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ENGLISH PHONETICS

A theoretical course

MINISTRY OF HIGHER AND SECONDARY SPECIAL EDUCATION OF THE REPUBLIC OF UZBEKISTAN

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This textbook is devoted to the students of Universities. It includes description of the English pronunciation in Great Britain which is compared with other literary pronunciations. The textbook gives comporative-typological analysis of the vowel and consonant phonemes, syllable structure, word stress and intonation in English, Uzbek and Russian. It uncludes also the glossary of terms in phonetics and phonology in three languages and the list of literature.

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A.A. ABDUAZIZOV

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PREFACE

This textbook is devoted to a theoretical course of English phonetics and constitutes the material used by the author while delivering lectures and conducting seminars in the past 20 years.

This book may also help in conducting courses in comparative-typology of English and Uzbek (also Russian) and General Linguistics as it includes a comparative-typological analysis of the phonetic (phonological) systems of English, Uzbek and Russian languages. Comparing the languages with different systems and structures permits to establish interesting phenomena and facts which may not be noticed in describing the phonetic systems of a particular language isolately. Comparative analyses are made between the principal literary and regional types of English pronunciation. In comparative typological analysis of the phonetic (phonological) systems the author mostly followed his own light. The author has tried to explain different linguistic terms used in modern investigations of phonetics and phonology and represented them as a short glossary in English, Russian and Uzbek to make it easy for the students to understand them and make use of them in practice.

Some of the material in the book has appeared elsewhere, in books and articles by various linguists and the author has brought them together. In particular it concerns the statistic data and examples used in the book.

Prof. A.A. Abduazizov

CHAPTER I

I.1. INTRODUCTION. PHONETICS AS A BRANCH OF LINGUISTICS

Phonetics (from the Greek word "phone" – meaning sound, voice and "-tika-" a science) is a special science which studies the phonic substance and the expression area of the language, or otherwise the physical media of a language (sounds, syllables, stress and intonation). The linguistic form and content are described by other branches of linguistics, namely grammar (morphology and syntax), lexicology (lexicon or vocabulary, the formation and the meanings of the words) and stylistics (expressive-emotional meanings).

The definition of phonetics as «the study of the sounds of a language»[1] is not sufficient in modern linguistics. Nowadays phonetics is a science or a branch of linguistics studying articulatory – acoustic and perceptual features of a language. It is concerned with the linguistic expression represented in the speech sounds, syllables, stress and intonation. Phonetics deals with oral speech.

Phonetics is of great theoretical and practical value. Theoretically it is important to study the formation of speech sounds, their combinations, syllables, stress and intonation. If we approach the study of pronunciation and listening scientifically partial similarities and great differences may be noticed among the utterances which may be recorded either with pen and paper or with a recording machine. A language consists of a series of physical events. Sound waves are formed bythe work of speech organs and perceived by ear. There is a conversion of muscular energy into acoustic energy. But the articulatory and auditory (listening) control of this conversion is not common property. Speech is perceived, observed, collected and classified by millions of sets of human senses and nervous systems. The classification of various speech utterances and their division into smaller and higher elements require theoretical, scientific bases – principles and meth-

[1] *Malmberg B.* Phonetics. N. Y. 1963.

ods. The explanation and description of the articulation of speech sounds, the pronunciation rules of a language is the object of practical or applied phonetics which is very important in teaching correct pronunciation of a foreign language. Sometimes, as to its aims of teaching the normal pronunciation of a language, this type of phonetics is called a normative course of phonetics. There is a close relationship between theoretical and practical phonetics, as it is important to combine theory and practice. It is impossible to represent a good pronunciation rule without a theoretical explanation of a particular question. Speaking about the phonetic system of a language we mean the whole set of relations of its elements. The phonetic elements or units are sounds, syllables, stress and intonation which have their linguistic functions observed in the identification and distinction of the utterances. In such words or morphemes as **lag – bag, meet – seat,** etc. the first sounds help to distinguish their meanings. The words '**present – pre'sent** are distinct by the position of the stress. The sentence **She came** may be pronounced in such a way as to be declarative, interrogative etc.

The following types of phonetics may be distinguished:

1. **General phonetics** which studies the human sound – producing possibilities, the functioning of his speech mechanism and the ways they are used in all languages to pronounce speech sounds syllables, stress and intonation. It is a part of General Linguistics.

2. **Descriptive phonetics** studies the phonetic system of a certain language. For example: English phonetics, Russian phonetics, Uzbek phonetics etc.

3. **Historical or diachronical phonetics,** which studies the changes a sound undergoes in the development of a language or languages. Its material may be based on written historical and literary monuments. Diachronical studies of the phonetic system may explain the present state (synchronical) of a language and compare them. It is a part of a history course of a language. For example, Verner's and Grimm's Laws, Ablaut, Umlaut, Great Vowel Shift etc. are the objects of diachronical phonetics which is also called evolutionary phonetics.

4. **Comparative-typological phonetics** studies the phonetic features of two or more languages of different systems such as English, Russian, and Uzbek etc. It is a part of comparative-typological linguistics. Its fundamental principle is using linguistic

categorization of all the various units of the languages in comparison. Comparative-typological phonetics is of great theoretical and practical value. Theoretically it is important to compare phonetic systems of all languages in order to establish language universals (the facts and features which exist in many languages), similarities and diffirencies between the sound structure, syllable types, stress and intonation. From the results obtained it is possible to represent adequate teaching materials and suggest effective methods of foreign language teaching. The comparative-typological method is also known by the terms «contrastive», «confrontative», «differential» and «comparative» method. This method is used either in historical or synchronical analysis of a language.

I.2. SPEECH APPARATUS AND PHONETIC BASIS

The speech apparatus or vocal tract consists of three parts: 1) the respiratory mechanism, which furnishes the airflow necessary for the production of most sounds; 2) the larynx, which creates most of the sound energy used in speech; 3) the supraglottal cavities which play the role of resonators to produce speech noises. The supraglottal cavities are: *the pharynx, the mouth cavity* and *the nasal cavity.* One more resonator is the labial cavity which functions in the pronunciation of rounded and unrounded vowels and also labial consonants. The roof of the mouth is divided into: *the hard palate, soft palate* (or velum), *the uvula* (the end of the soft palate), *the teeth-ridge, the upper-teeth, the upper lip* and *the lower lip.* The most active organ of speech is the tongue which may be divided into: *the root, the back, the center* (or front) *and the blade with the tip* (see *fig. 1*) .

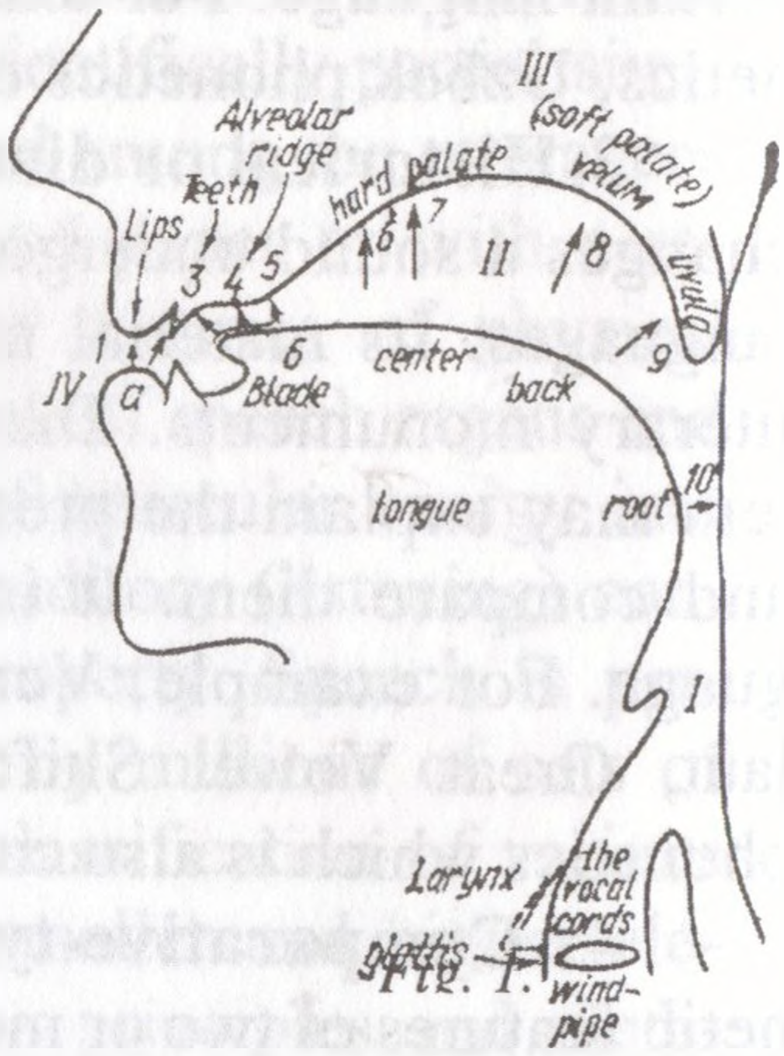


Fig. 1.

The four principal resonators of the speech organs: I. The pharynx; II. The mouth; III. The nasal cavity; IV. The labial cavity.

Places of articulation; 1. Bilabial; 2. Labiodentals; 3. Dental; 4. Alveolar; 5. Retroflex; 6. Palato-alveolar; 7. Palatal; 8. Velar; 9. Uvular; 10. Pharyngal.

The larynx is at the upper end of the trachea which contains the vocal cords. When the vocal cords are drawn near together the air vibration, coming from the lungs, produces voiced sounds. If the vocal cords are apart they do not vibrate as a result of which voiceless consonants may be produced. The space between the vocal cords is called the glottis.

The glottis is open during normal respiration. It may be closed when the vocal cords are kept together.

The voiceless plosive consonants may be aspirated and unaspirated. When the glottis is closed the unaspirated plosive consonants /p, t, k/ may be produced. During the occlusion of an aspirated plosive consonant sound the glottis is open. This is essentually a matter of the time relations between the closed phase of articulation and the time of onset (aspiration) or preaspiration of voicing as in /p^h, t^h, k^h/. The air which escapes the glottis is closed for the articulation of the following vowel is heard as an exhalation. The aspirated voiceless stops (plosives) are used before vowels. Aspiration is usually weak before an unstressed vowel. The unaspirated consonant is used before and after other consonants. It is probable that the difference between aspirated and unaspirated stops is not purely a matter of timing, since oral pressure recordings frequently show a level or even slightly falling, oral pressure during unaspirated stops, but oral pressure rising right up to the moment of release in aspirated stops.

The state of the glottis, its opening and closing, also the vibration of the vocal cords characterize the types of phonatory structures: breath, voice, voiceless, murmur, creaky voice and glottal stop.

In breath the vocal cords are kept apart, with slow airflow. Voice is the result of periodic and closing of the glottis with vocal cords vibration. As to voiceless sounds the glottis is closed and vocal cords do not vibrate. In murmur the glottis is wide open as for breath with a very slow air-flow generating no sound. Creak is produced by a periodic opening of a chink near the hyroid end of

I.3.1. The articulatory aspect

From the physiological point of view every human sound is a production of complex, definite, strictly coordinated movements and positions of speech organs. The articulatory aspect studies the voice-producing mechanism and the way in which we produce speech sounds. Usually this aspect is called articulatory or physiological phonetics. The founder of modern phonetics, a Great Russian – Polish linguist I. A. Baudouin de Courtenay (1845 – 1929) called it «antropophonics» meaning antropological studies of speech sounds. The articulatory aspect deals with biological, physiological and mental activity necessary for the pronunciation of a language. But the linguistic interpretation of the production of speech sounds makes phonetics a science which is autonomous from that of physiology and biology. The oldest and most available method of the articulatory phonetics is direct observation, which studies the movements and positions of one's own or other people's organs of speech pronouncing various speech sounds and judges them by ear. It is a subjective method of phonetics, as our direct observation does not give a concrete description of the production of speech sounds. There are some objective methods of experimental investigation which imply palatography, photography, cinematography, X-ray photography, X-ray cinematography etc.

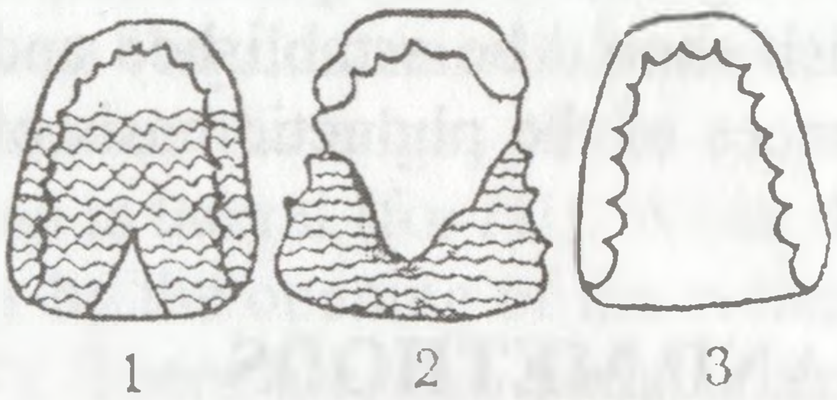


Fig. 2. Palatograms of a palatal /k/ or /g/ – 1eft; an intermediate (post-palatal) /k/ – center, a purely velar /k/ – right.

Palatography is inserting an artificial palate into a speaker's mouth. After the pronunciation of the desired sound the artificial palate is removed and one can immediately see what parts have been touched by the tongue. The place of articulation and the degree of rising of the tongue in the mouth are determined. The artificial palate used in the articulation is called a palatogram. It is difficult to study the sounds pronounced in the back part of the mouth. Labial and nasal articulations are not seen in it at all.

X-ray photography helps to fix the exact position of the organs of speech in the articulation of speech sounds. The person under examination, who has a literary pronunciation, is called an

informant. The focus of the X-ray lamp is directed against the upper molar of the informant. The lips, the tongue and the palate are sprinkled with bithmus solution or with barium which helps to show their position in the X-ray photo as clear as possible. The X-ray negatives are photographed. The drawings based on these photoes serve the purpose of detailed description of the pronunciation of speech sounds (see *fig. 3*).

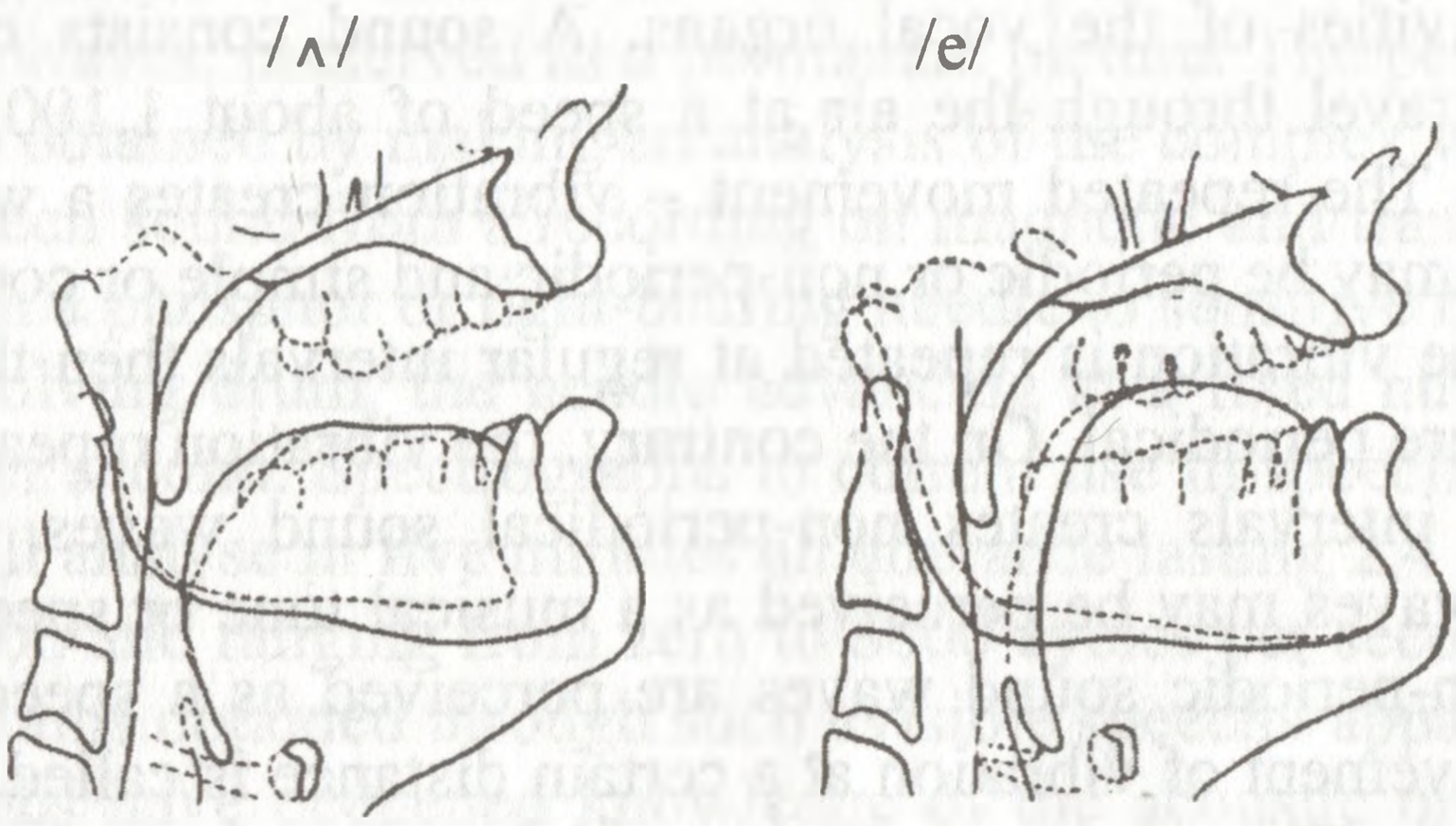


Fig. 3.

The X-ray photoes can be used as reference points for measurements of the shape and distance between the speech mechanisms.

There is also the method of X-ray cinephotography of speech organs during the articulation of certain sounds which requires a variable speed (about 50 to 100 frames per second). The X-ray films show the position of speech organs, their frame-by-frame tracing and measurement.

With suitable illumination and the selection of a suitable angle some information or the tongue postures and on the oral articulatory channels formed by contact between tongue and roof of mouth can be obtained by direct (cine) photography. It can illustrate also the position of the lips, the opening of the lower jaw. The lip rounding and its protrusion change the shape of the vocal tract. Direct (cine) photography is used as an auxiliary method in X-ray photography but sometimes it is used as a separate method in physiological phonetics. There are other techniques such as laryngoscope, glottography etc. The articulatory aspect uses its own

terms: oral, nasal, labial, dorsal, fore-lingual, back lingual, rounded, unrounded etc.

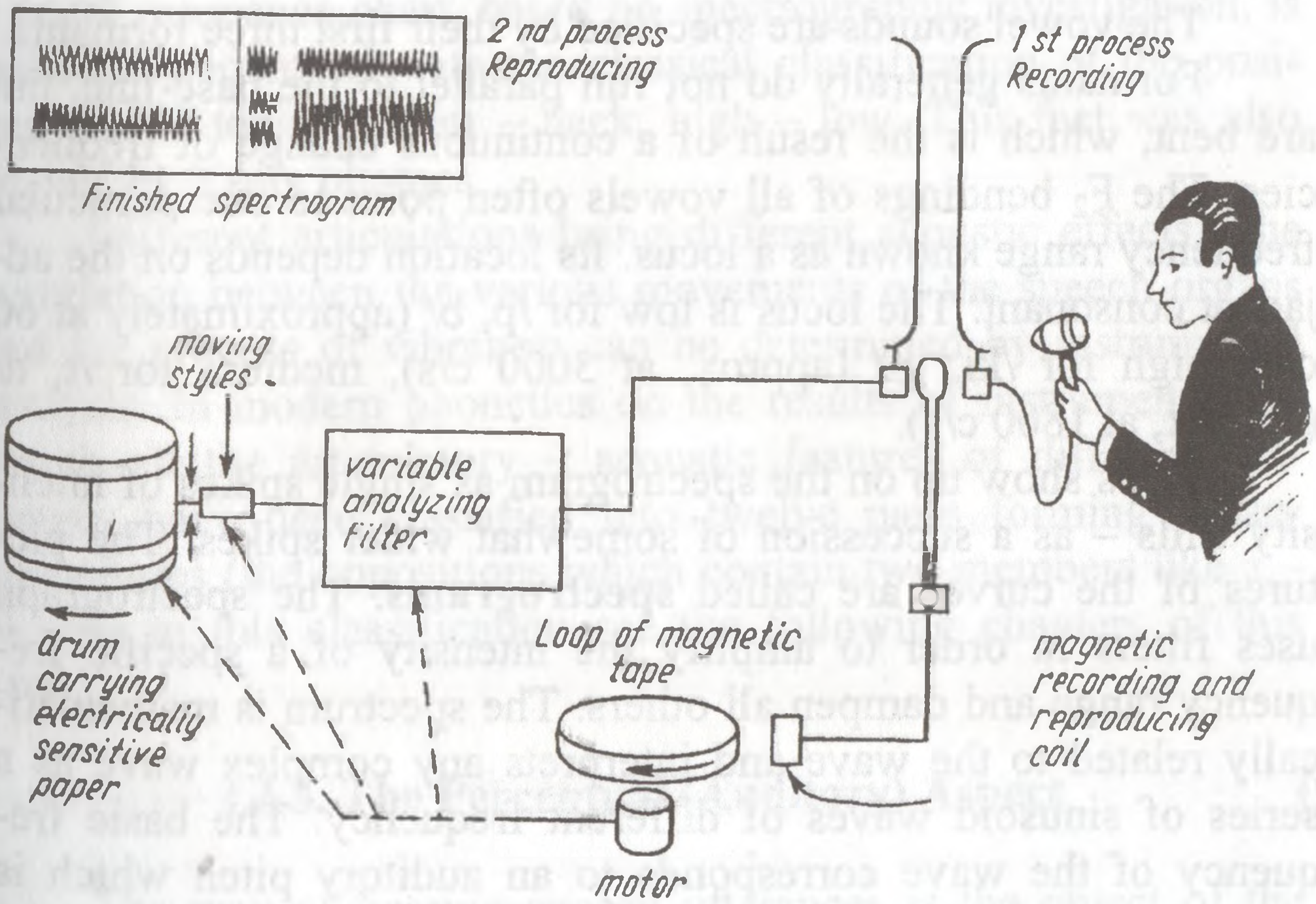
I.3.2. The acoustic (physical) aspect

It was already stated that the vocal tract may be described as an apparatus for the conversion of muscular energy into acoustic energy. Sound is a physical or acoustic phenomenon generated by the activities of the vocal organs. A sound consists of waves which travel through the air at a speed of about 1,100 feet per second. The repeated movement – vibration creates a wave. Vibration may be periodic or non-periodic and simple or complex. If the same vibration is repeated at regular intervals then the sound waves are periodical. On the contrary, the vibration repeated at irregular intervals creates non-periodical sound waves. Periodic sound waves may be perceived as a musical tone or speech-tone. The non-periodic sound waves are perceived as a speech-noise. The movement of vibration at a certain distance is called a period or a cycle. The maximum distance of the curve from the point of rest till the last point reached by the vibration is called its **amplitude**. The frequency of vibration is determined by the specific qualities of the body in question (its weight, or in the case of vocal cords, their tension; in the case of cavities, volume, shape, and size of the opening relative to the volume). The smaller opening of the cavity creates lower frequency. The larger opening of the cavity or higher tone forms greater frequency. **Frequency** is responsible for the pitch of the tone and amplitude determines intensity. An increase of the amplitude brings greater intensity. Physical **intensity** is measured by the sound energy which passes through 1 sq. cm perpendicular to the direction of the vibration (measured in watts) in a unit of time. The intensity of a vibration may thus be made four times greater by doubling the amplitude or the frequency. The intensity is proportional to the square of both. Loudness is the term used for the intensity perceived which is measured in **db** – decibels.

Thus the sounds or vibrations are specified in terms of three parameters or measures; frequency (measured in cs – «cycles per second»); intensity (measured in db – «decibels») and time (measured in ms – «milliseconds»). Roughly frequency corresponds to auditory timbre and intensity to perceivable loudness.

Besides the basic frequency of vibration there are additional overtones which are called harmonics. The latter are various timbre characteristics. Timbre and overtones form the spectrum of the speech sounds. The term «spectrum» comes from the word «spectrograph» which is one of the basic apparatus measuring sound waves in modern experimental (or instrumental) phonetics. The **sound spectrograph** is a combination of magnetic tape and frequency record with an analysis of the component frequencies of complex waves, preserved as a permanent picture. The permanent record is obtained by making an analysis of the complex waves of each speech sound from a recording on magnetic and transferring it through a phosphor or light-bearing needle to sensitive mounted on a revolving drum, the needle advancing at a fixed number of cycles per second. Spectrographs in current use in speech laboratories will analyse in five minutes an utterance lasting 2,4 seconds in duration and ranging from zero to 8000 cycles per second. The spectrograms obtained through such «visible speech» apparatus or sonographs have deepened knowledge of the acoustic properties of speech sounds and long utterances as well that are important for an understanding of their auditory perception.

The Sound Spectrograph.[1]



[1] *E. Pulgram.* Introduction to the Spectrography of Speech. Mouton. 1959 p. 99, fig. 20.

It is important to know some other concepts of acoustic phonetics.

Vibrating tuning fork, cord, cavity etc. which intensify a certain sound is called a **resonator**. If the difference between the vibration and the frequency of a resonator is great the resonance becomes lower. Resonance is very important in the production and distinction of vowel sounds. By means of resonance the frequency of the sound may be reinforced. By reinforcing the basic and additional harmonics it is possible to deepen the timbre. A special apparatus constructed to reinforce certain frequencies of a complex sound while weakening others is called **a filter**. Physiologically, oral and nasal cavities together form an acoustic filter.

The distribution of intensity over particular frequency ranges correlates with auditory timbre. The head register has low intensity in low frequency ranges; a hollow voice has low intensity in the high frequency ranges.

The concentration of energy in certain frequency regions in the production of a sound, or peak of intensity, is known as **a formant** or spectrum. Formants are numbered F_1 F_2 F_3 from bottom to top. The absence of intensity between formants is called **antiresonance**. Formants present intensity in different frequency ranges.

The vowel sounds are specified by their first three formants.

Formants generally do not run parallel to the base line, but are bent, which is the result of a continuous change of frequencies. The F_2 bendings of all vowels often point to one particular frequency range known as a locus. Its location depends on the adjacent consonant. The locus is low for /p, b/ (approximately at 60 c/s), high for /ki, gi/ (approx, at 3000 c/s), medium for /t, d/ (approx, at 1800 c/s).

Stops show up on the spectrogram as single spikes of intensity trills – as a succession of somewhat wider spikes. The pictures of the curves are called **spectrograms**. The spectrograph uses filters in order to amplify the intensity of a specific frequency range and dampen all others. The spectrum is mathematically related to the wave and interprets any complex wave as a series of sinusoid waves of different frequency. The basic frequency of the wave corresponds to an auditory pitch which is characteristic of the voiced parts of speech signal.

The other sinusoid waves are known as **harmonics or overtones**. Harmonic waves correspond to the harmonic spectrum. The non-periodic irregular harmonics correspond to the noise spectrum. A mixed spectrum contains both harmonic and noise elements. These different spectral types correspond to the auditory resonance.

There is also a special apparatus called an oscillograph which specifies acoustic data in terms of complex waves. The curves which this apparatus reproduces are known as oscillograms. In the oscillograms curves have time in the horizontal dimension, and amplitude in the vertical dimension. It is possible to use all the acoustic concepts already explained either in oscillography or spectrography both of which constitute a method of acoustic analysis of speech signals.

All the acoustic properties except the duration of a sound measured in time, determine the feature of quality. The length or duration of a sound is known as the quantity feature. The quantity of the sound depends on the tempo of speech (quick, normal, slow), the length of an utterance, the position of a sound (stressed and unstressed, open and close syllables, the influence of the preceding or following sound) etc. As we have seen there is a correlation between the articulatory and acoustic aspects. For example, a vocal resonance chart, based on spectrographic investigation, is practically identical with the classical classification of the position of the tongue: front – back; high – low. This fact was also proved by X-ray photoes.

Different articulations bring different acoustic effects. The correlation between the various movements of the speech organs and the process of vibration can be determined by instrumental analysis. In modern phonetics on the results of instrumental research all the articulatory – acoustic features of different languages have been classified into twelve pairs forming binary oppositions (the oppositions which contain two members like a – b). (As to this classification see the following chapters of this book).

I.3.3. The Perceptual (Auditory) Aspect

The way of hearing speech utterances is the object of the perceptual phonetics. It is a psychological perception which

makes it possible to hear different noises which may be classified in terms of three features: **continuity, resonance and timbre.**

Continuity. The stops /p, t, k, g etc./ consist of momentary noise. The glides last somewhat longer but cannot be drawn out at will (especially in English /h, j, w, r/, the short vowels and the second elements of the diphthongs). The continuants can be drawn out at will (spirants, nasals, /l/ and long vowels). The trills consist of a rapid sequence of taps and can also be drawn out at will (especially, the Scottish /r/ and the glottal catch which accompanies the fadeaway).

Resonance. The voiceless sounds consist of a silent noise. The vowels are generated by the musical tone without any obstruction. The voiced obstruents (stops and fricatives) are characterized by buss.

Timbre. By the term timbre we mean the quality of the voice, specified by the harmonic overtones and resonance tones based on it. Auditorily it is called pitch and overall timbre. In terms of overall timbre, the vowels, liquids and nasals are either bright and thin (such as/i/), dark and full (such as /a:/) or dull and neutral (such as /ə/). The English /l/ has a bright variant initially in British English, but it is dark and full in most varieties of American English. The hisses /s, z/ are bright and thin, the hushes /ʃ, ʒ/ bright and full, the spirants /f, θ/ dull and neutral.

Some linguists categorize timbre in terms of two dimensions: grave (dull) – acute (bright), compact (full) – diffuse (thin).

The English stops may have burst variants (explosives) initially, snap variants (implosives) finally. The stops /t, d/ have single tap (flap) variants medially as in Betty – beddy in American English. In British English /r/ has a similar tap variant medially (as in bury) in the initial cluster /br/. Double stops consist of snap + momentary silence + burst medially in British and Australian English. The snaps are rebased into a following vowel with a slight click. No release is audible before a following consonant as for /k/ in act, **fact, ticked, like** this. The voiceless bursts of English are known as aspirated and they are released into a weak white noise.

The affricates /tʃ, dʒ/ are bursts released into a hushy noise. The glottalized stops have snaps in a final position in British English (that). As we have seen, the auditory aspect uses its own terms as dark, light, full, thin, neutral, burst, click, snap, etc.

which may be interpreted in articulatory and acoustic terms. There are also some other facts of perception in longer utterances or segments realized in various pitch patterns and intonation contours. The perceptual approach is of great theoretical and practical value. Theoretically it is very important to study scientifically how the language signal may be perceived by the listener. This problem is closely coordinated not only by the psychological facts of hearing, but the most important event lies on the neurological basis that is controlled by the brain through the complex nervous and sensory systems and also by muscular activity. The practical significance of the perceptual approach may be proved by the facts of mastering the pronunciation of a foreign language. Before trying to produce a foreign language the students should listen to them and perceive the differences between the sounds of their own language and those of the foreign language. Listening, in this case, becomes very important. The instructions in foreign language pronunciation teaching usually begin with listening, than the coming identifycation of speech utterances, transcribing, listening and repeating and at last writing notes on the elements to be drilled[1].

I.3.4. The Phonological Aspect

Any segment of a language consists of a sound chain which is specified by some articulatory, acoustic and perceptual features. But not all the phonetic features function to distinguish lexical and grammatical forms. Some features serve to distinguish words, morphemes and phrases and some of them cannot serve this purpose. Thus, it is the functions of distinction and also identification which is characteristic of all linguistic units. According to their functions phonetic units – sounds, syllables, stress and intonation can be described linguistically and classified to some ranks, groups and subgroups. The theoretical study which sets up to account all the phonetic distinction of a language is called phonology. Some linguists prefer the terms phonemics and phonematics. But the term phonology has become popular nowadays. Phonology is not an autonomous and independent science. But it is one

[1] This type of approach is given in: *A.C. Gimson.* A practical course of English pronunciation. A perceptual approach. London, 1975, pp. 1-7.

of the aspects of studying phonetic data, otherwise it is a purely linguistic and social aspect of studying phonetics.

Phonetics in the wider sense includes phonology as distinct from morphology, syntax and stylistics. But in the narrow sense the term phonetics is used, excluding phonology. These two types of usage of the term phonetics is observed in our country. For some linguists there exist two aspects of studying phonetic data: phonetic – articulatory, acoustic and perceptual studies and phonological – linguistic functions of phonetic units. In both cases a strict separation between phonetics as a natural science and phonology as a linguistic science is not possible as there is a close relationship between them. Although this type of separation was suggested by N.S. Trubetskoy and promoted by the representatives of structural linguistics. Without fathoming further into the development of phonology and phonological schools (see chapter II) let us discuss some basic concepts of phonology. Phonetics and phonology have two levels of investigation: segmental and suprasegmental. Segmental phonology studies phonemes realised in various speech sounds. Suprasegmental phonology studies the distinctive features realised in syllables, stress and intonation.

It is convenient to use the term phonemics for segmental phonology as it refers to the term phoneme itself. As to suprasegmental phonology the term "prosodics" may be used. Thus, phonology may be divided into phonemics and prosodics. Although these terms were suggested and became popular in modern linguistics we are using them in different senses. The fundamental concept of phonemics is the phoneme which is the smallest unit of a language system. It is impossible to establish the exact number of speech sounds but, generalizing them all we combine them into a certain number of phonemes, which are real, and at the same time abstract units of a language, as the language itself is an abstract phenomenon realized in the form of speech. Thus, the dialectal unity of an abstract and concrete explains the materialistic approach to the problem of the phoneme.

There are several phonological theories in modern linguistics. Every phonological theory suggests its own definition of the concept «the phoneme». But the term «phoneme» itself has not been changed. Among the first founders of the term and the concept of «the phoneme» such outstanding linguists as I. A. Badouin

de Courtenay, N. Krushevsky (Russia), P. Passy (France), H. Sweet (England), F. de Saussure (Switzerland) and others.

Phoneme is the smallest meaningless unit of a language which forms and distinguishes words and morphemes.

The phoneme is a minimal segment which cannot be divided into further smaller units but for scientific analysis, it can be separated from the material form (the sound structure) of the word. Besides it exists in the form of a number of articulatory and acoustically definite speech sounds, its allophones. All sounds of this kind which have common articulatory and acoustic features constitute the material invariant of the phoneme. It is due to concrete reality that the phoneme is manifested in speech chain in its **allophones** which are pronounced objectively and differ from each other to some degree.

The abstracted and generalized character of the phoneme is reflected in its definition as a language unit. All the linguistic units are established as a result of an abstraction and generalization of actual speech utterances. In general a phoneme cannot be pronounced. We always pronounce one of the allophones (variants) of the phoneme but unconsciously generalize all the allophones as representatives of the same phoneme. For example, all sounds of «e – type» as /e_1 , e_2, e_3, ..., e_n/ = /e/) represent the phoneme /e/. The sound /e/ has its articulatory and acoustic features as a front, half-close unrounded, short, lax vowel. But all these features are established as a result of phonemic abstraction. In reality it is impossible to pronounce a sound many times in the same way without changing its features. Every phoneme consists of a bundle of features generalized from its allophones.

Another fundamental concept of phonology is the **phonological opposition** which is defined as opposition between the speech sounds serving to distinguish the meanings of words. For example:

/p – t/ – pool /pu:l/ – tool /tu:l/,
/l – s/ – let /let/ – set /set/,
/r – l/ – right /rait/ – light /lait/, etc.

The words used to illustrate the phonological oppositions are known as **minimal pairs of words or guasyhomonyms** (the term suggested by L. V. Shcherba).

There is a classification of phonological oppositions according to the relationship between the oppositions, between the

members of oppositions and the force of oppositions[1]. This type of classification of phonological oppositions is based on logic and linguistic categorization of phonetic data. Besides there is a principle of **preliminary phonological analysis** suggested by V.A. Vassilyev[2]. According to this principle all the phonological oppositions are classified into two-member oppositions but the main difference between the members of opposition is based on the number of the distinctive features: single – when there is one distinctive feature (e. g. /p – t/), double – when there are two distinctive features (e. g. /p – d/) and complex when there are more than two distinctive features (e. g. /p – z/). There are also non-phonological oppositions which cannot serve to distinguish words. For example, the difference between aspirated /p^h, t^h, k^h/ and non-aspirated /p, t, k/ sounds is non-phonological. The feature aspirated – non-aspirated is non-distinctive or phonologically irrelevant in modern English. A feature which is distinctive in one language may be non-distinctive in another. The concept of a distinctive feature is important to analize the character of phonological oppositions.

The articulatory, acoustic and perceptual feature which can distinguish two phonemes is called **a distinctive feature**. The feature which cannot serve this purpose is known as a non-distinctive feature.

Every phoneme in relation to the other phoneme may be characterized by this distinctive and non-distinctive feature. Thus, a phoneme is a bundle of distinctive features. In relation to the phoneme the same phoneme's allophones have non-distinctive feature such as the relation between /p^h/ aspirated and /p/ non-aspirated may be characterized by a non-distinctive feature. But the common features of /p/ and /p^h/ generalize the phoneme /p/ which is bilabial, plosive-occlusive, voiceless[3].

As a linguistic unit the phoneme functions to distinguish lexical and grammatical forms and in this way performs its communicative function in a language. Every phoneme with its allophones is a member of a phonological opposition.

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[1] *Н.С. Трубецкой.* Основы фонологии. М., 1960, стр. 74-92.
[2] *V.A. Vassilyev.* English phonetics. A theoretical course. M., 1970, p. 136.
[3] In transcription / / indicates phonemes and [ ] allophones or sounds.

The exact number of the phonemes also called the **inventory** of the phoneme which exists in a certain language is established by using the **method of commutation**. This method is defined as substitution or replacing one speech sound by another in the same position of minimal pairs of words. For example: pet – bet – set – let – met – net – jet – get – vet.

Sometimes it is very difficult to discover minimal pairs. As in the case of /tʃ/, /dʒ/, /θ/, /ð/ etc. it is possible to find a few minimal pairs but no minimal pair exists for the opposition / ʃ / – /ʒ/. But if there is no minimal pair in the language we must not omit the phoneme from the inventory. Such as in Russian and borrowed from it in Uzbek the phoneme /ts/ cannot be used in minimal pairs but we describe it as a special phoneme which has limited distribution. By the term **distribution** we mean all the positions and combinations in which a certain speech sound – a representative of the phoneme is used. There are four types of distribution.

1. If two elements cannot be used in the same position and replace each other in one position they are considered to be in a complementary distribution. For example, aspirated /p^h, t^h, k^h/ sounds can be used only before stressed vowels if they are not preceded by /s/ and in the intervocalic position. But in all other positions non-aspirated /p, t, k/ sounds are used. Thus /p^h, t^h, k^h/ sounds cannot replace /p, t, k/ sounds in the same position. They represent the allophones of the /p, t, k/ phonemes. It is possible to establish the allophones of the phoneme using complementary distribution.

2. Two elements (sounds) may be used in one and the same position and serve to distinguish the words. For example, bill /bɪl/ – till /tɪl/, sight /saɪt/ – bight /baɪt/ – night /naɪt/ – right /raɪt/ – light /laɪt/ – might /maɪt/ etc.

Using contrast distribution it is possible to establish the number of phonemes in a given language.

3. The elements (sounds) used in one and the same position and which cannot distinguish the meanings of words are considered to be in free variation. In such cases every sound manifests the free allo-phone of the phoneme. This type of distribution is known also as an equivalent distribution. For example, some speakers pronounce /e/ sound either half-close /e/ or half-open /ɛ/ in one and the same position but it cannot distinguish the words.

4. Two various sounds may be used in one and the same position. In such cases one of the sounds represents the free allophone of the other. For example, the word phonetics may be pronounced as /fɔnetıks/, /founetıks/ and /fənetıks/ where the sounds /ɔ/, /ə/ represent the free allophones of the phoneme /ou/. In reality each of them is an allophone of the separate phoneme.

The distributional method is very important in phonological analysis of the sound structure. It is necessary to show also what clusters of sounds the pattern of a language admits. The branch of phonology which studies the possible clusters of sounds in words and morphemes is known as «phonotactics»[1].

Using the statistical method it is possible to establish the exact number of phonological oppositions in a language and the number of sound clusters in initial, medial and final positions of the words. For example, in English, out of a theoretically possible 11,000 initial three member consonantal clusters at the beginning of a syllable, only about 40 occur. Of 576 possible combinations of two consonants, only 137 are utilized by the language[2]. There are no initial three member consonantal clusters in Uzbek. Thus it is difficult to teach the Uzbek students the pronunciation of the initial three member consonantal clusters of English.

I.4. TRANSCRIPTION. PHONETIC AND PHONOLOGICAL TRANSCRIPTION

Transcription is of great theoretical and practical value as it is used in the scientific-theoretical investigation of the phonetic systems and teaching foreign language pronunciation. Transcription is a special phonetic alphabet by means of which the sound system or a system of phonemes of a particular language is represented. Usually two principal types of transcription are distinguished: **phonetic** and **phonological**.

Phonetic transcription represents a system of sounds and changes their pronunciation undergo. The symbols of a phonetic transcription are enclosed in square brackets [ ]. Phonological transcription denotes the system of segmental phonemes of a language. Its symbols are denoted between two slanting bars / /.

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[1] *H.Kurath.* A phonology and prosody of modern English. Ann. Arbor, 1964. pp. 30-31.
[2] *Joshua Whatmough.* Language. A Modern Synthesis. 1956, p. 126.

The great difference between English spelling and pronunciation makes the use and choose special phonetic symbols to avoid misunderstanding. The transcription symbol of a certain language is based on the International Phonetic Alphabet. The most widely used transcription of English is known as «the broad form» of phonetic transcription which was suggested by an outstanding English linguist Daniel Jones. This transcription is used in the well-known dictionary «The Concise Dictionary of Current English» by Fowler's and in some other dictionaries. The phonetic symbols used in the broad form of transcription are as followings:

Vowels: [i:, ɪ, e, æ, ɑ:, ɔ, ɔ:, u, u:, ʌ, ə:, ə, eɪ, ou, aɪ, au, ɔɪ, ɪə, ɛə, uə, ɔə].

Consonants: [p, b, t, d, k, g, s, z, tʃ, dʒ, f, v, ɵ, ð, ʃ, ʒ, h, m, n, ŋ, 1, r, j, w].

Besides, there is a «narrow form» of phonetic transcription used in some text-books and dictionaries. For example, in «Oxford Student's Dictionary of Current English» by A.C. Hornby with the assistance of Christina Ruse (Oxford University Press, 1978) the following phonetic symbols of the vowels and diphthongs are used: [i, ɪ, e, æ, a, ɒ, ɔ, ʊ, u, ʌ, ɜ , ə, əu (oʊ), aɪ, aʊ, ɔɪ, eə, ʊə, ɔə.

There is no difference between the phonetic symbols of the broad and the narrow forms of transcription for the consonants.

Modern English diphthong /oʊ/ is indicated by the symbol /əu/ which is used in this book.

As to the transcription of the American English vowels and some consonants they are indicated by different symbols. However, the transcription symbols given in «A Pronouncing Dictionary of American English» by John S. Kenyon and Thomas A. Knott (Springfield, Mass., 1953) and in «A Concise Pronouncing Dictionary of British and American English» by J. Windsor Lewis (London, Oxford Univ. Press, 1972) are used in this book as well. They resemble the symbols of the narrow form of transcription.

I.5. PHONOLOGY AND ITS RELATION TO OTHER BRANCHES OF LINGUISTICS

The description of a language includes its pronunciation, vocabulary and the construction of utterances. An adequate description of a language system requires its pronunciation to be divided into

throat or larynx: a *whistle, laugh, giggle, hiccup, gasp, belch, grunt, scream, sob, cry, sing, hiss etc.*

In the description of a language it is necessary to establish the facts concerning the way sound material or usually named phonic substance is used to carry grammatical and lexical meanings. In such minimal pairs of words as **t**ake – **m**ake /teik – meik/, b**e**t /bet/ – b**a**t /bæt/ etc. phonological oppositions between /t/ and /m/, /e/ and /æ/ distinguish the lexical meanings of these words. But the contrasts made in the English intonation are grammatical, but clearly not lexical[1]. For example, the phrase *He has come* – may be pronounced by the falling tone when it is a declarative sentence. It can also be pronounced in a rising tone to indicate an interrogative sentence (a question) or when it is an exclamatory sentence the tone of voice is very high and the timbre is emotional. Thus, phonological units and their features may be used as a part of the system in the realization of grammatical and lexical items. There is no direct consequence between the sound material and the meaning, but this relationship must be understood in the sense of providing «a bridge» between the form and substance of a language. Thus, the relations between phonetics and other branches of linguistics are complex and complicated which require the use of a different linguistic interpretation.

The sound matter is realized in the form of speech sounds, syllables, stress and intonation. The complex combination of all these phonetic units constitutes the components of the phonetic structure. When these units are used in the phonological sense, i.e. as the distinctive units they are called **phonemes, syllabemes, accentemes** (word-accenteme, syntagm-accenteme, phrase-accenteme) and **intonemes**. The complex combination of all these phonological units constitutes the components of the phonological structure of a language. It should be stated that among these units only phoneme is regarded as a linguistic unit which is always present in any kind of language expression.

The relationship between phonology and other branches of linguistics is outlined in the given diagram:

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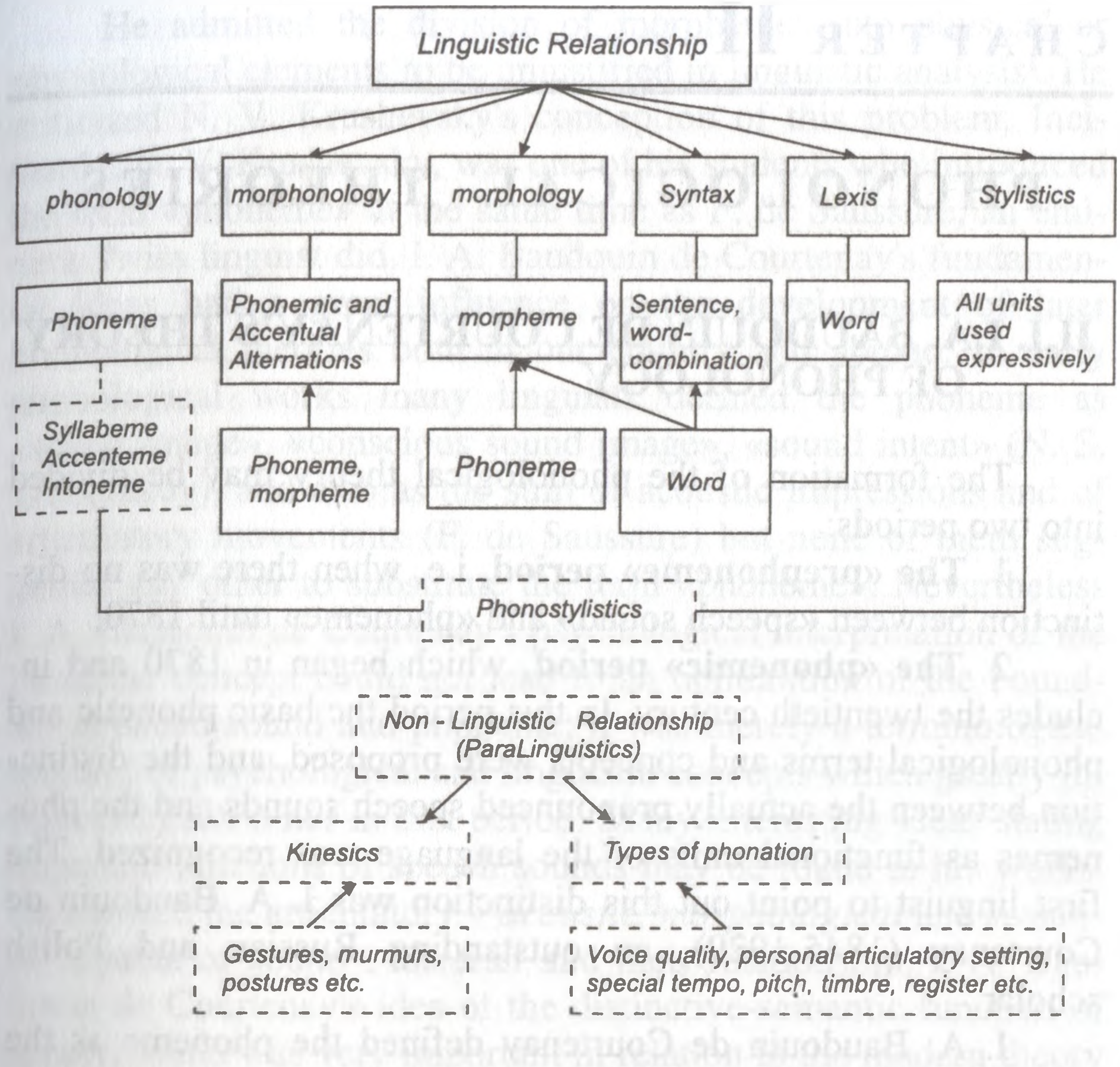
[1] *M.A.K. Halliday.* Intonation and Grammar in British English Mouton, 1967, p. 10.


Linguistic Relationship
phonology
morphonology
morphology
Syntax
Lexis
Stylistics
Phoneme
Phonemic and Accentual Alternations
morpheme
Sentence, word-combination
Word
All units used expressively
Syllabeme
Accenteme
Intoneme
Phoneme, morpheme
Phoneme
Word
Phonostylistics
Non - Linguistic Relationship
(ParaLinguistics)
Kinesics
Types of phonation
Gestures, murmurs, postures etc.
Voice quality, personal articulatory setting, special tempo, pitch, timbre, register etc.

CHAPTER II

PHONOLOGICAL THEORIES

II.I. I.A. BAUDOUIN DE COURTENAY'S THEORY OF PHONOLOGY

The formation of the phonological theory may be divided into two periods:

1. **The «prephoneme» period,** i.e. when there was no distinction between «speech sound» and «phoneme» until 1870;

2. **The «phonemic» period,** which began in 1870 and includes the twentieth century. In this period the basic phonetic and phonological terms and concepts were proposed, and the distinction between the actually pronounced speech sounds and the phonemes as functional units of the language was recognized. The first linguist to point out this distinction was I. A. Baudouin de Courtenay (1845-1929), an outstanding Russian and Polish scholar.

I. A. Baudouin de Courtenay defined the phoneme as the «psychological» equivalent of the speech sound». But he was aware of the fact that acoustic and motor images of the speech sound do not correspond to each other. I. A. Baudouin de Courtenay also tried to analyse phonemes on the bases of phonetic alternations in morphemes. Besides psychological and morphological definitions of the phoneme, he could propose the distinctive function of the speech sound in notions[1] as he considered that words may be realized in notions. I.A. Baudouin de Courtenay repeatedly stated that semantically the utterance breaks up into sentences, sentences into significative words, words into morphological components or morphemes and morphemes into phonemes. As a morpheme is only divided into components of the same nature as itself: these components – phonemes must also be significative.

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[1] *И. А. Бодуэн де Куртене.* Избранные труды по общему языкознанию. М., 1963, Т.1. с. 384.

He admitted the division of morphemes into physical or physiological elements to be unjustified in linguistic analysis[1]. He criticized N. V. Krushevsky's conception of this problem. Incidently, N. V. Krushevsky, was one of his students who introduced the term «phoneme» at the same time as F. de Saussure, an eminent Swiss linguist did. I. A. Baudouin de Courtenay's fundamental ideas had a great influence on the development of later phonological theories both in our country and abroad. In early phonological works many linguists defined the phoneme as «sound image», «conscious sound image», «sound intent» (N. S. Trubetzkoy), and also as the sum of acoustic impressions and of articulatory movements (F. de Saussure) but none of them suggested any other to substitute the term «phoneme». Nevertheless I. A. Baudouin de Courtenay's psychological interpretation of the phoneme concept could not lead to an obliteration of the boundary between sound and phoneme; it was merely a terminological mixture of psychological and linguistic concepts which greatly influenced each other in that period. Many interesting ideas stating linguistic functions of speech sounds may be found in his works. He showed the articulatory – *acoustic, morphological* and *semantic* aspects of sound . material and their relationship. I. A. Baudouin de Courtenay's idea of the distinctive-semantic function of speech sound was very important in relation to the modern theory of distinctive features of the phoneme, according to which the phoneme of a given language may be divided from a system of sequences which is formed by their constituents, i.e. by distinctive features. As the morphemes may be divided into phonemes, likewise phonemes are divided into distinctive features which are interpreted either in articulatory or acoustic terms. Inspite of the various approaches to the problem of establishing an inventory of the phonemes in a given language, which should be possible on the basis of breaking up utterances or words into the smallest segments or by the method of commutation test, counting minimal pairs of words like **pill – bill**, **till – mill**, **kill – hill** etc. The fundamental discussion on the problems of phonemic analysis is still going on among phonemicists.

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[1] *R. Jakobson.* Selected Wrintings. I. Mouton, 1962, p. 418.

II.2. THE St. PETERSBURG PHONOLOGICAL SCHOOL. L.V. SHCHERBA'S PHONEMIC CONCEPT

The St. Petersburg Phonological School's theory is closely connected with the name of academician Lev Vladimirovich Shcherba (1880-1944), a talanted student of I. A. Baudouin de Courtenay. L. V. Shcherba developed the phonemic concept represented by his research advisor. L.V. Shcherba repeatedly stressed the differential function of the phoneme. He gave the following definition of the phoneme: «The shortest general sound image of a given language, which is capable of associating with images of meaning differentiating words, ..., is called phoneme»[1]. In this definition besides the term «sound image», which shows the influence of psychology, everything is clear from the phonological view point. Although L.V. Shcherba realized that phonemes are not general images in the logical sense, he considered phonemes as concrete sound images which are the result of different perceptions. L.V. Shcherba illustrated his phonemic theory with examples from various languages. The quantitative and qualitative variations in the pronunciations of languages may depend on their phonetic structures and linguistic habits the sum of which L.V. Shcherba called the articulation basis.

He emphasized the importance of the variants of phoneme. For example, citing D. Jones' idea of the existence of two allophones of the phoneme /l/ in English – **dark** and **clear** L.V. Shcherba wrote that they cannot be associated with meanings consciously. As for the Russian pair of **ль – л** it is capable to distinguish meanings: **бил – был**. Thus L.V. Shcherba emphasized the practical value of sound types in the pronunciation of a given language. He explained that in concrete speech we pronounce a number of speech sounds which may be summed up in a comparatively small number of sound types capable of distinguishing words and word forms. Such sound types are called phonemes. Actually pronounced speech sounds, in which phonemes may be realized, would be called the phoneme shades (allophones or vari-

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[1] *Л.В. Щерба.* Языковая система и речевая деятельность. Изд. «Наука», Л., 1974, с. 116.

ants of the phoneme). But among those shades of the phoneme usually there may be one that is the typical representative of the phoneme which can be pronounced isolately, actually, this is what is perceived by us consciously as an element of speech. All other shades cannot be understood consciously and it is difficult to perceive them all by ear normally. These explanations make it clear to understand the distinction between general sound types and concrete speech sounds, which can prove the distinction between a phoneme and allophone (speech sound).

L.V. Shcherba also indicated three aspects of speech sounds: biological (physiological), physical and linguistic (social), of which he paid special attention to the last aspect. In speech communication physiologically and physically different articulations (for example [a]) may be generalized by one meaning. Such a generalized unit is called a **phoneme**. Thus, L.V. Shcherba underlined the **concrete, generalized** and **functional** aspects of the phoneme. He explained that each phoneme may be distinguished from all other phonemes by its features, while all the phonemes of a given language form a unit system of oppositions in which each phoneme is defined by its oppositions against another separate phoneme or phoneme groups.

L.V. Shcherba invented his own system of transcription. He wrote about different pronunciation styles and advanced very interesting ideas on the subjective and objective methods of scientific investigation. L.V. Shcherba's phonological theory was developed and improved by many linguists. His followers and pupils L.R. Zinder, M.I. Matusevich, L.V. Bondarko, A.N. Gvozdev, V.I. Litkin, Y.S. Maslov, O.I. Dickushina are representatives of the St. Petersburg phonological school.

L.R. Zinder defines the phoneme as the smallest, i.e. indivisible in time (or linearly) unit, but from the structural view point, it may have different features some of which are considered to be common with other phonemes and some other features which distinguish it from all other phonemes. The phoneme is very complex unit and it may be realized in different allophones (or shades, variants). There are two of allophones: **positional** and **combinatory** i.e. depending on their positions and on the neighbouring sounds. If the distinctions between the sounds are not capable of distinguishing the meanings of words or word-forms, then such sounds are the allophones of a phoneme. For ex-

ample, let us examine consonant sounds t, t°, t', t'° in the words **так** /tak/, **тот** /t°ot/, **стяг** /st'ak/, **тётя** /t'ot'ъ/ etc. The distinction between the first and second sounds, and between the third and fourth sounds can not serve to distinguish the meanings of the words. Thus, they represent one phoneme. The distinctions between the first and the third sounds and between the second and fourth sounds are capable of differentiating the meanings of the words. Therefore they may represent different phonemes. Accordingly we can state that some sound distinctions may be phonematic and some of them may be phonetic[1].

L. R. Zinder points out the reality of the phoneme i. e, its existence in a given language, being the sound unit of a language phoneme through its different representatives may have very complex phonetic characteristics. Besides, being independent and autonomous unit of a language expression, the phoneme can be separated from the sound material of words. For example, the word **прут** /prut/, may be broken up into /p/, /r/, /u/, /t/[2]. This comes from the descrete character of the phoneme. L. R. Zinder also proposes rules to determine phonemes and phoneme combinations. He thoroughly analyses the most valuable phonological ideas of I. A. Baudouin de Courtenay, L. V. Shcherba, N. S. Trubetzkoy and other linguists.

It must be kept in mind that the St. Petersburg Phonological School's definition of a phoneme is based on words and word-forms, i.e. the phoneme is the smallest unit capable of differentiating words and word forms. This phonemic concept is applied to the description of English phonemes by G. P. Torsuyev, V. A.Vassilyev, O. I. Dickushina and V. N. Vitomskaya.

II.3. THE MOSCOW PHONOLOGICAL SCHOOL

Another scientific approach to the phoneme concept in Russia is known as the Moscow phonological school. This school is represented by R.I. Avanesov, V.N. Sidorov, A.A. Reformatsky (1901-1978), P.S. Kuznetzov (1899-1968), A.M. Sukhotin, M.V. Panov, N.F. Jakovlev. One of the first linguists to give a definition of phoneme void of psychologic elements was N.F. Jakovlev:

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[1] *Л.Р. Зиндер.* Общая фонетика. М., 1979, с. 42-58.
[2] *Л.Р. Зиндер.* Указ, соч., с. 56-58.

«Phonemes are understood those phonic properties that can be analysed from the speech flow as the shortest elements serving to differentiate units of meaning[1].

The representatives of the Moscow phonological school based their definition of a phoneme on the concept of the morpheme. A.A. Reformatsky gave the following definition of the phoneme: «Phonemes are minimal units of the sound structure of a language, serving to form and differentiate meaningful units: morphemes and words»[2]. Phonemes are meaningless units of a language but they are capable of distinguishing meaningful units as their sequences may form morphemes and words. For example, **pit – lit, but – bet** etc.

Analysing the sound changes in the morphemic structure of a language, it is possible to establish two different positions: **stressed** and **unstressed.** In a stressed position phonemes can preserve their phonetic characteristics, while in an unstressed position they change their articulatory and acoustic features. This fact is very important in the phonetic analysis of Russian vowels. In the Russian word **вода** (vad' ʌ/ there are two variants or allophones of the phoneme /ʌ/: stressed and unstressed, which are different as to their quantitative feature because usually stressed vowels are longer than unstressed ones. But if we take the wordforms **воды** /vodi/, **водный** /vodnij/, **водяной** /və djanoj/ in the morpheme **вод** we can distinguish the sound alternations /ʌ′ – o – ə/. In such cases R. I. Avanesov proposes to define each member of alternations /ʌ′ – o – ə/ as variants of one phoneme /o/. Likewise in the words **вода** /vʌdʌ′/, **вод** /vót/, **воде** /vʌde/ the consonants /t/ and /d/ may also be interpreted as variants of the phoneme /d/, but the members of alternations /d – t – d′/ may be considered as the realizations of one phoneme. In all these cases the relationship between the notions of phoneme and morpheme becomes very important. In such alternations, which depend on their position in morphemes or words, and there are no distinctive functions between the members of alternations, it is possible to use the term **phonemic line** («фонемный ряд»). According to R.I. Avanesov a phoneme is an element of a wordform and «pho-

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[1] *N.S. Trubetzkoy.* Principles of Phonology. Univ. of California Press, 1969, p. 51.
[2] *А.А. Реформатский.* Введение в языковедение. М., 1967, с. 211.

nemic line» is an element of a morpheme[1]. There are some differences in the phonemic solutions of the representatives of this school. A.A. Reformatsky did not use the term «phonemic line». Thanks to the perceptual and significative functions, he divided the stressed and unstressed positions into the following types: perceptually the stressed position is that where a phoneme is represented in its basic form independent of its position; as to the unstressed position, where under the influence of positions, a phoneme is represented in its variations. For example, in the words **мал – мял** and **мил – мыл** we can observe pairs of vowels /a/ – /æ/ and /и/ – /ы/. In the first pair the basic form of the phoneme is /a/, while /æ/ is variation, likewise in the second pair /и/ is the basic form of the phoneme, while /ы/ is its variation.

Phonemes organize different phonological oppositions, resulting in their significant functions. In a stressed position phonemic oppositions may be preserved, while in an unstressed position they are neutralized. Usually neutralization is the result of coincidence of two phonemes which are differentiated by one feature. For example, in words **плод** and **плот, луг** and **лук** voiced consonants become voiceless at the end of words. The Moscow phonologists suggested the term «hyperphoneme» which is defined as a unit which appears in the position of neutralization of a group of phonemes. For example, in Russian neutralization may take place in unstressed syllables where the vowels /a/, /o/, /i/, /e/, /u/ can be distinguished from each other; in this case they are not phonemes but hyperphonemes /a/ o, i /e/ and /u/[2]. The unit hyperphoneme as presented by the Moscow phonologists does not coincide with the «archiphoneme» unit suggested by the Prague phonological school. The latter is understood as a unit, when two phonemes, distinguished only by one feature, for example, voiced – voiceless consonants /p – b/, /t – d/ etc., may coincide with their feature in the position of neutralization: **луг – лук, пруд – прут**. In such cases archiphonemes /p/b and t/d/ may appear in Russian.

Phonemes and their distinctive features differ. A phoneme is a sum of distinctive features. Distinctive sounds, i.e. phonemes and distinctive features are considered to be two levels of the phono-

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[1] *Р.И. Аванесов.* Русская литературная и диалектная фонетика. М., Просвещение, 1974, с.30-37.

[2] *А. А. Реформатский.* Из истории отечественной фонологии. Очерк. Хрестоматия. М., «Наука», 1970, с. 164.

logical structure of a language. The level of distinctive features is called «merismatic level». One of the fundamental notions of phonology is that of position, which creates conditions for the realization of phonemes in speech. Positions may depend not only on the phonetic context but also on the morphological conditions. For example, in joining basic and affixal morphemes some sound combinations become an affricate: **штатский, шведский** where /тс/ and /дс/ form the affricate /ц/.

Some Moscow phonologists, especially, A. A. Reformatsky gave a classification of phonological oppositions and presented a new approach to the problem of neutralization. It should be stated that their theory is commonly applied to the description of Russian phonemes; it was also fruitful in the analysis of the phonological systems of other languages. The Moscow phonologists described the supersegmental features of syllables, stress and intonation. Besides, they improved the morphonological theory advanced by N.S. Trubetzkoy. According to A.A. Reformatsky morphonology is a «bridge» level between phonology and morphology. N.S. Trubetzkoy included almost all the phonemic alternations into morphonology and used the term «morphoneme». However, morphonology must not only study the alternations of segmental phonemes but can analyse the alternations of suprasegmental elements, i.e. stress alternations in morphemes. In the Russian words **рука – ручной, нога – ножной, слух – послушный** we can observe alternations both of a segmental and suprasegmental character. Such alternations in English as **foot – feet, tooth – teeth, ox – oxen, child – children,** which are interpreted as morphonological by the American linguists, belong to the grammatical meanings formed by the internal inflexion[1]. The alternations, which do not depend on their positions in morphemes, would be studied in morphonology.

II.4. THE PRAGUE PHONOLOGICAL SCHOOL

The fundamental scientific works have been done by the representatives of the Prague phonological school – well-known linguists W. Matezius (1882-1945), B. Havranek (1893-1978),

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[1] *А.А. Реформатский.* Ещё раз о статусе морфонологии, её границах и задачах. В книге «Фонологические этюды». М., изд. «Наука», 1975, с. 108-118.

N.S. Trubetzkoy (1890-1938), B. Trnka, I. Vachek, V. Skalichka and others. Among them very important phonological ideas were advanced by the Russian scholar N.S. Trubetzkoy. In his book «Principles of Phonology» first published in German in 1939, N.S. Trubetzkoy discussed the relation of phonology to other studies, the nature of phonemes and their variants, how to determine the phonemes of a language, relations between phonemes in general analysis and in particular languages, the classification of phonological and non-phonological oppositions, neutralzation, mono- and biphonemic combinations, phonological statistics, boundary-markers (junctures) and prosodic elements (syllables, stress and intonation). His theoretical work on phonology shows «... the breadth of Trubetzkoy's knowledge and the intricacy and incisiveness and cerebral character of his scientific analysis»[1].

N.S. Trubetzkoy came to the phoneme concept through the classification of phonological oppositions. The concept of distinctiveness presupposes the concept of opposition. One thing can be distinguished only from another thing insofar as a relationship of opposition exists between the two. Likewise one sound property may be opposed to another phonic property. Oppositions of sound, capable of differentiating the lexical meaning of two words in a particular language are phonological or phonologically distinctive or distinctive oppositions. In contrast, those oppositions of sound that do not have this property are phonologically irrelevant or nondistinctive. For example, in English the opposition /e – æ/ as in /bet – bæt/ phonological (distinctive) while the opposition between aspirated /p^h, t^h, k^h/ and non-aspirated /p, t, k/ sounds and also opposition between dark and soft /l/ sounds are non-distinctive as there is not a single word pair in English that is differentiated by these oppositions. Each member of a phonological opposition is called a phonological (or distinctive) unit. Phonological units that, from the standpoint of a given language, cannot be analysed into still smaller successive distinctive units are called phonemes. N. S. Trubetzkoy points out that phonemes should not be considered as «building blocks» out of which individual words are assembled. Each word is a phonic entity and the phonemes are then the distinctive marks of the configurations of

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[1] *Zellig S. Harris.* Review of «Grundzuge der Phonology» by *N.S. Trubetzkoy.* In «Phonological Theory. Evolution and currect practice», N.Y., 1972, p. 301.

words. Sounds participate in phonological oppositions only by means of their phonologically relevant properties. Another definition of phoneme given by N. S. Trubetzkoy is «the sum phonologically relevant properties of a sound (laut-gebilde)»[1].

Phonemes are functional sounds of a language while speech sounds are the realizations or manifestations of phonemes in speech. This distinction between language and speech was borrowed by N.S. Trubetzkoy from F. de Saussure's and K. Bühler's works. N.S. Trubetzkoy insisted on defining a phoneme solely on the basis of its function in the system of a language.

One of the rules for the determination of phonemes was formulated in the following way: «If two sounds occur in exactly the same position and cannot be interchanged without a change in the meaning of the words or without rendering the word unrecognizable, the two sounds are phonetic realizations of two different phonemes»[2]. For example in beet /bi:t/ – but /bʌt/, /i:/ and /ʌ/ are interpreted as realizations of two different phonemes.

The rule for the determination of individual phonemes and phoneme combinations is very important in solving the problem of phonemic interpretation of diphthongs and affricates. N.S. Trubetzkoy wrote: «A combination of sounds can be interpreted as the realization of a single phoneme only if it is produced by a homogeneous articulatory movement or by the progressive dissolution of an articulatory complex»[3]. This rule was illustrated by the English diphthongs /eɪ/ and /ou/ which are regarded as monophonematic. This rule is solely phonetic but not phonematic as it is based on the articulatory movement, i.e. it is an articulatory characteristics of a diphthong. This is one of the interesting points which clearly show the close relationship of phonetics and phonology separated by N. S. Trubetzkoy into two independent sciences.

According to another rule if the constituent parts of combinations of sound are not distributed over two syllables then such combinations of sounds are to be regarded as the realization of single phonemes. This rule is true for the English diphthongs and

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[1] *N.S. Trubetzkoy.* Principles of Phonology. (Trans. C. A. Baltaxe). Univ. of California Press, 1969, p. 52. All other quatations have been taken from this translation.
[2] *N.S. Trubetzkoy.* Id., p. 62.
[3] *N.S. Trubetzkoy.* Id., p. 66.

affricates /tʃ/, /dʒ/. The combinations of sounds which cannot be determined by the rules are called phoneme clusters.

N.S. Trubetzkoy presented the classification of phonological oppositions in terms of logic. Two things which have no features in common cannot be contrasted, likewise two phonemes which have no common features cannot be opposed. Firstly, oppositions are classified in relation to the entire system of oppositions. According to this principle oppositions may be unidimensional and pluridimensional (or bilateral and multilateral). Two phonemes possessing a common feature, which no other phoneme has, are in unidimensional opposition. For example in English /t-d/, /p-b/, /k-g/, /b-m/, /d-n/, /g-ŋ/ /f-v/, /s-z/, /s-ʃ/, /z-ʒ/, /t-tʃ/, /d-dʒ/, /r-l/ are unidimensional (bilateral) oppositions.

Two phonemes, whose feature is common to some other phoneme, are in pluridimensional (multilateral) opposition. For example, the opposition /b - d/ in English is pluridimensional as the common features of the members of this opposition (plosive + voiced + lenis are characteristic of the phoneme /g/.

According to N.S.Trubetzkoy the unidimensional oppositions are fewer but more interesting than the others. Pairs of phonemes, having similar oppositions between them, are called proportional oppositions. In English pairs of phonemes /p-b/, /t-d/, /s-z/, /ʃ-ʒ/, /θ-ð/, /tʃ-dʒ/, /f-v/, /k-g/ have similar oppositions in which the distinctive feature is voiceless – voiced (resp. fortis – lenis (tense – lax). These pairs of phonemes constitute proportional oppositions.

If there is no pair of phonemes in similar relation to the existing pair of phonemes, such an opposition is called isolated. For example, /r-l/ is an isolated opposition in English, Russian and Uzbek.

Secondly, oppositions may be classified on the basis of relationship between their members. According to this principle they may be private, gradual and equipollent.

If the member of opposition is differentiated from the other by one distinctive feature such an opposition is called private. For example, /d-t/, /f-v/ etc. Which differentiated by a voiced-voiceless (resp. fortis-lenis) feature. The member of such an opposition, characterized by the presence of a feature, is called marked and the member of opposition, which is characterized by

the absence of a feature, is called unmarked. Thus, a voiced member is marked (+) while an unvoiced member is unmarked (–).

Gradual oppositions are those whose members are characterized by different gradations of one and the same feature. In English /i:-a:/ according to the hights of the tongue they may be distinguished as close-open where half-open and half close members are omitted. Likewise /p-k/ is a gradual opposition, because, according to the place of articulation, /p/ is labial and /k/ is backlingual, between which forelingual (alveolar, apical) and interlingual /j/ members of opposition are omitted.

If both members of opposition have the same distinctive features except one, which is different, such an opposition is called equipollent. In English /p-f/, /b-v/, /t-θ/, /d-ð/, /k-h/ are equipollent oppositions.

Thirdly, oppositions may be classified on the basis of distinctive force and their occurrence in different positions according to which oppositions may be neutralizable and constant. In particular positions the feature of one member of the opposition may have a different distinctive force. As in Russian and in Uzbek voiced members of the oppositions become unvoiced at the end of words: пруд /прут/, teg/tek/ - tek/tek etc. The opposition where the opposition is neutralized is called the position of neutralization.

N.S.Trubetzkoy stated that usually only unidimensional (bilateral) oppositions may be neutralized. In the position of neutralization one of the phonemes becomes the representative of an archiphoneme. An archiphoneme is the sum of the relevant (distinctive) features common to both members of the opposition. In the above examples:

/d/ \
/t/ archiphoneme
/t/ /

This unit may have different features in other languages.

The unidimensional, privative, proportional oppositions, the members of which are in similar relations with each other, are combined into correlation: /p-b/, /t-d/, /s-z/, /ʃ-ʒ/, /f-v/, /tʃ-dʒ/, /θ-ð/, /k-g/. Such pairs of phonemes are called correlation pairs and

the feature voiced – voiceless (resp. Fortis – lenis) is called the feature of correlation.

Constant oppositions are those which are not neutralized in some positions and always preserve their distinctive features. But there may be cases when two phonemes are opposed in some positions but not in others. For example, English /p/ and /b/ are not opposed after /s/, because only one of them can occur after /s/ as in the word **spin**. Such types of neutralization is called contextual which appear in many languages. After N.S.Trubetzkoy's definition of neutralization there were attempts to classify neutralizations into several other types[1].

N.S.Trubetzkoy advanced a valuable theory and methods available in paradigmatic analysis of phonemes i.e. in establishing phonological and non-phonological oppositions. But there are some shortcomings in his description of syntagmatic relations of phonemes. N.S.Trubetzkoy's theory was applied to the description of the phonemic system of English by B.Trnka, J.Vachek[2], by V.A.Vassilyev[3] and A.Cohen[4].

II.5. THE LONDON PHONOLOGICAL SCHOOL

There is a long tradition of phonetic and phonological studies in England. One of the first linguists who made a serious study in English phonetics was Henry Sweet. He distinguished broad and narrow transcriptions and gave the classification of English vowels and consonants in his "Handbook of Phonetics" (Oxford, 1877).

Under "The London Phonological School" we mean the theory and methods of phonetic and phonological analysis proposed by the British linguists. This school is represented by J.R. Firth, Daniel Jones, D. Abercrombie, I. Ward, L. Armstrong, D. B. Fry, H. Kingdon, J.D. O'Connor, A.C. Gimson. The British linguists presented original idea on phonemic and prosodic analy-

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[1] *В.К. Журавлёв.* К проблеме нейтрализации фонологических оппозиций. ВЯ, 1972, № 3. с. 36-49.

[2] *B. Trnka.* A phonological analysis of Present-day standard English. Univ. of Alabama Press, 1968. И. Вахек. Пражские фонологические исследования сегодня. В книге «Пражский лингвистический кружок». М., Изд. «Прогресс», 1967, с. 100-114.

[3] *В.А. Васильев.* Система фонологических оппозиций Н. С. Трубецкого в применении к английскому языку. М., МГПИИЯ им. М. Тореза, 1973.

[4] *A. Cohen.* The Phonemes of English. The Hague, 1965.

sis. Well-known British linguist D. Jones and J.R. Firth gave brief explanations of the phoneme concept.

D.Jones admits the fact that the idea of the phoneme was first introduced to him by Leningrad professor L.V. Shcherba in 1911, but both the theory and the term itself had existed for more than thirty years even then. D. Jones wrote: "According to J.R. Firth the term "phoneme" was invented as distinct from "phone" in 1879 by Krushevskiy"[1]. Thus, both outstanding English linguists were familiar with theory and term "phoneme" used by Russian linguists.

D. Jones prefers to speak about an "explanation" of phoneme rather than a "definition", the latter is impossible without making use of terms such as "language", "speech sounds" and "words". He gave the following explanation of a phoneme: "... a phoneme is a family of sounds in a given language which are related in character and are used in such a way that no one member ever occurs in word in the same phonetic context as many other members"[2]. D. Jones explanation of a phoneme is a physical (acoustic) one, since the phoneme is treated as a "family of sounds" His physical interpretation is distinct from the articulatory approach to the phoneme. D. Jones explained a phoneme on the basis of auditory distinctions, which only secondarily is based on presumed articulatory positions. He also distinguishes "principal and subsidiary member" of the phoneme which are equal to the terms "allophone" and a "variant" of the phoneme. According to his view point a phoneme consists of more than one member, and one of the sounds seems more important and common than the others, or because it is the one used in isolation or is intermediate between extreme members. Such a sound is called by D. Jones the "principal members of the phoneme". The other sounds in the same phoneme are called "subsidiary members". One of the rules for the determination of a phoneme is that if two sounds of a language can occur in the same phonetic context they belong to separate phonemes. For instance, /i/ and /ə/ belong to separate phonemes in English because they can both occur initially before the same consonant as in the words illusion /ɪ`lu: ɜn/ - allusion /ə'lu: ɜn/. Such differences between phonemes are significant i.e. capa-

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[1] *D. Jones.* The phoneme: its nature and use. Cambridge, 1950, preface.
[2] *D. Jones.* The phoneme: its nature and use. Heffner, Cambridge, 1950, ch. II, p. 31.

ble of distinguishing one word from another. These ideas of D. Jones emphasize the importance of the semantic function of phonemes in a language. Two members of the same phoneme cannot be significant if they cannot distinguish words. The aspirated /k^h/ and non-aspirated /k/ sounds as members of the phoneme /k/ cannot distinguish two words and they are used in different positions. The aspirated /k^h/ is used before vowels while non-aspirated /k/ is used in all other positions in English.

Besides the phoneme concept D.Jones presented his ideas on the problems of syllable structure, stress and intonation applied to the description of English in a number of his works, particularly in "Outline of English Phonetics" (Cambridge, 1957), "The pronunciation of English" (Cambridge Univ. Press, 1956) etc. D. Jones' "Everyman's English Pronouncing Dictionary" (reprinted with minor correction and short supplement. Eleventh edition, L., 1958) is the best handbook on literary British pronunciation. The well-known English linguist J.R. Firth who is considered to be the head of the London Phonological school, began to work in the area of phonology in 1930 although his fundamental work "Sounds and Prosodies" was published in 1948. J.R. Firth distinguished prosodic system from phonematic system on the basis of the analysis of works. J.R. Firth stated: "Looking at language material from a syntagmatic point of view, any phonetic features, characteristic of and peculiar to such positions or junctions, can just as profitably and perhaps more profitably be stated as prosodies of the sentence or word. Penultimate stress or functional geminations are also obvious prosodic features in the syntagmatic junction. Thus, the phonemic and phonological analysis of the word can be grouped under ... sounds and prosodies"[1].

J.R. Firth purposely avoided the term "phoneme" in his work as "sound" is sufficient for his analysis. He illustrated his prosodic theory with the character of the English neutral vowel which marks junctions and required by the prosodies of word formation, especially in the formation of derivatives. The occurence of Southern English diphthongs is a good illustration of the value of his prosodic treatment. Besides J.R. Firth regarded the so-called **intrusive r, linking r,** the glottal stop etc. as prosodies.

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[1] *J.R. Firth.* Sounds and Prosodies. In «Phonological Theory. Evolution and current practice». N. Y. 1972, p, 253.

He also distinguished prosodies of strength quantity, tone in which the prominant syllable is regarded as the nucleous of the group of syllables forming a word. He wrote: "The prominent syllable is a function of the whole word or piece structure", naturally, therefore, the prosodic features of a word include:

1. The number of syllables.
2. The number of syllables – open or closed.
3. The syllabic quantities.
4. The sequence of syllables (radicals and flexional elements separately treated)
5. The sequence of consonants
6. The sequence of vowels
7. The position, nature and quantity of the prominent.
8. The dark or clear qualities of the syllables[1].

J.R. Firth's prosodic theory was developed and applied in the description of different languages. R.H. Robins classified syllable prosodies, prosodies of syllable groups, phrase or sentence - part prosodies, sentence prosodies, word and morpheme prosodies[2]. John Lyons included some consonantal and vocalic features (aspiration, vowel harmony etc.) into the object of prosodics besides tone, stress and quantity as they all operate as "long components"[3].

A new approach to the description of English phonemics and prosodics is given by A.C. Gimson who revised some ideas of D.Jones and other representatives of the London phonological school[4].

II.6. PHONOLOGICAL TRENDS IN THE USA

There are several phonological trends in the USA. The head of the American descriptive linguistics L.Bloomfield was one of the first phonologists whose ideas were very fruitful in the further development of phonological theories in USA. Another well-

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[1] *J.R.Firth.* Id., p. 258.
[2] *R.H.Robins.* Aspects of prosodic analysis. In «Phonological Theory...», p. 267.
[3] *J. Lyons.* Phonemic and non-phonemic phonology: some typological reflections. In «Phonological Theory...», p. 275-281.
[4] *A.C.Gimson.* An introduction to the pronunciation of English. L., 1962.

known American linguist E.Sapir also formulated his own approach to phonemic solutions. Below we give a short review of phonological trends in the USA.

Bloomfieldian descriptive phonology is also called the relative - acoustic theory, as it is based on the analyses of structural functions and acoustic features of phonemes. According to L.Bloomfield, a phoneme is a minimal distinctive unit of a language, which has no meaning itself but may be determined as a special unit, owing to its physical and structural contrasts in relation to all other sounds types of a particular language. His other definition of the phoneme as a minimal unit of the phonetic feature is purely a phonetic one. He sometimes mixed up the notions of a "speech sound" and a "phoneme". His idea on the primary and secondary phonemes was very important in the further classification of segmental and suprasegmental phonemes. He also gave descriptions of the phoneme combinations in initial, medial and final positions of the words[1].

L.Bloomfield`s theory was developed and improved by a number of linguists and is called the **post-Blooomfieldian theory** of descriptive phonology. The representatives of this are Z.Harris, Ch.F.Hockett, H.A.Gleason. According to this theory a phoneme is a class of sounds or a class of allophones (phones) which have both phonetic similarity and functional identity, in the sense that the substitution of one for another in the same context does not change its syntactic or semantic function, i.e. makes no change in its meaning. This theory defines a phoneme on the basis of the distributional method. Usually the phoneme is defined as the repsentative of phones in free variation or complementary distribution, which are phonetically similar[2]. The allophones of phonemes may also be determined on the basis of the distributional method. Some representatives of this trend define a phoneme as a sum of distinctive features. They state the physical and functional aspects of the phoneme from the mentalistic point of view, as their theory is based on the stimulus-response segments that are the same or different.

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[1] *Л. Блумфилд.* Язык. М., Изд. «Прогресс», 1968, с. 72-141.

[2] For details see: *Г.Глисон.* Введение в дескриптивную лингвистику. М., 1959, с. 224-258.

American tagmemic school of linguistics advanced its own phonological theory which differs from the theories of descriptive phonology. According to the tagmemic trend a language is the result of verbal behavior and mind and it consists of three levels: grammatical, lexical and phonological. Each of these levels has its own units: morpheme, tagmeme and phoneme, the latter is a minimum unit of the phonological level.

The phoneme is characterized as composing disjunctive, emic portions of the verbal behavior phonetically represented. A phoneme is not a class of sounds, but a phonetic unit with particular features, which is connected with the units of the other levels. A new unit, which is called a tagmeme, is defined as the implication of a slot or position for a functional meaning and a morpheme. The head of the tagmemic school of American linguistics Kenneth Pike uses the term "archiphoneme" in a different sense that N.S.Trubetzkoy did. Two phonemes, which cannot be identified with the phoneme, is called an archiphoneme. For example, in the English words **night-rate** and **nitrate** we may predict the medial unaspirated long /t/ as opposed to the aspirated short /t/. Without using junctures they form an archiphoneme in such morphemes. K.L.Pike states: "Phonemes cannot be analysed without some knowledge - though it may be very slight of grammatical facts"[1]. In his work "Coexistent Phonemic Systems" (1949) K.L.Pike attempts to demonstrate the possibility of two or more phonemic systems in monolingual speech. The tagmemic theory is also based on behavior. The phonological theory, which was suggested by K.L.Pike, is called **phonotagmemics** according to which all languages have a phoneme level, most have a syllable level, a pause group level and the level between the syllable and pause group. Intonation takes its characteristics on the phonological phrase level[2]. Thus, the relation between the levels of a language, strictly speaking, the sublevels of speech, is very important in phonotagmemics.

The theory which is being developed in modern American linguistics is **a generative-transformational phonology** (often

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[1] *K.Pike.* Grammatical prerequisites to phonemic analysis. In his «Selected Writings», Mouton, 1972, p. 33-34.

[2] *Eunice V. Pike.* Phonology. In «Trends in Linguistics». Studies and monographs I. Edited by W. Winter. Tagmemics. Vol. I. Aspects of the field. Ed. *R.M. Brend* and *K.L. Pike*. Mouton, 1976, p. 45-83.

called a "generative phonology"). Generative phonology is one of components of generative grammar as a syntactic component and component of lexicon. Generative phonology serves to provide phonetic representations of utterances in a language. It studies the phonological form of morphemes and morph listed in the lexicon and determines the rules of how the phonetic units (sounds, syllables, stress and partly intonation) are pronounced in various environments in which they are found. The resulting phonetic representation level provides a transcription of a sound segment used in actual utterances. According to generative phonology distinction between phonemes and allophones requires levels of phonological representation to be recognized: the level of pronunciation (the phonetic level) and the level of contrast or opposition (the phonemic level). As to articulatory and acoustic feature they fulfill three functions: 1) they are capable of describing the systematic phonetics - a phonetic function; 2) at a more abstract level they can differentiate lexical items - a phonemic level; 3) they define natural classes, that is, those segments, which, as a group undergo similar phonological processes[1]. The main aim of generative phonology is to find the rules and answer the following questions: 1) What segments change? How do they change? Under what conditions do they change? This theory cannot be universal as each language requires its specific rules for phonological analysis.

Almost all phonological theories in USA regard variations in phonological form at or across morphological boundaries as the morphophonemics of a language. N.Chomsky and M.Halle suggest the principle of cycle to predict accent elements in their work "The Sound Pattern of English" (N.Y., 1968). Discussions on the problems of adequacy and predicative power in recent phonological theories are still going on among American linguists.

II.7. SOME BASIC POINTS IN PHONOLOGICAL ANALYSIS

The starting point of any linguistic analyses is the principle of categorization i.e. definition of concepts which may be used in

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[1] The most elementary explanation of this theory can be found in: *Sanford A. Shane.* Generative Phonology. New Jersey, 1973.

the further description of the nature of a language. In the previous chapter we have explained some elements of categorization: they are the distinctions between content and expression, substance and form. Incidently there are no boundaries between them as the existence of one requires the other. Language, as a social phenomenon, may be manifested in the form of speech. The sound material of language is not merely substance i.e. not only an articulatory, acoustic and audible phenomenon. It is a structuraly organized system serving to distinguish the units of meaning. This functional approach makes the object of phonological analysis clearer than any other treatment.

To study the distinctive features of the sound matter means to analyse it from a functionally significant point of view. Therefore, we can agree with A.Martinet, a well-known French linguist, who called "phonology as functional phonetics" as in the title of his book (Oxford Univ. Press, reprinted in 1950).

The functions of speech sounds may be categorized by the criteria of **distinction and identification.** For example, in **pet** /pet/ – **bet** /bet/ – **let** /let/ – **set** /set/ we can observe the distinction of the first sound, while in **pool** /pu:l/, **sport** /spɔ:t/, **plate** /pleɪt/ we find identification of the sounds. In phonetic transcription we distinguish the aspirated /p_1/, /p_2/, /p_3/ sounds used before vowels from the non-aspirated /p^h/ sound used in other positions. Thus, using the criterion of distinction, we set up phonemes as distinctive unites, and, in the latter case, we identify sounds as allophones of the phoneme. As it is repeatedly pointed out in modern theories of language, citing F. de Saussure's concept, there are two axis in a language: an axis of successiveness and axis of simultaneity, which are called **paradigmatic** and **syntagmatic relations** between the linguistic units. The criterion of distinction makes it possible to set up the system of phonemes i.e. phonological oppositions. N.S. Trubetzkoy defined a phoneme through the concept of phonological opposition: "A phoneme is a member of phonological opposition". It is also possible define a phoneme through the concept of distinctive features. In the latter case a phoneme is formed by its constituents, i.e. by distinctive features. This approach was also suggested by N.S. Trubetzkoy and R. Jakobson. There are also some differences in the classification of phonological oppositions V.A. Vassilyev classifies phonological oppositions on the basis of the number of distinctive features. Choosing any two phonemes he counts their distinctive

features. Two phonemes, distinguished by one feature, are in simple opposition (for example, /p-t/, /f-s/ etc.). If there are two distinctive features the opposition is called a double one (for example, /p-d/, /i:/ – /u/ etc.). If there are more than two features the opposition is complex (for example, /p-z/, /v-g/ etc.). This type of classification called a "preliminary phonological analyses of sounds" by V.A. Vassilyev is easy to use in practice nonetheless he suggests that theoretically it may be possible to apply N.S. Trubetzkot's classifications of phonological oppositions after such a preliminary analysis[1]. Categorization makes possible to define phonemes, phonological oppositions and distinctive features which come from setting up paradigmatic relations.

Another way of categorization is to observe phonemes on the axis of simultaneity, i.e. one must take into consideration the linear character of units, as phonemes occur in linear sequence. N.S. Trubetzkoy formulated this type of categorization according to the position and combination of sounds in words. Any given linear sequence of elements forms a speech but not a language. Any type of text is also formed by linear sequence is known as syntagmatic relations between the elements.

On the syntagmatic level we deal with facts of speech, while paradigmatic relations are established on language. Besides, paradigmatic relations between the phonemes show up as if they are constant, unchangeable, static units of the language: /i: – ʌ/, /k-h/ etc. On the contrary, syntagmatic relations emphasize the way underline how the speech sound-representatives of phonemes function as dynamic elements. Thus, paradigmatic relations make it possible to set up and categorize phonemes and their distinctive features, while allophones and non-distinctive features become clear owing to the syntagmatic level.

R. Jakobson stated "However as the phonemes of a given language form a system of sequences, so the system of phonemes, in turn, is formed by their constituents, i.e. distinctive features. And breaking up of the phonemes into distinctive features follows precisely the same tested devices as the division of the morphemes into phonemes"[2].

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[1] *В.А. Васильев.* Система фонологических оппозиций Н.С. Трубецкого в применении к английскому языку. М., МГПИИЯ им. М. Тореза, 1973, с. 8.

[2] *R. Jakobson.* On the identification of phonemic entities //Phonological Theory, Evolution and current practice. N.Y., 1972, p. 319.

As modern experimental investigations prove, the distinctive features operate differently in various positions. For example, in some languages **long – short, aspirated – non-aspirated, voiced – voiceless** distinctive features may be in different degrees.

Most of phonological theories in USA are based on the method of distribution of sounds in the linear of speech. They analyse syntagmatic relations between the elements of speech. This is also one of the possible ways of categorization of linguistic elements. But in order to give a complete and thorough theoretical analysis of the phonological system, linguistic elements must be classified both on paradigmatic and syntagmatic levels, which make clear all existing phonological and non-phonological oppositions and also distribution of phonemes and their allophones. In such analysis the problem of neutralization of oppositions takes on a new interpretation which as usual is syntagmatically dependent.

Any phonological unit has the following four functions:

1) **a constitutive function,** i.e. all the phonological units are used as the material-carriers of the linguistic units: morphemes, words, word-combinations and sentences (phrases);

2) **a distinctive function,** i.e. the phonological units serve to distinguish linguistic units: take /teɪk/ – lake /leɪk/; a nice house /ə´naɪs haus/ – an ice house /ən´aɪs´haus/; contract /´kɔntrækt/ – contract /kən´trækt/.

Is there any mistake here? – Is there any Miss Take here?

3) **a delimitative function** emphasizes the boundary between linguistic units, particularly, between morphemes, words and combinations. The elements which appear in such boundaries are known as junctures. The above examples, except the first one, illustrate the delimitative function;

4) **a recognitive function** makes words, word forms and sentences easily recognizable or identifiable, as the result of the use of the right allophones, syllable divisions, degree and the place of stress and also right intonations in the right places of the utterances. When they are used wrongly the meanings of the utterances may be confused as the result of the pronunciation (phonetic and phonological) mistakes.

There are two other phonological terms which should be mentioned: "functional load" and "the power of opposition". The term "functional load" was introduced by N.S. Trubetskoy,

features. Two phonemes, distinguished by one feature, are in simple opposition (for example, /p-t/, /f-s/ etc.). If there are two distinctive features the opposition is called a double one (for example, /p-d/, /i:/ – /u/ etc.). If there are more than two features the opposition is complex (for example, /p-z/, /v-g/ etc.). This type of classification called a "preliminary phonological analyses of sounds" by V.A. Vassilyev is easy to use in practice nonetheless he suggests that theoretically it may be possible to apply N.S. Trubetzkot's classifications of phonological oppositions after such a preliminary analysis[1]. Categorization makes possible to define phonemes, phonological oppositions and distinctive features which come from setting up paradigmatic relations.

Another way of categorization is to observe phonemes on the axis of simultaneity, i.e. one must take into consideration the linear character of units, as phonemes occur in linear sequence. N.S. Trubetzkoy formulated this type of categorization according to the position and combination of sounds in words. Any given linear sequence of elements forms a speech but not a language. Any type of text is also formed by linear sequence is known as syntagmatic relations between the elements.

On the syntagmatic level we deal with facts of speech, while paradigmatic relations are established on language. Besides, paradigmatic relations between the phonemes show up as if they are constant, unchangeable, static units of the language: /i: – ʌ/, /k-h/ etc. On the contrary, syntagmatic relations emphasize the way underline how the speech sound-representatives of phonemes function as dynamic elements. Thus, paradigmatic relations make it possible to set up and categorize phonemes and their distinctive features, while allophones and non-distinctive features become clear owing to the syntagmatic level.

R. Jakobson stated "However as the phonemes of a given language form a system of sequences, so the system of phonemes, in turn, is formed by their constituents, i.e. distinctive features. And breaking up of the phonemes into distinctive features follows precisely the same tested devices as the division of the morphemes into phonemes"[2].

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[1] *В.А. Васильев.* Система фонологических оппозиций Н.С. Трубецкого в применении к английскому языку. М., МГПИИЯ им. М. Тореза, 1973, с. 8.

[2] *R. Jakobson.* On the identification of phonemic entities //Phonological Theory, Evolution and current practice. N.Y., 1972, p. 319.

As modern experimental investigations prove, the distinctive features operate differently in various positions. For example, in some languages **long – short, aspirated – non-aspirated, voiced – voiceless** distinctive features may be in different degrees.

Most of phonological theories in USA are based on the method of distribution of sounds in the linear of speech. They analyse syntagmatic relations between the elements of speech. This is also one of the possible ways of categorization of linguistic elements. But in order to give a complete and thorough theoretical analysis of the phonological system, linguistic elements must be classified both on paradigmatic and syntagmatic levels, which make clear all existing phonological and non-phonological oppositions and also distribution of phonemes and their allophones. In such analysis the problem of neutralization of oppositions takes on a new interpretation which as usual is syntagmatically dependent.

Any phonological unit has the following four functions:

1) **a constitutive function,** i.e. all the phonological units are used as the material-carriers of the linguistic units: morphemes, words, word-combinations and sentences (phrases);

2) **a distinctive function,** i.e. the phonological units serve to distinguish linguistic units: take /teɪk/ – lake /leɪk/; a nice house /ə´naɪs haus/ – an ice house /ən´aɪs´haus/; contract /´kɔntrækt/ – contract /kən´trækt/.

Is there any mistake here? – Is there any Miss Take here?

3) **a delimitative function** emphasizes the boundary between linguistic units, particularly, between morphemes, words and combinations. The elements which appear in such boundaries are known as junctures. The above examples, except the first one, illustrate the delimitative function;

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There are two other phonological terms which should be mentioned: "functional load" and "the power of opposition". The term "functional load" was introduced by N.S. Trubetskoy,

though it was defined by A. Martinet as the number of word pairs in which phonemes are opposed. For example, the functional load of opposition /p-s/ is high as it can differentiate many pairs of words /pit – sit/, /pil – sil/, /pæt – sæt/ etc. While the functional load of opposition /θ – ð/ is very low as it can differentiate some pairs of words A. Martinet also gave the definition of the functional load of an isolate phoneme on the basis of its frequent and rare occurrence. Frequent occurrence of the phoneme shows that its functional load is high, it is regarded low when occurrence is rare[1]. The idea of the functional load sometimes becomes very vague as some of the phonemes can occur only in a limited number of positions, so that, for example, some phonemes cannot be directly opposed to. It is hard to see how, on the basis of defining functional load as the degree of utilization for the differentiation of meanings, the load of /h/ versus /ŋ/ could be anything more than zero[2], because the phoneme /h/ never occurs in syllable final position and the phoneme /ŋ/ in syllable initial of the English words. In such cases it is possible to compare the frequency of occurrence of phonemes in words or in some texts. For example, the phoneme /h/ is relatively less frequent than the phoneme /d/. The phoneme /ʒ/ is also one of the relatively infrequent phonemes in English. So we should distinguish the frequency of phonemes and functional load of oppositions. They are important both theoretically and practically. This way of categorization of isolated phonemes on the basis of their frequency and phonological oppositions according to their functional load needs statistical data in various positions. As to the statistic investigation made by B. Trnka among 3.203 words he found 528 pairs of voice oppositions, 389 pairs of plosion-friction oppositions and 714 pairs of homonymous formations[3] (the latter is somewhat doubtful). The notion of functional load deals with the language as a system which is important in communication. The functional load of the opposition /θ – ð/ is low because of the small number of such word pairs. But the frequency of occurrence of the phonemes /ð/ and /θ/ is high as they are often in English words.

The notion of the power of opposition was defined by V.K. Zhuravlyov as "... the number of members or correlation pairs

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[1] *A. Мартине.* Принцип экономии в фонетических изменениях. М., 1960. с. 79-80.
[2] *R.S. Meyerstein.* Functional load. Mouton, 1970, p. 37.
[3] *B. Trnka.* A phonological Analysis of Present-day Standard English. Univer. of Alabama Press, 1968, pp. 111, 144, 145.

which form a given phonological opposition". The power of opposition may be measured by the number of neutralizable positions of distinction. If there are more positions of distinction and less positions of neutralization, the power of opposition is regarded strong. On the contrary, more positions of neutralization make opposition weak. In English the power of opposition /θ – p/ is weak in itself, but it is not neutralizable in any position and is included into the correlation pairs by voiced-voiceless (resp. lenis – fortis) distinctive features, which have a great number of members. Therefore, power of this opposition is regarded strong[1]. The power of opposition is closely connected with the functional load of opposition. The power of opposition is based on the number of members of opposition or correlation pairs while the functional load of opposition is based on the number of minimal pairs of words. When there are no minimal pairs, which can illustrate phonological oppositions like /ŋ – h/ the criteria of the relative frequency of phonemes should be used. In such cases the constitutive and recognitive functions of phonemes make clear the existence of the given phonemes. It should be stated that the functional load and the power of phonological oppositions in English have not yet been investigated completely, however the relative frequency of the English phonemes and consonant clusters was studied by some linguists.

In the field of suprasegmental phonology some interesting ideas, notions and terms have been suggested. The phonological functions of word-boundaries (junctures, syllables) and accents have become clearer than the phonological function of intonation (see chapters VI-VII of this book).

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[1] *В.К. Журавлев.* К понятию силы фонологической оппозиции // Фонетика. Фонология. Грамматика. К 70-летию А.А. Реформатского. М., «Наука», 1971, с. 115-116.

CHAPTER III

THE PRINCIPAL TYPES OF ENGLISH PRONUNCIATION

III.1. GENERAL REMARKS. LITERARY AND LOCAL TYPES OS PRONUNCIATION. THE ORTHOEPIC TEACHING NORMS OF ENGLISH PRONUNCIATION

One of the vital features of literary language, which distinguish it from its dialects, is the existence of more or less uniformed norms. A **literary language** has its own lexical, grammatical, and orthographic and pronunciation norms. Every national language possesses two forms: **the written form,** which is the literary uniform of a language and **spoken form**, which is not uniform and characterized by the individual features of the speaker. English is represented in writing and printing by the twenty-six letters of the alphabet, a dozen of punctuation marks and such devices as capitals and italics. In the spoken form of English we evidently use about a hundred sounds and variations in pitch, stress, pause etc. Each sound is used with some modifications in actual speech: For example some people have a full /r/ and others a very slight indication of the sound. The pronunciation of words varies considerably among the different regions in which English is spoken, so that we can easily distinguish speakers according to their pronunciation.

However, there is no strict boundary between written and spoken forms of a language because some elements of the spoken form may be found in the written form. As to the dialects they are the linguistic varieties of the language used by some group of speech community only in the oral or spoken form and differ from the spoken literary form of a language in more or less degree. Dialects may be distinguished from each other by their pronunciation, grammar, lexicon and stylistics. A special branch of linguistics which studies the variability of a given language is called **dialectology**. Dialectology has a close relationship to his-

tory, geography and other sciences as dialects may be important in the formation of nations and any change in the process of migration and urbanization. The pronunciation features of dialects are studied by a special branch of phonetics, namely dialectological phonetics. It is possible to investigate the literary and dialect pronunciations of the same language. The literary language has its **orthoepic norm**, i.e. the sum of rules of the spoken form characterized by the unity of the sound material formed in the process of its historical development. By the term norm we mean more or less constant and stable feature of pronunciation, i.e. all the components of the phonetic structure-phonemes, syllables, stress and intonation.

Speaking about literary orthoepic norm of English, some linguists use the terms **standard English** or **uniform English**, the latter has already been used in this book, J. S. Kenyon cited the following idea advanced by A.L. James: "... speech is immeasurable and there is no absolute standard of pronunciation... It is quite evident that we are not entitled to conclude that there is only a simple standard of pronunciation and only one correct way of speaking English. There are varieties that are acceptable throughout the country, and others are not"[1]. Sometimes "Good English" is distinguished from "Bad English" ("Vulgar English"). On the basis of its usage the following principal varieties of English are distinguished: 1) For**mal English** (Limited use) – more often written than spoken – speaking and writing for somewhat restricted groups in formal situations; 2) **General English** (Unlimited use) – both spoken and written – speaking and writing of educated people in their private or public affairs; 3) **Informal English** (Limited use) – more often spoken than written; 4) **Nonstandard English** (Limited use) – chiefly spoken – language not much affected by school instruction; often conspicuously local; not appropriate for public affairs or for use by educated people. According to the above classification P.G. Perrin and G.H. Smith came to the conclusion that Formal, General and Informal English make up Standard English, on the contrary, the term "Nonstandard English" refers to the everday speech of many people as ... a

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[1] *J.S. Kenyon*. American Pronunciation. Tenth edition, Ann. Arbor, Michigan, 1962, p. 15.

Northern English pronunciation is used in the region between Birmingham and the border of Scotland. Until the turn of the nineteenth century the majority of people in England spoke Northern English as it was uniform at that time, while Southern English was spoken by fewer people. There were even claims to recognize the superiority of the northern pronunciation and encourage it against the Southern (including London) pronunciation at the beginning of the nineteenth century. At present there are not so many differences between the Northern and Southern English pronunciations. Owing to the location of the great industrial centers in the North of England and the fact that many scientists and technicians speak Northern English, this type of pronunciation, mainly spoken in Yorkshire and Lancashire, has become especially influential.

The following basic differences between RP and the Northern English pronunciations may be observed, which cause the inventory of phonemes and their distribution: /a/ is used instead of GE /æ/ in words like **pan, bad, man** etc.; /æ/ is used for RP /ɑ:/ in such words like **chance, glass, ask,** i.e. in which the letter a is followed by word-final consonants other than **r**. The words **father, mother** are pronounced with /ɑ:/ as exceptions; **/u/** is used instead of /ʌ/ in such words as **cup** /kup/, **love** /luv/, **much** /mutʃ/ etc.; /e/ or /ɛ:/ is used instead of /eɪ/ in such words **may** /me/, /mɛ:/ **take** /tek/, /tɛ:k/)[1] etc.

The voiceless back lingual /ʍ/ is used for RP /w/ when the letter **w** is followed by the letter **h** in words like **when** (ʍen), **which** /ʍɪtʃ/ **what** /ʍɔt/ etc.

In the **Scottish type of pronunciation** some phonetic features of old English precisely the Northumbrian dialect of the Anglo-Saxon language, were preserved. In the seventh century the German tribes-angles and saxes migrated to Scotland. In the ninth century Scandinavians arrived in Scotland. The population of Scotland is known as high landers at present.

There is no difference between the written forms of Scottish and British English. But there are a number of marked differencies between British and Scottish speech which may be noticed in the inventory and distribution of phonemes, as well as in word accentuation and intonation.

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[1] *V.A. Vassilyev.* English Phonetics. A theoretical course, M., 1970, p. 40.

Instead of RP /æ/ the vowel /a/ is used in words like **bad** /bad/, **man** /man/ etc. /æ/ for RP /ɑ:/ in such words as **path** /pæθ/, **ask** /æsk/, **glass** /glæs/ etc.

Instead of RP /ɪ/ sound the vowel /ə/ is used before the combinations of two consonants: **fifty** /fəftɪ/, **which** /hwət/, **mister** /məstə/ etc. /ə/ is substituted by /ɪ/ or /ʌ/: **there is** /ðɪr'ɪz/, **rather** /rʌðɪr/, **take it away** /tekɪt'ʌwe/, **in a minute** /in ʌ'mɪnɪt/ etc. The sound /u/ is pronounced more front /ü/: **good** /güd/, **book /bük/, full** /fül/ etc. RP diphthongs /ou/, /eɪ/ are monophthongized to /o/ and /e/ in the Scottish English: **home** /hom/, **take** /tek/ etc. The first element of the diphthongs /aɪ/ and /au/ is pronounced as /ʌ/: **ice** /ʌɪs/, **child** /tʃʌɪld/, **house** /hʌus/, now /nʌu/ etc.

Among consonant sounds /l/ is usually dark, /r/ is trilled or rolled in all positions of a word.

The glottal stop /?/ articulated by closing the glottis, compressing the air below and then opening the glottis to release the air, is used instead of the final and internal /k/ and /t/: **bottle** /bɔ?l/, **cattle** /kæ?l/, **lake** /le?/ etc.

The Scottish English back lingual fricative voiceless (x) like the Russian and Uzbek /x/ (dark /h/) is used in words like **caught** /kɔxt/, **thought** /θɔxt/, **loch** /lɔx/ etc.

The sound /hw/ is used in words with initial digraph **wh: why** /hwaɪ/, **when** /hwen/, **what** /hwɔt/ etc.

The medio-lingual palatal voiceless fricative /x/ is used in words like **night** /nixt/, **sight** /sɪxt/ etc.

The pitch is not high in Scottish word accentuation. The Scottish intonation is characterized by slightly rising and falling melodies, monotonal timbre, weak stress and normal tempo of speech.

The Irish type of pronunciation is used in Ireland which is politically separated into two parts: The Republic of Ireland (Eire) and Northern Ireland (Ulster). The mother tongue of Irish people is the Irish language, a Celtic group of Indo-European languages. Ireland was conquered by England in the twelfth century and English began to be spread there.

After the independence of Ireland (Eire) in 1937 both English and Irish became the official languages. Nonetheless more Irish people speak English than Irish. English spoken in Ireland is known as Irish English which differs from RP with its inventory of phonemes and their distribution and also word accentuation

and intonation. As a result of linguistic contact between Irish and English, the latter changed some of its phonetic features. There are also some changes in the vocabulary and grammar of Irish English.

Instead of /ɪ/ or /i:/ the vowel /e/ is used in words like **spirit** /'speret/, **sit** /set/, **he** /he/, **tea** /te/ etc.

Long /ɑ:/ for RP is used in words like **man** /mɑ:n/, **bad** /bɑ:d/ etc.

The vowel /ɔ/ is substituted by /ɔ:/ in words like /sɔ:ft/. The diphthong /oɪ/ is used instead of RP /aɪ/ in initial and medial positions in words like **nice** /noɪs/, **ice** /oɪs/ **but** /aɪ/ is pronounced in the final position of words as in **my** /maɪ/, **by** /baɪ/ etc.

The consonants /θ/ and /ð/ are substituted by /d/ and /t/ in words like **thing** /tɪŋ/, **thought** /tɔ:t/, **this** /dis/, **bathe** /bed/. /ʃ/ is used instead of /s/ before consonants in words like **fist** /fɪʃt/, **sleep** /ʃlɪ:p/, **sixty** /sɪkʃtɪ/. The consonants /tʃ/ and /ʃ/ are intersubstituted in such words as **showel** /tʃʌvl/, **chimney** /ʃɪmnɪ/. The sounds /t/ and /d/ are pronounced dental aspirated before /r/: **dry** /d^{h}rai/, **tree** /t^{h}ri:/. Sometimes the final sound /d/ is omitted in words like **cold** /kəul/, **land** /la:n/, **hand** /ha:n/. The cluster /hw/ is used instead of /w/ in words like **what** /hwat/, **why** /hwai/, **when** /hwen/.

The Irish English vowels are pronounced longer than in RP. In Irish English stress may be shifted to the final syllable of a word: **sacri'fice**. The Irish English intonation is characterized by very high tones and abrupt rising and falling melodies[1].

Among the English dialects Cockney should be mentioned. The word «cockney» is used in two different meanings: 1) from French «coquin» which means knave, rascal, a literary – cooked egg and 2) a native of the East End of London or England as it is given in «Webster's New World Dictionary» (College Edition, 1966, p. 281-282). The second meaning of Cockney is right for this dialect. As a dialect it exists from the fifteenth century but its well-developed form began from the eighteenth century. There are some similarities and differences both in the inventory of phonemes and their distribution between RP and Cockney dialect. The systems of plosive consonant phonemes and their allophones are similar in

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[1] *Т.И. Беляева, И.А. Потапова.* Английский язык за пределами Англии. М., 1961, с. 15.

both of them but the distribution of plosive consonants of Cockney is different from RP. For example, voiced plosive consonants are used instead of voiceless plosives, labial fricatives[1]. Besides the following marked differences exist in modern Cockney dialect:

/i/ for RP /i/: **me** /məɪ/, **see** /səɪ/;

/ɪjə/ for RP /ɪə/: **clear** /klɪjə/, **fear** /fɪjə/;

/ɛ/ for RP /æ/: **ham** /ɛm/ **back** /bɛk/;

/aɪ/ for RP /eɪ/: **train** /traɪn/, **maid** /maɪd/;

/ɑ:/ for RP /au/: out /a:t/, down /dɑ:n/;

/ɔ/ or /ɔ:/ for RP /a:/: **charles** /tʃɔ:lz/ **charm** /tʃɔm/;

/ɔ:/ for RP/ /oɪ/: noise /nɔ:z/, spoil /spɔ:l/;

/au/, /ʌu/ for RP /ou/ **roud** /rʌud/, /raud/;

/owə/ for RP /ɔə/: **four** /fowə/, **sore** /sowə/;

/əu/, /ɪu/ for /u/: dew /djəu/, do /dəu, dɪu/;

/h/ is not used in initial positions before vowels: **heart** /ɑ:t/, **hook** /uk/, **hold** /auld/, **here** /ɪje/; the glottal stop /?/ is used instead of medial /p/, initial /t/, initial and final /k/: **paper** /paɪ?ə/, **better** /bɛ?ə/, **bacon** /ba?n/, **talk** /to?/; the affricate /dʒ/ is used instead of the cluster /dj/ in words like **immediately** /ɪməɪdʒɪtlɪ/, duke /dʒuk/[2]. Cockney preserved some phonetic features of old and Middle English which may be found even in orphography: **fur** for RP far, **clurk** for RP **cle**rk y**erd** for y**ard**, **fermer** for **farmer** etc. Thus, Cockney was not constant historically, as there is a mutual influence between the literary and dialect forms of speech[3]. There are also some differences of Cockney in word accentuation and intonation which is characterized by the specific rhythm, stress shifts and prolongation of vowel sounds in speech though the letter is not phonological in it.

III.3. THE PRONUNCIATION TYPES OF ENGLISH IN THE USA AS COMPARED WITH GENERAL BRITISH

English was brought to the American continent by the English colonists in the first half of the sixteenth century. There are at

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[1] *E. Sivertsen.* Cockney phonology. Oslo studies in English, № 8, 1960. p. 104-106, 120.

[2] *C.M. Wise.* Applied Phonetics. N.C. 1957, p. 250-252.

[3] *В.Н. Ярцева.* Развитие национального литературного английского языка. М., Изд. «Наука», 1969, с. 242.

least three major speech areas in the USA: 1) **the Eastern type of pronunciation;** 2) **the Southern type;** 3) **the Western general American type. The Eastern type** is spoken in New England (Maine), New Hampshire, the eastern parts of Vermont, Massachusetts, Connecticut, Rhode Island and in a part of the Atlantic sea-board, i.e. a part of the New York state. This type is also called Eastern New England speech. In New England and in the Boston State American English have some common features with RP pronunciation. They are found in such words like **dock** /dɔk/, **hot** /hɔt/, **dance** /dɑ:ns/, **sir** /sə:/, **far** /fɑ:/ etc., in which vowels sound alike.

This type of pronunciation avoids retroflex /r/ in the final position of a word and before consonants as it is in RP. As a result of /r/ dropping in the Eastern pronunciation there appear diphthongs **like** /ɛə/, /uə/ and /ıə/: care /kɛə/, sure /ʃuə/, mere /mıə/ etc.

There also a lot of marked differencies existing in the Eastern type of pronunciation. For example, in words like **sill** and **seal** and also **pot** and **port**, which sound alike /sil/ and /pot/ the phonetic distinction between long and short vowels becomes insignificant. The diphthong alternating between /au – ɑu/ is used in the Eastern dialect[1]. The opposition /hw – w/ exists initially: **whale** /hweil/ – **wail** /weil/ **whet** /hwet/ – **wet** /wet/.

The Southern type of American pronunciation is used in Pennsylvania, in the eastern area of Texas State, Arkansas, Maryland, Virginia, North and South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Louisiana. One of the specific phonetic features of this type of pronunciation is the so-called «Southern drawl» which is characterized by the diphthongization both long and short vowels in certain positions (in stressed position, before voiced consonants and fricatives). Besides, as the result of «Southern drawl» some diphthongs may be monophthongized. The first element of the diphthongs is pronounced long. While the second is omitted. More often diphthongs are pronounced as the combination of three vowels (thriphthongs). Sometimes the vowel /ə/ follows /i/ which is

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[1] *H. Kurath,* British Sources of Selected Features of American Pronunciation. Problems and Methods // In Honour of D. Jones, Longmans, 1964, p. 159.

called double diphthongization **yes** /jeɪs/[1]. The following are examples of the «Southern drawl»: **egg** /ɛəɪg/, **yes** /jeɪs/, **cost** /koust/, **walk** /wouk/, **fine** /fɑ:/, **shower** /ʃɑ:/ **either** /ɪ:ðə/, **again** /ə'gen/ etc. In the Southern speech word pairs like **ear – air; fear – fair** sound alike, i.e. homophonic as they are pronounced either with the diphthong /ɪə/ or /ɛə/. The diphthongs /ɛə/ and /æə/ form phonological opposition in the Eastern type of pronunciation.

Omitting the /r/ sound is typical of this speech. Even the so-called linking /r/ is not used in it. Instead of /ɑ:/ the vowel /æ/ is used in the Southern type: **dance** /dæns/, **path** /pæθ/, **ask** /æsk/ etc. In words **like farm, park, mark** long /ɑ:/ is diphthongized and pronounced as /aə/. The short vowel /a/ is used in words like **hot** /hat/, **pot** /pat/. In such words as **mourning – morning, hoarse – horse** the simple vowels /ɔ/ and /ɔ:/ form phonological opposition with /oə/ and /ɔə/. The simple vowels /æ/ – /ɛ/ form opposition in word-pairs like **mary** /mærɪ/ – **merry** /merɪ/ – **mary** /marɪ/.

There are some similar features between the Southern American and RP. They are the pronunciation of a soft /l/ before a vowel, the usage of the cluster /ju:/ in words like **reputation** /repju:teɪʃn/, **student** /stju:dənt/, **duty** /dju:tɪ/, the omission of /r/ etc.

It should be stated that New York city has dialect variations of its own. W. Labov admits: «The structure of the sound system of New York is the most amenable to quantitative techniques. Within this system, the question of structure can be approached on a number of levels of increasing complexity»[2]. One of the marked differences of New York city dialect is the usage of (r) which is more often dropped in words like **farmer** /fame/, **part** /pa:t/, **sort** /sɔ:t/. In words like **turn, shirt, bird both** /ɜ:/ and retroflex /ɜ^{r}/ are used. In unstressed positions retroflex /ɜ^{r}/ is substituted by the vowel /ə/. The linking /r/ is used normally. In monosyllabic words like **pot, top, not** the vowel /a/ is usually used. This is correct regarding words in which the sound /r/ follows the vowel: **orange** /aɜ^{r}ɪndʒ/, **sorry** /sarɪ/, **horror** /harə/ etc.

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[1] *А.Д. Швейцер*. Литературный английский язык в США и Англии. М., Изд. «Высшая школа», 1971, с. 50.

[2] *W. Labov*. The Social Stratification of English in New York City. Center for Applied Linguistics. 1966, p. 5.

The distinction between long and short vowels is not perceived in word pairs like **pot** /pat/ – **part** /pa:t/, **cut** /kat/, **caught** /kat/. The glottal, stop is used instead of the medial /t/ sound: **cattle** /kæ?l/, **little** /lı?l/ **butter** /ba?ə/ 1e?eг /1ɛ?ə/. /w – hw/ opposition does not exist in New York city dialect.

The Western type of American English is accepted as the literary pronunciation in the USA which is used by 120 million people. This type of pronunciation is known as **General American** (abbreviation GA). It is also called **Standard American English.** We do not use the latter term in order to have analogical terms RP and GA. General American is spoken in Mid-Atlantic States: New York State (but not the city itself which has its own dialect described above), New Jersy, Pennsylvania, Ohio, Indiana, Illinois, Michigan and Wisconsin.

The following differences exist within the consonant systems of RP and GA. One of the most striking phonetic features of General American is observed in the retroflex sonorant articulation of /r/. In GA /r/ is pronounced in two ways:

1) when it is retroflex sonorant /r/, the tip of the tongue is curled back so that a wide air passage is formed between the under side of the tongue-tip and the back slope of the teeth-ridge. In such an articulation of /r/ the position of the tongue at the start is the same as that the vowels /u/ and /i/ and follows curling back to /r/;

2) when it is pronounced as a cacuminal sonorant /r/, it is similiar to that of RP. This type of /r/ is usually used before the consonants /t, d, θ, ʃ, z/: **try** /traı/, **drink** /drınk/, **shry** /ʃraı/, **three** /θrı:/, **misery** /mızrı/ etc.

The retroflex GA consonant is usually indicated by the symbol /ɜ^{r}/. The degree of retroflexion varies. In some cases the tongue for /r/ is merely raised towards the teethridge, in others it is merely retracted and laterally contacted but the acoustic effect is strikingly similar. If the tongue position is fixed in the starting position for the /r/ in rate and voice uttered, the vowel /3/ in **hurt** /h^{r}ɜt/ is made. Hence, combinations of r – any vowel form rising diphthongs exactly as do /w/ and /j/[1].

Many speakers of GA use the slightly dark /1/ before vowels and darker one in the other positions, while in the Southern

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[1] *J. S. Kenyon.* American Pronunciation. Ann Arbor, Michigan, 1962, p. 161.

type of American English a soft /l/ is used in nearly all positions: **hill** /hıl/, **pillow** /pılou/, **full** /ful/ etc.

The distinction between GA /hw/ or /ʍ/ is based not only on the voiceless /hw/ arid voiced /w/ feature but also on the fricative back-lingual and sonorant labial (bilabial) features, /hw/ is regarded as a consonant cluster and used in words spelt with the initial digraph **wh** /ʍ/ is regarded as a facultative or optional phoneme in GA. ***Example:*** **whether** /weðə/, /hweðə/ – **weather** /weðə/, **whale** /hwɛjl/ – **wail** /wɛjl/ **what** /hwat/ – **watt** /wat/ etc.

The glottal stop /?/ is used occasionally as an allophone of the medial /t/ phoneme in the words: **butter** /bʌ?ə/, **letter** /le?ə/, **bottle** /ba?l/. It also appears in the negating interjections /?'m?m,?'n?n/ and the affirming /?mh'm/ and as a prosodic onset of overstressed initial vowels, as in älways, äbsolutely, öh! äh[1] etc.

GA /t/ is often voiced in an intervocalic stressed position but usually differs from /d/ by being articulated as a swift and snappy top aginst the upper gum. Acoustically GA /t/ is a medial sound between the brief /d/ and one-tap alveolar /r/: **tomato** /tomatou/, **button** /bʌtn/, **elevator** /elevɛjtə/ etc. The words **latter, kitty** are usually not homophonous with ladder, kiddy.

The most striking distinctive feature exist between the GA and RP vowel systems.

The quantity feature of vowels (long – short) is not phonemic (distinctive) in GA. It is a phonetic feature which usually depends on the position of vowels. Besides, there is no symmetry between all the short and long pairs of vowels. Only /ı:– ı/, /u – u:/ pairs are constant in GA. GA /ɛ/ is more open than RP /e/: **bed** /bɛd/, **tell** /tɛl/, **pet** /pɛt/. RP /a:/ before /f/, /θ/ /s/, /ns/ is usually pronounced /æ/ in GA: **pass** /pæs/, **staff** /stæf/, **path** /pæθ/, **chance** /tʃæns/, **rather** /ræðə/, **after** /æftə/. GA /a/ is used instead of RP /ɔ/: **pot** /pat/, **lot** /lat/ **common** /kamən/. In words like song /sɔŋ/, **long** /lɔŋ/ /ɔ/ is preserved.

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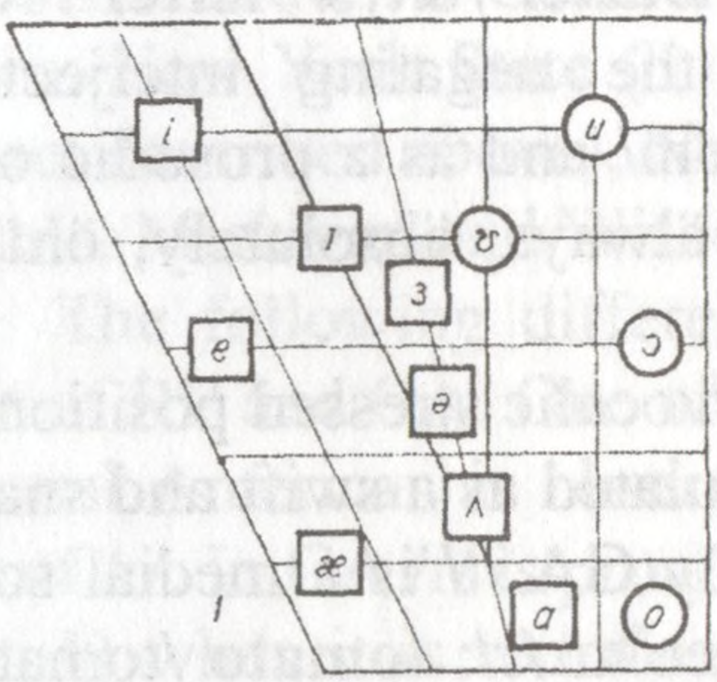
[1] *H. Kurath.* A Phonology and Prosody of Modern English. An Arbor, 1964, p. 51. Note: The interjections and affermings, onomatopoetic words and signals for people and animals etc. are studied in a special branch of phonetics namely «extra – normal phonetics» or «non-canonical phonetics». *А. А. Реформатский.* Неканоничная фонетика. В книге «Развитие фонетики современного русского языка» М., Изд. «Наука», 1966, с. 96-109.

The vowels /ɔ, ɔ: o/ are regarded different separate phonemes in GA. /ɔ/ is an unrounded allophone of /a/, whille long /ɔ:/ and short /ɔ/ may be slightly distinctive from each other.

Instead of RP cluster /ju:/ the vowel /u:/ is used in GA: **due** /du:/, **duty** /du:tɪ/, **student** /stu:dənt/ etc. But /j/ is pronounced in words like beauty /bju:tɪ/, **few** /fju:/, **music** /mju:zɪk/ etc.

RP /ə/ known as **shwa** has /ʌ˘, ɪ, ɛ/ variations in GA. It usually appears in unstressed positions: **apply** /ʌˆplaɪ/, **oppose** /ʌˆpouz/, **capable** /kɛɪpɪbl/, **human** /hju:mɪn/, **princess** /prɪnsɛs/ etc.



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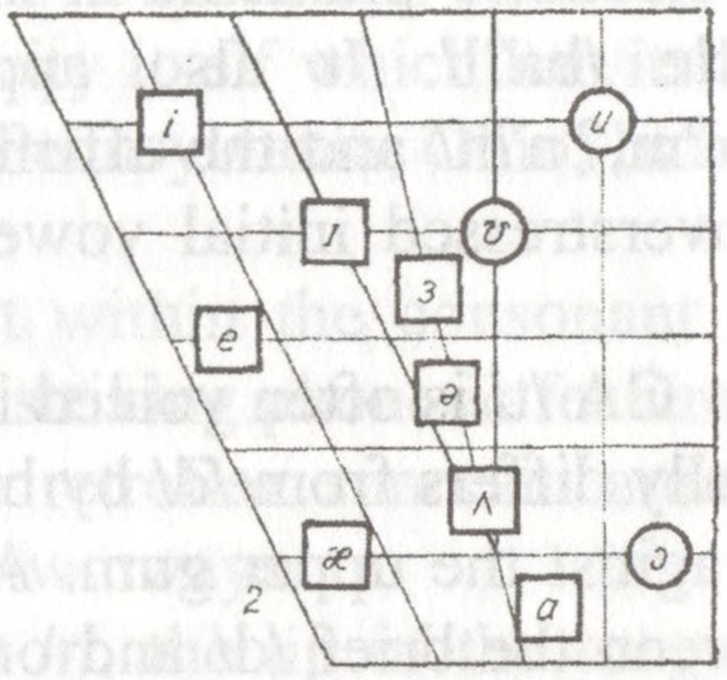

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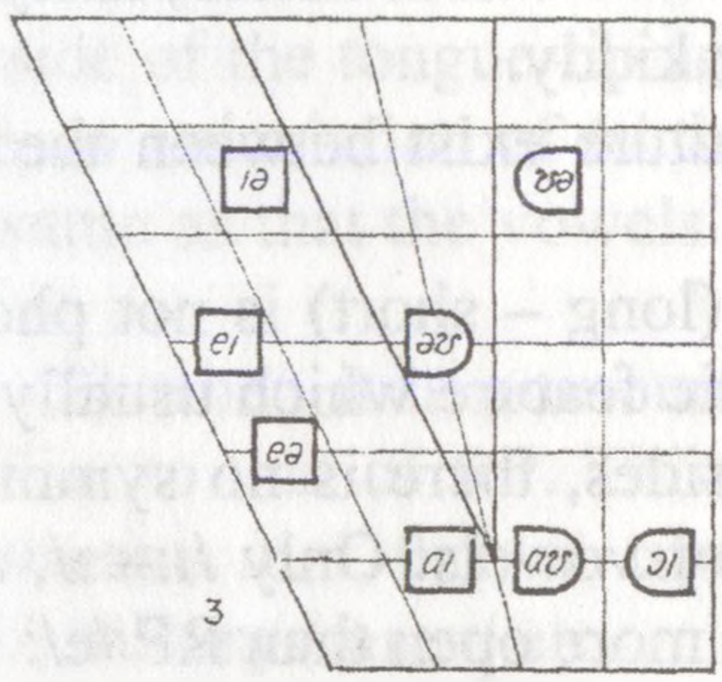

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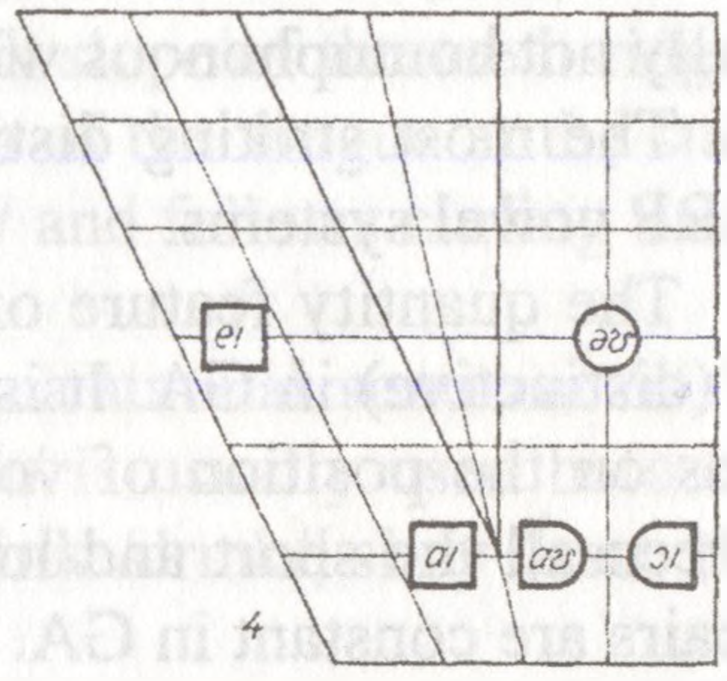

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The vowel inventory and the distribution of vowels and their description varies from one linguist to another. While there are more similarities in the description of vowel phonemes in RP. Almost all the British linguists distinguish twenty-one vowel phonemes including the facultative or optional vowel /ɔə/. The most original vowel table of RP and GA is given by J. Windsor Lewis in his «A Concise Pronouncing Dictionary of British and American English» (London, Oxford Univ. Press, 1972) (See Fig. 1-4).

Rounded vowels are given in O ungrounded in ف and when the first or the second elements of diphthongs are rounded, they are indicated by /əu/ /uə/, J. W. Lewis uses the symbols of narrow form of transcription: The diphthong /ɔə/ is omitted in the RP vowel table. RP /ə/ does not appear in the GA table because it is usually substituted by /a/ in GA. It would also have been possible to omit symbol /ʌ/ from Fig. 2 because in the case of most GA speakers it scarcely differs from /ɔ/ in quality. The RP diphthongs /ɪə, eə, uə/ do not appear in Fig. 4 because the sound sequences of the GA pronunciations of near, **hair** and **pure** do not contain diphthongs as the term is usually defined. Probably, there is a printing mistake in the notation of /ue/ which should be given as /uə/. J.W. Lewis uses the symbol /eə/ for RP /ɛə/, the latter symbol is used more often. As he states in the design of the dictionary he has tried to simplify the notation of phonetic symbols used by D. Jones and A. C. Gimson. The problem of using different transcription systems in RP and GA is closely connected with the articulatory, acoustic a perceptible characteristics of speech sounds which depend on the scientific and practical approach of the investigator. Sometimes the phonetic symbols used in books depend on the printing conditions as in the case of copyright of the manuscripts of books written by Ch. C. Fries (Teaching and Learning English as Foreign Language, Ann Arbor, 1957), K. L. Pike (Phonemics. Ann Arbor, 1947), H. L. Smith and G. L. Trager (Outline of English Structure, 1951). G. Gleason also used Ch. C. Fries', H. L. Smith's and G.L. Trager's transcription in his book «An Introduction to Descriptive Linguistics» (First published in N. Y., 1955).

The so-called **«broad» and «narrow» forms of transcription** are usually often used in description of RP. But in GA there are too many transcription forms suggested by various linguists. There are differencies in word accentuation between RP and GA too. Usually British linguists distinguish three degrees (primary, secondary and weak) degrees of word stress, while American authors distinguish four (primary, secondary, tertiary and weak) or even five (including the fourthiary) degrees of word stress. These degrees also have different notations in books. One which H. A. Gleason indicated is /ʌ`v/ symbols in GA. From these / /\/ symbols are used to indicate primary and secondary degrees of stress in RP. The secondary stress is more commonly used in GA than

RP. In words ending -ary , -ery , -ory as **necessary, monastery, territory,** which are derived from Latin through old French, the primary stress in old French was usually on what is now the syllable before the last. In Middle English the accent shifted to the fourth syllable from the last in accord with the native English tendency to accent words near the beginning. But owing to the principle of alternating rhythm in words, consisting of three or more syllables by the different degrees of stress, a distinct secondary stress remained where the main accent had been. Thus Middle English **neces′sarie** became **′neces, sary** and **‚terri′torie** became **′terri′tory.** This tendency still remains in GA.

Examples[1]:

Spelling	**RP**	**GA**
adversary	/′ædvə,serɪ/	/′ædvəsərɪ/
commentary	/′kɔmən,terɪ/	/′kɔməntərɪ/
momentary	/mɔmən,terɪ/ /′mɔmənt(ə)rɪ/	
auditory	/′ɔdɪ,trɪ/	/′ɔdɪtərɪ/

In many words of RP the primary stress is preserved on the first syllable, while in GA stress is shifted to the next syllable. For example: garage RP – /'gæra:ʒ/, GA – /gə′raʒ, gə′radʒ/, **contrast** RP – /′kɔntrɑ:st/, GA – /kən′træst/ etc.

The shifting accent is often observed in complex and compound words in both literary types of pronunciation. But it is more frequent in GA that in RP. The accentuation of words may be different when they are pronounced isolately and in phrases, the latter is called a sentence stress or phrase stress (H. Kurath) or sometimes sense stress (J. S. Kenyon). Such compound adjectives as **high-strung** /′haɪ′strʌŋ/ in GA, when used predicatively as in *He's rather high-strung*, retains its stress marks. But when it is followed by a strong stress (**'high-strung 'nerves),** the second accent is reduced[2].

There is also a spelling-pronunciation relationship both in RP and GA. As we have seen phonetic changes are concerned

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[1] *J.S. Kenyan.* American Pronunciation. Ann Arbor. Michigan, 1962, p. 87-88.

[2] *John S. Kenyon, Thomas A. Knott.* A Pronouncing Dictionary of American English. Springfield, Mass., 1953, p. XXV.

primarily with the spoken form, though the written form retains its constancy except for the spelling of some words. For example, the following words have slight differencies in their spelling (left column – RP, right column GA forms):

axe – ax,	**draught – (draft) – draft,**
briar – brier,	**tyre (tire) – tire,**
labour – labor,	**defence – defense,**
honour – honor,	**offence – offense,**
centre – center,	**enclose – inclose,**
organise – organize,	**through – thru,**
cosy – cozy,	**pyjamas – pajamas**[1] etc.
grey – gray,	

We can notice from this list of words that GA spelling is more close to the pronunciation than in British English.

As to intonation in both literary types of pronunciation, it is a very complex and difficult problem to compare all intonation patterns. But it is possible to distinguish an American speaker from a British one by their intonation.

In British speech falling and rising melodies are accompanied by more loudness and length than in American speech.

The only common prosodic feature may be observed in the pronunciation of **«yes – no»** questions which are marked by a rising intonation in RP and GA[2].

But the rhythmic, syllabic and accentual structures of such questions may also be different in both types of pronunciation.

III.4. THE PRONUNCIATION OF ENGLISH IN OTHER COUNTRIES

III.4.1. The Canadian type of pronunciation

English came to Canada in the seventeenth century when the British colonists arrived there. English is one of the national offi-

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[1] *H. Spitzbardt, Gerhard Grðf.* Amerikanisches English. Leipzig, 1964, S. 36.

[2] *Ch. C. Fries.* On the Intonation of «Yes – no» questions in English. In Honour of D. Jones, Longmans, London, 1964, p. 31.

cial languages (about 14 million speakers) together with French (about 4 million speakers) in Canada.

Canadian English (CaE) has common phonetic features both with RP and GA. English, which is spoken in Ontario region, is more similar to GA than in other parts of Canada as this region is situated very close to the USA. The most specific phonetic features of CaE are the following:

a) before the voiceless consonants the first element of the diphthongs /ai/ and /au/ may be substituted by the vowels /ʌ/ and /ɛ/ in words like **out** /ʌut/ or /ɛut/, **nice** /nʌɪs/ or /nɛɪs/, **house** /hʌus/ or /hɛus/;

b) in word final position before the sonants /1/, /m/, /n/ the vowel sounds as /u/, /ə/, /i/ may be added: **mail** /meiul/ **film** /filəm/, **known** /nouən/ etc.;

c) the vowel sound /ɔ:/ is used both in **pod** and **pawed** which sound homophonic, i.e. similar;

d) Scottish influence is apparent in Canada, especially in the use of the intermediate /a/ for /æ/ in words like **man, hat, bad** in the regions of Nova Scotia and Alberta. For the /au/ diphthong /ou/ and /u/ are heard, which probably reflects Scottish influence as well[1];

e) the American retroflex /r/ is used in CaE too, nonetheless the retroflex /r/ sounds «brighter» (further front in the Canadian Maritimes than in Canada West of the French-speaking belt. It is regarded as a valid dialectological statement)[2];

f) the glottal stop /?/ used in GA is typical of CaE too: **mountain, fountain, sentence, accountant**;

g) /æ/ is usually used instead of /ɑ:/ in words like **path** /pæθ/, **task** /tæsk/ etc.;

h) **dark** /1/ is used in CaE in almost all positions: **pull** /pul/, **fellow** /fɛlau/ etc.;

i) both GB and GA forms of accentuation are used in words ending with ***-ary, -ory, -iry;*** **dictionary** /dɪkʃənrɪ/ or /ˈdɪkʃən,ɛrɪ/, **laboratory** /lə ˈbɔrətrɪ/ or /ˈlæbrə,tɔrɪ/ etc.

j) CaE intonation possesses many features in common with both RP and GA. However it is still not scientifically investigated by the methods of instrumental phonetics.

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[1] *J.S. Kenyon. Th. A. Knott.* Id., p. XLV.

[2] *H. Pilch.* Structural Dialectology. // American Speech, 1972, vol. 47, No. 3-4, p. 166.

III. 4.2. The Australian Type of pronunciation

Australian English is one of the literary national types used since the end of the eighteenth century. There are three types of pronunciation in Australia:

1. Educated or Cultivated Australian English;
2. Broad Australian English;
3. General Australian English (GAu) which is regarded as a literary type.

The following simple vowels (monophthongs and diphthongized vowels) exist in GAu;

/i/ as in the word **seat** /sɪt/
/ɪ/ » **sit** /sɪt/
/ɛ/ » **head** /hɛd/
/æ/ » **had** /hæd/
/ʌ/ » **father** /'fʌðə/
/ɔ/ » **hot** /hɔt/
/ɔ:/ » **sort** /sɔ:t/
/ʊ/ » **put** /pʊt/
/u/ » **boot** /bʊt/
/ʌ/ » **but** /bʌt/
/ɛ/ » **bird** /bɛd/
/ə/ » **alone** /ə'loun/

The following diphthongs exist in GAu:

/ɛɪ/ as in the word **day**
/ou/ » **so**
/aɪ/ » **try**
/ʌu/ » **down**
/ɔi/ » **boy**
/ɪa/ » **clear**
/ɛə/ » **dare**
/uə/ as in the word **tour** (tuə)[1].

GAu /i/ is a diphthongized vowel as /ɪɪ/ or diphthong /aɪ/, /ɪ/ is more close and somewhat prolonged especially in a stressed

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[1] *Г.А. Орлов.* Современный английский язык в Австралии. М., «Высшая школа», 1978, с. 62.

position. GAu uses diphthong /ʌɪ/ for /ʌ·ɪ/ instead of /ɛɪ/: **say** /sʌɪ/ **made** /mʌ·ɪd/. It often alternates between /ɛɪ~ʌɪ~æɪ/ in Australian speech. GAu diphthong /aɪ/ sounds like /ʌɛ/, /ɔɪ/, /ɔ·ɪ/: **time** /taɪm/, /tɔɪm/ etc. GAu /ʌ/ is used instead of RP /a:/: **father** /fʌðə/. The opposition /ʌ – a:/ is neutralized in GAu: **cut – cart, much – march** sound identical[1], i.e. become homophones.

In principal the phonetic inventory of GAu does not differ much from RP but the distribution of phonemes is different in both literary types. There are also slight differences in word accentuation and intonation between GAu and RP. But in many cases GAu is much closer to the RP pronunciation than that of GA.

III. 4.3. The New Zealand English Pronunciation

This type of pronunciation has many features in common with RP. The most striking phonetic features of the New Zealand English pronunciation are the following:

a) the short vowel /ɪ/ is prolonged in the final unstressed position: **city** /sɪtɪ:/, **very** /verɪ:/ etc;

b) in the unstressed position /i/ becomes /ə/. Phonologically the opposition /ɪ – ə/ is neutralized in an unstressed position: **did** /dəd/, **it is** /ət əz/, **charges** /tʃa:dʒəz/ etc.;

c) words like **dance**, **chance**, **glass** have two forms of pronunciation, one, which coincides with RP, the other – with GA: /da:ns/ – /dæns/, /tʃa:ns/–/tʃæns/, /gla:s/ – /glæs/ etc.;

d) the diphthong /au/ is substituted by /æu/: **town** /tæun/, **cow** /kæu/ etc.;

e) Besides the influences of GA, as in the usage of /æ/ and substitution of /ʃ/ by /ʒ/ in words like **Asia** /ˈeɪʒə/ **version** /və:ʒn/ the influence of Eastern English and Cockney dialects may be noticed in the New Zealand pronunciation[2].

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[1] *Г.А. Орлов.* Указ. соч., с. 64-70.

[2] *Т. М. Беляева, И. А. Потапова.* Английский язык за пределами Англии. Л., 1961, с. 101-102.

III. 4.4. The South African Pronunciation

The following are the most striking phonetic features of this pronunciation type:

a) the vowels may be nasalized when the nasal consonant precedes or follows them;

b) all the vowel sounds are halflong, i.e. all short vowels become longer and long vowels – shorter;

c) a special vowel /ë/ which is half-close, front-central, half-tense and rounded, is used instead of /ɪ/, /ɛ/, /ə/, /ə:/ both in stressed and unstressed positions;

d) in an initial position /h/ may be dropped: **hause** /aus/;

e) the rolled or trilled (r) is used in all positions: great /grɛit/, **dear** /dɪ·r/, **warm** /wɔ·rm/ etc.;

f) word accentuation and intonation are different in this type than in RP and GA. For example, auxiliary verbs, pronouns and meaningless words may be stressed and therefore they are pronounced in full;

g) the glottal stop is often used to retain the «jerky» South African pronunciation[1].

There are also other types of pronunciation in Asia (India, Pakistan, Philippines), in America (Puerto-Rico), which are regarded as dialects or idiolects. Besides there are mixed or hybrid languages which have peculiarities of English.

III.5. THE RELATIONSHIP BETWEEN THE PRINCIPAL TYPES OF ENGLISH PRONUNCIATION AND THEIR DIALECTS

Usually in conversation people use the terms «British dialect», «American dialect» or «British accent», «American accent» etc. which concerns only the characteristics of speech, i.e. the way British or American speech is used orally.

The term **dialect** is often used in the sense of regional, local or geographic varieties of a language mainly used in oral speech. (In writing there are may be dialectal words and constructions used which characterize the style of speech). A language belongs

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[1] Т. М. Беляева, И. А. Потапова. Указ. соч., с. 72-75.

to a nation or nations, as English does, therefore it is a social phenomenon, understandable by all its members. A language is not a complex combination of individual speech forms, but it has its literary orthoepic (pronunciation) and orthographic (written) rules.

The individual speech of a member of a language community is known as an **idiolect.** Idiolects and dialect speakers are identifiable by their sounds, tone or melody, words and also by expressions and constructions, i.e. by their phonetic, grammatical, lexical and stylistic features. The distinction between a language and a dialect is based on criterion of functional approach. Functionally a language is characterized by the acceptance of the communication unit and elaboration of function in society. If two or more languages are spoken (as in Canada English and French are official languages), they are called **bilinguals** (speakers in two languages) and this process is known as **bilingualism.** Bilingualism may be of two types: 1) **natural,** when people speak two languages which have mutual contact; 2) **artificial** bilingualism appears in second language learning when the mother tongue (its pronunciation habits, grammar, lexicology) influences the language studied.

These problems are regarded as an object of sociolinguistics, which is an interdisciplinary branch of modern linguistics. The phonetic and phonological features of a language – dialect relationship, natural bilingualism and also some types of speech communities classified by their social characteristics are studied in a new branch of phonetics, namely **social phonetics.** The problem of artificial bilingualism is studied in comparative-typological phonetics or phonology[1] which is a part of comparative – typological linguistics. Abroad it is known as **contrastive linguistics** (it's branch is contrastive phonetics) more often used in the USA. It is also called **confrontative linguistics** in Germany.

Now let us turn to the problem of affinity of the principal types of English pronunciation with its dialects which is the result of social, educational, trade, cultural, migration and urbanization factors. Correlation between these factors may be noticed in the

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[1] *А.А. Абдуазизов.* Сопоставительная фонология разносистемных языков и обучение произношению (обзор). //Проблемы фонологии и морфонологии. М., 1975, с. 173-182.

process of language change and dialect variations. Ch. Barber states: «One way in which the English language has been changing in recent years is the relationship between the different kinds of English spoken in England, and in people's attitudes to these different varieties of the language»[1]. Other ways of changing RP may be explained by the influence of American English pronunciation types heard in the cinema, on the wireless and television and on records of popular singers etc. A.C. Gimson also pointed out the influence of the London dialect to RP such as the pronunciations of /o:/ instead of /ɔ:/, /ʌ:/ instead of /ɜ:/, monophthongization of /eɪ/ as /ɛ:/ in words like **saw** /so:/, **fur** /fʌ:/, **day** /dɛ:/. In modern RP pronunciation the influence of Southern English may be found such as the unrounding of /u/ = /ə/ (**good**), coalescence of /ɔ:/ with /ɔə/ (**more**) and sometimes with /uə/ (**poor**), centralization of the first element of the diphthong /ou/ = /əu/ (**go**)[2]. These changes may be found in the Australian English pronunciation in which they are regarded as the orthoepic norm. These examples show the intradialectal influences and contacts between the principal types of pronunciation (RP and GAu). There are also intraidiolectal phonetic variations defined as the variations in the pronunciation of one and the same native speaker of a language, i.e. those within one and the same idiolect. V.A. Vassilyev distinguished two types of **intraidiolectal variations.** The first type of intraidiolectal phonetic variations are spontaneous, accidental, unintentional, unconditioned, non-functional, and therefore absolutely non-distinctive linguistically. For example, though the pronunciation of one and the same sound, word or a phrase may be different acoustically, though identical and non-distinctive from the linguistic point of view.

The second type of intraidialectal phonetic variations may be intentional and conditioned by different styles of speech[3], i.e. colloquial and full styles of pronunciation (see next paragraph).

Some terms have been suggested for use in the intradialectal and interidiolectal phonetic variations. The term **diaphone** (D. Jones) is defined as a sound used to denote a sound together with other sounds which replace it consistently in the pronunciation of

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[1] *Ch. Barber.* Linguistic Change in Present-day English. London, 1964, p, 16.
[2] *A.C. Gimson.* Phonetic Change and the RP Vowel System. //In honour of D. Jones, Longmans, London, 1964, p. 133.
[3] *V.A. Vassilyev.* English Phonetics. A theoretical course. M., 1970, p. 63.

other speakers. For example, different types of /ai/ or /r/ may be regarded as members of the same diaphone. The idiophone is used to denote a sound pronounced in one idiolect in place of a different sound pronounced in other idiolects in the same phonetic context as allophones of the same phoneme. These terms are equivalent to **free variants** of phonemes[1]. Free variants of phonemes are those which substitute each other in the same context. It is possible to use the term **variphone** in the sense of free variations of a phoneme in the same context. The term variphone may be used not only in the interdialectal or interidiolectal variations but also within one and the same language. For example, in the word **direct,** which is transcribed /dɪrekt/ and /daɪrekt/ the phonemes /ɪ/ and /aɪ/ may be members of a variphone. Likewise, in the word again /ə'geɪn/, /ə'gɛn/ the vowels /eɪ/ and /ɛ/ may also be members of a variphone. There are also accentual and intonational variations of which the latter have not been investigated at all.

As to the teaching standard of English, V.A. Vassilyev suggested two basic criteria for choice: 1) the degree of understandability of this or that type of pronunciation in all English-speaking countries; 2) the extent to which this or that type has been scientifically investigated and practically described in a number of textbooks, dictionaries, audiovisual aids[2] etc. These criteria have been applied to both RP and GA which are chosen as teaching units in many countries.

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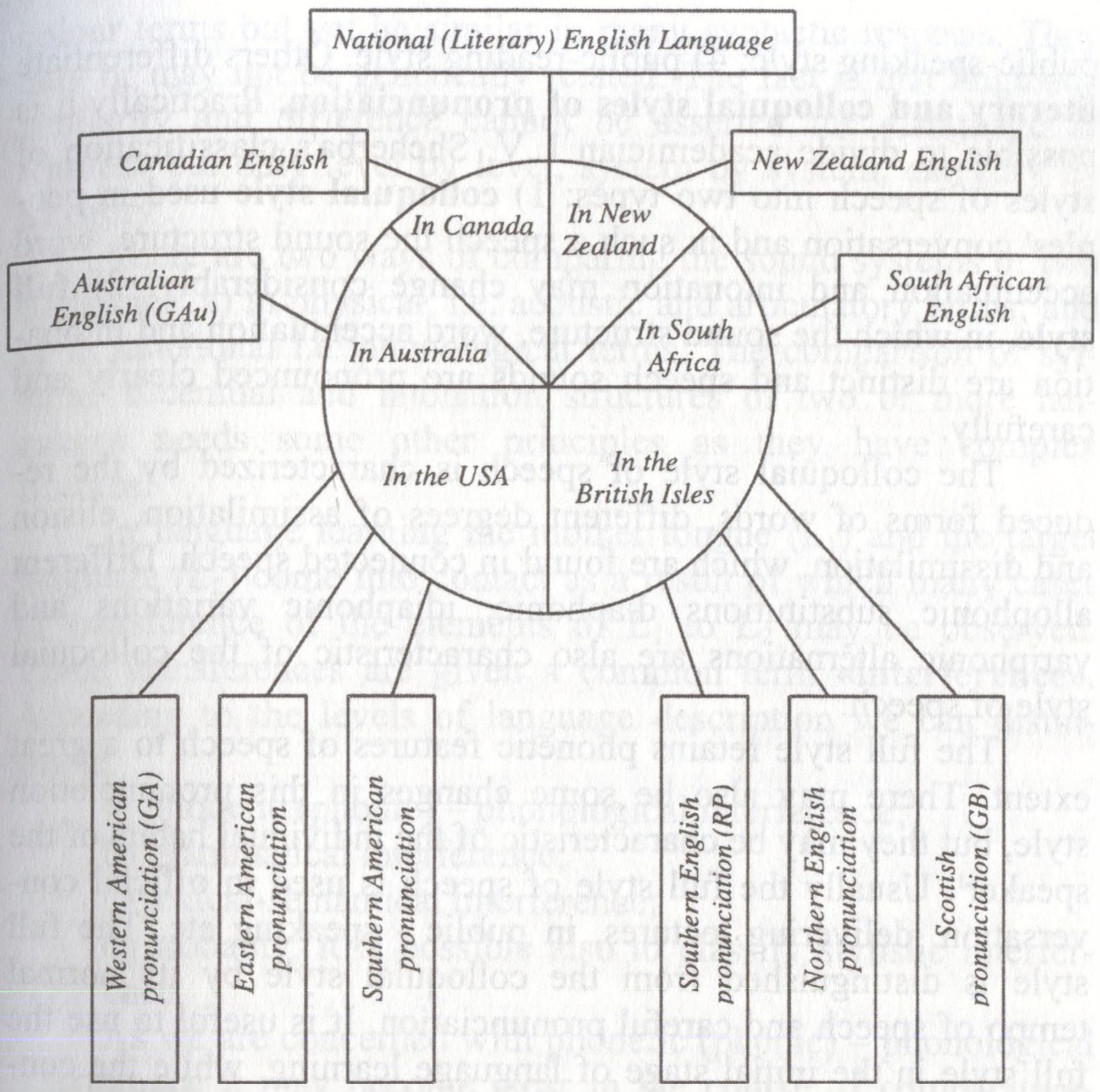
[1] *V.A. Vassilyev.* Id., p. 88.



III. 6. STYLISTIC VARIANTS OF PRONUNCIATION

The pronunciation of the speaker is not similiar in all occasions. It may vary, depending on the situations, context, on the character of the audience and listener, on the emotional attitude of the speaker etc. All these are characteristic of the style of speech. The oral form of speech has its own phonetic features. For example, the pronunciation of one and the same person in friendly conversation and in delivering a lecture or speaking over the radio may have different phonetic features. On the basis of such differencies it is possible to distinguish stylistic variants of pronunciation. There are different classifications of stylistic variants of pronunciation. Some authors distinguish four principal styles for practical purposes: 1) familiar colloquial; 2) formal colloquial; 3)

public-speaking style; 4) public-reading style. Others differentiate **literary and colloquial styles of pronunciation.** Practically it is possible to divide academician L.V. Shcherba's classification of styles of speech into two types: 1) **colloquial style** used in peoples' conversation and in such a speech the sound structure, word accentuation and intonation may change considerably; 2) **full style,** in which the sound structure, word accentuation and intonation are distinct and speech sounds are pronounced clearly and carefully.

The colloquial style of speech is characterized by the reduced forms of words, different degrees of assimilation, elision and dissimilation, which are found in connected speech. Different allophonic substitutions diaphonic, idiaphonic variations and variphonic alternations are also characteristic of the colloquial style of speech.

The full style retains phonetic features of speech to a great extent. There may also be some changes in this pronunciation style, but they may be characteristic of the individual habits of the speaker[1]. Usually the full style of speech is used in official conversation, delivering lectures, in public - speaking etc. The full style is distinguished from the colloquial style by its normal tempo of speech and careful pronunciation. It is useful to use the full style in the initial stage of language learning, while the conversational style may be used in the later stages. Thus, the stylistic variants of pronunciation are also important in choosing the right type of rules for teaching pronunciation.

The stylistic features of pronunciation are studied by **phonostylistics** which is a special branch of phonetics.

THE PHONEMIC SYSTEM OF THE ENGLISH LANGUAGE. GENERAL REMARKS

In language teaching we have to do with at least two languages: the mother tongue and the target language. These may fall into the same broad type as far as their morphological characteristics are concerned, but be strikingly different in respect to their syllable structures. They may differ markedly in their lexical structure, for example, in the semantic field of kinship terms or

[1] *Л.В. Щерба.* Фонетика французского языка. М., 1967, с. 20-21.

colour terms but yet be similar in many syntactic respects. They may or may not be genetically related. The fact is that linguistic similarity and difference cannot be asserted for «language as wholes» but only level by level, system by system, category by category[1].

There are two ways of comparing the sound systems of two languages: a) in physical, i.e. acoustic and articulatory terms; and b) in functional i.e. phonological terms. The comparison of syllabic, accentual and intonation structures of two or more languages needs some other principles as they have complex features.

In language learning the mother tongue (L_1) and the target language (L_2) come into contact as a result of which many cases of transference of the elements of L_1 to L_2 may be observed. These transferences are given a common term **«interference»**. According to the levels of language description we can distinguish:

a) phonetic (phonic) – phonological interference;
b) grammatical interference;
c) lexical-semantical interference;
d) probably, it is possible also to classify stylistic interference.

As we are concerned with phonetic (phonic) – phonological interference it may become clear in the course of comparative-typological analysis of languages. But the term phonetic (phonic) – phonological interference is too general and it is described only on the bases of phonemic vs. non-phonemic differences in languages. The following types of interference within the segmental phonemes of two or more languages are usually distinguished: 1) under-differentiation; 2) over-differentiation; 3) re-interpretation; 4) phone-substitution[2]. Among these types of interference the second is not always noticeable as it is not always clear how it can be proved nor to what extent it may rightly be called interference in any strict sense, since the perception of allophonic differences presumably does not diminish communication and may not even

[1] *S. Pit Corder*. Introducing Applied Linguistics, Penguin Books, 1977, pp. 227-228.
[2] *U. Weinreich*. Languages in Contact: Findings and Problem. The Hague, Mouton, 1963.

be manifested in any foreign accent[1]. There is also a classification of interference types according to their occurrence in production and in perception (in rhythm and intonation)[2]. In general all approaches to the problem of interference are limited by the segmental phonemes. Though some linguists emphasize the existence of transference of suprasegmental features of the mother tongue to the target language but none of them has classified the types of such a suprasegmental interference. We suggest the following types of phonetic (phonic) – phonological interference:

1) the phonemic interference;
2) the syllabic interference;
3) the accentual interference;
4) the intonational interference;
5) the phonologically mixed interference.

(Its types are: a) phonemic-syllabic; b) syllabic-accentual; c) accentual-intonational). All these types of interference may be observed between the mother tongue and target language in the course of language learning, i.e. in the process of artificial bilingualism.

There are also cases of interference within one language system, i.e. in the process of the natural bilingualism which is a special problem of sociolinguistics. The problem of phonetic (phonic) – phonological interference needs special investigation. Therefore, in this book we deal only with a comparison of phonemic systems of English and Uzbek which is both theoretically and practically important.

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[1] *S. Saporta, R. E. Brown and W. D. Wolfe.* Toward the Quantification of Phonic Interference. //Language and Speech, vol. 2, 1959, pp. 205-210.

[2] *Fred M.* Chreist. Foreign Accent. N. Y., 1964.

CHAPTER IV

THE SYSTEM OF CONSONANT PHONEMES IN ENGLISH

IV.1. VOWEL-CONSONANT DISTINCTION

Usually the distinction between a vowel and a consonant is regarded to be not phonetic, but phonemic. From the phonetic point of view the distinction between a vowel and a consonant is based on their articulatory – acoustic characteristics, i.e. a vowel is produced as a pure musical tone without any obstruction of air-stream in the mouth cavity while in the production of a consonant there is an obstruction of air-stream in the speech tract. There are other criteria to distinguish a vowel from a consonant as well.

From the standpoint of information theory vowels are redundant and it is possible to recognize words on the basis of consonants. Perhaps it depends on the number of vowels and consonants. Owing to the latter being usually numerically bigger, it has more information load.

Another distinction of vowel-consonant dichotomy is made due to the criterion that the vowels have the syllabic function forming its peak while consonants are marginal in the syllable forming its slopes. This criterion is, perhaps, universal as to vowel-consonant distinction. Therefore some linguists use the terms syllabic and non-syllabic phonemes. But the existence of the sonorants or sonants, which may be syllabic, contradicts this criterion. For example, in English /r/, /l/, /j/, /w/ oral sonants and /m/, /n/, /ŋ/ – nasal sonants may have a syllabic function: **little** /litl/, **hundred** /hʌndrɪd/, **parrot** /pærət/ etc.

The distinction of the vowel-consonant dichotomy may function differently in various languages. In English, Russian and Uzbek this distinction is more clear than in other languages. But in some languages owing to the vowel harmony which is interpreted as the dilation of the vowel in the stem of the word in its

affix, vowels may be more important in recognizing the word than the consonants[1].

There are also attempts to find an acoustic criterion to distinguish a vowel-consonant dichotomy. Acoustically vowels are characterized by the presence of a strict formant structure, on the contrary consonants have negative formant structure as the vowels have greater intensity than that of consonants. Besides, tone is significant for vowels while noise – for consonants. But this distinction is not clear because of the existence of sounds which are neither vocalic nor consonantal. This type of consonants are sonorants or sonants which have similiar formant structure like vowels, but tone prevails over noise. In the dichotomic classification of distinctive features sonants are characterized either as vowels or consonants[2]. One of the authors of dichotomic phonology who even suggested twelve binary distinctive features of sounds universal for all the languages of the world G.Fant admitted that the physical criterion for the vocalic and consonantal features have not been rigid and therefore in the classification of Swedish phonemes he proposed a new formulation, retaining the concept of formant reduction in defining the consonant feature, but with intensity associated with the vocalic feature[3]. In fact, the acoustic distinction between vowel and consonant has not been classified yet.

Perhaps, one of the criterion in a vowel-consonant distinction may be found in the perceptual aspect. Though it is easy to distinguish vowels from consonants by ear, there are also some difficulties in classifying them by perceptual features.

In spite of all these contradictions we should use traditional distinction between vocoid-contoid in the phonetic sense and vowel-consonant for the linguistic categories. The phonemic system of the English language consists of vowel phonemes and consonant phonemes. Usually the pronunciation of vowels depends on the neighbouring consonants. Therefore we should begin the description of the phonemic system of English with consonants.

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[1] *Л. Р. Зиндер.* Общая фонетика. М., Изд. «Высшая школа», 1979, с. 111-113.

[2] *Р. Якобсон, Г. Фант, М. Халле.* Введение в анализ речи. В кн. «Новое в лингвистике», Вып. 2., М., 1952, с. 178.

[3] *Gunnar Fant.* The Nature of Distinctive Features. //Phonological Theory. Evolution and Current Practice. N. Y., 1972, p. 363.

In the description of the phonemic system of English we use articulatory terms in the main, which are more understandable and important for practical use than the acoustic terms. As to the terminology used in the dichotomic classification of distinctive features, such terms are often called mixed as articulatory, acoustic and even musical terms are used. For example, the terms **vocalic – non-vocalic, oral – nasal, voiceless – voiced, tense – lax** are articulatory terms; **compact – diffuse, grave – acute** are acoustic terms; the terms **flat sharp and plain** are borrowed from the theory of music. Besides, some of them, particularly grave – acute are used to distinguish the different types of word stress and the term plain does not mean anything in this case[1]. This type of terminology, which is used in other science as well and has two or more meanings, is not suitable in the phonemic description.

Peutinent to this, analysis of English phonemes is made in the following way:

1) the phonetic (articulatory and acoustic) classification;

2) the phonemic classification which makes clear the distinction between phonemes and their allophonic variations;

3) the distribution of phonemes and some sound clusters. More often we compare the phonemic systems of English and Uzbek.

IV.2. THE ARTICULATORY AND ACOUSTIC CLASSIFICATION OF ENGLISH CONSONANTS (IN COMPARISON WITH UZBEK)

The general phonetic principles of the classification of consonant sounds are as follows:

1) the place of articulation;
2) the manner of production;
3) the presence or absence of voice;
4) the position of the soft palate.

According to place of articulation the consonants may be labial and pharyngal (/h/). Labial consonants are divided into bilabial (as English /p/, /b/, /m/, /w/) and labio-dental (English /f/, /v/). The lingual consonants may be forelingual (English (/t/, /d/,

[1] *В.А. Васильев.* Акустическая классификация фонем Якобсона – Фанта – Халле в применении к английскому языку. М., МГПИИЯ, 1973, с. 20-21.

/s/, /z/, /l/, /n/, /ʃ/, /ʒ/, /tʃ/, /d3/), interlingual (/j/) and backlingual (/k/, /g/, ŋ/).

The chief points of obstruction at the place of articulation, besides labial (bilabial and labio-dental), are dental (allophones of the phonemes /t/, /d/, etc.), alveolar /t/, /d/, /s/, /z/, /l/), retroflex (G. A. /r/), cacuminal (RP /r/), palato-alveolar /ʃ/, /ʒ/, /tʃ/, /d3/, palatal /j/, velar /k/, /g/, /ŋ/ uvular (Scottish /R/), glottal /?/ – stop which is used more often in GA and in some English dialects). All these characterize the place of obstruction formed at some points of speech organs.

The manner of articulation makes it possible to distinguish occlusive (/p, b, t, d, k, g/), constrictive (/f, v, s, z, θ, ð, ʃ, ʒ, h/) consonants and affricates (/tʃ, d3/). In turn, occlusive consonants may be two types: plosives or stops, in the production of which noise is essential and sonants or sonorants /m, n, ŋ/ in the production of which tone prevails over noise. Constrictive consonants may be divided into fricatives and sonants. Fricative consonants may be unicentral (those in which narrowing has two foci) and bicentral (produced by two foci narrowing as in /ʃ, ʒ/). Unicentral consonants may be produced either with a flat narrowing (/f, v, θ, ð, h/) or a round narrowing (as in English /s, z/). As to constrictive sonants, they may be medial (as in English /w, v, j/) and lateral (/1/).

The next class of consonants namely affricates are formed by the stream of air stopped first (as in the production of plosives) and then the closure is released with friction (as in fricatives). Sometimes these, type of sounds are called occlusive – constrictive or plosive – fricative complexes as the English /tʃ, d3/. Affricates may also be unicentral (as the Russian тс /ц/) and bicentral (as in the English /tʃ, d3/).

The rolled (or thrilled) sonants are not characteristic for RP and GA but may be heard in some positions, especially when /r/ proceeds /t/ and /d/ it drops its sonorant feature[1]. The rolled sonants are found in Russian (/p/) and Uzbek (/r/).

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[1] *Г.П. Торсуев.* Константность и вариантность в фонетической системе (на материале английского языка). М., Изд. «Наука», 1977, с. 61.

Table of English and Uzbek Consonant Phonemes

Notes:
E – English,
U – Uzbek

According to the active organ of speech			Labial		Lingual									Pharyngal
					Forelingual						Medio-ingual	Backlingual		
The manner of production	The place of obstruction		Bilabial	Labio-dental	According to the position of the tongue									
					Dorsal	Apical			Cacuminal					
					Dental	inter dental	Alveolar	Palato-alveolar	Alveolar	Post-alveolar	Palatal	Velar	Uvular	
Occlusive consonants	Noise consonants (plosives)	E	P, b				t, d					k, g		
		U	P, b		t, d							к, g	q	
	Sonorants (nasal)	E	m				n					ŋ		
		U	m		n							ng		
Constrictive consonants	Noise consonants (fricatives)	E					s, z							
		U												
		E		f, v		θ, ð		ʃ, ʒ						h
		U		f, v	s, z			sh, j					kh, g'	h
	Sonorants	E	w				L			r	j			
		U									y			
Affricates (noise consonants)		E						tʃ, dʒ						
		U						ch, j						
Rolled consonants	Sonorants	U			R									

The next principle of the classification of consonants is based on the presence or absence of voice, according to which voiced and voiceless consonants may be distinguished. This distinction is closely connected with the degree of breath and muscular effort, involved in the articulation. Usually the English voiced consonants are articulated by relatively weak energy of the speech organs, whereas the voiceless consonants are pronounced by relatively strong energy. This distinction, indicated by the feature fortis-lenis (from Latin words which means «tense-lax»), is phonologically very important. There are eight pairs of voiceless – voiced, resp. fortis – lenis consonants in English: /p-b/, /t-d/, /f-v/, /s-z/, /ʃ-ʒ/, /θ-ð/, /tʃ-dʒ/, /k-g/.

The position of the soft palate is very important in the production of consonants. When the soft palate takes a high position it blocks the air-passage into the nasal cavity and the air passes through the mouth cavity. The consonants produced are called orals (/p, t, s, z/ etc.). When the soft palate is lowered, the vibrating breath passes through the nose. The nasal cavity, along with the oral cavity or part of it, function as a resonance chamber (as in /m, n, ŋ/). The general principles of the consonant classification explained here are outlined in the comparative table of English and Uzbek consonant phonemes given above.

IV.3. COMPARATIVE-TYPOLOGICAL ANALYSIS OF THE ENGLISH AND UZBEK CONSONANT PHONEMES

In comparing the consonant systems of two languages, it is suitable to begin with the inventories of phonemes set up in both languages. The inventary of the English consonant phonemes comprises the following 24 phonemes: /p/, /b/, /t/ /s/, /k/, /g/, /n/, /ŋ/, /1/, /m/, /h/, /v/, /d/, /z/, /ʃ/, /ʒ/, /tʃ/, /dʒ/, /w/, /r/, /j/, /θ/, /ð/, /f/ and the facultative or optinal phoneme /ʍ/.

The inventary of the Uzbek consonants consists of 23 phonemes /p/, /b/, /f/, /v/, /s/, /z/, /t/, /d/, /sh/, /j/, /k/, /g/, /kh/, /g'/, /q/, /h/:, /n/, /l/, /r/, /y/, /ch/, /m/, /ng/.

Some of the English consonants, for example, /θ, ð, w/ can not be found in Uzbek. Likewise, the Uzbek consonants /kh, g', q/ do not exist in English. We can arrange the differences in the inventories of consonant phonemes of both languages into a single

table. As we look at the table of consonants we find differences in the number and articulation of some consonants. For example, the Uzbek consonants /t, d/ are articulated in a more frontal position, being dental and dorsal, than the English consonants /t, d/, which have an alveolar and apical articulation. The Uzbek plosive (stop) uvular /q/ does not exist in English. It is articulated in a more backward position than the backlingual consonants.

Among the fricatives the Uzbek /s, z, sh, j/ may be produced in a more frontal position of the mouth cavity than the English counterparts /s, z, ʃ, ʒ/. The Uzbek /s, z/ are dorsal, /sh - j/ are palato-alveolar consonants. The English /s, z/ have apical, alveolar articulation with round narrowing and /ʃ, ʒ/ being also palato-alveolar, have two foci in articulation. Besides, the consonants /kh, g'/ are specific for Uzbek and cannot be found in English.

The class of nasals coincides in number /m, n, ŋ/ - /m, n, ng/ but their articulatory, acoustic and phonological features are different in both languages. The English /n/ is alveolar and apical, while the Uzbek /n/ is a dorsal, dental consonant. The English /ŋ/ is a separate phoneme and it can never be divided into two syllables as /n - g/ in all positions. The Uzbek /ng/ can function as a separate phoneme in word final position (uying – «your house», qo'ling – «your hand») and in word medial position, owing to the syllable division it can be divided into two elements, as /n – g/ qo'lingga – «to your hand» /qo'l-in-ga/, синглинга (sin-glin-ga) – «to your sister».

As to the English /l/ phoneme it has two allophones: «clear» and «dark» the distinction of which is based on the pronunciation with a frontal secondary focus («clear» /l/) and with a back secondary focus («dark» /1/). Such kinds of articulation are not found in Uzbek.

There is no consonant phoneme such as the English sonant /w/ in Uzbek. The English /r/ has a cacuminal, post alveolar articulation while the Uzbek /r/ is regarded as a rolled (or trilled) consonant.

IV.4. PHONOLOGICAL ANALYSIS OF THE ENGLISH CONSONANTS (in Comparison with Uzbek)

IV.4.1. The criteria of phonological and comparative-typological analysis

The comparative table of the English and Uzbek consonant phonemes is based on their articulatory and acoustic classification. This table gives a general idea of the differences and identities of the consonant phonemes and of the pure phonetic features of the isolated consonant phonemes. The table and the phonetic characteristics do not clarify the relationship between the phonemes, i.e. the way they are arranged into the whole system and what structural relations exist between the phonemes. The answer to these questions may be found through a phonological analysis which has its own principles, methods and conditions. Its main principle is based on choosing two or more sounds and establishing their mutual relations in the system. Such mutual relations may become clear by using the method of opposition. Oppositions between sounds require certain conditions. In phonological analysis conditions for the oppositions may be equal to the positions, i.e. initial, medial and final positions where two or more sounds form oppositions. The phonemes and their distinctive (relevant) and non-distinctive (irrelevant) features may be established on the basis of phonological oppositions which may be set up on the paradigmatic axis. The sounds, in which the phonemes are manifested may be used in the linear sequence or on the syntagmatic axis. For analysing sounds in the syntagmatic axis, the method of distribution is used, which makes clear the usage of distinctive and non-distinctive features.

Choosing two sounds, we can compare their articulatory and acoustic properties in the phonetic table cited above. If the features are different, they may be regarded, as being distinctive, if the features coincide, they are called non-distinctive features. This explanation is given for the sake of convenience.

At first we begin with the preliminary phonological analysis of the speech sounds, suggested by V. A. Vassilyev. According to this principle we can set up simple oppositions (based on one dis-

tinctive feature), double oppositions (based on two distinctive features) and complex oppositions when there are more than two distinctive features. The next stage of phonological analysis may be based on the classification of oppositions given by N.S. Trubetzkoy.

The inventary of phonemes is one of the criterions used as a starting point in the comparative-typological analysis of the phonemic systems of languages with different systems. The next criterion is based on the quality and quantity of phonological oppositions existing in both languages.

In phonetic comparison we deal with **etic units**, i.e. sounds which form phonic substance of languages. Comparative-typological analysis of phonological systems aims at describing **structural emic units, i.e. phonemes** which function as formal items in the identification and distinction of words and morphemes. The quality of oppositions may be verified on the basis of distinctive and non-distinctive oppositions while the quantity of oppositions is characterized by their number which includes a majority or minority of phoneme pairs. It is possible to measure the **functional load of** oppositions determined by the number of minimal pairs illustrating phonological oppositions and the **power of oppositions** determined by the number of opposition pairs. The last two criteria are known in language typology as «weighting of the values»[1]. Besides it is possible to compare **frequency of occurrence** of phonemes in two or more languages, which ascertains the functional exploitation of language units in different languages. This type of comparison enables us to make an undistorted classification of languages. The comparison of languages, according to the statistical data of certain facts or units, is known as a quantitative typology of languages.

The above given criteria may be used either in the phonological analysis of consonants or vowels and even in comparing the relation of the frequency of occurrence of vowels and consonants.

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[1] *J. Ellis*. Towards a General Comparative Linguistics. Mouton, 1966, p. 52.

IV.4.2. The System of the English Consonant Phonemes

As stated, a phoneme is a member of phonological opposition. Thanks to this definition of the phoneme, the system of the English consonant phonemes is arranged from various phonological oppositions. According to the place of articulation the following oppositions (mainly single) exist in English.

1) labial (bilabial or labio-dental) – forelingual: between plosives /p – t/, /b – d/; between fricatives /f – θ/, /v – p/ /f – s/, /v – z/, /f – ʃ/; between nasals: /m – n/; between constrictive sonants /w – l/, /w – r/ in which the features bicentral-unicentral and round narrowing – flat narrowing are non-distinctive. The oppositions /f – s/, /v – z/ are accompanied by the non-distinctive features flat (slit) narrowing groove-like narrowing. The latter features are distinctively relevant only in the oppositions /θ – s/, /p – z/. As to the opposition /f – ʃ/ it is also accompanied by the non-distinctive features unicentral-bicentral[1].

The given oppositions, except the oppositions where /θ/ and /p/ occur, exist in Uzbek too. But the only difference may be observed in oppositions /v/–/l/, /v/–/r/ in which /v/ takes part with its bilabial sonorant allophone. Besides, the above non-distinctive features are not typical of Uzbek.

The functional load of the opposition labial-forelingual is higher in English than in Uzbek, as there are too many minimal pairs of words, in which the above oppositions may occur in initial, medial and final positions. This opposition shows low functional load in Uzbek as few oppositions may occur in medial and final positions of the minimal pairs.

The power of this opposition is stronger in English (10 pairs) than in Uzbek (9 pairs). The number of labial consonants do not coincide: there are six labial consonants in English and five in Uzbek. The relation between the numbers of forelingual consonants in English and Uzbek is 13:11.

As observed more than half of the English consonant phonemes are forelingual. In Uzbek it is expressed by almost 45% of

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[1] The description of single oppositions is based on: *V.A. Vassilyev*. English Phonetics (A theoretical course), M. , 1970, p. 182-194.

the total number (23) of consonants. The number of forelingual consonants and frequency of their occurrence is very great in both languages. This fact depends more relative on the physiological activity of the front part of the tongue than the other types of articulation. Evidently, this is for the sake of economy of pronunciation effort.

2) The single opposition labial-mediolingual is represented in both languages by the pairs /w – j/ /v–y/. The features bicentral-uni-central and round narrowing – flat narrowing are non-distinctive in the English /w – j/. Such features are not found in Uzbek at all.

The American authors Ch.E. Bidwell and A.F. Sjoberg distinguish slit fricatives /ɸ, f, v, в/, and groove fricatives (/s, z, x̆, x', x, ğ/[1]) (in our transcription /s, z, sh, j, kh, h, g'/) which cannot be faund in Uzbek literary pronunciation. They rarely occur only in the pronuncia-ion of words borrowed from Russian. This opposition has the lowest functional load and very weak power.

3) The opposition labial-backlingual exists in the pairs: /p – k/, /b – g/, /m – ŋ/ in English. In Uzbek this opposition is presented by the pairs /n – k/, /b – g/, /m – ng/, /f–kh/, /v – g'/. There are no fricative consonants among the English backlingual consonants. The fricative-backlingual consonants are specific of Uzbek. Instead of the opposition labial fricative-backlingual fricative, which is specific of Uzbek, the opposition labial fricative-pharyngal fricative exists in English: /f – h/, /v – h/. The functional load of this opposition is greater in English than in Uzbek as there are a lot of minimal pairs in English and few in Uzbek.

4) The single opposition forelingual-mediolingual can be established between the constrictive sonants: /l – j/, /r – j/ in English and/l – y/, /r – y/ in Uzbek, which coincide not only with the number of oppositions but also with their low functional load and weak power.

5) The opposition forelingual-backlingual or pharyngal: /t – k/,/d – g/, /n – ŋ/, /θ – h/, /s – h/, /z – h/, /z – h/, /ʃ – h/ in English and /t – k/, /t – q/, /d – g/, /s – kh/, /z – g'/, /n – ng/, /s – h/,/sh – h/, /j – h/, /kh – h/ in Uzbek. The phoneme, /h/ being either voiced

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[1] *Ch. E. Bidwell.* A Structural Analysis of Uzbek, Copyright, 1955, p. 10. A.F. Sjoberg. The Phonology of Standard Uzbek // American Studies in Altaic Linguistics, vol. 13, The Hague, 1962, p. 236.

IV.4.2. The System of the English Consonant Phonemes

As stated, a phoneme is a member of phonological opposition. Thanks to this definition of the phoneme, the system of the English consonant phonemes is arranged from various phonological oppositions. According to the place of articulation the following oppositions (mainly single) exist in English.

1) labial (bilabial or labio-dental) – forelingual: between plosives /p – t/, /b – d/; between fricatives /f – θ/, /v – p/ /f – s/, /v – z/, /f – ʃ/; between nasals: /m – n/; between constrictive sonants /w – l/, /w – r/ in which the features bicentral-unicentral and round narrowing – flat narrowing are non-distinctive. The oppositions /f – s/, /v – z/ are accompanied by the non-distinctive features flat (slit) narrowing groove-like narrowing. The latter features are distinctively relevant only in the oppositions /θ – s/, /p – z/. As to the opposition /f – ʃ/ it is also accompanied by the non-distinctive features unicentral-bicentral[1].

The given oppositions, except the oppositions where /θ/ and /p/ occur, exist in Uzbek too. But the only difference may be observed in oppositions /v/–/l/, /v/–/r/ in which /v/ takes part with its bilabial sonorant allophone. Besides, the above non-distinctive features are not typical of Uzbek.

The functional load of the opposition labial-forelingual is higher in English than in Uzbek, as there are too many minimal pairs of words, in which the above oppositions may occur in initial, medial and final positions. This opposition shows low functional load in Uzbek as few oppositions may occur in medial and final positions of the minimal pairs.

The power of this opposition is stronger in English (10 pairs) than in Uzbek (9 pairs). The number of labial consonants do not coincide: there are six labial consonants in English and five in Uzbek. The relation between the numbers of forelingual consonants in English and Uzbek is 13:11.

As observed more than half of the English consonant phonemes are forelingual. In Uzbek it is expressed by almost 45% of

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[1] The description of single oppositions is based on: *V.A. Vassilyev*. English Phonetics (A theoretical course), M. , 1970, p. 182-194.

the total number (23) of consonants. The number of forelingual consonants and frequency of their occurrence is very great in both languages. This fact depends more relative on the physiological activity of the front part of the tongue than the other types of articulation. Evidently, this is for the sake of economy of pronunciation effort.

2) The single opposition labial-mediolingual is represented in both languages by the pairs /w – j/ /v–y/. The features bicentral-uni-central and round narrowing – flat narrowing are non-distinctive in the English /w – j/. Such features are not found in Uzbek at all.

The American authors Ch.E. Bidwell and A.F. Sjoberg distinguish slit fricatives /ɸ, f, v, в/, and groove fricatives (/s, z, x̆, x', x, ğ/[1]) (in our transcription /s, z, sh, j, kh, h, g'/) which cannot be faund in Uzbek literary pronunciation. They rarely occur only in the pronuncia-ion of words borrowed from Russian. This opposition has the lowest functional load and very weak power.

3) The opposition labial-backlingual exists in the pairs: /p – k/, /b – g/, /m – ŋ/ in English. In Uzbek this opposition is presented by the pairs /n – k/, /b – g/, /m – ng/, /f–kh/, /v – g'/. There are no fricative consonants among the English backlingual consonants. The fricative-backlingual consonants are specific of Uzbek. Instead of the opposition labial fricative-backlingual fricative, which is specific of Uzbek, the opposition labial fricative-pharyngal fricative exists in English: /f – h/, /v – h/. The functional load of this opposition is greater in English than in Uzbek as there are a lot of minimal pairs in English and few in Uzbek.

4) The single opposition forelingual-mediolingual can be established between the constrictive sonants: /l – j/, /r – j/ in English and/l – y/, /r – y/ in Uzbek, which coincide not only with the number of oppositions but also with their low functional load and weak power.

5) The opposition forelingual-backlingual or pharyngal: /t – k/,/d – g/, /n – ŋ/, /θ – h/, /s – h/, /z – h/, /z – h/, /ʃ – h/ in English and /t – k/, /t – q/, /d – g/, /s – kh/, /z – g'/, /n – ng/, /s – h/,/sh – h/, /j – h/, /kh – h/ in Uzbek. The phoneme, /h/ being either voiced

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[1] *Ch. E. Bidwell.* A Structural Analysis of Uzbek, Copyright, 1955, p. 10. A.F. Sjoberg. The Phonology of Standard Uzbek // American Studies in Altaic Linguistics, vol. 13, The Hague, 1962, p. 236.

and voiceless, form phonological oppositions with voiced and voiceless consonants. The number of oppositions discerned by the distinctive feature forelingual-backlingual (or pharyngal) coincide, but the quality of oppositions differ greatly in the languages compared, owing to the existence of some specific English phonemes such as /θ/, /ð/ and the Uzbek /q/, /g'/. The functional load of these oppositions is greater than in Uzbek. The number of phonemes which take part in these oppositions is equal in both languages, as they include 13 phonemes. But their functional load is greater in English than in Uzbek. No minimal pair can be found for the opposition /3 – h/, but we include it on the basis of frequency of occurrence of its members. The power of this opposition is stronger in Uzbek (11 pairs) than in English (9 pairs).

According to the manner of production, it is possible to establish the following (mainly single) phonological oppositions:

1. The opposition plosive-fricative exists between the English labial consonants /p – m/, /p – f/, /b – v/. As V.A. Vassilyev points out: «Since there are no bilabial fricative «opposite numbers» of the bilabial plosives /p, b/ in English, the above opposition is «skewed» into the opposition bilabial plosive vs. labio-dental fricative, the difference between bilabial and labio-dental articulations being distinctively irrelevant»[1].

The opposition plosive-fricative also exists between the forelingual consonants: /t – θ/, /d – ð/, /t – s/, /d – z/, /t – ʃ/, /d – ʒ/; between the backlingual and pharyngal consonants /k – h/, /g – h/. There are the following plosive-fricative oppositions in Uzbek: /p – f/, /b – v/ /t – s/, /d – z/, /t – sh/, /d – j/, /k – h/, /g – h/, /k – kh/, /q – g'/.

The functional load of this opposition is higher in English than in Uzbek. The power of this opposition is stronger in English (11 pairs of phonemes) than in Uzbek (10 pairs).

2. The single opposition plosive - affricate exists between /t – tʃ/ and /d – dʒ/ in English and /t – ch/, /d – j/, in Uzbek. The polemics of whether to treat the English affricates as one phoneme or two dominated linguistic literature about three decades ago. Some American linguists regard English affricates /tʃ, dʒ/ to be clusters, but most of them consider affricates to be «compound phonemes» by which they mean that two simple phonemes may

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[1] *V.A. Vassilyev.* Id., p. 188.

function as a unit[1]. There are discussions on the number of affricates in English. D. Jones and A. Cohen distinguish six affricates /tʃ, dʒ, ts, dz, tr, dr/[2]. I. Ward and A.C. Gimson add two more affricates: /tθ/ as in eight/h /eɪtθ/ and /dθ/ as in width /wɪdθ/[3]. In fact, only two affricates /tʃ and /dʒ/ exist in modern English as separate phonemes.

From the phonetic point of view affricates consist of two elements: plosive – fricative, which are indivisible in articulation and cannot be divided into two syllables. It is also impossible to notice any differences between plosive – fricative in the production of affricates.

The phonemic status of the affricates may be determined on the basis of the morpheme boundary. Two elements of the affricate do not belong to two morphemes. Even in such syntactic information like *Why choose?* /wai tʃu:z/ – white shoes /wait ʃu:z/ which are usually regarded junctures, it is possible to notice the differences in their spectrograms.

Another solution of the phonemic status of the affricates is that languages with affricates also have dental stops and palatal fricatives[4]. That is to say the languages which have the affricate /tʃ/ also have that of /t/ and /ʃ/. The phonemic status of affricates may be proved by the existence of threnary opposition affricate-plosive-fricative: /t – tʃ – ʃ/, /d – dʒ – ʒ/. All these criteria may be applied also to the Uzbek affricates.

3. The single opposition plosive-nasal exists between the English/b – m/, /d – n/, /g – ŋ/ and the Uzbek /b – m/, /d – n/, /g – ng/.The distribution of the phonemes /ŋ/ and /ng/ is extremely limited in both languages. In Uzbek /ng/ may be separated into two elements/n – g/ in word medial syllables.

4. /z – l/,/ð – l/, /v – w/ and /z – r/ may form the single opposition constrictive (fricative) – constrictive sonant. This opposition is represented by the only pair /z – l/ in Uzbek.

The functional load of these oppositions is extremely low and its power is also weak (it is weaker in Uzbek). The opposition

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[1] *Г. Глисон.* Введение в дескриптивную лингвистику. М., 1959, с. 306.
[2] *A. Cohen.* The Phonemes of English. The Hague, 1965, p. 45.
[3] *I. Ward.* The Phonetics of English. 4th ed. Cambridge, 1948, p. 121. *C. Gimson.* An Introduction to the Pronunciation of English, London, 1964, p. 166.
[4] *Р. Якобсон. Г. М. Фант и М. Халле.* Введение в анализ речи. «Новое в лингвистике», вып. II, 1962, с. 185-186.

constrictive sonant – occlusive nasal sonant exists between the English /w – m/, /l – n/, /r – n/ and the Uzbek /v – m/, /l – n/, /r – n/[1].

The opposition medial sonant-lateral sonant exists between /r – 1/ in both languages and in many other languages as well.

5. The opposition voiceless – voiced resp. fortis – lenis exists between the pairs /p – b/, /t – d/, /s – z/, /f – v/ /ʃ – ʒ/, /tʃ – dʒ/, /θ – ð/, /k – g/ in English and /p – b/, /t – d/, /s – z/, /f – v/, /sh – j/, /ch – j/, /kh – g'/, /k – g/. Such pairs of phonemes which are distinguished by the absence and presence of one feature, are combined into the **correlation**. The correlation pairs are given naturally in the form of binary oppositions whereas all other single oppositions may be formed on the basis of choosing, i.e. we choose two phonemes which are distinguished by one distinctive feature.

S. Pit Corder made up a table which shows a comparison of the relative functional load of some oppositions of English consonants in initial and final position in monosyllabic words without initial and final consonant clusters (the highest functional load is counted as the base for comparison)[2].

Relative functional load of certain consonant oppositions in English		
opposition	in initial position	in final position
/k – h/	100	–
/p – b/	98	14
/m – n/	59	42
/k – g/	50	29
/d – z/	7	100
/θ – ð/	1	6
/n – ŋ/	–	18
/r-1/	83	–

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[1] *А.Г. Максумов.* Артикуляционные, акустические, перцептивные и фонологические характеристики английских носовых сонантов (в сопоставлении с узбекским). Автореферат канд. дисс., М., 1972, с. 24.

[2] *S. Pit Corder.* Introducing Applied Linguistics. Penguin Books ltd, 1977 p. 220. Probably, statistic analysis are made from «The Concise Oxford Dictionary» The table is borrowed with some changes by the author.

S. Pit Corder pointed out that oppositions are very important in language learning for practical reasons while the principle of relative frequency is the right criterion for the selection of lexical material in the syllabus[1].

(1) On the basis of the relationship between oppositions in the entire system of oppositions we distinguish: ***a)*** **bilateral-multilateral and *b)* proportional-isolated types of opposition.** For example, the following oppositions between the English consonant phonemes are bilateral («одномерные», «bir – o'lchovli»): (p – b/, /t – d/, /k – g/, /s – z/, /ʃ – ʒ/, /tʃ – dʒ/, /b – m/, /d – n/, /g – ŋ/, /f –v/, /s – ʃ/, /z – ʒ/, /t – tʃ/, /d – dʒ/, /r – 1/. The multilateral oppositions are: /b – d – g/, /p – t – k/, /m – n – ŋ/, /k – g – h/ etc. Among these oppositions /p –b/, /t – d/, /s – z/, /ʃ – ʒ/, /f – v/, /tʃ – dʒ/, /θ – ð/, /k – g/ are proportional because the relationship between these oppositions is equal: /p – b/ = /t – d/ etc. may be distinguished by one feature.

The opposition /r – 1/ is isolated as no other oppositions of this kind may be found in the system of the English consonant phonemes. /r – 1/ is distinguished by the medial sonant – lateral sonant.

(2) On the basis of the relationship between the opposition members the following types are distinguished:

a) **the privative oppositions,** when one member of opposition is characterized by the presence (marked) and the other – by the absence of feature (unmarked) as voiced – voiceless, oral-nasal etc.

The oppositions /p – b/, /t – d/, /s – z/, /ʃ – ʒ/, /tʃ – dʒ/, /f – v/, /k – g/, /θ - ð/, and also /m – b/, /n – d/, /ŋ – g/, /м – w/, /n – l/, /n – r/ are privative;

b)**the gradual opposition,** the members of which are characterized by different levels of gradation, may be formed between /p – k/ in which a localization level /t/ is omitted, also /b – g/ through /d/ /m – ŋ/ through /n/, /t – h/ through /k/;

c)**the equipollent opposition,** when the members are equal from the logical point of view and there is no gradation level in it: /p – t/, /b – d/, /f – s/, /f – θ/, /v – ð/, /v – z/, /r – l/, /ʃ – tʃ/, /ʒ – dʒ/, /t – k/, /p – f/, /b – v/, /t – θ/, /d – ð/, /k – h/, /b – d/, /t – d/, /d – g/.

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[1] Id., 221-223.

As we can notice from the given classification[1] different names and terms are given to one and the same opposition. For example, /b – d/, /t – d/, /d – g/ are bilateral, proportional and equipollent, whereas the opposition /r – l/ is bilateral, isolated, equipollent. Therefore, this principle is complex and not suitable in all cases. B. Trnka attempted to simplify this principle and applied it to English. He distinguished two principal types of opposition: **conjunct and disjunct.** The conjunct opposition is distinguished by a single relevant feature while disjunct opposition is distinguished by two or more features[2]. This classification is similar to V.A. Vassilyev's single and double oppositions. However, the further stage of B. Trnka's classification is made according to N. S. Trubetzkoy's principle.

(3) According to the extent of the distinctive force, oppositions may be **constant and neutralizable.** N.S. Trubetzkoy stated that only bilateral, privative oppositions may be neutralizable[2] but further investigations of this problem have shown that multilateral oppositions may also be neutralizable[3].

The bilateral privative, proportional oppositions /p – b/, /t – d/, /s – z/, /k – g/ etc. may be neutralized in English in word final position: **cap** /kæp/ – **cab** /kæb/, **bet** – /bet/ – **bed** /bed/, **course** /kɔ:s/ – **cause** /kɔ:z/, **back** /bæk/ – **bag** /bæg/ etc. In word final position voiced consonants of English do not become fully voiceless otherwise the given words become homophones. The voiced – voiceless feature is accompanied by the fortis-lenis feature which is not neutralized in many English words. But there are cases when fortis-voiceless and lenis-voiced oppositions are neutralized and both distinctive and recognitive functions are transferred to the preceding sounds, which are half long before a voiced consonant and quite short before voiceless consonants[4] as in the words **bed** /bed/ – **bet** /bet/, **bid** /bɪd/ – **bit** /bit/ etc. This transference of the distinctive and recognitive functions of some phonemes in the structure of a word is possible owing to the prin-

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[1] This classification is applied to Uzbek in the book: *Н.А. Баскаков, А.С. Содиқов, А.А. Абдуазизов.* Умумий тилшунослик. Тошкент, «Ўқитувчи», 1979, 41-45-бетлар.

[2] *Н.С. Трубецкой.* Основы фонологии, М. , 1960, с. 87.

[3] *В.К Журавлев.* К проблеме нейтрализации фонологических оппозиций. ВЯ. 1972, №3, с. 36-49.

[4] *V.A. Vassilyev.* Id., p. 154.

ciple of compensation. Here the neutralization of voiced-voiceless opposition may be compensated by fortis-lenis feature or by long-short resp. unchecked-checked features in the word or syllable structures CVC.[1] As a result of such neutralization two phonemes /t – d/, /p – b/ which form the opposition, may have common distinctive features in word final position. The combination of distinctive features common to two phonemes is called **an archiphoneme.** But this term cannot express the nature of neutralization in English, as we cannot establish two phonemes (t/d or s/z) having combination of distinctive features owing to the compensation principle.

Therefore it is convenient to call such a phonemic alternation by the **term «an alternophoneme»** (suggested by V.A. Vassilyev).

In such languages as Uzbek and Russian it is possible to use the term an archiphoneme (suggested by N.S. Trubetzkoy), because in these languages voiced consonants in word final position may become fully voiceless: **qand** /qant/, **kelib** /kelip/, **barg** /bark/ in Uzbek and **луг – лук** /лук/, **пруд – прут** /прут/ in Russian. The nasals before labial and velar consonants may also be neutralizable: lamp, slumber, comfort, sink, longer, English. In these examples /m/ before /p/, /b/; /m/ before /f/ as /m/; /n/ before /v/, /ŋ/ before /k – g/ are neutralizable: **envy, anvil, length, Stamford, comfort, Humfrey, Banff**[2]**.**

On the basis of the above given examples it is possible to distinguish two principal types of neutralization: a) **paradigmatic neutralization,** which takes place in the system of oppositions, for example, voiced-voiceless opposition in /p – b/, /t – d/ etc.; b) **syntagmatic or contextual neutralization,** when a phoneme may drop or obtain some of distinctive features, for example nasals before labial and velar consonants in words but not in minimal pairs. The latter may more often appear in connected speech.

It is also possible to distinguish the terms used in neutralization. The terms an «alternophoneme» (in English) and an «archiphoneme» (in Uzbek and Russian) may be used in paradigmatic neutralization. The term a **«neutralized variant»** (suggested by

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[1] *Э.Г. Курятникова.* Функция количества в системе современного английского вокализма. Автореферат канд. дисс., М., 1972, с. II.

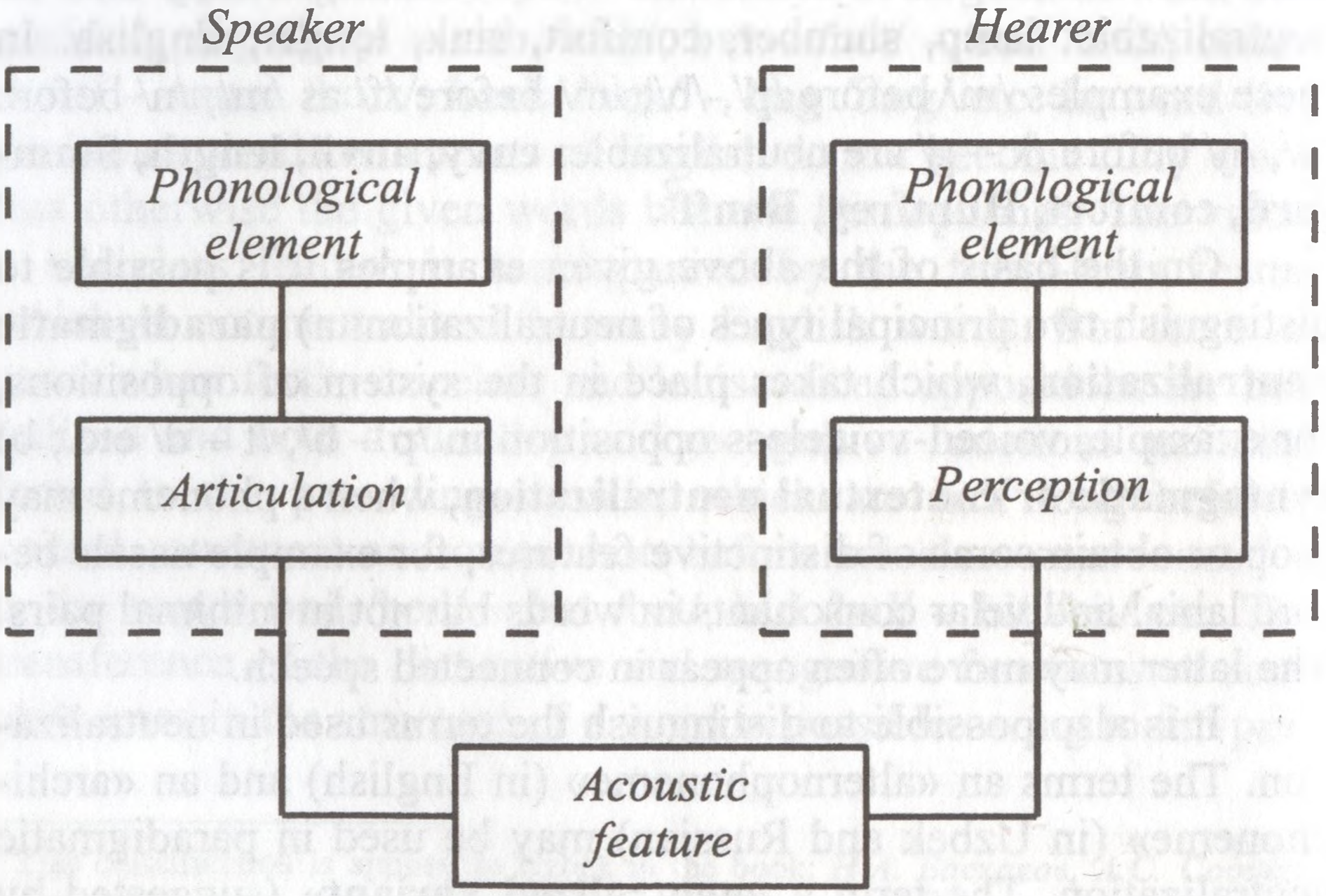
[2] *B. Trnka.* A Phonological Analysis of Present Day Standard English. Univ. of Alabama Press, 1968, p. 32.

B. Trnka) may be used in the syntagmatic neutralization. Thus, the phonemic systems of the English and Uzbek consonants differ by the quality and quantity of oppositions and by the different nature of neutralization.

The above given distinctive features of the English consonants have been explained in articulatory and acoustic terms. The authors of the dichotomic phonology have represented the distinctive features in mixed terms.

IV.4.3. Dichotomic Classification of the Acoustic Distinctive Features of the English Consonant Phonemes and its Articulatory Correlates

The theory of distinctive features, which was suggested by Jakobson-Fant-Halle, is known as the acoustic classification. In fact, this theory represents the act of communication and shows the steps involved in inducing the hearer to select the same phonological element the speaker has selected. It may be illustrated as follows[1]:



[1] *E.C. Fudge.* The Nature of Phonological Primes. //Phonological Theory. Evolution and current practice. N. Y., 1972, p. 32.

This theory is based on the results of the spectrographic (acoustic) and X-ray (articulatory) investigations. Each feature is described in articulatory and acoustic levels (including perception).

The acoustic representation of a distinctive feature corresponds to more than one articulatory feature. In many cases it does not take into consideration the existing allophones, i.e. non-distinctive features of phonemes. In such cases as distinguishing the dental /n/ as in **tenth** /tenθ/ from the alveolar /n/ no acoustic or perceptual feature can be used. These two allophones of the phoneme /n/ can be described only in articulatory terms.

The dichotomic (or binary-meaning to choose two elements or a pair of elements in logic sense) theory has many other shortcomings. Each of the distinctive features involves a choice between two terms of opposition. The mark (+) means «yes», (–) – «no», (o) – both distinctive features are possible.

According to this theory 12-15 distinctive features are possible both for vowels and consonants in all languages. The starting point of this classification shows that two binary features define four major classes of segments (minimal segments of sound, that can be distinguished by their contrast within words are called phonemes). They are:

Consonant (C)	Vowel (V)	Liquid (L)	Glide (G)
+ C – V	– C + V	+ C + V	– C – V
/p/	/a/	/l/	/j/
stop	all	/r/	/w/
fricatives	vowels	intermediate between	
affricates		the 1st and 2d classes	
nasals			

The consonant features correlation in acoustic and articulatory terms, their correspondence and representation can be illustrated in the following table:

№	Binary acoustic features	Articulatory correlates
1.	Vocalic/non-vocalic	a periodic excitation and constriction /non-periodic
2.	Consonantal /non-consonantal	excitation and obstruction in oral cavity produced with occlusion of contact /with lesser degrees of narrowing
3.	Compact/diffuse	palatal, velar, guttural /labial/ dental, alveolar consonants opposition
4.	Grave/acute	labial, velar/dentai, alveolar, palatal
5.	Flat/plain (non-flat)	labial /non-labial
6.	Nasal/oral	nasal /oral
7.	Discontinuous/continuant	stops (plosives), affricates /fricatives, liquids, glides
8.	Voiced /voiceless	voiced/voiceless
9.	Strident/mellow	noisy fricatives (labiodental, alveolar, alveo-palatal affricate)/less noisy fricatives (interdental, palatal, velar), plosives, glides, liquids
10.	Checked/unchecked	glottalization/non-glottalization
11.	Tense/lax	Fortis/Lenis
12.	Sharp/plain (non-sharp)	palatalized/non-palatalized (in Russian)

In the table[1] of the distinctive features representation eight pairs of them are characteristic of English consonant phonemes.

Distinctive Feature Representation of the English Consonants

Distinctive features	l	ŋ	ʃ	tʃ	k	ʒ	dʒ	g	m	f	p	v	n	s	θ	t	z	ð	d	h	≠
Vocalic/non-vocalic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Consonantal /non-consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	–
Compact/diffuse	+	+	+	+	+	+	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Grave/acute								+	+	+	+	+	–	–	–	–	–	–	–	–	–
Nasal/oral		+	–	–	–	–	–	–	+	–	–	–	–	+	–	–	–	–	–	–	–
Tense/lax			+	+	+	–	–	–		+	–	–	–	+	+	+	–	–	–	+	–
Discontinu-			+	–	–	+	–	–		+	–	+	–		+	+	–	+	+	–	–

[1] The table is taken from: *R. Jakobson, C. G. Fant, M. Halle,* Preliminaries to speech analysis. The distinctive features and their correlates. «Technical Report» No 13, June, 1955, p. 32. The Russian translation is in «Новое в лингвистике». Вып. II. М., 1962.

ous/continuant																					
Strident/mellow				+		–	+	–									+	–		+	–

As we can notice in the above table /i/, /r/, /w/, /j, are omitted be cause the liquids /l, r/ are vocalic and consonantal and the glides /j, w/ are non-vocalic and non-consonantal. Usually American linguists regard the semivowels /j/, /w/ to be positional variants of the lax vowels /i/, /u/, respectively. Thus, this binary classification has restrictions on these four classes. Besides, correlation between the acoustic and the articulatory classification is not very clear in this theory[1]. In spite of the fact that the binary classification of the acoustic features has some shortcomings, it is often used as a universal framework in the description of the distinctive features of phonemes without any experimental research. It is useful to use the binary classification of the acoustic distinctive features after instrumental investigations, as the latter is helpful in making a correct classification. The articulatory correlates of the twelve pairs of acoustic features may correspond to more than twenty features, thanks to the division of the consonant classes. This correlation has its own difficulties which require experimental investigation as well. The articulatory classification is more useful in language teaching practice than the acoustic one.

The feature strident-mellow is distinctive for eight consonant phonemes of English, whereas it is not distinctive for the Uzbek consonants The distinctive feature strident-mellow is very important in Russian as the consonant phonemes form one more correlation on the basis of this feature (in Russian it is called «мягкие-твердые») besides voiced-voiceless correlation.

IV.4.4. Allophonic Variations of the English Consonant Phonemes

G.P. Torsuyev distinguishes two types of variations of the English phonemes: a) diaphonic variation which does not depend on the position, i.e. the constant quality and quantity of the phonemes; b) allophonic variation which depends on the position and

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[1] *Р. Якобсон, М. Халле.* Фонология и ее отношение к фонетике. В книге «Новое в лингвистике», Вып. II, М., 1962, с. 221-277.

changes its quality and quantity. He also gives a complete description of these variations in English[1].

The allophonic variations of the English and Uzbek consonant phonemes depend on their distribution in words, syllables and junctures and also on the phonotactic rules (combinations of sounds or sound sequences). The allophones of a phoneme may be established on the basis of the complementary distribution. Two acoustically similar speech sounds which never occur in a certain position are regarded the allophones of a phoneme. The pronunciation of the allophones may vary in different positions i.e. in initial, medial, final positions of words, syllables and also in neighborhood positions, in stressed and unstressed positions. The way three phases of articulation act to combine the sounds in the structure of words and syllables is also essential[2]. It is very complicated to describe all the allophonic variations of the consonant phonemes. Therefore, we give the general rules of the occurrence of the allophones.

The phonemes /p, t, k/ have rather marked positional allophones. Before a stressed vowel, whether alone or followed by a sonorant or other consonant; they have aspirated allophones /p^h, t^h, k^h/: **pin, play, proud, pure, tin, true, twice, tune, key, clean, crop, cure, quick.** The alveolar phonemes /t, d, n, l/ have dental allophones before the fricative consonants /θ/ or /p/ of the same or following word: **health, eighth, tenth, width, the ticket, all those, bell tune** etc. The phonemes /t, d, n, l/ have post alveolar allophones before /r/: **true, drink, country, hungry, children,** etc. The lateral sonant /r/ has rather striking allophones and regional diaphones, when /r/ follows /θ/ or /p/ it has an alveolar allophone, for example – **through, the right hand.** In prevocalic and intervocalic positions it has an apical allophone: **cherry, merry, glory, far out, store it** etc. After aspirated voiceless stops, as in **proud, try, cry,** it has a partially voiceless allophone[3].

Diaphone variation may be observed when /n/ is pronounced instead of /ŋ/ in words like **strength, length.** The pre-

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[1] *Г.П. Торсуев.* Строение слога и аллофоны в английском языке. М., Изд. «Наука», 1975, с. 104-213.

[2] *Г.П. Торсуев.* Вопросы фонетической структуры слова (на материале английского языка), М. -Л., 1962.

[3] *H. Kurath.* A Phonology and Prosody of Modern English. An Arbor, Michigan Univ. Press, 1964, p. 74.

fixes **con-, in-, syn-,** when stressed, have /ŋ/ besides /n/ before a following /k/, as in **conquest, concord, income, syncope** etc.

The vowel-like allophone of the phoneme /j/ may occur in such words as **curious, Indian, Genius** etc.

Many other allophones of the English consonant phonemes may occur in the various sound combinations. English is rich in initial medial and final combinations of consonants. Many of them do not occur in Uzbek.

CHAPTER V

THE SYSTEM OF THE ENGLISH VOWEL PHONEMES

V.1. THE ARTICULATORY AND ACOUSTIC CLASSIFICATION OF THE ENGLISH VOWELS COMPARED WITH UZBEK

General principles of vowel production are outlined according to the movement of the tongue, lip position, quantity features (long-short) and distribution.

1) According to the horizontal movement of the tongue, vowels are classified into front, mixed and back ones. In comparative-typological classification of the vowel sounds on the basis of the position of the bulk of the tongue five groups of vowels may be distinguished: *a)* front – /i:/, /e/, /æ/; *b)* front-retracted – /ɪ/; *c)* mixed – /ɜ:/, /ə/; *d)* back-advanced – /u/, /ʌ/; *e)* back – /u:/, /ɔ/, /ɔ:/, /ɑ:/.

2) According to the vertical movement of the tongue (or to the height of the raised part of the tongue) vowels may be classified into: *a)* close or high – /u:/, /ɪ/, /u/, /u:/; *b)* mid-open or mid – /e/, /ʌ/, /ə:/ /ə/; *c)* open or low – /æ/, /ɔ/, /ɔ:/, /a:/.

Each of these heights of the tongue has two variations: narrow and broad. These principles of vowel classification are very important in comparative-typological studies of the vowel systems of two or more languages and also in languages with many vowels.

3) According to the position of the lips vowels may be rounded and unrounded. Rounded vowels are of two types: a) slightly rounded – /ɔ/, /u/ and b) closely rounded – /ɔ:/, /u:/; there are two types of unrounded vowels as well: *a)* neutral position of lips – /ʌ/, /ə:/, /ɪ/ and *b)* spread position of lips – /a:/, /æ/.

According to the vertical movement of the tongue	According to the horizontal movement of the tongue / According to the variation in the height of the tongue	Front		Mixed (in English)	Central vowels (in Russian)	Back	
		Front	Front – retracted			Back – advanced	Back
Close (high)	Narrow variation	и i: i			ы		u y u:
	Broad variation		ɪ			ʊ	
Mid – open (mid)	Narrow variation	e e e		ɜ:		o^3	ō o
	Broad variation	ε^1		ə		ʌ	
Open (low)	Narrow variation						ɔ: ɔ o
	Broad variation	æ a a^2			a		a:

Notes: □ – *Uzbek vowels*

△ – *Russian vowels*

[ε^1] – *the nucleous of the diphthong /ɛə/*

[a^2] – *the nucleous of the diphthong /aɪ/ and /aʊ/*

[o] – *the nucleous of the previous diphthong /oʊ/ (Now its symbol /əʊ/)*

[ɔ] – *the nucleous of the diphthong /ɔɪ/*

4) Traditionally, according to the quantitative features, English vowels are classified into historically long /i:/, /ɑ:/, /ɔ:/, /u:/, /ə:/ and in certain positions /æ/ and short /ɪ/, /e/, /ɔ/, /u/, /ʌ/, /ə/ (and in certain positions /æ/) vowels.

5) According to the degree of the muscular energy of the organs of speech, especially, the muscles of the tongue, the walls of

mouth-resonator and of the pharynx, tense and lax vowels may be distinguished. Usually, all English long vowels are tense and short vowels are lax.

6) Physiologically, according to the character of their end or the last phase of articulation, English vowels may be checked and free. All short and lax vowels, except /ə/, are checked in the pronunciation of which there is no diminution in the force of utterance towards their strong end. Their pronunciation is interrupted by the abrupt articulation of the consonant sound following it. On the contrary, free vowels are pronounced with a diminution in the force of utterance towards their end and therefore, they have a weak end[1]. According to the distribution, free vowels occur both finally and before consonants. English short vowels in an unstressed syllable are also free. All English long vowels and diphthongs are free, as they occur either in open (CV) or closed CVC (C) syllables: **tea** /ti:/, **team** /ti:m/, **bay** /baɪ/; **bight, bite** /baɪt/, **sore** /sɔ:/, **sought** /sɔ:t/, **so** /səu/, **soap** /səup/ etc. (The symbol /əu/ is used instead of /ou/ in modern English.) Checked vowels occur in the words or morphemes with the structure CVC (C), i.e. in closed stressed syllables: **bit** /bit/, **set** /set/, **cat** /kæt/, **pot** /pot/, **cut** /kʌt/ etc. As we notice, the phonotactic nature of the English vowels, based on their distribution in different syllables or morphemes, is regarded as one of the essential features[2].

7) According to the stability of their articulation English vowels may be divided into three groups:

1. 10 monophthongs: /ɪ/, /e/, /æ/, /ɑ:/, /ɔ:/, /ɔ/, /u/, /ʌ/, /ə:/, /ə/;

2. 9 diphthongs among which are:

glides to /ɪ/ – /eɪ, aɪ, ɔɪ/; glides to /u/ – /au/, /əu/; glides to /ə/–/ɪə, ɛə, uə, ɔə/;

3. 2 diphthongoids: /i:/, /u:/;

Thus, the phonemic inventory of the English vowels includes 21 phonemes, among which the phoneme /ɔə/ is regarded as facultative or optional, owing to its substitution by the vowel /ɔ:/ in words like **more** /mɔə/, /mɔ:/, **sore** /sɔə/, /sɔ:/. Therefore

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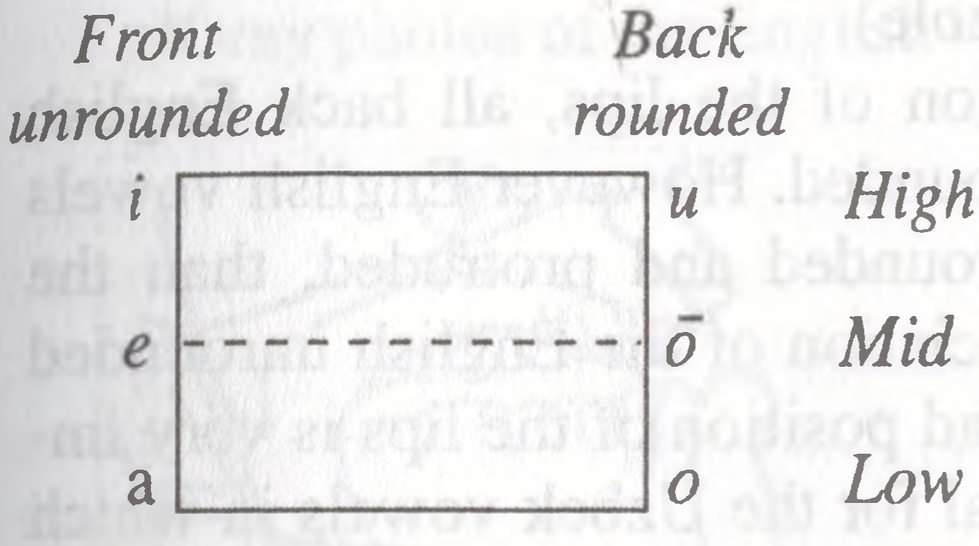
[1] *V.A. Vassilyev* et al. English Phonetics (A normative course) Leningrad. 1962, p. 30.

[2] *H. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor. The Univ. of Michigan Press. 1964. p. 17-20.

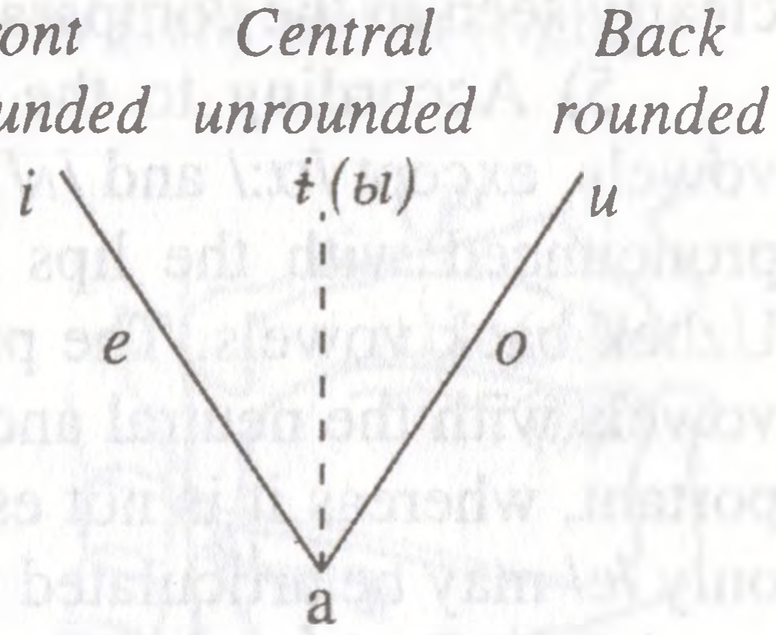
/ɔə/ is often omitted from the inventory of English vowel phonemes.

All other principles of the vowel classification, except the tongue and lip positions, are not essential in the production of the Russian and Uzbek vowels. According to the horizontal and vertical movements of the tongue and position of lips, the Uzbek and Russian vowels are classified as shown in the following table:

The vowel phonemes of Uzbek.



The vowel phonemes of Russian.



The main differences and partial similarity between articulatory features of the English monophthongs, diphthongoids and the Uzbek vowels may be summed up as follows:

1) The English, Uzbek and Russian vowel phonemes are characterized by the oral formation. There are no nasal vowel phonemes in the languages compared.

2) Comparing the X-ray pictures it is easy to notice the positions of the tongue and lips in the articulation of the English and Uzbek vowels. It is convenient to compare the articulations of English and Uzbek vowels establishing certain acoustic types of vowels which relatively exist in both languages /i/, /e/, /a/, /ɔ/, /u/, /ə/. For example, the acoustic type (i) includes the English /i:/, /ɪ/ and the Uzbek /i/, /a/ combines the English /æ/, /ʌ/, /ɑ:/ and the Uzbek /a/ etc.

This type of comparison makes easy to describe the phonemic interference between the English and Uzbek vowels on the basis of the articulatory, acoustic and auditory properties.

3) According to the horizontal movement of the tongue, English vowels may be front, front-retracted, mixed, back-advanced and back, whereas Uzbek vowels are fully front and back.

4) According to the hight of the tongue and its variations (narrow, broad) there are vowels of all hights and variations in English, whereas, three levels of height: high (/i/, /u/), mid (/e/, /ō/) and low (/a/, /o/), are sufficient for the Uzbek vowels. But we can classify the Uzbek vowels on the basis of the variations of the height of tongue in order to clarify our comparative-typological classification. For this purpose we may compare X-ray photos and notice that the Uzbek /i/ and /u/ belong to the narrow variation of close vowels, /e/ and /ō/ – to the narrow variation of mid-open vowels, /a/ and /o/ – to the broad variation of open vowels (this is clearly seen in the comparative table).

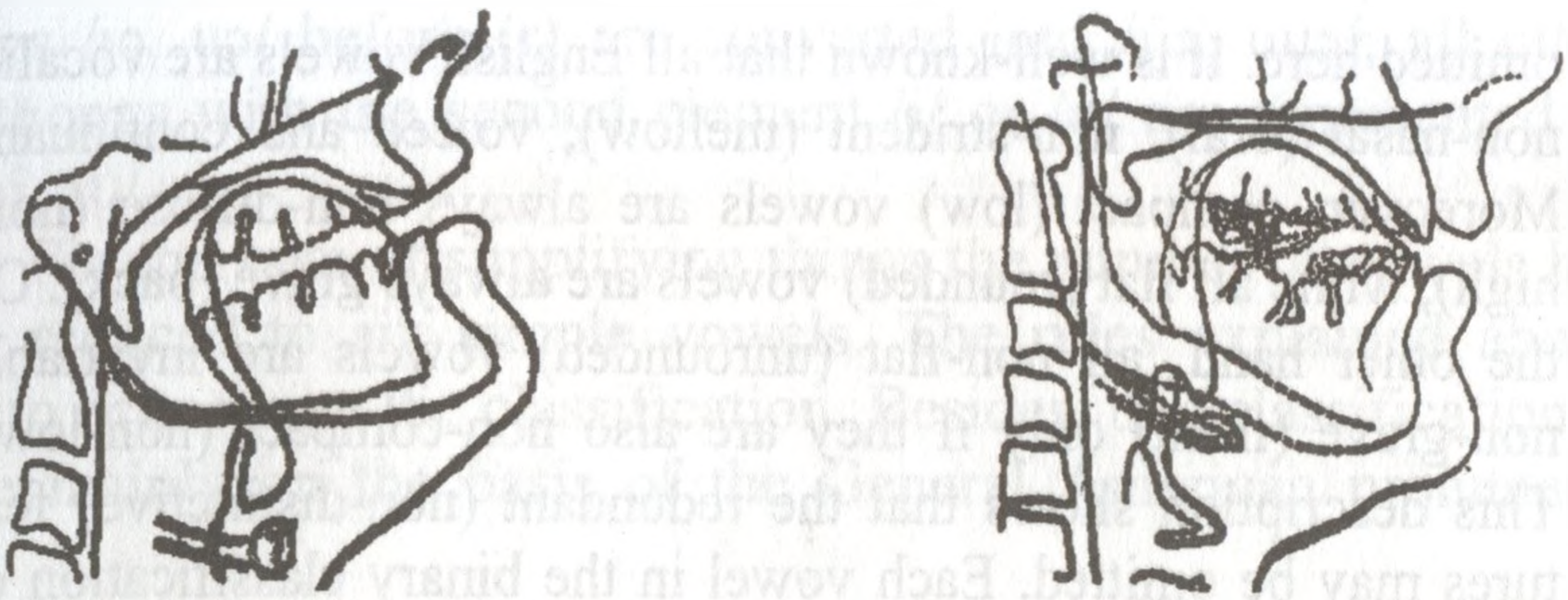
5) According to the position of the lips, all back English vowels, except /ɑ:/ and /ʌ/ are rounded. However English vowels pronounced with the lips less rounded and protruded, than the Uzbek back vowels. The pronunciation of the English unrounded vowels with the neutral and spread position of the lips is very important, whereas it is not essential for the Uzbek vowels in which only /e/ may be articulated with spread lips.

6) Besides the above differences, which comprise quality features of English and Uzbek vowels, there is a difference based on the quantity features which make clear all other differences such as tense – lax, checked – free. The Uzbek vowels are typically «middle» sounds, being neither long or short.

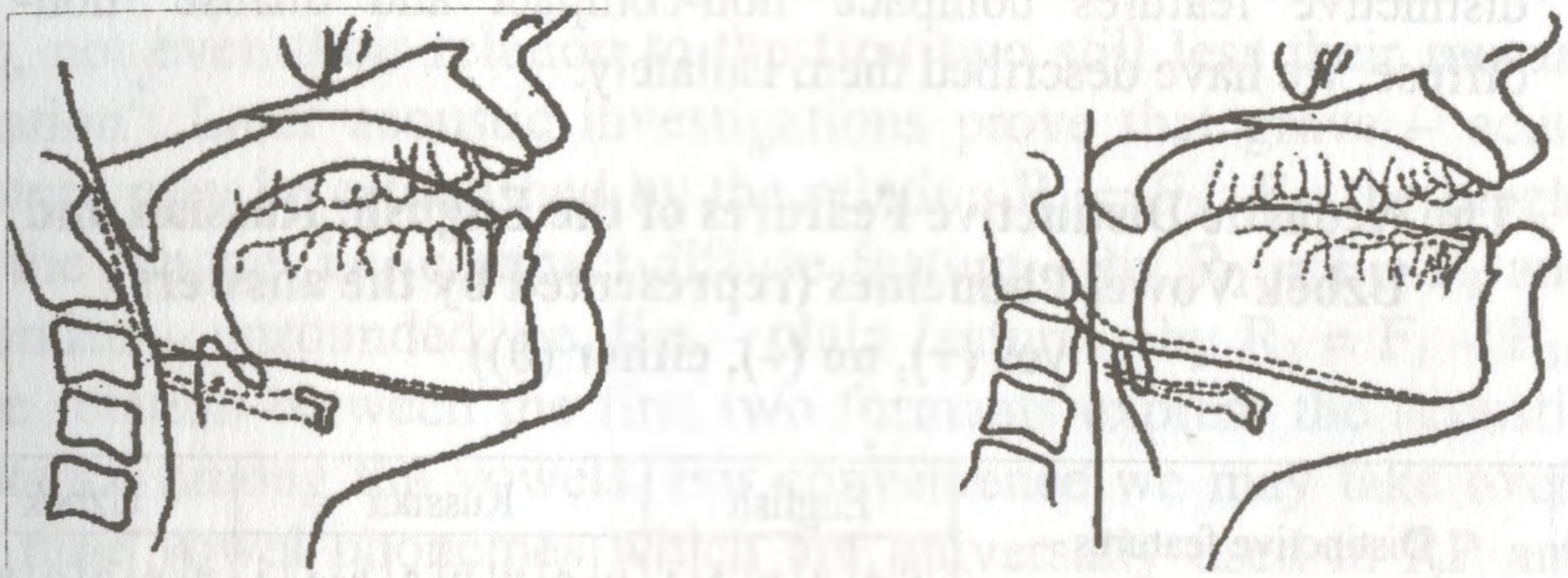
7) The Uzbek vowels have relatively stable articulation. There are no diphthongs and diphthongoids in Uzbek.

There are other differences in the articulation of the English and Uzbek vowels. For example, the Uzbek /i/ takes an intermediate position between the English /i:/ and /ɪ/. In the articulation of the Uzbek /i/ the tongue takes a less frontal position than in the English /i:/ but is more frontal than in the English /ɪ/. Such differences may be found in the X-ray pictures given below.

The acoustic classification of the vowels can be made on the basis of the results of spectrographic analysis. Any speech signal is the result of the vocal organs.



X-ray photos of the English vowels /i:/ (left) and /ʜ/ (right).



X-ray photos of the Uzbek vowels /e/ and /a/.

The correlation between the acoustic and articulatory and to some extent, the perceptual levels, makes it possible to establish the articulatory correlates of the acoustic distinctive features.

The Articulatory Correlates of the Acoustic Distinctive Features of Vowels

№	Binary acoustic features	Articulatory correlates
1.	Compact/non-compact	low/high and mid vowels
2.	Diffuse/non-diffuse	high/mid and low vowels
3.	Grave/acute (non - grave)	back/central (mixed) and front vowels
4.	Flat/plain (non-flat)	rounded/unrounded vowels

We have already explained vocalic /non-vocalic and consonantal/ non-consonantal features (chapter IV), therefore they are

omitted here. It is well-known that all English vowels are vocalic, non-nasal (oral), non-strident (mellow), voiced and continuant. Moreover, compact (low) vowels are always non-diffuse (non-high), while all flat (rounded) vowels are always grave (back). On the other hand, all non-flat (unrounded) vowels are invariably non-grave (front) only if they are also non-compact (non-low). This description shows that the redundant (non-distinctive) features may be omitted. Each vowel in the binary classification of the acoustic distinctive features may be represented in the form of sequences of distinctive feature complexes. Taking into consideration that compact/diffuse feature functions separately as the distinctive features compact/ non-compact and diffuse /non-diffuse, we have described them isolately.

The Acoustic Distinctive Features of the English, Russian and Uzbek Vowel Phonemes (represented by the answers yes (+), no (–), either (0))

№	Distinctive features	English						Russian								Uzbek					
		o	a	e	u	ə	i	o	e	u	u	a	a	i	i	u	e	a	o	y	y
1	Vocalic /non-vocalic	+	+	+	+	+	+	+	+	+	+	+	–	+	+	+	+	+	+	+	+
2	Consonantal /non-consonantal	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3	Compact /non-compact	+	+	+	–	–	–	–	–	–	–	+	+	–	–	–	0	+	+	–	0
4	Diffuse /non-diffuse	–	–	–	+	–	+	–	–	+	+	0	0	+	+	+	–	–	–	+	–
5	Grave /acute (non-acute)	+	+	–	+	+	–	+	–	+	+	–	–	0	0	–	–	–	+	+	+
6	Flat /plain(non-flat)	+	+	–	+	–	–	+	–	+	+	–	–	–	–	–	–	–	+	+	+
7	Sharp /plain(non-sharp)	–	–	–	–	–	–	0	0	0	0	0	0	0	0	–	–	–	–	–	–

Note: The vowel phonemes of Russian are represented by the symbols used in dichotomic theory in which /'o/, /'a/, /'u/, /'i/, /'e/ are used for identification[1].

The vowels described in this classification include only /i/, /e/, /a/, /o/, /u/, /ə/. In this classification two similar simple long or short vowels correspond to a long vowel; the diphthongs /aɲ, /eɲ, /əu/ are regarded to be combinations of two vowels; the diph-

[1] *Е. Черри, М. Халле, Р. Якобсон.* К вопросу о логическом описании языков в их фонологическом аспекте. «Новое в лингвистике» Вып. II, М., 1962, с. 286.

thongs /ıə, uə/ before (r) are converted into /ıjə, uʊə/; all other diphthongs with the second element /i/ or /u/ are represented as /aj, oj, aʊ/.

For the sake of simplifying things the number of vowels has been reduced to six simple vowels. The rules explained above help to economize the classification. Besides, this classification is made mainly on the basis of the General American pronunciation[1].

As the results of spectrographic analysis show the acoustic elements by which the individual vowels are distinguished, are the frequency and relation of the first two formants (F_1, F_2), not however the frequency and relation the other two formants (F_3, F_4), not even their relation to the first two still less their mutual relation[2]. Later acoustic investigations prove that grave – acute feature may be established by the relation $R_1 = F_2 : F_1$; the height of the tongue, i.e. compact-diffuse feature – by $R_2 = F_3 : F_1$ and rounded – unrounded, i.e. flat – plain feature – by $R_3 = F_1 - F_3$.[3] The relation between the first two formants express the acoustic distance among the vowels. For convenience we may take overall nine vowel phonemes which are universally used in RP and GA, also in many English dialects[4].

Frequency of F²

Frequency of F¹	2400	1800	1200	600
200	i	ɪ		u
400	e	ə		o
600				
800	æ	a		ɔ

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[1] *Р. Якобсон, М. Халле.* Фонология и ее отношение к фонетике. В книге «Новое в лингвистике». Вып. П. М., 1962, с. 231.

[2] *M. Romportl.* Vocalic Formants and the Classification of Vowels. In his «Studies in Phonetics», Prague, 1973, p. 32.

[3] *Г. Фант.* Акустическая теория речеобразования. М., Изд. «Наука», 1964. с. 225-231.

[4] *G.L. Trager* and *H. L. Smith.* An Outline of English Structure. Norman (Oklahoma), Battenburg, 1951. p. 61.

It is possible to compare the acoustic distinctive features of the English, Russian and Uzbek vowel phonemes. We can notice in the table that sharp/plain (non-sharp) feature is typical of Russian vowels, as they may be used after palatal or non-palatal consonants in which their quality may be changed (see the table).

V.2. PHONOLOGICAL ANALYSIS OF ENGLISH VOWELS

V.2.1. General Remarks

The phonetic criterion used in distinguishing the vowel phonemes is not sufficient theoretically, as it cannot clarify the relation between the phonemes in the entire system and the character of existing phonological oppositions their quality and quantity.

Commonly, the phonemic system of English vowels can be divided into two subsystems: a) the stressed vocalism, which includes the vowels under stress, i.e. occur in the stressed position and b) the unstressed vocalism, which includes all the vowels and so called neutral vowels /ə/ and /ɪ/.

The unstressed vocalism is more rich than the stressed vocalism, in which the vowels /ə/ and unstressed /ɪ/ do not take part.

English has a complex system of vowel phonemes, among which we distinguish ten short and long monophthongs, two diphthongoids and nine diphthongs. All these vowel phonemes may be established using the commutation test: /bi:t/ – /bɪt/ – /bet/, /bæt/, /bɔ:t/, /bʌt/, /bu-t/, /beɪt/, /baɪt/, /bəʊt/ etc. However, first we should discuss the phonemic status of the diphthongs and the vowel /ə/ and the phonetic features long – short, tense – lax, checked – free, which are closely connected with each other.

V.2.2. The Phonematic Value of Vowel-length

There are two approaches to the phonematic value of the vowel-length in English. Most linguists regard vowel-length as a non-phonological, non-distinctive feature in modern English. Only a few linguists admit the phonematic value of the English vowel-length. Summing up the ideas of British linguists Ch. Barber writes: «English vowels vary in length according to the phonetic context – the degree of stress they bear, whether they are

followed by a voiced or by a voiceless consonant, the number of unstressed syllables before and after them, and so on. However, given an identical phonetic context, some of the vowels are longer than others, and there is quite a considerable range of variation; /i:/ appreciably longer than /ɑ:/, and /ɑ:/ is a good deal longer than /e/, which is itself longer than /ə/. It is convenient, however, to divide the vowels into two groups, the long and the short; the vowels usually considered short are /ɪ, e, æ, ʌ, ɔ, u/ and /ə/ the remaining pure vowels and diphthongs are usually regarded as long»[1].

On the basis of the given explanation it is possible to make a phonological conclusion on the vowel-length. If we establish vowel pairs by such long – short features as /i: – ɪ/, /ɔ: – ɔ/, /ʊ – u:/, /ɑ: – æ/, /ə: – ə/ they seem to form proportional, even symmetric oppositions by long-short feature.

The vowels /i:/ and /u:/ are diphthongoids. They are pronounced as /ii/ and /uu/. Thus, the vowels /ɪ/ and /u/ are not in opposition to long vowels, but diphthongoids. The opposition /ɜ: – ə/ is specific of English, as /ə/ occurs only in an unstressed position and therefore it is included in the subsystem of unstressed vocalism, whereas /ɜ:/ occurs mostly in a stressed position and rarely in an unstressed position. Usually /ɑ:/ is opposed to /ʌ/ but in reality should be paired with /æ/. Only the pair /ɔ: – ɔ/ form an opposition by the long-short feature. Even in this pair the shortened /ɔ:/ may be perceived not as /ɔ/ but as /u/. Thus, long-short feature is non-distinctive and in many cases it cannot preserve its recognitive function (when the shortened /ɔ:/ is perceived not as /ɔ/ but as /u/).

Most American linguists also negate the distinctiveness of the vowel-length in English. H. Kurath states: «Length is not a distinctive feature in the vowel system of MnE. It is automatic in the sense that the actual length of any English vowel depends upon a variety of factors. In general, (1) both checked and free vowels are longer under full stress than under half-stress or weak stress (2) low vowels are longer than mid-vowels, and mid-vowels are longer than high vowels; (3) free vowels are longer in a free position than in checked one; (4) both checked vowels and free vowels in a checked position are longer before voiced conso-

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[1] *Barber Ch.* Linguistic change in Present-day English. London, 1964. p. 49-50.

nants»[1]. Distribution is regarded, therefore one of the distinctive features of the English vowel system[2]. This conclusion may only be proved phonetically, but phonologically, a distinctive-relevant feature does not depend on the phonetic context. According to H. Kurath long-short is a phonetic feature which is substituted by the phonological feature checked-free. In further analysis he distinguishes separate sets of checked and free vowel phonemes and the «unique» unstressed vowel /ə/[3].

Most linguists state that long vowels are tense and short vowels are lax. Usually tense-lax feature is associated by the degree of muscular tension. Nonetheless, tense-lax does not show any consistent opposition isolately. Therefore, B. Trnka regards long-short and tense-lax features as a «concomitant» phenomena as long-short feature may be different in various positions, but tense-lax preserved[4]. In fact nobody could explain the traditional definition of the tense and lax pairs of vowels. Even the authors of the dichotomic phonological theory admit that this feature requires further investigation[5]. Nevertheless in generative phonology, suggested by N. Chomsky and M. Halle, tense-lax feature is regarded the main phonological feature[6]. Objecting to this, R. Lass writes: «... the claims made for «tenseness» as a vowel feature in English are circular and contentless; and in any case an analysis of the English vowel system can do very well without it ... A language happens to have both short and long (phonemic) vowels, this does not mean that its vowel system is organized in «correlated pairs». This kind of symmetry, while attractive to linguists ... and perhaps common enough, is not in principle the only way of organizing a dichotomous system»[7].

Summurising all the view points we can notice that if we do not regard long-short feature as a distinctive feature, we negate all

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[1] *H. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor. The Univ. of Michigan Press, 1963, p. 18.
[2] Op. cit., p. 18.
[3] Op. cit., p. 18.
[4] *B. Trnka.* A Phonological Analysis of Present-day English. Univ. of Alabama Press, 1968, p. 21.
[5] *Р. Якобсон, М. Халле.* Фонология и ее отношение к фонетике. В книге «Новое в лингвистике», Вып. II, М., 1962, с. 254.
[6] *N. Chomsky, M. Halle.* The Sound Pattern of English. N. Y., 1978.
[7] *R. Lass.* English Phonology and Phonological Theory. Synchronic and Diachronic Studies. Cambridge Univ. Press, 1976, pp. 39-44.

the phonological oppositions based on this feature. The main property of the distinctiveness of the English vowel phonemes is based on their quality features; though it is doubtful whether features checked-free, tense-lax also belong to quality features. In reality these features are concomitant to long-short feature, which is realized variously. Phonetically it is a quantity or duration feature measured by time, which cannot be confused with the phonological long-short feature. The phonematic value of the long-short feature may be proved by the existence of such value of /i: – ɪ/, /u: – ʊ/, /ɜ: – ə/, /ɔ: – ɔ/, /ɑ: – æ/, in which the first two pairs are distinguished by the feature diphthongoid-monophthong. In any case they are distinguished by quality features. Thus, the quality quantity, relationship is significant in the phonemic system of English vowels. Even when the voiced-voiceless feature of the following consonants in the word structure (C)VC is neutralized the lone and short feature may remain as a distinctive feature (Ex. **bag – back, bed – bet** etc.).

The distinctive function of the vowels always remain in similar phonetic contexts: **beat** /bi:t/ – **bit** /bɪt/, **pool** /pu:l/ – **pull** /pʊl/, **turn** /t ɜ :n/ – **ten** /ten/, **port** /pɔ:t/ – **pot** /pɔt/, **cart** /kɑ:t/ – **cat** /kæt/. There is a strong tendency to lengthen short vowels, especially /æ/ and /e/ and also to shorten some long vowels in speech. These phonetic changes depend on the style of speech and on intonation changes inside the syllable (as «Ye-es», good /guu:d/)[1]. Among these changes /æ/ may be really regarded as a long vowel, especially before the voiced and nasal consonants which was remarked by D. Jones. According to D. Jones different degrees of vowel-length – «allochrone» as long-short pairs belong to one «chroneme»[2].

Nevertheless, we cannot accept this idea as the «chroneme» links a pair of phonemes and «allochrone» cannot exist itself in many cases owing to the simultaneity of both quality and length of the vowels. The term allophone is sufficient to describe such variations of vowels. The phonemic opposition long-short is based not only on a difference in tongue-position but it may be accompanied by a change in lip-position. For example, the oppo-

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[1] *Ch. Barber.* Op. cit., p. 50; *A. C Gimson.* Phonetic Charge and R. P. Vowel System. «In Honour of D. Jones», Lond., 1966.

[2] *D. Jones.* Chronemes and Tonemes. Acta Linguistics, 1944, Vol. IV.

sition /i:/ – /u:/ is based on two features: 1) front and back and 2) unrounded – rounded. Nevertheless, lip-rounding is not a distinctive feature in the English vowel system because there are no pairs of vowel phonemes which are distinguished solely by the fact that one is unrounded while the other is rounded. All the front, front-retracted and mixed vowels are unrounded whereas among the back-advanced and back vowels /ɔ, ɔ:, ʊ, u:/ are rounded. Being distinctively irrelevant, rounded – unrounded feature is regarded as «... a phoneme – constitutive, inalienable, indispensable concomitant feature for English vowel phonemes because no vowel can exist without it in English»[1].

In some languages, like Uzbek, and Russian, lip-rounding is a distinctive feature. In Uzbek the opposition front-back is distinctively irrelevant, thanks to the positional changes of vowels. After forelingual consonants back vowels become front, likewise, after backlingual consonants front vowels become back in modern Uzbek. But the front feature is inextricably tied up with unrounded feature, while back – with rounded feature, i.e. they are combined with each other. The rounded – unrounded feature is never changed in any positions: /i – u/ bir «one» – bur «turn», /e – ō/ kel «come» – kōl «lake», /a – o/ saf «row» – sof «pure».

V.2.3. The Phonological Status of Diphthongs

There are two basic approaches to the phonological status of English diphthongs, which are known as the «unit theory» and «analytic treatment». The unit theory suggested by the Prague phonologists (N. S. Trubetzkoy, B. Trnka, J. Vachek) is based on the certain rules for the determination of the mono- and biphonematic realizations of the combinations of two phonemes. The criteria used in the unit theory are as follows: 1) diphthongs may be produced by unit articulatory movements and their length is almost equal to that of simple vowels (monophthongs); 2) diphthongs are monosyllabic combinations, i.e. their two elements – a nucleous and a glide – do not belong to different syllables of a word; 3) according to the functional criterion the distinctive function of a diphthong may be established by two rules: a) the combination is biphonemic if its components may function as

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[1] *V.A. Vassilyev.* Op. cit., p. 207.

distinctively different elements, i.e. if it can be substituted. If the combination may fulfill its distinctive function, it is monophonematic; b) if the combination has its correlation pair among the simple phonemes, then it is monophonematic.

According to the above criteria long vowels and diphthongs can be defined as single vowel phonemes, since both categories with the exception of /a:/ and /ɜ:/ are free vowels with a variable degree of opening. In this case /i:/ and /u:/ are interpreted as /ii/ and /uu/ (but not as /ij/ and /uw/ in which the second elements appear as semi-vowels or consonants). According to the articulatory direction of the second elements, the diphthongs /eɪ, aɪ, aʊ, əʊ, ɔɪ/ are parallel to those of the high, long vowels. They are opposed to the remaining diphthongs, whose second elements move towards the central neutral vowel /ə/[1]. Usually these two groups of diphthongs are called closing and centring diphthongs. J. Vachek classifies them as «movement diphthongs» which are constituted by a direct articulatory movement and cannot be divided into two vowels /eɪ, aɪ, əʊ, aʊ/ and therefore, they are regarded as single phonemes and «positional diphthongs» which preserve the individual articulatory nature of these two elements /ɪə, ɛə, ʊə, ɔə/[2].

N.S. Trubetzkoy's first functional criterion, which may function as single phonemes, it is a biphonematic combination, is entirely useless. By using this principle the diphthongs /eɪ/, and /ou/ become biphonematic, though Trubetzkoy regarded them as single phonemes, i.e. he admitted their monophonematic value. In this case he takes into consideration the stability of diphthongs in morphological changes. This approach is formal and cannot explain the phonological status of diphthongs[3].

The morphological criterion which works in favour of a morphemic boundary between the two elements of a diphthong leads to its interpretation as a biphonematic combination. For example, **loyal** /lɔ:jəl/, **lower** /lɔ: – ʊə/, **sawing** /sə – uɪŋ/, **poet** /pəʊ – ɪt/ etc. In such words they occur at morphemic junctures in native words, or in two contiguous syllables of the same morpheme

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[1] *A. Cohen.* The Phonemes of English. The Hague, 1962, p. 90.

[2] *J. Vachek.* Über die Phonologische Interpretation der Englischen Diphthonge mit besonderer Berüksichigung des Englischen «Studies in English by Members of the English Seminar of the Charles University», vol. 4, 1933, p. 152.

[3] *А.Ф. Биршерт.* К вопросу о системе фонем английского языка. Уч. зап. 1-МГПИИЯ, т. I, 1940, с. 77-78.

in distinctively foreign words. In words like **seer** /si:ə/, **fewer** /fju:ə/. B. Trnka notices the combinations of two phonemes in which the first element preserves the tendency of length[1].

The analytic treatment suggested by some American and Copenhagen linguists regards diphthongs to be biphonematic combinations. The criterion used by American linguists is based on the method of complimentary distribution. As complex segments (diphthongs) consist of two components. The first components of the diphthongs /еɳ ɑɳ əu, au/ are in complementary distribution with the simple vowels /ɛ/ and /a/ used in such words as **let, sun.** The second elements are also in complementary distribution with the semi-vowels or glides /j/ and /w/. The diphlhongoids /i:/ and /u:/ are also treated as /ij/ and /uw/. According to this approach English diphthongs are regarded as the combinations of two phonemes, because their first and second elements can function as single phonemes.

On the paradigmatic axis the English diphthongs may form phonological oppositions both with simple phonemes and with each other. They have constitutive, distinctive and recognitive functions in the structure of English.

On the syntagmatic axis the structure of a diphthong is represented by three properties: a) the first component, called its nucleous; b) the second element, called its glide; c) its monosyllabic character, i.e. forming the crest of the syllable as in the word **time** /taɳm/.

The length of the diphthong, which is equal to that of the simple vowel also proves its monophonematic character.

D. Jones defined diphthongs from the phonetic point of view. He also regarded diphthongs as monosyllabic units pronounced by one expiration[2]. He distinguished «rising» /ɳə uə/ and «falling» (all other diphthongs) diphthongs. The endings of the rising diphthongs have greater prominence than their beginnings, while in falling diphthongs their beginnings have greater prominence than their endings[3].

D. Jones' treatment is based on the articulatory indivisibility of English diphthongs and their monosyllabic character. Besides

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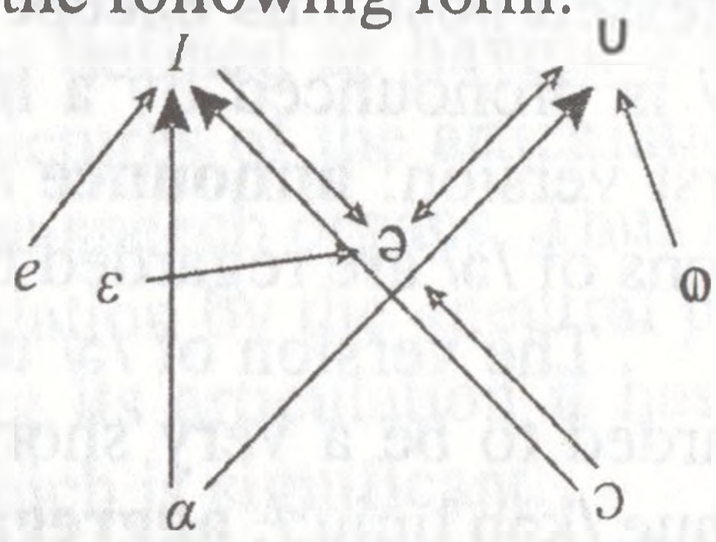
[1] *B. Trnka.* Op. cit., p. 17.
[2] *D. Jones.* An Outline of English Phonetics. Cambridge, 1956, p. 83.
[3] Everyman's English Pronouncing Dictionary. M., 1954, p. XXXIII.

he represented positional variants of the diphthongs /ɔɪ, eə, ɔə/ in his dictionary. But /uɪ/ can not function as a diphthong owing to its articulatory divisibility and disyllabic character.

The substitution of diphthongs by monophthongs takes place in morphonological alternations: **devine** /də'vaɪn/ – **devinity** /də'vɪnɪtɪ/, **chubby** /tʃʌbɪ/ – **chubbier** /tʃʌbɪə/ etc. (The morphonological alternations are discussed in chapter X). The gliding of English diphthongs may be represented in the following form:



Speaking about diphthongs we should mention two triphthongs: /aɪə/ and /aʊə/. The first two elements of these combinations may be regarded as diphthongs /aɪ/ and /aʊ/ while the third element represents the neutral vowel /ə/. There is no stable articulatory and syllabic indivisibility among the elements of these combinations. Usually they are divided into two syllables: **tire** /taɪ – ə/, **fire** /faɪ – ə/ **cower** /kaʊ – ə/ **shower** /ʃaʊ – ə/. The element /ə/ cannot be omitted in the pronunciation, otherwise words like **high** /haɪ/-**higher** /haɪə/, **tie** /taɪ/ – **tire** /taɪə/ may be mixed.

The combinations /eɪə/, /oʊə/ and /ɔjə/ occur in word-forms as **player** /pleɪə/ **rower** /roʊə/ **destroyer** /dɪstrɔjə/ and they are also considered to be combinations of vowel phonemes or groups of vowel phonemes.

V.2.4. Unstressed Vowels of English.
A. The Phonetic Approach

As stated above the unstressed vocalism of, English includes all vowel phonemes and the neutral phoneme /ə/ which appears as a result of weakening of the vowels in the unstressed position. The vowel /ə/ articulated by weak articulatory effect, has an indefinite tamber and changes its. quality under the influence of neighbouring sounds depending on its position, and in certain positions it may be omitted. Therefore, it may have different variations distinct from each other, especially, by the height of the tongue and duration. The X-ray picture of /ə/ in **a cat** /ə'kæt/ shows that this vowel may be classified as mixed, mid-broad variation, unrounded (either

lips are spread or neutral) vowel. Usually linguists distinguish from two[1] to four variations of /ə/[2].

The neutral vowel, which appears in final unstressed position, is somewhat close to the tamber of the vowel /ʌ/, perhaps, to the Russian /a/ and the Uzbek /a/, but is shorter than they are: **worker** /wə:kə/ **matter** /mætə/ etc.

The next version of /ə/ is used in initial and medial unstressed positions except the neighboring /k/ and /g/. This type of /ə/ is pronounced by a higher position of the tongue than in the first version: **announce** /ə'nauns/, **about** /ə'baut/. These two versions of /ə/ are regarded basic in practical studying of English.

The version of /ə/ used by the neighbouring /k/ and /g/ is regarded to be a very short and back, close-narrow variation: continue /kən'tınju:/, **aggregate** /ə'grıgeıt/.

The fourth version occurs before the consonants /z/ and /d/ which are used as morphemes expressing the plural form of nouns and the tense of verbs: **matters** /mætəz/, **hunters** /hʌntəz/, **covered** /kʌvəd/. It resembles /ɜ:/ though it is pronounced half-long.

All these versions have different degrees of laxity. They are notated by the symbols /ə^, ə³, ə^ᵘ, ə/[3].

They all represent the reduced forms of the neutral vowel /ə/, as they all occur in unstressed positions under the influence of reduction. Weakening of the unstressed syllables, as a result of which vowels (sometimes, consonants) change their quality and quantity features, is called **reduction**. The shortening of the vowel-length in unstressed position is known as a **quantity reduction**, while the omission of the clear tamber of a vowel is termed as a **quality reduction**. The most widespread type of quality reduction is neutralization, used in the phonetic but not phonological sense. The vowels of the neutral tamber have features similar to vowels with a certain quality called **«cardinal tambers»** by A.L. Trakhterov[4]. Speaking about /ə/ it is better to describe it as **«neutral tamber»**, than **«neutral position»** of

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[1] *D. Jones.* An Outline of English Phonetics. 9th ed. London, I960, 368.

[2] *В.А.Васильев.* Обучение английскому произношению в средней школе. М., Изд. «Просвещение», 1979, с. 102. *Г.П. Торсуев.* Фонетика английского языка. М., 1950, с. 103.

[3] *Г.П. Торсуев.* Вышеуказ. соч., с. 103-104.

[4] *А.Л. Трахтеров.* Практический курс фонетики английского языка. М., Изд. «Высшая школа», 1976, с. 102.

speech organs. Usually «neutral position» is used to describe the configuration of the speech organs just prior to a certain articulation of a speech sound. In a neutral position the velum is raised and the air-flow through the nose is shut off. Such a universal neutral position does not exist in the articulation of any speech sound. However, some linguists consider that the sounds /æ/, /ɜ:/, /ʌ/, /e/, /ə/ may be produced by a neutral position. The neutral position stated above is possible in «hesitation vowels», interpreted also as a «vocalic filled pause» which is defined as having a (+ vocalic, – consonantal) feature[1]. X-ray pictures of the articulation /ə/ do not show any neutral position of the speech organs. Thus /ə/ is called a neutral vowel not for its articulation by the «neutral position», but owing to the fact that during its articulation it has a neutral, non-distinct tamber or quality which is significant.

Besides the neutral vowel /ə/ there is an unstressed /ı/ which is regarded as an unstressed allophone of the English phoneme /ı/. The unstressed /ı/ is used in unstressed syllables, in prefixes, suffixes in medial and final positions: **mischief** /mistʃi:f/, **abdicate** /əˈbdıkeıt/, **infinite** /ınˈfınıt/, **discover** /dısˈkʌvə/, **impose** /imˈpəʊz/, **enjoy** /inˈdʒɔı/ **credit** /ˈkredıt/ etc. It should be stated that the neutral vowel /ə/ may often be omitted in colloqual rapid style of speech, but never so in the unstressed /ı/: **cotton** /kɔt(ə)n/, **London** /lʌnd(ə)n/, **darkness** /dɑ:knıs/, **sausage** /sɔ:sıdʒ/ etc. According to their occurance some authors distinguish vowels of: l) full formation: 2) semi-weak vowels, i.e. those which take an intermediate position between strong vowels and the neutral /ə/ and 3) weak vowels. The idea of the semiweak vowels have been made clear by G.P. Torsuyev and V.A. Vassilyev: «From the distributional point of view a semi-weak vowel ... be defined as a partially reduced vowel which is used in a more careful style of pronunciation instead of the neutral vowel used in the rapid colloquial style and instead of the corresponding vowel of full formation used in the full style»[2]. All the unstressed vowels of constantly full formation are used in all styles of pronunciation and even in many words of foreign origin, especially Latin and

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[1] *W.R. Brian Annan.* The «Articulation Base» and Chomsky's «Neutral Position». Proceeding of the 7th International Congress of Phonetic Sciences. *Mouton,* 1972, p. 1080. *R. Lass.* English Phonology and Phonological Theory. Cambridge Univ. Press, 1976, p. 43-44.

[2] *V.A. Vassilyev.* Id.p. 217.

Greek, which have not yet been fully adopted in English: **insect** /ınsekt/, **epochs** /ˈi:pɔks/, **diagram** /daıəgræm/, **marquee** /mɑ:ki:/ etc[1].

The vowels of constantly full formation have a relatively stable quality and may preserve their less clear tamber in an unstressed position: **apple-tree** /ˈæpltri:/, **architect** /ˈɑ:kıtekt/, **objective** /əbˈjektıv/, **artistic** /ɑ:ˈtıstık/, **programme** /prəuˈgræm/, **ensign** /enˈsaın/, **upturn** /ʌpˈtɜ:n/, **Uganda** /u:ˈgændə/, **obey** /əuˈbeı/ **idea** /aıˈdıə/ etc.

B. The Phonological Interpretation

Our Phonological interpretation mainly concerns the neutral vowel /ə/. The phonological status of the English /ə/ have been discussed by many linguists, including A. Martinet, M. Swadesh, O. Funke, A.C. Lawrenson, J. Vachek. But only the first two authors negated the phonemic status of /ə/. A. Martinet regarded that /ə/ and /r/ belong to a single phoneme, and gave the examples as perfection beginning with phonemical /prf/ and professor with /prrf/. He regarded that when /r/ occurs before a vowel it should be notated as /r/, but when it occurs before a consonant, its notation should be /ə/. The same conclusion was made by M. Swadesh on the basis of «r – less» dialects of English in which /ə/ is regarded as a positional variant of the /r/ phoneme, but it has phonematic status in words like sofa /səufə/. A. Cohen, who cited the above ideas, established the significant function of /ə/ in English words summer /ˈsʌmə/ – some /sʌm/ rudder /rʌdə/ – ruddy /rʌdı/[2]. According to B. Trnka in unstressed syllables only one pair of phonemes may be distinguished: /ı – ə/ – **effect** /ıˈfekt/ – **affect** /əˈfekt/, **except** /ıˈksept/ – **accept** /əˈksept/, **city** /ˈsıtı/ – **sitter** /sıtə/, **ready** /redı/ – **redder** /redə/, **fatty** /fætı/ – **fatter** /fætə/. Nevertheless the neutral /ə/ may functionally be opposed to the vowels of constantly full formation in an unstressed position:

/ə – /ə: **allusion** /əˈlu: ʒn/ – **illusion** /ıˈlu: ʒn/

/ə – ɔ:/: **exercise** /ˈeksəsaız/ – **exorcise** /ˈeksɔ:saız/

/ə – ɜ:/: forward /ˈfɔ:wəd/ – forword /ˈfɔ:wɜ:d/

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[1] *V.A. Vassilyev.* Id.p. 217.

[2] *A. Cohen.* Op. cit., p. 77.

/ə – e/: **experiment** /ɪks'perɪmənt/ – (*n*) **experiment** (*v*) /ɪks'perɪment/

/ə – ʌ/: **some** /səm/ (*pr.*) – **some** /sʌm/ (*adj.*)

/ə – æ/: **that** /ðət/ (*pr.*): **that** /ðæt/ (*pr.*)

/ə – eɪ/: **estimate** /'estɪmət/ (n.) estimate /'estɪmeɪt/[1] (*v*)

Certainly, a few minimal pairs may be found to illustrate the above phonological oppositions, though the distinctive function of /ə/ becomes clear in the given minimal pairs. Thus, the phonological status of /ə/ is somewhat limited, but other difference definitely exist between the opposition members. B.Trnka's idea that «the quantity is not a distinctive feature in unstressed position»[2] is vague, as there are some oppositions based solely on the vowel-length /ə – ɜ:/ and some complex oppositions based on quality and quantity features (/ə – ɔ:/, /ə – ʌ/, /ə – æ/).

Besides the neutral phoneme /ə/ has its own constitutive and recognitive functions, which are especially important in words with identical spellings as some, that, duplicate, estimate, experiment, etc. In many words both reduced and full forms of vowels may be used: **Monday** /mʌndɪ/, mʌndeɪ/, **Sunday** /sʌndɪ, sʌndeɪ/ etc.

The neutral phoneme /ə/ may alternate with other vowel phonemes within the same morpheme. In this case it is possible to observe the morphonological alternations. According to H.Kurath: «the vowel /ə/ confined to unstressed syllables, occurs as a prosodically conditioned alternant of all stressed vowels, with the possible exception of /au/ ...»[3]. This type of morphonological alternations may be illustrated in the following examples:

/e – ə/ – **heresy – heretical;**

/ʌ – ə/ – **conduct – conductionable;**

/æ – ə/ – **active – activity;**

/ɔ: – ə/ – **author – authority;**

/ɔ – ə/ – **methodic – method;**

/eɪ – ə/ – **oration – orator etc.**

There is a tendency to pronounce /ə/ as /ʌ/ and an intermediate sound between /ə/ stressed vowels more often observed in «spelling pronunciation»: **official** /'ɔfɪʃəl/, **conversion** /'kɔnvəʃn/, **dormitory** /dɔrmɪtrɪ/ etc.

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[1] *Г.П. Торсуев.* Указ. соч., с. 104-105.

[2] *B. Trnka.* Op. cit, p. 27.

[3] *H. Kurath.* Op. cit., p. 123.

V.3. THE CLASSIFICATION OF THE PHONOLOGICAL OPPOSITIONS OF VOWELS

Having established the phonematic value of the vowel-length the phonological status of diphthongs and the neutral /ə/, it is convenient to classify all the phonological oppositions in the vowel system of English. Though some oppositions have been given in certain cases to prove phonematic facts we could not discuss the relation between the phonemes in the entire vowel system of English. As a rule, we should begin with the preliminary phonological analysis, the criterion of which is based on establishing mainly single, as well as double and complex oppositions.

According to the horizontal movement of the tongue, it is possible to establish the following single oppositions:

a) fully front – fully back: /i: – u:/: **seen – soon**;
b) front-retracted-back-advanced: /ɪ – ʊ/: **pit-put**;
c) fully front-mixed: /e – ɜ:/: **ten – turn**;
d) fully front-back-advanced: /æ – ɑ:/: **cap – carp**;
e) back-advanced-fully-back: /a: – ɔ/: **part – pot**.

The distribution of some members of the given oppositions is limited. For example, /u:/ seldom occurs word-initially; /ʊ/ does not occur word initially; /e/, /ɔ/, /ʊ/, /æ/, /ʌ/ never occur at the end of words; /ɔ/ never occurs word finally. Therefore, the functional load of those oppositions in which /ʊ/, /e/, /ɔ/ take part are lower than the other oppositions.

The oppositions /ɑ: – ɔ/ and /ʌ – ɔ:/ may be regarded as single only on condition that /ɑ:/ is defined as a back-advanced vowel and /ʌ/ as a low-narrow vowel. These alternations do not seem to describe more precisely the actual tongue positions in pronouncing /ɑ:/ and /ʌ/ but make the oppositions more symmetric[1].

The following nine single oppositions are based on the vertical movement of the tongue:

a) high-narrow – high-broad: /*i:* – ɪ/: **beat – bit**;
/u: – ʊ/: **fool – full**;
b) mid-narrow – mid-broad: /ɜ: – ə/: **foreword – forward**;

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[1] *V.A. Vassilyev*. Op. cit., p. 211-212.

c) low-narrow – mid-narrow: /ɔ: – ɔ/: **port – pot**;
d) high-narrow – mid-narrow: /i: – e/: **seat – set**;
e) high-narrow – low-narrow: /u: – ɔ:/: **boot – bought**;
f) high-narrow – low-broad: /ɪ: – æ/: **cheap – chap**;
/u: – ɔ/: **shoot – shot**;
g) high-broad – mid-narrow: /ɪ – e/: sit – set;
h) high-broad – low-narrow /ʊ – ʌ/: look – luck;
i) high-broad – low-broad: /ʊ – α:/ put – part.

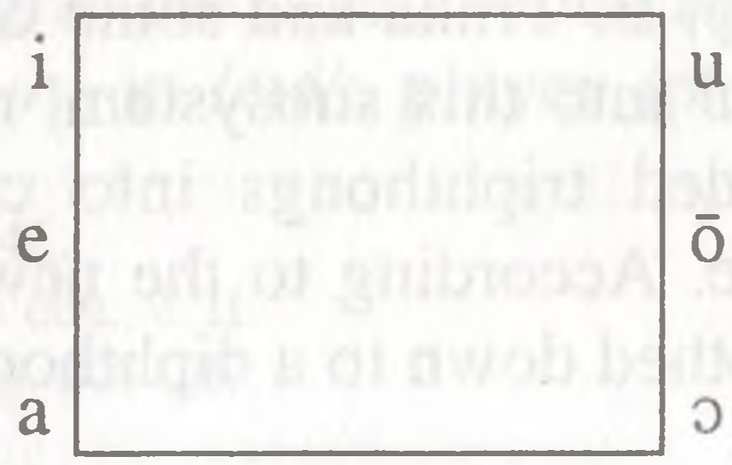
All the given oppositions, except /ɪ – e/ and /ʊ – ʌ/ may be regarded double if the vowel-length is regarded as a distinctive feature. In this case the oppositions may be based both on quality and quantity features of vowels.

In Uzbek, as in all languages, the height of the tongue is phonologically relevant and the following single oppositions may be established:

a) high – mid: /i – e/, /u – ō/;
b) high – low: /i – a/, /u – o/;
c) mid – low: /e – a/, /ō – o/.

The second distinctive feature is lip-rounding. All front vowels are unrounded and all back vowels are rounded in Uzbek, but front-back feature is concomitant. It brings symmetry into the phonological oppositions of the Uzbek vowel phonemes. N.S. Trubetzkoy, citing E.D. Polivanov's classification of the Uzbek vowel phonemes, called it «logically equippolent with two classes of tamber (maximal high and low) quadrangular system» which appears very rarely in languages of the world[1]. Correcting his transcription symbols[2] the system of the Uzbek vowel phonemes may be illustrated in the following way:

Sonority



[1] *Н.С. Трубецкой.* Основы фонологии. М., 1960, с. 111-112.

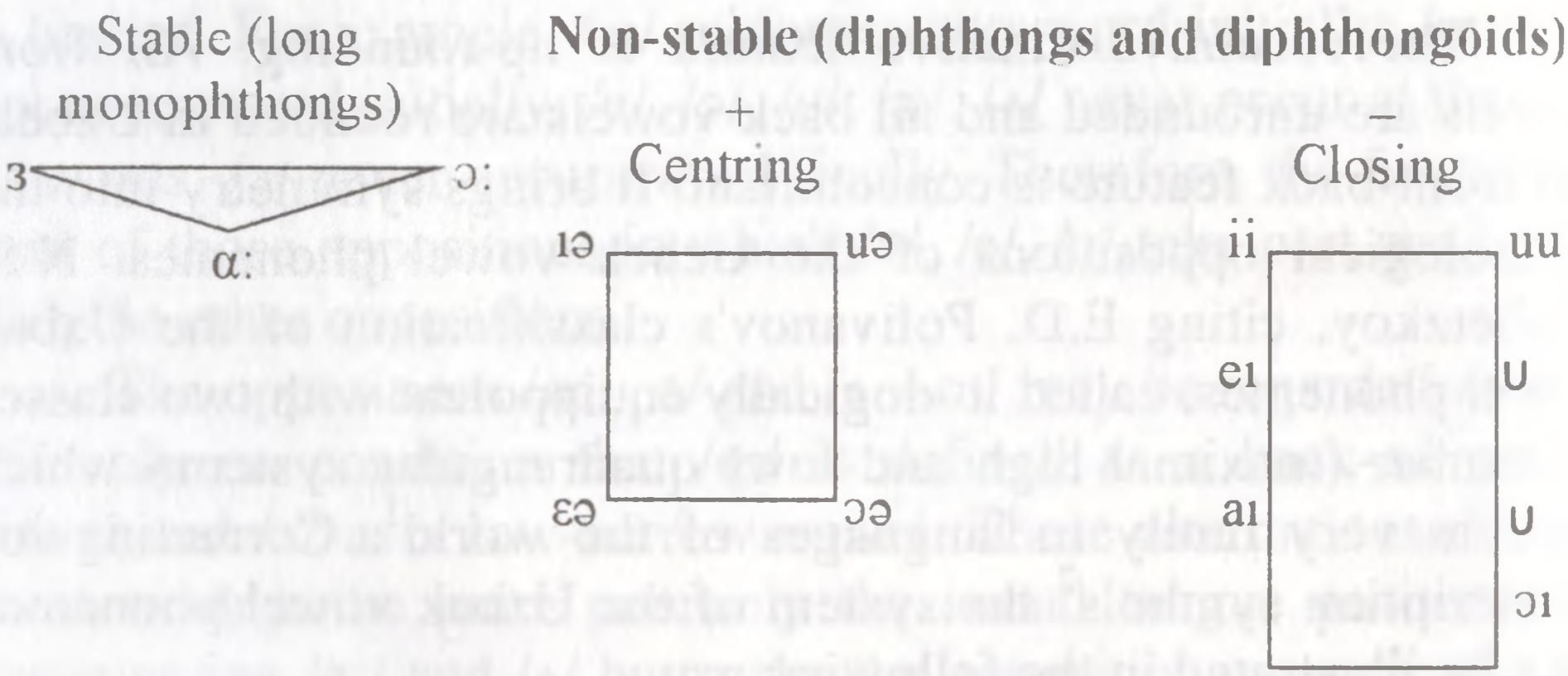
If we apply N.S. Trubetzkoy's classification to the subsystem of the English stressed short vowels, it resembles the Uzbek vowel phonemes as a quadrangular system:

maximal	i		u
mid	e	(ə)	ɔ
minimal	æ		ʌ

The timbre (the horizontal movement of the tongue) opposition in the subsystem of the English short vowels is also equipollent, as it is shared by three pairs of phonemes /i – u/, /e – ɔ/ /ɪ – ʊ/, /e – ɔ/, /æ – ʌ/; the same opposition is observed on sonority (the height of the tongue): /ɪ – e/, /e – æ/, /ɪ – æ/, /ʊ – ɔ/, /ʊ – ʌ/ /ɔ – ʌ/.

The neutral vowel phoneme has its own place in the system.

In the subsystems of long monophthongs and diphthongs, including two diphthongoids /ii/, /uu/ the timbre and sonority oppositions may be outlined as follows:



N.S. Trubetzkoy, B. Trnka and some other linguists did not include diphthong /ɔɪ/ into this subsystem, regarding it biphonemic, but they included triphthongs into centring diphthongs[1], which is rather vague. According to the new tendency, /aɪə/ and /aʊə/ tend to be smoothed down to a diphthong of the /aə/ type (as

[1] *Н.С. Трубецкой.* Выше указ. соч., с. 136; B. Trnka.. Op. cit, p. 21; *В.Я. Плоткин.* Очерк диахронической фонологии английского языка. М., Изд. «Высшая школа», 1976, с. 97.

in **fire** /faə/, **tire** /taə/). Some speakers smooth them even further to a pure vowel /a:/ or /ɑ:/ (as in **fire** /fa:/ or /fɑ:/) which is more common in RP[1]. But this type of substitution may be regarded as variphone alternation, (i.e. free variation of the sound structure of a word is called a «variform»)[2].

According to the movement and the height of the tongue it is possible to establish double and complex (if long-short feature is distinctive) phonological oppositions between all the monophthongs and diphthongoids[3].

The. opposition monophthong – diphthong (absence and presence of glide) may be possible when simple vowels coincide or are regarded to be very close to the nuclei of the diphthongs: /e – eɪ/, /æ – aɪ/, /ɔ – ɔɪ/, /æ – aʊ/, /ɑ: – aʊ/, /ɔ: – oʊ/, /ɜ: – əʊ/, /ɪ – ɪə/, /e – ɛə/, /ɔ – ɔə/, /ɔ: – ɔə/, /ʊ – uə/. V.A. Vassilyev found 36 commutations illustrating phonological oppositions between two diphthongs[4]. It is also possible to establish oppositions between two diphthongs on the basis of their nuclei as fronting-backing diphthongs: /eɪ – ɔɪ/, /au – ou (əʊ)/, /ɪə – uə/, /ɛə – uə/, /ɛə – ɔə/ and also on the basis of their glides as closing-centring diphthongs: /eɪ – ɛə/ (when/e/ and /ɛ/ are very close), /ɔɪ – ɔə/. Further development, of the vowel system may result in the appearance of the diphthong /ɑ:ə/ or /aə/ instead of the triphthongs /aɪə/ and /aʊə/.

The opposition /aɪ – aə (ɑə)/ may also come into being. However it is not real, owing to the existence of words like **tire** /taɪə/ – **tower** /taʋə/ which sound homophoneous if /aɪə/ and /aʊə/ coincide as a result of convergence.

Analysing the permissible variation of the phonemic structure of words from D. Jones' dictionary A.C. Gimson has found 7,5% items of this kind from 5900 monosyllabic and polysyllabic words[5]. The following variphone alternations may also be found in modern English pronunciation[6].

a) monophthongization of /eɪ/ → /e/: **again** /ə'gen/;

b) reduction of /ɪ/ in /eɪə/; **player** /ple·ə/, which is like in

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[1] Ch. Barber. Op. cit., p. 45-46.
[2] *В.А. Васильев.* Вышеуказ. соч., с. II.
[3] *V.A. Vassilyev.* Op. cit., p. p. 208-209.
[4] Op. cit., p. 199.
[5] *A.C. Gimson.* A Note on the Variability of the Phonemic Components of English Words. «Brno Studies in English», vol. 8, 1969.
[6] *A.C. Gimson.* Phonetic Change and the RP Vowel System. «In Honour of D. Jones», London, 1964, p. 131-136.

/aɪə/ and /aʊə/ → /a·ə, ɑ·ə, aə, ɑə/ but the final element of /eɪə/ is not omitted;

c) diphthongization of /ɪ, e, æ/ → /ɪᵊ, eᵊ, æᵊ/ especially, before the voiced consonants: **bid, head, bad;**

d) instability of the glides of closing diphthongs /eɪ, ɔʊ, aɪ, a*ʊ*, ɔɪ/ in favour of prolonging the prominent first elements in advanced RP in the London region:

/eɪ/ → /e˙ˡ/ in **day, made, lay hands, greyer;**

/oʊ/ → /əʊ/ in **row, road, low hurdless, goal;**

/aɪ/ → /a˙ᵊ/ or /a:/ in **side, society, sigh;**

/aʊ/ → /a˙ᵛ/ or /ä:ᵊ/ or **/ä:/** in **sow, allow, half;**

/ɔɪ/ → /ɔ˙ˡ/ or /ɔ˙ᵉ/: **boy, toy, toil.**

A.C. Gimson also notes the new relationship between the centring, falling /ɪə, ɛə, ɔə, oə/ and /ɪ, e, æ, ɔ:/. For example, the levelling of earlier /*ʊ*ə/, /ɔə/ and /ɔ:/ is now common: poor, pore, paw; sure, shore, shaw; the centring diphthongs /ɪə/ and /ɛə/ are frequently in opposition: hear-hair, fear-fair, weary-wary[1].

It is possible to classify modern changes in English pronunciation in the inventory of vowels and according to their distribution. For example, the changes in the inventary concern: /e/ became more open /ɛ/; /æ/ – more front and long or half-long like /a/; /ɑ:/ – more front; /ɔ:/ – somewhat half-open; /ʌ/ – more front, like central vowel /a/; the nucleous of the diphthong /eɪ/ has become more open as /ɛɪ/; the nucleous of the diphthong used in conservative English /oʊ/ is /ə/ and it is indicated as /əʊ/[2] in most textbooks and dictionaries of today.

Besides, there are the changes in the distribution of vowels, caused by the spelling pronunciation, (consider /kən'sɪdə/ – /kɔn'sɪdə/ and merely sound substitution in words or by the influence of stress shifting (**regime** /reɪ'ʒi:m/ – re(ɪ)' ʒi:m/)[3]. These new tendencies in modern English pronunciation are moving towards the monophthongization, diphthongization, changing of the vowel-length, more often appearing as centring diphthongs (/aɪ/, /aʊ/, /əʊ/, /ɔɪ/ and even triphthongs tend to the direction of cen-

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[1] *A.C. Gimson.* Op. cit., p. 134-136.

[2] *K.Wachtler.* Sociolinguistic Aspects of a Phonetic Change in the RP-Model of British English. «Linguistische Berichte, 53, 1978, p. 21-28.

[3] *В.А. Васильев, Д.П. Венцкуте.* Об изменениях в произношении современного английского языка». «Иностранные языки в высшей школе. Вып. 8, 1974, с. 152-154.

tring diphthongs), which have been observed in the historical development of the phonemic system of English vowels.

V.4. THE RELATIONSHIP BETWEEN THE FREQUENCY OF OCCURANCE OF VOWELS AND CONSONANTS

Analysing vowel and consonant phonemes, we could not always discuss the frequency of their occurance in words. The most wide-spread type of English word is CVC, which is interpreted as a monosyllabic or monomorphemic structure. According to B. Trnka's statistic analysis, the total number of CVC structures of word is 42%. Therefore, the maximal variety of vowel oppositions appear in positions between consonants. Only seventeen phonemes occur in the initial position, but /ʊ, ɪə, ʊə/ do not appear in this position. The long vowels and diphthongs usually more often occur in the stressed position. Among the consonants /h/, /ŋ/, /3/ have limited occurance[1]. It is interesting to note that the consonants /kh, ng, j, v/ also show limited frequency of occurance in Uzbek as two of them have been borrowed from Russian (/ж/) and Tadjik (/в/).

If we compare the relationship between the frequency of occurance of vowels and consonants in the languages of different families, Indoeuropean and Ural-altaic, and groups among these families – Germanic (English, German), Romanic (French, Spanish), Slavonic (Russian) and Turkic (Uzbek, Kazakh, Turkmen, Kirghiz) we find they have a typological similarity. This typological similarity is expressed by the relationship of the frequency of occurance between the vowels and consonants, which is equal to 2:3. It shows the stability of the given relationship in many languages, though their structures and grammatical systems differ greatly. The above typological similarity may be illustrated in the following table:[2]

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[1] *B. Trnka.* Op. cit., pp. 35, 111.

[2] *В.Ф. Чистяков.* Частотности гласных и согласных в 50 языках разного грамматического строя. «Lingua Poznaniensis», 1972, XVI, p. 45-48.

Languages	Frequency of Occurance	
	Vowels	Consonants
English	0,41	0,59
German	0,40	0,60
French	0,44	0,56
Spanish	0,44	0,56
Russian	0,42	0,58
Uzbek	0,42	0,58
Kirghiz	0,43	0,57
Kazakh	0,44	0,56
Turkmen	0,43	0,57

If we apply the table of typological features suggested by V.D. Arakin[1], including the Uzbek vowels and by adding the functional load and the power of opposition, it may be outlined in the following way: (N – number, F.L. – functional load, P.O. – power of opposition)

№	Phonemes, Features and Oppositions	Languages								
		English			Russian			Uzbek		
		N.	F. L.	P. O.	N.	F. L.	P. O.	N.	F. L.	P. O.
1.	Monophthongs (simple vowels)	10			6			6		
2.	Diphthongoids Diphthong	2 9			0 0			0 0		
3.	Tongue move-ment	5			3			2		
4.	Height of tongue	3			3			3		
5.	Variations of the height of tongue	2			0			0		
6.	Oppositions on tongue move-ment	5	low	strong	4	low	strong	0		
7.	Oppositions on one height of tongue	4	low	weak	0			0		

[1] *В.Д Аракин.* Сравнительная типология английского и русского языков. Л., Изд. «Просвещение», 1979, с. 78.

№	Phonemes, Features and Oppositions	Languages								
		English			Russian			Uzbek		
		N.	F. L.	P. O.	N.	F. L.	P. O.	N.	F. L.	P. O.
8.	Oppositions on different heights	7	high	strong	6	high	strong	6	high	strong
9.	Oppositions on lip-rounding	0			6	low	strong	6	high	strong
10.	Length	distinctive with quality			0			0		
11.	Distribution	depends on the structure of a word			0			0		

THE PROSODIC SYSTEM OF THE ENGLISH LANGUAGE, GENERAL REMARKS

The structure of the segments longer than segmental phonemes requires adequate principles of phonetic and phonological analysis. Such longer segments constitute the syllabic structure, the accentual structure of words and intonation structure. They are studied by the division of phonetics or phonology named prosody (or suprasegmental phonetics or phonology). The approaches to the prosodic analysis differ greatly. Some linguists regard that the object of suprasegmental phonetics is limited by the description of intonation[1]. Most linguists consider stress and intonation to be suprasegmental properties of a language[2]. A syllable which is formed by more than one segment in many cases (as CV, VC, VCC etc.) may belong to prosodic structures of any length. The syllable may be perceived as a long or short segment having a peak of loudness. Therefore, sometimes the syllable is defined as a chain of expression including only one accent. The syllables act as structural units within words, word-combinations and sentences (or phrases), and therefore, it is possible to include the syllable into prosody. In recent works the syllable is regarded as a constructive element of accentuation of words.

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[1] For example: *D.I. Dickushina.* English Phonetics. A theoretical course. M.-L., 1965, p. 129.

[2] *A.A. Реформатский.* Пролегомены к изучению интонации. In his: «Фонологические этюды», М., 1975, с. 36.

Thus, within the prosodic system of the English language we distinguish the syllable-prosody, word-prosody and sentence or phrase-prosody which are in close relationship to each other.

The phonetic structure of a word comprises four types of structure interdependent of each other: 1) the phonemic structure; 2) the structure of the combination of phonemes; 3) the syllabic structure; 4) the accentual-rhythmic structure[1]. Among these components the syllable structure takes a somewhat intermediate position because the syllable is a special unit of expression and not merely a combination of phonemes. The syllable has its central element (the peak) and marginal elements (the slopes). Its special feature is noticed under stress. The syllable functions as a medial unit between phonemics and prosodics (or segmental and suprasegmental phonology). It may be classified according to its phonemic structure into open and closed or covered and uncovered. But according to its prosodic structure it may be classified into stressed and unstressed syllables. Like other phonetic units the syllable may be defined either as a purely phonetic unit or as a phonological unit. In the latter case we use the term a «syllabeme». Inside the phonological word the signalling of syllable boundaries is optionall as the syllable boundary does not always coincide with the «meaningful segments». Thus, the syllable becomes very significant as it functions as a «bridge» between phonemics and prosodics.

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[1] *Г.П. Торсуев.* Вопросы фонетической структуры слова (на материале английского языка), М., 1962, с. 5-35.

CHAPTER VI

THE SYLLABIC STRUCTURE OF ENGLISH

VI. 1. THE DEFINITION OF THE SYLLABLE. THE FUNCTIONS OF THE SYLLABLE

Listening to utterances of any language one can observe the peaks of loudness in the speech continium. The discrete sounds, in which the segmental phonemes are realized, is the result of the most minimal segmentation of the speech continium. The combination of speech sounds constitutes the longer segments in which the complex unity of all the phonetic elements and their features may be found. The minimal unit of utterance is known as a syllable. The syllable is the result of the natural segmentation of speech continium. The definitions of the syllable differ greatly, as linguists choose the acoustic, articulatory and functional criteria. There are wrong conceptions as well, which state that the syllable, as a phonetic phenomenon, does not exist and that the grouping of phonemes in syllables is a mere convention without any objective reality (a view held, for example by G. Panconcelli – Calzia, O. Von Essen)[1]. Nonetheless, most linguists admit the existence and the articulatory – acoustic reality of the syllable.

From the articulatory point of view the syllable may be regarded as a single uninterrupted unit of utterance which may coincide with a word (ex. **cat** /kæt/) or a part of a word or a word form (ex. **little** /lit–l/) **making** /meı–kıŋ/). Syllables consisting of two or more phonemes, joining the articulations, have a complex structure characterized by on – glides, retention and off-glides which is essentual also for the ordinary combination of phonemes.

From the acoustic and perceptual point of view **a syllable is a wave of loudness characterized by prosodic features such as stress, pitch, sonority and length.** The acoustic – auditory shape of the syllable depends on the sonority of the sounds. The peak of the syllable is often formed by a vowel as in **pet, act, see**; less of-

[1] *B. Malmberg*. Phonetics. N. Y., 1963, p. 65.

ten by the sonants or sonorants (m, n, l), as in the second syllable of **cable, tension, times.** The peak of the syllable may be followed by less sonorous sounds (consonants). One sound, which is characterized by the great force of utterance (accent and pitch of voice), sonority and length, may function as a syllable. For example, **I** /aɪ/, **little** /lit–l/, **rhythm** /rɪð–m/.

From the functional point of view a syllable, like other phonetic units, fulfills four functions:

1) **constitutive function,** i.e. a syllable or syllables act as material carriers of words, word-forms, word-combinations and phrases;

2) **distinctive function,** i.e. the syllables may serve to distinguish minimal pairs of words, word-combinations and phrases. For example: **an apron** /ən 'eɪprən/ – **a napron** /ə 'neɪprən/ **an ice house** /ən 'aɪs 'haʊs/ – **a nice house** /ə naɪs'haʊs/, **its lips** /ɪts'lɪps/ – **it slips** /ɪt slɪps/. **Is there any mistake here? – Is there any Miss Take here?;**

3) **recognitive function,** i.e. the recognition of the right syllable formation and syllable division rules;

4) **delimitative function,** i.e. some syllables may occur only in initial or final positions in words.

Phonologically it is possible to distinguish two types of syllables:

1) **genuine syllables,** the phonemic structure of which has constant functional relevance: **bottle** /bɔt–l/ **– bottom** /bɔt–əm/, **make** /meɪk/ – **making** /meɪkɪŋ/;

2) **the secondary syllables** are unstable and their phonemes have not the same functional relevance as the phonemes of genuine syllables. There are two or more peaks of sonority in the secondary syllables[1]. For example: **a black tie** /ə'blæk'taɪ/ – **a blacked eye** /ə'blæktt'aɪ/, **ice-cream** /'aɪs'krɪ:m/ – **I scream** /aɪ'skrɪ:m/.

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[1] *J. Kramsky.* Papers in General Linguistics, Mouton, 1976, p. 67.

VI.2. THE CLASSIFICATIONS OF SYLLABLES. TYPES OF SYLLABLES IN ENGLISH (as compared with Russian and Uzbek)

There are the various generally accepted classifications of syllables. (1) According to the syllable division, i.e. from the viewpoint of whether a syllable begins and ends with a vowel or a consonant sound, syllables are classified into open, closed, covered, uncovered. V.A. Vassilyev distinguished the following types of syllables:

V – uncovered, open;
VC – closed, uncovered;
CVC – closed, covered;
CV – covered, open[1].

G. P. Torsuyev gives the following types of syllables:

V – fully open;
CVG – fully closed;
CV – initially covered;
VC – finally covered.

Besides he distinguishes the sub-types of syllables.

A fully open syllable consists of a vowel or a diphthong and therefore it has no other sub-types. A fully closed (CVC) syllable may be of the following twelve sub-types depending on the number of consonants: 1) CVC – **fat**, 2) CVCC – **fact**, 3) CVCCC – **facts**, 4) CCVC – **place**, 5) CCCVC – **street**, 6) CCVCC – **speaks**, 7) CCVCCC – **spinx**, 8) CCCVCC – **streets**, 9) CCCVCCC – (con) – **structs**, 10) CVCCCC – **sixths**, 11) CCVCCCC – **twelfth,** 12) CVCCCCC – **sixths** /sıksθ / (with optional /t/).

The initially covered syllable has three sub-types: 1) CV – **sea**, 2) CCV – **play**, 3) CCCV – **straw**.

The finally covered syllable also has three sub-types: 1) VC – **at,** 2) VCC – **apt**, 3) VCCC – **acts**. Thus, there are nineteen structural sub-types of syllables in modern English and their peak is formed by a vowel or sonorant when it follows or precedes constrictive consonants. For example, CS (S – indicates a sonorant); **/(rı)** – tn/ **written;** CSC /(ˈlaı – sns/ **license;** CCSC: /(ˈsæŋ)

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[1] *V.A. Vassilyev.* Op. sit., p. p. 231-232.

– kʃnz/ **sanctions;** CSCC: /('skæ) – fldz/ **scaffolds**; CCSCC: /('en) – trnts/ **entrants**[1].

The above given classification represents the phonemic, to be more strict, the allophonic structure of syllables. An English syllable is the minimum unit of the phonetic structure of a monosyllabic word (e. g. **/aɪ/ I, /ɪt/ it,** /buk/ **book** etc). Nevertheless it can also explain the allophonic structure of polysyllabic English words, i.e. words with two or more syllables. The English word may contain from one to eight syllables. There are more than eight syllables in Uzbek word as agglutination tendency is strong (it is possible to add a number of suffixes) in it.

Typologically the following types of syllables exist in English, Russian and Uzbek (including borrowings):

The universal type of syllable for English is CVC – closed and covered, which is the most frequently used in it.

№	The Type of the Syllable	English	Russian	Uzbek
1.	V	I/aɪ/ awe /ɔ:]	о-а-зис, А!	u, E! A!
2.	CV	he /hi:/ me /mi:/	Он, те-ма	ke-ma, bu, shu
3.	VC	it /ɪt/ art /α:t/	ум, ил	un, o't, o'r-oq
4.	CVC	bed /bed/, take /teɪk/	сон, дом, пар /та/	bo'sh, say-/ra/-/moq/
5.	VCC	act /ækt/, old /ould/	акт, иск, -ость	akt, ahd, ust
6.	VCCC	ants /α:nts/ asks /α:sks/	искр-, астр-	astr-,
7.	VCCCC	Ernst /ɜ:nst/ entry /entrɪ/	Эрнст	Ernst
8.	CCV	try /traɪ/ stay /steɪ/	сто, три, сна-	smeta, trio
9.	CCCV	straw /strɔ:/	вста-вать, мгла	Brno
10.	CCVC	prize	стол, стул,	sta- /kan/,

[1] *Г. Торсуев.* Структура слога и аллофоны в английском языке.

№	The Type of the Syllable	English	Russian	Uzbek
		/praɪz/, stop /stɔp/	стой	sta- /dion/
11.	CCVCC	speaks /spi:ks/	столб, праст-	plast-
12.	CCVCCC	stamps /stæmps/	спектр, сфинкс	spektr
13.	CVCC	tent /tent/, mend /mend/	мост, серп	mard, qand, g'isht
14.	CCCVC	strength /streŋθ/	скрип-/ка/, страх	shtraf, skripka/ka/
15.	CVCCC	facts /fækts/, tends /tendz/	пункт, фильтр	tekst, filtr
16.	CCCCVC	–	взгляд, встреч	
17.	CCCCV	–	вспле-/ски/	
18.	CCCCVCC	–	всплеск, взблеск	
19.	CCCVCC	(con)-structs /kən-strʌkts/	страсть, вскольз	
20.	CVCCCC	sixths /sɪksθs/	монстр, /свиде/-тельство	

According to statistic investigation almost half of the syllables frequently used in English are CVC (42-47,7%). In Russian the universal type of the syllable is CCVC (31,8%) while in Uzbek CV type of syllable is regarded as a universal type (48,983%). CVC type has lower frequency of occurance in Russian and Uzbek. In the Turkic languages CVC is regarded the oldest universal type which originated the other syllable types as (C)VC, CV(C), (C)V(C)[1].

G.P. Torsuyev gave the statistic data of sound combinations used in initial, medial and final positions of words and syllables.

[1] *Н.А. Баскаков.* Введение в изучение тюркских языков, М., 1969, с. 122-123.

All the consonants except /ŋ/ may be used in the initial positions of syllables preceding vowels. The same may be observed in Uzbek in which the consonant /ŋ/ cannot occur in initial syllables of words, while in Russian all 36 consonant phonemes may appear in the initial syllables which precede vowels. More than 50 combinations of two consonants may occur in the initial syllables of words in which affricates and two similiar consonants (geminates) cannot take part. There are 230 combinations of two consonants occuring in the initial syllables of a Russian word[1]. Their number is very small in Uzbek as there are no combinations of consonants used in the initial position of the words of Turkic origin. In modern Uzbek as the result of linguistic contacts some combinations of consonants began to be used in the initial syllables of words (e. g. stakan, stadion, brigada, shnur, start, prorab, slesar, traktor etc.).

Many words of this type have been borrowed from Russian and other languages through Russian into Uzbek. There are also a great number of combinations of three and four consonants in the medial and final positions of the Russian and English words which do not exist in Uzbek at all or in a very small number used only in borrowings. According to the number of phonemes constituting syllables they may be classified into simple and complex.

(2) As we have stated above a syllable is a constructive unit of prosodics, i.e. it can be characterized by a certain degree of stress, i.e. by the force of utterance, pitch and duration. On the basis of these properties syllables may be classified into: a) stressed and unstressed; b) short and long; c) high, mid, low etc. tones in tone languages such as Chinese, Thai, Japanese etc. in which the change of pitch is a distinctive prosodic feature.

English, Russian and Uzbek are languages with dynamic stress, i.e. the changes in the force (acoustically intensity) of utterance is the primary property in them. But duration and pitch are secondary properties of the English, Russian and Uzbek accent.

The stressed syllables of an English word may be pronounced by high tone and become longer, while unstressed syllables are shorter and have a low tone of voice. Besides fully open syllable is longer than a closed syllable, e. g. **bee** /bi:/ – longer,

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[1] *Н.П. Торсуев.* Строение слога и аллофоны в английском языке. М., 1975 с. 102.

bead /bi:d/ – long, **beat** /bi:t/ – **shorter**. English, Russian and Uzbek are regarded as languages of syllable-counting.

In Latin, Greek and Czech duration is regarded as a primary property and the syllable length is a distinctive prosodic feature which is usually known as the mora. Such languages are called **mora – counting** languages as contrary to the **syllable – counting** languages[1].

Types of Syllables	English				Russian		Uzbek	
	Within 3203 words counted by B.Trnka[2]		Within 1000 words in Thorndike's dictionary[3]		Within 3150 monosyllabic wordforms given in «Словарь русского языка» (M., 1957-1961)[4]		Within 30000 words used in text (fiction)[5]	
	Frequency %	Number of words	Frequency %	Number of words	Frequency %	Number of words	Absolute frequency	Number of words
CVC	42	1,346	47,7	299	30,5	960	39,967	11990
CV	5,37	88	7,5	72	2,3	71	48,983	14695
V	0,31	11	1	3	–	–	5,610	1683
VC	2,05	67	5	32	1,5	47	4,097	1229
CVCC	13,45	445	17	108	14,8	457	0,830	249
CCV	3,88	124	4	24	3,8	120	0,177	53
VCC	0,087	30	2	12	1,0	31	0,173	52
CCVC	22,46	714	11	72	31,8	1003	0,137	41
CCVCC	5,2»	169	2,7	17	5,7	177	0,013	4
CVCCC	0,43	24	1	3	–	–	0,007	2
CCCVC	2,36	75	1	6	5,4	170	0,003	1
CCCV		19			1,0	≠30	0,003	1
CCCVCC	0,34	11	0,1	1	–	–	–	–
CCCVCCC	0,09		0	0	–	–	–	

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[1] *Я.С. Трубецкой.* Основы фонологии. М., 1960, с. 206-225.

[2] *B. Trnka.* A Phonological Analysis ... p. 61-111.

[3] *Yi-Chin-Fu.* The phonemic Structure of English words, Taipei. Taiwan, 1960, p. 70-71.

[4] *А.И. Моисеев.* Типология слогов в современном русском литературном языке. ВЯ, 1975, №6, с. 113-114.

[5] *С. Ризаев.* Бўғин структурасини ўрганиш тажрибасидан. Тошкент, «Фан», 1975, с. 7.

In tone, languages (also called languages of musical stress) various levels of pitch (tone of voice) may serve to distinguish the meanings of words, while the force of utterance and duration is not very important. For example: In Thai **maa** with high tone means «horse», with a mid tone – «come», with a rising tone – «dog». Thus, **Maa maa** means «the horse comes», whereas m'aa maa means «the dog comes»[1].

E.D. Polivanov suggested the linguistic terms for each of these three types of languages[2]. The phonologica function of dynamic stress, is described by the term **«accenteme»**. The term **«syllabeme»** is used to indicate the phonological function of syllables in mora-counting languages, while the term **«toneme»** characterizes the phonological function of tones. V.A. Vassilyev distinguishes «word-accenteme», «phrase accenteme» and «syntagm-accenteme» used to describe the distinctive function of stress at different levels. He also uses the term «syllabeme» to indicate the phonological unit which has the only distinctive feature based on syllabicity. E. g. **lightening** /ˈlaɪtənɪŋ/ – **lightning** /ˈlaɪtnɪŋ/, **finely** /ˈfaɪnlɪ/ — **finally** /ˈfaɪnəlɪ/[3] etc.

The above given syllables are called phonetic syllables which are used in utterances. There are orthographic «syllables» used in writing and printing for the purpose of application of reading rules. They are also termed syllabographs. For example, **mak-ing, chang-ing, tal-king** etc.

VI.3. THE RELATIONSHIP BETWEEN A SYLLABLE AND A MORPHEME

So far, speaking of a syllable, we have tried to explain it in connection with a word. We have done so because a syllable is defined as an intermediate phonetic unit occupying a place below the word unit but above the phoneme. The syllable is not directly connected with a morpheme. Perhaps, some linguists negate the importance of a syllable on the basis of this fact and regard it better to describe the combinations of phonemes in certain positions.

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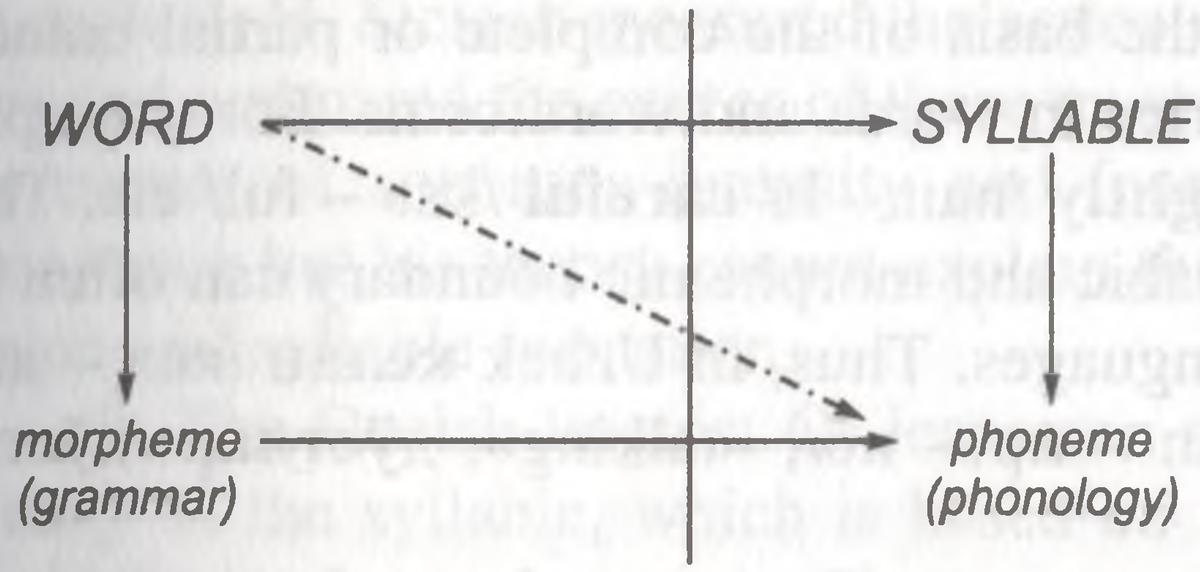
[1] *Sanford A. Shane.* Generative Phonology. N. J., 1973, p. 14.

[2] *Е.Д. Поливанов.* Музыкальное слогоударение и тоны дунганского языка. СБ. «Вопросы орфографии дунганского языка». Фрунзе, 1937.

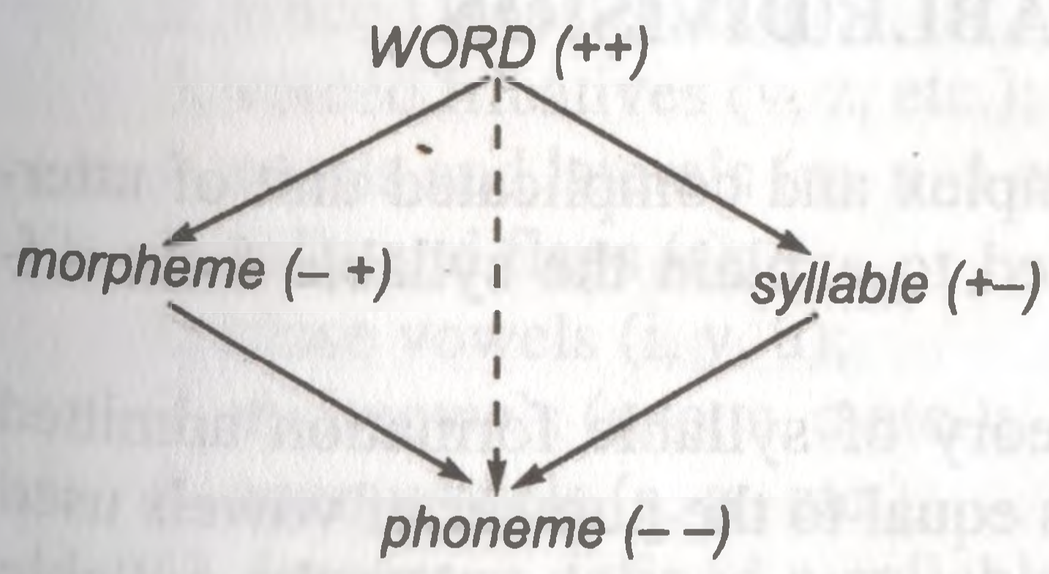
[3] *V.A. Vassilyev.* Op. cit., p. p. 233-234, 252-256.

The word is a central unit of language structure. It may be represented as the combination of syllables. We can choose the criterion of breaking the word into minimal meaningful units, namely morphemes. But it is difficult to analyse a word according to syllable division and morpheme boundary simultaneously as they represent different levels and have their own nature and descriptive methods. The word as a complex unit comprises a syllable and morpheme. Phonotactically a word may consist of a phoneme or a number of strictly combined phonemes. Therefore the relationship between the syllable and the morpheme may be established at word level or to be more strict at lexis – semantic level. The word may exist as an independent and meaningful unit in language structure, while other units cannot possess both properties. This may be illustrated by the following diagrams:[1]



It is possible to notice in clock wise 45 degrees that the syllable and the morpheme form a link between the word and the phoneme.

	phoneme	morpheme	syllable	word
Independent	–	–	+	+
Meaningful	–	+	–	+



The passage from the word (linguistic unit) to the phoneme (phonological unit) always involves a crossing boundary between grammar and phonology. The line may be crossed directly (dotted line) if we speak of the phonemic structure of words. There are two possibilities here: one via the morpheme, the other via the syllable. In the former case the boundary line is crossed between the morpheme and the pho-

[1] *Jan Cygan.* Aspects of English Syllable Structure, Wroclaw, 1971, p.p. 17-18.

neme, in the latter case between the word and the syllable. The important thing is that any crossing skips one unit. If we choose former approach, the syllable becomes unnecessary. In the latter case the morpheme will be in the way. This comes from the fact the syllable and the morpheme are both intermediate but incommensurable units between two extremes – the phoneme and the word. The relationship of the syllable and the morpheme is not like that of definite relations existing between the four units which may be characterized in the following way:

a) every morpheme consists of one or more phonemes;

b) every syllable consists of one or more phonemes;

c) every word consists of one or more phonemes, or syllables or morphemes[1].

The relationship between the syllable and the morpheme may be explained on the basis of the complete or partial coincidence of their boundaries in words and wordforms. For example, **coming** /kʌm – ɪŋ/, **nightly** /naɪt – lɪ/ **careful** /kɛə – ful/ etc. This coincidence of the syllabic and morphemic boundary can often be found in the Turkic languages. Thus, in Uzbek **келди** /кел – ди/, «came», **гапириб** (гап – ир – иб/, «talking», **дўстлар** /дўст – лар/ «friends» etc.

Every language has its own specific rules of syllable formation and division. The relationship between the syllable and the morpheme is regarded as one of the most important typological characteristics of a language[2].

VI.4. THEORIES OF SYLLABLE FORMATION AND SYLLABLE DIVISION

A syllable is a very complex and complicated unit of utterance. Many linguists attempted to explain the syllable from different points of view.

1. The most ancient theory of syllable formation admitted that the number of syllables is equal to the number of vowels used in an utterance. It does not take into consideration the syllable formation function of some consonants.

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[1] *Jan Cygan.* Op. cit., p. 19.

[2] *Ю.С. Степанов.* Основы общего языкознания. М.,

2. The American phonetician R. H. Stetson suggested the **expiratory theory** of the syllable, which is also called the chest-pulse or pressure theory. According to R. H. Stetson's expiratory theory «the vowel is an articulation which has the function of delimiting the chest-pulse of the syllable»[1]. He also admits that phonetically the language signals depend on the function of vowels and consonants which affect the meaning of a syllable. The syllables are regarded as meaningful minimal units of speech articulated by a single expiration. But in fact a number of syllables may also be uttered by a single expiration. The Romanian linguist A. Rossetti have approved the expiratory theory regarding «no syllable without expiration»[2]. It is not necessary to break up utterances or phrases and sentences into chest-pulses in oral speech. Therefore the expiratory theory of the syllable is regarded useless. Though R. H. Stetson measured the action of the respiratory muscles and compared the curves of these musculatory variations with the curves of sonorous intensity and found their perfect correspondence but his theory cannot explain the nature of syllable division and syllable formation.

3. The Danish linguist O. Jespersen suggested the **sonority theory** of the syllable, which is based on the degree of sonority (audibility) of speech sounds. The term «sonority» is used here to denote the prevalence of musical tone over noise in the production of speech sounds. O. Jespersen classified sounds according to the degree of sonority beginning with the last sonorous sound in the following way:

1. Voiceless consonants (p, t, k, f, s, etc.);
2. voiced stops (b, d, g);
3. voiced fricatives (v, z, etc.);
4. nasals and laterals (m, n, l etc.);
5. trills and flaps (r);
6. close vowels (i, y, u);
7. mid vowels (e, o, ɛ, ɔ etc.);
8. open vowels (a, æ, etc.).

O. Jespersen defined a syllable as the distance between two degrees of sonority. Syllables of the type of plain, freight, like are

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[1] *R.H. Stetson.* Motor Phonetics. A study of Speech Movements in Action. 2nd ed. Amsterdam, 1951. p. 2.

[2] *A. Rossetti.* Sur La theorie de la syllable. The Hague, 1963.

consequently in accordance with this definition. But many types of syllables contradict it. Thus, in such words as **station** /steɪʃn/, **little** /lɪt–l/, **straw** /strɔ:/ **middle** /mɪdl/ etc. We notice one or two syllables in which consonant clusters do not form separate syllables. The sonority theory cannot explain the syllable boundary. Inspite of this and other shortcomings this theory is used by some foreign linguists who develope it further. The sonority theory of the syllable have been applied to Russian by R.I. Avanesov who distinguishes only three degrees of sonority: 1) constrictive consonants, 2) sonorants and 3) vowels[1].

4. The classification of sounds according to their sonority is very closely connected with grouping of sounds based on the degree of opening. A vowel is more sonorous and also more open than a consonant, a plosive consonant is more closed (and less sonorous) than fricative consonant sounds, /a/ is more open and sonorous than /i/ etc. F. de Saussure's definition of the syllable is based on the degree of opening of the sounds. According to F. de Saussure, consonants are grouped around vowels on the basis of their opening. The syllabic boundary is at the junction of a more close sound and more open. Saussure called the opening, occurring at the beginning of the syllable, the **explosion**, and the closing at the end, the **implosion**. These terms are still used in modern linguistics. Any consonant, which is placed after the vocalic nucleus (the vowel) of the syllable, is called implosive whereas any consonant which precedes a vowel sound is called explosive. According to Saussure, syllable may be symbolized by the sign < > (opening + closing). Wherever one finds > < (closing + opening) there is a syllabic boundary[2]. The implosive and explosive element's coincide with the slopes of a syllable, while its nucleus is equal to its centre or peak.

5. F. de Sassure's theory of syllable formation is used by many linguists with perfection. For example, J.W.F. Mulder gives the following definition of a syllable: «The syllable can be defined as a simultaneous bundle of positions which is a subset of a simultaneous bundle of positions called a distributional unit, which subset contains an explosive, a nuclear and an implosive

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[1] *Р.И. Аванесов.* Фонетика современного русского литературного языка. М., 1956, с. 42.

[2] *B. Malmberq.* Phonetics. N. Y. 1963. p.p. 67-68.

position or position group»[1]. Any distributional unit contains at least one syllable and cannot therefore be properly included in a syllable. That is to say, the extension of a syllable is the lower limit of extension of a distributional unit. According to Mulder, distributional units are disjoint, i.e. no syllable can belong to more than one distributional unit, nor can a part of a syllable be long to a distributional unit and another part of that syllable to another distributional unit. For some languages there may be pre-explosive, post-implosive positions as in the English word **stands** /stжndz/. Mulder distinguishes free and non-free or bound syllables. Free syllables can occur in any place, i.e. initially, medially or finally in a distributional unit. An independent syllable can appear alone in a distributional unit.

Besides, a syllable is defined both as a simultaneous bundle of positions and as a sort of «accent group» with respect to the phonemes in that syllable[2]. It should be stated that the above definition of the syllable is based on its distribution in different positions, though it cannot explain the nature of syllable formation and syllable division.

6. The French phoneticians M. Grammont, and later on P. Fouche, have defined the syllable in psychological terms according to which it is characterized by a growing tension of the muscles of the voice-producing mechanism in the explosive part followed by a decreasing tension in the implosive part of it[3].

7. The Czech phonetician B. Hala, summarizing all the definitions of the syllable, distinguishes five components: 1) **expiratory;** 2) **phonatory;** 3) **articulatory;** 4) **the muscular;** 5) **acoustic.** B. Hala also emphasizes the importance of the sonority degree of sounds in the acoustic characteristics of the syllable[4]. B. Hala's syllable theory, like R.H. Stetson's expiratory theory, is based on the physiological principle, while the sonority theory is based on the acoustic principle.

8. Academician L.V. Shcherba advanced his own syllable theory. According to L.V. Shcherba a syllable is formed due to the muscular tension of the articulation which is constantly

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[1] *J.W.F. Mulder.* Sets and Relations in Phonology. An Axionatic Approach to the Description of Speech. Oxford, 1968, p. 178.
[2] *J.W.F. Mulder.* Op. cit., p.p. 180. 209.
[3] *B. Malmberg.* Op. cit., p. 68.
[4] *B. Hala.* Slabica, jeji podstava a vyvol. Praha, 1956.

changed. The boundaries of the syllable coincide with moments of weakening tension, whereas the peak of the syllable is formed by the maximal muscular tension which may be changed during the articulation of one and the same sound. Thus, this theory explains how a vowel or a consonant sound's articulation may be divided into two syllables. The sounds pronounced with growing tension begin the syllable. Consonants, which begin the syllable with strong articulation and gradually reduce muscular tension towards the end are called initially strong (finally weak). E. g., in the words **shut** /'ʃʌt/, **tiny** /'tını/ **country** /'kʌntrı/ the initial consonants /ʃ/, /t/, /k/ are initially strong (finally weak). If the con sonant articulation becomes gradually tense towards the end of it, this type of consonant is termed finally strong (initially weak) which ends the syllable. E. g., in the words **map** /mæp/, **type** /taıp/ **artistic** /ɑ:'tıstık/ the final consonants are strong (initially weak). Sometimes both the beginning and the end of the articulation of consonants may be strong, while its centre becomes weak. Such consonants are called double peaked[1]. Usually the combination of two similar (geminated) consonants may be double peaked. E. g. **misstate** /'mıs-steıt/, **unnatural** /ʌn-'nætʃr(ə)l/, **rest time** /'rest-'taım/, **cold day** /'kəuld 'deı/. In the last two examples double-peaked geminated consonants occur at the junction of two words or morphemes.

L.V. Shcherba's syllable theory can be applied to Russian and Uzbek. In the Russian words сон, ссора, к кому finally strong (initially weak) consonants occur in the beginning of syllables. In words **ус**, **ум**, **кит** etc. the final consonants are initially strong (finally weak). The double-peaked consonants appear in the juncture of the Russian words: **дом мой**, **вкус соли**, **от тона** etc. In the Uzbek word qirq – «fourty» the initial /қ (q)/ has a strong end, while the final /к (q)/ is weak-ended. The double-peaked consonants may appear in Uzbek words in which the geminated consonants divide the syllables, e. g. **qattiq** «strong», **achchiq** «bitter», **sassiq** «putrid smell» etc. Sometimes the double-peaked consonants may occur at the juncture of Uzbek words, e. g. **qirq qo'zi** «fourty sheeps», **besh shahar** «five cities» etc. There are some minimal pairs in which the simple and geminated consonants may be opposed and, consequently, the syllabic structure of

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[1] *Л.В. Щерба.* Фонетика французского языка. М., 1957, с. 79.

words may be distinguished, e. i. **soda** «soda» – **sodda** «simple», «ordinary», **qatiq** «yoqurt» – **qattiq** «strong» etc.

V.A. Vassilyev and G.P. Torsuyev have applied L.V. Shcherba's syllable theory to English. The definition of the syllable as «the arc of loudness» is based on the perceptual approach. The syllable is also defined as «the arc of articulatory tension» on the physiological basis. Both definitions are based on L.V. Shcherba's conception of the syllable. N.I. Zhinkin has perfected this theory on the basis of his experimental investigation. **He defined the syllable as the arc of loudness or the arc of articulatory tension with the louder sounds at its peak and the less loud phonemes forming both slopes**[1].

Both the expiratory and sonority theory cannot explain the monosyllabic pronunciation of a word, for example, **star** /stɑ:/. In this word consonant /s/ is more sonorious than /t/ and therefore, according to the sonority theory, this word is bisyllabic. As to the expiratory theory the word **star** /stɑ:/ may be pronounced as bisyllabic /s–tɑ:/ with two expiration or with two arcs of muscular tension[2]. In fact the word **star** /stɑ:/ is pronounced and perceived as a monosyllabic word which may be proved by the results of instrumental (spectrographic) research. If we compare the spectrograms of the word **star** /stɑ:/ with that of **start** /stɑ:t/ it is possible to notice the absence or presence of the final /t/ sound which has strong-end (initially weak) articulation.

There are also some other scientific approaches to the problem of syllable formation and syllable division. The instrumental investigation of the syllable CV proves the existence of syllable contrasts of pitch, duration, formant structure, intensity and frequency of F II which is characteristic in Russian[3]. Some linguists suggest to establish syllables on the basis of the phonetic features of sounds, which is regarded to be the most convenient principle in the comparative-typological analysis of languages[4].

Phonetic and phonological definitions of the syllable exist in modern linguistics. Phonetically, a syllable is regarded as a se-

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[1] *Н.И. Жинкин.* Механизмы речи. М., 1959, с. 219.
[2] *Г.П. Торсуев.* Фонетика английского языка. М., 1950, с. 174.
[3] *Л.В. Бондарко.* Звуковой строй современного русского языка. М., 1977, с. 141-151.
[4] *М.И. Лекомцева.* Типология структур слога в славянских языках, М., 1968» с. 52-53.

quence of sounds containing one peak of prominence (syllabic sound) and very rarely double peaks (when geminated consonants occur). Phonologically, «... the syllable may be defined as some sort of unit of accent placement; vowel and consonant can then be either derived from the syllable as its central and marginal constituents, or treated independently as units of widely different distribution»[1]. Nevertheless many questions regarding the syllable require further instrumental investigations.

VI.5. SYLLABLE FORMATION AND SYLLABLE DIVISION IN ENGLISH

As stated above the syllabic structure, as a component of the phonetic system, consists of syllable formation and syllable division which are in close relationship to each other. All theories of the syllable have more often attempted to explain the syllable formation, but the problem of syllable division has not been thoroughly investigated, which is both theoretically and practically important in language description. Nevertheless, it is possible to formulate some general rules of syllable formation and syllable division in English.

In English a syllable is formed by a vowel (monophthong or diphthong) alone or in combination with one or more consonants. E. g., **ore** /ɔ:/, **more** /mɔ:/, **at** /æt, ət/, **cap** /kæp/, **consideration** /ˈkənsɪd-ə- reɪ-ʃn/ etc. In the English words **bottle** /bɔt – l/, **batten** /bæt – n/, **rhythm** /rɪð – m/ the final sonorants (lateral /n/ and nasal /m/, /n/ and sometimes /ŋ/ may form separate syllables[2]. But the English sonorants /w/, /j/, /r/ cannot form syllables. Thus, we can distinguish syllabic /m, n, l/ and non-syllabic /r, j, w/ sonorants.

In English a syllable formation and syllable division depend on many factors among which the phonotactic rules, which determine the combination of phonemes or clusters and the nature of adjoining them, are regarded very important. The permissible clusters of consonants are, in part, conditioned by historical but chiefly by physiological factors. These include the following; 1)

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[1] *J.D. O'Connor and J.L.M. Trim.* Vowel, Consonant and Syllable – a Phonological Definition. «Word», vol. 9, №1, 1953, p. 103.

[2] *И. Вахек.* Несколько замечаний о роли слогообразующей функции при фонологическом анализе. В кн. «Человек и язык», Изд. МГУ, 1970, с. 45-54.

whether two phonemes which might adjoin in the same cluster have the same articulator; 2) whether they have the same type of articulation; 3) whether they are both voiced or voiceless; 4) whether they have the same or varying conditions of structure; 5) whether, especially in phonemes of the same articulation type, one is slightly more prominent than the other. Thus, /r/, an apical consonant, is never preceded by /s/, also apical stops do not combine initially with stops, etc.[1]

Syllabic consonants occur when a syllable ends in /t/, /d/ or /n/ and the next syllable is unstressed and contains /l/, /n/ or /m/. If the other consonant clusters except C + /l/, /n/, /m/ occur at the end of words they are regarded to be non-syllabic. This conditions the existence of the contrast «no syllable vs. a syllable». E. g. cattle /kæt–l̩/ – **cats** /kæts/, **battle** /bæt–l̩/ – **bats** /bæts/, **muttony** /mʌt–nɪ/ – **matches** /mætʃz/ etc. Thus, the syllable formation and syllable division in English have a phonological (distinctive) function. From the articulatory point of view the clusters /t/, /d/ + /l/, /n/ are formed with the tip of the tongue touching the tooth ridge, i.e. they have the similar type of articulation. Clifford H. Prator, Jr. points out two other cases of the occurence of syllabic consonants in rapid conversational speech where stops and continuants have the same points of articulation: (1) between /p/ or /b/ and /m/ as in **stop'em** /stop them/ stɔp – m̩/; and (2) between /k/ or /g/ and /n/, as in **I can go** /aɪ kŋgəu/[2]. The English sonorants are not syllabic when they follow vowels. E. g. Sweden /swɪ:dən/, **highten** /haɪtən/, **lantern** /læntən/ etc.

The following final clusters, in which the second member constitutes sonorants /m/, /n/ and /l/ may form separate syllables: /-tm/, /-ðm/, /-sm/, /-zm/, /-lm/: **bottom** /bɔt-m̩/, **rhythm** /rɪð-m̩/, **blossom** /blɔsm/, **prison** /prɪzn/, **film** /fɪlm/; /p, b, t, d, k, g, dʒ, f, v, θ, s, z, ʃ, l/ + + /n/: **open** /əu-pn/, **ribbon** /rɪ-bn/, **eaten** /i:-tn/, **garden** /gɑ:-dn/, **darken** /da:-kn/, **dragen** /dræ-gn/, **region** /ri:-dʒn/, **often** /ɔ-fn/, **seven** /se-vn/, **earthen** /ɜ:-θn/, **lesson** /le-sn/, **season** /sɪ:-zn/; /p, b, t, d, k, g, tʃ, dʒ, v, f, s, z/ + /l/: **people** /pi:pl/, **table** /teɪ-bl/, **settle** /se-tl/, **middle** /mɪd-l/ **cycle** /saɪ-kl/,

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[1] Webster's New World Dictionary. Cleveland and N. Y., 1978, p. XX.
[2] *Clifford H. Prator,* Jr. Manual of American Pronunciation, N. Y., London 1957, p. 85.

bugle /bju:-gl/, **racial** /reɪ-ʃl/, **cudgel** /kʌdʒl/, **rifle** /raɪ-fl/, **civil** /sɪ-vl/, **castle** /kɑ:-sl/, drissle/drɪ-zl/, **special** /spe-ʃl/[1].

In some cases two syllabic consonants may occur in the derivatives of English words. E. g. **national** /næʃnl/, **regionly** /rɪ:dʒnlɪ/ etc.

Acoustically, the syllabic feature of /n/ and /l/ may be characterized by relative duration and intensity, which are interpreted as their prosodic properties[2]. As to the distribution of the non-syllabic consonants, it is conditioned by the occurance of /ə/ or /ɪ/ sounds between the two elements of the clusters cited above, whereas their omission is necessary for the formation of syllables[3].

None of the above clusters exist in final position of Uzbek words. On the contrary, in such Uzbek wordforms as **qoldi** «stayed», **senga** «for you», **tomda** «on the attic», **bordi** «went» etc. combinations of /l, m, n, p/ + S appear which are divided into two syllables. The consonants /l, p, y, v, n, m, p/ cannot form syllables in Uzbek isolately. When they occur before vowels, they signal the existence of a syllable division before or after them. E. g. **bola** /bo-la/ «a child», **qani** /qa-ni/ «where», **borgan** /bor-gan/ «gone», **qorda** /qor-da/ «on the snow», **uyga** /uy-ga/ «to the house», **suvda** /suv-da/ «in the water», **ko'rdingmi**? /ko'r-ding-mi/ «Have you seen?» etc. All Uzbek vowels are freely used before or after consonants and it is an important factor of syllable division and non-syllabic character of the consonants /l, m, n/. Thanks to this difference there may be cases of syllabic interference. The syllable division may depend on the free and checked character of English vowels. All the long monophthongs, two diphthongoids and diphthongs of English are regarded free, as they occur both in open and closed syllables, while all the checked vowels occur in a closed syllable.The free vowels may be separated from the word-final syllabic sonorants, when the latter form separate syllable with the preceding consonants, e. g. **cable** /keɪ-bl/, **people** /pɪ:-pl/, **garden** /gɑ:-dn/. When the checked vowels are separated from other

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[1] *V.A. Vassilyev* et al. English Phonetics (A Normative Course), M., 1980, p. 11.

[2] *С.А. Богдасарян.* О фонетической природе сонантной слоговости. Сборник научных трудов, вып. №108, МГПИИЯ, М., 1977, с. 30-39.

[3] *D. Jones.* The Use of Syllabic and Non-Syllabic l and n in Derivatives of English Word Endings in Syllabic l and n. «Zeitschrift fur Phonetic and Allgemeine Sprachwissenschaft», Band 12, Heft 1-4, 1959.

vowel sounds by only one consonant sound, the exact determination of the syllabic boundary is a moot point. Theoretically this means that the syllable division can only be either within or after the intervocalic consonant and never before it, since the vowel is checked by it, and the syllable is closed[1]. E. g. **matter** /mætə/, **sitter** /sɪtə/, **manner** /mænə/, **lesser** /lesə/ etc. Though after the stressed checked vowels of such words as **middle, sunny, flannel,** the syllable division regularly occurs before the consonants: /ˈmɪ-dl/, ˈsʌ-nɪ/, /flæ-nl/. In many English words the syllable division automatically coincides with the morphemic boundary. E. g. **take over** /teɪkˈəʊvə/, **day time** /ˈdeɪtaɪm/, **over-dressed** /ˈəʊvədrest/. Such a coincidence of syllabic and morphemic boundaries often occurs in English complex and compound words.

G.P. Torsuyev points out that there are many cases of the variation of phonemic structure of English words, which are conditioned by different types of assimilation and reduction. For example, /mpt/ → /mt/: **attempt**, /kən/ → /kn/: **bacon**, /nt∫/ → /n∫/: **bencher, open** /əʊvp(ə)n/, **total** /taʊt(ə)l/ etc. G.P. Torsuyev states that the articulatory transition is constant in syllable boundary but all other features of a syllable may be varied by the influence of different phonetic factors[2].

There are also cases when the syllable boundary is within the consonant sound in an intervocalic position or within the C + sonorant: cluster in word-medial position. E. g. **ever** /ev–və/, **difficult** /dɪf-fɪ-k(ə)lt/, **sunny** /sn-nɪ/, **middling** /mɪdl-lɪŋ/. A similar case may be noticed in some Uzbek words: **ola** /ol-la/, «black», **Ashirmat** /Ashir-mat/ «a name of a man». Incidently, such cases appear as the result of metanalysis of syllables into two syllables which often occur in rapid pronunciation, but they are theoretically doubtful.

The syllabic structure of English is very complex and we have analysed some of its general problems of theoretical importance.

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[1] *V.A. Vassilyev*. Op. cit., p. 247.

[2] *Г.П. Торсуев.* Константность и вариантность в фонетической системе (на материале английского языка), М., Изд. «Наука», 1977, с. 90-95.

VI. 6. THE PHONOLOGICAL STATUS OF JUNCTURES

The American linguistists use the term **juncture phoneme** to indicate the distinctions in the syllabic boundary at the junction of words and morphemes. We do not use the term «juncture phoneme» but suggest the term «juncture» which is sufficient to analyse open and closed transitions between vowels and consonants in the syllabic boundary of words and morphemes. Phonemes are segmental units of language, particularly, units of the phonological level of a language. As to syllables, stress and intonation they are suprasegmental or prosodic features of language and as phonological units they exist only in the phonological level of a language. Thus, phonemes, which exist in the form of speech sounds and suprasegmental units or prosodemes, are not equal as to their function in a language. Therefore, we do not shade the terms **suprasegmental phonemes, juncture phonemes, the accentual phonemes** etc. which are used by some linguists.

The syllable division is phonologically distinctive in English. The position of the syllable boundary at the junction of words or morphemes, which are often accompanied by differences in length, pitch and rhythm[1] can distinguish the meanings of words and word combinations. Such distinctive units are termed «junctures» which may be of two types: **open juncture** (+) and **close juncture** (–). Thus, in **a tall** /ə'tɔ:l/ there is an open juncture between /ə/ and /t/ which may be contrasted to the closed juncture in **at all** /ət 'ɔ:l/ in which /t/ and /ɔ:/ are linked more loosely than in the previous case. There are other examples illustrating the difference in junctures; **they'd rest – they dressed, not the terrain – not that a rain, in to play – into play, some ice – some mice, its tips – it stips, that stop – that's top** etc. The distinctive function of the open juncture is rather limited in English.

The following examples may illustrate the phonological function of junctures in Uzbek and Russian: **yettita kampir** «seven old women» – **yettita kam bir** «seven minutes to one» (when (п) becomes voiced by the influence of (m) in **«kampir»** («old woman»), **yotoq oldi** «got the place in hostel» – **«yota**

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[1] *Н.Г. Камышная.* Слогоделение в современном английском языке. В кн., «Исследования по теоретической и экспериментальной фонетике английского языка». М., 1972, с. 92-123.

qoldi» «went to bed», **к Ире** «to Ira» – **Кире** «to Kira», **Виталию** «to Vitaly» – **В Италию** «to Italy».

In pea stalks, open (i.e. as before a pause) juncture relates to /s/ and close, (i.e. as within a word) juncture relates /s/ to /t/, whereas in **peace talks,** close juncture relates /i:/ to /s/ and open juncture /s/ to /t/, with the relevant phonetic cues. If the two utterances were not distinguished in such terms, it would be necessary to postulate, for instance, a phonetic opposition between the full and reduced forms of /i:/ and between the aspirated and unaspirated types of /t/[1], the latter is not a distinctive feature in English.

A.C. Gimson and D. Jones have given the following examples in which phonetic cues may mark word boundaries:

/əˈneɪm/ – **a name** (relatively long (n), associated with stress onset and possible pitch change);

an aim (relatively short /n/, stress and pitch change beginning in /eɪ/).

/ðætstʌf/ – **that stuff** (unaspirated /t/, strong /s/;

/ðætsˈtʌf / – **that's tough** (aspirated /t/, weaker /s/;

/ðə weɪtəkʌtɪt/ – **the waiter cut it** (reduced /ei/, rhythmic group /ðəˈweɪtəˈkʌt ɪt/);

the way to cut it (long (eɪ), rhythmic group /ðə weɪ tə kʌt ɪt/);

/hau streɪnd/ – **how strained** (long /au/, strong /s/, little devoicing of /r/;

house trained (reduced /au/, weaker /s/, devoiced /r/.

Similarly, simple word entities may be distinguished from words composed of separable morphemes:

/haɪnɪs/ – **highness** (/aɪ/ and /n/ in close juncture, rhythmical shortening of /aɪ/);

high-ness (/aɪ/ and /n/ in open juncture, full length of /aɪ/);

/naɪtreɪt/ – **night-rate** (/t/ and /r/ in open junctural relationship, little devoicing of /r/);

nightrate (/t/ and /r/ close juncture, devoiced /r/).

The given examples illustrate the phonological status of junctures in modern English. In defining junctures it is necessary to take into consideration the stages of transition between the sound sequences and establish the combinatory changes taking place in the syllabic boundary at the junction of words and morphemes.

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[1] *A.C. Gimson.* An Introduction to the Pronunciation of English. London, 1962, p. 276.

CHAPTER VII

WORD STRESS IN ENGLISH

VII.1. DEFINITION OF WORD STRESS. ITS TYPES AND COMPONENTS

Word stress or accent is usually defined as the degree of force or prominence with which a sound or syllable is uttered. Incidently, the syllabic structure of a word is closely connected with its accentual structure as in disyllabic (a word consisting of two syllables) and polysyllabic (a word consisting of more than three syllables) words; there may be different degrees of prominence in syllables of initial, medial or final positions. Hence by word stress we mean singling out one or more syllable in a word with the help of greater prominence accompanied by the change of pitch, qualitative and quantitative features of the sound in relation to other syllable or syllables of the same word. A.C. Gimson emphasizes that in a stressed syllable there is relatively greater breath effort and muscular energy[1] in comparison with another syllable or syllables of the same word.

The classification of words according to the place and degree of stress is known as the **accentual structure (type, pattern) of words.** Traditionally word accent has the following phonetic components:

a) In articulatory aspect stress is realized by the great force of respiration (a stressed syllable has both an increase in respiratory and laryngeal activity[2], duration of articulation (a stressed syllable may belong and tense[3]) high frequency of the vibration of vocal chords;

b) Acoustically, a stressed syllable has greater intensity, duration and pitch or tone of voice than an unstressed syllable;

c) Perceptually, a stressed syllable is characterized by more loudness, duration and high tone of a sound in comparison with an unstressed syllable.

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[1] *A.C. Gimson.* An Introduction to the Pronunciation of English. London, 1962. 128.

[2] *P. Ladefoged.* A Course in Phonetics. Harcourt Brace Jovanovich Ins., 1975.

[3] *Г.П. Торсуев.* Экспериментальное исследование словесного ударения в английском языке. Уч. записки, МГПИИЯ, 1950, т. 18.

Word accent serves not only to single out one or more syllables in a word with the help of intensity, pitch and duration but it also prosodically combines and thus, phonetically shapes the word as a semantic unit in language structure.

According to the significance of prosodic features of intensity, duration and pitch (including qualitative and quantitative features of sounds (mainly vowels) languages are classified into the following three types:

1) languages, in which intensity is more significant than the other correlates – duration and pitch to form special prominence of the stressed syllable, are called **stress languages** or languages which have **force or dynamic stress** or accent. E. g. English, Russian, Uzbek have dynamic accent;

2) languages, in which a stressed syllable is mainly characterized by a pitch change accompanied by greater duration and intensity are known as **tone languages** or languages with pitch accent (also called **«musical accent»**), e. g. Serb, Japanese, Chinese, Thai are tone languages;

3) in some languages the duration of a stressed syllable is more significant than other factors. This type of languages has **a quantitative stress.** E. g. Czech and Greek (See also chapter VI, 6.2).

N.S. Trubetzkoy emphasized the **culminative function** of word accent. While a tone language can allow a high pitch to occur on more than one syllable of a word, the basic principle in a stress language is that only one syllable per word will receive primary stress. This idea is somewhat vague as there are words which have two primary stresses. Word accent is culminative in nature but its number and degree depend on the structure of a word in **syllable-counting languages.** For example, **kind-'hearted, 'penmanship, 'brightness** etc. In mora-counting (tone) languages short moras may receive one pitch while long moras have two pitches which are in contrast[1]. Typologically, in stress languages syllable prominence is culminative, while in tone languages it is not. In the first type stress is syntagmatically conditioned as its place is free, i.e. a stress may be placed on any syllable if we take all the words. In tone languages pitch is paradigmatic. Some languages use lexical pitch in the same way that

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[1] *Н.С. Трубецкой.* Основы фонологии. М., 1960, с. 230-233.

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[1] *A.C. Gimson.* An Introduction to the Pronunciation of English. London, 1962. 128.

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[1] *Н.С. Трубецкой.* Основы фонологии. М., 1960, с. 230-233.

English uses stress, i.e. in such languages the same sequence of segmental phonemes can have different meanings depending on the pitch distinction, e. g. In Thai naa has five meanings: **naa** – middle tone «field», **(noojɔnaà** – low tone «custard apple», **nâa** – falling tone «face», **náa** – high tone «mother's young brother (or sister), **náa** – rising tone «to be thick»[1]. This type of pitch distinction is somewhat similar with that in English in which a noun and a verb may be distinguished by the place of stress: **'con,tract – con'tract, 'extract – ex'tract, 'di,gest – di'gest, 'in,sult – in'sult, 'object – ob'ject** etc.

D.B. Fry states that differences of stress are perceived by the listener as variations in a complex pattern bounded by four physiological dimensions; *length, loudness, pitch and quality.* The physical correlates of these perceptual factors are: duration, intensity, fundamental frequency and formant structure of speech sound waves. If we consider the accentual patterns of English in perceptual terms, there are a number of factors that influence a judgement of stress. The listener relies on differences in: 1) the length of syllables, 2) the loudness of syllables, 3) the pitch of syllables, 4) the sound qualities occurring in the syllables, 5) the kinaesthetic memories associated with his own production of the syllables he is receiving[2]. Instrumental investigations have proved that in English the fully stressed vowel is characterized by a greater intensity, a high fundamental frequency, pitch and more duration in comparison with the unstressed vowels." The relationship between the components of word accent depends on the position of stressed syllable[3].

In Russian the main distinction between the stressed and unstressed vowels depends on their length which is accompanied by their quality and intensity, while pitch is irrelevant, though in

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[1] *F.C. Southworth, Ch. J. Daswani.* Foundations of Linguistics. N. Y., 1974, pp. 67-68.

[2] *D.B. Fry.* Experiments in the Perception of Stress. «Language and Speech», vol. I, 1958, pp. 126-128.

[3] *Т. А. Бровченко.* Словесное ударение в английском языке (в сопоставлении с украинским). Автореферат докт. дисс. Одесса-Ленинград, 1974. *М. А. Соколова.* Экспериментально-фонетическое исследование словесного ударения в английском языке. «Ученые записки 1-МГПИИЯ», т. XX, М., 1960, с. 373-395.

some cases it contributes to weakening intensity of the stressed vowels and to change their timbre in final positions[1].

As to Uzbek it is said that word accent is realized more often with combination of fundamental frequency of tone and intensity, and that the stressed syllable is distinguished from an unstressed syllable, first of all, by a greater force[2]. We regard that in Uzbek word accent intensity is the main component, while pitch (fundamental frequency of tone) and duration are prosodically additional correlates of it. Acoustically, languages with dynamic stress do not use both intensity and pitch equally. Though there is an exception, for example, the Scandinavian languages use both dynamic stress and tonic accent in more or less equal degree. The given definition of word stress in Uzbek is based on perceptual dimentions, though it was proved by instrumental investigation. However, word stress in English, Russian and Uzbek is defined as dynamic but they differ by the action of their physical components and distribution in different syllables in relation to the initial, medial and final positions of polisyllabic words. The components of word stress are in mutual compensation and therefore it is not right to expect that the stressed syllable is always very long, loud and high in tone[3].

It should be emphasized that word stress and sentence stress are different, as the terms indicate. Word stress forms a word and singles out one or more of its syllables, while sentence stress deals with the formation of a sentence or phrase and singles out one or more words in the structure of a phrase. Thus, sentence stress is regarded as one of the components of intonation. These two types of stress, which are used in different levels of investigation, are sometimes mixed[4], though they differ with their components and degrees and also with their factors and functions. For example, the word **can** is often unstressed, but it may receive stress in such a sentence as, Now **you** can see it. **Can you see it? I can.**

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[1] *Л. В. Златоустова.* Фонетические особенности словесного ударения в русском и болгарском языках. В книге «Вопросы славяноведения». Ученые записки Казанского ГУ им. В. И. Ульянова Ленина, т. 122, кн. 5, 1962, с. 170-199.

[2] *А. Махмудов.* Словесное ударение в узбекском языке. Ташкент, 1960, с. 15.

[3] *Г.П. Торсуев.* Вопросы акцентологии современного английского языка. М., 1960, с. 41-58.

[4] *Pilch H.* Empirical Linguistics. Munchen, 1976, pp. 76-79.

In English the accentual patterns of words normally preserve their identity in the context of the sentence and that the onset of the pitch figure of the sentence is usually determined by the accentual pattern of the word. Probably, owing to this fact some linguists do not distinguish word stress from sentence stress.

VII.2. PLACEMENT AND DEGREES OF WORD STRESS

Languages can differ with word stress placement and degrees of it. According to the position of stress in words and word forms, word accent may be free (or shifting) and fixed (or constant). As to A.C. Gimson: «The accentual pattern of English words is fixed, in the sense that the main accent always falls on a particular syllable of any given word, but free in the sense that the main accent is not tied to any particular situation in the chain of syllable, constituting a word, as it is in some languages»[1]. Thus, word accent in English may be regarded free if we take all words in which any syllable can receive stress. E. g. **ˈwater, ˈcommon** (the first syllable is stressed), **beˈcome, misˈspell** (the second syllable is stressed), **ˌafterˈnoon** (the third syllable is stressed while the first receives secondary and the second receives the tertiary stress), **ˈall-ˈround** (both syllables are stressed), **ˌrepresenˈtation** (the fourth syllable is stressed) etc.

If we take a separate word, it is noticeable that stress replacement in it is fixed and cannot be shifted to any other syllable of a monosyllabic, disyllabic and polysyllabic word. E. g. **aˈbout, aˈbility, ˈup-to-date, uniˈ-versal, conˈtain** etc.

Word-stress in Russian is both free and shifting as it falls on any syllable of words and word forms and may shift from one syllable to another in different grammatical forms of words. E. g. голова, голову, письмо́, пиˈсьма, высо́кий, высо́к, выˈше, но́ги, ногиˈ.

In Uzbek word stress is free as it may fall on any syllable. E. g. **derazá** «a window», **réls** «rails», **qonún** «a law», **sekretár** «secretary» etc. Word stress in Uzbek has become free as a result of language contacts which is observed in the cited examples. In the Turkic languages, particularly in Uzbek, word stress usually

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[1] *A.C. Gimson.* An Introduction to the Pronunciation of English. London, 1962, p. 216.

falls on the final syllable. Turkic languages are regarded as agglutinative, i.e. word forms may take from one to six suffixes. For example, the word bola «a child» may have four suffixes as **bola-lar-i-miz-ga** «for our children», in the word form **ishqi-boz-li-gi-miz-dan** «as we like» there are six different suffixes. In these examples word stress tends to be at the end of the word form and very often the last syllable receives stress.

Many languages have dominant initial or final syllable stress. Turkic languages have heavy syllables in word final position and in order to combine such «heavy» syllables (or suffixes) into a single word form the final stress is very important. Besides, there is historical evidence that long vowels, which had been stressed, was being lost in Uzbek and short vowels began to be used in all words. As a result of this historical change, final stress was generalized in all words of Turkic origin. As to borrowings from other languages, they brought foreign accentual patterns and prosodic rules which influenced to make the placement of word stress in Uzbek free.

Different authors distinguish from three to five degrees) of word stress in English. The British linguists distinguish three degrees of word stress: **primary** (ˈ), **secondary** (ˌ) and **weak** (unstressed)[1]. Most American linguists distinguish four degrees of word stress in English: **primary** (ˈ), **secondary** ($_{\wedge}$), **tertiary** (ˊ) and **weak** ($_{v}$)[2] but the terms and marks used to indicate the degrees of word stress are also different. For example, they use the terms **main, lowered main, medium** and **weak** degrees of stress and also **full stress**[3], **half stress, weak stress** distinguishing three degrees[4]. Probably, it is possible to differentiate more than three degrees of word stress in English polysyllabic words. Though listeners cannot perceive five or more degrees of word stress (as D. Jones and A.C. Gimson have admitted them), theoretically such degrees of stress may be important only for some polysyllabic words. Practically the human ear can distinguish three degrees of stress.

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[1] *V. A. Vassilyev.* Op. cit., p. 261.
[2] *P. Ladejoged.* A Course in Phonetics. Harcourt Brace Jovanovich, Inc., 1975, p. 101.
Г. Глисон. Введение в дескриптивную лингвистику. М., 1959, с. 79-80.
[3] *F. S. Southworth.* Ch. J. Daswani. Id., p. 67.
[4] *H. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor, 1964, p. 141.

N. Chomsky and M. Halle distinguish five degrees of word stress in English and emphasize «... that the major stress contours are determined by the operation of a transformation cycle»[1]. By the latter cycle they mean both the placement of main stress and stress contours (secondary, tertiary, fourthiary, weak) within initial medial and final positions of words and vowel reduction. Transformational-generative phonology attempts to distinguish at least four and five or more degrees of stress and to suggest the predictable stress placement rules. Their description is in sharp disagreement with the statements in most textbooks, which, like, D. Jones have been teaching that, generally speaking, there are no rules determining, which syllable or syllables of polysyllabic English words bear the stress[2]. They regard that the location of the stress can be determined automatically, for example, the location of primary stress in a word is closely correlated with the distribution of tense (long vowels and diphthongs) vowels. The other degrees of stress may depend on the distribution of lax (short) vowels. Thus, English has a complex system of stress contours. For the description of word stress in English three degrees of stress (primary, secondary and weak) may be sufficient which are both theoretically and practically important.

Three degrees of word stress may be distinguished in Russian: **main** (основное /'/), **accessory** (побочное /,/) and **weak** (unstressed). E.g. во́донепроница́емый, аэ́ронавигация, сто́метро́вый, дра́мкружо́к[3].

We distinguish four degrees of word stress in Uzbek: **primary** /'/ **secondary** /,/ **tertiary** /ˉ/ and **weak**, e. g. uylarimizda «at our house», kutubxona «library», studentlar «students» etc. Recent experimental investigation proves the correctness of this idea as to Uzbek[4].

The placement and degrees of word stress in Uzbek depend on the syllabic structure of words. Different degrees of word

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[1] *N. Chomsky and M. Halle.* The Sound Pattern of English. N. Y., 1968, p. 74.

[2] *M. Halle and S. J. Keyser.* English Stress. Its Form, its Growth, and its Role in Verse. N. Y., 1970, p. 3.

[3] *Р.И. Аванесов.* Русская литературная и диалектная фонетика. М., Изд. «Просвещение», 1974, с. 107-118.

[4] *С. Салиджанов.* Силлабическая и акцентная структуры слова и их соотношение в разносистемных языках. (Сопоставительно-типологическое и экспериментально-фонетическое исследование на материале английского и узбекского языков.) Автореферат канд. диссертации. М., 1982.

stress may fall on any syllable of a polysyllabic word. Primary stress cannot be shifted from one syllable to another in most English words of Germanic origin though some suffixes may be added (e. g. ˈbeauty, ˈbeautiful, ˈbeauti-fulness, ˈbeautifully). On the contrary, in Uzbek word stress can be shifted from syllable to syllable, e. g. **ko'z** «eye», **ko'zí** «his (or her) eye», **ko'zlár** «eyes», **ko'zlargá** «to eyes», **ko'zlarimizgá** «to our eyes». Some linguists do not distinguish word stress from sentence stress, as a result of which they distinguish four or more degrees of stress interdependent with tone. For example, R. Kingdon suggested the following four degrees of stress: 1) full (kinetic) stress; 2) full static (atonic) high level stress; 3) partial static (low-level) stress and 4) absence of stress[1]. P. Ladefoged distinguishes stress tonic accent when he speaks of the combination of stress, intonation and vowel reduction. He notices the existence of tonic accent in the words *explain, exploit* (in the second syllable), *exploitation, explanation* (in the third syllable). As to stress placement which coincides with the position of tonic accent and in the word *exploitation, explanation* the first and third syllables are stressed[2]. Although both authors give four levels of stress in English which are possible in polysyllabic words but do not explain the relationship between stress and pitch.

VII.3. THE FACTORS AND TENDENCIES DETERMINING WORD STRESS

Stress is one of the constitutive features of a word. Owing to stress the sound structure of a word is phonetically combined and shaped and forms a semantic unit. Singling out a syllable or syllables of a word by great prominence does not take place isolately; it is a result of many factors among which semantic, morphological (i.e. grammatical) rhythmic and phonetic factors should be mentioned. Usually those factors are interdependent. They are very important in stress placement and in distinguishing the degrees of stress. Probably, the semantic factor is more important than the other factor in English. G. P. Torsuyev gave a brief de-

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[1] *R. Kingdon.* The Groundwork of English Stress, London, 1958, p. 8.
[2] *R. Ladefoged.* Op. cit., p. 217.

scription of all these factors in his works[1], which is used in this book.

The semantic factor is observed in the accentual structure of English words. For example, in abbreviations represented by letters such as USA /ˈju:ˈes ˈeɪ/ each component has equal stress owing to its semantic importance. Besides, there are words with separable prefixes as they are called, i.e. those which have a distinct referential meaning of their own, and compound words. The majority of such compound words have two equally strong stresses known as a double-stress, or even (level) accent. Usually the second stress in these words is somewhat stronger than the first. H. Kurath calls this type of stress «fore-stress» which is used in native words consisting of two or more free forms (bases). In this respect, these compound words differ sharply from the normally end-stressed phrases of English as in the following examples: **a blue bird – a blùe bird, a gláss hòuse – a glàss dóor, a stándstill – stànd still, a blàck òut – black óut**[2]. Even accent is observed in the following words: **ˈover-ˈdressed, ˈwhite-ˈhot, ˈwell-ˈmade, ˈupstairs, ˈapple-ˈpie** etc.

Stress usually falls on the semantically important element of a word. Compound words which are formed by two stems as noun-noun, adjective-noun etc., are usually called compound nouns, compound adjectives, compound adverbs etc. They often have even (level) stress as both components of a compound word are important semantically. E. gl **ˈrain ˈfall, ˈsun ˈrise, ˈmidˈnight, red-ˈskin, ˈhome-ˈsick, ˈstead ˈfast, ˈnowa ˈdays, ˈnoˈwhere, ˈkind-ˈhearted, ˈhot-ˈtempered** etc.

The Morphological factor is determined by stressing some of the suffixes in word formation. It should be stated that an accentual pattern of a word is regarded one of the main characteristics of the phonetic structure of words. Stressed morphemes (basic or suffixal) of English have specific prosodic features.

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[1] *Г.П. Торсуее.* Вопросы фонетической структуры слова (на материале английского языка). Изд. АН СССР, М.-Л., 1962, с. 9-15; Его же. Вопросы акцентологии современного английского языка. Изд., АН СССР, М.-Л., 1960. Проблемы теоретической фонетики и фонологии. Изд. «Наука», Л., 1969, с. 74-82; Константность и вариативность в фонетической системе (на материале английского языка), Изд. «Наука», М., 1977, с. 71-86.

[2] *H. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor, 1964, pp. 143-144.

Owing to the semantic importance of suffixal morphemes, the latter elements in word final position may be stressed in polysyllabic words. The stressed suffixes of these types are: **-ian, -ic (al), -ental, -mental, -ion, -ious, -eous, -itis, -ade, -ier, -esgue, -ette, -ique, -oon, -ee, -eer; physician:** /fɪ'zɪʃn/, **politician** /pɔlɪ'tɪʃən/, **symbolic** /sɪm'bɔlɪk/, **democratic** /demɔ'krætɪk, **oriental** /ɔrɪ'entəl/, **instrumental** /ɪnstru'mentəl/, **decision** /dɪ'sɪʒn/, **affection** /ə'fekʃn/, **religious** /rɪ'lɪdʒəs/, **courageous** /kʌ'rɪdʒəs/, **tonsilitis** /tənzɪ'lɪtɪs/, **blockade** /blɔ'keɪd/, **cavalier** /kəvə'lɪə/, **grotesque** /grə'tesk/, **novelette** /nɔvɪ'lɪt/, **intrique** /ɪn'trɪg/, **unique** /ju:'nɪk/, **cartoon** /kɑ:'tu:n/, **employee** /ɪmplɔɪ'ɪ:/, **pioneer** /paɪə'nɪə/.

Some of these words were borrowed from French and Latin. Usually it is difficult to distinguish semantic and morphological factors as morphemes are meaningful units and, therefore, they may be stressed. Though not all suffixes or suffixal morphemes may always be stressed in words which depends on the semantic weight of suffixes. Incidently, we should distinguish the semantic morphological factor of word-stress thanks to the close relationship between semantic and morphological factors.

The semantic-morphological factor contributes to determining the stress placement in words which are distinguished by the place of stress, e. g. **reform** /rɪ'fɔ:m/ (improve) – **reform** /'rɪ'fɔ:m/ (form again), **recollect** /,rɪkɔ'lekt/ (remember) – **recollect** /'rekɔ'lekt/ (collect again), **overdevelop** /'əuvə'dɪveləp/, **overbusy** /'əuvə'bɪzɪ/, **to over look** /əuvə'luk/, **overcoat** /'əuvə'kəut/. In the given pairs of words the first of them has one stress while the second receives even (double) stress.

The prefixes, which are semantically important, may also be stressed, e. g. **anticlerical** /'æntɪ'klerɪkəl/, **decontrol** /'dɪ'kɔntrɔl/, **ex-champion** /'eks 'tʃempɪən/, **misspel** /'mɪs'spel/, **overead** /'əuə'ri:d/, **pre-war** /'prɪ'wɔ:/, **ultra-modern** /'ʌltrə'mɔdən/, **undertake** /'ʌndə'teɪk/.

Some words may be contrasted by different position of stress. For example: **conduct** /'kɔndəkt/ – **to conduct** /kən'dʌkt/, **protest** /'prəutest/ – **to protest** /prɔ'test/, **record** /'rekɔ:d/ – **to record** /rɪ'kɔ:d/. Besides, the difference of the position of word stress, there are some changes owing to reduction and phonetic opposition between stressed and unstressed vowels /əu/ – /ə/, /e/ – /ɪ/, /ə – e/ may be observed in these words.

Mixing the position of word stress in words, may lead to accentual interference as a result of which a foreign accent or pronunciation mistake will take place.

The rhythmic factor of word stress is observed while singling out a certain syllable or syllables in accordance with rhythmic habits and tendency to alternate stressed and unstressed syllables in order to distribute stress contours in relatively equal times. Word stress in English falls on a certain syllable in relation initial, medial and final positions of a word. In many cases a syllable before primary stress is either unstressed or weakly stressed, a syllable once removed receives secondary stress, e. g. **supernatural** /sjupəˈnætʃrəl/, **extravagant** /ekstrʌ ˈvægənt/, **hypercritical** /ˌhaɪpəˌkrɪtɪkəl/. Thus, the alternation of stressed and unstressed syllables is rhythmically determined. Probably, the rhythmic factor helps make pronunciation easy, i.e. to economize speech effort. The rhythmic factor is associated with the prosodic structure of a word and therefore it is possible also to speak of a rhythmic-accentual factor of word stress. When a syllable or syllables of a word receive some degree of stress, the latter stresses make up a rhythm or rhythmic pattern. Rhythmic-accentual contrasts may distinguish words or grammatical forms of words, e. g. **permit** /ˈpɜ:mɪt/ (a noun) – **permit** /pəˈmɪt/ (a verb), **project** /ˈprɔdʒekt/ – /prəˌdʒekt/ (a verb) etc. Thus, the rhythmic-accentual structure of a word may be associated with the morphological factor, as parts of speech may be distinguished by their combination. The rhythmic-accentual structure is regarded as one of the components of the phonetic structure of a word.

The Phonetic factor of word stress serves to single out one syllable from another by its sound structure i.e. the prominence or force of articulation rises sharply at the beginning, culminates in the syllabic, and tapers off towards the end. Hence, consonants preceding the syllabic are pronounced with greater force than those following it; the former are «strong» and the latter are weak». They are called prosodic allophones of consonants, which are observed in monosyllabic morphemes beginning and ending the identical consonants. These prosodic allophones with primary stress may be observed in such words as **coke** /kəuk/ – **cook** /kuk/, **judge** /dʒʌdʒ/, **life** /laɪf/[1] etc.

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[1] *H. Kurath,* Op. cit., p. 151.

G.P. Torsuyey regards the phonetic factor to be not very important in stress placement. It is connected with the rhythmic factor which is not determined by the phonetic structure of syllables[1]. The phonetic factor of word stress is a constituent part of a word. Hence, it shapes the word phonetically and through it semantically. In fact, all the factors of word stress are in close relationship, though each of them is tied to one of the characteristics of a word. As it was emphasized in the previous chapter, a syllable and a morpheme are regarded as constituents of a word, though these two different units do not coincide in breaking a word into syllables and morphemes. The relationship between the phonetic (a syllable) and morphological units (a morpheme) can be established through the central unit of a language, namely words.

Some polysyllabic words which have the alternation of rhythmical accent also have a tendency to retain stress in the initial syllable or on the other syllable of the same wordform. Such a type of free stress, namely **recessive accent,** is a result of ancient accentual structure existing in the Proto-Indo-European language, from which both English and Latin descended. The words borrowed from Latin into English have preserved the variable position of stress, e. g. **perceive** /pɜ:ˈsi:v/, **percept** /ˈpɜ:sept/, **perception** /pɜ:ˈsepʃn/, **transcribe** /transˈkraıb/, **transcript** /trænskrıpt/, **transcription** /ˈtrænskrıpʃn/ etc.

V.A. Vassilyev distinguishes two sub-types of recessive stress in words with prefixes which have lost their referential meaning: (1) unrestricted and (2) restricted (by an unstressed prefix)[2].

Unrestricted recessive stress falls on the initial syllable of the great majority of native English words, e. g. **Sunday** /ˈsʌndı/, /ˈsʌndeı/, **hopeful** /ˈhəupful/, **freedom** /fri:dəm/, **brightness** – /ˈbraıtnıs/, **Greenwich** /ˈgri:nıtʃ/ etc.

Restricted recessive stress falls on the stem of native words with a prefix which has no referential meaning in Modern "English, e. g. **forgive /fəˈgıv/, asleep /əˈsli:p/, withdraw** /wıðˈdrɔ:/, **again** /əˈgeın/ etc.

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[1] *Г.П. Торсуев.* Вопросы акцентологии современного английского языка. Изд. АН СССР, М., 1960, с. 6.

[2] *V.A. Vassilyev.* Op. cit., p. 282.

Historically, the recessive tendency contributed to preserve stress in certain positions of native word derivatives of three or four syllables, e. g. **'beauty – 'beautiful – 'beautifully – 'beautifulness, 'love – 'lovely – 'loveliness – 'loving.**

Thus, to stress the root syllable of a word is an ancient tendency which came from the so called by O. Jespersen «value-stressing», i.e. to stress that part of the word which was of greatest value to the speaker and which therefore he wanted the hearers to notice[1]. This tendency has become habitual in Germanic languages and led to other consequences of interest. In English the distinction between stressed and unstressed syllables is more distinct than in French and Uzbek, in which native words receive a stress on the final syllable. English borrowed a large number of Latin and French words during the Middle English period but the adaptation of these words to native accentual patterns was a complicated process which continued over several centuries. Many French words, stressed on the final syllable, are now stressed on the first syllable, though this is often ascribed to the inability of the English people to imitate the French accentuation. Gradually more and more French words had their accent shifted according to the English prosodic rules: value-stressing, contrast of accents and rhythm[2].

There were a few words which received stress on the final syllable, but it was confined to verbs with prefixes, such as **arise, believe, forget, understand.** Some Latin and French verbs with prefixes retained stress on the last syllable according to this accentual pattern, e. g. **ad'just, com'mit, con'nected, im'ply, suf'fice, sur'vive.** This adaptation of foreign words to the native stress rules is called an **accentual assimilation** (V.A. Vassilyev). In terms of language contacts, this type of phonetic interference may be called an **accentual interference** between languages. The majority of disyllabic and trisyllabic French words borrowed by English have recessive accent as a result of this accentual interference. We have already mentioned the importance of the rhythmic factor in English word stress.

Rhythm means the regular occurrance of some phonetic features. According to rhythmic structure, languages may be of two

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[1] *O. Jespersen.* Growth and Structure of the English language, N. Y. 1955. pp. 26-27.
[2] *O. Jespersen.* Op. cit., pp. 107-109.

types: (1) languages, in which the syllable determining the rhythm irrespective of stress occurs regularly are known as **syllable-timed language,** e. g. French, Uzbek and other Turkic languages; (2) the other type of rhythm is where stresses occur at regular intervals irrespective of the number of intervening unstressed syllables are known as **stress-timed languages,** e. g. English, German, Russian. The difference between these types of rhythm lies in the equal time intervals of syllables and the large number of stressed syllables.

The methodic recommendations given by S. Pit Corder[1] may be applied to English learners of Uzbek. There may appear some difficulties in teaching English to Uzbeks. The English students of Uzbek will have to learn to distribute the total «stress energy» of his utterance more evenly over the whole utterance instead of concentrating it principally on one or two places, usually on the final syllables. Otherwise, pronunciation mistakes may occur which are caused by the rhythmical structure of Uzbek.

In the great majority of three- and four-syllabic words stress falls on the third syllable from the end and this type of stress is known as **rhythmical accent** in Modern English, e. g. radical, family, opinion, occasion etc. It is possible to distinguish two types of rhythmical stress: (1) historical, or diachronical rhythmical stress which is determined by historical changes (e. g. French and Latin borrowings) and (2) synchronical rhythmical stress which can be illustrated in the words **pronunciation** and **examination** in which stress falls on the second pretonic syllable[2].

There is also one more tendency of word stress, namely **retentive**[3], which characterizes the constant position of word accent in word derivatation. The retentive tendency is observed in the derivative of one and the same basic word in which accent falls on a certain syllable and cannot shift its position, e. g. **hope – ˈhoping – ˈhopeful – ˈhopefully (ly) – ˈhopefulness, life – lively – liveliness – livelihood.**

The retentive tendency is typical in other Germanic languages. For example, in German word derivation such as **ˈreden –**

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[1] *S. Pit Corder.* Introducing Applied Linguistics. Penguin Books., 1977, p.257.

[2] *V.A. Vassilyev.* Op. cit., p. 284.

[3] *И.И. Вольфсон.* Словесное ударение в английском языке (закономерности распределения ударения в многосложных простых и производных словах). Автореферат канд. дисс, М.. 1960.

'redest, 'redete – 'Rede – 'Redner – 'rednerisch – 'Redefreiheit – 'Rednerpult[1].

A great number of English disyllabic and polysyllabic words retain the primary or secondary stress on the basic word, e. g. de'clare –, declaration, 'examine – exami'nation, 'prepare –, pre'paration, refuge /'refju:d3/ – refuges /'refju:d3ɪz/ – refugee /ˌrefju(:)'d3i:/ – refuges /ˌrefju(:)'d3i:z/.

D. Jones formulated the stress rules in derived words. When the head-word (i. e. basic word) is monosyllable it may have a strong stress while affixes may be unstressed. Thus from the **entry nine, – s, fold** /naɪn – zfəuld/ it is to be understood that the word **ninefold** has a single stress on the first syllable. And from the **entry ewe, – s, – lamb (s)** it is to be understood that in **ewe – lamb** both syllables have a strong stress.

When a head-word is a compound word in which the second element is a weakly stressed monosyllable and the termination for forming a derived word adds yet another syllable, the first syllable of the second element of the derived word receives a secondary stress, e. g. **greenhouse** /'gri:nhaus/, **green houses** /'gri:n, hauzɪz/, **shockhead** /ʃɔkhed/, **shockheaded** /ʃ'ɔkˌhedɪd/[2].

If we compare a fixed (constant) stress with the retentive accent, it is possible to notice that the former falls on the same syllable in all the grammatical forms of a word or in all the derivatives from one and the same root, whereas the latter falls on the same syllable on which it falls in the basic word. However, in other derivatives from the same root it may be shifted, e. g. **canon** /'kænən/ – **canoness** /'kænənɪs/ – **canonic** /kə'nɔnɪk/ – **canonisation** /ˌkænənaɪ'zeɪʃn/. From this example, we can notice the relationship between the retentive and recessive tendencies. Thus, in **canonic** and **canonization,** which are derived from **canon,** both accents do not coincide, whereas in **canon** and **canoness** they coincide in position though the latter two derivatives have a different rhythmical structure than the former two examples.

The changes of word accentuation, caused by the explained factors and tendencies are still going on. A.C. Gimson emphasized: «The most obvious area of change is that of word accentua-

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[1] *R. Arnold, K. Hansen.* Phonetik Der Englischen Sprache. Eine Einführung. Leipzig, 1965, s. III.

[2] *D. Jones.* Everyman's English Pronouncing Dictionary. M., 1964, p. XXIV.

tion» and gives the examples: **harass, primarily, controversy, statutory, mondatory, rhetoric** in which the second syllable is stressed, while in the word **dispute** the first syllable is stressed[1]. Partly, these changes in stress placement have occured under American influence and partly due to analogy i.e. the changes reinforced by analogy in the accentual structure of words. For example, due to the influence of the verb **'compare** the adjective **comparable** /kɔmpɛərıbl/ is stressed on the first syllable. This kind of anological stress may be observed in **preferable, lamentable, admirable** in which the first syllable is stressed. There are words in which the second syllable is stressed due to new tendencies in word accentuation, that cannot be explained by analogy, e. g. **doc'trinal, communal, formidable, hos'pitable, pe'jorative, aris'tocrat.**

In disyllabic words, in which normally the second syllable is stressed the stress is shifted to the first syllable, e. g. garage, adult, alloy, ally[2] etc.

In some English words there are two or more 'possible variants of word accentuation. Such cases are known as **free variation of the accentual patterns of words,** e. d. **decade** /'dekəd/ in RP and /dl'keid/ popular pronunciation, similarly, **deficit** /'defısıt/, /dı'fısıt/, **explicable** /eks'plıkəbl/, /ıks'plıkəbl/.

Other words with free variation of accentuation given by D. Jones, Ch. Barber, R. Arnold and K. Hansen are listed below:

interesting /'ıntrıstıŋ/, /'ıntərəstıŋ/, /ˌıntə'restıŋ/;

applicable /'æplıkəbl/, /ə'plıkəbl/;

etiquette /ˌetı'ket/, /'etıket/;

hospitable /'hɔspıtəbl/, /hɔs'pitabl/;

intricacy /'ıntrıkəsı/, /ın'trıkəsı/;

kilometre /'kılə,mı:tə/, /kı'lɔmıtə/;

miscellany /mı'selənı/, /'mısılənı/;

Waterloo /ˌwɔ:tə'lu:/, /'wɔ:tə'lu:/.

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[1] *A. C. Gimson.* English as she is spoke (n). «New Society», 8 July 1976, p. 72.
[2] *Ch. Barber.* Linguistic Change in Present-Day English. London, 1974, p. 66.

A marked difference may be noticed between RP and GA in the position of secondary accent. They are found in J. Windsor Lewis's dictionary[1]:

interloper RP /ˈɪntələupə(r)/, GA /ˈɪntəˌləupər/;

commentary RP /ˈkɔməntərɪ/, GA /ˈkaməˌnterɪ/;

centenary RP /senˈtɪ:nərɪ/, GA /ˈsɛntəˌnɛrɪ/;

auditory RP /ˈɔ:dɪtərɪ/, GA /ˈɔdɪˌtɔrɪ/.

It is too complicated to establish which tendency is primary and which is subsidiary in the accentuation of English words. Generally, all the tendencies explained here by come into contact in Modern English and some new accentuation patterns may be explained by language contacts.

VII.4. THE FUNCTIONS OF WORD STRESS

We have emphasized that stress is one of the constitutive features of a word. Any word, no matter whether it is monosyllabic, disyllabic or polysyllabic, has its own stress. **The constitutive function** of word stress shapes the word phonetically, join the sound sequences by articulatory means, combines its stressed and unstressed syllables with the help of intensity (loudness), pitch, quantity and quality. The accentual-rhythmic structure is regarded as one of the components of the phonetic structure of a word which has a phonemic structure as well the structure of combinations of phonemes, a syllabic structure. The latter three components of the phonetic structure of a word may be joined thanks to the accentual rhythmic structure which shapes a word into a single unit of utterance and through this, a word may function as a semantic and central linguistic unit.

Word stress as a prosodic or suprasegmental unit has a phonological or **distinctive function,** which means that the stress placement and degrees of accent can distinguish words and their grammatical forms. The distinctive function of word accent is closely connected with lexical and morphological aspects. When words may be distinguished by the position of stress, some linguists prefer to call it lexical stress or lexical

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[1] *J. Windsor Lewis.* A Concise Pronouncing Dictionary of British and American English. London, Oxford Univ. Press, 1972.

function of stress. If the position or degree of accent can distinguish grammatical forms (parts of speech and morphemes), it performs a morphological function which is known as grammatical stress. There are two types of grammatical stress: (1) morphological and (2) demarcative. The morphological stress exists in English, Russian and Uzbek languages in which the morphological categories (morphemes and parts of speech) may be distinguished by the position of accent, e. g. **'present** (a verb) – **pre'sent** (a noun); in Russian: **но́ги – ноги́;** in Uzbek: **olma'** (a noun) «an apple» – **'olma** (imperative form of a verb) «do not take».

The demarcative stress serves as a boundary or a signal, for example, in Polish it is common for the second syllable from the end to be stressed Thus, the distinctive function of word accent performs both lexical and grammatical functions simultenously.

The distinctive function makes word accent a separate, suprasegmental or prosodic, phonological unit which is called by V. A. Vassilyev the **word-accenteme** in accordance with – emic linguistic terminology. The number of word-accentemes in a language with free stress is determined by the number of the latter's distinctive degrees[1].

In Russian and Uzbek among the degrees of word accent only two of them, i.e. primary stress vs. weak stress may be contrasted which are regarded as two **word-accentemes,** e. g. in Russian: **му́ки – мукй́** (word-distinctive function), **ру́ки – рукй́** (form – distinctive function); in Uzbek: **átlas** «a material» **atlás** «atlas» (word – distinctive function), **yozmá** «written form» – **yo'zma** «do not write» (form-distinctive function).

In English primary and weak word accentemes only perform a word-distinctive function,[2] e.g. **contest** /ˈkɔntest/ n. – to **contest** /kənˈtest/ *v.*; **transport** /ˈtrænspɔ:t/ *n.* – **to transport** /trænsˈpɔ:t/ *v*, **absent** /ˈæb-s(ə)nt/ *adj.* – **to absent** /æˈbsent/, /əˈbsent/, /əˈbsent/ *v*, **perfect** /ˈpɜ:fɪkt/ *adj.* – **to perfect** /pəˈfekt/, /ˈpəfɪkt/ *v.*

In these minimal pairs word accenteme appears in its morphological aspect distinguishing different parts of speech, though there may be some free variations of the phonemic or

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[1] *V.A. Vassilyev.* Op cit., p. 282.
[2] *V.A. Vassilyev.* Op. cit., p. 283.

accentual structures of words, e. g. **to perfect** /pəˈfekt/, /ˈpefɪkt/, **to decrease** /dɪˈkri:s/, /ˈdi:kri:s/, **to increase** /ɪnˈkri:s/, /ˈɪnkri:s/, **contact** /kənˈtækt/, /ˈkɔntækt/, **to export** /eksˈpɔ:t/, /ˈekspɔ:t/ **to prospect** /prəsˈpekt/, /ˈprɔspekt/, **to subject** /səbˈdʒekt/, /ˈsʌbdʒɪkt/[1].

Compound words with the main stress on the first component and tertiary on the second component can be distinguished from free word: combinations by the contrast tertiary stress vs. primary stress, e. g: **a ˈblue,bird – a ˌblueˈbird, a ˈglass,house – a ˌglassˈhouse, a ˈblack,board – a ˌblack ˈboard, a white ˌhouse – ˈa ˌwhite ˈhouse.**

These minimal pairs may confirm the difference between the functions of word accent and sentence stress (in word combinations) and in the latter case we can notice the function of stress signaling the boundaries of the words. In many cases word accent cannot perform a delimitative function because of the non-regularity of difference between the degrees of stress on the first and second syllables. In Russian words the secondary stress always precedes primary stress, and, due to this, it may mark the beginning of a word[2]. As to Uzbek primary stress signals the boundary of a word and the next word usually begins with a weak stress. Hence, Russian and Uzbek word accent has a delimitative function. The onset of stress is determined by the morphological structure of English words. The onset of stress strengthens the initial consonant or consonant cluster, which marks the beginning of a word or morpheme for the listener. This phenomenon is easily observed in such utterances as **ˌsellˈfish, ˈshell-ˌfish vs., ˌself-ˈinterest, ˈshelf-ˌice; the ˈstreet, ˌtwo ˈstreets, ˈBayˌstreet, vs. ˌthis ˈtreat; ˈrace-ˌtrack vs. ˌlastˈrack, ˈtest ˌrun.** In each of these sets of expressions the consonant sequence between the syllables is the same, but the breaks vary with the onset of stress as determined by morphological structure. Besides these types of signalling a word boundary, there are cases when stress-conditioned allophones occur in such minimal pairs as **aˈname** /əˈneɪm/ – **anˈaim** /ənˈ eɪm/ and strong allophones of consonants serve to illustrate the prosodic signalling of morpheme breaks as

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[1] Examples are borrowed from *R. Arnold, A. Hansen's* book, p. 123.

[2] *Г.П. Торсуев.* Проблемы теоретической фонетики и фонологии. М., 1969, с. 82.

in minimal pair **‚buy'tin** /baɪ'tɪn / – **bite in** /‚baɪt 'ɪn/[1] etc. Thus, the delimitative function is determined by the syllabic and morphological boundaries with the assistance of prosodic features.

Word accent in English has a morphonological aspect which is usually known as grammatical function of stress alternations or **morphonological function of word accent**[2]**.** Free word stress in English is characterized by shifting its position and degrees in various word derivatives representing different grammatical (morphological) categories, e. g. **'diplomat** /'dɪpləumət/ – **diplomacy** /dɪp'ləuməsɪ/ **– diplomatic** /dɪpləu'mætɪk/, **mechanic** /mɪ'kænɪk/ – **mechanician** /mekə'nɪʃn/ – **diagnostic** /‚daɪəg'nɔstɪk/ – **diagnostician** /‚daɪəgnɔs'tɪʃən/, **history** /'hɪstərɪ/ **– historian** /hɪs'tɔ:rɪən/, **custody** /'kʌstədɪ/ – **custodian** /kʌs'təudjən/, **placid** /'plæsɪd/ – **placidity** /plæ'sɪdɪtɪ/, **plural** /'plʊərəl/ **– plurality** /plʊə'rælɪtɪ/.

In the examples cited, besides stress alternations, there are phonemic alternations which are not determined by their morphological position. Both types of alternations – phonemic (or segmental) and prosodic (or suprasegmental) are studied by morphonology (see chapter X) a special linguistic level or aspect between phonology and morphology (grammar). Morphonological function of word accent is in close relationship to its distinctive (phonological) function owing to the fact that word-formation in English uses stress alternations (also phonemic alternations) which contribute to their semantic identification.

The following function of word accent or as a phonological unit word-accenteme is called **recognitive or identificatory** which means that the correct accentuation of words facilitates their recognition and comprehension[3], and semantic identification. Wrong accentuation of words may destroy their semantic (distinctive) function. The recognitive function of word accent is both theoretically and practically important. All the functions of word accent are in close relationship with each other and wrong accentuation (misplace of the degree and positions of word accent etc.) distroys the functions and, thus, leads to in-comprehensive speech communication. The latter process is a result of the accentual interference in language learning. English, Russian and

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[1] *H. Kurath.* Op. cit., 151-152.

[2] *Л.А. Телегин.* Морфонологическое использование английского словесного ударения. СамГУ, Самарканд, 1976.

[3] *V.A. Vassilyev.* Op. cit., p. 284.

Uzbek have different accentual patterns of words, though they all have free dynamic stress. Therefore, each accentual pattern of an English word should be explained separately in terms of tone (pitch) sequences. For example, the word **educational** consists of three tone sequences: /edju:/ – pre-tonic sequence, /keı/ tonic syllable, /ʃənə1/ – post-tonic sequence; **'purify** has tonic syllable /pju:ə/ and post-tonic sequence /rı-faı/, **internationalization** has five pretonic sequences /ı^{5}ntə^{4}næ^{3}ʃn^{2}əla^{1}ı/ tonic syllable /zeı/ and post-tonic sequence /ʃən/[1]. Tonic syllable coincides with the position of primary stress.

VII.5. THE ACCENTUAL PATTERNS OF ENGLISH WORDS

Analysing D. Jones's pronouncing dictionary G.P. Torsuyev established eleven accentual patterns and more than hundred accentual-syllabic patterns of English words[2]. A.C. Gimson gives more than fifty accentual-syllabic patterns of English words for foreign learners[3]. Other authors distinguish about forty to eighty accentual-syllabic patterns of English words[4]. Cited below are the most usual accentual-syllabic patterns of English words using G.P. Torsuyev's graphic notation: ⊥ a syllable with primary stress, T syllable with secondary stress – a weak syllable. Thus, for convinience, we distinguish three degrees of word accent, regarding the tertiary stress as a variant of the secondary stress or as a type of **alloaccenteme,** though there is a slight difference between these two degrees of word accent.

The monosyllabic words have no stress pattern. They have one degree of stress if they are main words, which include nouns, adjectives, verbs, adverbs, numerals. The auxiliary words (pronouns, prepositions, conjunctions, auxiliary verbs and certain adverbs) are usually unstressed or half stressed. Their stressing depends upon the prosodic structure of phrases of which they are constituent parts.

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[1] *G.F. Arnold.* Stress in English. Amsterdam, 1957, p. 21.

[2] *Г.П. Торсуев.* Вопросы акцентологии современного английского языка. М., 1960. с. 52-61.

[3] *A.C. Gimson.* A Practical Course of English Pronunciation. London, 1975, pp. 33-43.

[4] *Yi-Chen Fu.* The Phonemic Structure of English Words. Taipei, Taiwan, 1960, pp. 152-160.

The difference in the degrees of word stress, the distribution of the primary and secondary degrees of stress and different number of stresses in words form the accentual patterns or types of words, e. g. /⊥ ⊥/, /⊥ T/, /T ⊥/, /⊥ T ⊥/ etc. The distribution of stresses in the syllables of a word form the accentual-syllabic structures of words, e. g. within one accentual pattern we may distinguish various accentual-syllabic structures of words such as /⊥ ⊥ –/, /⊥ – ⊥ –/, /⊥ – – ⊥ –/, /⊥ – – ⊥ / etc.

The accentual pattern I includes words with one primary stress and consists of fifteen accentual-syllabic structures among which there are words with primary stress on the first syllable (/⊥ – /, /⊥ – – /, /⊥ – – – /, /⊥ – – – – /, /⊥ – – – – – – /), on the second syllable (/– ⊥ /, /– ⊥–/, /– ⊥– – /, /– ⊥ – – – /, /– ⊥ – – – – /, /– ⊥ – – – – – /), and on the third syllable (/ – – ⊥ /, / – – ⊥–/, / – – ⊥– – /, /– – ⊥ – – – /) **asking** /a:skıŋ/, **diamond** /'daıəmənd/, **misarable** /'mızərəbl/, **justify** /'dʒʌstıfaı/, **spiritualism** /spırıtuəlızm/, **contain** /kən'teın/, **abnormal** /ə'bnɔ: məl/, **accuracy** /'ækju:rəsı/, **ability** /ə'bılıtı/ etc.

The accentual pattern II includes words with two primary stresses. If has twenty-seven accentual-syllabic structures, six of which have even (level) stress (/⊥ ⊥/, /⊥ ⊥ – /, /⊥ ⊥ – – /, /⊥ ⊥ – – – /, /⊥ ⊥ – – – – – /) and the others have two primary stresses in different syllables (/⊥ – ⊥ /, /⊥ – ⊥ –/, /⊥ – ⊥ – – /, /⊥ – ⊥ – – – /, /⊥ – ⊥ – – – – /, /⊥ – – ⊥/, /⊥ – – – ⊥/, /⊥ – – – ⊥ – – – /, /⊥ – – ⊥ – /, /⊥ – – ⊥ – – –/, /⊥ – – ⊥ – /), e. g. **backbone** /'bæk'bəun/, **well-being** /wel bi:ıŋ/, **up-to-da-te** /'ʌptə'deıt/, **high-spirited** /'haı'spırıtıd/, **ivory-black** /'aıvərı'blæk/, **misapply** /'mısə'plaı/, **impracticabie** /'im'pærktıkəbl/ **unjustifiableness** /'ʌn'dʒʌstıfaıəblnıs/, **prehistoric** /'prıhıs'tɔrık/ etc.

The accentual pattern III includes words with three primary stresses on the first, second and third syllables (/⊥ ⊥ ⊥/) which is typical in three syllable abbriviations like **G.P.O.** /'dʒi:'pi:'əu/.

The accentual pattern IV is characteristic of abbriviations like **USSR** /'ju:'es'es'α:/ with primary stresses in all four syllables (/⊥ ⊥ ⊥ ⊥/).

The accentual pattern V includes words with one primary and one secondary stresses. It has fourteen accentual-syllahic structures, in ten of which the first syllable receives the primary stress and one of the following syllables have secondary stress /⊥ T – /, /⊥ T – – /, /⊥ – T/, /⊥ – T – /, /⊥ – T – – /, /⊥ – – T/, /⊥ – –

⊤ – /, /⊥ – – ⊤ – – /, /⊥ – – – ⊤/, /⊥ ⊥ – – ⊤ – /. The rest accentual-syllabic structures are: /– ⊥ ⊥ –/, /– ⊥ ⊤ – – /, / – ⊥ – ⊤ – /, / – ⊥ – ⊤ – – – /. E.g. **platform** /ˈplæt,fɔ:m/, **dressmaker** /ˈdres,meɪkə/, **avenue** /ˈævɪ,nju:/, **illustrate** /ˈɪləs,treɪt/, **experimental** /ɪks,perɪˈmentəl/, **materialize** /məˈtɪərɪə,laɪz/, **justifiable** /ˈdʒʌstɪ,faɪəbl/, **liberialism** /ˈlɪbərə,lizm/, **anybody** /ˈenɪ,bɔdɪ/ etc.

The accentual pattern VI has two stresses the first of which is the secondary and the second one is the primary. It has twenty accentual-syllabic structures such as /⊤ – ⊥/, /⊤ – ⊥ – /, /⊤ – ⊥ – – /, /⊤ – ⊥ – – – /, /⊤ – ⊥ – – – – /, /⊤ – – ⊥/, /⊤ – – ⊥ – /, /⊤ – – ⊥ – – /, /⊤ – – – ⊥ – /, /⊤ – – – ⊥ – – /, / – ⊥ ⊤ – /, / – ⊤ – ⊥/, / – ⊤ – ⊥ – /, / – ⊤ – ⊥ – – /, / – ⊤ – ⊥ – – – /, / – ⊤ – – ⊥ – /, / – ⊤ – – ⊥ – – /, / – ⊤ – – – ⊥ – /, / – ⊤ – – – ⊥ – – /.

Examples, **magazine** /ˌmægəˈzɪ:n/, **coincide** /ˌkɔɪnˈsaɪd/, **representation** /ˌreprɪzenˈteɪʃn/, **academical** /ˌækəˈdemɪkəl/, **satisfaction** /ˌsætɪsˈfekʃn/, **dissatisfactority** /ˈdɪsˌsætɪsˈfæktɪrɪtɪ/, **identification** /aɪˈdentɪfɪˈkeɪʃn/, **economically** /ˌɪkəˈnɔmɪkəlɪ/, **evolutionary** /ˌevəˈlju:ʃnərɪ/ etc.

The accentual pattern VII has two primary stresses on the first and second syllables and the secondary stress on the third syllable of a word. It has two accentual-syllabic structures such as / ⊥ ⊥ ⊤ – /, / ⊥ ⊥ ⊥ – – /, e.g. **unciworthy** /ˈʌnˈsi:,wɜ:ðɪ/, **unciworthiness** /ˈʌnˈsɪˈwɜ:ðɪnɪs/.

In the accentual pattern VIII the secondary stress is placed between two primary stresses. It has fourteen accentual-syllabic structures: /⊥ ⊤ – ⊥/ – **misrepresent** /ˈmɪs,reprɪˈzent/, /⊥ ⊤ – ⊥ – / – **Konstantinopol** /ˈkɔns,tæntɪnˈəupl/, /⊥ ⊤ – ⊥ – – / – **unostentacialy** /ˈʌn,ɔstenˈteɪʃəslɪ/, /⊥ ⊤ – ⊥ – – – / – **unfilosophically** /ˈʌn,fɪləˈsɔfɪkəlɪ/, **dimobilization** /ˈdɪməubɪlaɪˈzeɪʃən/, /⊥ – ⊤ – ⊥ – – / – **incompatibility** /ˈɪnkəm,pætəˈbɪlɪtɪ/, **individualization** /ˈɪndɪ,vɪdju:əlaɪˈzeɪʃn/, **undesireability** /ˈʌndɪ,zaɪəˈbɪlɪtɪ/, /⊥ – ⊥ – – – ⊥ – – / – **valitudinearianism** /ˈvælɪ,tju:dɪˈnɛərɪzm/, /⊥ – – – ⊥/ – **oliomargarine** /ˈəulɪəu,mɑ:dʒəˈrɪn/, /⊥ – – ⊤ ⊥ – / – **intercommunication** /ˈɪntəkə,mju:nɪˈkeɪʃn/.

In the accentual pattern /IX/ the primary stress precedes two secondary stresses which has two accentual-syllabic structures: /⊥ ⊤ – ⊤ – / – **uncercamcigion** /ˈʌn,sɜ:kəms,ɪʒn/, /⊥ – ⊤ – ⊤ – / – **soda-water-bottle** /ˈsəudə,wɔtə,bɔtl/.

The accentual pattern X has three stresses, i.e. secondary stresses precede the primary stress. It has four accentual-syllabic structures /⊤–⊤–⊥–/ – **superanewation** /ˌsjpər,ænjuˈeɪʃn/, **superficiality** /ˌsju:pə,fɪʃɪˈælɪtɪ/, /⊤–⊤–⊥– – –/ – **autobiographically** /ˌɔ:tɔ,baɪə,græfɪkəlɪ/, /⊤ – ⊤ – – ⊤ – / – **individualization** /ˌɪndɪ,vɪdjuəlaɪˈzeɪʃn/.

The accentual pattern XI has three stresses, i.e. the primary stress is placed between two secondary stresses. This pattern has an accentual-syllabic structure /⊤ – ⊥⊤ – /: **overstimulate** /ˌəuəˈstɪmˈju:leɪt/.

These accentual patterns and their accentual-syllabic structures are determined by the morphological type of wordformation, by the number of syllables of a word, by the semantic weight of the stem and affixes (prefixes) and suffixes (postfixes)) and also by other factors and tendencies which influence word accentuation.

CHAPTER VIII

INTONATION STRUCTURE OF ENGLISH

VIII.1. THE DEFINITION OF INTONATION. ITS COMPONENTS AND FUNCTIONS

Intonation is an essentual prosodic element of human speech. It shapes human speech phonetically and helps to express grammatical, semantic and emotional meanings of phrases or sentences. Intonation is a very complicated phenomenon and therefore its definition varies widely among linguists. The following definitions of intonation have been given by British linguists: «Intonation may be defined as the variations which take place in the pitch of the voice in connected speech, i.e. the variations in the pitch of the musical note produced by the vibration of the vocal cords» (D. Jones)[1]. «By intonation we mean the rise and fall of the pitch of the voice when we speak» (L. Armstrong and I. Ward)[2].

The American linguist D. L. Bolinger defines intonation as «... the melodic line of speech, the rising and falling of the «fundamental» or singing pitch of the voice ...»[3].

P. Ladefoged defines intonation as «the pattern of pitch changes»[4]. P. Lieberman regards intonation as «... the entire ensemble of pitch contours, pitch levels and stress levels that occurs when a sentence is spoken»[5].

From given definitions we can notice that intonation is regarded as pitch changes or speech melody and also stress levels which accompany an utterance. Speech melody perceived as pitch changes is one of the main components of intonation, but it is not equal to intonation.

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[1] *D. Jones.* An Outline of English Phonetics. Cambridge, 1962, p. 275.
[2] *L. Armstrong and I. Ward.* A Handbook of English Intonation. Cambridge, 1931, p. 1.
[3] *D. L. Bolinger.* The Melody of Language. Modern Language Forum 40, (June, 1955), p. 20.
[4] *P. Ladefoged.* A Course in Phonetics. Harcourt Brace Jovanovich, Inc., 1975, p. 93.
[5] *Ph. Lieberman.* On the Acoustic Basis of the Perception of Intonation by Linguists. «Word», 21, 1965, p. 40.

Some linguists include other components of intonation in their definition. For example, A.M. Peshkovskij defined intonation as the indissoluble connection of both rhythm and melody[1]. These definitions have been given in a narrow sense.

A broad and adequate definition of intonation is given by V.A. Vassilyev who writes: «On the perceptual level, sentence intonation is a unity of four components, formed by the communicatively relevant variations in: (1) voice pitch, or speech melody; (2) the prominence of words, or their accent; (3) the tempo (rate), rhythm and pausation of the utterance, and (4) voice – tamber, this complex unity serving to express adequately, on the basis of the proper grammatical structure and lexical composition of the sentence, the speaker's or writer's thoughts, volition, emotions, feelings and attitudes towards reality and contents of the sentence»[2].

G.P. Torsuyev defines intonation as a complex combination of speech melody, distribution of stress in a sentence, tamber of voice and tempo of pronunciation, which serves as the most important means of expressing the meaning of an utterance[3].

A.M. Antipova regards intonation as a complex combination of the following components: (1) speech .melody, (2) sentence stress, (3) time characteristics (duration, tempo and pausation), (4) rhythm and (5) tamber (the quality of voice)[4].

The latter three definitions of intonation include all the components of intonation and have been given in a very broad sense. We also shade these definitions.

Intonation is a prosodic or suprasegmental characteristics of an utterance or phrase, and therefore it is possible to speak of the prosodic structure of a phrase. By the term «phrase or utterance» we mean the sentence realized phonetically as a unit of speech.

Like other phonetic units intonation may be studied in four aspects: (1) **articulatory (physiologically),** (2) **acoustically (physically),** (3) **perceptually (auditorially)** and (4) **functionally**

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[1] *А.М. Пешковский.* Интонация и грамматика. В его книге «Избранные труды», Учпедгиз, М., 1959, с. 177.

[2] *V.A. Vassilyev.* English Phonetics. A Theoretical Course. M., 1970, p. 290.

[3] *Г.П. Торсуев.* Фонетика английского языка. М., 1950, с. 212. *Г.П. Торсуев.* Обучение английскому произношению. М., 1954, с. 127.

[4] *А.М. Антипова.* Система английской речевой интонации. М., Изд. «Высшая школа», 1979, с. 5.

(linguistically). There is a close relationship between all these aspects of intonation. The functional aspect of intonation which deals with a linguistic analysis of it, namely phonological aspect of intonation, has not been studied thoroughly. This aspect is very important in linguistic structuring of intonation components and in establishing relations between the phonological, grammatical, lexical and stylistic levels of a language.

M. Pomportl considers that intonation is studied by a special branch of phonetics, namely **intonology,** and suggests even **Intonological Typology** as a part of universal typology of languages[1]. Though we do not shade the term «Intonology», but admit the possibility of scientific investigation of intonation in relation with linguistic levels and comparative – typological study of various intonation types in languages. Besides, it is possible to study **intonational interference** between the mother tongue and foreign language which has a theoretical and practical value.

Any utterance may have communicative and expressive – emotional functions, which may be formed either by intonational or lexico-grammatical means. Any sound information is formed by intonation which also contributes to distinguish communicative types of utterance. The expressive-emotional function of an utterance, which is determined by the division of sense-groups in a context or in a text, may also be formed by means of intonation. Various types of emotions expressed by intonation are studied by a special branch of phonetics, the so-called **phonostylistics.** A.M. Antipova calls it **«intonational stylistics»** which, being a branch of intonology, studies intonations of different functional styles[2] of a language.

The distribution of intonation itself and its components depend on the situation or context. It is called the **text-forming function** of intonation. The phonological, phonostylistic and text-forming functions of intonation have not been deeply investigated and these types of scientific approaches are going to develop in modern linguistics. As to the place of intonation in transformational-generative grammar, it is not clear how intonation can operate in this theory[1].

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[1] *Milan Romportl.* Studies in Phonetics. Prague, Academia. 1973, pp. 129-136.
[2] *А.М. Антипова.* Вышеуказ. раб., с. 114-129.

As a prosodic unit intonation acts with all its components, it can operate in phrase together with the grammatical and lexical means of language. Intonation itself and its components perform four functions like other phonological units.

(1) **A constitutive function** of intonation is expressed by its existence in an utterance through which intonation shapes a sentence phonetically. For example, Come! as a word and sense-group has its own grammatical form and intonation. The phrases *Come here!* or *He will come tomorrow.* constitute different grammatical (syntactic) structures and intonation.

(2) **A delimitative function** of intonation is very closely connected with its constitutive function. Intonation, as a prosodic constituent of a phrase, may also delimitate parts within a phrase, and its end, through breaking up a sentence into sense-groups (pause-groups or intonation groups)[1]. By a sense-group we mean a word or a group of words forming the shortest possible unit in a sentence from the point of view of meaning, grammatical structure and intonation. E. g. *'Early in the morning it's 'always 'pleasantly cool.* In this sentence there are two sense groups (a single vertical stroke (1) denotes a short pause inside a sentence).

(3) **A distinctive (phonological) function** of intonation serves to distinguish the communicative types of sentences, e. g. *He is a student* may be pronounced by four different pitch contrasts. When it is pronounced by a low pitch at the end it means a normal, matter-of-fact report. When it has a mid pitch at the end of a sentence it indicates that the utterance is not finished or that the fact is like an afterthought, having significance for something said previously. If it is pronounced by a high pitch at the end it indicates mild doubt, as if *he is a student* or trying to remember *he is a student.* When it is pronounced by an extra-high pitch it indicates strong disbelief or surprise. In this case the distinctive function of intonation becomes clear through the pitch contrasts which have its distinctive function too. In the minimal pair «Is there any Miss Take here? – Is there any mistake here?» the distinctive function of intonation becomes clear through stress levels at the junction of mistake (one stress) and Miss Take (two stresses). The distinctive function of intonation and its components is under discussion in modern phonology.

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[1] *P. Stockwell.* The Place of Intonation in Generative Grammar of English. «Language», 1960, vol. 36, №3.

(4) **A recognitive (identificatory) function** of intonation may be proved by the fact that every language or dialect has a characteristic pattern of intonation which is manifested in all utterances of speakers, though there may be some individual prosodic features in their pronunciation. Any phrase or utterance has its proper intonation, according to which it may be identified by all speakers. It is not possible, for example, to pronounce a declarative sentence by a high or extra-high pitch. If so, the recognitive function of intonation may be destroyed and a sentence pronounced by a high pitch becomes an exclamatory or interrogative sentence, i.e. the communicative type of a sentence may be changed. To learn the right recognitive function of intonation is necessary in mastering a good pronunciation of a foreign language.

All the functions of intonation are in close relationship with each other. Wrong usage of one of these functions may bring about wrong interpretation of other functions. All four functions of intonation are characteristic also of its components as given examples illustrate.

Intonation, its components and functions exist not only in oral speech but in the written form of a language as well. In a written text the punctuation marks make the meaning of sentences clear to the reader. Besides words, word combinations and grammatical combinations used in written texts, the writer's idea, his emotions and feelings may be expressed by means of punctuation marks which visually express various intonation types within a sentence, e. g. the punctuation marks which are called «end stops», i.e. period (.), a question mark (?), exclamation mark (!) are used to mark the end of sentences and indicate the communicative types of sentences through intonational delimitation. The internal punctuation marks: comma (,), semicolon (;), colon (:), dash (–), parenthesis ( ) are used to separate, to inclose or indicate the relation between elements within a sentence. They usually indicate pauses, intonations expressing non-finality (the rising tone) or finality (the falling tone) and emphatic intonations. Punctuation marks with specialized uses: quatation marks («»), brackets ( ), ellipsis (...) and italics may also signal certain intonation delimitations by means of pitch changes, stress levels, pauses.

The above example *He is a student* may be pronounced with different intonations (pitch variations) thanks to three final punctuation marks – end stops: period signals the falling tone; the

question mark indicates the rising tone and the exclamation mark requires to use a special type of intonation expressed by all its components. Probably, the relationship between the punctuation marks and intonation is universal in all languages. Such examples as *He is a student* in Russian (*Он – студент)* and Uzbek *(U – student)* have relatively the same intonations depending on the usage of the punctuation marks.

Some American linguists regard punctuation marks as **«suprasegmental phonemes»**. We do not shade this idea but consider that punctuation marks may be interpreted as symbols of prosodic units in written sentences. Punctuation marks contribute to distinguish the functions of intonation. Thanks to the usage of punctuation marks the constitutive, distinctive delimitative and recognitive functions of intonation become clear in a written text. Thus, punctuation marks are important signals in the text-forming function of intonation, which operates in a different way to the proper functions of intonation (constitutive, distinctive, delimitative, recognitive). In any language intonation performs grammatical and expressive functions, but in English the contrasts in intonation are not clearly lexical[1]. These functions of intonation belong to language functions as a whole. Intonation and syntax are complementary aspects of sentence structure and therefore, intonation is partly grammatical and partly referential[2].

VIII.2. METHODS OF INDICATING AND DESCRIBING INTONATION

There are different methods of indicating intonation which depend on theoretical and practical approaches of linguists.

The graphical method of indicating intonation by special symbols is called a tonetic transcription. These three approaches in describing intonation use different graphical methods, i.e. tonetic transcriptions. D. Jones regarded the description method used by L.E. Armstrong and I.C. Ward in their «Handbook of English Intonation» (Cambridge, 1931) to be effective in practical teaching and, therefore, he followed their system. L.E. Armstrong

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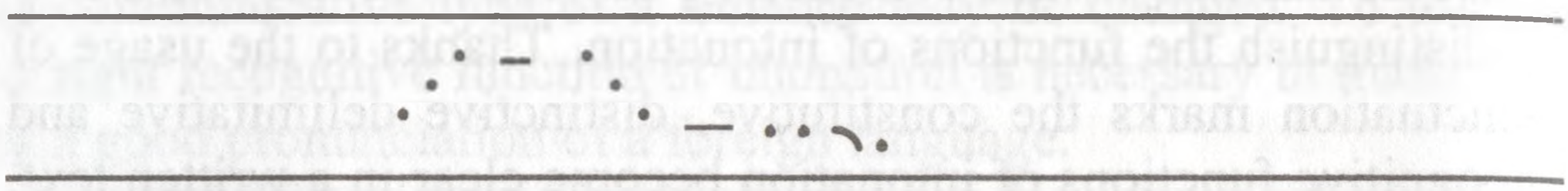
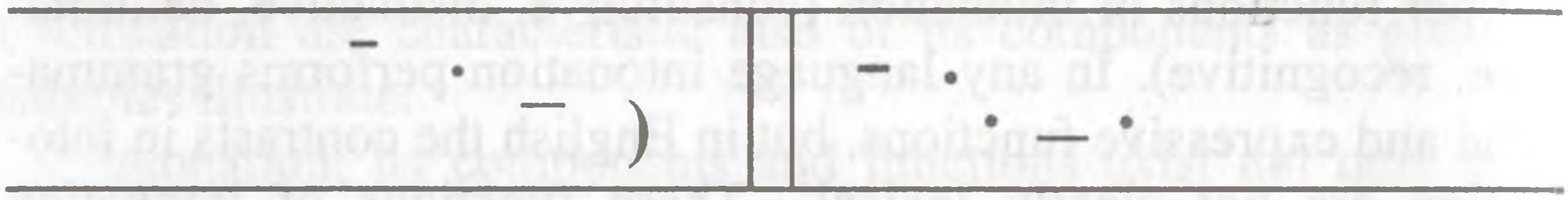
[1] *M.A.K. Halliday.* Intonation and Grammar in English. Mouton, 1967, p. 10.
[2] *N. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor, 1964, pp. 126-127.

and I.C. Ward distinguish two fundamental tunes or motifs: tune I and tune II. As to different pitch changes used in the emphatic speech, they are regarded to be variants and combinations of two tunes[1]. Being useful in practice this system of description cannot indicate phonological function of intonation. It is also used by other phoneticians, thanks to its simple and visual graphic notation of English intonation. According to this system dots and dashes denote approximately unstressed and stressed pitch levels, while curves indicate rising and falling intonations placed above each syllable of a phonetic transcription, e. g.



They have a 'jally little 'boat on the 'river.



'Are you 'quite' sure? 'Don't be frightened.

R. Kingdon's tonetic stress-mark system shows the stress marks and pitch levels simultenously. This system is based on H. Palmer's tonetic notation according to which it is possible to distinguish five nuclear tones, intensification, tails, heads and six tone patterns and their varieties.

Modern English possesses the following five nuclear tones:

Two falling tones: High-falling /↘/
Low-falling /↘/
Two rising tones: High-rising /↗/
Low-rising /↗/

One rise – fall-rise tone /↗↘↗/

[1] *L.E. Armstrong, I.C Ward.* A Handbook of English Intonation. Cambridge, 1942, pp. 21-23.

Besides these marks H.E. Palmer and F.G. Blandford suggested other marks used to indicate tails, heads and tone patterns[1]. This tonetic notation system is too complicated for printing and teaching purposes.

The British phonetician Roger Kingdon revised the above given tonetic notation by separating stress and tone. R. Kingdon distinguishes two types of tones: (1) **Static tones** in which the vocal cords remain at a given tension, producing a note of constant pitch; (2) **Kinetic tones** in which the tension of the vocal cords is changed, thus producing a sound of varying pitch.

The next step is to discover the number and nature of the members of each of these two classes. Naturally, there may be a large number of static and kinetic tones. R. Kingdon regards it is sufficient to recognize two level static tones – high and low – and a modification in pitch of each of these when it is emphatic, thus giving in effect four pitches, e. g. «Now» may be pronounced in high-level normal (ˈNow) tone and high level emphatic tone (ˈˈNow). It may also be pronounced in a normal low tone (ˌNow) and emphatic low level tone (ˌˌNow). There are five types of kinetic normal and emphatic tones:

(1) high rising tone: ˌNow, ˌˌNow (normal), ˈNow, ˈˈNow (emphatic);

(2) low rising tone: ˌNow, ˌNow (normal), ˌNow, ˌˌNow (emphatic);

(3) falling-rising tone: ᵥNow, ᵛNow (normal),
ᵛNow ˈᵛNow (emphatic);

(4) rising-falling tone: ˍNow, ˈ^Now (normal),
^Now, ˈ^Now (emphatic);

(5) rising-falling-rising tone:
ᵥNowˈ~ˈᵛ Now (normal), ˈᵛNow, ˈ^Now (emphatic).

R. Kingdon emphasizes six main factors of kinetic tones:

1) direction or directions of pitch change (rising, falling, falling-rising etc.) which is the most important factor as it often has a semantic (distinctive) function;

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[1] *H.E. Palmer, F.G. Blandford.* A Grammar of Spoken English. Cambridge, 1950, pp. 13-25.

2) position on the scale of pitches used by the human voice (i.e. high or low) which mainly indicates the feelings of the speaker;

3) range of pitch (normal or extended) and,

4) intensity (degree of loudness, breath force used, muscular energy, etc.). These two factors (3-4) combine to provide varying of emphasis, though it is sufficient to show two degrees: normal and emphatic;

5) duration of tone on the syllable or on almost any of its component parts (such as lengthening or shortening of particular consonants or vowels) which adds both expression and emphasis;

6) variation in the rate of pitch change (e. g. in a falling tone, a slow descent from the starting-point, with an increase in the rate of descent as the end of the tone is reached, or conversely, a rapid initial descent followed by a slowing-up towards the end)[1].

Each intonation – group has its own stress and pitch pattern which is divided into sections. The section, formed by any unstressed or partially stressed syllable or syllables preceding the first fully stressed syllable of an intonation group is called **«pre-head»**. Three main types of pre-head may be distinguished in unemphatic speech: (1) the pitch of initial unstressed syllables may either rise gradually to the pitch of the first stressed syllable or be (2) on a mid or (3) low level note, the latter is called a normal **pre-head.**

(.˙,.)	(˙ ˙ ˙	(. . .)

The second section of the intonation group is called its **head** which is formed by the first fully stressed syllable. According to H.E. Palmer there are main types of heads:

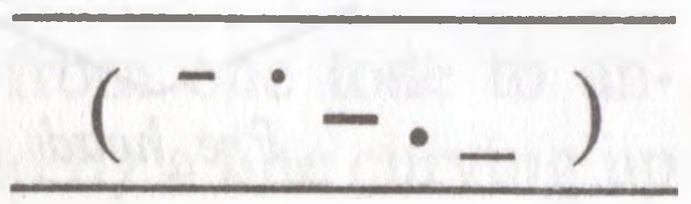
(1) inferior (2) superior (3) scandent

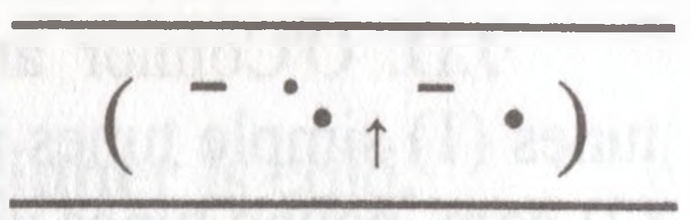
(_)	(¯)	(/)

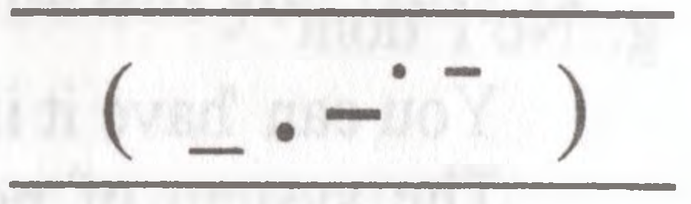
The third section which is called the «body» is formed by the stressed and unstressed syllables lying between the head and

[1] *R. Kingdon.* The Groundwork of Intonation. London, 1959, pp. XXV-XXVI.

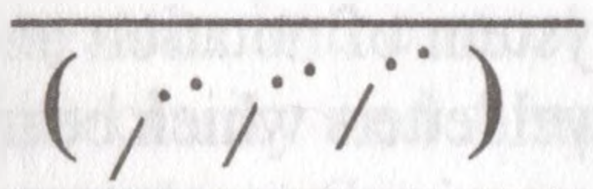
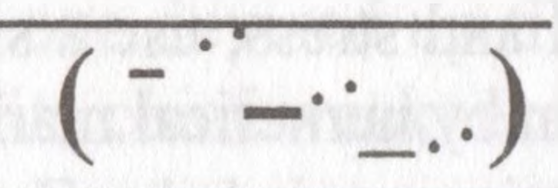
the nucleus of the group. Some phoneticians call it the scale, and distinguish the following types of scales in RP:

(1) the regular descending scale 

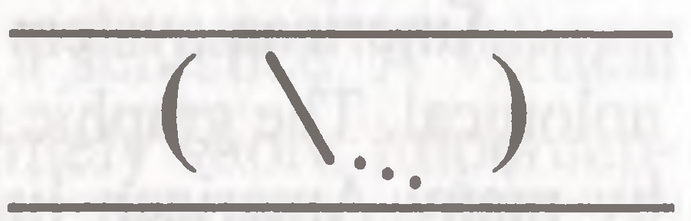
(2) the broken descending scale with a special rise 

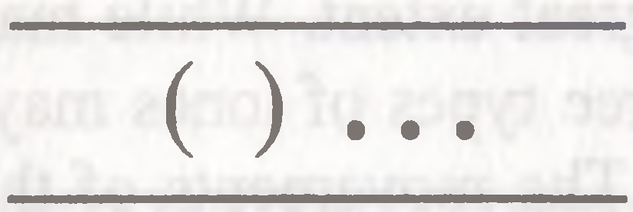
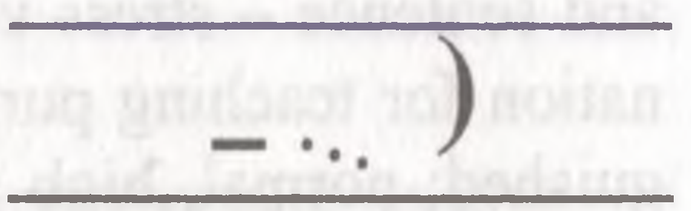
(3) the ascending scale 

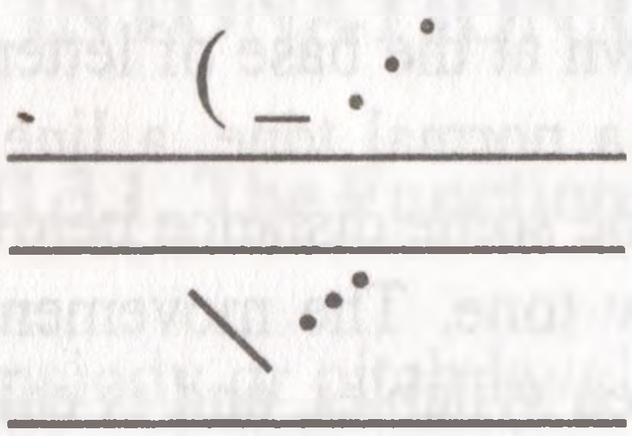
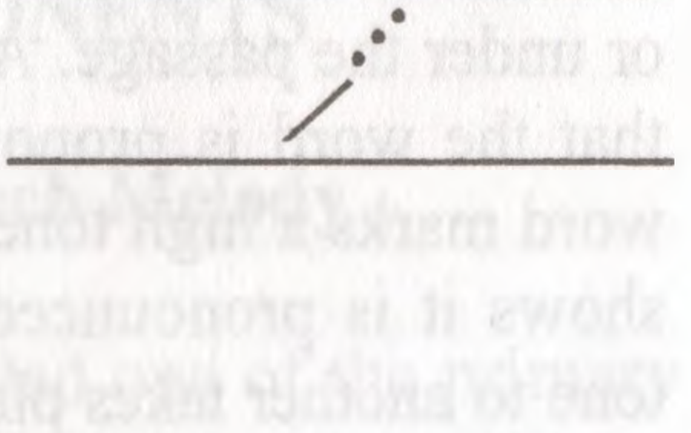
(4) the scandent scale with each posttonic syllable pronounced on a slightly higher pitch than in the preceding syllable

 or 

When the nuclear syllable is followed by an unstressed or partially stressed syllable or syllables, this section of the intonation-group is called its **tail.** There are three types of tails:

(1) descending 

(2) level  or 

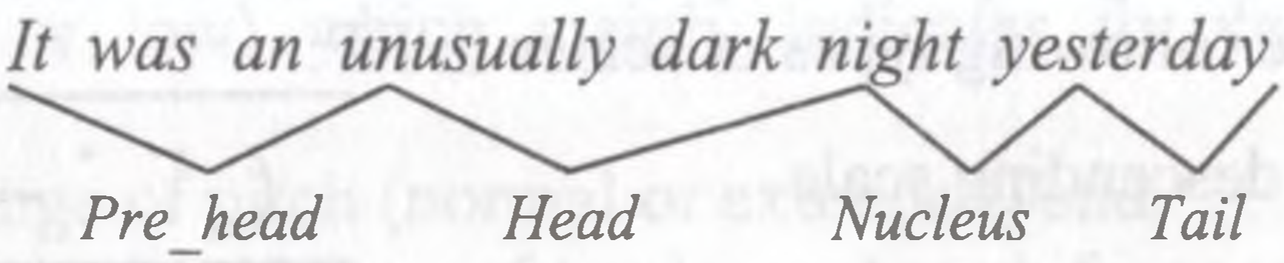
(3) ascending  or 

or

The occurrance of a certain tail depends on the type of the nuclear tone used in a phrase. The tail is a constituent of the falling or rising terminal tones[1].

E. g. It was an unusually dark night yesterday.

[1] *V.A. Vassilyev.* Op. cit., pp. 299-300.



J.D. O'Connor and G.F. Arnold distinguish two principal tunes (1) simple tunes i.e. those which have one nuclear tone and (2) com. pound tunes which contain more than one nuclear tone. e. g. 'No I 'dont

You can 'have it if you 'like[1].

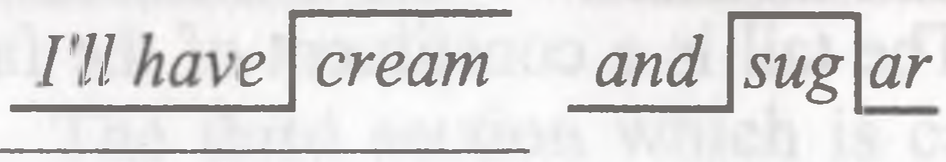
The system of notation of the English intonation used by J.D. O'Connor and G.F. Arnold is used by A.C. Gimson who also distinguishes certain sections in the intonation-group[2].

American linguists, defining intonation as a complex unity of pitch level and stress, use a simplified system of notation and indicate them by numerical marks over vowel letters which bear sentence-stress, e. g.

3 3 1
– Where did he get it

2 2 2
– Bought it in a drugstore.

American system of description of intonation is called phonological. The graphic representation of intonation contours given by many American linguists coincide, but the degrees of tones and sentence – stress vary to a great extent. While marking intonation for teaching purposes, three types of tones may be distinguished: normal, high and low. The movements of the voice up and down may be indicated by lines at three different levels over or under the passage. A line drawn at the base of letters indicates that the word is pronounced in a normal tone, a line above the word marks a high tone, and a line some distance below the word shows it is pronounced in a low tone. The movement from one tone to another takes place between syllables, and is called a shift. A shift is indicated by a straight vertical line, e. g.



I'll have cream and sugar.
How are you, Mr. Johnson?

[1] *J.O. D'Connor and G.F. Arnold.* Intonation of Co 25-26.

[2] *A.C. Gimson.* A Practical Course of English Pronunciation. A Perceptual Approach, London, 1975, pp. 53-70.

How are you, Mr. Johnson?

The movement of the voice, sliding from one tone to another while pronouncing a syllable, is marked by a line curving up or down, and is known as an inflection, e. g.[1]

The dinner is cold.

The dinner is cold.

What time did you call?

What time did you call?

This intonation – marking system is based on K.L. Pike's[2] interesting work and is used by Ch. C. Fries[3] and other American linguists. According to C.H. Prator, Jr. K.L. Pike's intonation – marking system is the most teachable one devised up till now because of its clarity and simplicity but its chief weakness is that, it may give students the impression that English intonation is much less flexible than is really the case.

Our graphical representation marks indicated the boundary of sense-groups or pauses. Two vertical strokes (||) denote a long pause, which usually occurs at the end of a sentence. A single vertical stroke (/) denotes a short pause inside a sentence. A vertical wavy line (≀) denotes a pause that is extremely short, imperceptible, or does not exist at all but is possible and therefore non-obligatory.

VIII.3. THE LINGUISTIC FUNCTIONS OF INTONATION COMPONENTS

VIII.3.1. The Functions of Speech Melody

Speech melody or pitch level is regarded one of the primary or main components of intonation. Its chief function is to distin-

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[1] *Clifford H. Prator.* Manual of American Pronunciation. N. Y., 1957, p. 38.

[2] *K.L. Pike.* Intonation of American English. Ann Arbor. Univ. of Michigan Press, 1946.

[3] *Ch. C. Fries.* Teaching and Learning English as a Foreign Language. Ann Arbor, Univ. of Michigan, 1957. R. Lado, Ch.C. Fries. English Pronunciation. Exercises in sound segments, intonation and rhythm. Ann. Arbor Univ. of Michigan, 1968.

guish communicative types of sentence and to divide a sentence into sense-group or intonation groups.

The four functions of intonation (constitutive, delimitative, distinctive and recognitive) are performed by a number of pitch patterns and their distribution in a sentence.

R. Nash distinguishes the following five basic functions of speech melody:

(1) the identity function, i.e. the ability of listeners to recognize a language without understanding what is said and to pronounce utterances with a foreign accent;

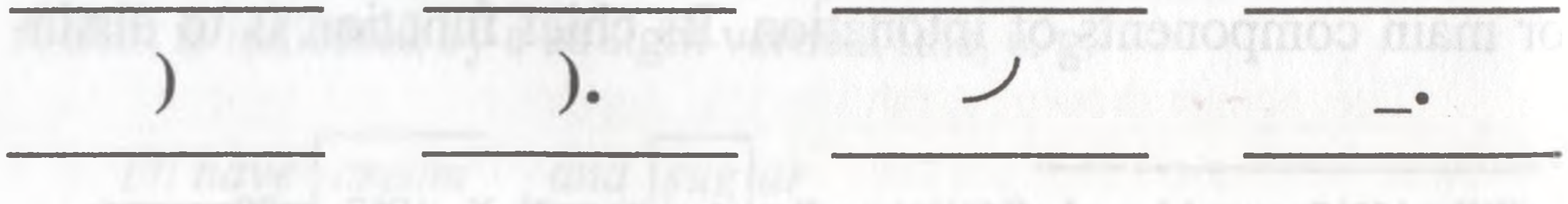
(2) the presentation function, i.e. in every language any utterance is pronounced with some degree of pitch inflection;

(3) the structural function, i.e. the speech melody is used to signal structure boundaries and relationships across boundaries;

(4) the deictic function, i.e. a certain degree of speech melody, intentionally altered by the speaker, is used to emphasize a particular lexical item of an utterance;

5) the expressive function of speech melody signals the presence of a speaker's emotion. If the emotion is strong, other prosodic elements such as tempo, loudness and voice quality are added[1]. This shows a close relationship of all prosodic elements and intonation components.

As stated above English has terminal tones such as the falling tone, the rising tone, the rising-falling tone and the falling-rising tone among which the first two are called tonemes or intonemes. Each terminal tone has two of more variants, called by V. A. Vassilyev, allotones: the principal one is realized in the accentual nucleus alone, and is, therefore, represented by the nuclear tone as such (nuclear allotone); the subsidiary ones are realized simultaneously in the nucleus and the tail (nuclear, postnuclear allotones). The principal and subsidiary variants of a terminal tone are in complementary distribution, cf.



[1] *Rose Nash.* Turkish Intonation. An Instrumental Study. Mouton, 1973, pp. 30-38. See my review in «Советская тюркология», 1975, №3, с. 96-99.

V.A. Vassilyev's phonological terms **toneme** («intoneme») and **allotone**[1] coincide with M. Romportl's terms **«melodeme»** and **allomel**[2] though the phonological treatment of the latter differs in some respects.

Comparing Czech, Polish, Russian, German, French, Hungarian M. Romportl establishes that these languages do not all exploit the means of melody in quite the same way which is determined by the difference in the place of melody and by means of differentiation of utterances and not only by prosodic means (stresses, pauses) and lexico-grammatical means (using question words, special imperative forms, word order etc.). The similarity and difference in the realization of melodic forms are termed «homonymy and synonymy of means of intonation».

The functions of speech melody become clear owing to the joint operation of its constituents such as pitch levels (high, mid and low), pitch range (i.e. interval between two pitch levels or two differently – pitched syllables or parts of a syllable which may be wide or narrow) and rates or angles of pitch change (i.e. manifestation of time and tempo). Ranges used in emphatic and unemphatic speech are divided into upper, normal and lower ranges. Graphically, they may be indicated by horizontal lines[3].

Ranges	Speech	
Upper general range	emotional	
Upper range	emphatic	
Normal (or mid) range	unemphatic	Mid general
range		
Lower range	emphatic	
Lower general range	emotional	

The sentence **I saw my friend yesterday** may be pronounced as emphatic and unemphatic, depending on situation[4].

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[1] *V.A. Vassilyev.* Op. cit., p. 301.

[2] *M. Romportl.* On the Synonymy and Homonymy of Means of Intonation. In his «Studies in Phonetics», Prague, 1973, pp. 137-146.

[3] *А.М. Антипова.* Система английской речевой интонации. М., «Высшая школа», 1979, с. 24.

[4] *J.D. O'Connor.* A Course of English Intonation (English by Radio). Stoch holm, 1959, p. 18.

A) Unemphatic

I 'saw my 'friend ,yesterday.

B) Emphatic

'I saw my friend yesterday.
(It was I and no one else)

I 'saw my friend yesterday.
(I didn't speak to him on the telephone).

I saw 'My friend yesterday.
(It was my friend, not yours).

I saw my 'Friend yesterday.
(It wasn't some strange person).

I 'saw my 'Friend yesterday.

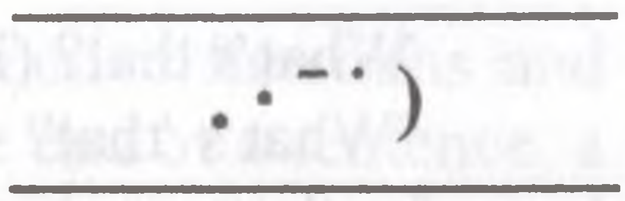
I saw my friend 'yesterday.

I 'saw my friend 'Yesterday.
(Not today or a week ago).

VIII.3.2. The Functions of Sentence-stress

Sentence-stress is the second primary component of intonation. Its main functions are to single out, words in a sentence, according to their relative semantic importance, and to provide an adequate rhythmical structure of a sentence, e. g.

I am going home
/aɪ əm 'gəuiŋ həum/



The given sentence is formed by one sense-group and one sentence-stress which operate together with speech melody determining the degree and position of stress in a sentence. Like word stress, this type of stress has semantic, grammatical and rhythmical factors which are in close relationship to each other, although the semantic factor is more important in English than the other factors[1].

The presense of stress in any utterance proves its constitutive function. H. Kurath distinguishes two types of stress: (1) sentence-stress, which is accompanied by a pitch figure and signals the end of a segment of discourse; (2) phrase stress used at or near the end of English phrases, irrespective of their syntactic structure[2]. Both of these types of stress are combined by the term «the accentual structure of a sentence» in modern investigations. Some linguists do not distinguish word stress and sentence stress and describe both of them in terms of three, four and even five degrees. Recent experimental analysies prove the existance of five degrees of sentence stress in English: primary, secondary, tertiary, fourtheary and weak. Like word stress, sentence accent is manifested by intensity, duration (i.e. prolongation of the sounds of the accented syllable) and tone. Sentence accent performs distinctive (phonological) and recognitive functions. As to its delimitative function, it acts jointly with a constitutive function of sentence stress. The adequate usage of sentence stress in its right position and degrees is connected with its recognitive function. Sentence stress, used in its distinctive function is called **«phrase-accenteme»** (suggested by V.A.Vassilyev). Phonologically, phrase-accenteme performs word-distinctive, syntactic-distinctive (it is called **«syntagmo-accenteme»**) and emotional-distinctive functions in a sentence[3], e. g.

Is there any 'mistake here? (Word-distinctive function)
Is there any Miss Take here?
This is my brother John. (Apposition)
This is my brother, John. (Direct address)

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[1] *Л.П. Торсуев.* Вопросы акцентологии современного английского языка. М., Изд. АН СССР. 1960, с. 4.
[2] *H. Kurath.* A Phonology and Prosody of Modern English. Ann Arbor. 1964, p. 139.
[3] *Р. Алимарданов.* Акцентная структура предложения в современном южноанглийском предложении. Автореферат канд. дисс., М., 1977.

person's psychological state[1]. A lot of questions of phonostylistics have not been studied yet. The phonostylistic functions of intonation components are not clear unless investigated instrumentally. The emotional position of an informant during experiments is also one of the chief factors forming phonostylistic variations in speech.

Intonation acts along with grammatical and lexical aspects as means of realizing semantic categories. Stylistics deals with choosing phonetic, grammatic and semantic means of expressive-emotional colouring and usually one of these means may become more important than the others. For example, in an ordinary sentence formed by a simple grammatical construction there is no stylistic meaning at all. If it is pronounced by an emotional timbre and unusual stress it may get some emotional colouring. The emotional information depends on the selection of certain intonation curves of a speaker. The given information may be emotionally relevant for a listener. If there is little syntactic and semantic ambiguity, intonation will not be decisive in a listener's understanding of the utterance. When there are several choices, intonation helps the listener make an adequate choice. This type of selection is called the «principle of compensation» by A. M. Peshkovskyj»[2], according to which one component of intonation may be substituted by another within the prosodic level[3].

Emotional means of intonation express a speaker's attitude towards the facts in question, his feelings, emotions and moods. Sentences, pronounced with emphatic intonation, besides the general meaning, have an implication. The emotional meaning is superimposed on the general meaning of the sentence through intonation.

Very often in order to emphasize a particular word in a sentence it is pronounced by greater prominence than the other words. This prominence may be given (1) by increasing the length of one or more sounds, (2) by increasing the stress of one or more syllables, (3) by using special kinds of intonation or by combinations of these means. Thus, such a word may be pro-

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[1] *С.М. Гайдучик.* Фоностилистика как один из разделов фонетики. В книге «Интонация», Киев, 1978, с. 33-41.

[2] *А.М. Пешковский.* Интонация и грамматика. В его «Избранные труды», М., 1959.

[3] *Т.М. Николаева.* Фразовая интонация славянских языков., М., Изд. «Наука», 1977, с. 15-17.

nounced in more than one way, its fuller or strong form is used for emphasis.

Following O. Coleman's ideas D. Jones distinguishes two types of emphasis: a) emphasis for contrast and b) emphasis for intensity[1]. As the terms denote two words may be contrasted with a previous and a new meaning mainly by intonation, but intensity – emphasis is pronounced with a high degree of stress and can be applied to certain words expressing qualities such as **adjectives:** (lovely, wonderful, marvellous, awful, killing, brilliant etc.), **adverbs:** (extremely, hopelessly, etc.), **verbs:** (rush, queeze, hate, like etc.). E. g. It is "Your book, not"mine (contrast-emphasis). It is so "wonderful (intensity emphasis).

In reality **emphasis is** capable of expressing not only ideas of contrast and intensity, but also various shades of meaning, which sometimes are very subtle[2]. Usually emphatic intonation is typical in jokes, anecdotes, comic remarks, irony, teasing etc.

R. Nash introduced the musical term ***"motif"*** in intonation, which is defined as a pitch interval signalling the relationship between isolated intonation units. Six such motifs are distinguished: emphasis, equal weight, presentation, topic-comment, outlining and layering. By identifying the recurrent motifs and the relationship they signalled, it is possible to reconstruct a speaker's interpretation of utterances in their linguistic contexts and to account for individual variation. The material, instrumentally investigated has included anecdotes[3] in which a lot of emphatic intonation have been used.

Emotional means of intonation are variable. They include different variations of melody, sentence stress, tempo, especially, timbre. In emotional colouring of a phrase some of these components of intonation become phonologically relevant and others – non-relevant. Thus, the distinctive function of intonation contributes to its phonostylistic function.

The tones used in emphatic speech are: emphatic falling tone, fall-rise, rise-fall, rise-fall-rise. Their usage depends on the communicative type of sentence in which they occur. The ascending and scandent scales are also used in emphatic intonation.

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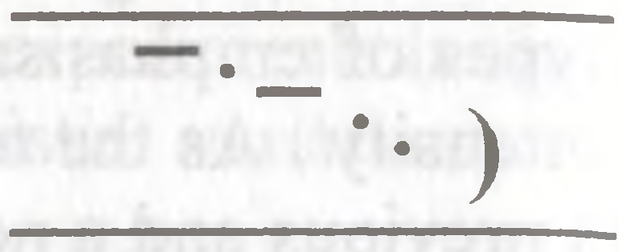
[1] *D. Jones.* An Outline of English Phonetics. Cambridge, 1952, p. XXXI.
[2] *A.A. Garntzeva, A. A. Abduazizov.* English Phonetics. Tashkent, 1972, p. 122.
[3] *R. Nash.* Op. cit., p, 78-88.

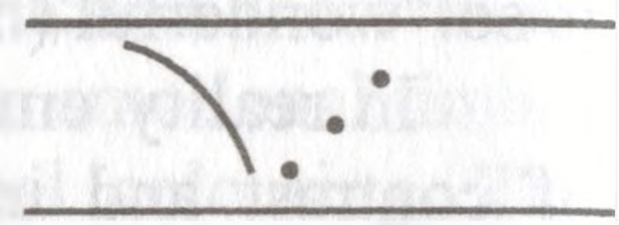
Higher or lower pitch levels of sense-groups and wider or narrower pitch ranges are often used in emphatic intonation, e. g.

What a wonderful day!
/wɔt ə "wʌndəful "deɪ/



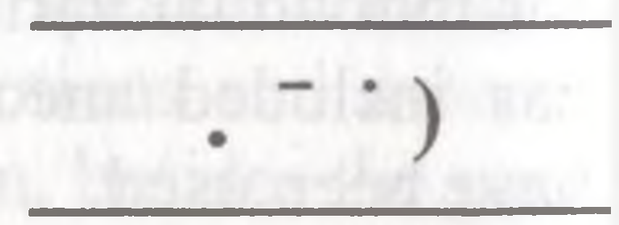
Emphatic intonation may be used when special and general questions are repeated. In such cases the pitch falls within the interrogative pronoun in special questions and in the first verb in general questions, thus emphasizing the whole question. The unstressed syllables start rising immediately after the fall[1].

Where does she live?
/"wɛə dʌz ʃi· lɪv/

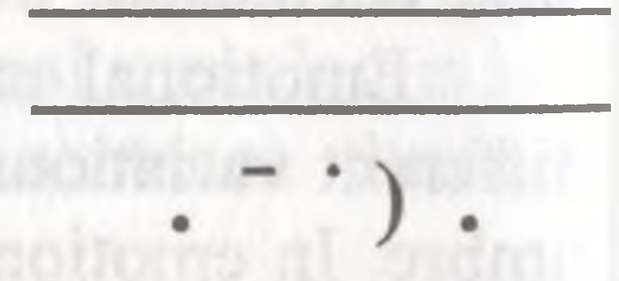


Lowering the pitch-level often serves to express hopelessness, disappointment, sadness, aversion etc., but it may express admiration as well. Lowering the pitch-level and narrowing the range is typical in such sentences in which the stressed and unstressed syllables are pronounced in a lower pitch, and the pitch intervals between these syllables are smaller than in unemphatic sentences. They are pronounced almost in a whisper and the stress is increased[2].

It frose and frose.
/ɪt "frəuz ənd "frəuz/



I don't believe it.
/aɪ "dəunt bɪ↘"li:v ɪt/



D. Crystal writes: «Within each phonetic type, the tones are ordered on the basis of their two fold potential function, grammatical and attitudinal. ...Degree of affective involvement refers to the amount of attitudinal implication carried by a tone, «amount» here referring to the consistent use of a range of descriptive labels (an-

[1] *V.A. Vassilyev* et al. English Phonetics (A Normative Course), Leningrad, 1962, pp. 230-246.
[2] *V.A. Vassilyev.* et al. Op. cit., pp. 336-337.

gry, pleasant... etc)»[1]. D. Crystal distinguishes affective (or attitudinal) and cognitive meanings of intonation which are psychologically-determined. Both types of meaning may be important in phonostylistic aspect of intonation analysis, which is in close relationship with psycholinguis-tics and sociolinguistics. Besides there is a correlation between the types of utterance and its division into sense-groups of which the degree of emotionality of speech may depend. This fact was proved by the results of instrumental investigation[2]. There may be some other extralinguistic factors relevant in emotional speech. Thus, emphatic intonation is regarded one of the features existing in emotional speech.

VIII.5. THE PARALINGUISTIC FEATURES OF SPEECH

Generally, three types of communicative systems are used: language, **kinesics,** i.e. visual aspects of non-verbal communication: gestures, motions, facial expressions, body posture etc. and **vocalizations,** i.e. various phonation types different from ordinary prosodic features. There are three main types of phonation used as paralinguistic means: vocal differentiators (e. g. laughing and crying etc.), vocal identifiers (e. g. «uh-huh» contrasted with «uh-uh» and vocal qualifiers (e. g. loudness, softness, overhigh and overlow pitch, clipping and drawl etc.).

The term «paralinguistics» came from the Greek words «para» meaning «beyond» and «linguistics». Besides, the terms «paralanguage», «para phonetic» or «paraphonological function» are also used in modern linguistics to denote non-linguistic means or signals to be set apart from other aspects of linguistic analysis-segmental and suprasegmental phonology. These terms are not adequate enough so as to indicate the field of study and it may give an impression that besides language there exists the other language which is called **paralanguage.** Though it is possible to contrast paralinguistic effects involving continuous non-discrete variations with discrete differences used in phonemic oppositions,

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[1] *David Crystal.* Prosodic Features and Linguistic Theory. In his «The English Tone of Voice», Essays in Intonation, Prosody and Paralanguage», N. Y., 1975, p. 38-39.

[2] *И.Г. Торсуева.* Интонация и смысл высказывания. М., «Наука», 1979, с. 39- 49.

but there is a strict interrelation between prosodic and paralinguistic features, manifesting linguistic and extra linguistic factors of communication.

The object of study in paralinguistics has not been defined definitely in modern linguistics. D. Crystal describes the following paralinguistic features: (1) non-human as well as human vocalization; (2) all suprasegmental features and some segmental ones, which include some degree of pitch, loudness and duration and also vocal identifiers and segregates including hesitation features; (3) voice quality – timbre, voice – set, tempo, personal articulatory setting and their variations; (4) social and emotional characteristics of speech determined by status, age, sex, occupation[1].

Distinction between prosodic and paralinguistic features of utterance can be made on the basis of the fact that prosodic features may be always present in any utterance, whereas paralinguistic features, being also vocal, are variable in respect of their definition, and they are discontinuous and relatively infrequent in speech[2]. They are not clearly contrasted as do prosodic features. Paralinguistic analysis should include different kinds of tenseness (tense, lax, slurred and precise articulations), degrees and kinds of resonance of articulation, contrasts in register (falsetto, chest) degrees of pharyngeal construction (huskiness), types of whisper and breathy articulation, spasmodic articulations (i.e. pulsations of air from the lungs are out – of phase with the syllables of an utterance as when one laughs or sobs while speaking or says something in a tremulous tone), general retraction or advancement of the tongue (e. g. velarization), distinctive use of the lips (labialization) and various kinds of nasalization. Some of these vocal-qualifier variations can be produced in the throat and larynx. As to the types of tension they are not very clear.

The distribution of paralinguistic features may depend on the situation or context in which they are used to express various types of emotions. For example, *I don't know at all* may be pronounced by a very high pitch range, very low pitch range, different types of loudness, extra-long duration, whisper, husky or

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[1] *D. Crystal.* The English Tone of Voice, Essays in Intonation, Prosody and Paralanguage. N. Y., 1975, pp. 51-55.

[2] *D. Crystal.* Prosodic Systems and Intonation in English. Cambridge Univ. Press, 1969, pp. 128-131.

creaky voice and sometimes it is difficult to establish the action of used paralinguistic features. But anyway, the emotional function of paralinguistic features can be noticed by the appropriate intonation conditions accompanying the stylistic force of the sentence[1].

The speaker is free to choose certain paralinguistic features so to make his speech more vivid and emotional. Hence, there is a relationship between phonostylistic and paralinguistic features, the latter being a non-linguistic but also verbal component of speech. All these paralinguistic features are determined by culture, psychology and individual manner of speaking. Besides, there are non-verbal paralinguistic features, so-called kinesics which include gestures, motions, body posture, facial expressions etc. accompanying speech. Paralinguistic features are not studied in any language adequately.

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[1] *Г.В. Колшанский.* Паралингвистика, М., Изд. «Наука», 1974, с, 33-44.

CHAPTER IX

THE COMBINATORY-POSITIONAL CHANGES OF PHONEMES

Speech sounds, i.e. phones representing phonemes, are combined in strict order to form words, morphemes, word-combinations and sentences which influence each other, as a result of which their articulatory-acoustic features may be changed and modified. These changes in pronunciation, which depend on the way they influence one another, their position and stress – are called **combinatory-positional changes** (or «combinatory phonetics»). They are classified into assimilation, accomodation, dissimilation metathesis, sandhi, haplology, reduction and elision. Combinatory-positional changes are connected with the historic development of a language and its phonetic structure in particular. The fluency of speech, the unstressed position in words and word junction are the favourable conditions under which assimilation and reduction find their expression. These factors accelerate assimilation and reduction, though the cause of these phonetic changes cannot be explained from a narrow viewpoint.

Some linguists explain combinatory-positional changes as the result of speech effort economy or the tendency ease of pronunciation which occurs in pronunciation, owing to the fact that speakers try to obtain maximum effect with minimum effort[1]. For example, in rapid speech the word **ninth** /n/ /наɳnθ is pronounced as a dental allophone owing to the influence of the dental (interdental) /θ/. It is easier to articulate two dental consonants than pronounce alveolar and dental consonants. Such cases may often be observed in pronunciation.

There are some attempts to interpret combinatory-positional changes from the phonological point of view. According to Ch.A. Ferguson: «Phonology is variable. Variation has to be included in any type of phonological theory. It is important to study how

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[1] *B. Malmberg.* Phonetics, N. Y., 1963, p. 56.

phonology works»[1]. Various combinatory – positional changes may cause the system of phonological oppositions and distinctive features to grow or eliminate, which may be proved by diachronic phonology. The realization of phonological oppositions in speech and different allophonic variations of phonemes by the influence of some factors should be studied by methods of syntagmatic phonology. However, paradigmatic changes may depend on syntagmatic changes in the development of a phonological system. The problem of phonological interpretation of combinatory-positional changes has not been studied thoroughly yet.

Combinatory-positional changes are universal for all languages, but the character of changes determined by certain factors may differ. Some combinatory-positional changes have been explained in previous chapters in relation with the description of the allophones of vowel and consonant phonemes. Therefore, below we give classification of combinatory-positional changes and explain them briefly.

IX.1. ASSIMILATION

The articulations of sounds combined to form words, word combinations (junctions) and sentences influence each other. The process when the articulation of a sound under the influence of the articulation of a neighbouring sound becomes similar or takes on features of the neighbouring sound, is called **assimilation.** Assimilation is a result of a modification process of adjacent phonemes. There are cases of modification when as a result of it, a phoneme may be formed which differs from either the assimilated or assimilating phoneme.

Although assimilation is a universal process in all languages, its action may be different. The assimilatory processes include the influence of a vowel on a consonant (V → C), a vowel on a vowel (V → V), a consonant on a vowel (C → V), consonant on a consonant (C → C).

The articulation of English vowels may be modified by the position of the tongue, lips, soft palate, and the degree of muscu-

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[1] *Charles A.* Ferguson. New Directions in Phonological Theory: Language Acquisition and Universals Research. In «Current Trends in Linguistic Theory» Indiana Univ. Press, 1977, pp. 293-297.

lar tension. This type of assimilation is known as **adaptation of speech organs,** making a convenient transition from one articulation to another. There are other types of vowel assimilation known as a **vowel harmony,** in which the vowel of the syllable may become more like the vowel of some other syllable, and vowels agree with each other in certain features. Vowel harmony is widely used in Turkic (except Uzbek) languages, e. g. in Turkish the plural suffix **-lar** or **-ler** may be used when the stem contains a velar vowel or a palatal vowel: **gül** (a rose) – **güller** (roses), **at** (a horse) – **atlar** (horses).

Phonologically, vowel harmony means that the vowel system of a language has its full value only in the first syllable of the word, whereas in other syllables the oppositions of the vocalic timbre (i.e. positions of the tongue) are neutralized, the choice of the archiphonemic representative being conditioned externally. Thus, vowels in any other syllables but the first always belong to the same class of articulatory position of the tongue as vowels of the preceding syllable[1]. High vowels of a suffix agree in backness and rounding with the stem vowel. In some other languages back vowels are fronted before certain suffixes, containing a high front vowel which is called umlaut widely used in German (e. g. gut – good, gütik – kind). Vowel harmony and umlaut can be distinguished by the direction of the assimilating vowels also by some prosodic factors.

The assimilation of consonants is frequently observed in modern English. It is possible to distinguish assimilations affecting (1) the place of articulation or both the place of obstruction and the active organ of speech; (2) the manner of production; (3) the work of the vocal cords and (4) the position of the lips.

(1) A) Assimilation, affecting the place of obstruction: the principal (alveolar) allophones of the phonemes /t/, /d/, /n/, /l/, /s/, /z/ are replaced by their subsidiary dental allophones when they are adjacent to dental consonant phonemes e.g. **tenth** /tenθ/, **in them** /ˈın ðəm/, **width** /wıdθ/, **read this** /ri:dˈðıs/, **wealth** /welθ/, **all that** /ˈɔ:lˈðæt/, **sixth** /sıksθ/, **what's this** /ˈwɔtsðıs/.

B) Assimilation, affecting the active organ of speech and the place of obstruction, is observed in words with the prefix con-, when it is followed by the consonant phonemes /k/, /g/ the alveo-

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[1] *J. Kramsky.* Papers in General Linguistics. Mouton, 1976, p. 39.

lar sonorant /n/ is replaced by the backlingual sonorant /ŋ/ if the prefix bears either a primary or secondary stress e. g. **congress** /kɔŋgres/, **concrete** /kɔŋkri:t/, **conquest** /kɔŋkwest/.

(2) Assimilation, affecting the manner of production, is observed when nasal consonant phonemes influence the plosive phonemes pronounced in the same place, e.g. **sandwich** /ˈsænwɪdʒ/, **kindness** /ˈkaɪnnɪs/, **grandmother** /ˈgrænmʌðə/. In the word *handkerchief* the process of assimilation was more complicated. Under the influence of /n/ the consonant phoneme /d/ changed to the phoneme /n/ and, then disappeared. The remaining phoneme /n/ changed to /ŋ/ under the influence of the phoneme /k/. Thus, in the word **handkerchief** we observe assimilation affecting the active organ of speech, the place of obstruction and the manner of production of noise.

(3) Assimilation, affecting the work of the vocal cords: a) a voiceless consonant phoneme, may be replaced by a voiced one under the influence of the adjacent voiced consonant phoneme, e.g. **gooseberry** /ˈguzbərɪ/ from /gu:s/ influencing /b/ in berry; b) a voiced consonant phoneme may be replaced by a voiceless one under the influence of the adjacent voiceless consonant phoneme, e.g. newspaper /ˈnju:speɪpə/ from /nju:z/ and /peɪpə/ in which /p/ influence /z/, making it voiceless.

(4) Labialized subsidiary allophones of the phonemes /k/, /g/, /t/, /s/ are used under the influence of the following bilabial sonorant /w/, e. g. **quite** /kwaɪt/, **twinkle** /twɪŋkl/, **language** /læŋgwɪdʒ/, **swim** /swɪm/.

This type of labial assimilation often occurs where elements of compound words meet (e.g. **football** /fupbɔ:l/, **ninepence** /ˈnaɪmpəns/, **tenpence** /ˈtempəns/, **sevenpence** /ˈsevmpəns/) and at the junction of words in rapid familiar speech, e. g. **isn't it** /ˈɪnnɪt/, **wasn't it** /wɔnnɪt/, **give me** /gɪmmɪ/[1].

According to its degrees assimilation may be: (A) complete, (B) partial and (C) intermediate.

(A) In complete assimilation adjacent phonemes, under the influence of one of them, become idential or merge into one, e. g. **this shop** /ðɪʃʃɔp/, **give me** /gɪmmɪ/, **horseshoe** /hɔ:ʃʃu:/. In Uzbek rapid speech: akam bilan (akam minan) (with my brother), xo'pmi? (xo'mmi) (agreement).

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[1] *Ch. Barber.* Linguistic Change in Present-Day English. London, 1964, p. 63.

(B) When the assimilated phoneme retains its main phonemic fea tures and becomes only partly similar to the assimilating phoneme, e. g. **tenth** /tenθ/, **lets** /lets/. The examples, illustrating assimilation affecting the place of obstruction, are incomplete as the principal alveo lar allophones of the phonemes /t/, /d/, /n/, /s/, /z/ are replaced by the subsidiary dental allophones, retaining all other phonemic features.

(C) The assimilation is intermediate (i.e. between complete and incomplete) when the assimilated phoneme changes into a different phoneme, but does not coincide with the assimilating phoneme, e. g. **gooseberry** /ˈguzbərı/, **congress** /ˈkɔŋgres/. **That's all right** /ˈðætsˈɔ:l↘ raıt/, **handkerchief** /hæŋkətʃıf/ in which the change /d – n/ is a complete assimilation, but the subsequent change /n – ŋ/ under the influence of /k/ is an intermediate assimilation.

According to its direction assimilation may be (1) **progressive**, (2) **regressive** and (3) **mutual** (or reciprocal, double).

(1) In progressive assimilation the preceding phoneme influences the following one. It can be represented by the formula X → Y, where X is the assimilating phoneme, and Y the assimilated phoneme, e. g. **talked** /tɔ:kt/, **works** /wə:ks/, **bags** /bægz/, **cats** /kæts/.

(2) In regressive assimilation the following phoneme influences the preceding one. Its formula is X ← Y, e. g. **used to** /just tu/, **goose berry** /ˈgu:zbərı/, **newspaper** /nju:speıpə/.

When the adjacent phonemes influence each other assimilation is regarded to be mutual. In **try**, **tree** /t/ causes partial devoicing, while /r/ becomes /t/ post-alveolar. In **twice**, **twenty** /t/ causes partial devoicing, while /w/ makes /t/ lip-rounded.

From the synchronical and diachronical points of view assimilation in English may be subdivided into (1) **historical** and **(2) contextual** (or juxtapositional),

(1) Historical assimilation reflects the changes which have taken place in the course of historical development of the language, e. g. nature, furniture, literature, occasion, decision, question, nation. In Uzbek: ketaman (I shall go), qaytgaysan (You will return).

(2) Contextual (juxtapositional) assimilation is of comparatively recent development and is still going on in present day

English, e. g. **horseshoe** /ˈhɔ:ʃʃu:/, **gooseberry** /ˈguzbərı/, **does she** /ˈdʌʃʃi·/, **used to** /ˈju:st tu/.

The above given types of assimilation are regarded to be established owing to their common usage as a literary standard of pronunciation by native speakers. There are cases of assimilation in careless speech though they cannot be regarded as a literary norm. They are called **accendental,** e. g. **amidst** /əˈmıtst/, **bacon** /beıkŋ/ **instead of** /beıkn/, **happen** /hæpm/, **open** /əupm/. The «coalescing» type of assimilation is also taking place in present-day English, e.g. **duke** /d3u:k/, /dju:k/ **during, education, tube** /tʃu:b/, /tju:b/, **Tuesday** /ˈtʃu:zdı/, /tju:zdı/ **issue** /ısju:/, /ıʃu:/. According to Ch. Barber they are quite common in educated speech of present-day English[1].

IX.2. OTHER COMBINATORY-POSITIONAL CHANGES

There are other combinatory-positional changes besides assimilation. The modification of one of the adjacent consonants to the preceding or following consonant is known as assimilation.

There are cases when the articulation of a consonant is modified under the influence of an adjacent vowel, which is called **adaptation,** or **accommodation.** The accommodated sound retains its main phonetic features and is pronounced as an allophone of the same phoneme slightly modified under the influence of a neighbouring sound. Modern English distinguishes three main types of accomodation[2].

(1) An unrounded allophone of a consonant phoneme is replaced by its rounded allophone under the influence of the following rounded vowel phoneme, in an initial position:

Unrounded allophones of consonant phonemes	Rounded allophones of consonant phonemes
tea /ti:/	too /tu:/
less /les/	loose /lu:z/
none /nʌn/	noon /nu:n/

[1] *Ch. Barber.* Op. cit., pp. 63-64.
[2] *V.A. Vassilyev* et al. Op. cit., p. 101.

(2) A fully back allophone of a back vowel phoneme is replaced by its slightly advanced (fronted) allophone under the influence of the preceding mediolingual phoneme /j/, e. g.

Fully back allophone of (u:)	Fronted allophone of /u:/
booty /bu:tɪ/	beauty /bju:tɪ/
moon /mu:n/	music /mju:zɪk/

(3) A vowel phoneme is represented by its slightly more open allophone before the dark /l/ under the influence of the latter's back secondary focus. Thus the vowel sound in tell, bell is slightly more open than the vowel in **bed, ten:** /bɛl/ – /bed/, /tɛl/ – /ten/.

The phonetic changes, which results in a sharpening of the difference between two phonemes, is called **dissimilation,** e. g. the English word heaven is the result of a change of (m) to (v) because of the final. The word **marble** is due to a French **marbre** whose second «r» was changed into «l»[1].

Elision is the omission of a sound in rapid speech, e. g. **an old man** /ən'əul'mæn/, **and so** /ən'səu/.

Haplology is the process of dropping a group of sounds which should be articulated twice in a word, e. g. morphonology for morphophonology, probably (from probablely).

Reduction is also one of the wide-spread combinatory-positional change which has been explained in chapter V, 5.2.3 in connection with unstressed vowels.

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[1] *B. Malmberg*. Op. cit., pp. 62-63.

CHAPTER X

PHONEME AND STRESS ALTERNATIONS. MORPHONOLOGY

In English there are many cases when a phoneme or phonemes within the morpheme may be replaced by another phoneme or other phonemes. These substitutions of phonemes may or may not be determined by a certain position of stress. The position of stress may also vary in different word derivaties formed from one base morpheme. The substitution of phonemes by one another and the change of the position of stress within morphemes are called phoneme and stress alternations. Theory of phoneme alternations suggested by I.A. Baudouin de Courtenay was very important in further development of linguistics. It has contributed to the formation of a new branch of linguistics – «morphonology» (or «morphophonology», «morphophonemics») which is defined differently by various linguists. In the formation of morphonology much credit goes to N.S. Trubetzkoy who defined it as (1) a part of word phonology which studies the phonological structure of morphemes, as (2) a division of grammar, as (3) a linking branch between morphology and phonology[1]. Among these definitions the first and the third can be accepted. Morphonology has not got its own unit, though some linguists introduced the term «morphoneme» which does not exist at all. Morphonology uses the terms phoneme and morpheme borrowed from other linguistic levels and studies phoneme and stress alternations, performing morphonological functions. The other aspects of morphonology, which study the phonological structure of morphemes and combinatory sound changes occurring in some morphemes[2], are not studied in morphonology. In recent theories not all the alternations taking place within morphemes are included in morphonology, though

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[1] *Н.С. Трубецкой.* Некоторые соображения относительно морфонологии. «Пражский лингвистический кружок», М., 1967, с. 115-118.

[2] *А.А. Реформатский.* Еще раз о статусе морфонологии, её границах и задачах. В его «фонологические этюды», М., 1975, с. 98-118.

some linguists, especially American scholars, regard it is being so. Morphonology does not include the description of suppletion or pormanteau morphemes (e. g. **good – better – best),** internal inflexion, i.e. the changes in the base of a word or base morphemes distinguishing grammatical forms (e. g. **write – wrote, ox – oxen, foot – feet, beet – bet),** alternations in the affixes which occur under the certain phonetic conditions[2] (e. g. the English plural affixes, Present Indefinite Tense the third person singular, suffix Past Tense ***-ed*** *).* Thus, morphonology studies only the phoneme and stress alternations within morphemes, which are not determined by their phonological position, e. g. grave /ˈgreɪv/ – **gravity** /grævity/, **mechanic** /mɪˈkænɪk/ – **mechanician** /ˌmekəˈnɪʃn/, **diet** /ˈdaət/ – **dietition** /ˌdaɪəˈtɪʃən/ etc. All other phonemic changes are studied in phonology in regard with combinatory – positional and historical changes. These changes are classified as phonetic and historical alternations which also perform certain morphological (grammatical) functions.

Phonetic alternations include changes under assimilation, e. g. the Present Tense third person singular suffix **(-s, -iz, -z)** variation which depend on the position: **cats** /kæts/, **boxes** /bɔksɪz/, **bags** /bægz/.

Historical alternations take place in words etymologically related, e. g. in the verbs: **sing – sang – sung, bend – bent, begin – began, build – built, choose – chose, lose – lost;** in the nouns formed by internal inflexion: **goose – geese, foot – feet, mouse – mice, woman – women** and in other words as **hot – heat, breathe – breath, gold – gild, child – children**[1]**.** In the latter example there are alternations both in base and affix.

Alternations performing morphological (grammatical) functions, which serve to distinguish different grammatical forms of words, are called morphonological alternations. They are frequently used in the Slavic languages. The morphonological alternations used in different languages have not been studied thoroughly, but they are of great theoretical value for modern linguistics. Morphonology may clarify the relationship between base morpheme and affixal morpheme and their different variations in

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[1] *O.I. Dickushina.* English Phonetics. A Theoretical Course. Moscow – Leningrad, 1965, pp. 104-111.

word formation. Morphonological structure of a language shows how phonology works to transform morphological units[1].

The unity of morphemes, the identity of different variants of the morpheme (or «allomorphs») to be more precise, is determined of their phonological identification which is their formal but not functional-semantic side. Thus, the identification of allomorphs can be established on a phonological basis[2]. Such examples used in English as **Elizabeth** /ɪˈlɪzəbəθ/ – **Elizabethan** /ˌɪlɪzəˈbi:θən/, **Lilliput** /ˈlɪlɪpʌt/ – **Lilliputian** /ˌlɪlɪˈpju:ʃɪən/, **centenary** /senˈti:nərɪ/ – **centenarian** /ˌsentɪnˈnɛərɪən/ **history** /ˈhɪstərɪ/ – **historian** /hɪsˈtɔ:rɪən/ have both phoneme and stress alternations. In some morphemes there is only phoneme or stress alternation, e. g. **act** /ækt/ – **action** /ækʃən/, **speech**/spi:tʃ/ – **speak** /spi:k/ or **speaker** /spi:kə/, **trust** /trʌst/— **trustee** /trʌsˈti:/, **China** /ˈtʃaɪnə/ – **Chinese** /tʃaɪˈni:z/. Thanks to these examples, morphonological alternations may be classified into: (1) phoneme (as in act – action), (2) accentual (as in trust – trustˈee) and (3) complex, including both phonemic and accentual alternations (as in **history** /ˈhɪstərɪ/ – **historian** /hɪsˈtɔ:rɪən/.

Explaining phoneme and stress alternations, we have defined their morphonological aspect. It must be emphasized that the morphonological aspect of phoneme and stress alternations may be studied independently as a «bridge» linguistic level between phonology and morphology.

Variations of the formal structure of English morphemes may take place, owing to phonemic and accentual distinctions. As the morpheme is a meaningful unit of a language, it may be used as a word, if it is a monomorphemic word, or as a part of a word, if it is a composite word. Usually morphonological alternations occur in composite words, between their morpheme boundaries or within a morpheme, e. g. **Neptune** /ˈneptju:n/ – **Neptunian** /nepˈtju:nɪən/, **placid** /ˈplæsɪd/, **placidity** /plæˈsɪdɪtɪ/, **fruit** /fru:t/ – **fruitarian** /fru:ˈtɛərɪən/, **plastic** /ˈplæstɪk/ – **plasticity** /plæsˈtɪsɪtɪ/, **plural** /ˈpluərəl/ – **plurality** /pluəˈrælɪtɪ/, **anile** /ˈeɪnaɪl/ – **anility** /æˈnɪlɪtɪ/ in the latter case there are two phonemic alternations and one stress alternation, Some linguists include morphonological alternations into lexicology or morphology

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[1] *О.С. Ахманова.* Фонология. Морфонология. Морфология. М., 1966, с. 58.

[2] *Э.А. Макаев, Е.С. Кубрякова.* О статусе морфонологии и единицах ее описания. В кн. «Единицы разных уровней грамматического строя языка и их взаимодействие». М., 1969, с. 103.

due to their active part in word-building or changing the grammatical forms of morphemes.

Like other linguistic levels, morphonology is determined paradigmatically, i.e. the members of alternation may be distinguished as phonologically distinctive units – phonemes, and syntagmatically, i.e. the alternations take place in certain position which do not depend on the context or other factors. For example, the English suffix **-ion** which is the affixal morpheme may be represented as /– keɪʃn/, /– ɪeɪʃən/, /– eɪʃən/, /–zɪʃən/, /–ɪʃən/, /– ju:ʃən/, /–u:ʃən/, /–ɔʃən/, /–ʃən/, /kʃən/, /– jən/, /– ʒən/, /–ən/[1] in such examples as **act –action, reduce – reduction, assume –assumption, demonstrate – demonstration, repeat – repeatition, classify – classification, solve – solution, contribute – contribution, adhere – adhesion, opinion** etc[1].

Besides, the suffix **-ion** influences in such a way as to change different vowel and consonant phonemes within a word. Such different alternations, causing changes of phonemes in the phonetic structure of a word, may be orbserved in the variations of other suffixes[2].

English is regarded a language in which monosyllabism is typical. There is a small number of productive suffixes in English, some of which consist of a single consonant or consonant clusters. The variations of morphemes performing morphological functions and formal structure of morphemes, being the object of morphonology, should be studied in close relationship with affixation in word-building.

The alternation of stress, conditioned by suffixes or an increase of final syllables, occurs not only in English words of Germanic origin but in words borrowed from other languages, e. g. **ˈprince – prinˈcess, ˈphotograph – phoˈtographer – photogˈraphic, ˈfamily – faˈmiliar – fa,miliˈarity, ˈconvene – conveˈnance.**

There are also some unusual consonant alternations used in foreign words, e. g. **social – society, patient – patience, invade – invasion**[3].

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[1] *Л.А. Телегин.* Морфонологическая структура суффиксальных производных на -*ion* в современном английском языке. Автореферат канд. дисс. М., 1970.

[2] *Р.З. Зятковская.* Суффиксальная система современного английского языка М., 1971.

[3] *B. Trnka.* On Foreign Phonological Features in Present – Day English, «In Honour of Daniel Jones, London, 1964, pp. 188-190.

The morphonological function of the English word accent is determined either by regular shifting of the position and its degrees in different morphemes or by the irregular influence of suffixes. Suffixes, which cause accentual alternations, are: ***-able, -ant -ent (-ance -ence), -ive, -ory, -ous, -ize, -ism (-ist), -ate, -ment*** etc., e. g. **repáir – ré-páirable, cóincide – coincidence, combine – cómbinative, cómpensate – compénsatory, ánonym – anónymous, cápital – capitalize, épigram – épigr'ammist, hypnósis – hýpnotism, órigin – originate, ádvertise – advértisment**[1].

Some morphonological alternations are common in different languages. For example, **academy** /ə'kædəmɪ/ – **academic** /ˌækə'demɪk/ – **academician** /əˌkædə'mɪʃən/. In Russian: акаде́мия – акаде́мик – ака'демик – академический. In Uzbek: akade'miya – akademik – akade'mik.

Russian is rich in morphonological alternations: рука́ – ручно́й, сухо́й – суши́ть, оре́х – оре́шник, до́ска – дощечка, за́яц – зайцы́.

Some morphonological alternations occur in Uzbek **too:** past «low» – pasaymoq «to be low» sust «weak», susaymoq «to weaken», ulug' «great» – ulg'aymoq «to be great», son «number» – sanoq «counting», o'qi «read», o'quv «reading».

A kind of prefexation in reduplication of an initial syllable with one of the consonants, frequently with /p, s, r, m/, occur in Turkish[2] and Uzbek, probably, in other Turkic language as well, e. g. in Turkish **sap-sari,** in Uzbek **sap-sariq** (extra-yellow), in Turkish **dos-dogru**, in Uzbek **to'p-to'g'ri** or **to'ppa-to'g'ri** (very correct), in Turkish **bem-beyar,** in Uzbek **oppoq** (extra-white). In compounding, some alternations occur at the junctural border of morphemes, e. g. no one /nʌn/, Uzbek: bu kun – bugun «to-day».

An adequate morphonological description of alternations may contribute to establishing some internal phenomenon of a language, which has theoretical and practical value in general linguistics.

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[1] *Л.А. Телегин.* Морфонологическое использование английского словесного ударения. Самарканд, 1976, с. 56-59.

[2] *H. Sebüktekin.* Turkish-English Contrastive Analysis. Turkish Morphology and Corresponding English Structures. Mouton, 1971, pp. 20, 28.

TOPICS AND QUESTIONS FOR DISCUSSION AT SEMINARS

Seminar № 1. Phonetics as a Branch of Linguistics.

1.1. What does the term «language» denote?

What is the distinction between the system and the structure of a language?

What is the distinction between the terms «substance» and «form»? What do we mean by the content and expression? What forms of speech do you know?

Will you give the definition of phonetics? Explain the theoretical (scientific) and practical importance of phonetics. What types of phonetics do you know?)

1.2. Explain the work of speech organs.

What is phonetic basis? How do we establish phonetic interference?

1.3. What aspects of phonetics do we distinguish?

1.3.1. How do we define a speech sound from the articulatory point of view?

What instrumental methods are used in the articulatory aspect?

1.3.2. What is a speech sound or an utterance from the acoustic point of view?

What is fundamental frequency? What is intensity (or loudness); What is a filter? What is the acoustic spectrum? What is a formant structure of a sound?

What do we mean by harmonics (or overtones)?

Explain the instrumental methods used in the acoustic aspect. What is the difference between quality and quantity features?

1.3.3. Explain the perceptual (auditory) aspect.

What does the term timbre denote?

1.3.4. What does phonological aspect study?

What is the difference between phonological aspect and phonetic aspect?

What levels of phonetic and phonological investigation do you know?

What does segmental phonology study?

What does suprasegmental phonology study?

Name the first founders of «the phoneme» concept. What is a phoneme? Give its definition.

What is an allophone? What is a minimal pair? What is the phonological opposition?

What is the non-phonological opposition?

Explain the principle of preliminary phonological analysis. What is a distinctive (phonologically relevant) feature? What is a non-distinctive (phonologically irrelevant) feature?

Why is the method of commutation used?

What is meant by distribution? What types of distribution do you know?

Explain the complementary distribution?

What purpose is contrast distribution used for?

Explain what free variation means. What is meant by phonotactics?

1.4. Why do we use transcription? What types of transcription do you know?

What forms of transcription are used in English?

Explain the difference between phonetic and phonological transcriptions.

1.5. With what other fields of science is phonetics connected? What is the relationship between phonetics (phonology) and other branches of linguistics? What means of non-linguistic communication do you know? What components of the phonetic and phonological structure do you know?

Explain the difference between linguistic and non-linguistic relationship.

Seminar № 2. Phonological Theories.

2.1. Who is the founder of the phonological theory? What periods can be distinguished in the formation of the phonological theory? Explain I.A. Baudouin de Courtenay's phonological theory. How did he define the phoneme? Explain the further development of I.A. Baudouin de Courtenay's theory.

2.2. Give L.V. Shcherba's definition of the phoneme. What are the theoretically and practically important ideas suggested by L.V. Shcherba? What phonological school develops L.V. Shcherba's theory? Who applied L.V. Shcherba's theory to English?

2.3. Give the definition of the phoneme by the Moscow Phonological school.

What marked differencies exist between the theories of St. Peterburg and Moscow phonological schools?

Who suggested the term «phonemic line» and what does this term mean?

What does hyperphoneme mean? Is the phoneme a bundle of distinctive features? Why? What is morphonology?

2.4. What representatives of the Prague phonological school do you know?

Explain the types of oppositions. What definition of a phoneme was

given by N.S. Trubetzkoy? What rules for the determination of individual phonemes and phoneme combinations have been suggested by this theory?

Give the classification of phonological oppositions in relation to the entire system of oppositions?

What types of oppositions are distinguished according to the relationship between their members?

What oppositions do we distinguish according to the distinctive force and their occurrance in different positions? What is phonological neutralization?

What is the meaning of archiphoneme?

2.5. Give D. Jones' explanation of a phoneme.

Why do we call D. Jones' theory an acoustic one? What members of the phoneme were suggested by D. Jones? Why is the semantic function of a phoneme important? What phonological approach was suggested by J. Firth?

2.6. What phonological trends exist in the USA?

Explain the basic phonological ideas of descriptive phonology? What is meant by phonotagmemics?

2.7. Give an explanation of paradigmatic relations.

Give an explanation of syntagmatic relations.

What can be studied by the categorization of phonological units in paradigmatic and syntagmatic levels?

What functions of the phonological units do you know? What is a constitutive function? Give an explanation of the distinctive function. What is a delimitative function? Is recognitive function important?

What do we mean by functional load?

How do we measure a functional load?

What is a power of opposition? Is statistic data important in establishing the functional load and power of opposition?

Seminar № 3. The Principal Types of English Pronunciation.

3.1. What is a national language? What is a literary variant of a language?

What is dialectology?

What is an orthoepic norm?

3.2. Explain three principal types of English pronunciation distinguished on the British Isles? What is the Southern English pronunciation?

Why has RP been chosen as a standard for teaching in many countries? Where is Northern English spread?

Explain the Northern English pronunciation.

What are the marked features of the Scottish type of pronunciation in comparison with RP? What pro-

nunciation features exist in the Cockney dialect?

3.3. What pronunciation types exist in the USA?

Where is Eastern American pronunciation spread? What are its features? What pronunciation features exist in Southern America? What is called the «Southern drawl»?

What pronunciation type is accepted as literary in the USA? Explain the marked differencies between RP and GA vowels. What marked differencies exist between RP and GA consonants?

Explain the pronunciation of GA /r/.

What differencies exist between the distribution of vowel (or consonant) phonemes in RP and GA?

Draw the vowel charts of RP and GA.

What main differencies exist in the notation of phonetic symbols given by British and American linguists?

What are the marked differencies in word accentuation between RP and GA.

What is called spelling – pronunciation? Give examples from RP and GA.

What differencies exist between RP and GA intonation?

3.4.1. Explain the main features of Canadian pronunciation.

3.4.2. What do you know about the Australian pronunciation?

3.4.3. What main pronunciation features of New Zealand English are known?

3.4.4. What is known about the South African pronunciation? In what countries is English spoken?

3.5. What is idialect?

What is bilingualism? What does school phonetics study?

What does comparative-typological phonetics study? What other terms are used instead of it?

What intradialectal phonetic variations are used in English? What do the terms diaphone, idiophone and variphone denote? What type of English pronunciation do you study?

3.6. Explain the stylistic variants of pronunciation.

Seminar № 4. The System of Consonant Phonemes.

4.0. What is the distinction between a vowel and a consonant sound?

4.1. Explain the general principles of the classification of consonants;

What types of consonant phonemes may be distinguished according to the place of articulation?

What types of consonant phonemes are distinguished on the basis of the manner of articulation?

What pairs of consonant phonemes are distinguished according to presence or absence of voice? What consonant phonemes are distinguished according to the posi-

tion of the soft palate? What differencies exist in the inventaries of consonant phonemes of English and Uzbek (or Russian)? Explain the main differencies between the articulations of English and Uzbek (or Russian) consonants.

Draw the chart of consonant phonemes.

4.2.1. What is a simple (double, complex) opposition?

Give the phonological oppositions (mainly single) of consonants according to the place of articulation.

4.2.2. What phonological oppositions exist between the English (and Uzbek) consonants according to the manner of production?

How many affricate phonemes are there in English? Explain the phonological status of affricates.

Will you compare the functional load and power of oppositions of some English consonant phonemes?

What consonant oppositions may be established on the basis of the relationship between oppositions in the entire system of oppositions in English? What consonant oppositions exist between English consonants according to the character of its members?

What is a bilateral (or multilateral) opposition? Give examples.

What opposition is called privative? Give examples. Are there any gradual opposition in English? Give examples.

What opposition is called equipollent? Give examples.

What opposition is neutralizable?

Can we use the term archiphoneme in English?

What is an alternophoneme?

4.2.3. What are four major classes of phonemes in the dichotomic classification?

Explain the correlation between acoustic and articulatory terms in the dichotomic theory.

4.2.4. What allophonic variations of consonant phonemes are distinguished in English?

What is the distinction between aspirated and nonaspirated allophones? Explain their distribution.

Seminar № 5. The System of Vowel Phonemes.

5.1. Explain the general principles of classifying vowels. What classes of vowels are distinguished by the horizontal movement of the tongue? What classes of vowels are distinguished by the neight of the tongue?

What vowels are rounded (and unrounded)?

Are there quantitative distinctions between English vowels? What vowels are tense (and lax)?

What is the difference between checked and free vowels? Give the classification of English vowels according to the stability of their articulation? What are the main

differrencies in classifications of English, Russian and Uzbek vowels? Draw the vowel chart of English (Uzbek, Russian). Explain the articulatory correlates of the acoustic distinctive features.

What acoustic distinctive features of vowels exist in English (Russian and Uzbek)? What is essential in the acoustic classification of vowels? 5.2. What subsystems of vowels may be distinguished within the system of English vowel phonemes?

5.2.1. Explain the phonematic value of vowel-length in English.

Is vowel-length a distinctive feature in English? What differences exist in the distribution of long and short vowels?

What is the relationship between the features long-short, tense-lax, free-checked?

5.2.2. What [approaches exist in the explanation of the [phonological status of English' diphthongs? Explain the phonological interpretation of English diphthongs according to the unit-theory. What is the main argument in the explanation of phonological status of diphthongs suggested by American linguists? What vowels are unstressed? Explain the phonological status of /ə/.

How do you explain the phonetic approach to unstressed vowels?

What do we mean by reduction? What types of reduction may be distinguished?

5.3. What phonological oppositions (mainly single) exist among English vowels according the horizontal (and vertical) movement of the tongue? What other types of oppositions exist among English vowels?

Seminar № 6. The Syllabic Structure of English.

6.1. What is a syllable?

What functions of the syllables do we distinguish?

6.2. What principles do we use in the classification of syllables? What types of syllables exist in English (Uzbek and Russian)?

6.3. How do you explain the relationship between a syllable and a morpheme?

6.4. What theories of syllable formation and syllable division exist in modern linguistics? How did the ancient theory explain a syllable? Explain the expiratory theory of a syllable.

What principle was suggested by the sonority theory of a syllable?

Explain F. de Soussure's syllable theory.

What components of the syllable have been defined by the theories refered to? Explain the syllable theory suggested by L.V. Shcherba? What is the peak of the syllable?

Give the phonological definition of a syllable.

6.5. What consonants are syllabic in English?

What consonant clusters may form separate syllables? Explain the contrast syllable vs. no – syllable. Are there any syllabic consonants in Uzbek or Russian? Does the syllable division depend on the character of checked-free vowels? What is a syllabeme?

6.6. What is a juncture and what types of luncture do we distinguish?

Is syllable division distinctive in English? Give examples.

Seminar № 7. Word Stress.

7.1. What is meant by word stress? What does the term accentual structure (type, pattern) mean? How is word stress defined from the articulatory point of view, acoustically and perceptually? What main types of word stress exist in languages? What type of word stress is used in English (Russian and Uzbek)?

What is the culminative function of word stress?

What is the difference between syllable-counting and mora counting languages?

What components of word stress do you know?

What differences exist between English, Russian and Uzbek according to the action of the components of word stress? What is the difference between word stress and sentence stress?

7.2. What types of word stress are distinguished by its position? What differencies exist between English, Russian and Uzbek word stress depending on its position? How many degrees of word stress are distinguished in English? What is the opinion of British and American linguists concerning the degrees of English word stress?

7.3. Why is the semantic factor important in English word stress?

How do you explain the morphological factor of word stress? What do we mean by the action of rhythmic factor? Why is rhythmic-accentual structure regarded a component of the phonetic structure of a word? What is a recessive accent and how do we distinguish its types? What is a rhythmical stress? Give examples.

Explain the retentive tendency of word stress?

What changes are taking place in present-day English word accentuation?

How do you define free variation of accentual patterns? Give examples.

7.4. What functions does word stress perform?

What is the difference between morphological and demarcative stress?

What is a word-accenteme? Give examples.

Give minimal pairs, illustrating the contrast between primary and weak word-accentemes. Is a delimitative function of word stress important in English? What is your opinion of the matter with regards to Russian and Uzbek?

Are there any stress alternations in English word derivation? Give examples.

What accentual patterns of English words are distinguished? What is the I-st (II, III, IV, V, VI, VII, VIII, IX, X, XI, XII) accentual pattern?

Seminar № 8. Intonation.

8.1. What is intonation? Give its definition by British and American linguists. What components of intonation do you know?

What is intonology (or intonological typology)? What prosodic types of interference do you know? What aspects of intonation do you know?

What is phonostylistics (intonational stylistics)? What is the text-forming function of intonation? What functions of intonation do we distinguish?

How do you define a sense-group?

Why is the recognitive function of intonation important? What methods of indicating and describing intonation exist in English?

8.2. What is a tonetic transcription? Explain R. Kingdon's tonetic notation.

Explain L.E. Armstrong and I.C. Ward's tonetic notation. What marks are used in the tonetic notation of intonation by British linguists? Explain tonetic notation suggested by American linguists.

8.3. What functions does speech melody perform?

8.3.1. What is a toneme (intoneme)? What is an allotone? What differencies exist in the realization of speech melody between English, Russian and Uzbek? Explain their presentation pattern.

What pitch ranges are distinguished in English?

8.3.2. What functions of sentence-stress exist?

What does the term accentual structure of a sentence mean? What do we mean by timbre? Why is rhythmic structure important in intonation? Explain the tempo of speech and its types.

What function does pausation perform?

8.4. What emphatic intonation means exist in English?

How is the principle of compensation defined?

What do we mean by emphasis and what types of it are distinguished?

What variation of intonation components perform emotional function?

How does speech melody function in emphatic intonation?

8.5. What is paralinguistics?

What paralinguistic means exist? What is the difference between prosodic and paralinguistic features of speech?

What voice quality features are paralinguistic?

What kinds of tenseness are paralinguistic?

What types of articulation are regarded paralinguistic? What does the distribution of paralinguistic features depend on?

Seminar № 9. Combinatory-Positional Changes.

What do the combinatory-positional changes depend on? Is there any speech effort economy?

9.1. What is meant by assimilation? What is the difference between assimilation and adaptation (or accomodation)?

What types of assimilation may be distinguished, affecting the place of articulation (the manner of production, the work of vocal chords, and the position of the lips)? Give examples. What types of assimilation may be distinguished according to degree? What types of assimilation may be distinguished according to direction?

Explain the difference between historical and contextual assimilations.

9.2. What other combinatory positional changes do you know, besides assimilation?

What do we mean by adaptation? When do rounded allophones of consonant phonemes occur? When do fully back allophones of consonant phonemes occur? How does the dark /l/ influence a vowel articulation?

What is meant by dissimilation? Give examples.

What is an elision? Give examples.

What is haplology? Give examples.

Seminar № 10. Phoneme and Stress AlternationsMorphonology.

What is morphonology? Has it a unit of its own? What does morphonology study? What phoneme alternations are regarded morphonological? What stress alternations are regarded morphonological?

Give an explanation of regular phonetic and historical alternations. Give examples. What types of morphonological alternations do we distinguish? Do morphonological alternations depend on the context or other factors?

How is the English suffixation realized in different morphemes? Does the alternation of stress depend on adding different suffixes? Explain the morphonological function of word stress. Give examples.

GLOSSARY OF ENGLISH-RUSSIAN-UZBEK PHONETIC TERMS

Abrupt change in pitch [ə'brʌpt't∫eɪnd3 əv 'pɪt∫] – крутой сдвиг высоты тона. Перерыв постепенности мелодии. Резкое изменение (обычно повышение) голоса, прерывающее постепенность движения мелодии и вызывающее в пределах смысловой группы (в синтагме) различные модификации ее смыслового содержания.

Ton balandligining to'satdan o'zgarishi. Ton (odatda ko'tariladi) ohangning izchilligini o'zgartirib, ma'no gruppasi ichida (sintagmada) ma'noning turlicha o'zgarishiga olib keladi.

Accenteme ['æksentɪ:m] – акцентема. Дистинктивная функция словесного ударения, позволяющая дифференцировать слова по месту и степени ударения. Напр., **'present – pre'sent** считаются словоакцентемами (word-accenteme). В предложении выделяются фразоакцентемы (phrase-accenteme). Is there any 'mistake here? Is there any 'Miss Take here?

Aksentema. So'zlarni urg'uning o'rni va darajasiga ko'ra farqlashga xizmat qiluvchi birlik. Masalan: **'present – pre'sent** aksentema hisoblanadi. Gapda frazoaksentemalar belgilanadi: Is there any 'mistake here? Is there any 'Miss Take here?

Accentual pattern ['æksent∫ual 'pætən] (type, structure) – Акцентная модель (тип, структура). Схема расположения степени и места ударения в слове или фразе.

So'z yoki iborada urg'uning o'rni va darajasining joylanish sxemasi.

Accomodation [ə,kɔmə'deɪ∫(ə)n] (Adaptation) – аккомодация. Взаимное приспособление артикуляции разнотипных звуков в речи.

Akkomodatsiya. Turli tovushlar artikulyatsiyasining nutqda o'zaro moslashuvi.

Acoustics [ə'ku:stɪks] (Acoustic Phonetics) – акустика. Раздел физики, исследующий звуковые волны и, следовательно, имеющий отношение к фонетике (Акустическая фонетика).

Akustika. Fizikaning tovush to'lqinini o'rganadi va shu sababli fonetika bilan bog'liq (Akustik fonetika).

Affricate ['æfrɪkeɪt] – аффрикат. Звук, образуемый двумя элементами и имеющий смычное начало и щелевой конец. В англ. [tʃ, dʒ], в русск. (тш, дж, тс).

Affrikatlar – birinchi elementi portlovchi va ikkinchi elementi sirg'aluvchi tovushlardan iborat bo'lgan murakkab tovushlar. Masalan: ch(tsh), j(dj), ts(ts).

Alloaccenteme [ælə'æksentɪ:m] – аллоакцентема. Вариант ударения, различающегося по степени; замена третьестепенного ударения второстепенным.

Alloaksentema. Urg'uning darajasi bo'yicha farqlanadigan varianti; uchinchi darajali urg'uni ikkinchi darajali urg'u bilan almashtirish.

Allochrone ['æləkrəun] – аллохрон. Вариант фонемы, определяемый только по долготе – краткости.

Alloxron – fonemaning faqat cho'ziq-qisqaligi bilan aniqlanadigan variantlari.

Allophone ['æləfəun] – аллофон или основной вариант фонемы. Один из основных представителей фонемы, реализуемый в различных звуках речи. Напр., в англ. языке придыхательные [p^h, t^h, k^h] и непридыхательные [p, t, k] звуки являются аллофонами фонем [p, t, k]; по дополнительной дистрибуции они встречаются в различных позициях.

Allofon yoki fonemaning asosiy varianti. Nutqning turli tovushlarida namoyon bo'luvchi fonemalarining bir ko'rinishi. Masalan, undoshlar bilan birikib kelgan – [p, t, k] aspiratsiyalashmagan va unlilardan oldin kelgan [p^h, t^h, k^h] aspiratsiyali tovushlar [p, t, k] fonemalarining allofonlaridir. To'ldiruvchi distributsiyaga ko'ra, ularning biri qo'llanilgan holatda, ikkinchisi ishlatilmaydi.

Alternophoneme [ˌɔ:ltə:nə'fɔnɪ:m] – альтернофонема. Фонемы, чередуемые между глухими и звонкими согласными, но полностью не переходящие ни в одну из них. Напр., звонкие согласные в англ. языке в конце слов оглушаются, но не становятся полностью глухими.

Alternofonema. Jarangli va jarangsiz fonemalar oralig'idagi fonema, biroq u to'la jarangciz bo'la olmaydi. Masalan,

ingliz tilida so'z oxiridagi jarangli undoshlar ana shunday xususiyatga ega.

Alveolar [ˈжlvңdə] consonants – альвеолярные согласные, образуемые путем прижимания кончика языка к альвеолярной дуге. Напр., англ. (t, d, l, n).

Tanglay (alveolyar) undoshlari – tilni qattiq tanglayga bosish orqali hosil bo'luvchi undoshlar. Masalan, ingliz tilidagi (t, d, n, l) kabi tovushlar.

Archiphoneme [ˌɑ:kң ˈfəunңm] – архифонема. Фонологическая единица, определяемая сходством двух фонем, снятием противопоставления фонем в позиции нейтрализации. Напр., луг – лук, пруд – прут г/к=к, д/т=т выступают как архифонемы.

Arxifonema. Ikki fonemaning o'xshashligi yoki neytralizasiyalashuvi holatida oppozitsiyaning yo'qolishi natijasida hosil bo'lgan fonologik birlik. Masalan, kitob (kitop) so'zida b/p=p arxifonema hisoblanadi.

Assimilation [əˌsңmңˈeңn] – ассимиляция. Уподобление. Качественное сближение смежных звуков (согласных), вызываемое взаимовлиянием фаз артикуляции соседних звуков.

Assimilatsiya – yondosh (undosh) tovushlarning artikulyatsion fazalarining o'zaro ta'siri natijasida ulardan birining sifat jihatdan ikkinchisiga yaqinlashuvi.

Bilabial [baңˈeңbɪəl] consonants – губно-губные согласные (p, b, w, m). Lab-lab undoshlar (bilabial) – yuqori va pastki lablarning jipslashuvi natijasida hosil bo'luvchi undoshlar. Masalan: (b, p), inglizcha (w, b, p).

Bilingualisnv [ˈbaңgwəlңzm] билингвизм – 1) двуязычие; 2) влияние двух языков.

Bilingvizm – 1) ikki tilda so'zlashuv; 2) ikki tilning biriga o'zaro ta'siri.

Central phrase of articulation – [ˈsentrəl ˈfeңz əv ˈɑ:tңkju:leңʃn] выдержка; основная фаза артикуляции звука речи.

O'rta faza – nutq organlarining talaffuzdagi asosiy holati.

Central vowels [ˈsentrəl′ vauəlz] – гласные центрального ряда, при произношении которых форма языка характеризуется так называемым плоским профилем средних и низких укладов. Русск. (а), (ы).

Til o'rta qator unlisi – talaffuzida til og'izning o'rta qismida yassi shaklda pastroq holatda harakat qiluvchi tovush. Masalan, rus tilidagi (ы), (a).

Checked vowels ['tʃəkt 'vauəlz] – Усеченные гласные, артикуляция которых внезапно прерывается последующим согласным в односложных закрытых слогах: pit, pet, cut.

Talaffuzi yopiq bo'g'inli so'zlarda keyingi undosh bilan uzilib qoluvchi unlilar: pit, pet, cut.

Closed syllable [ˈkləuzd 'sıləbl] – закрытый слог, заканчивающийся на согласный звук.

Yopiq bo'g'in – undosh tovushga tugagan bo'g'in.

Close vowel [ˈkləuz 'vauəl] – закрытый гласный, образуемый при высоком подъеме языка. Напр, англ. (i:, i, u, u:), русск. (и), (у), узб. (i), (u).

Yopiq unli – tilning ancha yuqoriga ko'tarilishi natijasida hosil bo'luvchi unli tovush. Masalan: (i), (u).

Combinatory changes [ˈkəmbınətərı 'tʃˈeınd3] – комбинаторные изменения (аккомодация, ассимиляции, диссимиляция, диэреза, эпентеза).

Kombinator o'zgarishlar (akkomodatsiya, assimilatsiya, dissimilatsiya, diereza, epenteza).

Complementary distribution [ˌkɔmplıˈmentarı 'dıstrıbjuʃn] – дополнительная дистрибуция, состоящая во взаимном исключении разных воспроизведений одной и той же структурной единицы, каждая из которых встречается в своем окружении.

To'ldiruvchi distributsiya. Bir til birligiga tegishli xilma-xil elementlarning turlicha ishlatilishini aniqlovchi distributsiya turi. Masalan, aspiratsiyali (p^h, t^h, k^h) unlilardan oldin, aspiratsiyasiz [p, t, k] boshqa o'rinlarda ishlatiladi va shu sababli [p, t, k] fonemalarining allofonlaridir.

Complete assimilation [kəmˈplı:t əˌsımıˈleıʃn] – полная ассимиляция. Полное уподобление одного звука под влиянием другого.

To'liq assimilatsiya, ya'ni tovushlarning o'zaro ta'siri natijasida to'la holda bir tipga o'tishi.

Comparative-typological method [ˈkəmpærətıv taıpɔlɔd3ıkəl meθəd] (contrastive, confrontative) – Сравнительно-типологический (констрастивный, конфронтативный) метод, изучающий языки независимо от их генетическо-

го происхождения и устанавливающий путем сравнения их различительные и родственные черты. Обычно под этим методом понимают сравнение двух языков в фонетическом, грамматическом и стилистическом аспектах. Напр., сопоставительная фонетика русского и узбекского языков.

Qiyosiy-tipologik metod (ba'zan kontrastiv yoki konfrontativ metod deyiladi) – tillarning qarindoshligidan qat'i nazar ulardagi o'xshash va farqli alomatlarni aniqlash metodi. Odatda, qiyosiy metod nomi bilan ikki yoki undan ortiq tillarning fonetik, grammatik, leksik va stilistik xususiyatlarini chog'ishtirib o'rganish tushuniladi. Masalan: rus va o'zbek tillarining qiyosiy grammatikasi.

Comparative-typological (contrastive, confrontative) phonetics – сравнительно-типологическая фонетика. Тип фонетики, сравнивающий два или более разносистемных языков.

Qiyosiy-tipologik fonetika. Ikki yoki undan ortiq tillarning fonetik sistemasini qiyosiy o'rganish.

Conjunct opposition [kən'dʒʌŋkt,ɔpə'zɪʃən] – однородная (гомогенная) оппозиция, т.е. оппозиция различающаяся только одним релевантным признаком. Оппозиции бывают привативными, градуальными и эквиполентными. Напр. [p – f], [t – θ], [d – ð], [k – h], [p – t], [b – v], [b – d], [f – θ], [v – ð]. Bir turdagi (gomogen) oppozitsiya a'zolari; faqat bir relevant belgiga asoslangan oppozitsiya. Oppozitsiyalar privativ, gradual va ekvipolent bo'ladi. Masalan, [p – f], [b – v], [t – θ], [d – ð], [k – h,] [p – t]. [b – d], [f – θ], [v – ð].

Constitutive function ['kɔnstɪtju tɪv 'fʌŋkʃən] – конститутивная (материально-образующая) функция, т.е. использование единиц низкого порядка для образования единиц высшего порядка. Напр., фонемы образуют материальную сторону морфем, слов и фраз.

Konstitutiv (material jihatini hosil qilish) funksiyasi, ya'ni tildagi quyi birliklar yuqori birliklarning material jihatini hosil qiladi. Masalan, morfemalar, so'zlar va iboralar fonemalarning birikuvidan tashkil topadi.

Constrictive [kən'strɪktɪv] **consonants** – щелевые согласные, звуки с неполной преградой. Напр, [f, v, s, z, ʃ, ʒ, h).

To'la to'siqda uchramay hosil bo'luvchi sirg'aluvchi undoshlar. Masalan, (s, z, sh, j, x, h, g').

Content [ˈkɔntent] – план содержания. Внутренняя (смысловая, понятийная) сторона языка.

Tilning mazmun plani – tildagi elementlarning ma'no-mazmun jihati.

Culminative function [ˈkulmɪneɪtɪv ˈfʌŋkʃən] – кульминативная функция. Особенности звукового выражения, служащие для выделения слов и их соединений в речевой цепи. Напр., словесное ударение в английском, русском и узбекском языках.

Kulminativ funksiya. So'zlar va ularning birikmalarini nutqdagi tovush jihatdan ifodalanishini ajratib ko'rsachish. Masalan, ingliz, rus va o'zbek tillarida so'z urg'usi ana shunday funksiyani bajaradi.

Dental [dentl] consonants – зубные (дентальные) согласные, артикулируемые путем образования переднеязычно-зубных преград. Напр., русск. (т, д, с, з).

Tish (dental) undoshlari – til uchi pastki tishlarga tegizilishi natijasnda hosil bo'luvchi undoshlar. Masalan: (t, d, s, z) kabi.

Descriptive linguistics [ˈdɪskrɪptɪv ˈlɪŋgwɪstɪks] – дескриптивная лингвистика. Направление исследования языка в США. (Его видные представители: Ф. Боас, Л. Блумфильд, З. Харрис В др.).

Deskriptiv tilshunoslik oqimi. AQSHdagi tilni o'rganish oqimi. (Uning ko'zga ko'ringan namoyandalari F. Boas, L. Blumfild, Z. Xarris kabilardir.)

Delimitative function [ˈdelɪmɪteɪtɪv fʌŋkʃən] – делимитативная (разграничительная) функция – функция обозначающая границы между последовательными единицами. Напр.: К Ире – Кире.

Delimitativ (chegaralash) funksiyasi – ketma-ket kelgan birliklarni chegaralash. Masalan: yotoq oldi – yota qoldi.

Diaphone [ˈdaɪəfəun] – диафон. Аллофон определенной фонемы, произносимый неодинаково различными людьми, говорящими на данном языке.

Diafon. Turli kishilar tomonidan bir xil talaffuz qilinmaydigan ma'lum fonema allofoni.

Diphthong [ˈdɪfθɔŋ] – дифтонг. Сочетание двух гласных, произносимых единой артикуляцией как один слог.
Diftong – bir bo'g'in sifatida yagona artikulatsiya bilan talaffuz qilinadigan ikki unli tovush birikmasi.

Diphihongoid [ˈdɪfθɔŋɔɪd] – дифтонгоид. Гласные с признаками тембрального скольжения, в произношении которых имеется неустойчивая артикуляция. В англ. языке [ɪ:], [u:]. Diftongoid. Diftonglashgan unlilarning talaffuzi muayyan emasligi. Masalan, inglizcha [ɪ:], [u:].

Disjunct opposition [ˈdɪsdʒʌŋkt] – неоднородные (негомогенные) оппозиции, т.е. различающиеся только двумя или более релевантными признаками. Напр., [p– v], [b – f], [b – t], [p – d], [m – b], [b – k].
Har xil turdagi (gomogen bo'lmagan) oppozitsiya – a'zolari ikki va undan ortiq relevant belgilarga asoslangan oppozitsiya. Masalan: [p– v], [b – f], [b – t], [p – d], [m – b], [b – k].

Dissimilation [ˈdɪsɪmɪleɪʃən] – диссимиляция. Расподобление. Замена одного из двух одинаковых по артикуляции звуков звуком иной артикуляции, но сходным по тембру.
Dissimilatsiya – bir tipdagi ikki tovushdan birining artikulasiyasi o'zgarishi natijasida ikkinchisining moslashuvi.

Distinctive function [ˈdɪstɪŋktɪv ˈfʌŋkʃən] – дистинктивная (дифференциальная, различительная, семиологическая, сигнафикативная) функция. Главная функция фонологических единиц (фонем, силлабем, акцентем и интонем) – различать особенности звучания единиц разного семантического уровня. Distinktiv (differensial, farqlanish, semiologik, signifikativ) funksiya. Fonologik birliklarning (fonema, sillabema, aksentema, intonema) turli semantik bosqichdagi birliklarning eshitilishini farqlash uchun xizmat qilish funksiyasi.

Distributional method [ˌdɪstrɪˈbju:ʃənəl ˈmeθəd] дистрибутивный метод изучает место, сочетаемость, порядок, свойства употребления элементов языка.
Distributiv metod – til elementlarining qo'llanishi, birikishi va ishlatilishini o'rganadi.

Distinctive [ˈdɪstɪŋktɪv] **(differential, phonological) features of the phoneme** – дистинктивный (дифференциальный, фонологический) признак фонемы, т.е. артикуляцион-

ные и акустические свойства, служащие для различения одной фонемы от другой. Напр., (t – s) различаются дистинктивным признаком смычно-взрывной и щелевой звуки, а другие признаки не являются дистинктивными.
Fonemaning distinktiv (differensial, fonologik) belgisi – bir fonemani ikkinchisidan farqlashga xizmat qiluvchi artikulyatsion va akustik xususiyatlar. Masalan: tur – sur so'zlarida (t) – (s) portlovchi – sirg'aluvchi belgilari fonologik belgilar hisoblanadi. Boshqa belgilari fonologik emas.

Dinamic stress (expiratory) [daɪˈnæmɪk ˈstres] – динамическое ударение, т.е. выделение ударных слогов силовой акцентуацией (характерно для английского, русского, узбекского языков).
Dinamik (kuch, ekspirator) urg'u – talaffuz kuchi bilan urg'uli bo'g'inni ajratish (ingliz, rus va o'zbek tillariga xos).

Enclitics [ɪnˈklɪtɪks] – Энклитика. Слитное фонетическое единство безударного слова или слога предыдущего ударного слова в произношении.
Enklitika – urg'usiz so'z yoki bo'g'inni urg'uli so'zdan keyin qo'shib aytish.

Equipollent opposition [ˈɪkwɪpɔlənt ˌɔpəˈzɪʃən] – эквиполентная (равнозначная) оппозиция, оба члена которой логически равноправны, т.е. не являются ни двумя ступенями какого-либо признака, ни утверждением или отрицанием признака. Напр, [p – t], [b – d].
Ekvipolent (teng huquqli) oppozitsiya, a'zolari logik jihatdan teng, ya'ni biror belgining ikki turli darajasi, belgining bor yoki yo'qligi bir xil bo'lgan oppozitsiya. Masalan: [p – t], [b – d].

Expression (plane) [ɪksˈpreʃen] – выразительность. Высокая степень яркости и убедительности словесного выражения мысли, достигаемое средствами интонационного оформления устной речи.
Ifodalilik, fikrni so'z bilan ifodalashdagi yorqinlik va ishonchlilikning yuqori darajasi. Bunga og'zaki nutqni intonatsiya vositalari bilan kuchaytirish orqali erishiladi.

Extralinguistics [ˌekstrʌˈlɪŋuɪstɪks] – экстралингвистика. Исследование функционирования и развития языка в от-

ношении к этническим, общественно-истооическим, географическим, социальным факторам.

Ekstralingvistika – tilning etnik, ijtimoiy-tarixiy, geografik, sotsial va boshqa faktorlar xizmati va rivojlanishi bilan bog'liq bo'lgan tomonlarini o'rganish.

Facultative (Optional) phoneme ['fækəltətɪv 'fəunɪ:m] – факультативная фонема. Вариант фонемы, регулярно замещающий её в некоторых позициях (или ограниченной группе слов) в речи носителей отдельных территориальных или социальных разновидностей языка. В англ. [м] или [hw] : [mɪtʃ] which [hwɪtʃ] · [ɔə] заменяемая обычно с [ɔ:], считаются факультативными фонемами.

Fakultativ fonema. Ba'zi holatlarda (chegaralangan so'zlar gruppasida) tilning alohida territorial va sotsial turida so'zlashuvchilar tomonidan, doimiy ravishda almashtiriluvchi fonemaning varianti. Inglizcha [m], [hw], [ɔə] fakultativ fonemalar bo'lib, [hw] va [ɔ:] bilan almashtirilishi mumkin.

Form (of expression) – форма выражения языка. Внутренняя лингвистическая форма.

Tilning ifoda jihati. Ichki lingvistik forma.

Free (unchecked) vowel [frɪ:('ʌntʃekt) vauəl – неусеченный гласный. В английском языке долгие гласные и дифтонги, встречающиеся как в открытом, так и в закрытом слогах.

Talaffuzi bo'linmovchi unlilar. Ingliz tilida ochiq va yopiq bo'g'inlarda ham erkin ishlatiladigan cho'ziq unlilar va diftonglar.

Free variation (alternation) ['frɪ: 'værɪeɪʃən] – свободная вариация (альтернация) – чередование, которое, не имея дифференциального характера, не является также и позиционно обусловленным. Напр.; обусловливать – обуславливать; калоша – галоша: direct [dɪrekt, daɪrekt], intonation [ɪntəuneɪʃən,ɪntəneɪʃn]. Erkin variatsiya (alternatsiya) – farqlanish xarakteriga va holatga bog'liq bo'lmagan fonemalar almashinuvi. Masalan, Toshkent shevasida kabob (kabop, kovop), cho'ziq (cho'ziq, cho'zuq) kabi.

Fricative consonants ['frɪkətɪv] (Spirants) – щелевые согласные, производимые торможением воздуха при его про-

хождении через образуемые органами артикуляции щели и сужения различной формы. Напр. англ. [s, z, θ, ð, ʃ, ʒ], русские (ш, ж, в, ф, х).

Sirg'aluvchi (frikativ, spirant) undoshlar – havo oqiminiig to'siqdan sirg'alib o'tishi natijasida hosil bo'luvchi tovushlar. Masalan: [s, z, v, x, sh, g', h, j] kabi.

Front vowels ['frʌnt 'vauəlz] – гласные переднего ряда, т.е. гласные образуемые движением языка вперед. Напр., /i:/, /e/, /æ/.

Til oldi qator unlisi – talaffuzida til oldinga harakat etuvchi tovush Masalan: [i], [e], [a].

Functional load of opposition ['fʌŋkʃənəl 'ləud əv 'ɔpə'zɪʃən] – функциональная нагрузка оппозиции, определяемая числом минимальных пар или частностью фонем.

Oppozitsiyaning funksional xizmati. U farqlanuvchi minimal juftlarning soni va chastotasi bilan aniqlanadi.

Glottal stop ['glɔtl 'stɔp] – гортанная или глоттальная, смычка, образуемая энергичным размыканием взрывом мышечно-напряженных краев голосовых связок. Напр., patric ['pætrɪk].

Havo oqimi va tovush paychalarining kuchli to'siq bilan harakati natijasida bo'g'izda hosil bo'luvchi tovush. Masalan: patric ['pætrɪk].

Gradual opposition [grædjuəl ,ɔpə'zɪʃən] – градуальная (ступенчатая) оппозиция, члены которой характеризуются различной степенью или градацией одного и того же признака. Напр., англ. [ɪ: – æ], [ɪ – e], [u: – ɔ], [p – k], [w – g].

Gradual (pog'onali) oppozitsiya – a'zolari bir belgining turli darajasi bilan izohlanuvchi oppozitsiya. Masalan, o'zb. [i – a], [u – o] tilning ko'tarilish darajasi bilan shunday oppozitsiyani tashkil etadi.

Half-close syllable ['hɑ:f-'kləuz 'sɪlʌbl] – слог, заканчивающийся на сонант.

Yarim ochiq bo'g'in – sonor tovushga tugagan bo'g'in.

Half-open vowel ['hɑ:f 'əupən 'vauəl] – полуоткрытый гласный, образуемый при среднем подъеме языка. Напр., русск. [е], англ. [ə:, ə], узб. [е], [о'].

Haplology [ˈhæplələdʒɪ] – гаплология. Выпадение одного из двух одинаковых слогов слова. Напр., морфофонология – морфонология.

Gaplologiya – ikki bir xil bo'g'inlardan birining tushirib qoldirilishi. Masalan: morfofonologiya – morfonologiya.

Homophones [ˈhɔməfəunz] – омофоны. Разные слова, совпадающие по звучанию.

Omofonlar. Aytilishi bir xil, lekin ma'nolari turlicha bo'lgan so'zlar.

Hyperphoneme [ˈhaɪpəˈfəuni:m] – гиперфонема. Фонологическая единица, определяемая в позиции нейтрализации группой фонем. Напр., в русском языке а/о, и [и] выступают как гиперфонемы.

Giperfonema. Neytralizatsiya holatida fonemalar gruppasi bilan belgilanuvchi fonologik birlik. Masalan, rus tilida a[o] va [i] giperfonemalardir.

Idiolect [ɪdɪəulekt] – идиолект. Индивидуальная речь носителя определенного языка.

Idiolekt. Ma'lum tilda so'zlovchining individual nutqi.

Idiophone [ɪdɪəˈfəun] – идиофон. Один и тот же звук речи, произносимый различно разными носителями.

Idiofon. Aynan bir nutq tovushining turli so'zlovchilar tomonidan turlicha talaffuz qilinishi.

Incomplete Assimilation [ɪnkəmˈplɪ:t əˌsɪmɪˈleɪʃn] – неполная ассимиляция, когда звуки уподобляются не полностью.

To'liq bo'lmagan assimilatsiya – tovushlarning o'zaro ta'siri natijasida ularning ba'zi belgilarining moslashuvi.

Instrumental [ˈɪnstruˈməntəl]. Experimental Method of Phonetics – инструментальные (экспериментальные) методы фонетики (исследование звуковых явлений с помощью аппаратур: осциллографа, спектрографа, рентгена, кимографа и т.д.).

Eksperimental-fonetik metod (tovush xususiyatlarini alohida apparatlar – kimograf, spektrograf, ossillograf, rentgen va h.k. yordamida o'rganuvchi metod.)

Interdental [ˈɪntəˈdentl] consonants – межзубные согласные, артикулируемые путем выдвижения переднего края языка между резцами верхней и нижней челюсти. Напр. англ. [θ, ð].

Tish o'rta undoshlari (interdental) – til uchi va tishlar oralig'idan havo oqimi sirg'alib o'tuvchi undoshlar. Masalan, ingliz tilida [θ, ð].

Interference (Phonetic-Phonological) ['ɪntəfərəns] – фонетико-фонологическая интерференция. Влияние фонетических явлений, одного языка на другой. Различаются [1] фонемные и [2] просодические и соответственно а) фонемная, б) силлабическая, в) акцентологическая, г) интонологическая, д) смежная типы интерференции.

Fonetik-fonologik interferensiya. Bir tildagi fonetik hodisalarning ikkinchi tilga ta'siri. Asosan, (1) fonemik va (2) prosodik va o'z navbatida (a) fonemik, (b) sillabik, (v) aksentologik, (g) intonologik, (d) aralash interferensiya turlariga bo'linadi.

Interlinguistics ['ɪntə'lɪŋuɪstɪks] – интерлингвистика. Изучение явлений, относя щихся только к внутренней структуре языка.

Interlingvistika – faqat tilnnng ichki strukturasiga tegishli xususiyatlarni o'rganish.

Intonation [ˌɪntə'neɪʃn] – интонация. Сложное единство, характерное для фразы, фонетических средств – мелодики, ударения, темпа, тембра, ритма, паузации, для выражения различных смысловых и эмоциональных значений.

Intonatsiya – frazaga tegishli bo'lgan ovoz tempi, tembri, nutq ritmi, melodika, urg'u, pauza kabi fonetik vositalarning mazmun va emotsionallikni ifodalash uchun qo'llanuvchi murakkab birligi.

Intoneme ['ɪntəunɪ:m] – интонема. Фонологическая (просодическая) единицу, образуемая дистинктивной функцией компонентов (обычно мелодики и ударения) интонации.

Intonema. Intonatsiyaning komponentlari tomonidan farqlash funksiyasi (odatda melodika va urg'u) bilan hosil bo'luvchi fonologik (prosodik) birlik.

Juncture ['dʒʌŋktʃə] – стык. Место, где два звука или слова сочетаются. Напр., a name [ə'neɪm] – an aim [ən 'eɪm], that stuff [ðæt 'stʌf] – that's tuff [ðæts 'tʌf].

Ikki tovush yoki so'zning qo'shib talaffuz etilish o'rni. Masalan, uchta kam bir – uchta kampir.

Junction ['dʒʌŋʃən] – стык. Соединение звуков или слов.

Tovush yoki so'zlarning qo'shib aytilishi.

Kinetic [kaɪ′netɪk] – кинетика – жесты, мимика.
Kinetika – mimika, imo-ishora.

Labial [laɪbɪəl] (consonants) – лабиальные (губные) согласные, включающие губно-губные и губно-зубные согласные.
Lab undoshlari (labial) – talaffuzida lablar ishtirok etuvchi lab-lab va lab-tish undoshlar. Masalan: (b, f, v, m) kabi.

Labio-dental [laɪbɪə dentl] **consonants** – губно-зубные согласные.
Lab-tish undoshlar (labiodental) talaffuzida yuqori old tishlar va pastki lab ishtirok etuvchi undoshlar. Masalan, o'zb. (f, v), inglizcha (f, v).

Lateral [lætərəl] **consonant or sonant** – боковые согласные или сонанты, при образовании которых в центральной части полости рта образуются серединные затворы а по бокам – широкие протоки, выводящие воздух наружу. Напр., (l), (л). Og'iz bo'shlig'ining markaziy qismida havo to'sig'ining chekka tomondan chiqishi bilan hosil bo'luvchi yon undosh yoki sonant. Masalan, ingliz tilida (l) va o'zbek tilida (l) undoshlari.

Lax [læks] (Lenes) – слабый, вялый, (ненапряженный звук, при произношении которого наблюдается расслабленность мышц языка, губ и стенок полостей. Английские краткие гласные являются ненапряженными.
Kuchsiz. Talaffuzida til, lab va og'iz bo'shlig'ining devorlari kuchsiz holatda bo'luvchi tovushlar. Ingliz tilidagi qisqa unlilar kuchsiz hisoblanadi.

Logical stress [lɔdʒɪkəl 'stres] – логическое ударение, т.е. выделение одного из слов в предложении, определяющего смысл всего высказывания.
Logik urg'u – nutqda biror so'zni ajratib ko'rsatish orqali gapning ma'nosini ochiqroq qilish uchun qo'llanuvchi urg'u.

Melody [′melədɪ] мелодика – изменение, т.е. понижение или повышение голоса.
Melodika – talaffuzda ovozning pasayishi va ko'tarilishi.

Minimal pairs [′mɪnɪməl 'pɛəz] (of words, word combinations, sentences) – Минимальные пары (слов, словосочетаний и предложений), используемые для иллюстрации противопоставления фонологических единиц.

Minimal juftlikdagi (so'zlar, so'z birikmalari va gaplar) – fonologik birliklarni qarama-qarshi qo'yish uchun ishlatiluvchi misollar. Masalan, kel – sel, ber – ter, xol – hol kabi.

Mixed Vowels ['mɪkst 'vauəlz] «смешанные» гласные, образуемые при плоском положении языка, в котором как бы участвуют оба выгиба спинки одновременно. Англ. [ə:], [ə].

Aralash qator unlisi (yoki indifferent, inglizcha (mixed) – til yassi holatda bo'lib, tilning oldinga yoki orqaga harakati muayyan bo'lmagan unli. Masalan, ingliz tilida [ə:], [ə].

Monophthong ['mɔnəfθɔŋ] – монофтонг, Артикуляционно-акустический устойчивый звук, характеризуемый однородным тембром, в англ.: [i, e. æ, α:, ɔ, ɔ:, ə:, u].

Monoftong. Artikulyatsion-akustik jihatdan muayyan talaffuzi va tembriga ega bo'lgan tovush. Ingliz tilida [ɪ, e, æ, α:, ɔ, ɔ:, ə:, u].

Mora [ˈmɔ:rə] – мора. 1. Единица длительности, равная краткому слогу или половине долгого. 2. Минимальный сегмент речи, могущий быть носителем просодического элемента.

Mora. 1. Qisqa bo'g'in yoki cho'ziq bo'g'inning yarmiga teng keluvchi birlik. 2. Prosodik element (urg'u) ga ega bo'la oluvchi nutqning minimal segmenti.

Morphonology [ˌmɔ:fə'nɔlədʒɪ] – морфонология. Уровень языка между фонологическим и морфологическим уровнями, изучающий альтернации фонем в морфемах, не обусловленных позиционно. Напр., рука – ручка.

Morfonologiya – fonologiya va morfologiya oralig'idagi til bosqichi bo'lib, pozitsion jihatdan bog'liq bo'lmagan morfemalardagi tovush almashinuvlarini o'rganadi. Macalan, tara – taroq, so'ra – so'roq kabi.

Musical (tonic, melodic) stress ['mju:zɪkəl 'stres] – музыкальное (тоновое, мелодическое) ударение. Выделение слога высотой тона.

Muzikal (ton, melodik) urg'u ovoz tonining balandlashuvi yordamida bo'g'in ajratish.

Nasal ['neɪzəl] **consonants** – носовые согласные, при образовании которых ток воздуха проходит через нос. Напр., [м], [n], [ŋ].

Burun (nazal) undoshlar – talaffuzida havo oqimi burundan o'tuvchi tovushlar. Masalan: [m], [n], [ng].

Non-distinctive feature of the phoneme [ˈNʌn ˈdɪstɪŋktɪv ˈfi:tfərəv ðə ˈfəuni:m] – недистиинктивные (неразличительные, недифференциальные) признаки фонемы, т.е. признаки, не служащие для различения фонем. Напр., различия между придыхательными [p^h, t^h, k^h] и непридыхательными [p, t, k] звуками не служат для различения фонем, а считаются признаками их аллофонов, находящихся в дополнительной дистрибуции.

Fonemaning fonologik bo'lmagan (farqlanmovchi) belgisi bir fonemani ikkinchisidan farqlash uchun xizmat qilmaydigan belgilar. Masalan: (t – k) oppozisiyasida fonemalarning jarangsiz, portlovchi belgilari fonologik emas.

Occlusiye [əˈklu:sɪv] **consonants** – смычные согласные, образуемые полной преградой тока воздуха в речевом канале. Напр., (p, t, k, b, d, g).

Portlovchi undoshlar. Ular nutq kanalida havo oqimi to'la to'siqqa uchrashi bilan hosil bo'ladi. Masalan, (p, t, k, b, d, g).

Off set [ˈɔ:f set] – [Final phase of articulation – рекурсия – конечная фаза артикуляции звука.

Rekursiya – nutq organlarining talaffuzidan keyingi bevosita holatga qaytishi.

On set [ˈɔnset] (Initial Phase of articulation) – экскурсия – начальная фаза артикуляции звука.

Ekskursiya – tovushlarning талаффузида nutq organlarining boshlang'ich holati.

Open syllable [ˈəupən ˈsɪləbl] – открытый слог, т.е. слог оканчивающийся на гласную.

Ochiq bo'g'in – unli tovushga tugagan bo'g'in.

Open vowel [ˈəupən ˈvauəl] – открытый гласный, образуемый при низком подъеме языка. Англ. [æ, ɑ:, ɔ, ɔ:]; русск. [a]; узб. [a], [o].

Ochiq unli – tilning ko'tarilishi past bo'lgan unli. Masalan, o'zbekcha [a], [o].

Orthoepy [ɔ:ˈθəuɪpɪ] – орфоэпия. Совокупность норм правильного литературного произношения.

Orfoepiya – to'g'ri adabiy talaffuz normalarining yig'indisi.

Palatalization [ˌpælətəlaɪˈzeɪʃən] – палатализация; – смягчение согласных. Напр., [ль] в слове пыль.
Palatalizatsiya – undoshlarning yumshatilishi. Masalan, yumshoq [l].

Palatal consonants [pælətl] – согласные, произносимые с подъемом средней спинки языка к твердому нёбу. Напр., [j], [ль]. В русском языке мягкие (палатальные) согласные считаются отдельными фонемами.
Yumshoq (palatal) undoshlar – til pushtining qattiq tanglayga ko'tarilishi bilan talaffuz qilinuvchi tovushlar. Masalan: o'zbekcha [y]. O'zbek tilida [l] ning yumshoq talaffuzi alohida fonemani hosil qilmaydi.

Paradigmatics [pærədɪgmətɪks] – парадигматика. Рассмотрение единиц языка как элементов системы, как структурных единиц, объединяемых в классы, группы и т.д., и их противопоставления. Напр., [x – y].
Paradigmatika – tildagi birliklarni uning sistemasida birlashgan sinflar, gruppalar va h.k. tartibida qarab, ularni o'zaro qarama-qarshi qo'yish. Masalan: [x – y].

Paralinguistics [ˌpærəˈ lɪŋuɪstɪks] – Паралингвистика. Раздел языкознания, изучающий жесты, мимику (кинесика) и качество голоса (фонация) человека в совокупности.
Paralingvistika. Turli imo-ishora va mimika (kinesika) hamda ovoz sifati (fonasiya) ni o'rganuvchi tilshunoslik bo'limi.

Pausation [ˈpɔːzeɪʃən] – паузация. Пауза. Разделение речи по смысловым группам.
Pauza – nutqni ma'no gruppalariga bo'lib айтиш.

Pharyngal [fəˈrɪŋgəl] consonant – фарингальный (щелевой) согласный, т.е. согласный, образуемый в фарингальной полости: анг. [h].
Bo'g'iz (sirg'aluvchi) undoshlar – havo oqimining bo'g'izda hosil bo'lishi bilan talaffuz etiluvchi undoshlar. Masalan: o'zb. [h], ingl. [h].

Phone (phonic) [ˈfəun] – фон (фонический) – звук речи (звуковой).
Fon (fonik) – nutq tovushi (tovush jihati).

Phonetics [fəˈnetɪks] – фонетика. Наука, изучающая звуковую сторону языка.
Fonetika – tilning tovush jihatini o'rganuvchi fan.

Phoneme [ˈfəuni:m] – фонема – фонологическая единица. Наименьшая единица системы языка, служащая для различения слов и морфем. Напр., tall – ball, sit – lit.

Fonema. Fonologik birlik; so'zlar va morfemalarni o'zaro farqlashga xizmat qiluvchi eng kichik til birligi. Masalan: kon – non, bir – kir kabi.

Phonetic (allophonic) transcription [fəˈnetık trænsˈkrıpʃən] – фонетическая (аллофоническая) транскрипция, при которой один знак соответствует одному звуку. Например, pen [pen], sit [sıt].

Fonetik (allofonik) transripsiya – bir tovush bir belgi bilan ko'rsatiluvchi transkripsiya. Masalan: kitob (kitop) kabi.

Phonology [ˈfənɔlədʒı] – фонология – раздел фонетики, изучающий функциональную-сторону звуковых явлений языка.

Fonologiya – fonetikaning tildagi tovush jihatining funksional tomonlarini o'rganuvchi bo'limi.

Phonological neutralization [ˌfəunəˈlɔdʒık(ə)l ˈnju:trəlaıˈzeıʃn] – фонологическая нейтрализация. Нейтрализация фонологической оппозиции в тех позициях, где реализуется только часть фонологических средств у данной оппозиции; условия для реализации архифонемы, гиперфонемы и альтерфонемы. Напр., в словах луг – лук оппозиция (г – к) нейтрализуется.

Fonologik neytralizatsiya. Fonologik oppozitsiyaning ma'lum holatda neytralizatsiyaga uchrashi. Bu o'rinda ma'lum oppozitsiyaning fonologik vositalaridan bir qismi qo'llanadi: arxifonema, giperfonema va alternofonemaning namoyon bo'lishi uchun sharoit yaratadi. Masalan: kitob (kitop) (b – p) oppozitsiyasi neytralizatsiyaga uchraydi.

Phonological (phonemic) opposition [ˌfəunəˈlɔdʒık(ə)l ˈɔpəˈzıʃən] – фонологическая (фонематическая) оппозиция, т.е. различение слов и морфем с помощью противопоставления фонем. Напр, bet – set, ball – bought.

Fonologik oppozitsiya (yoki fonemalar oppozitsiyasi) – fonemalarni fonologik belgilari asosida qarama-qarshi qo'yish orqali so'z va morfemalarni farqlash. Masalan, bir – sir kabi.

Phonological (phonematic) transcription [ˌfəunəˈlɔdʒık(ə)l ˈtrænskrıpʃn] – фонологическая, (или фонематическая)

транскрипция, при которой один знак соответствует одной фонеме. Напр, [p] – |p|.

Fonologik (fonematik) transkripsiya bir fonema bir belgi tartibida yozib olishga asoslangan transkripsiya.

Physiological (Articulatory) Phonetics – физиологическая (артикуляторная) фонетика, изучающая артикуляционную сторону звуковых явлений.

Fiziologik (artikulyator) fonetika, tovush hodisalarining talaffuz jihatini o'rganadi.

Pluridimensional (multilateral) opposition [ˌpluːrɪˈdaɪmenʃənəl] – многомерная оппозиция, т.е. совокупность общих признаков не ограничивается только членами данной оппозиции, а распространяется и на другие члены той же системы. Напр. в оппозициях [b – d – g], [p – t – к] смычность – звонкость (глухость) – ленисность (фортисность) повторяется в третьем члене оппозиции.

Ko'p o'lchovli oppozitsiya, ya'ni oppozitsiya a'zolariga tegishli belgilar yig'indisi sistemadagi boshqa a'zolarga ham xos bo'lgan oppozitsiya. Masalan, [b – d – g], [p – t – k] da portlovchi – jarangli (jarangsiz) – kuchsiz (kuchli) belgilari oppozitsiyalarning uchinchi a'zosiga ham xos.

Plosive [ˈpləusɪv] **consonants** – взрывные согласные, артикулируемые путем быстрого устранения полной преграды, освобождающей сжатый в замкнутых полостях воздух. Напр., [п, т, к, б, д, г].

Portlovchi undoshlar – havo oqimining qattiq to'siqqa uchrashi bilan hosil bo'luvchi tovushlar. Masalan, [p, b, t, d].

Power of opposition [ˈpauə əv ˌɔpəˈzɪʃən] – сила оппозиции, т.е. включение числа фонем в оппозицию. В зависимости от числа фонем оппозиции различаются большей/меньшей силой оппозиции.

Oppozitsiyaning kuchi, ya'ni oppozitsiyaga kiruvchi fonemalar soni. Fonemalar soniga ko‘ra oppozitsiyalar kuchli va kuchsiz bo'ladi.

Prague [ˈprɑːg] **Linguistic School** – пражская лингвистическая школа, функционально-структурное направление, исследующее отношение плана выражения и плана содержания языка. (Представителями являются: В. Матезиус, Н.С. Трубецкой, В. Скаличка, Б. Трнка, И. Вахек и др.)

Praga maktabi – struktural-funksional oqim bo'lib, tilning ifoda va mazmun tomonlari o'rtasidagi aloqani o'rganadi. (Bu maktab namoyondalari V. Matezius, V. Skalichka, B. Trnka, Y. Vaxek, N.S. Trubetskoy va boshqalar).

Privative opposition ['prɪvətɪv] – привативная оппозиция, один член которой характеризуется наличием, а другой – отсутствием дифференциального признака. Напр., звонкий – глухой, носовой – ротовой, огубленный – неогубленный, твердость – мягкость.

Privativ oppozitsiya – bir a'zosi ma'lum farqlanish belgisining borligini, ikkinchisi esa yo'qligini bildiruvchi oppozitsiya. Masalan, jarangli – jarangciz, burun – og'iz, lablangan – lablanmagan, yumshoq – qattiq.

Proclitics ['prə(u)klɪtɪks] – Проклитика. Безударное слово, примыкающее к последующему ударному слову и образующее с ним слитное фонетическое единство.

Proklitika. Urg'usiz so'zni urg'uli bo'g'indan oldin qo'shib talaffuz qilish.

Progressive assimilation [prə'gresɪv ə,sɪmɪ'leɪʃən] – прогрессивная ассимиляция. Влияние предшествующего звука на последующий звук: beds [bedz].

Progressiv assimilatsiya – oldingi tovush talaffuzining keyingi tovushga ta'siri: ketdi [ketti].

Prosodic [prəsɔdɪk] **elements** – просодические элементы, т.е. относящиеся к слогу, ударению и компонентам интонации (мелодике, паузе, ритму, темпу, тембру). Используются также термины «сверхсегментные, суперсегментные» элементы.

Prosodik element – bo'g'in, urg'u va intonatsiyaning komponentlari (melodika, urg'u, pauza, ritm, temp, tembr). «O'tasegment, supersegment elementlar» terminlari ham qo'llanadi.

Prosodics (Prosody) [prə'sɔdɪ] – раздел фонетики, изучающий особенности слога, ударения и интонации. Общее название для сверхсегментных (суперсегментных) свойств речи: высоты тона, длительности и громкости.

Prosodika (Prosodiya) – bo'g'in, urg'u va intonatsiyani ilmiy tadqiq etuvchi fonetikaning bo'limi. Supersegment vositalarni, ya'ni tonning balandligi, cho'ziqlik va nutq balandligini o'rganuvchi bo'limga berilgan umumiy nom.

Phonostylistics [ˌfəunəuˈstaılıstıks] – фоностилистика. Раздел стилистики, изучающий эмоционально-экспрессивные средства произношения. Иногда ее часть, связанную с интонацией, называют интонационной стилистикой.

Fonostilistika. Stilistikaning talaffuzdagi emotsional-ekspressiv vositalarni o'rganuvchi bo'limi. Intonatsiya bilan bog'liq qismini ba'zan «Intonatsion stilistika» deb ham ataladi.

Quantity reduction [ˈkwɔntıtı rıˈdʌkʃən] – количественная редукция. Сокращение длительности звука (гласного) в безударном слоге.

Miqdor reduksiya. Urg'usiz bo'g'inlarda unlilar cho'ziqligining qisqarishi.

Quality reduction [ˈkwɔlıtı rıˈdʌkʃən] – качественная редукция, при которой в безударном слоге гласные изменяют свои качества (тембр).

Sifat reduksiyasi. Urg'usiz bo'g'inlarda unlilar sifati (tembri)ning o'zgarishi.

Quantitative Stress [ˈkwɔntıtətıv] (Accent by length) – количественное ударение, т.е. выделение слога (или слогов) преимущественно долготой произношения.

Cho'ziqlik (kvantitativ) miqdoriy urg'usi, ya'ni bo'g'in (yoki bo'g'inlar)ni cho'zib aytish orqali bo'g'inga ajratish.

Recessive stress [rıˈsesıv] – рецессивное ударение, которое падает на первый слог или на корневой слог слова.

Resessiv urg'u. Birinchi bo'g'inga yoki so'z o'zagiga tushuvchi urg'u.

Recognitive function [ˈrekɔgnıtıv ˈfʌŋkʃən] – рекогнитивная (опознавательная) функция. Осознанное литературной нормой произношение (звука, слога, ударения и интонации), единое для всех представителей данного языка.

Rekognitiv (tyanib olish) funksiyasi. Adabiy norma sifatida tanib olingan ma'lum tilda so'zlashuvchilarning barchasi uchun bir xil bo'lgan talaffuz.

Reduction [rıˈdʌkʃən] – редукция, т.е. ослабление, сокращение и изменение артикуляции безударных элементов речи.

Reduksiya – urg'usiz elementlarning kuchsizlashuvi va talaffuzining o'zgarishi.

Regressive assimilation [ˈrıgresıv əˌsımıˈleıʃən] – регрессивная ассимиляция. Уподобляющие влияния артикуляции ка-

кого-либо звука, распространяющегося назад на предшествующий звук или слог.

Regressiv assimilatsiya – keyingi tovushning oldingi tovush yoki bo'g'in talaffuziga ta'siri.

Rolled ['rəuld] consonant – раскатистые согласные; вибранты, в артикуляции которых наблюдается быстрая смена смыканий – размыканий. Напр., [r].

Titroq (sonor) tovushlar – talaffuzida nutq organlarining davomiy titrashi ro'y beruvchi undoshlar. Masalan: [r].

Rhythm ['rɪðm] – Ритм. Чередование ударных и безударных, а также долгих и кратких слогов в речи.

Ritm. Nutqda urg'uli va urg'usiz hamda cho'ziq va qisqa bo'g'inlarning almashinuvi.

Rounded Vowels ['raundɪd 'vauəlz] – лабиализованные (округленные) гласные, при образовании которых участвуют губы. Напр, [ɔ, ɔ:, u, u:].

Lablangan unli. Talaffuzida lablar harakat qiluvchi unli tovushlar. Masalan: [u], [o'], [o].

Segment ['segment] – отрезок речи. Большой отрезок – макросегмент, маленький отрезок – микросегмент.

Segment – talaffuzdagi nutq bo'lagi. Katta nutq bo'lagi – makrosegment, kichik nutq bo'lagi – mikrosegment deyiladi.

Sentence stress ['sentəns 'stres] – фразовое ударение. Выделение слов во фразе. Один из важных компонентов интонации.

Fraza urg'usi (ba'zan gap urg'usi deyiladi) – nutqda (gapda) frazalarga, so'z birikmalariga tushuvchi urg'u. Intonatsiyaning muhim bir komponenti.

Sociolingustics [ˌsəuʃɪəuˈlɪŋuɪstɪks] – социолингвистика (социология языка). 1. Раздел языкознания, изучающий отношение между языком и социальной (общественной) жизнью. 2. Раздел языкознания, изучающий социальную дифференциацию языков, т.е. различные его социальные диалекты.

Sotsiolingvistika. (Til sotsiologiyasi). 1. Til va sotsial (ijtimoiy) hayot o'rtasidagi bog'lanishni ilmiy o'rganuvchi tilshunoslik bo'limi; 2. Tillarni sotsial farqlashni, ya'ni uning turli sotsial dialektlarini ilmiy o'rganuvchi tilshunoslik fanining bo'limi.

Social Phonetics [ˈsəuʃəl fəuˈnetıks] – социофонетика. Раздел фонетики, изучающий фонетические особенности социальных диалектов (социальных групп людей).

Sotsiofonetika. Sotsial dialektlarga (kishilarning sotsial gruppasi) xos fonetik xususiyatlarni o'rganuvchi fonetikaning bo'limi.

Sonorants (sonants) [ˈsɔnərənts, ˈsəunənts] – сонанты. Звуки, содержащие голосовой тон, звучные, с минимальной примесью шума. Напр. [l, r, j, w, m, n, ŋ].

Sonor tovushlar (yoki sonantlar) – talaffuzida shovqindan ton kuchli bo'lgan tovushlar. Masalan: [l, r, m, n].

Southern drawl (in American prounounciation) – так называется монофтонгизация дифтонгов в южно-американском произношении.

Janubiy Amerika talaffuzida diftonglarning monoftonglashuv hodisasi shunday deb ataladi.

Structural Linguistics (or trend) (Structuralism) – структурализм; структурная лингви стика, широко развлетвленное направление в современном языкознании, изучающее внутренние уровневые соотношения элементов языка. (Существуют американский, датский, пражский структуральные направления).

Strukturalizm (struktural oqim) – tildagi ichki aloqalarni va tildagi bosqichlar o'rtasidagi bog'lanishlarni hozirgi davr tilshunosligida ilmiy o'rganuvchi oqim (AQSH, Daniya, Praga kabi strukturalizm maktablari mavjud).

Syntagmatics ['sintægmatiks] – синтагматика. Рассмотрение единиц языка в плане их сочетаемости в горизонтальной плоскости. Напр., $A_1A_2A_3 \ldots A_n = A_x$.

Sintagmatika – tildagi elementlarni gorizontal bir yo'nalishda birikishini o'rganish. Masalan: $A_1A_2A_3 \ldots A_n = A_x$.

Syllabeme ['silabi:m] – Силлабема. Фонологическая (просодическая) единица, служащая для различения минимальных пар с помощью слогоделения. Напр., К Ире – Кире, a name – an aim.

Sillabema. Fonologik (prosodik) birlik bo'lib, bo'g'in bo'linishi yordamida minimal juftlarni farqlaydi Masalan, g'isht 'in – g'ishtin kabi.

Substance [ˈsʌbstəns] (of expression) – субстанция. Материальная (звуковая) сторона языка.
Substansiya. Tilning material (tovush) jihati.

Syllable [ˈsɪləbl] – Слог. Один звук или сочетание нескольких звуков, артикулируемое едино голосовым элементом.
Bo'g'in – bir yoki bir necha tovushlarning birikuvidan hosil bo'lgan bir yo'la talaffuz etiluvchi nutq bo'lagi.

Syllabic sounds [ˈsɪlæbɪk ˈsaundz] – Слоговые звуки, т.е. звуки, образующие слог и произносимые с большой звучностью; они находятся в вершине слога. Как правило, такими звуками считаются гласные и сонорные согласные.
Bo'g'in hosil qiluvchi tovushlar. Ular juda jarangli bo'lib, bo'g'in cho'qqisini hosil qiladi. Odatda bunday tovushlarga unlilar va sonor undoshlar kiradi.

Syllable boundary [ˈsɪləbl ˈbaundərɪ] – граница слога. Слоораздел. Bo'g'in chegarasi (chizig'i) – bo'g'inlarni ikkiga bo'lish chegarasi.

Tagmeme [ˈtægmɪ:m] – тагмема. Мельчайшая единица грамматического членения речи на уровне предложения; единица морфосинтаксической организации речи.
Nutqning gap bosqichidagi eng kichik grammatik bo'linishdagi birligi; nutqning morfosintaktik tashkil bo'lishidagi birlik.

Tagmemics [ˈtægmemɪks] (Phonotagmemics) – тагмемика лингвистическое направление в США, имеющее свой раздел «фонотагмемику». Главой этой школы является К.Л. Пайк.
Tagmemika. AQSHdagi tilshunoslik oqimi. Uning bir bo'limi «fonotagmemika» deb ataladi. Bu oqim boshlig'i – K.L. Payk.

Tempo of speech [ˈtempəu əv ˈspɪ:tʃ] – темпы речи, время звучания (бывают слабый, нормальный и быстрый темпы).
Nutq tempi – nutqning aytilish vaqti (sekin, normal, tez talaffuz qilish).

Tense [tens] (Fortes) – напряженность. При артикуляции долгих гласных английского языка органы речи бывают напряженными.
Kuchli. Ingliz tilidagi cho'ziq unlilarning talaffuzida nutq organlari kuchli holatda bo'ladi.

Timbre (tamber) [ˈtımbə, ˈtæmbə] – качество (тембр) голоса (бывает нейтральным и эмоциональным).

Ovozning sifati (tembri) (u bevosita neytral va emotsional bo'ladi).

Toneme [ˈtəunı:m] – Тонема. 1. Фонологическая единица, служащая для дифференциации слов с помощью тонового ударения. Напр., в китайском, тайском и др. языках. 2. Фонологическая единица во фразе, служащая для их различения с помощью высоты тона.

Tonema. 1. Ton urg'usi yordamida so'zlarning ma'nolarini farqlovchi fonologik birlik. Masalan, xitoy, tay va boshqa tillarda. 2. Frazalarni tonning balandligi yordamida farqlashga xizmat qiluvchi fonologik birlik.

Transcription [ˈtrænskrıpʃən] – Транскрипция. Способ записи устной речи с помощью специальных знаков.

Transkripsiya – og'zaki nutqni maxsus belgilar orqali yozib olish usuli.

Unidimensional (bilateral) opposition [ˌju:nıˈdaımenʃənəl] – одномерная оппозиция, т.е. совокупность признаков, которыми обладают в равной мере оба члена оппозиции. Она присуща только этим двум членам оппозиции и не присуща никакому другому члену той же системы. Напр., англ. [p – b], [t – d], [k – g], [b – m], [d – n], [g – n], [f – v], [s – z], [s – ʃ].

Bir o'lchovli oppozitsiya – a'zolariga tegishli belgilar yig'indisi faqat shu fonemalarga tegishli bo'lib, sistemadagi boshqa a'zoga tegishli emas. Masalan, [p – b], [t – d], [k – g], [b – m], [d – n], [g – n], [f – v].

Unrounded vowels [ˈʌnraundıd ˈvauəlz] – нелабиализованные гласные, при образовании которых губы не участвуют. Напр., [i:, e, i, æ, ʌ, ə:, ə, α:].

Lablanmagan unlilar talaffuzida lablar ishtirok etmovchi unlilar. Masalan: [i, e, a].

Uvular consonants [ˈju:vju:lə] – увулярные или языковые согласные, артикулируемые нёбным язычком или задней спинкой языка. Напр., узб. [g'] и франц. [r].

Uvulyar undoshlar – kichik til yordamida hosil bo'luvchi tovushlar. Masalan, o'zbekcha [g'], fransuz tilida [r].

Variations of the phoneme [ˌvɛərɪˈeɪʃnz əvðəˈfəunɪ:m] второстепенные звуки, относящиеся к определенной фонеме и отличающиеся от ее вариантов (аллофонов).

Fonemaning variatsiyasi – fonemaning asosiy variantidan (allofonidan) farqlanuvchi ikkinchi darajali tovushlar.

Variphone [ˈvɛərɪfəun] – Варифон (свободная фонема). Совокупность реализации определенной фонемы, необусловленной позиционными изменениями и непроизвольно возникающей в разных диалектах.

Varifon (erkin fonema). Ma'lum fonemaning pozitsion o'zgarishlar bilan bog'liq bo'lmagan va turli dialektlarda uchraydigan vakillarining yig'indisi.

Velar [ˈvɪ:lə] consonants – Велярные, задненёбные согласные, образуемые нёбной занавеской. Напр., [k. g].

Tanglay, til orqa (velyar) undoshlari (yoki chuqur til orqa undoshlar); til orqa qismining tanglayning orqa qismiga tomon ko'tarilishi bilan talaffuz etiluvchi tovushlar. Masalan, [q, g', x].

Velarization [ˈvɪ:ləraɪˈzeɪʃən] – веляризация (отвердение). Дополнительная артикуляция (подъем) задней части спинки языка по направлению к заднему или мягкому нёбу, что вызывает твердость согласных.

Velyarizatsiya – til orqa qismining yumshoq tanglayga ko'tarilishi orqali qattiqlashuv hodisasi. Masalan, qattiq [t].

Voiced [ˈvɔɪst] consonants – звонкие согласные, при образовании которых голосовые связки вибрируют: [d, z, ð, dʒ, ʒ, v, b, g].

Jarangli undoshlar talaffuzida tovush paychalari titraydigan undoshlar. Masalan, [b, d, g, z, v] kabi.

Voiceless [ˈvɔɪslɪs] consonants – глухие согласные, при артикуляции которых голосовые связки не вибрируют.

Jarangsiz undoshlar. Talaffuzida tovush paychalari titramaydigan undosh tovushlar. Masalan: [p, t, k, s, f] kabi.

Word stress [ˈwə:d ˈstres] – словесное ударение; выделение слога или слогов в слове.

So'z urg'usi; so'zdagi bo'g'in yoki bo'g'inlarni ajratuvchi urg'u.

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