Abstract: The relevance of the work is determined, first of all, by a new perspective on the speech variability analysis depending on the influence of selected extralingual factors: gender, ethnicity, social status and age, which, of course, corresponds to the current state of the linguistic development and growing interest in disclosure of the influence of social factors on the functioning of language in different territories, as well as the application of an ecolinguistic approach to the analysis of Pittsburgh dialect sociolinguistic differentiation. Second, our study is quite interesting in response about the sociocultural role importance of the Pittsburgh dialect (object of study) in the overall linguistic picture of the United States of America. The language behaviour of Pittsburgh residents is due to the influence of non-linguistic factors (gender, ethnicity, social status of speakers and age). The functioning of speech in this area, the implementation of phonetic processes and lexical units in communication directly depends on the social impact on speech. The novelty of the study is that for the first time on the material of the modern Pittsburgh dialect the regularities of variation of language mean of phonetic and lexical levels from the point of view of ecolinguistic approach to studying sociolinguistic differentiation of speech of Pittsburgh dialects speakers are determined. An analytical study was conducted and the variation of certain language tools used by Pittsburgh speakers according to their social affiliation was established.

Keywords: Ecolinguistic approach, ethnic origin, social status, social factors, speech functioning, the United States of America, sociophonetic differentiation, sociolinguistics, variability, postmodernism.

Introduction

The purpose of the work is to determine the main parameters of the concept of “language behaviour of Pittsburgh residents” and to establish patterns of language unit’s variation of the Pittsburgh dialect in accordance with the impact on their functioning of extralingual factors: gender, ethnicity, social status and age.

First of all, it is necessary to define the concepts mentioned in the context of this topic.

In the explanatory dictionary of linguistic terms by Yermolenko (2001) one can find that “sociolinguistics” is a branch of linguistics that explores, in addition to functioning of language in society, the influence of various factors on it, and also distribution of social functions between dialects and languages that are used in society, as well as development and distribution of normative literary language.

In the same dictionary, the variability of language is defined as its property “to act in varieties, which affects its functioning in certain territorial, social, historical and cultural conditions”. In her article, Holubovska (2016) considers variation as a natural, universal feature, which is characteristic of everything in the world, and, especially, languages. And Leychik (2009) sees in it implementation of “the general theory of variation, which is manifested both in the language as a whole, and in its separate varieties and components”.

A dialect is each of the regional varieties of a language, which has certain differences from other varieties in grammar, pronunciation, vocabulary, but they all make up a single language. The range of dialects, or the dialect landscape is often described as a “continuum”. That is, in a certain territory there is a set of separate dialects with minimal differences. Jeszenszky (2015) highlights two forms of dialect continuum: the essence (isogloss) and the field (dialect continuum). This space is limited (geometrically or by gradient) by the phenomenon of a change in a certain language property.

Kurath (1949) highlighted three main dialects in the United States: northern, midland and southern, which he further divided into eighteen subregions.

40 years later Davis & Houck (1992) expressed an opinion that the grounds for isolation of the Midland dialect continuum are insufficient, because in the direction from north to south, features of the southern dialect only become clearer. That is, there are only two - the northern and southern
dialects of the continuum. However, in the study of Johnson (1994), the existence of the Midland dialect continuum is exhaustively proved, and in statistical tests, it was divided into six districts, northern – into two, southern - into three.

Postmodernism, as a global phenomenon, is spread onto most countries and imposed its imprint on the life of communities. It is believed that the place of its origin is the United States of America, but according to Hassan (1987) the origin of postmodernism is uncertain as its importance. In the literary studies, it was used in the meaning of “sorts of exhausted and gently modernist”, as pointed out by Smart (1993).

The Pittsburgh dialect should be considered in the context of this phenomenon as evidence of the acceptance of variability, which is becoming a key slogan in all spheres of culture. At the same time, the uniformity of norms or any uniformity in general loses its former attractiveness. This is fully relevant to ethnic diversity, which is no longer seen as a weapon of socio-economic importance, and to regional differences. In case of postmodern, language variations, regional or social, are seen as something that should be preserved rather than eradicated (Milroy, Milroy, 1985; Crowley, 1989; Tollefson, 1991; Nerubasska, Maksymchuk, 2020; Nerubasska, Palshkov, & Maksymchuk, 2020).

It is believed that the popularity of the media in the United States, standardized corporate language standards, as well as the high rate of migration, both territorially and socially, contribute to the disappearance of phonetic features of the dialect.

It was observed that feeling the danger of extinction of the local dialect, its speakers may exaggerate some features to keep it alive. People often resist homogenization. Pittsburgh locals consider their dialect to be related to the working class.

The very desire to reject global solutions like nothing else precisely characterizes the postmodern tendencies. Because reality depends on culture, changes over time, as does culture, and varies from community to community, knowledge is not universal. Pittsburgh people are intolerant of truth and values if they are not considered local and diversity in the community is encouraged.

Sociolinguistics is a relatively young and fairly relevant direction of linguistics. According to Filin (1982), sociolinguistics can be understood as research of dependence of characteristics of the language from society, and its social functions and influence on society. The important material for
sociolinguistic analysis is the dialect of Pittsburgh residents, as representatives of postmodern society.

There is a need to determine the structure of the concept of “language norm” in sociolinguistics based on the analysis of the content of the concept, lingual and extralingual elements, as well as collective and individual patterns of language behaviour to scientifically interpret sociolinguistic parameters of the category “language norm” and identify trends language behaviour and the possibilities of a reasonable sociolinguistic forecast of this type of behaviour in different social conditions.

The specificity of the intralinguistic norm is considered only in terms of a functional approach, as claimed by the representatives of the Prague Linguistic School. Scientists Gavranek (1972), Bell (1980), Trudgill (1992), etc., made a significant contribution to the study of the influence of social factors on the development and functioning of language and the study of the relationship between language and social processes.

The gender aspect of the studied speech nature and its features is a promising area and is of interest to many scholars. The issue of gender linguistics is considered in the works of foreign researchers (Fishman (1997), Cameron (1992), Lakoff (1973), etc).

The influence of age on communication has been analysed by numerous researchers of the social portrait of speech (Eckert (2003), Labov (1977), Trudgill (1992), etc.). Ethnic differentiation of speech has been studied in the works of Ukrainian scholar Semenets (1986), etc.

This paper presents a sociolinguistic approach to the study of the language features of residents of Pittsburgh, the United States. The influence of such factors as ethnicity, age, gender, social group affiliation is comprehensively considered and the relation of speech variants and the influence of the social factor is revealed. From this proceeds uniqueness of the studied dialect.

**General characteristics of language properties and features of the city language**

Ecolinguistics is a scientific field that studies the interaction of language and human, as well as the ecological environment of their functioning. Ecology affects language through humans and society, and language, in turn, affects the moral and spiritual level of society. Language is seen as an important component of the chain of relationships between an
individual, the society and nature. The functioning and development of language is an ecosystem, and the world around us acts as a language concept.

Traditionally, the norm, according to the definition of scientists, is considered in linguistics as a set of language tools that correspond to the language system and are perceived by its speakers as a model of social communication in a certain period of language development and society. It is a regulator of the actual combination of language units within the language system (Ermolenko, 2004).

The variability of language and language norm is characterized by changes in the content of different levels of language units, their ability to accumulate alternative or variant sets of language units based on variation, i.e., changes in sound composition or meaning of lexical unit, which contributes to certain identical variants.

For a correct scientific description of the consequences of natural changes that occur in language, such concepts as “variability”, “variations” and “variety” have been clarified, which have been considered by Vyshnevskaya (2002) as well as proposed its own interpretation.

Variability is a common property and way of existence of the language system and language norm, which reflects changes in the structure of language in connection with its socio-economic environment.

By variations we mean the distinction of language into national-state variants of language, as well as those that depend on the influence of social factors (gender, age, social status, etc.).

Variety is a difference in the formation of language units (change the sound composition of the latter or structural meaning without loss of identity).

Due to the continuous process of urbanization, the city is increasingly becoming the object of linguistic research. Representatives of social dialectology use the sociological technique of sample research in order to identify extralinguistic factors of variability (Vinogradov, 1967; Labov, 1976; Larin, 1928). The term “city language” refers to the object of study, but is not theoretically rigorous. The essence of the language of the city can be considered from the standpoint of communication (private, public, mass, public) and forms of language (oral and written).

Urban language as a complex structured unity is the result of interference of literary language, dialect, vernacular, and in some cases - other languages. But the influence of sociolinguistic factors leads at the same
time to formation of jargon, sociolects, slang in the urban environment. Thus, the language of the city, on the one hand, is a heterogeneous structure with social stratification, and on the other - a homogeneous language formation inherent in a particular city, which is a consequence of a complex interaction of language subsystems in the urban communicative environment.

The Pittsburgh dialect in the current language situation of the United States

Formation of the Pittsburgh dialect was the result of interaction of a number of language components: the languages of local residents and dialects of immigrants from other countries, professional jargon of workers engaged in the steel industry. For a long time, the Pittsburgh dialect was considered an “inferior” language, which characterized its speakers as people with a low level of education. However, today there is a tendency to develop a positive attitude towards the Pittsburgh dialect, even among people belonging to the upper strata of society, as evidenced by various modern advertising messages with dialect units operating in them.

The Pittsburgh dialect demonstrates differences from the American version of modern English at all levels: phonetic, lexical and grammatical:

a) among the features in the phonetic series were found as follows:
- merger of vowels of the back row of the lower elevation /ɔ/ and /ɒ/
- increasing the level of elevation of the tongue during the pronunciation of the vowel /æ/ before prelingual sonorous and before /d/;
- qualitative and quantitative reduction of tense vowels before /l/;
- vocalization of the lateral sonant /l/;
- monophthongisation of diphthongs /aʊ/ → [aː] and /ai/ → [aː];
- using n’at instead of and that;

b) The Germans took directly participated in coining such a lexical unit as sammitch, the Scots-Irish – in coining the word-combination redd-up. Russian stem is found in the lexical item babushka, and the Polish stem – in pierogi. However, the language of Pittsburgh has a number of phonetic features common to other parts of Pennsylvania. The grammatical features of Pittsburgh are also recorded in Southwest Pennsylvania and in the Appalachian Mountains.

The current language situation in Pittsburgh and neighbouring states’ cities is characterized by a variety of language existence and language
subsystems. First, Pittsburgh has a standard codified American version of modern English, used in written and oral forms, as well as in the form of literary spoken language in everyday urban communication. Secondly, in addition to literary language, Pittsburgh residents use such subsystems of uncodified language as youth slang, jargon, and professional slang.

Thus, on the one hand, the language of Pittsburgh is a heterogeneous formation formed as a result of interaction of language variations, the use of which is socially conditioned. On the other hand, the complex correlation of language subsystems in the urban communicative environment leads to emergence of a specific, unique to this city, language situation.

Pittsburgh dialect in the sociophonetic differentiation aspect

The target group comprised 54 Pittsburgh dwellers - the original residents of the place. The informants sampling structure, depending on certain factors, is as follows: 30 females and 24 males; Irish-Scots - 9, Germans (10), Slavs - 4, African-Americans - 13, other - 12; representatives of high social status - 13, middle - 15, workers - 12, lower (unemployed) - 10; 12 people aged 16 - 30 y. o.; 20 - aged 31–48 y. o.; 19 - aged 49–73 y. o.; 12 - aged over 73 y. o.

Initially, on the basis of the method of sociophonetic analysis of the material in English, proposed by Labov (1977), a study was conducted, in the process of which peculiarities of pronunciation of the participants were established. Afterwards 592 lexical items were obtained by surveying these 54 respondents during the second part of the experiment.

Data in the form of audio recordings, survey results were collected through the use of the Internet, Skype and the social network Facebook, as well as directly during a stay in Pittsburgh (USA).

Quantitative processing of the obtained data allowed to reveal a number of phonetic and lexical features of the speech of the inhabitants of Pittsburgh.

Taking into account the influence of extralinguistic factors (gender, ethnicity, social status, age), the phonetic properties of the Pittsburgh dialect of the modern period are systematized, presented and interpreted graphically.

Within the sociolinguistic approach of ecolinguistics, the most common deviations from the American version of modern English include the following (Table1):
### Table 1. Phonetic features of Pittsburgh residents’ speech

<table>
<thead>
<tr>
<th>Phonetic feature</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing the level of elevation of the tongue during the pronunciation of the vowel /æ/ before the prelingual sonorous and before /d/</td>
<td>Pan /pæn/ [pæn], Dad /dæd/ [dæd]</td>
</tr>
<tr>
<td>Change on the basis of a number during the pronunciation of the diphthong nucleus /əʊ/</td>
<td>Boat /bəʊt/ [bəut], home /həʊm/ [həʊm]</td>
</tr>
<tr>
<td>Change on the basis of a number during the pronunciation of a vowel /u:/</td>
<td>Boot /bʊt/ [but], move /mu:v/ [muv]</td>
</tr>
<tr>
<td>Merging vowels of the back row of the lower elevation /ɔ/ i /ʊ/</td>
<td>Caught /kɔ:t/ [kɔt]</td>
</tr>
<tr>
<td>Vocalization of the lateral sonant /l/</td>
<td>College /kɔlɪd/ [kɔlɪd], Bill /bɪl/ [bɪl]</td>
</tr>
<tr>
<td>Qualitative and quantitative reduction of tense vowels before /l/</td>
<td>Peel /pi:l/ [piːl], pool /pʊl/ [pʊl]</td>
</tr>
<tr>
<td>Decrease in the level of the tongue during the pronunciation of a vowel /ʌ/</td>
<td>But /bʌt/ [bʌt], fun /fʌn/ [fʌn]</td>
</tr>
<tr>
<td>Quantitative reduction of vowels and their diphthongization in the position before /r/</td>
<td>Boar=Bore /bɔː/ [bɔː]</td>
</tr>
<tr>
<td>Monophthongisation of diphthong /aɪ/; Monophthongisation of diphthong /aʊ/</td>
<td>Tile /tai/ [tau], iron /aɪrən/ [aɪræn]; Down /dəʊn/ [dən], house /hɔus/ [hɔs]</td>
</tr>
</tbody>
</table>

Note: after Davis (1992)

In the study of the influence of the gender factor, it was found that 43% of females pronounce the vowel [ɔ] close to [ɒ], and the peculiarity of pronunciation of 51% of males is monophthongisation /aʊ/. Consideration of the influence of the age factor on speech revealed that the speech of older informants is characterized by monophthongisation of the diphthong /aʊ/, and middle-aged females in 27% cases approach the vowel sound [ɔ] in pronunciation to [ɒ].
Examining the speech of Pittsburgh residents on ethnic and class differentiation such characteristic features as vocalization of the consonant /l/ (12%) and monophthongisation of the diphthong /əɪ/ (7%) among the working-class representatives were revealed.

The influence of racial factor is observed in approximation of pronunciation of the sound [ɔ] to the sound [ɒ], and 51% of Americans and only 22% of African Americans pronounce /aʊ/ as [aː].

As a result of numerous changes in pronunciation, new token items often appear to denote sometimes whole phrases.

**Pittsburgh dialect in the sociolinguistic differentiation aspect (lexical level)**

The obtained data allowed us to systematize a glossary containing 592 tokens. All lexical units are divided into parts of speech: content and function.

The glossary included: 412 nouns, 109 verbs, 44 adjectives, 13 adverbs, 1 pronoun as content words.

The group of nouns, which is the most numerous, includes both proper names (13.3%) and common ones (69.5%). According to the meaning, these tokens were assigned to the following groups: “life” – 38.5%, “sports” – 13.6%, “food and drinks” - 11.6%, “professional vocabulary” – 9.7%, “shopping and fashion” - 4.9%, “medical vocabulary” – 1.9% and other - 6.3%.

Verbs were correlated with such areas as “everyday” (46.7%), “life” (21.1%), “hobby” (7.3%) and others (19.2%). Noteworthy are the tokens for “life” related to females’ (11%) and males’ (10.1%) responsibilities.

The group of adjectives (44 units): “colour” and “nationality” (conditionally combined into one subgroup due to the small number of lexical units) together make up - 9%, “weight and size” - 20.4%, the rest - 43, 1%. Tokens with negative (13.6%) and positive meanings (11.3%) were identified.

The group of adverbs and pronouns is small (1.3% and 0.16%, respectively). A characteristic feature of the Pittsburgh dialect, most studied by scholars, is the commonly used - yinz (denotes you guys or you two).

The group of official parts of speech includes prepositions and conjunctions, the percentage of which is 2.1% and 1.3%, respectively.
Gender, ethnicity, social status and age affect the lexical level of Pittsburgh residents’ speech. The influence of gender on speech is most pronounced (23.7%) in men’s speech.

The token used by a male is most likely to be close to the topic of sports and sports games - 3.6%) (The Lig, Goofy Gulf, Da Pens / Da Gwins, Bullin’) or to relate to everyday affairs - 10.1% (feeschun, rasslin’, poosh).

Women’s vocabulary is divided into thematic subgroups: fashion /shopping - 4.9% (Gutcheez, booty parler, mah, sell); household - 11% (redd up, worsh, kook, dip-up, press off); names of traditional dishes - 6.3% (pierogi, jumbo).

It is noted that representatives of older age groups more often (54%) than other residents use dialect vocabulary, and such vocabulary is associated with food, drink (fuud, melk, pop, cut, takeela) and everyday life - 21.1% (ize, waidon, baffroom, meer).

The population of Pittsburgh belongs to a variety of social strata, which is facilitated by the pronounced development of various social structures: the city is the centre of steel industry, as well as it is rich in modern health care, education establishments, business centres. As a result, the use of language tools is quite versatile.

Lexical units were systematized by thematic groups: production materials - 9.7% (still mills, hoosafratz, toll, tahrarn), education and medicine (dinge, am-blee-unce, dennis, skull, caw-idge, liberry) and creative activity - 1.9% (pitcher, pin, gum, cammra).

Specific language is most characteristic of the older age group of Pittsburgh - 54% (Fuud - Food - Food; Melk - Milk - Milk; Hun (Hon) - Honey - Honey).

Young people tend to use fashionable lexicon and slang - 3.9%, and middle-aged people (19%) use codified language due to the fact that they are involved in the production process, which involves the use of standardized language. The influence of the age factor is observed in the use of special lexical units, namely those related to everyday life and national cuisine.

Conclusions

In the course of the study the origin, changes under the influence of various factors (ethnic, gender, age, social status) and the use of the Pittsburgh dialect by means of a sociolinguistic approach were analysed and
its heterogeneity in the context of the Midland dialect continuum was proved.

Experimental author’s research of phonetics and vocabulary is made on the basis of the author’s glossary of the Pittsburgh dialect which is systematized on the basis of the material collected during repeated stays in Pittsburgh, and also constant contact with inhabitants of Pittsburgh (through the Internet, Skype).

Only a comprehensive sociolinguistic study of the speech of the original Pittsburgh residents, representing different social groups, enabled to create linguistic portraits, to single out social types of the city, and to characterize the linguistic background in general.

Its main feature is that informants in informal communication mostly use the Pittsburgh dialect. Although they are literary language speakers, in everyday life they prefer such forms as jargon, youth slang, professional slang.

The main contribution to the development of the studied dialect was made by speech of local residents in interaction with the dialects of Germans, Scots-Irish, immigrants from Slavic countries during the American Revolution. The share of professional jargon of the steel industry workers is also significant. The nature and extent of the use of the Pittsburgh dialect are also influenced by the social characteristics of the city residents.

The ecolinguistic approach to the analysis of this dialect allows to identify socio-cultural varieties of speech of respondents and to trace how it changes under the influence of processes in social environment. The influence of the set of studied factors on formation of characteristic features in the communication of the inhabitants of this territory is proved. Ethnic, gender, age, and social factors are characterized by the most significant influence.

The object of the study was also pronunciation of the Pittsburgh residents. The issue was raised whether the degree of manifestation of phonetic features corresponds to the social factor.

In the course of sociophonetic research it was found that the Pittsburgh dialect is characterized by the following changes: in the pronunciation of the vowel core of the diphthong [əʊ] on the basis of the row; in the pronunciation of the vowel /uː/ on the basis of the row; vowels of the back zone of the lower elevation [ɔ] and [ɒ]; vocalization of the lateral sonant /l/; qualitative and quantitative reduction of tense vowels before /l/; decrease in the level of language in the pronunciation of the vowel /ʌ/;
quantitative reduction of vowels in the position before [r];
monophthongisation of diphthong /ai/, especially before sonorous;
monophthongisation of diphthong /ao/.

Evidence of the influence of the gender factor is approximation of
the vowel [ɔ] to [ɒ] in the pronunciation of females and
monophthongisation of /ao/ in pronunciation of males. Consonant
vocalization of consonant /l/ and monophthongisation of diphthong /ai/
arose as a result of ethnic and class influences. And racial differences
affected the speech of informants in the form of approximation of
[ɔ] to [ɒ]. An example of the action of the social factor is the pronunciation of /ao/ as
[ə:], and the action of age factor is approximation of the vowel [ɔ] in the
pronunciation to [ɒ] by middle-aged women. Pronunciation of the older
respondents had a feature in the form of monophthongisation of the
diphthong /ao/.

The second part of the linguistic experiment concerned isolation of
token items and creation of a glossary, which eventually contained 592 units,
including 412 nouns, 109 verbs, 44 adjectives, 13 adverbs, 1 pronoun.

This variety of names of concepts and phenomena is a reflection of
the linguistic philosophy of Pittsburgh residents. It was correlated with the
following groups: individuals, objects, actions, evaluative features, as well as
function words. The former can be classified according to gender, age,
occupation, ethnicity and / or nationality. The latter - according to
designation of clothing, footwear, accessories, food, buildings, institutions or
household items. The third can denote physical action of a person;
professional activity, household chores, hobbies). Size, weight, colour,
nationality can be a distinctive feature, and evaluation can be positive or
negative.

The token items denoting various human relationships observed in
the course of lexical study of the Pittsburgh dialect, as well as numerous
stylistically distinctive synonymous series are noteworthy.

However, there is an increasing tendency for the informants to give
preference to commonly used colloquial vocabulary in casual informal
situations. In addition to oral speech, the reviewed token items can be seen
in advertising, which may indicate the heterogeneity of the Pittsburgh dialect
and the city’s population.

Older people use regular token items, which are more related to food
and drink, everyday life; it has been established that, in contrast to the
upper-class informants, representatives of the middle and lower classes have
a greater share of vocabulary inherent in the Pittsburgh dialect in their speech.

Within the framework of the eco-linguistic approach, borrowings, modified words and neologisms were recorded in the studied dialect. German, Scottish-Irish and Slavic immigrants had the greatest influence on the formation of the lexical structure of the Pittsburgh dialect (borrowing - 23%). The next largest group is represented by neologisms - (12.4%). Modified words make up the smallest group and account for only 6%.

Traits that are characteristic of differentiation in terms of ethnic origin, gender, age and social class can be traced at the level of phonetics and vocabulary. However, the Pittsburgh dialect, as a special case of the most significant influence of gender, is characterized by diversity of language according to this criterion at all levels. This is evidenced by the excellent strategies for constructing speech, use of language units, which are chosen by females and males in case of similar age, social status, professional achievements and communicative role.

Comparative analysis of word usage in Pittsburgh and other cities of the Midland dialect continuum revealed lexical units unique to the Pittsburgh dialect, and their functioning in both oral and written speech indicates a deep historical connection with the city and provides opportunities for further widespread use and development of the Pittsburgh dialect as a unique national culture.

The bottom line of this work is the material which is valuable in the study of American English and the study of a stratified society. In future, the regularities of the grammar of the Pittsburgh dialect and its differentiation under the influence of extralingual factors will also need attention. Also, the study of this speech in the phono-stylistic aspect for the correspondence of certain features of dialectal colloquial language to the degree of formality of communication is promising.

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