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INTONATION AS A MEDIUM OF INDIVIDUAL'S PERCEPTION AND EXPRESSION

The article is concerned with a psychological aspect of intonation. The intonation parameters and their combinations convey the information about the psychological state and features of the speaker.

To establish the type of relations between the intonation and psychological features was one of the aims of the research. The findings of the experiment enable to state that 1) the listener is able to perceive the psychological features of the speaker with a certain degree of correctness on the basis of the intonation parameters; 2) a definite type of correlation exists between certain intonation parameters, a psychological state and psychological features.

The carried out research singled out: 1) the factors that determine the listener's identification of the speaker's psychological features 2) the intonation models that manifest the speaker's psychological state.

KEY WORDS: *correlation of the intonation and the psychological state, the intonation models of psychological states, perception, intonation parameters, identification of the psychological features of the speaker on the basis of intonation.*

Anthropocentric approach that has been prevailing in sciences during the last decades has made an individual and his discourse as an object of study in modern linguistics. An individual and his language are inseparable: language does not exist out of the individual, it is one of the ways of his expression of himself. Therefore to study the discourse of the individual means to study the individual, get information about his social and educational background, psychological and physiological characteristics.

Psychological features of the individual are traced on all the language levels: grammatical, lexical and phonetic. Intonation of speech gives a great amount of information about the speaker. It manifests the person's state and indicates his per-

sonal qualities which he sometimes even does not realize. Intonation is the token that listener perceives and on the basis of which comprehends the meaning of speech and evaluates the speaker.

Voice is so closely connected with the psychological state of a person that, as the psychologists and psychoanalysts assert, it makes possible to diagnose depression and schizophrenia and other psychological deviations. J. Pierrakos¹ points out that imbalanced voice is an indicator of a person's problems and describes examples of enriching of person's voice after the overcoming of his psychological problems.

Scholars' attention to the reflection of the psychological properties and states in speech is described in the following researches "Language of

¹ PIERRAKOS, J. *The Voice and Feeling in Self-Expression*. New York, 1969, p. 75–88.

depression" by W. Bucci², "Schizophrenic speech: a factor analytic approach" by D. Gerver³, "Sprachphänomene und Psychose" by Th. Spoerri⁴, where the language of people with psychological deviations are under study.

Nevertheless, the languages of the current psychological states (states that are referred to as a psychological norm) have not been observed yet. Along with it, the intonation in connection with the current psychological states has not been the object of study.

All the reasons mentioned above explain the necessity of study of the intonation in connection with the psychological states and features. Apparently the prosodic structure can be considered as an inherent feature of an individual and an essential medium of expression of his psychological properties and states. Therefore, the experimental phonetic research was fulfilled, the main goal of which was to ascertain intonation structure of individual's speech as an indicator of the psychological states and psychological features.

The experimental material is constituted by the recorded samples of speech of 60 speakers. The amount of experimental material makes up 10 hours recorded speech in English, Russian and Ukrainian.

The analysis consists of two stages: auditory and acoustic. The speakers were in various psychological states (the psychological states were identified by the psychologists) and naturally possessed certain psychological features.

The auditory analysis was carried out by 36 people, linguists and psychologists, they were divided into 2 groups, 18 persons in each.

The tasks of the psychologists included identi-

fication of psychological states and psychological features of speakers (temperament, rate of thinking, accentuation of personality, features of character, etc.)

The group of linguists fulfilled the following tasks: establishing of intonation parameters on the perceptual level, namely the directions and types of the nuclear tones, the frequency of stresses occurrence in a phrase and their degree, tempo, its stability (acceleration and deceleration).

To obtain the reliable data, the auditory analysis was conducted in the circumstances of 'white noise'. The experimental material was presented in noise, which muffled the words and therefore contents of speech samples could not be comprehended by the listeners.

The acoustic analysis included investigation of the intonation parameters of the fundamental frequency, intensity and duration on acoustic level.

The structure of the experiment described above enabled 1) to consider the relations between intonation and psychological features; 2) to establish an extent of correlation between intonation and psychological states 3) to ascertain a number of the intonation models typical of the definite psychological states. It also allowed to determine the abilities of the listeners in recognising of the speakers' psychological features by means of their intonation.

Based on the findings of the above research, it is logical to assert that every listener has in mind certain intonation models, which he associates with definite psychological characteristics. Perception of a speaker's intonation by a listener proceeds as decoding not only speaker's words but also the information about him, his personal features, including psychological characteristics.

² BUCCI, W.; FREEDMAN, N. The language of depression. In *Bulletin of the Menninger Clinic*, 1981, Jul, Nr (45) 4, p. 334-358.

³ GERVER, D.; LAWSON, J. S.; GERVER, M. E. Schizophrenic speech: a factor analytic approach. In *Language and Speech*, 1976, January-March, Nr (19) 1, p. 46-56.

⁴ SPOERRI, Th. *Sprachphänomene und Psychose*. Basel; New York, 1964.

A listener is able to identify psychological features of speaker during the listening to the recorded speech, but with different probability of identification correctness. The degree of correctness is determined by two factors. On the one hand, it depends on the speaker (degree of manifestation of these features by a speaker), on the other hand, it depends on the abilities of a listener and his qualities (age, gender, social, educational and professional background).

The psychological features – temperament, attitude to the outside world (introvert/extrovert) – are relatively difficult to identify, whereas properties of character are rather easy to recognize from intonation. Thus, the listeners are able to identify the psychological features of a person but with different degree of correctness. Steady tendencies revealed in intonation models give grounds to consider them as language means, taking part in explication of speakers' psychological features.

The relations between the prosodic parameters and psychological features do not bear the character of direct correlation, that means that no acoustic parameter correlates with one psychological feature. A certain combination of intonation parameters correlates with a definite psychological feature.

The grade of psychological tension determines the distribution of the highest pitch level in a phrase. The localization of the pitch peak on the first stressed syllable in the phrase is a marker of the psychological tension, while the placement of the pitch peak on the last stressed syllable witnesses its absence.

A nuclear syllable prominence achieved by means of an intensity rise and a pitch fall indicates the substantial degree of self-confidence. While a fast tempo with a narrow pitch range is a marker of a little degree of self-confidence.

A narrow pitch range and a wide intensity range, a high degree of occurrence of the falling to-

nes with extremely short post-nuclear syllables, represent a substantial degree of competence and confidence.

The tempo of speech doesn't imply the rate of thinking by the speaker, but a frequency of its changes demonstrates it. Slow tempo is not related to the slow rate of thinking.

Some of the prosodic features are similar in extremely different types of discourse: e.g. public and neurotic ones. They have nearly identical intonation structures: a wide pitch range, a high intensity level, a wavy contour of tune, unsteady tempo, short intonation groups. The differentiating feature in these cases is the combination of mentioned above parameters with others. The neurotic discourse is characterized by an inadequate variation of tempo, accentuation, pitch level, pauses and delimitation of the intonation groups.

A nuclear syllabic prominence achieved by means of an opposite direction of pitch and intensity movement (a pitch fall and intensity rise) is an evidence of an individual's confidence. Nevertheless, this prosodic feature is typical of the people in the psychological crises, in neurotic state. This fact explains the embarrassment of the listeners in identifying the confidence degree of the speakers (self-assurance, self-possession, flexibility, etc.).

As already was mentioned, prosodic parameters correlate with the psychological features. This correlation is used by the image-makers in creating images. A listener associates a definite intonation model with a certain psychological feature. Therefore the intentional realising of some intonation models by a speaker helps in creating the impression of possessing by him some personal qualities.

The experiment unveiled not only the correlation between intonation and psychological features, but singled out the patterns of relation between intonation and psychological states. The

research of the intonation parameters of different psychological states was carried out on the discourse of the people in various psychological states.

Although the psychological states of activation and tension possess quite certain intonation models, to a some degree they are determined by the individual properties of the speaker. Nevertheless, a range of phonetic parameters in speech, actually, demonstrates each of this states.

The activation state is a state of psychological concentration; individuals' attention is focused on the activities which are of his interest. The intonation analysis of the person's speech in the activation state gave insight into its prosodic characteristics. This is a normal/slow stable tempo, a low pitch level, low intensity level, a medium frequency of stress occurrence, lesser prominence of the nuclear tone. The syllable prominence is moderate, and achieved mainly by only one of the phonetic parameters in the succession of syllables.

The analysis of individuals' speech in the tension state, i. e. a psychological state demanding strenuous efforts, tension and responsibility for achieving results of activities, demonstrated a high degree of intonation variation, stipulated for variety of pragmatic aims, situational and individual differences.

Irrespectively of the language, the intonation parameters are to some extent identical in the tension state. The intonation parameters in tension state are realized by short/medium intonation groups, their distinct delimitation, a wide usage of pauses, wide/medium pitch and intensity range, a considerable variety of nuclear tones, a high grade of nuclear tone prominence, medium frequency of stress occurrence, and a high degree of the rhythmical organisation.

The intonation analysis was also carried out on the speech of people in the public state. It allowed to establish some intonation parameters: a mid pitch level, a high probability of the falling

tones, a wide intensity range. A lesser duration of the post-nuclear syllables in comparison with the nuclear ones makes ending of phrases sound abrupt. The pitch peak is located on the nuclear syllable.

The stable character of the prosodic modifications makes it possible to describe prosodic organisation of speech differentiated by such psychological states as psychological crises and post-traumatic syndrome.

In spite of all its variety, intonation models of speech belonging to the people in psychological crises differ from all the other intonation models of other psychological states. In the neurotic-depressive state the intonation parameters can be specified in terms of the high irregular prehead, complex or level nuclear tones, high pitch level, inadequate accelerations and slowdowns of tempo, a considerable frequency of the stress occurrence, a high degree of the nuclear syllable prominence, the increase of duration of some syllables within intonation group and a change of the pitch level on them.

The neurotic state is displayed in the intonation organisation of speech. Short intonation groups, a considerable quantity of pauses, used for concentrating the efforts to speak, a wide usage of parentheses and absence of the factual words, actualisation of the implicative tones (falling-rising and rising-falling) points at the uncertainty and unawareness of his problems by the speaker. A high degree of emotional tension is demonstrated by the realisation of high irregular prehead, a considerable nuclear contrast, a wavy pitch contour, a change of pitch level within one syllable and extension of its duration.

Inadequate and frequent changing of tempo in the intonation group, slowdown on the functional words and accelerating on the notional words create an effect of a spiky speech. The indicator of the unstable psychological state is a high level of intensity and pitch, wide pitch range in

combination with spiky rhythm, pausation and prominence of functional words.

In the psychological crises with excessive sensitiveness the intonation organisation of speech has the following parameters: a stable tempo, a high level of pitch contour, lengthening of syllable duration and a change of the pitch level within them, the pitch and intensity rise on the final syllables. The combination of these parameters is an indicator of the psychological crises and discomfort.

The intonation of the speakers with the post-traumatic syndrome can be divided into two groups in compliance with two types of reaction in this state: the situational-psychopathic (which is characterised by extreme anxiety and psychological instability) and the situational-depressive reaction (retardation of psychological and speech processes).

A sharp decrease of concentration of attention of a person in the situational-depressive and situational-psychopathic state determines grammatical, semantic and logical incoordination of the intonation groups, inadequate delimitation and pausation. A slight degree of prominence of the nuclear syllable can be explained by the semantic uncertainty of the phrase, absence of the distinct placement of the semantic center, as a result of the intellectual and volitional decline of an individual.

A high level of the anxiety during the psycho-

pathic reaction becomes apparent in speech in the phonetic terms of high and level pitch movement, narrow pitch range, high intensity level, lengthening of final syllables in the intonation groups with the intensity and pitch rise on them.

The depressive reaction as an evidence of the post-traumatic syndrome is conveyed in speech by the narrow pitch and intensity range, the level pitch contour, low intensity, a weak degree of accentuation.

Comparison of the prosodic parameters of the two groups (with psychopathic and depressive reaction) shows, that unilateral prosodic tendencies occur in both groups, i.e. the narrow pitch range, the level pitch contour, the level nuclear tones, lengthening of the final syllable duration.

Nevertheless, some distinguishing features are established in these groups: high/low pitch level, high/low intensity level, fast/slow tempo. The left members of the opposition in each pair belong to psychopathic, and the right ones pertain to the depressive states.

Thus, each psychological state is exposed in speech and has its particular intonation structure.

The carried out research gives all the reasons to take into account the psychological states in the phonetic analyses of discourse. One can observe stable correlations that occur between combinations of intonation parameters of speech and psychological states as well as psychological qualities.

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INTONACJA JAKO FORMA PERCEPCJI I EKSPRESJI JEDNOSTKI

Streszczenie

Artykuł omawia psychologiczny aspekt intonacji. Parametry intonacji oraz ich kombinacje przekazują informację o stanie psychicznym rozmówcy i cechach jego charakteru.

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INTONACIJA KAIP INDIVIDUO SUVOKIMO IR RAIŠKOS PRIEMONĖ

Santrauka

Straipsnyje analizuojamas psichologinis intonacijos aspektas. Intonacijos parametrai ir jų kombinacijos teikia informaciją apie psichologinę kalbėtojo būseną ir jo charakterio bruožus.

Jednym z celów pracy było określenie rodzaju zależności między intonacją a cechami psychicznymi jednostki. Wyniki eksperymentu pozwalają twierdzić, że: 1) słuchacz zasadniczo trafnie potrafi zdefiniować cechy psychiczne rozmówcy na podstawie parametrów intonacyjnych; 2) istnieje wyraźna zależność między określonymi parametrami intonacji, stanem psychicznym i cechami psychicznymi.

Przeprowadzone badania pozwoliły na ustalenie: 1) czynnika determinującego zdolność słuchacza do określania cech psychicznych rozmówcy; 2) modeli intonacyjnych, odzwierciedlających stan psychiczny rozmówcy.

SŁOWA KLUCZE: zależność między intonacją a stanem psychicznym, modele intonacyjne stanów psychicznych, percepcja, parametry intonacji, określanie cech psychicznych rozmówcy na podstawie intonacji.

Vienas iš darbo tikslų buvo nustatyti santykių tarp intonacijos ir psichologinių ypatybių tipą. Eksperimento rezultatai leidžia teigti, kad 1) klausytojas geba pakankamai teisingai suprasti kalbėtojo psichologinius bruožus iš intonacijos parametrų; 2) egzistuoja aiškus koreliacijos tipas tarp tam tikrų intonacijos parametrų, psichologinės būsenos ir psichologinių bruožų.

Atliktas tyrimas nustatė: 1) veiksnius, lemiančius klausytojo gebėjimą nustatyti kalbėtojo psichologinius bruožus; 2) intonacijos modelius, rodančius kalbėtojo psichologinę būseną.

REIKŠMINIAI ŽODŽIAI: intonacijos ir psichologinės būsenos koreliacija, intonaciniai psichologinių būsenų modeliai, suvokimas, intonacijos parametrai, kalbėtojo psichologinių bruožų nustatymas iš intonacijos.

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