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Methodology Of Phonetics In Applied Linguistic Research In Present Scenario

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Abstract

It wasn't long after the birth of experimental phonetics that people became increasingly interested in the physical qualities of speech sounds. The experimental methodology makes it possible to describe in detail the qualities of the mechanisms that are responsible for the production of sound in a complete manner. During the latter half of the nineteenth century, Kazan University was the site of the world's first experimental phonetics investigations, which took place there as well. It was already recognised as significant at the time, and as a result of this recognition, it became possible to substantiate the theory and methodology of experimental study of the sound structure of the language in a creative and methodologically correct manner, as well as to predict milestones and steps for future research. In addition to linguistic ideas, a large number of extralinguistic perspectives were transmitted principally through phonetic structures and units. The fact that the sounds of local speech implicitly serve as a technique of formalising mental spaces in the context of multilingualism makes it absolutely essential to investigate and discover the role of phonetics in the building of a scientific knowledge system (according to the tradition of Kazan Linguistic School, this can be a model of the word phonemography). Acoustic phonetics, which makes use of acoustic parameters for sounding speech elements, can be used to reveal general patterns of the dynamics of the speech model in communication between speakers of heterogeneous languages, as well as to identify vulnerable points in the articulatory base of speakers of heterogeneous languages, according to the authors. A major goal of modern instrumental research is to define the acoustic component of speech, which will allow for a more in-depth investigation of the phenomena of human speech as a complex associative aggregation in the near future (the definition of V.A.Bogoroditsky, the founder of experimental phonetics in Russia). It is the goal of our research to understand the role and possibilities of experimental phonetics in the process of the production of phonetic knowledge. Our research is focused on the development of phonetic knowledge.

Keywords: Experimental Phonetics, Acoustic Segmentation, Phonemography of the Word, Basic Acoustic Correlates, Speech Signal, Phonetic Portrait of the Speaker

Introduction

It is necessary to have a database including all systematic knowledge essential to the philologist's profession in order to be considered competent. In recent years, substantial study on the idea of knowledge has been performed in many different scientific domains like as psychology, cognitive linguistics, and linguistic culturology, amongst others. Yu.I.N. Boduen de Courtenay was a founding member of the Kazan Linguistic School and was responsible for the development of one of the most comprehensive classifications devoted to the various categories of knowledge in linguistics, which is considered to be one of the earliest classifications devoted to the various categories of knowledge in linguistics. While learning a language, he recommended that pupils distinguish between different types of knowledge, such as intuitive, scientific, and linguistic, at various stages of the process of learning. The development of approaches to fundamental paradigms of language, such as system-structural and communicative approaches, as well as the development of the activity aspect, resulted in the development of a detailed character in the following parameters: relationship to science; social life; research methodology; dynamics of verbal representation, and so on. These aspects are described in detail in the works of V.V. Krasnykh [Krasnykh 2012: p. 61].

At the commencement of the concept of the Kazan Linguistic School, it was also stated that the study of language phenomena and structures would be approached in a systematic manner. This, we believe, was the spark that ignited the interest in knowing the phonetic level of language as a harmonic component of linguistic unity. There were a variety of methodologies utilised to analyse the resources and potential of the language's phonetic system, including psychophonetics, anthropophonics, and word phonemography.

This set of methodologies acted as a kind of guidance on how to investigate phonetic units in the context of science and everyday communication in the first place, rather than just reflecting metalinguistic things. Furthermore, these characteristics served as a framework for the use of phonetics analytic techniques. It was at Kazan University, near the end of the nineteenth century, that a breakthrough in experimental sound structure study happened, making it possible to substantiate theory and methodology, as well as predict the milestones and steps of future research. Instrumental research, as V.A. Bogoroditsky explained in his 1930 work, "The Key Moments of Instrumental Research," is critical in the development of the articulatory base of language and speech, and it plays a critical part in its development.

Language information, according to the theory of linguisticdidactics, is not only necessary for the acquisition of a language, but it also contributes to the development of an individual's integrated picture of mental spaces, and as a result, contributes to the diversification of the vectors that constitute the human speech continuum. This paper proposes a connection between the foundations and dynamics of human cognitive capacities and laws of speech, which are particularly relevant in today's world of communication. Vogoroditsky defines speech as "a complicated associative aggregate," which is a difficult associative aggregate.

One of the most essential roles played by the phonetic component of speech is in the development of associated metadata, as well as the fundamental means of organising and communicating acoustic-phonetic and pragmatic information, among other things, and this is true for all languages. A growing interest in speech necessitates the development of skills that will enable them to successfully implement a diverse range of problems that originate in the sound structure of the language and emerge as a result of it to develop communicative tactics and strategies, such as communication models, phonetics and presuppositions, phonetics and universal-object code, and so forth. 2017 is the calendar year. [Dediu]

Components and Methods of Operation

When experimental phonetics was still in its infancy, the study of neurophysiological systems served as the launching pad for the field. In accordance with the findings of studies conducted at the time, members of the Kazan linguistic school came to the following conclusions: speech zones exist in the cortex of the human brain; the nature of linguistic thinking; the causes of individual speech phenomena such as slips of the tongue; and other findings that are relevant today.

It is required to provide a theoretical explanation for what is causing the occurrence of these events. Representatives of the Kazan linguistic school feel that experimental recordings can aid in the improvement of not just motor perception of speech but also the ability to correlate words. In particular, this is true in light of the fact that the essence of associations based on similarities and contiguity played a significant role in the development of the experimental phonetic description of language programme developed by the Kazan linguistic school. We feel that these approaches are beneficial when it comes to teaching pupils the underlying mechanisms that make up the phonetic structure of a language, in addition to being relevant and time-efficient.

Among the four primary types of linguistic activity that people participate in are speaking, listening to others speak to them, writing and reading. According to proponents of the Kazan linguistic school, sound and writing are two of the most important means of communication in human communication. It is common for speakers of polylingualism to overlook the acts of these modes, which embody the dynamism of human speech and the ability of the speaker to extract basic and supplementary meanings from phonetic and auditory information, when speaking in multiple languages. Visual series of permitted slips of the tongue and hooks generated by computer systems. Students can specify the phase aspects of variable sounds using the Speech Analyzer or PRAAT, and the oscillograms can be used to grasp the phonetic level of the causes of these events using the oscillograms. Orthophonic diversity is particularly useful for those who are learning a foreign language as a non-native or as a foreign speaker to establish an articulation base for the language. In the case of orthophony, the possibility of modelling non-tonal accents (in the words of S.V.Kodzasov), which also reveals the emotional potential of speech, correlates with the orthophony, and the intensity

curves in this case really indicate how well the speaker perceives the emotional, axiological parameter of speech. In this case, the intensity curves really indicate how well the speaker perceives the emotional, axiological parameter of speech Results This is accomplished through the use of the so-called integrative description, which describes the rhythmic structuring of speech as it pertains to explanation of the semantic projection of an utterance. Automatic algorithms for characterising the speech signal are required for the training of rhythmic, dynamic, and melodic speech qualities, among other things. Computer technologies enable academics to create a phonetic portrait of a native speaker based on his or her social status, as well as to elucidate how the dynamics of speech varies when ethnic and cultural aspects are taken into consideration. We can see what trends emerge in the development of the articulatory base as we progress through the learning experience. When stating a phonemic representation in the context of polylingualism, these parameters are extremely important; in particular, such a language situation is currently observed in the Republic of Tatarstan; we believe that it is advisable to pay attention to the variation of speech signal parameters depending on the basic extralinguistic factors (age, emotional state, education, culture, and so on) when performing a comparison of speech signals. We believe that The acoustic data collected will be significant in the decision-making process for adaptation questions in dialogues between diverse native speakers as well. This initiative will make a significant contribution to the preservation and development of languages in a multilingual environment.

As a complement to the oscillographic observations of the word sound structure, modern experimental phonetics answers the difficulties of listening processes through a package of prosodic speech characteristics, which are observed simultaneously with the oscillographic observations. After setting the settings (degree of naturalness of speech, accent, genre, psychology and so on), it becomes able to duplicate the text exactly as it was written. Because of the acoustic data gathered with the aid of these computer programmes, it is now able to conduct a comparative examination of the phonetic structure of the foreign language and the native language, while taking note of both phonetic universal and unique aspects in both languages. The characteristics of the accent revealed in this situation will also show the status of phonological hearing in speaking, as well as the ability to perceive and understand speech utilising sound and acoustic registers. a.

In order to overcome not only the didactic and methodological challenges that arise, but also to refill the phonetic fund of the languages in a given location, comparative phonetic bases of different languages are being developed. The establishment of such phonetic funds in the Republic of Tatarstan is currently underway; in the 1990s of the twentieth century, the phonetic fund of the Russian language was established through the collaborative efforts of scientists from Moscow, St. Petersburg, and Germany, among others. Although the phonetic fund of the Russian Federation is important from a linguodidactical standpoint, it is also

important from an applied standpoint (clinical and neurolinguistics, for example [Richards 2015; Gorobets 2016]), as well as from the perspective of forensic linguistics [Lacerda 2013].

Discussion

With the help of experimental phonetics, it is possible to correct the dynamics of phonetic space in native speakers based on their social parameters; the aspects of social phonetics that are refined through the use of experimental technologies are primarily such characteristics as melodic and prosodic timbre, rhythm dynamic modelling in the speech behaviour of speakers, actualization of meaning with the help of prosodic markers, which is recognised by all specialists in applied phonetics.

It is necessary to employ a wide range of strategies in order to establish suprasegmental phonetics during the course of instruction in the fundamentals of phonetics; computer programmes allow for the true expansion of the semantic functions of speech prosody. L.V.Zlatoustova's [Zlatoustova 1981] theories, as well as those of S.V.Kodzasov's [Kodzasov 2009], R.K.Potapova's theories, as well as those of V.Potapova's theories [Potapova 2012], and others, are taken into consideration theoretically in this article.

Even if the prosodic intonation is still prone to fluctuation, the phonetic transcription follows well-established criteria. Certain differences will be revealed when comparing the algorithms of prosodic transcription developed by S.V. Kodzasov with the works of the St. Petersburg phonetic school, and the experimental analysis will aid in the refinement of some approaches, such as a set of phrase accents or accent types [Sajin 2017]. In the process of learning, it is possible to visualise the intonational contours of speech and so convey accents in a more vivid manner; intonograms are quite beneficial in this regard. Finding the phonation will be more difficult, and it will be necessary to emphasise the duties of training the prosodic timbre, which will entail modelling the pitch of the voice and the dynamic characteristics of the sounds in this situation. The evolution of the ability to segment a speech stream into segments will be influenced by the pitch range over which the sound is conveyed in the speech stream, which will be discussed in more detail below. This is especially important for nonnative speakers when it comes to the construction of a system of phonetic knowledge, which is particularly difficult for them. While incorporating the findings of experimental phonetics into the teaching of Russian phonetics to non-Russian speaking students, we also sought to draw on the traditions of the Kazan linguistic school, which has produced promising results in the fields of syntagmatic formalisation, localization of phrasal stresses, and the correlation of sound and meaning. It is not only current in educational and methodological aspects, but it also solves a number of applied questions, thereby enriching the philological competence of students; formalisation of speech through acoustic sound supports, their perception and interpretation with a semantic programme that reveals the general semiotic cognitive potential of speakers; formalisation of speech through acoustic sound supports, their perception and interpretation with a semantic programme that reveals

the general semiotic cognitive potential of speakers When it comes to the segmentation of speech, the issues of syllabic prosody are given significant emphasis in the vast majority of publications. In terms of the acoustic parameters of a syllable, the frequency of the pitch on border areas, the intensity curve, and the duration are the most important – everything that contributes to the development of listening skills, the correction and coordination of sounding / pronunciation and understanding techniques, the success of developing skills and abilities in working with phonetic material of varying degrees of semantic and communicative complexity.

Recognizability of a sounds speech When a person comprehends and recognises the semantic focus of a lexeme through the mechanisms of external speech, this is referred to as markers. Experimental phonetics is a branch of linguistics that contributes to the development of dividing semantic parts in speech by means of physical parameters. In this way, researchers can distinguish between the purity of the background gesture in sound formation and the presence of certain paralinguistic nuances, which are indicated by a shift in frequency of the spectrum into either the high or low frequency region, which indicates both the presence of the extralinguistic plan and a change in sound quality. When it comes to solving tasks such as recognising a person by voice identification, the emotional component of experimental phonetics plays a role. The typology of prosodic models has been studied in depth by a number of experts, including L.V. Zlatoustova, R.F. Kasatkina, S.V. Kodzasov, R.K. Potapova, and others, who have made major contributions to the field of Russian phonetics through their research. It is vital in the setting of polylinguism to take advantage of the resources made available by experimental phonetics [Fenwick 2017] in order to maximise efficiency. A so-called "mixed character of the language" (in terminology coined by Y.I.N. Boduen de Courtenay) is formed when two different languages actively interact in a single communicative space, as has been the case in the Republic of Tatarstan for several centuries, and when two different languages actively interact in a single communicative space, as has been the case in the Republic of Tatarstan for several centuries. It is feasible to capture the characteristics of phonetic acoustic information through the use of experimental phonetics technology, which is currently being developed (currently it is available through computer programmes PRAAT, and Speech Analyzer). In the course of utilising the programmes that provide the acoustic properties of the voice signal in a single complex, it is possible to observe oscillograms, intensity curves, melodies, and spectral contours all at the same time on the computer screen.

Conclusions

The results of experimental phonetic analysis of speech are extremely valuable in the classroom for teaching the fundamentals of speech activity. Acoustic phonetics not only aids in the discovery of general patterns in the dynamics of the speech model in communication between native speakers of heterogeneous languages, but it also aids in the identification of

vulnerable points in the articulation base by analysing the acoustic parameters of sounding speech elements, resulting in the construction of a kind of phonetic code for extracting information from the flow of conversation.

Accordingly, experiments on the perception of semantic segments of speech revealed a low percentage of accentuation in non-speakers' sounding Russian language speech; however, when the emotional factor is considered, there is a greater sensitivity to the semantic points of the message; therefore, in teaching practise, this technique should be actively used in conjunction with data visualisation on the screen. Nikolaeva [Nikolaeva 2000] is credited with developing the semantics of accentuation in Russian linguistic theory.

According to the findings of the auditive study, exercises for modelling frequency ranges of the basic tone are appropriate for use in both the practise of teaching and the creation of phonetic knowledge. Particularly vital when working with native speakers of tonal languages, such as Chinese, is the ability to communicate effectively. Tatar native speakers, on the other hand, will find this important since the rhythmic structure of the Russian and Tatar languages differs; they can be classified as accent and anaccent, respectively, and as a result, the rhythm-melodic organisation will also differ. Accent patterns will be classified into several typologies based on their rhythmic, dynamic, and melodic frameworks. Instead of serving as an adjunct didactic device, experimental phonetics is used in this process as an integrative semantic and grammatical information technology that integrates the semantic and communicative competencies of learners.

It is our intention to carry out our research in accordance with contemporary ideas of interpretation of acoustic phonetics possibilities. The idea of V.A. Bogoroditsky (that speech is a complex associative phenomena) has been validated in current linguistics by the development of modern computer technology, which should be utilised in the educational process as much as possible.

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