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ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

ACCENTUAL TYPES OF WORDS IN MODERN ENGLISH (Experimental phonetic investigation)

Speciality: 5708.01 – Germanic languages

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GENERAL CHARACTERISTICS

Urgency of the theme and the degree of research. It is known that the expression sides of the words or word forms, being the language units, are not limited with phonemes and speech sounds establishing their substantial cover. It is important to include other phonetic means of expressions and phonological units in this matter. As to R.Jacobson and M.Hale, unless other units are included into the phonological system of the language except phonemes, the phonological system of the language cannot be described as something complete or proper. These scholars divide the distinctive features into two parts – inherent and prosodic[1] .

Prosodic elements as phonemes possess constitutive and distinctive functions. As to N.S.Trubetskoy, distinctive functions of voice features can be considered only as so called "free" stress, namely the stress the placement of which apparently in the words is not conditioned, and perhaps it is stress which distinguishes the meanings of a word[2].

From this viewpoint stress in English is "free" and it is fitting to distinctive requirements. It should be noted that the most important and central unit of a language is a word; so that, the existence of a number of elements in the language, which ensure the load of meaning of each word and word forming is considered to be important. In the English language, the formation of words as a complete lexical-grammatical unit is mainly realized by stress, which is considered as an important element, and the bearer of its acoustic features.

The main function of stress is expressed by the fact that it (namely, stresses of different degrees) performs the phonemes (allophones) within a certain quantity, creates the unity of words and inner elements of word forms, connecting them in one sound complex, turns the combination to a whole unit, determines their

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[1] Якобсон, Р.О. Фонология и его отношение к фонетике / О.Р.Якобсон, М.Халле // В кн: Новое в лингвистике. Вып. 2, Москва, – 1962. –с. 235

[2] Trubeskoy, N.S. Fonologiyanın əsaəları. Alman dilindən tərcüməsi, "Qeydlər və "Son söz" Fəxrəddin Yadigarındır / N.S.Trubetskoy. – Bakı: Elm və Təhsil, – 2012. – s.259

lexical-semantic contents and grammatical forms and ensures their cognition.

English phonetician R.Kingdon comparing wrong stress with intonation writes: "In a strongly stressed language like English, where vowel quality is so frequently influenced by the presence or absence of stress, wrong stressing disguises words far more effectively than does the wrong intonation"[3].

The above mentioned citation shows that studying the relation of stress, which is the inseparable and main components of words and word forms, compound words or word combinations in the modern English language is of great importance. Investigations show that despite the fact that the accentological system of the language is characteristic with its firm stability, this stability can be subjected to gradual changes. Such changes manifest themselves as facts in the changes taking place in the accentual structures of the American version of the modern English language and the BBC version of the English language in polysyllabic words, word forms and compound words, etc.

From this view the urgency of the theme can be conditioned by the observation of disparity in the accentological system of the modern English language, by the existence of good enough distinctions in the words possessing strong prefixes as to the place, degree and syllabic distribution of stresses in the English language observed in "The Pronouncing Dictionary" by D.Jones in its old publications, also in the lexicological dictionaries published both in our country and abroad, in the pieces of information given on the accentual types of words in the English language and including the differences existing between the accentual structures and accentual types in pronouncing dictionaries worked out on the basis of BBC pronunciation models.

Different approaches, thoughts and assumptions on the different aspects of word stress, on its accentological peculiarities as a whole take place in the works of English phoneticians such as D.Jones, R.Kingdon, O'Connor, A.Gimson, P.Leydfoged, D.Fray, D.Kristal,

[3] Kingdon, R. The Groundwork of English Stress / R.Kingdon. – London, – 1958, XI

H.Grgerix, P.Roach and others, in the works of post-soviet Germanistics such as V.Vitomskaya, V.A.Vasilyev, G.P.Torsuyev, O.Dikushina, A.L.Trakhterev, A.M.Antipova, M.A.Sokolova, E.A.Glikina, V.Karnevskaya, S.F.Leontyeva, Y.A.Dubovski, F.Veysalli, T.Vrabel and others, including the works of the Azerbaijani phoneticians as A.Akhundov, S.Babayev, F.H.Zeynalov (1996) and others. Nevertheless, it is necessary to mention that in the English language with the exception of the work of G.P.Torsuyev, we do not come across special research work in this field. Based on the 11th publication of D.Jones "English Pronuncing Dictionary", G.P.Torsuyev determined eleven accentual types of words in the English language and the conclusions which he makes form disparity with the accentual structure of words in the modern English language.

The object and subject of research. The object of the research contains disyllabic, polysyllabic words, compound words and compound abbreviated words consisting of many components. The subject of research is the systematization and generalization of the knowledge attained by the analyses of accentual structure of these words and their accentual types.

Aims and objectives of the research. The purpose of the research is to study polysyllabic words, accentual-rhythmic structures of many-component compound and compound abbreviated word combinations and reveal the accentual types of words based on the prosodic structures and modeling them. To achieve these goals it becomes necessary to carry out the following research tasks:

- to consider the theoretical problems linked with the accentual structure of words in modern linguistics;
- to give the analyses of existing thoughts and considerations on stress in modern Germanic languages study;
- to consider the aspects of word stress in English;
- to investigate accentual-rhythmic structures of English two disyllabic, polysyllabic and many-component compound words and compound abbreviated words, words possessing prefix or suffixes;
- to specify the degrees of word-stress in the English language;
- on the basis of experimental-phonetic analyses to discover the accentual types of words and to establish their models.

Methods of research. Each method used in any research work is conditioned by the tasks and objectives put forth before the reseach work. From this point of view, the following methods such as observation, comparison linguistic description and method of experimental-phonetic analysis were used in the work. The language materials used in the research, being analyzed by the "Praat" computer program, acoustic indications of degrees of stress, unstressed and weak-stressed (secondary stress) have been discovered and on the bases of the attained results, attempts have been made to find out the accentual types of English words and their modeling.

The main provisions for defense:

1. There were certain disparities between the pieces of information given in dictionaries and textbooks, which were published earlier by scholars on the accentual structures of words of the modern English Language.

2. Despite the fact that the accentological system of the English language is characteristic with its firm stability, during the course of time it has been subjected to some changes.

3. There still exist contradictory thoughts about the nature of the word stress in English.

4. In the modern English language words and word forms as to the placement and degree of stress formulate a certain quantity of accentual types.

5. Each accentual types depending on the place and number of syllables, are realized in different accentual-syllabic structures in the modern English language.

6. There exist some tendencies and factors influencing the accentual-rhythmic structures of disyllabic and polysyllabic words in the English language.

7. In the modern English language polysyllabic, two-component and many component compound and compound abbreviated words are realized only by one strong stress.

Scientific novelty of the research work. It should be mentioned that in the lexicological dictionaries published in the English language (both in our country and abroad) serious distinctions manifest themselves between dictionaries from the view of placement and

degrees of stress in polysyllabic and compound words, word combinations including the accentual structures of abbreviated words. On the other hand, between the pieces of information given on the accentual types of words before and the pieces of information given in the present-day dictionaries from the view of quantity, disparities are observed. Taking the logical contents of the above-mentioned considerations and the considerations put forth by the compilers of the 17th publication of Jones Pronouncing Dictionary (P.Rouch and others) as bases, attempts made for the discovery of accentual types of words modern English by the experimental-phonetic method in Azerbaijani Germanics can be valued as innovations of researh.

The theoretical and practical significance of the research. The theoretical significance of the work can consist of the facts that in the clarity of some disputable problems existing in the accentological system of the modern English language and deepening of these problems including the study of similar problems in other languages can be of scientific-theoretical importance and their consideration in this work can be considered as the theoretical importance of the dissertation. The practical importance of the dissertation is that the conclusions attained as a result of investigations can be used in the dictionaries on the English language, in the textbooks and manuals written on the English phonetics, phonology, including English lexicology and at the lectures and workshops carried out in English.

Approbation of the dissertation. On the separately taken chapters of the dissertation discussions have been carried out in the Department of English phonetics of AUL, reports have been made in the international and Republican scientific conferences; also scientific articles have been published in different journals.

Structure and the total volume of the research work. The dissertation consists of an introduction, three chapters, a conclusion and the list of used literature and appendixes. Introduction – 7 pages, 14,227 characters, Chapter I – 51 pages, 97,574 characters, Chapter II – 34 pages, 60,278 characters, Chapter III – 42 pages, 60,226, conclusion – 4 pages, 6,548 characters, list of references – 14 pages. The total volume of the dissertation consisting of 19,642 characters, chapters 154 pages, 261.049 characters.

BASIC CONTENTS OF THE RESEARCH WORK

The "**Introduction**" substantiates the choice and the relevance of the research topic, defines its object and subject, goals and objectives, indicates the research materials and methods, sets out the scientific novelty, the theoretical and practical significance of the work, outlines the main provisions to be defended, provides information on approbation, structure and volume of the dissertation.

The first chapter of the work is called "**Theoretical problems of word stress in modern linguistics"** and consists of three sub-chapters.

The first sub-chapter named "**General remarks"** conveys information on accentological problems of stress such as nature of stress, its placement, movability degrees and functions, as well as its relation or connection of word stress on belonging to a vowel, syllable and the whole words in linguistic literatures and opinions of foreign and Azerbaijani linguistics are analyzed concerning the content of these notions.

The second sub-chapter, called "**The problem of the study of stress and its definition in Germanism".** It deals with the summary of the scientific-theoretical literature on the accentological peculiarities of stress in Germanic languages.

Investigations show that on dealing with the nature of word stress in Germanic languages, dynamic, musical (tonic), quantity and quality stress types are distinguished[4].

F.Veysalli, who deals with the nature of word stress in the Germanic languages writes: "As to its nature word stress can be melodic, dynamic or temporal. In most cases, in the ground of the stress two components stand-melody + power (intensity); power + time (temporal), melody + time, etc." As to the thought of the scientist "In the Germanic language stress is melodic-dynamic, time is the inherent feature of the vowel phonemes. In the English language stress is dynamic-melodic. In the Azerbaijani language stress is dynamic"[5].

[4] Зиндер, Л.Р. Общая фонетика / Л.Р.Зиндер. – Москва, – 1979. – с. 266.

[5] Fakhraddin, Yadigar. Introduction to the German language / Fakhraddin Yadigar. – Baku: Tahsil, – 2003. – p.261.

One of the problems with stress in Germanic languages is the problem of placement of stress in words. As to its place stress can be free and fixed stress. The place of stress in the Germanic languages in two or more syllable words tends more to the root of the word. Nevertheless, in the Germanic languages stress may fall on any syllable of the word.

In this respect in the modern Germanic languages, two thoughts are put forth, linked with the discrimination of two problems. One of these problems is the placement of stress and the second one is the movability of the stress.

In the German and Dutch languages word stress may fall on different syllables of the same word[6].

For e.g.: /'aːbənt/ axşam, /melo'diː/ melodiya, /ter'naeniŋ/ inkarlıq in the Dutch language: /'kaːnɔn/ - kanon, /kaː'nɔn/ – top (təyyarə vuran) /'servis/-/ser'vis/.

Both in the German and the English languages when word forms change, the place of stress changes as well. For e.g.: 'climate-cli'matic; 'melody-me'lodic. As it is seen from the examples, despite the fact that the place of stress is free, from the view of movability, it can be characterized as relatively free or relatively movable.

One of the accentological problems of stress is the problem of degree of stress in words and the other one is its function. In the Germanic languages three degrees (in the German language) and four degrees (in the English languages) are distinguished.

As far as word stress is concerned with the linguistic sources several functions of stress, such as culminative (N.S.Trubetskoy), constitutive, recognitive (L.R.Zinder, V.A.Vasilyev), distinctive or demarcative (R.O.Jakobson) are distinguished. In the English language constitutive, distinctive, recognitive functions of stresses are mentioned (R.Kingdon, A.Gimson, H.Glison, V.A.Vasilyev).

In the Germanic languages as to the relation of stress to the language of units, four types of stress are distinguished: word, syllable,

[6] Fakhraddin, Yadigar. Introduction to the German language / Fakhraddin Yadigar. – Baku: Tahsil, – 2003. – p. 262

syntagmatic and sentence stresses. To the number of English stress rhythmic and metric kinds of stresses can be added as well[7].

In the sub-chapter called "**Aspects of word stress in the English language**", the summary on the nature, placement and degrees of stress in the English language, scientific-theoretical literature is introduced.

Studies show that one of the most arguable problems with the word stress is the nature of stress and the second one is the problem of degrees of stress[8].

As to O.Dikushina in the English language, dynamic stress is expressed distinctly, but it has no quantity, quality components[9].

G.P.Torsuyev comparing phonetics distinctions of word stress with sentence stress points out that the common component for the word stress and sentence stress is the force component.

Melodic components as to him are in the composition of sentence stress. This component as a whole is not characteristic for the phonetic structure of the words of the English language[10].

As to A.V.Vasilyev, stressed syllables in English are distinguished from the unstressed syllables by the high pitch and change of the pitch direction, strong breath and strong tensity of muscles[11].

But A.Gimson notes that the prominence of syllables in words is realized by four means (stress, pitch of the voice, quality of voice, the length-quantity of voice). A.Gimson comes to such a conclusion that the change of pitch in speech is the most general means signaling the distinction[12].

Sharing A.C.Gimson's thought P.Roach on the nature of stress points out that in the English language the powerful distinction is

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[7] Akhundov, A. İngilis və Azərbaycan dillərində vurğunun ritmik-melodik xüsusiyyətləri / A.Akhundov, S.Babayev, F.H.Zeynalov. – Bakı: BDU, – 1996. – 252 s.

[8] Jones, D. An outline of English phonetics. 8th edition / D.Jones. – 1957. – p.245

[9] Dikushina, O. English phonetics / O.Dikushina. – Moscow, – 1965/ – p.122

[10] Торсуев, Г.П. Вопросы акцентологии современного английского языка / Г.П.Торсуев. Москва-Ленинград: АН. СССР, – 1960. – с. 32.

[11] Vasilyev, V.A. English phonetics. (A theoretical course) / V.A.Vasilyev. Moskva, – 1970. – p. 260

[12] Gimson, A.C. İntroduction to the pronunciation of English / A.C.Gimson. – London, – 1970. – p. 227

created by the height of the voice tone and length of voice is also a strong factor. Loudness and quality have less effect[13].

From the carried out investigations, it becomes clear that there is not a unanimous opinion among the scholars on the phonetic nature of word stress in English. Nevertheless, most of the phoneticians dealing with the nature of word stress put the force factor in the first place with which they highlight the dynamic character of word stress.

The cause of differentiation of thoughts in English, as we think, derives from the approach of the same prism to the word and sentence stress by some scholars. As far as the length component is concerned, it should be mentioned that the length of voice, being distinctive in the phonemic level in English it is excluded to act as the main factor signaling the word stress. We share our opinion on the nature of the dynamic character of word stress, wanted to note that the same dynamism is measured by the energy of the air stream spent on it and by the intensity of muscles from the view of articulation. Due to this reason, the distinction of syllables on this or that word is connected with the energy spent on it. On the basis of the prominence of voice formed by the pitch of voice tone and loudness naturally stand on the factor of force and energy. From this viewpoint, in the definition of the nature of word stress in English, we take the dynamic (force) component as a basis and support the idea of other factors as being secondary factors. The main accentological category for the word stress in English is whether the placement of stress in words is free, fixed or movable. In English the placement of word stress is free. In this language stress can fall on different syllables in the words. For e.g. "ˈlovely", "re'spect", "emplo'yee" etc. Investigations show that determination of the place of stress in English on the basis of certain rules is a complicated problem.

Nevertheless, in the determination of the placement of stress in the English language, it is necessary to have some linguistic knowledge. While determining the place of stress in the words it is necessary to

[13] Roach, P. English phonetics and phonology / P.Roach. – Cambridge University Press, – 2009. – p.74

know the following information 1) whether the word is morphologically simple or complex that contains one or more affixes (prefixes or suffixes) or being a compound word; 2) how many syllables the word has 3) to what category the word belongs (noun, adjective, verb, etc.); 4) historical origin of the word.

Dealing with the relation of the suffixes to stress, P.Roach divides them into 3 groups: 1) suffixes carrying primary stress themselves; 2); 3) suffixes that influence stress in the stem (root)[14].

He includes the following suffix which takes the stress onto themselves: -ee, -eer, -ese, -ette, -esque. For e.g. ˌrefúge'e, ˌmountaíne'er, laundeŕe'tte, picture'sque.

The following suffixes are included into the group of suffixes that do not influence the placement of stress in word forms: -able, -age, -ful, like, -less, -ment, -ness, -wise etc. 'comfortable, 'wonderful, 'birdlike, 'powerless, 'punishment, 'yellowness, 'otherwise, etc.

The following suffixes are included into the group of suffixes that influence the placement of stress in the stem: -eous, -graphy, -ial, -ic, -ion, -ious, -ty, -ive.

Ad'vantage →ˌ advan'tageous, 'photo → pho'tography, 'proverb → pro'verbial, 'climate→cli'matic, 'injure→in'jurous, 'tranquil→tran'quility, 'reflex→re'flexive. In this case primary stress is on suffixand the secondary stress is on the first syllable.

It should note that a certain part of two-syllable words and most of the polysyllabic words mainly consist of suffixes or prefixes. Thus, depending on the load of meaning which prefixes bear, they show themselves differently as to the place and degree of stress. From this viewpoint the prefixes used in the English language are divided into two categories: 1) prefixes of Germanic origin; 2) Prefixes of Romanic origin.

The attitude of the prefixes of Germanic origin to the stress is of double character. Thus, a-, be-, with- prefixes in the composition of the words are unstressed, and the place of stress in the words is on the second syllable: a'wake, be'lieve, with'draw. Other prefixes such

[14] Roach, P. English phonetics and phonology / P.Roach. – Cambridge University Press, – 2009. – p. 74

as (mis, out-, over-, un-, under-, up-) being joined the verbs bear secondary stress. E.g. (ˌun'do, ˌout'do, ˌover'look, ˌunder'pay), but when they join the nouns, they bear the main stress ('overlook, 'overdose, 'underwear, 'upstart, etc.). Prefixes of Roman origin are usually unstressed (a/d-, com-, de-, dis-, ex-, en-, in-, o-, per-, pre-, pro-, re-, sub-) and the place of stress is on the second syllable. For e.g. ad'mix, com'plain, dis'card, ex'clude, en'treat, in'hale, o'ppose, pe'rsuade, remember, subside etc. Unlike the prefixes of Germanic origin, most of the prefixes of Romanic origin, when being a part of verb become unstressed: com'pare, dis'turb, pro'duce, etc.

As far as the place of stress in compound words is concerned here we come across different approaches. R.Kingdon classifies the compound words of Germanic origin according to their components. He divides the compound words consisting of noun in the first component and noun, gerund, adjective, past participle, adverb and verb in the second component, into 5 groups, and determines the place of stress in each of these groups and notes that in the compound words of such type one main stress is characteristic and in such combinations stress falls upon the first syllable[15].

As to Gimson in compound words which are the most common type of words in English the place of stress is on the first element. As to him, in the two, three, four and five- syllabic words except for the main stress, there can be the secondary stress. In this case, the main stress may transfer onto the second or the last syllable of the words. For e.g. ˌblack 'current ˌgood-'looking. In these words, the place of the main stress is located on the second stress.

In the word combinations, consisting of three components such as ˌhot-'water-ˌbottle, ˌwaste 'paper-basket the place of stress is on the second component of the compound words[16].

Thus, investigations show that in the English language disyllabic or polysyllabic words, including the compound words and compound abbreviated words there exist several rules, factors and tendencies,

[15] Kingdon, R. The Groundwork of English stress / R.Kingdon. – London, – 1958
[16] Gimson, A. The indicated work, p.228

conditioning the place of stress, but among them semantic and rhythmic factors are of leading roles.

In the English language, one of the important aspects of stress is its degrees. D.Jones defines the degree of word stress according to the number of syllable s in the words. The division of degrees of stress to such smaller quantities indicates sonority which is peculiar to the vowels, the length of consonants and prominence of stress accompanied by intonation[17].

American linguist H.A.Glison distinguishes four degrees of word stress in the English language and marks each of them with special signs[18]: main stress – /ˈ/, tertiary stress – /ˋ/, secondary stress – /ˆ/, weak stress – /ˇ/.

Investigations show that there is unanimous of English (D.Jones and R.Kingdon) American and as well as of the scholars of postsoviet period to the degrees of word stress in the English language. Thus G.P.Torsuyev, O.Dikushina, V.A.Vasilyev, S.F.Leontyeva, Y.B.Karnevskaya, Y.A.Dubrovski, A.M.Antipova, M.A.Sokolova, T.T.Vrabel and others note that there are four degrees of stress in the English language (main, secondary, weak and even stress of which are not equally corresponding to the accentual model of BBC of the present-day English. Thus, in the present-day English in the accentual structures of words, the degree of equal or even stress is excluded.

The second chapter is called "**Accentual-rhythmic structure of words in the English language**" and consists of five sub-chapters. In these subchapters, the analyses of the accentual-rhythmic structure of words included to the investigation are based on the materials of textbooks and dictionaries published in the 50th and 90th years. In this chapter the relation of word stress to borrowings and words of Germanic origin in the English language, accent-rhythmic structures of two or more syllable words compound words, word combinations consisting of three, four and more components are widely drown to analysis.

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[17] Jones, D. An outline of English phonetics. 8th edition / D.Jones. – Cambridge, – – 1957. – p. 247.

[18] Глисон, Г.А. Введение в дескриптиную лингвистику / Г.А.Глисон. – Москва, – 1959. – с. 41

It is necessary to note, that in the English language we come across with information on the accentual structure of two or more component words and word combinations in the work of Roger Kingdon. Under the name of compounds he investigates and analyses the words and word combinations of Greek, Roman and Germanic origin[19]and comes to such a conclusion that the components of words of Greek and Roman origin cannot be used separately. They form polysyllabic words and occupy intermediate position among other compounds (electro ˌtype; 'hetro 'geneous; 'micro ˌphone, etc.).

Compounds of Germanic origin consist of the combination of two or more independent words. Compounds of such type in some cases can be written either through a dash or as one word ('salt 'water; 'air 'craftman, 'urban'district 'council, etc.).

In the English language stress as an active factor influences the phonemic, syllabic and accentual-rhythmic structures of words and changes them. These changes taking place in the accentual structures of words and word combinations, at the same time influences the grammatical forms of word and word combinations and their meanings as well. Let's compare:

a) 'object (n) – əşya, obyekt; ob'ject (v) – etiraz etmək; au'gust (adj) – əzəmətli, möhtəşəm; 'August (n) – avqust ayı;

b) melody ['melədi] (n) – melodiya, melodic [mə'lədik] (adj);

c) 'cooking 'butter – əridilən yağ; 'cooking butter – əridilməsi nəzərdə tutulan yağ; 'blue 'stone – göy daş; 'bluestone – ağır metalların sulfat duzu.

In the English language compounds consisting of three components show themselves in two forms: 1) word combinations of which both components possess independent lexic-semantic meanings. E.g. ˈaircraft ˈcarrer, 2) word combinations which consist of a subsidiary word. e.g.ˈbutter -and ˈeggs, ˈbird of ˈparadise

In the English language many compounds consisting of more than three components are observed, as a rule in initials stress patterns in this type of compounds may vary depending on the presence of the

[19] Kingdon, R. The indicated work, p.32

notional and structural words. So that, side by side with the notional words structural words are often used with initials.

'First 'Lord of the 'Admirality, 'Navy 'Army and 'Air Farce 'Institute. 'British 'Shipbuilding 'Research Assȯciation ('B'S'C'R'A).

Thus, polysyllabic words in the English language are of Greek and Romantic origin, but two or many component words are the words and compounds of Germanic origin. The components, forming the Roman and Greek of compounds are mainly the components that are not used separately and do not act as independent words and components of such type mainly can formulate many syllable words and their accentual structures are not so various. But each of the components forming the words and compounds of Germanic type can separately be used as an independent lexical unit. On the other hand, the compounds, consisting of words of Germanic origin, can create not only two-component words but can also form compounds consisting of three or more components. From this viewpoint, the accentual-rhythmic structures of such compounds are of greater choice and variety.

The third chapter of the dissertation is called "**Experimental-phonetic analysis of accentual types of polysyllabic words in the Modern English language"**and it consists of four sub-chapters. In these sub-chapter it is dealt with the oscillographic analysis of accentual structures of Present-day English words. In the analysis of acoustic parameters of language materials "Praat" computer program has been used.

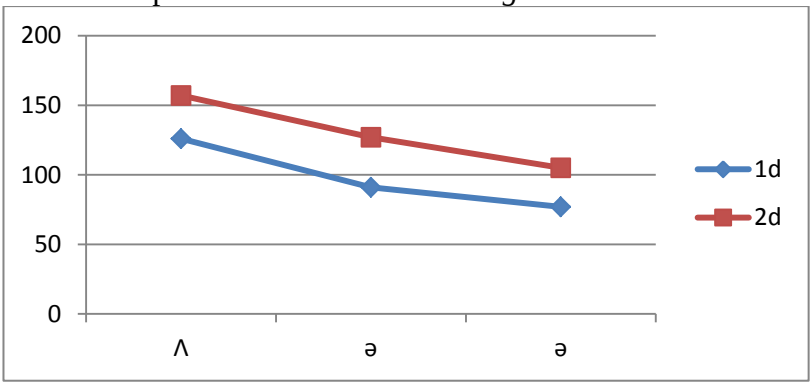
Polysyllabic and compound words, word combinations, including many-component compounds and abbreviated words have been included the analysis of acoustic materials. Characterization of acoustic parameters of words in Present-day English:

a) Characterization of words as to FFT.

It becomes clear from the analysis of mathematical figures, reflecting the fundamental frequency of the tone attained on the pronunciation of the word "government" /qʌvənmənt/ in the English language that the first announcer began this word with 126 hs., but the second announcer began it with 157 hs. The fundamental frequency of the tone for the first announcer in the final phase of this

word was 77 hs. but for the second announcer it was 150 hs. During the pronunciation of the whole word FFT (basic tone frequency) was not just the same from beginning till the end, but it was changeable. Changes have taken part among three syllables. See graphic 1.

Graphic 1. Indications reflecting the FFT of vowels during the pronunciation of the word */government/*



Such position taking place in FFT showed itself in the melodic structures of polysyllabic words possess similar models too. e.g. in the melodic structure of the word "legislative" FFT is used in the position of syllabic level, forming maximum situation.

In the words "government", "legislative" also in the other polysyllabic words such as /characterizing/, /subvariety/, /fauntain pen/, /satisfactory/, /hospitable/, /soda-water-bottle/, /sheeterness/, /faultfinding/ and others which we have analyzed, it was found out that the changes taking place in FFT was in the similar position.

In a certain part of many-syllable words, in the second syllable FFT was still higher. In other syllables vowels as to FFT was in the low level for e.g. /identifiable/, /ungentlemanliness/, /uncomfortable/, /appreclatory/, /illimitableness/, /unquestionableness/, /unexceptionable/, /immutability/, /hallucination/, /unseaworthy/ etc.

In the melodic structure attained from the pronunciation of the many-syllabic word /House of Commons/ the maximal level of the main tone of frequency was connected with the third syllable (163

hs.). Here melodic peak was situated in the middle of the expression. The frequency of tone used before or after the syllables are lower.

While analyzing melodic structures of such model of words and expressions such as/Toad in the hole/, /dog in the manger/, /intercontinental/, /methodological/, /americanization/ etc. which have been attracted to our analysis, we have observed one case common for all. The common case is linked with the place of stress in these words and expressions. The syllabic composition of the analyzed words and expressions was not more than four. Nevertheless, in all of them the main stress was placed on the fourth syllable. The indications of FFT in the pronunciation of these model words and expressions were in the peak level just in this syllable.

Among the polysyllabic words which we have analyzed, there are abbreviations as well. Their pronunciation causes some difficulties during communication. Consequently, it is important to take the changes in acoustic parameters into consideration during the pronunciation of such model of words If we pay attention to what components bearer the main stress and others possess weak stress (secondary stress), while pronouncing the abbreviated words, speech can be clearer and communication may become still comprehensive. Computer analyses on the basis of oscillograms attained from the pronunciation of such abbreviated words such as USA, BBC, GPO, EMS, FBİ, VAT used in English GCSE, VİP, İSO, NASA, NATO, UFO, UEFA, UCAS, MBA, CNN, ACAS have been carried out and brought clarity in the determination of degrees of stresses which were considered a disputable problem. e.g. in the pronunciation of USA /ju: es ei/ both announcers in the accentual rhythmic group as to the frequency of the basic tone have distinguished the first syllable. The very syllable has been dominant in the rhythmic group. But in the further syllables take of voice gradually weakened. But in the pronunciation of the abbreviated word BBC /bi: bi: si/ as to the melodic component the third syllable became in the peak level. In this accentual rhythmic structure three syllables have been combined. The vowel of the first syllable is 111 hs. tone frequency, in the second syllable this indication becomes lower (99 hs.). But in the third syllable the indicator pointing to this parameter had risen to the

maximum level. Accordingly, in comparison with the first and the third syllables, the second syllable had been in minimal lower level. But in the second announcer maximum level of tone frequency had been in the first level.

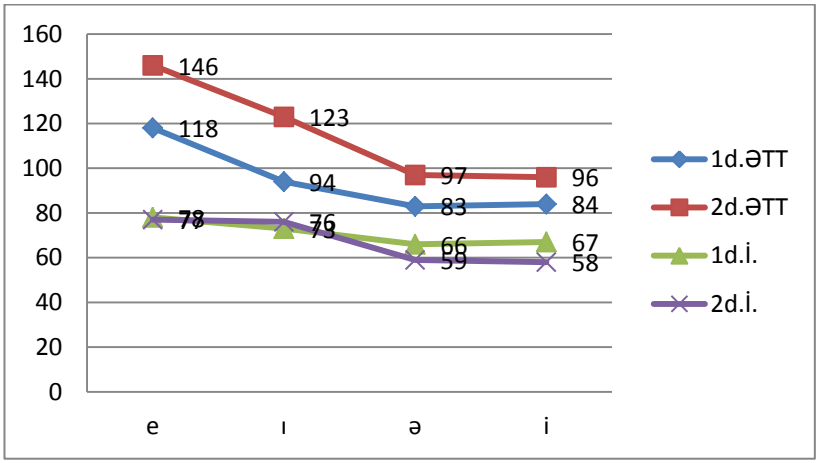
b) Characterization of words as to the intensity.

Analysis shows that in the English language, in the accentual structures of polysyllabic words and expressions, mainly the first and the second syllables as to the parameter of intensity possessed more frequency of usage. For this purpose, a part of computer analysis carried out on the language material is introduced here.

Polysyllabic words such as /government/, /legislative/, /subvariety/, /hospitable/, /soda water-bottle/, /ginger-beer bottle/, /English teacher/, /fountain pen/, /teleworking/, /superconductor/, /superwoman/, /overman/, /underdo/, /deaf and dumb/, /mather-in law/, /kiss-in the ring/, /gentleman at arms/ etc. which have been distinguished as to the force of the intensity of the first syllable in the accent-rhythmic structure, when being analyzed their parameters of intensity it became clear that in the first syllable of these words the fundamental frequency of tone was also higher. In the polysyllabic words of the mentioned above model the first syllable is the bearer of maximum intensity indication. In order to show this on the analyzed language materials we have compared the figures reflecting the changing of intensity indications of polysyllabic word /government/ in rhythmic accentual structures. See the table 1.

Speaker	*government*		
	Λ	ə	ə
I d.	81	73	66
II d.	77	67	62

Graphics reflecting I (intensity) parameters and calculated FFT on the basis of oscillogram attained from the pronunciation of the polysyllabic word */legislative/*



Graphic 2.

As it is seen from the graphic both in the formulation of the main stress and the frequency of the main tone intensity has acted as a relevant sign. Analysis shows that not all the accentual-rhythmic structures of all the polysyllabic words are in this form. Despite the fact that the words are the same as to the syllabic composition, their rhythmic-melodic structures are different which gives us ground to say that during the pronunciation of polysyllabic words, there is no stability in the position of the syllable on which there is main stress.

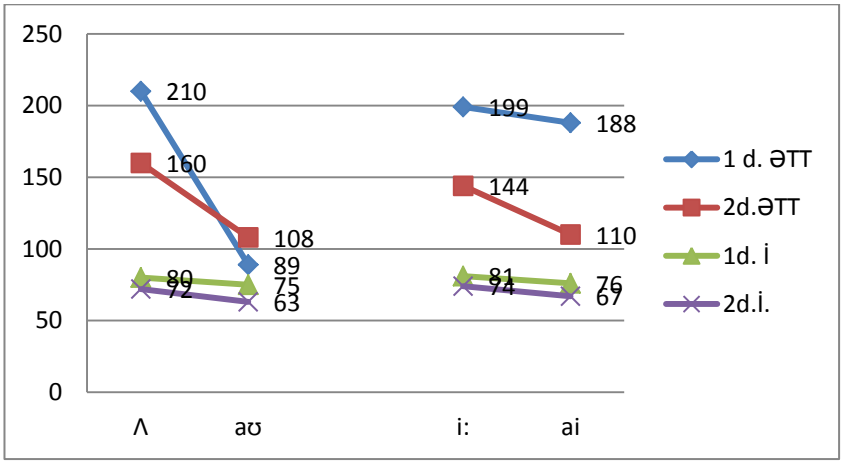
The analysis carried out on these two-syllabic model words such as /broadseal/, /hosepipe/, /headache/, /download/, /cellphone/, /keyboard/, /voicemail/, /touchdown/, /green flies/, /earthquake/, /green house/, /rewrite/, /fourteen/, /dark-eyed/ etc. shows that the first syllable is dominant as to the intensity. In these words, the first syllable is not distinctive only as to the intensity parameters, but also it is distinctive as to the FFT parameters. To imagine these changes in accentual-rhythmic structures still more clearly as an example the table showing the intensity indications gained from the analyses of the words /touchdown/ and /green flies/. See table 2.

Speakers/ touchdown/green flies

Speakers	*touchdown*		*green flies*	
	Λ	aʊ	i:	aɪ
I d.	80	75	81	76
II d.	72	63	74	67

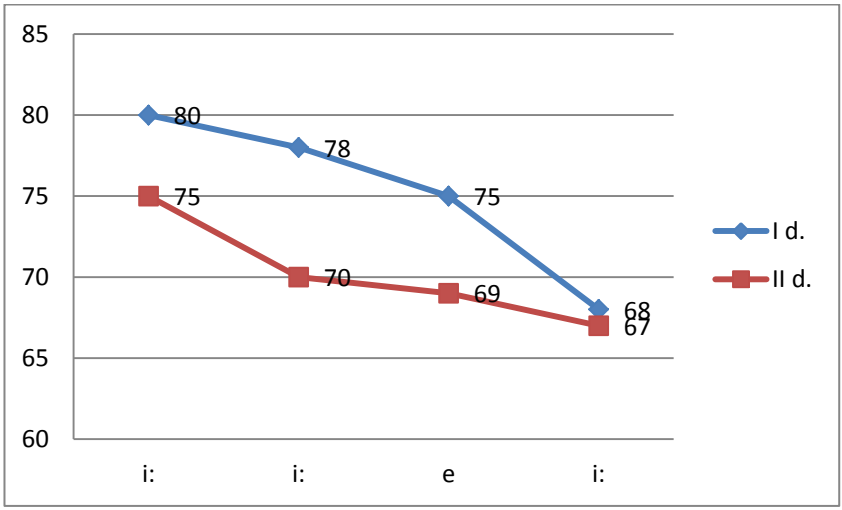
During the analysis process the thing causing our interest is that symmetry between the FFT and I indications has been observed. Such an isomorphism is reflected in the graphic.

Graphic, reflecting the changing features of FFT and I in the pronunciation of /touchdown/ and /green flies/



Graphic 3.

From these graphics we may conclude that this model has carried out the function of FFT and intensity indicator in the recognition of the first syllables as stress syllables in the process of the pronunciation of the words in the accentual-rhythmic structures. In the pronunciation of polysyllabic abbreviations, the indicator of intensity parameter in the accentual-rhythmic structure changes depending on what position the main stressed syllable comes within the word. e.g. During the pronunciation of GCSE abbreviation indications reflecting intensity structures as to the announcers are subjected to undergo changes.



Graphic 4.

As it is shown in the graphic intensity indications of the second and third syllables have varied between the first syllable and the last one. Intensively marks as to the first announcer in comparison with the second one has been higher. Generally, in English in polysyllabic words the main stressed syllable has been distinguished as to the intensity parameter.

c) Temporal characterization of words.

It should be noted that in the English language, in the formulation of the word as phonetically whole and in the adequate reception of the word by the listener the role of temporal component is not less important because there exist such words in the English language which are discriminated from one another just as to the quantitative features of vowels. e.g. as it is in the pronunciation of "fool" and "full".

To investigate the changes linked with temporal component in the accentual-rhythmic structures of polysyllabic words we have appealed to the analysis of experimental material. It became clear from the analysis of the syllables in the rhythmic temporal structure of the polysyllabic word /Government/ and from temporal features of the vowels, establishing their nuclear. Announcer have spent

maximum time period in different levels for the vowels, containing the nuclear of the syllables. For the comparison consider the given indications.

	Λ	ə	ə
I s.	0,08	0,04	0,04
II s.	0,05	0,03	0,05 san.

The first announcer for the pronunciation of three vowels has spent totally 1,6 sec, but the second announcer has spent 0,13 sec. for this purpose. In the composition of this polysyllabic word, for the pronunciation of the first syllable, maximum time period has been spent. While the first announcer pronounced the vowel of the second syllable of the word as to the FFT in the minimal height, from the view of time he spent as much time as in the pronunciation of the vowel in the third syllable. But the second announcer spent the same quantity of time for the pronunciation of the 1st and the 3rd syllables (0,05 sec.).

Depending upon the changing of the accentual rhythm structure of the word, the time spent on the pronunciation of the same vowel acting in various positions is different. For the consideration of these features we have compared the temporal features of the vowels in the analyzed word with the temporal features of the same vowels acting as a nuclear of syllables the word "uncomfortable" /ʌnkʌmpftəbəl/. The indications attained as a result of analysis of temporal parameters have found their reflections in the table. See table 3.

Indications attained on the temporal parameters carried out on the basis of computer analysis of the word "uncomfortable"

Speakers Vowels

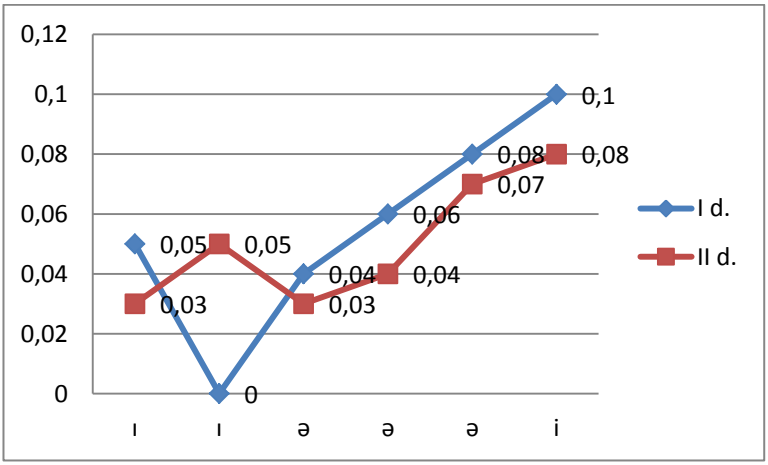
Speakers	Vowels			
	Λ	Λ	ə	ə
I d.	0,08	0,05	0,08	0,03
II d.	0,09	0,06	0,04	0,04san.

It is also seen from the table that in this polysyllabic word for the pronunciation of the vowel /Λ/ establishing the nuclear of the first

syllable, which is within the composition of the word, maximum time period has been spent: the first announcer 0,08 sec., but the II announcer 0,09 sec. For the pronunciation of the sound /Λ/ acting in the second syllable in comparison with the pronunciation of the vowel of the first syllable less time period was spent: the first announcer 0,05 sec.; the second announcer 0,06 sec. It becomes clear that for the pronunciation of the vowel /Λ/ used in anlaut is spent more time in comparison for the pronunciation of the vowel in inlaut /Λ/. The fact that the temporal indications are higher for the vowel in anlaut, shows itself in other polysyllabic words as well. E.g. in the pronunciation of /west countryman/ the vowel of the first syllable becomes in the peak point in the temporal structure of the word.

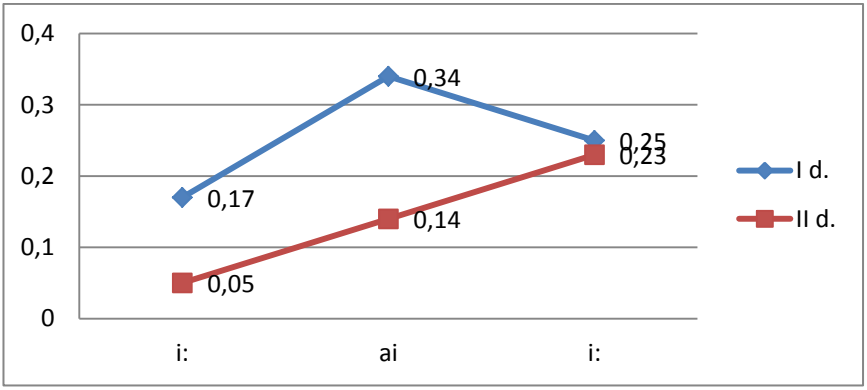
In the pronunciation of the word /uncomfortable/ the distinctions indicated by the announces are associated with the 3rd and 4th syllables, because in these cases, despite the fact that the vowel /ə/ acts as a syllabic vowel element, different periods of time were spent for their pronunciations. The announcer spent 0,08 sec. for the pronunciation of the latter vowel /ə / but he/she used 0.03 sec. for the pronunciation of /ə/ in the final position. So, we may say that the vowel /ə/ in this position has been subjected to more variation.

Temporal structure calculated on the basis of computer analysis of the word /Invincibility/



Graphic 5.

When considering the structure of this word it became clear that the vowel /i/ used in the last syllable of a polysyllabic word, as to its temporal indications differs from the other vowels (/ı/, /ə/). In this position, the vowel /i/ which possesses higher temporal indication can be explained by its complete pronunciation in the open syllable. Temporal structure calculated on the basis of computer analysis of the word VIP /vi: aı pi:/.



Graphic 6.

Its being higher as to the temporal parameter of the second syllable is linked with the fact that the vowel which forms that is a diphthong, because, in comparison with the pronunciation of monophthongs, more time is spent for the pronunciation of diphthongs (D.Jones). As it is seen from the analysis the first component of the diphthong /aı/ has been distinguished by its durable pronunciation. But the indication of the second announcer is different from the indications of the first one.

On the basis of the analyses of accentual rhythmic structures of polysyllabic words it is possible to say the following generalized thoughts:

- though the words are the same as to the syllable composition, their accent-rhythmic and melodic structures are different.

- in the pronunciation of the polysyllabic words accentual-rhythmic and structural distribution, put forth theoretically for the English language has been observed.

- in the accentual-rhythmic structures of the many-syllable words in the Modern English language mainly the first and the second syllables as to the height of FFT and intensity parameters have possessed still more frequency of usage.

- FFT has not been differentiated not only within the vowels of the words, but also it was different within the vowels themselves.

- in the Modern English language the existing melodic, intensity and quantity features of vowels have influenced the adequate features of the syllables and these features of the syllables in the result have influenced the melodic, dynamic and temporal features of the words.

- while there is the connection of isomorphism in the FFT of accentual-rhythmic structures of words and in the structures of intensity parameters, it is impossible to say the same opinion on the relation of temporal parameters.

- in the Modern English language the fact that the vowel of the syllable, bearing the main stress (distinguishing as to FFT and Intensity) is higher, as to the temporal parameters, the high value of vowels is not the main condition or relevant.

The carried out experimental analysis once more affirmed that in Present-day English stress is realized with higher intensity. But in the polysyllabic words this structure depending upon the position of the stressed syllable (at the beginning, in the middle, at the end of words) is varied. When a stressed syllable is linked with the last syllable of a many-syllable word, the acoustic indications of the vowel forming its nuclear, in comparison with the acoustic parameters of the vowels used at the beginning of that word is weaker.

For the purpose of revealing and finding out the accentual types of words in the Modern English language, the carried out investigations give us possibilities to come to the following conclusions.

1. The analysis of experiment materials shows that in the words possessing strong prefixes, as well as, in the compound abbreviated words, including the compounds consisting of two or more components, stressed syllables possessing the same value. According to the fundamental frequency of tone and intensity have not been observed and the bearer of maximum acoustic parameters has been

noticed only in one syllable which can be related to the presence of one main nuclear stress in these words and compounds.

2. The acoustic analysis of the experimental material has discovered the existence of one main and secondary stresses in many-syllable and compound abbreviated words and word combinations. From this viewpoint, it was revealed that the Present-day English language is characterized by not four but three (one main, the secondary, weak stresses) degrees of stress.

3. The results of experimental-phonetic analysis show that as the number of syllables in words increases, it leads to the appearance of secondary stress in the accentual structure of words, which is observed in the acoustic indications of acoustic parameters. From this point of view, it can be said that there is a dependency between the number of syllables and the degree of stress in English. A comparison of the syllable structure of words shows that the distribution of stress in two-syllable, polysyllabic compound words in English is mainly due to rhythmic factors. As for the semantic factor, this factor can be realized with secondary stress, not with primary stress, as it is mainly related to strong prefixes. However, the presence of secondary stress depends on the phonetic context. In this case, the rhythmic factor prevails over the semantic factor.

4. In English, as the number of syllables in polysyllabic and compound words increases, so does the amount of stress. The results of the experiment show that two secondary stresses manifest themselves in the pretonic position and one secondary stress in the posttonic position. The five accent types identified from the results of the experiment somehow suppress and eliminate the six types of eleven types mentioned in the existing literature. In English, the main reason for the invalidation of the five accentual types / ˥ ˩/, /˥ ˩ ˩/, ˥ ˩ ˩ ˩/, /˥ ˩ ˧/, /˥ ˧ ˩/ can be explained with the presence of only one primary stress in the syllables of polysyllabic and compound words. The omission of the sixth accentual type /˩ ˧ ˧/ is due to the fact that the posttonic position of the two secondary is not acceptable, because the intensity weakens after the nuclear stress. In this phonetic position, only one secondary stress manifests itself

5. Based on the results of the experimental-phonetic analysis, the accentual types of two-syllable, polysyllabic, abbreviated words and combinations in English, in contrast to the eleven types mentioned in the existing literature, can be defined as the following types:

1) / ˧ - - / accentual type consisting of one main accent;

2) / ˨ - ˧ / accentual type consisting of one secondary and one primary accent;

3) / ˧ - - ˨ / accentual type consisting of one primary and one secondary accent;

4) / ˨ - ˨ - ˧ / accentual type consisting of two secondary and one main accent;

5) / ˨ - ˧ ˨ / one secondary, one primary and one secondary accent.

Each of the above-mentioned accentual types forms a certain amount of accentual-syllabic (dynamic-rhythmic) structures, depending on the number of syllables in the word and the place and degree of stress.

The main provisions of the dissertation have been reflected in the following works of the author:

1. On the accent types of words and syllabic-rhythmic structures in English // – Baku: AUL, Language and literature, – 2013. №2. –p.159-164.
2. On the phonetic factors conditioning phoneme variation in the English language // – XVIII Republican conference of doctorates and young researchers, – 2013, – p. 207-208
3. Translation in the phoneme level // – Baku: The Caucasus University, The first international conference of young researchers, – 2013. – p.602.
4. On the factors of word stress in English // – Baku: AUL, Scientific news, – 2014. №2. – p.71-75.
5. The role of the intensity parameter in the formation of the rhythmic-melodic structure of polysyllabic words // – Baku: AUL, Scientific news, – 2015. № 4. – p. 166-170
6. Accentual structure of Spoken English-Has it been overanalyzed // – Canadian center of science and education: International Journal of English Linguistics, vol.6. №3. – 2016, p.200-207.

7. The place of stress in word combinations and compound words // – Baku: Taghiyev readings, – 2017. №2. – p.72-77.
8. The place of stress in the compounds of three and four components // – Baku: Actual problems of the study of Humanitarian Sciences, –2017. №4. – p.30-35.
9. The role of acoustic parameters in the accent-rhythmic structure of the short compound words // – Ufa: "NITs Vestnik nauky" Actual issues of modern science. Collection of articles on the materials of the international scientific-practical conference, – 2019. – p.205-210.

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