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## PSYCHOLINGUISTIC COMPONENT IN THE STUDY OF THE PITTSBURGH SPEECH EFFICIENCY DECODING

*The given article continues the series of scientific works on investigation of Pittsburgh Speech under the influence of the extra-linguistic factors. It covers three main level of the language: phonetic, lexical and grammar. Namely, the dynamism of the phonetic system of Pittsburgh Speech, which is constantly evolving under the influence of linguistic and extra-linguistic factors (gender, ethnicity, social identity of the informant, age), is realized both in the form of modification of the phonetic structure of words and in the form of variation of their accent patterns. The objectives of the study are quite various and include the following ones: summary of the basic features of Pittsburgh Speech; identification of the percentage of the Pittsburgh Speech apprehension by listening; determination of perception level of Pittsburgh Speech by visual examination of the questionnaire.*

*Thus the authors present the practical research of the perception of the speech used in the investigated territory by non-native speakers in the frames of the experiment held in one of the Ukrainian university. This is to understand that the psycholinguistic aspects such as thinking and cognition of speakers. All this could help in enhancing the adequacy and the effectiveness in the decoding of the English language by communicants and enriching the norm of the American English. The experiment consisted of two parts: listening (aural comprehension) and questioning (visual recognition). This two-part strategy lets us gain the purpose of the research – to discover Pittsburgh Speech state in the context of globalization processes and reaches all the tasks at hand. The data obtained indicate that Pittsburgh Speech is rather difficult to comprehend by non-native speakers. The difficulty is the specific pronunciation of words that observe such phonetic processes peculiar for the Pittsburgh Speech.*

*The results of the given study reveal the uniqueness and identity of this dialect and the dependence of the variation of linguistic units on the social characteristics of the society within the given region.*

**Key words:** Pittsburgh Speech, perception level, phonetic features, listening, questioning.

**Problem statement.** The modern development of linguistics is characterized by a gradual changes in the paradigms of language learning, when the study of its static features is inferior to the place of consideration of its dynamic characteristics, carried out in the framework and in terms of synergetic, socio-ecolinguistics, as well as the interrelationships between psychology of language, thinking and cognition of speakers due to the psycholinguistics.

It is clear that in this aspect, the **relevance of the given study** related to peculiarities of the Pittsburgh Speech units' functioning in terms of the impact of a number of extra-linguistic factors, as well as the comprehension of Pittsburgh Speech by representatives of other macro- and microenvironment within the psycholinguistic aspects is also due to the fact that the results of the given research and the results of such scientific investigations will allow us to solve such current questions as practice in international

political, cultural and professional communication, namely (1) enhancing the adequacy and, therefore, the effectiveness in the decoding of the English language by communicants and (2) enriching the norm of the American English by replacing the inherent linguistic features with those elements of dialects that are more natural to humans.

**Analysis of the recent investigations and publications.** It is well known that the English language has been studied both: as a result of the development and interplay of its national variants, and in terms of systematization of their convergent and divergent features (Yu. Zatsny, 2014; M. Kolesnyk, 2014; J. K. Chambers, 2005; D. Jones, 1997; I. Trevian, 2007; P. Trudgill, 1992 etc.). Specificity of sociological and cultural variation of speech within the psycholinguistics is presented in the works of A. Zalevskaya, 2000; T. Ushakova, 2006 (Psycholinguistics), David Corina, 1998 (Psycholinguistics and Neurolinguistics),

Dale J. Barr, 2013 (Meaning in Language Use), Rolf A. Zwaan, 2012 (Discourse Comprehension), Deffine Dahan, 2006 (Spoken Word Recognition), David A. Balota, 2004 (Visual Word Recognition), Jennifer S. Pardo, 2006 (Perception of Speech), Akhutina, 2005, 2016; Kovalenko, 1999; Leontiev, 1999; Chepeleva, 1992, 2015; Novikov, 1999, 2007; Marks, 2005; Foucart, Romero-Rivas & Gort, Costa, 2016; Hubers, Snijders & Hoop, 2016; Akimoto, Takahashi, Gunji, Kaneko, et al., 2017; Bitan, Kaftory, Meiri-Leib, Eviatar & Peleg, 2017; Bosco & Gabbatore, 2017; Sharon & Thompson-Schill, 2017; de Freitas, Peruzzi & Deacon, 2018; Giustolisi, Vergallito, Cecchetto, & Lauro, 2018; Hahne, Goldhammer, Kröhne & Naumann, 2018; Houghton, 2018; Mason, Scrimin, Zaccoletti, Tornatora, & Goetz, 2018; Ohadi, Brown, Trub & Rosenthal, 2018 (Listening Comprehension as a Subject of Psycholinguistic Studies) etc. Sociolinguistic variation of speech in the framework of Pittsburgh Speech with its influence on the microenvironment of Pittsburgh represents a particularly interesting task for special study.

**Objectives statement.** The prospect of this study requires a thorough detailing, systematization of theoretical observation foundations of psycholinguistic and socio-cultural factors, which are the vectors for development and state of language functioning in a particular area. The purpose of the investigation is the discovery of Pittsburgh Speech state in the context of globalization processes. The objectives of the study are as follows: 1) to summarize the basic features of Pittsburgh Speech; 2) to identify the percentage of the Pittsburgh Speech apprehension by listening; 3) to determine the level of perception of Pittsburgh Speech by visual examination of the questionnaire; 4) to systematize the obtained data and generalize it according to the stages of the experiment.

**Research methods.** To achieve the goal of the study, a set of methods and techniques have been used: 1) standard interview and observation to obtain material for further study; 2) descriptive and comparative methods for the classification and interpretation of the language units under the study; 3) continuous sampling from lexicographic sources; 4) mathematical analysis of frequency in usage of the language units to be analyzed; 5) a method of graphical and linguistic interpretation of the study results to systematize the data obtained and outline the features of their variation; 6) methods of psycholinguistic analysis to observe the components of speech activity on the example of the learned dialect.

**Research results.** Pittsburgh Speech is a very heterogeneous formation, which is characterized by

a high degree of differentiation within the phonetic, lexical and grammar levels although in some cases structural differences can also be detected [8].

The dynamism of the phonetic system of the English language, which is constantly evolving under the influence of linguistic and extra-linguistic factors, is realized both in the form of modification of the phonetic structure of words and in the form of variation of their accent patterns.

So, Pittsburgh Speech is demonstrated in deviations from the standard American English at all language levels [1]. The residents of Pittsburgh have the following phenomena in their speech:

- changing the vowel [ɔ] by [ɒ];
- quantitative and qualitative reduction of the stressed vowels before /l/;
- quantitative reduction of vowels before [r];
- changing in pronunciation of the vowel core of the diphthong [əʊ];
- lowering the tongue [ʌ];
- vocalization of the consonant [l];
- monophthongization of /ai/ and /aʊ/.

Within the framework of sociolinguistic research there has been found the features in pronunciation of the speakers with the purpose to define the presence or absence of interaction between phonetic features and extra-linguistic factors. The data corpus of authentic writing and speaking material made it possible to discover the reduction of the long vowels [o:], [u:], changing the vowel [ɔ] by [ɒ]; raising and lowering of the tongue in the pronunciation of the vowels [æ] and [ʌ] respectively, vocalization of the consonant [l]. Monophthongization of /ai/ and /aʊ/ in Pittsburgh citizens' speech have been found [7].

The lexical structure of Pittsburgh Speech covers a wide range of phenomena and concepts that represent speech outlook of Pittsburgh residents and is distributed in accordance with the following classification:

- names of people (sex, age, profession or occupation, nationality or ethnic affiliation, moral qualities);
- names of objects (clothing, footwear, accessories, food, alcoholic and non-alcoholic beverages, currency, vehicles, buildings, facilities, furniture, objects, etc.);
- names of actions (physical human actions, actions related to professional activities, households, hobbies);
- names of appraisal adjectives and adverbs (weight and size, color, nationality, appraisal (positive / negative) ;

– auxiliary part of speech (conjunctions, prepositions) [8].

In everyday communication Pittsburgh Speech is distinguished by significant demonstration of peculiar features in relation to a speaker's *gender, ethnic affiliation, social status and age* [2].

Thus, it is clear that representatives of other micro- and macro-environments may find it difficult to understand Pittsburgh Speech, in particular non-native speakers. In order to determine the psycholinguistic component of the Pittsburgh residents' speech, we have conducted an experiment to identify the perception level of Pittsburgh Speech among the University students. The participants of it were students-philologists of Alfred Nobel University (3–4 year of studying). The purpose of the experiment was to determine the percentage of Pittsburgh Speech perception by non-native speakers.

During our experiment, participants were asked to listen to audio recordings of authentic speech by a Pittsburgh resident with the usage of lexical units inherent in a purely Pittsburgh Speech (**Task 1**). At the same time, the informants should complete the questionnaire we had developed in advance (**Task 2**), which contained 5 sentences. They were doubled in audio recordings [8]. Each sentence has three interpretations, where the only one is correct. Participants had to emphasize the correct version of the sentence (annex 1).

The materials offered are units of phonetic and lexical levels taken from the authentic audio by Pittsburgh native speakers (interviews, reading passages, speech and visual perception).

#### **Annex 1. Identification of Pittsburgh Speech perception level.**

QUESTION: WHICH OF THE GIVEN OPTIONS IS CORRECT?

1) **“Quit jaggin around with dat jumbo” implies that:**

- *someone is sticking thorns into his food;*
- *someone is holding a very big weapon;*
- *someone is playing with his food.*

2) “Dawn is rillynebbly” means that:

- *the sunrise is really nice;*
- *don's reel is very sharp;*
- *don is a really nosy fellow.*

3) “What yinzdoinen at?” translates as:

- *what are you two eating today;*
- *what are the youths doing;*
- *tell me everything that you two are doing.*

4) What action do you take when you hear: “Get aht, dere's a fahr in da filled!”:

- *laugh and smell the pretty flower;*

– *look carefully at the filled sections;*

– *leave the field and call emergency.*

5) “If yinz wants served, raise your hans” translates as:

- *if you want service, lift some Germans;*
- *if the youths want to play tennis, they should raise their hands;*
- *if you want to be served, raise your hands.*

The target group of the experiment consisted of 56 Philology students from Alfred Nobel University, aged 19–21 (3–4 years of studying). Such a number of respondents are scientifically substantiated: according to V. Labov's theory, 25 informants are sufficient to study the socio-phonetic variability of pronunciation [4]. L. Verbitskaya believes that recordings of 20 people are enough to get reliable results [6].

As a result, 56 questionnaires have been analyzed. According to the data obtained, all informants have been divided into the following groups relatively to the level of Pittsburgh Speech perception:

- recordings were understood in full;
- recordings were understood in part;
- recordings were not understood at all.

Because of the fact that the experiment consisted of two parts: listening (aural comprehension) (1) and questioning (visual recognition) (2), the data obtained have been also divided into two steps.

According to the results of the experiment, it can be stated that the majority of students have showed a higher understanding of the material after visual contact with it than by listening only. This is due to the fact that most participants are prone to visual perception of information.

The results of the analyzed material (audio perception – 56 questionnaires) are summarized in fig. 1.

The vertical axis determines the number of students who understand the suggested sentences spoken by Pittsburgh native speakers. The horizontal axis indicates the number of questions in the questionnaire.

Thus, the number of students who have understood all the expressions is 10.7%; the proportion of students who have not understood this dialect was 5.3%. The largest proportion of informants was students who have understood two thirds of the information heard (30.3%).

The data obtained indicate that Pittsburgh Speech is rather difficult to competence by non-native speakers.

Let us note that the most understandable were sentences 3 and 5 from our questionnaire:

*What yinz do in enat? =Tell me everything that you two are doing! ma*

*If yinz wants served, raise your hans = If you want to be served, raise your hands.*

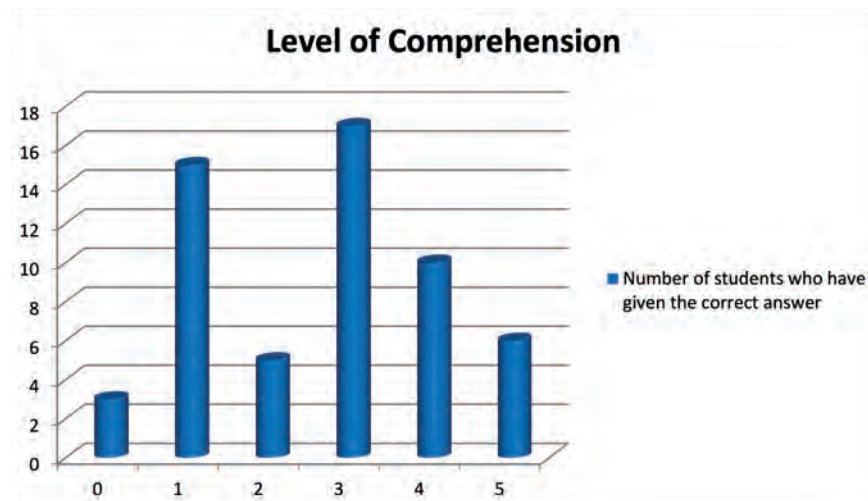


Fig. 1. The level of comprehension of Pittsburgh Speech

It is necessary to emphasize that both sentences contain the pure dialect lexeme *yinz*, which has the meaning of *you guys*, that is, *you are – 2 people, plural*. This may be due to the fact that the context of both expressions, with the exception of a specific lexeme, has a more Standard English, which is accustomed to the informants and which they have been learning for several years.

It should also be noted that the least clear was the sentence 4 of the suggested questionnaire:

*Getaht, dere's a fahrindafilled!* = *Leavethefieldandcallemergency* [8].

This sentence has the greatest number of phonetic features inherent in Pittsburgh Speech, namely monophthongization of the diphthong /aʊ/ and /aɪ/.

**Conclusion and propositions.** Pittsburgh Speech as one of the dialects of Midland American English was formed under the influence of extra-linguistic (socio-cultural, demographic and biological) and linguistic (interaction with other languages, dialects and variants) factors of broad sociolinguists. This dialect is characterized by specific phonetic and lexical features, capable of demonstrating context-

driven variability and presenting difficulties in understanding and comprehension of dialectal units not only by non-native speakers but also by representatives of the American English conglomerate.

Interest in studying features of Pittsburgh Speech is based on the definition and analysis of realizations of phonetic and lexical variables under the influence of extra-linguistic parameters (gender, ethnicity, social identity of the informant, age). The results of the given study reveal the uniqueness and identity of this dialect

and the dependence of the variation of linguistic units on the social characteristics of the society within the given region.

A new perspective is the analysis of the variability of speech and its comprehension by non-native speakers to determine comprehension level, consistent with the current state of linguistic and psycholinguistics development, and increasing interest in revealing the influence of social factors on the functioning of speech in different territories. This article is quite interesting in the light of the importance of the socio-cultural role of Pittsburgh Speech in the overall linguistic picture of the United States of America.

The data presented by the experiment has showed that the most difficult in decoding the speech of Pittsburgh residents by non-native speakers is the specific vocabulary inherent in this territory. Of particular difficulty is the specific pronunciation of words that observe such phonetic processes as the monophthongization of the diphthongs /aʊ/ and /aɪ/, which is the so-called feature of Pittsburgh Speech.

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### **Зірка В. В., Вуколова К. В. ПСИХОЛІНГВІСТИЧНИЙ КОМПОНЕНТ У ВИВЧЕННІ ЕФЕКТИВНОСТІ ДЕКОДУВАННЯ ПІТСБУРЗЬКОГО ДІАЛЕКТУ**

*Стаття продовжує цикл наукових робіт з дослідження пітсбургського діалекту під впливом позалінгвістичних факторів. Дослідження охоплює три основні рівні мови, такі як фонетичний, лексичний і граматичний. Саме динамізм фонетичної системи пітсбургського діалекту, який постійно розвивається під впливом лінгвістичних та позамовних факторів (стать, етнічна приналежність, соціальна ідентичність мовця та його вік), реалізується як у формі модифікації фонетичної будови слів, так і у формі варіації їх акцентів. Цілі дослідження досить різноманітні і включають такі: короткий зміст основних особливостей пітсбургського діалекту; визначення відсотка сприйняття вивченого мовлення шляхом прослуховування; визначення рівня сприйняття мовлення м. Пітсбург шляхом візуального огляду анкети.*

*Таким чином, автори представляють практичне дослідження сприйняття мови, що використовується на досліджуваній території не носіями мови в рамках експерименту, проведеного в одному з українських університетів. Цей експеримент необхідний для розуміння таких психолінгвістичних аспектів, як мислення та сприйняття мовців. Все це могло би сприяти підвищенню адекватності та ефективності декодування англійської мови комунікантами та збагаченню норми американського варіанта сучасної англійської мови. Експеримент складався з двох частин, таких як слухання (розуміння на слух) та анкетування (візуальне сприйняття). Ця стратегія, що складається з двох частин, дає нам змогу досягти мети дослідження, якою є виявлення стану мовлення, характерного для мешканців м. Пітсбург в контексті глобалізаційних процесів. Отримані дані вказують на те, що мова Пітсбурга досить важка для сприйняття не носіями мови. Складність полягає у специфічній вимові слів, що включають фонетичні процеси, характерні для мовлення пітсбургжан.*

*Результати дослідження виявляють унікальність та ідентичність цього діалекту, а також залежність варіацій мовних одиниць від соціальних характеристик суспільства в межах цього регіону.*

**Ключові слова:** *пітсбургський діалект, рівень сприйняття, фонетичні особливості, слухання, анкетування.*