# The Prosody of Directive Speech Acts: Pragmastylistic Aspect (On the Material of the Modern German Language)

L.G. Karandeeva[1,*], T.G. Stanchuliak[1], S.V. Popova[2], V.S. Suyskaya[3] and I.V. Shvedova[3]

[1]*Department of Theory and Practice of Foreign Languages, the Institute of Foreign Languages, Peoples' Friendship University of Russia, RUDN University, Moscow, Russia*

[2]*Department of Foreign Languages and Teaching Methods, Michurinsk State Agrarian University, Michurinsk, Russia*

[3]*Department of Germanic and Linguodidactics, University of the Foreign languages, Moscow City Pedagogical University, Moscow, Russia*

**Abstract:** The article represents the results of a phonetic experiment devoted to the study of pragmatically, and the stylistically determined manifestation of directive speech acts in the modern German language. The experiment allowed establishing the prosodic invariant of the directive speech act and describing variant patterns realized in diverse situational conditions which demonstrated a different degree of categoricalness and revealed their differential character on the level of prosodic expressive means. The research showed that pragmatic identification and stylistic differentiation of directive speech acts is realized utilizing all prosodic parameters - pitch, intensity and tempo. The complex analysis of pitch, intensity and tempo characteristics specific for situational variants of the directive illocutive allowed defining the level of involvement of these prosodic means in the functional realization of directive speech impact.

**Keywords:** Phonopragmatics, Prosody, Directive Speech Act, Speech Situation, Phonetic Experiment, Variant, Invariant.

## INTRODUCTION

Functional pragmatic speech acts are nowadays an area of active linguistic research. Their study is of particular importance for creating a universal system aimed at both filling existing gaps within the range of problems in the field of the pragmatic typology of utterances and describing their system characteristics (Leech, 1980; Motsch, 1994; Mouchet-Schlottke, 1982; Weber, 1986; Weisser, 2018). It is worth mentioning that on the phonetic level, such research has been very narrow and sketchy.

Due to the fact that in communication prosody is a key component of semantics, the range of phonopragmatic problems appears to be especially actual as their study does not only allow a deeper understanding of the communicative function of prosody but also helps fill the existing gap in the subject field of pragmatics itself: the criterion of prosodic markedness of types and illocutionary power of speech acts can facilitate the extension of their taxonomy and detailed specification (Harmash and Khaidari 2020).

In this connection, phonetic experiments carried out in the field of phonopragmatics are of a long-term perspective as with the phonetic aspect, the possibility arises to enrich the linguistic knowledge with significant findings of the processes of speech production and speech perception under certain conditions of interaction, and also about specifics of the world categorization and conceptualization, the mechanisms of verbalizing diverse data about the world, which are specific for a certain lingual culture. From this perspective, the study of such socially important speech acts as directive speech acts in the contemporary German language is of undoubtful interest (Kazhan, Hamaniuk, Amelina, Tarasenko and Tolmachev 2020).

It is unquestionable that in the German language, there is a specific prosodic arrangement appropriate of directive illocutive acts, which is determined by extralinguistic factors. This research considers the directive act as a categorical, authoritarian type of imperatives (orders, prescriptions, instructions, demands etc.) which only come from individuals who have the power to carry out such speech acts (Khaidarova 2020).

The task of a directive act includes an intension of changing the communication partner's point of view for the nearest or remote perspective, impel them into action. The obligation to fulfil the direction is an inherent property of this particular type of illocutives. The intensity of influence depends on the situational

*Address correspondence to this author at the Department of Theory and Practice of Foreign Languages, the Institute of Foreign Languages, Peoples' Friendship University of Russia, RUDN University, Moscow, Russia;
E-mail: l.education.3@mail.ru

E-ISSN: 1929-4409/20 

communication factors and demonstrates the categoricalness degree of the directive. This criterion indicates both the differences in the illocutive power of subclasses within one typological group (instruction – demand – order) and the differentiation inside a certain variety of the directive. The form of speech impact, which is integrated with the meaning content of an utterance, determines the nature of the partners' interaction.

It is worth noticing that linguistics has done thorough research into important aspects of imperatives (directives included), their structural specifics, morphological and syntactical features, and some pragmatic characteristics of imperative utterances (Belyaeva, 1992; Blinushova, 1994; Eremeev, 2000; Khrakovskiy & Volodin, 1989; Kozmin, 1965; Poroikova, 1985; Razguliaeva, 2000). However, one of the aspects in studying the directive as an imperative type, that is the phonopragmatic aspect, still remains extremely actual. In this connection, the study of the directive intension specifics delivered by means of prosodic features will allow differentiating illocutives of the same pragmatic field and establishing the dependence of the prosodic characteristics on situational conditions.

So, the relevance of this research is determined by the connection with contemporary studies of phonopragmatic problems within the anthropocentric scientific paradigm. The general focus of modern linguistics on the study of the functional load of speech units in the process of communication, the significance of directive acts in different spheres of human activity; the necessity to define the contribution of the prosodic component in the illocutive power of directive acts in different situations determined the object and the subject of the research. The study into functional characteristics at supra-segmental level with pragmalinguistic data involved allows finding out prosodic varieties of directive illocutive acts in the modern German language depending on situational conditions of communication.

The research hypothesis was the suggestion that illocutive directive acts in modern German are characterized by a set of primary (invariant, typical of the given illocutive act) and secondary (situationally and stylistically determined) prosodic parameters.

## METHODS

The experiment permitted establishing the prosodic invariant of the directive speech act and describing variant patterns realized in diverse situational conditions which exhibits a different degree of categoricalness and discovered their differential character on the level of prosodic expressive means.

To establish a prosodic invariant pattern of the directive speech act and to find out situationally determined prosodic variations of directive speech acts in modern German, a phonetic experiment has been carried out.

Diverse types of directive illocutives such as instructions and requirements with a different degree of categoricalness served as the experimental material. The utterances were produced in a spoken speech in the situations of formal business and informal communication by seven speakers, for whom German as their mother tongue – university professors and school teachers, residents of Brandenburg and North Rhine Westphalia. In order to receive speech samples, the speakers were offered to act out several situations in which the experimental illocutive acts were supposed to be realized in dialogues which presented variants of formal business and everyday communication. These variants were then divided into situational, slightly different pairs.

The recordings were made in the studio with the help of the high-frequency condenser microphone Behringer B-1, the audio interface Roland TRI-CAPTURE UA-33 and the audio corrector Steinberg Cubase 5.

Overall, for the purpose of the analysis, 415 utterances were chosen with the total volume of 6728 syllables. Then the material underwent standard processing typical of experimental phonetic research.

The experiment was carried out by the method of complex analysis which comprised: a) an aural analysis by native speakers of German and non-native phoneticians; b) an acoustic analysis of the experimental utterances which included: uploading the utterances onto the computer; their phonemic syllable decoding via a special computer application of sound signals (PRAAT); measuring and analyzing the acoustic parameters of the pitch, intensity and duration; c) statistical processing of the analysis data; d) comparing the aural analysis results with the statistically proven differences; e) the interpretation of the experiment results.

The aural analysis was carried out in two steps. At the first stage, the material was analyzed on the level

of relevance to the speech situations and pronunciation standards in these situations. To fulfil the task, three native Germans were involved, who were specialists of German philology and permanent residents of Germany.

The utterances under study were trice reproduced for the analyzers. For the identification of the relevance of the illocutive act, the analysis went unsupported by the full written text of the discourse. The experts were given a list of the situations with detailed explanations of the extralinguistic essence of each of them. The experts' task was to match the appropriate illocutive act with one of the offered situations.

In the result of the survey we intended to check:

1. The relevance of the illocutive act to the situation of its usage.
2. The probable addressee of the message.
3. The relevance of the utterance to the pronunciation standard in the given situation.
4. The speech tempo.

The utterances which were approved of by the experts as adequate to their situations and relevant to the conditions of the instrumental analysis were then subject to further aural analysis.

For the purposes of the second stage of the analysis, three phoneticians of German were involved for whom German was not their mother tongue. This group of experts were set the following tasks:

1. to mark perceptible pauses;
2. to identify the tone movement in pieces before the pauses and at the end of the illocutive utterance;
3. to establish stress hierarchy in the utterance.

For the acoustic analysis, those illocutive utterances were chosen which were approved of by the native German experts as adequate to the given speech situations of directives usage and relevant to pronunciation standards in these situations. While selecting the material, the pieces with sound defects were excluded. Thus, the experimental material for analyzing the prosodic characteristics of directive illocutives was presented by separate utterances without any outer noises which could have affected establishing their objective acoustic characteristics. On the whole, 330 utterances with a total volume of 4800 syllables were selected for further analysis.

The acoustic analysis of the material was carried out by means of the software package Praat. The program was designed and developed by two Professors of Phonetic Sciences Paul Boersma and David Weenink of the University of Amsterdam (Boersma & Weenik, 2017). The program enabled us to receive pitch and intensity spectrogram of a phrase and to gauge the pitch in hertz, the intensity in decibels, and duration in milliseconds with the quantization period of 20 milliseconds.

In order to eliminate interfering noises connected with individual pronunciation specifics, the received data were standardized in accordance with the methodology of B.M. Bashkina and L.D. Bukhtilov. Based on the standardized relative indicators of the above mentioned acoustic characteristics, their average parameters were established (Bashkina & Bukhtilov, 1977).

The comparative analysis of the acoustic characteristics considered the following constituents:

**A. Melody**

1) the average pitch of all recorded speakers;
2) the amplitude and localization of the minimal and maximal pitch parameters in the phrase;
3) the pitch range within illocutive acts;
4) the pitch levels of the syllables at the beginning and at the end of the pre-head, at the beginning and at the end of the head, the cadence period (in the research, the cadence period is seen as the localization of pre-nuclear, nuclear and post-nuclear syllables), the beginning and the end of the tail (points A, B, C, D, E, F, G).

**B. Intensity**

1) the average amplitude of intensity;
2) the amplitude and localization of the minimal and maximal intensity in the phrase;
3) the intensity range;
4) the intensity levels of the syllables at the beginning and at the end of the pre-head, at the

beginning and at the end of the head, the cadence period, the beginning and the end of the tail (points A, B, C, D, E, F, G).

**C. Tempo**

1) the average syllable duration;

2) the amplitude and localization of the minimal and maximal syllable duration in the phrase;

3) the average duration of the controlled syllables A, B, C, D, E, F, G;

4) the average speed of articulation.

The speed of articulation was gauged in milliseconds (msec) by means of dividing the total recording time by the total number of syllables.

The standardization of absolute dimensions of duration that is bringing them to the same time scale, and operating on relative dimensions of duration allows establishing individual tempo differences and makes the comparison of duration within the chosen extracts under consideration correct.

The average pitch was gauged by means of measuring the number of vibrations on vowels and sonorants within 20 msec pieces and multiplying it by 50, which showed the absolute dimension of the parameter in the point of measurement. The absolute dimensions were then brought to relative ones by dividing the indicator in a certain point by the average parameter of a particular speaker.

The pitch range was calculated as the difference between the maximal and minimal pitch amplitudes of an illocutive utterance (in normalized units).

The contour of tone movements was built on the base of controlled points localization (A, B, C, D, E, F, G) on the tone head.

The interval of the tone fall at the edge of two zones (pre-head and head, head and tail) was established following the same order, that is as the difference between the maximal and minimal pitch range, while the interval of the tone rise as the difference between the minimal and maximal pitch range (in normalized units).

The average level of intensity was established due to peak intensity of each syllable.

The range of intensity was calculated, similarly to the pitch range, as the difference between the maximal and minimal peak intensity points of the whole utterance.

The contour of intensity development was built on the basis of its amplitude on the controlled syllables A, B, C, D, E, F, G on the intensity scale.

The usage of mathematical and statistical methods of analyzing material in phonetic research has as its aim finding out the extent of randomness and regularity of speech facts, i.e. objective study and interpretation of received data.

Probabilistic experiments, sometimes called stochastic, are experiments which can be repeated any number of times, with the same stable conditions being maintained (as much as it is possible). Unlike determining experiments, the outcome of a probabilistic one is unclear and random. In other words, the outcome of a probabilistic experiment cannot be forecasted on the ground of a certain complex of conditions. However, with a probabilistic experiment being repeated many times under the same stable conditions, the variety of its outcomes proves to comply with certain regularities.

In this research, the comparison of characteristics was made by contrasting their average dimensions with the varying ones. The mathematical and statistical processing of the material was carried out with the usage of the *SPSS v 10.0.5 for Windows* software.

The average dimensions were calculated as:

$$\bar{x} = \frac{\sum x_i}{n} \quad (1)$$

where $\bar{x}$ is the dimension of a variant,

*n* is the number of variants,

$\sum x_i$ is the sum of dimensions.

After that, the average quadratic deviation of the variant was calculated as:

$$\sigma = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}} \quad (2)$$

where $x_i$ is the dimension of a variant,

$\bar{x}$ is the average dimension of the characteristic,

*n* is the number of variants.

The degree of deviation was calculated as the ratio of the average quadratic deviation to the arithmetical average of this characteristic multiplied by 100%:

$$v = \frac{\sigma}{\bar{x}} \times 100\% \quad (3)$$

where *v* is the coefficient of deviation,

$\sigma$ is the average quadratic deviation,

$\bar{x}$ is the arithmetical average of the variant.

Due to inevitable divergence between the selected samples and the general average, it is necessary to consider the average error of selection, which is calculated as:

$$S = \frac{\sigma}{\sqrt{n}} \quad (4)$$

where S is the error of selection,

$\sigma$ is the average quadratic deviation,

*n* is the number of variants.

For a more precise calculation of the error, with a low number of selected variants, the formula works as:

$$S = \frac{\sigma}{\sqrt{n-1}} \quad (5)$$

When contrasting two groups the number of variants in which is more than 30 the calculation of the error goes as:

$$S_d = \sqrt{Sx_1^2 + Sx_2^2} \quad (6)$$

If the number of variants is more than 30, the average error is calculated as:

$$S_d = \sqrt{\frac{\sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2}{(n_1 - 1) + (n_2 - 1)}} \times \frac{n_1 + n_2}{n_1 \times n_2} \quad (7)$$

where $S_d$ is the error of difference,

$x_1, x_2$ is the dimension of the characteristic,

$\bar{x}_1, \bar{x}_2$ is the arithmetical average of the characteristic,

$n_1, n_2$ is the number of variants.

The comparison of the accuracy of differences within a characteristic was carried out on the basis of the data received from the calculation of the normalized deviation:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S_d} \quad (8)$$

where *t* is the normalized deviation,

$\bar{x}_1$ is the arithmetical average of the fist selection,

$\bar{x}_2$ is the arithmetical average of the second selection,

$S_d$ is the error of difference of compared complexes.

When comparing the prosodic characteristics, we considered the differences to be significant if they were equal to 0.1 (90 % of probability).

Before recording the practical material, each speaker was gauged in his/her individual average pitch, intensity and speed of articulation, which later let us calculate the variations of prosodic parameters of each illocutive act in regard to this average dimension.

The determining factor in the study of prosodic characteristics of illocutives is acoustic speech characteristics. The data of the instrumental analysis aim to confirm or argue against the perceptual assumptions.

Based on the experts' responses and the analysis of situations in which directive illocutives were realized, four prosodic patterns were established – D1, D2, D3, D4 – which referred to one illocutive type, i.e. instructions and demands in situations of formal business and informal everyday communication.

## RESULTS

The acoustic and instrumental analysis of a situationally differentiated variant of the directive speech act allowed establishing prosodic specifics of each directive pattern. Based on the general characteristics typical of the four situationally determined variants, an invariant prosodic pattern of the directive was established, devoid of stylistic and modal connotations.

The invariant pattern of the directive D is characterized by melodic monotony realized in medium tone levels during the whole period of phonation except for the tone change on the main stressed syllable, which, however, is not contrast. The end of phonation is identified as interrogative. Such melodic monotony functions as a means of influence strengthening through the equation of all semantic zones. On the other hand, this property manifests following the rules

of decency and moderation, which generally accompany the usage of directive utterances in the German-speaking culture.

The dynamic component of the invariant is also marked by the medium level, though it demonstrates a greater variety. The contrasting changes of loudness level at the beginning and the end of the directive reflect the indisputability and high degree of the action urgency.

The analysis of the average syllable duration in relevant highlights a repeated phenomenon typical of most directive prosodic patterns and, as a result, reflected in their invariant, namely: the compression of the syllable duration in the pre-head and its extension in the head and tail. With the monotonous melody and moderate loudness, such a distribution of syllable duration forms a specific contrasting rhythm of the directive implying a superior speaker's status over the listener's, as well as the speech regularity, which renders significance of the directive and its categoricalness. The above-mentioned characteristics refer to the group of primary ones which characterize the directive as a given pragmatic type.

The comparative analysis of the prosodic characteristics typical of the directive illocutive variants allowed establishing their general and differential specifics as well as determining the degree of situational factors influence on the prosodic arrangement of these speech acts.

**D-1 PATTERN**

1. The melody of this pattern, which realizes a reserved instruction in situations of formal business communication, is heard as level, with a change on the pre-nuclear syllable, which is the point of maximum. The subsequent rather abrupt fall (the pitch goes two-tone levels down) makes the instruction very categorical.

The development of pitch realizes within the second and fourth, i.e. medium, pitch levels. The low-pitch final phonation appears to reflect the necessity to be tactful while giving instructions and categorical at the same time in order to point to a high degree of necessity and accuracy of fulfilling the task.

The comparison of this model with the invariant reveals the synchrony of the pitch development in the cadence period and in the tail. It means that the beginning and the end of phonation refer to common characteristics which do not depend on the situation of communication. The tone levels (medium) should be also referred to such characteristics.

More contrastive pitch differences typical of the D-1 pattern can be seen in the cadence period. In the invariant pattern D this part of the utterance is realized by the rise-fall tone whereas in the D-1 pattern by the level-fall tone, which characterizes the speaker's tone as calm but firm.

2. The analysis of intensity in the D-1 pattern shows a mismatch between the melody and loudness at the beginning of phonation, though the two synchronize further on up to the end of phonation. The level tone in the pre-head goes together with the rise-fall intensity, which, on the one hand, underlines the speaker's authority, his/her high social status and, on the other hand, the importance of the given instruction by means of intensive emphasis on one of the key semantic components.

Besides the last pre-head syllable, the maximum of loudness characterizes the pre-nuclear syllable. Emphasizing a word by means of contrastive decrease of loudness on the main stressed syllable creates the effect of categoricalness, rigidity and a high degree of obligation.

The character of loudness changes before the cadence period refers to invariant characteristics. Specific phonostylistic characteristics can be found in the head and tail, where they are presented by rise-fall movements in contrast to rise-fall-rise changes in the invariant pattern D. The contrastive differences which make the D-1 pattern a stylistic variant lie in the loudness levels at the beginning of final zones, where this characteristic is lower in comparison with the invariant pattern D. This fact seems to underline the semantic layer of the utterance over the emotional and modal ones.

3. The experiment shows that the syllable duration rises to the end of phonation in the D-1 pattern, which is connected with the tendency in the German language to locate the most important semantic component at the end of an utterance. The most stressed word is characterized by the longest syllable duration. In this connection, it seems possible to state that in the D-1 pattern the main phrase prominence is formed by means of a longer word phonation.

The comparative analysis of tempo specifics in the D-1 model and in the invariant reveals a relative synchrony of changes of the characteristic.

The stylistically marked specifics typical of the D-1 pattern include a quicker tempo at the beginning and the end of phonation. The main stressed and tail syllables are somewhat longer than these in the invariant.

**D-2 PATTERN**

1. This model is presented by reserved demands realized in the situations of formal business communication. The development of pitch realizes within the second and fourth pitch levels. The tone changes throughout the whole course of phonation, except the tail, are not significant. The rising melody at the end of utterances creates the effect of categorical influence, which results in the expectation that some responsibilities ought to be fulfilled. The accompanying changes of the semantics are connected with the arising negative evaluating meanings. Besides, such tone changes can imply a hidden threat of fines in case the demand is a default.

The comparison of the pitch contours in the D-2 pattern and the invariant pattern D reveals their complete coincidence from the beginning till the main stressed syllable. The phonation finishes symmetrically, but with a difference in the tone levels. A higher final tone in the D-2 model should be considered as a situational marker of this directive speech act.

2. The correlations of tone and intensity in the D-2 pattern are very limited. The contour of intensity is a falling-rising curve with significant differences on the first syllable of the head and the first syllable of the tail. The character of the pitch development and intensity are similar at the end of phonation. However, the intensity shows much more abrupt differences in this part: the tone rises within one tone level, whereas the loudness rises by more than three levels. The instrumental analysis data show that the average loudness in D-2 pattern significantly outdoes the general average one.

Therefore, the intensity plays a larger role in the identification of this pattern than the melody. The intensity level in the D-2 pattern is very wide and covers all five significant levels, which is a high identifying indicator. A verbally expressed demand obtains the features of a categorical utterance with shades of negative modality due to the high loudness in the pre-head and the tail. The accompanying tension remains till the end of the utterance.

The invariant specifics of the D-2 pattern are the character of intensity development in the head. A definite synchrony in its development matches with its slight predominance in the invariant pattern D.

Situationally determined specifics of loudness can be found at the beginning and the final phases of locution. The influential power is due to the high level of the speaker's loudness.

3. The syllable duration in the D-2 pattern is defined as steady medium with a remarkable lengthening at the end of phonation. On average, the speech tempo is characterized as below medium.

The tempo specifics of the D-2 pattern are almost the same as the invariant changes at the end of phonation. The development of duration in the pre-head is symmetric, the differences touch the levels of duration: in this part, the syllable duration is longer in the D-2 pattern. The time correlations of the D-2 pattern and the invariant pattern D in the head are negative. The steady medium tempo of phonation with a significant lengthening of duration at the end of the utterance comes as situationally determined marker of the D-2 pattern.

The factor of "restraint" resulting from the necessity to be tactful is reached by direct correlation of two prosodic components – the pitch and duration. Besides, the analysis shows that the final phase of phonation, which contains the key semantic component, is marked by all three parameters – the pitch, intensity and duration so that their indicators reach the maximum here.

Such a correlation creates the effect of preciseness underlying the categoricalness of the utterance with the possibility of using forced sanctions. However, the main influential element of this directive type on the audible level is loudness combined with duration.

**D-3 PATTERN**

1. This pattern is presented by illocutives realized in informal everyday situations and containing

highly categorical demands. The development of pitch in this pattern is realized in the second and fifth tone levels, which points to high variability of tone connected with situational conditions in which this speech act is realized.

The D-3 pattern comes in conflict everyday situations when there is no understanding or aspiration for cooperation and solving the conflict between the interlocutors.

It is natural that these utterances are characterized by tone variety, which serves to increase the influential effect by means of making the most important parts of the utterance prominent.

The general tone level of the D-3 pattern is higher than the average, which is connected with the increased emotional coloring of the utterance overall, which results from the feeling of indignation due to the unacceptance of the interlocutor's authority.

The main stressed syllable takes the highest, fifth level. Melodically it contrasts on the background of the low and medium tones of surrounding syllables, which creates the effect of unquestioning obedience and means an authorized, highly categorical character of a demand and a possible punishment in the case of disobedience.

The comparison of this pattern with the invariant shows the equivalence of the melody development in the pre-head and tail. Therefore, the beginning and the end of phonation refer to common characteristics, not dependent on the communicative situation.

The melody of the head has a contrasting character in the compared patterns. In the utterances realized by this pattern, the head is characterized by abrupt tone rises and falls, in contrast to the invariant pattern D, where the pitch change can be defined as level-rising-falling. The maximums of both patterns are located on the main stressed syllables. However, in the D-3 pattern, the maximum reaches a significantly higher level than in the invariant pattern D (approximately two-tone levels), which is connected with additional emotional and modal connotations. Overall, the D-3 pattern is tonally higher than the invariant.

Thus, the character of tone changes and the significant pitch differences compared to the invariant should be referred to situationally determined markers of the D-3 pattern.

2. In general, the pattern is characterized by a low level of intensity. However, the initial loudness is significantly weaker than the medial. The loudness grows up to the first fully significant word, then the loudness decreases, though rises again on the main stressed syllable. The energy tension and comedown, which make the most important parts of the utterance prominent are characterized as rather abrupt.

The falls and rises make up more than two levels on the intensity scale. By means of such contrastive falls and rises of loudness the speaker increases "speech pressure" on the recipient. The main stressed syllable also bears the highest pitch, which adds to the influential power. Therefore, in this pattern, the most important word is marked by the highest pitch and loudness.

The direct correlative character of pitch and intensity strengthening the authoritarian modality is located in the cadence zone and tail. The mismatch of melody and loudness on the initial syllable of the pre-head and on the pre-stressed syllable (asymmetric rise and fall of the characteristics), and the low level of loudness at the beginning and end of phonation combined with medium tones are also significant factors which add a threatening coloring to the demand.

The D-3 pattern and the invariant D show a definite synchrony in the character of the intensity development.

A situationally determined marker of the D-3 pattern is also a weaker loudness in all measured parts of the utterance, except the main stressed syllable, where the characteristic is above the invariant. The beginning of phonation is characterized by a significant difference in the intensity, which makes up more than two levels on the intensity scale.

3. The general tempo of the utterance phonation in the D-3 pattern is below average. The duration curve has a three-summit contour with the peaks on the first syllable of the head, on the main stressed syllable and on the final syllable. The last has the largest duration. Therefore, the syllable duration lengthens to the end of the utterance, and the lengthening is of a remarkably stepping character. The tempo of the final part is more than twice slower than the beginning.

The increase of duration leads to the prominence of significant words in this type of directive speech acts, i.e. those components of the utterance which are semantically most loaded.

The analysis of the three prosodic components allowed finding out a direct correlation of the pitch, intensity and duration in marking the main stressed syllable so that the melodic and dynamic characteristics reach their maximums here. The first significant word is marked by means of pitch and duration.

Although the longest duration does not mark the main stressed syllable in the speech act of demand, the synchronic decrease and increase of the pitch and duration allow speaking about their direct correlative character throughout the whole utterance. The development of loudness and tone in the D-3 pattern is less similar. The mismatch of the melody and loudness here expresses an additional pragmatic meaning, which is a hidden threat. The synchronic development of all the three characteristics is located on the main stressed syllable and the tail.

Therefore, it seems possible to state that both direct and negative correlations of prosodic characteristics are significant factors in the formation of a highly categorical directive speech act which is a demand with a threatening coloring. Their combination determines the influential power of the utterance.

The tempo specifics of the D-3 pattern almost completely coincide with the invariant changes of duration in the two relevant parts of the utterance – the head and the tail. There is an inconsiderable difference in the pre-head syllables, which are pronounced somewhat slower in the D-3 pattern. Therefore, the character of the syllable duration change in this pattern is very close to the invariant. The increase of phonation at the beginning of locution typical of this stylistic variant can be viewed as its differentiating characteristic.

**D-4 PATTERN**

1. This pattern arranges illocutives-instructions realized in informal everyday situations and having a high degree of categoricalness. The development of pitch in this pattern is realized within the first or second tone levels, i.e. in low levels. This implies a low degree of tone variability in this pattern, which is connected with the conditions in which the speech act is realized.

The situation in which the D-3 pattern is realized is characterized by a potential threat in the case of its conflict development. The speaker insists on the interlocutor fulfilling the instruction. Between the interlocutors, there is no cooperation or attempts to reach an agreement on the question under discussion. Their conversation feels some tension. Such communication is characterized by tone monotony as it serves to increase the insistence by means of tone levelling of all semantic zones.

The pitch contour is a wavy curve with a terminal ending. The tail starts at the second tone level; at the border of the head the tone goes down to the lowest level of the voice range, and the whole head is realized within the low melodic zone. In the cadence period, the tone level rises, and after it, the tone development tends down again.

Therefore, key semantic components of the utterance are accented by means of a low tone on the first syllable of the head and a tone drop after the main stressed syllable.

The tone contour of the D-4 pattern on all relevant points of the utterance are lower than the invariant D, and the difference of the level characteristics in the head is considerable. There is a definite synchrony of the pitch development in the pre-head and of the tone rise on the terminal syllable; however, unlike the invariant, in the D-4 pattern this syllable does not reach the maximum.

Therefore, the melodic arrangement of the D-4 pattern is to a high extent situationally determined. The monotony should be considered here as one of the means which strengthen the influence.

2. The intensity structure in the D-4 pattern reveals its almost complete synchrony with the pitch in all parts of the utterance, but the character of its development differs.

The dynamic contour is a falling curve with a high beginning of loudness and low ending. The range of dynamic changes in the D-4 pattern is wide, it covers all five significant levels on the intensity scale.

The initial loudness of the pre-head is on its highest peak. On the first significant word, the loudness goes two levels down and remains unchanged up to the end

of the head. Then, the loudness smoothly lowers in the tail.

In particular situational conditions, the decrease of speech loudness can have a similar effect. The decrease of loudness may mean persistence of the instruction and is often a way to show the speaker's rigidity.

Invariant characteristics of the D-4 pattern include the loudness change in the head and partially in the tail. Specific phonostylistic characteristics are located in the pre-head, where the loudness movements reveal somewhat different directions, and at the end of the tail, where the loudness development differs asynchronously in the two patterns.

3. The phonation slows down to the end of the utterance the same way it does in the previously described patterns. The characteristic maximum is located on the main stressed syllable.

Longer stressed syllables are followed by shorter unstressed ones, which results in a specific contrastive rhythm of the utterance. With the monotonous melody and reserved loudness, such a rhythm renders the attitude of confidence and categoricalness of the instruction.

The invariant D and the D-4 pattern show synchrony in the changes of duration throughout the whole phonation. The stylistically determined characteristic of duration consists in a slower phonation of all relevant syllables except the ones which precede and follow the main stressed syllable.

The comparison of the perceived prosodic characteristics of situationally determined prosodic patterns of directive speech acts demonstrates the fact that their stylistic differences are realized by means of all the components under consideration – the pitch, intensity and duration. However, the analysis of each component role in identifying the situational variants of the directive shows that in the utterances, the principle of compensatory interaction of the prosodic parameters is realized so that identifying the prosodic image of a particular illocutive is only possible with consideration of the entire tone-dynamic contour.

The experiment shows that in the formal communication context, the instruction and demand demonstrate a significant differentiation in intensity and duration; the level of pitch witnesses a less degree of difference. The pitch and tempo function as typological markers of the instruction in formal and informal contexts, of the demand in formal contexts and of the instruction in informal everyday contexts. The dynamic component plays a less important role in differentiating these situational varieties of the directive. Demands demonstrate the same way of differentiation in the mentioned contexts. In informal everyday contexts, the pitch and intensity become the markers of the instruction and demand; the tempo component only partly marks these illocutives. The instruction in the formal context and the demand in the informal context mostly differ in intensity. These prosodic characteristics build the group of secondary markers, differentiating situationally determined directive illocutives and expressing additional shades of their semantic content.

## DISCUSSION

Live spoken speech is a credible source of enriching knowledge about functional features of the language system units, since in this speech the units reveal their interconnection and interdependence in forming the meaning.

The 'speech sense' is believed as the ratio connecting the semantic and pragmatic components of an utterance. It appears as a result of a certain pragmatic focus inherent to language units. Being constituents of the oral speech discourse, lexical, grammatical and phonetic components make a different contribution to the pragmatic character of utterances and their emotional and modal coloring.

Linguists working in the field of theoretical and applied Phonetics note that having the largest potential of speech alteration to achieve positive perlocution in the process of communication, prosody plays a key role in forming semantic and pragmatic value of utterances (Gerazov *et al*., 2018; Golovchanskaya, 2018; Gibbon & Selting, 1983; Grigoriev, 1997; Eremeev, 2000; Imo & Lanwer, 2019; Jouvet, 2019; Karandeeva, 2013; Khrakovskiy & Volodin, 1989; Kodzasov & Krivnova, 2001; Lentsa & Solovyeva, 1989; Marić, 2018; Meinhold & Stock, 1982; Müller, 1999; Potapova & Potapov, 2006; Selting, 1995; Chesnokova, 2015).

Acoustic and experimental studies show that speech prosody can be unconditionally considered to be the key factor of a speaker's intensions identifier as it enables to unambiguously differentiate various types of speech acts and, first of all, unidirectional illocutives (Belenikina, 2011; Bortnikova *et al*., 2019; But, 2004;

Grigoriev, 1997; Karandeeva, 2013). The prosodic accuracy is not only a part of the proper language accent but also an important condition of fluent communication, devoid of failures.

In accordance with the research goal, we studied the prosodic characteristics of situation variants of the directive speech act. The experiment enabled us to establish four prosodic variants of the directive, which possess both primary (invariant) and secondary (variant) prosodic specifics. The invariant prosodic specifics help identify the illocutive type whereas the variant specifics mark their stylistic and modal properties. Thus, the research hypothesis is proved.

The scientific validity and foundation of the research results are supported by the experimental character of the research and the large quantity of the analyzed language material, with the complex usage of different research methods: the observation method, the method of aural analysis with native speakers involved, the method of aural analysis with teachers of Phonetics involved, the acoustic analysis method, the method of mathematical and statistical processing, the method of comparing analysis, and the usage of modern computer programs of speech signal processing.

The scientific novelty of the research results is determined by the approach to the directives as to speech acts of the categorical character studied from the point of view of the situationally dependent prosodic manifestation. The study allowed establishing the prosodic invariant of the directive and describing situationally determined variant patterns differentiated by prosodic expressive means.

The theoretical significance of the research lies in the fact that the complex analysis of the pitch, dynamic and tempo characteristics of the illocutive situational variants let us determine the contribution of these prosodic means in the speech influence of the directive and build the invariant prosodic pattern of the illocutive. Adding to the knowledge about the utterance semantics formed by their phonetic component, the research contributes to the theory of speech communication and sets the prospects of the further study of the situationally determined prosodic realization of speech influence.

The practical value of the research is determined by the possibility to use its results in teaching the foreign language (for developing students' speech skills and for the analysis of speech patterns in different situational conditions), in the Theoretical and Practical Phonetics courses, German Stylistics; in the further typological and gender study of directive illocutives and in applied research, for example, to solve a range of problems in the sphere of automatic speech recognition, understanding and synthesis.

## CONCLUSION

Directive speech acts refer to illocutives with a volitional modality. This tone type marks authoritarian speech acts imposing definite obligations.

The degree of influential intensity which is first of all formed by prosodic components is a key factor of interaction which determines the perlocutionary effect of the utterance. With regard to the directive speech act, the degree of categoricalness is often the criterion based on which a decision is made whether to fulfill the action or not. Depending on the situation, the same utterance can be more or less categorical.

Directive illocutives, being realized in different situational conditions, show primary (invariant) prosodic specifics, which refer them to this illocutive type, and secondary (variant) prosodic specifics, which correspond to a communicative situation.

Invariant prosodic specifics of the directive are melodic monotony realized in medium tone levels, with an interrogative end of phonation; the medium level of intensity, with contrastive differences of loudness at the beginning and end of the directive; the compression of syllable duration in the pre-head and its lengthening in the head and tail. The correlation of the prosodic specifics forms a contrastive rhythm of the directive.

Secondary prosodic specifics differentiating situationally determined patterns of directive illocutives show themselves on the level of tone, dynamic and tempo structures, which, interacting on the principle of compensation, express additional shades of the utterance semantics and influence its modality demonstrating a different degree of the directive influence intensity (the degree of categoricalness).

The main situational factors which determine the variability of prosodic forms of expressing the directive intention are the sphere of communication, the nature of interrelationships between the interlocutors and their attitude to the action (the degree of the prescriber's interest in the action fulfilment and the agent's willingness/unwillingness to execute the action).

The study helped establish that the prosodic arrangement of directive speech acts, being subject to the semantic and pragmatic intention of the utterance, comprises the whole complex of extra-linguistic conditions, which, as a result, determines the acoustic-articulatory and perceptive specifics of the prosodic characteristics and units.

## REFERENCES


Bashkina, B.M., & Bukhtilov, L.D. (1977). Physical parameters of speech prosody and their measurement. Minsk.

Belenikina, L.N. (2011). Phonostylistic variety of prosodic characteristics of the sentential type illocutive acts (experimental study on the material of modern German), PhD thesis, Moscow State Institute of International Relations of the Foreign Ministry of Russia, Moscow.

Belyaeva, E.I. (1992). The grammar and pragmatics of the imperative: the English language. Voronezh State University, Voronezh.

Blinushova, G.E. (1994). The interaction of verbal and non-verbal factors in realizing the imperative in modern German, PhD thesis, Moscow State Linguistic University, Moscow.

Boersma, P., & Weenik, D. (2017). PRAAT: A System for Doing Phonetics by Computer. v. 6.0.31, retrieved August 22, 2017. Institute of Phonetics Sciences, University of Amsterdam. http://www.praat.org.

Bortnikova, T.G., Kuznetsova, E.V., Chyornaya, O.V., & Esaulova A.V. (2019). Phonopragmatic specificity of speech acts of the "vetotivy" group. Culture in the mirror of language and literature, 69 – 74.

But, N.A. (2004). The prosodic characteristics of situationally determined illocutive acts of the groups "minatives", PhD thesis, G.R. Derzhavin State University of Tambov, Tambov.

Chesnokova, M.V. (2015). Social factors of the utterance prosodic arrangement. Notes of the Roman-German philology, 2, 174 – 182. https://doi.org/10.18524/2307-4604.2015.2(35).73167

Eremeev, Y.N. (2000). Directive utterances from the angle of the dialogical approach. Theoretical and Applied Linguistics 1, 109 – 126.

Gerazov, B., Bailly, G., Mohammed, O., Xu, Y., & Garner, P. N. (2018). A variational prosody model for the decomposition and synthesis of speech prosody. ArXiv e-prints https://arxiv. org/abs/1806.08685, June.

Gibbon, D., & Selting, M. (1983). Intonation und die Strukturierung eines Diskurses. Zeitschrift für Literaturwissenschaft und Linguistik (LiLi), 49, 53 – 73.

Golovchanskaya, I. (2018). A foreign language professional pedagogical discourse in the context of phonopragmatics. Philological sciences. Theory and practice questions, 4-2 (82). https://doi.org/10.30853/filnauki.2018-4-2.28

Grigoriev, E.I. (1997). The basics of German phonopragmatics. Navchalna Kniga, Dnepropetrovsk.

Harmash, T., & Khaidari, N. (2020). Structural and Semantic Peculiarities of the German-Language Terminological System of Logistics. Scientific Journal of Polonia University, 38(1-1), 22-28. https://doi.org/10.23856/3803

Imo, W., Lanwer, W.P. (2019). Interaktionale Sprache und Prosodie. In: Interaktionale Linguistik. https://doi.org/10.1007/978-3-476-05549-1

Jouvet, D. (2019). Speech Processing and Prosody. TSD 2019: *Text, Speech, and Dialogue*, 3 –15. https://doi.org/10.1007/978-3-030-27947-9_1

Karandeeva, L.G. (2013). Phonopragmatic characteristics of the speech act of requirement (on the material of the modern German language). Yaroslavl pedagogical bulletin, 2(1) (Humanitarian Sciences), 143 – 145.

Kazhan, Y. M., Hamaniuk, V. A., Amelina, S. M., Tarasenko, R. O., & Tolmachev, S. T. (2020). The use of mobile applications and Web 2.0 interactive tools for students' German-language lexical competence improvement.

Khaidarova, R. S. (2020). Features of phraseologies of the german language. Theoretical & Applied Science, (1), 556-558. https://doi.org/10.15863/TAS.2020.01.81.91

Khrakovskiy, D.S., Volodin, A.P. (1989). The semantics and typology of the imperative. Questions of Linguistics, 1, 36 – 41.

Kodzasov, S.V., & Krivnova, O.F. (2001). General Phonetics. Russian State Humanitarian University, Moscow.

Kozmin, O.G. (1965). The intonation of imperative sentences in the German language, PhD thesis, Moscow State Pedagogical Institute of Foreign Languages, Moscow.

Leech, G. (1980). Explorations in semantics and pragmatics. Benjamins, Amsterdam. https://doi.org/10.1075/pb.i.5

Lentsa, D.L., & Solovyeva, E.V. (1989). Phonetics in the aspect of pragmatics. Shtiintsa, Kishinev.

Marić, D. (2018). Der steigend-fallend-steigende Tonhöhenakzent in deutschsprachigen Gesprächen. Studia Germanistica, 5.

Meinhold, G., & Stock, E. (1982). Phonologie der deutschen Gegenwartssprache. VEB Bibliographisches Institut, Leipzig.

Motsch, W. (1994). Illokutionstypen und sprachliche Äußerungen. Spache und Pragmatik: Arbeitsberichte, 34, 1 – 25.

Mouchet-Schlottke, E. (1982). Ist der Sprechakt eine statische oder eine variable Einheit?. Recherches linguistiques: articles offerts à Marthe Philipp.

Müller, A. (1999). Die Macht der Stimme. Die Stimme als rhetorischer Wirkungsfaktor: Zur persuasiven Funktion und Wirkung der Prosodie, Bad Iburg.

Poroikova, N.I. (1985). To the characteristics of the semantic structure of the imperative situation. In: Functional analysis of the grammatical aspects of an utterance. Collected articles of Leningrad State University, Leningrad, 28 – 33.

Potapova, R.K., & Potapov, V.V. (2006). Language, speech, individuality. Slavic Culture Languages, Moscow.

Razguliaeva, A.V. (2000). Functioning of the direction in dialogical units, PhD thesis, Moscow state Linguistic University, Moscow.

Selting, M. (1995). Prosodie im Gespräch. Niemeyer, Tübingen. https://doi.org/10.1515/9783110934717

Weber, H. (1986). Klassen von Sprechakten, Sprechaktverben und Sprechakte Pragmatax: Akten d. 20. Linguist. Kolloquiums. Braunschweig 1985 / Hrsg. von Burkhardt u. Karl-Herman Korner. Tübingen, 213 – 225.

Weisser, M. (2018). How to do corpus pragmatics on pragmatically annotated data: Speech acts and beyond (Vol. 84). John Benjamins Publishing Company. https://doi.org/10.1075/scl.84


Received on 10-11-2020 Accepted on 14-12-2020 Published on 27-12-2020

DOI: https://doi.org/10.6000/1929-4409.2020.09.249