

INTONATION IN ENGLISH

§ 1. General characteristics of intonation

Intonation is a language universal, there are no languages which are spoken without any change of intonation. The role and functions of intonation get various interpretations in different linguistic schools.

Intonation is a phonetic phenomenon generally studied within the following language aspects: acoustic, auditory and functional.

The acoustic and auditory characteristics of intonation are combined within the perception level; the first present special interest for research work in theoretical phonetics, the second are connected with teaching practice. The functional level actualizes linguistic functions of intonation.

§ 2. Foreign views of the problem of intonation

There are different approaches to the problem of intonation in British and American linguistics.

I. The first is **contour analysis**, which is widely used in Great Britain. Its representatives are H. Sweet, D. Jones, G. Palmer, and others.

Intonation is defined as a layer that is superimposed on the lexicogrammatical structure and serves to express the speaker's attitude to the situation with the help of tone-blocks — the smallest meaningful units, consisting of pre-head, head and nucleus taken altogether. Ten tone-block types are distinguished and then combined with sentence types (statement, question, exclamation, command).

II. The second is the **grammatical study of intonation** worked out by the British linguist M. Halliday.

According to it the main unit of intonation is a clause which presents a complex of three systemic variables: tonality, tonicity and tone. Tonality marks the beginning and the end of a tone-group. Tonicity marks the focal point of each tone-group. Tones mark the nucleus and convey the attitude of the speaker. These parts of clauses are connected with the help of grammatical categories and carry out the syntactical function. Thus the statement “*I’d like to*” may have several attitudinal meanings determined by the pre-nuclear and nuclear choices: neutral (Low Fall), non-committal (Low Rise), contradictory (High Rise), reserved (Fall Rise), committal (Rise-Fall).

III. The American school of intonation founded by K. Pike considers pitch phonemes and contours to be the main units of intonation, which have their own meanings, but stand apart from the communicative function of intonation. This approach is treated by most linguists as ‘**mechanical**’.

IV. D. Crystal represents the **extralinguistic study of intonation**. He states that it is impossible to explain intonational meaning only with the help of grammatical or attitudinal means. He ignores the significance of pre-head and head choices and deals only with terminal nuclear tones, which should have both linguistic and extralinguistic marking.

According to D. Crystal, there are nine ways of saying “*Yes*” as an answer to the question “*Will you marry me?*”:

- 1) Low Fall — the most neutral tone, it reflects a detached, unemotional statement of fact;
- 2) Full Fall — an emotionally involved tone, the involvement of the speaker determines the onset pitch, whereas the choice of emotion (surprise, excitement, irritation) depends on facial expression of the speaker;
- 3) Mid Fall — a routine tone that conveys detached and unexcited attitude;
- 4) Low Rise — an emotional tone, the attitude is told by the speaker’s facial expression: with a ‘happy’ face the tone is sympathetic and friendly, with a ‘grim’ face it is guarded and ominous.
- 5) Full Rise — an emotionally involved tone meaning disbelief or shock, the extent of the emotion is determined by the width of the tone;

- 6) High Rise — an emotional tone, often used in echoing what has just been said, it reflects mild query or puzzlement;
- 7) Level tone — conveys bored, sarcastic, ironic attitude of the speaker;
- 8) Fall-Rise — a strongly emotional tone, the emotion is determined by the expression of the speaker's face: a 'straight' or 'negative' face conveys uncertainty, doubt, or tentativeness, a 'positive' face conveys encouragement or urgency;
- 9) Rise-fall — a tone that presents strong emotional involvement, depending on the face the attitude might be delighted, challenging, or complacent.

Thus the linguistic study of intonation in foreign linguistics is restricted by pitch movements (melody) which determine its outer physical expression. The priority of the pitch parameter is quite evident, but real communication involves the change of other intonation parameters as well.

§ 3. Problem of intonation in Russian linguistics

There is wide agreement among Russian linguists about the definition of intonation on the perception level. **Intonation** is a complex unity formed by significant variations of pitch, loudness and tempo closely related.

Pitch variations include significant moves of the voice up and down. The degree of loudness determines the force of utterance and the prominence of words. The tempo is determined by the rate of speech and the length of pauses. Some linguists also mark speech timbre as the fourth component of intonation. It definitely conveys certain shades of attitudinal or emotional meaning but there is no good reason to consider timbre alongside with three other components of intonation, because it has not been thoroughly described yet.

It's necessary to mention that the term 'intonation' isn't considered to be a happy one in theoretical phonetics, as it is too many-sided. M. Sokolova substitutes it with the term '**prosody**', which embraces the three main

prosodic components: pitch, loudness and tempo. This term is widely used in modern linguistic literature, because it is more adequate and causes no misunderstanding.

The prosodic components of intonation and their speech realizations are interconnected. Every speech syllable has a special pitch colouring and bears a definite amount of loudness. Together with the speech tempo they form an intonation pattern which is the basic unit of intonation.

An intonation pattern contains a nucleus which may or may not be preceded or followed by other stressed or unstressed syllables. The boundaries of an intonation pattern are marked by temporal pauses. Intonation patterns are actualized in intonation groups.

An intonation group (a speech syntagm) presents a semantically and syntactically complete group of words which may have different length: from one word to a group of words or a sentence.

For example: *Yes.*

I do.

I like it.

I like that too.

§ 4. Prosodic components of intonation. Structure of English intonation patterns

As it's been stated before, there are three prosodic components of intonation: pitch, loudness and tempo, which serve to actualize syntagms and sentences. They are interdependent and form the structure of an intonation pattern.

I. The pitch component or speech melody includes distinct variations of intonation in the direction of pitch, pitch level and pitch range. It's necessary to consider them thoroughly.

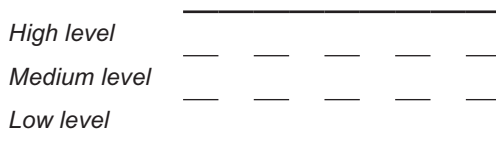
1. Variations in the direction of pitch give greater prominence to one of the syllables and form the nucleus of an intonation pattern.

There are eight nuclear tones in modern English: Low Fall (\downarrow No), High Fall (\wedge No), Low Rise (\uparrow No), High Rise (\prime No), Fall-Rise (\vee No), Rise-Fall (\wedge No), Rise-Fall-Rise ($\wedge\downarrow$ No) and Mid-Level ($>$ No).

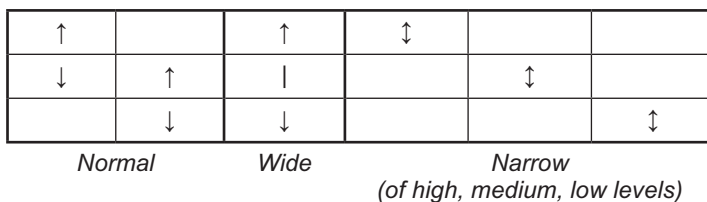
The first five of these are the most important nuclear tones characteristic of English. They have different meanings. Low Fall and High Fall usually express certainty, completeness, and independence. Low Rise and High Rise vice versa express uncertainty, incompleteness or dependence. Fall-Rise combines the meaning of certainty with that of incompleteness, thus suggesting that there is something else to be said. It may occur within one syllable or spread over two or more syllables (*Fortunately I do.*).

The last three tones are not considered to be essential ones. Rise-Fall and Rise-Fall-Rise add some refinement to speech and can be easily replaced by basic nuclear tones without making considerable changes in the meaning of the utterance: Rise-Fall by High Fall and Rise-Fall-Rise by Fall-Rise. Mid-Level tone is characteristic of spontaneous speech when replacing the rising tone (*After 'everything you've >said | I'don't want to go there!*).

- The pitch level parameter includes variations of the normal range of speaking voice within a given interval between its lower and upper limits. There are three pitch levels: high, medium, and low.



- The pitch range is the interval between two pitch levels from the highest-pitched to the lowest-pitched syllables. The pitch range may be normal, wide, and narrow.



II. The loudness component of intonation or **force of the utterance** includes changes in the level of loudness.

They may cause various semantic differences. For example, an overall loudness level conveys extreme emotions, such as anger, menace, or excitement. Loudness changes are inseparably connected with pitch variations, because both of them create the effect of accentuation.

III. The tempo component of intonation implies variations in the rate of the utterance and pausation.

a) The rate of speech is divided into normal, fast and slow.

It differs according to the importance of the parts of the utterance, since the important ones are spoken slower, but unimportant ones are pronounced at a greater speed.

b) Pauses are complete stops of phonation dividing a stretch of speech into smaller units.

According to their length, the following kinds of pauses are distinguished:

- short pauses, which separate intonation groups within a phrase;
- longer pauses, which manifest the end of the phrase;
- very long pauses, which are used to separate phonetic wholes.

From the functional point of view there exist:

- syntactic pauses, which separate phonopassages, phrases, intonation groups;
- emphatic pauses, which mark parts of the utterance especially important for the speaker (She is the most | talented actress I've ever met ||);
- hesitation pauses, which are used in spontaneous speech to think over what to say next; they may be silent (It's rather a ... difficult question ||) or filled (I'll have to ... eeh ... think it over ||).

The changes of pitch, loudness and tempo are not accidental. They are formalized in the abstracted set of intonation structures called **intonation patterns**, which form the prosodic system of the English language. Definite intonation patterns are actualized in real communicative situations with the help of intonation groups.

An **intonation group** is a word or a group of words characterized by a certain intonation pattern complete from the point of view of meaning.

For example, the sentence ‘*I suppose he’ll be here in a moment*’ may be divided in two intonation groups: ‘*I suppose*’ and ‘*he’ll be here in a moment*’.

The **structure of an intonation pattern** potentially includes the pre-head, the head, the nucleus and the tail:

- the pre-head contains unstressed and half-stressed syllables preceding the head;
- the head includes syllables from the first stressed up to the last stressed one;
- the nucleus is the last stressed syllable presenting the change in the pitch direction;
- the tail consists of unstressed and half-stressed syllables following the nucleus.

The boundaries of an intonation pattern are marked by complete stops of phonation or temporal pauses.

The abovementioned structure of an intonation pattern may be further grouped into two larger units:

- 1) The pre-nuclear part of the intonation pattern is formed with the pre-head and the head.

It can present different variations of pitch patterns, which do not usually affect the grammatical meaning of the utterance, but often convey meanings associated with the speaker’s attitude. There are three common types of pre-nuclear part:

- a descending type with the pitch level gradually descending to the nucleus;
- an ascending type with the ascending sequence of syllables;
- a level type with the syllable set of approximately the same pitch level.

- 2) The terminal part of the intonation pattern consists of the nucleus and the tail.

It is the most significant part of the intonation pattern which determines the nuclear tone and the pitch level of the rest of the utterance. The set of English nuclear tones includes five widely used common tones

(Low Fall, High Fall, Low Rise, High Rise, Fall-Rise), and three optional tones (Rise-Fall, Rise-Fall-Rise, Mid-Level).

It's important to mention, that every part of the intonation pattern besides the nucleus is considered to be optional.

For example, let us consider the importance of sentence parts in the following dialogue:

Who's done it? — Well, that's Jack actually.

It is obvious that in the second sentence of the dialogue the nucleus 'Jack' is the only part of the intonation group which is really informative. All other parts (the pre-head 'well', the head 'that's', the tail 'actually') can be omitted in real speech, because they are not necessary for understanding the meaning.

§ 5. Methods of indicating intonation

The best way of representing intonation in the text is the system of special symbols:

- level arrows which indicate the starting point of the head (→);
- superscript line signs representing stressed syllables (ˈ);
- interlinear line signs representing half-stressed syllables (ˌ);
- downward and upward arrows or slants which indicate the nucleus (∩);
- vertical bars indicating syntactic pauses (|| or |);
- wavy bars indicating emphatic or hesitation pauses (∩).

The abstract notation of intonation is usually presented by the system of tonograms with dots, dashes and slash marks which are put at the necessary pitch level:

- two parallel horizontal lines (staves) represent the range of human voice;
- dashes represent a level tone of stressed syllables (—);
- dots represent unstressed syllables (·);

- downward and upward curves represent the final nuclear tone;
- vertical bars indicate the temporal component (|| , | or ').

This representation is called 'a stave' or 'a tonogram'.

§ 6. Functions of intonation

Intonation is an important means of human communication. On the functional level intonation is studied as the list of its linguistic functions and the ways of their differentiation.

One of the most developed classifications in foreign linguistics is presented by D. Crystal, who distinguishes the following **functions of intonation**:

- the emotional function, which serves to express attitudinal meaning (interest, impatience, delight, irony, shock, anger, etc.);
- the grammatical function, which helps to identify certain grammatical structures in oral speech (statement, question, exclamation, command);
- the informational function, which draws the listener's attention to the new information in an utterance with the help of the most prominent tone;
- the textual function, which helps to contrast and organize meaningful units larger than the sentence;
- the psychological function, which splits stretches of speech into units that are easier to perceive and memorize;
- the indexical function, which serves an important marker of personal or social identity with the help of distinctive prosodic features.

Russian linguists consider the functional aspect of intonation in a different way. Intonation is treated as a complex phenomenon with a general function of communication. This communicative function of intonation is realized in the process of speech communication and serves:

- to structure the information content of a text and identify new information;

- to determine the speech function of a phrase and indicate sentence types;
- to convey attitudinal meaning (surprise, annoyance, etc.);
- to structure a text and organize smaller units (phrases, intonation groups);
- to differentiate between the meaning of the units with the same grammatical structure and lexical composition;
- to characterize a particular style of oral speech.

For the purposes of language teaching Russian phoneticians (M.A. Sokolova, K.P. Gintovt, and others) define the following **two main functions of intonation** as a powerful means of communication: the constitutive and the distinctive ones.

1. The constitutive function characterizes intonation as an organizing mechanism.

On the one hand, it delimitates texts into intonation groups with a certain structure; on the other hand, it integrates intonation groups when forming a complete text. A broad classification of intonation patterns, different and specific in their nature, is singled out in every language. Their material realization helps the speaker to construct the utterance and enables the listener to perceive it.

2. The distinctive function of intonation helps to distinguish communicative types of sentences, the actual meaning of a sentence, the speaker's attitude to its contents and the style of the utterance.

The distinctive function of intonation is realized in the opposition of the same word sequences which differ in certain parameters of the intonation pattern.

For example, the meaning of the phrases: '*If **Tom** calls let me know at once*' and '*If Tom **calls** let me know at once*' is easily distinguished thanks to the opposition of different intonation patterns of the first intonation groups. The first sentence means that a few people are expected to call but it is Tom who interests the speaker; the meaning of the second one is that no one else but Tom is expected to call.

The opposition in the pitch parameters of the sentences '*I enjoyed it*' and '*I enjoyed it*' shows the reserved attitude of the speaker in the first

case, and the attitude implying a continuation like ‘*but it could have been a lot better*’ in the second one.

§ 7. The phonological aspect of intonation

The phonological (functional) aspect of intonation is studied by a special branch of phonology called **intonology**. Numerous attempts to describe phonological facts of the intonation system in our country and abroad show that there are far more questions here than in the field of segmental phonology.

From the point of view of intonology all the constituents of an intonation pattern form a complex system of abstract units. These phonological units, just like phonemes, consist of a number of variants.

Let us consider this problem more carefully by the example of one of the units of phonology.

The phonological tone units are called **terminal tonemes**. They consist of a number of **allotones**: principal and subsidiary.

The principal allotone is realized in the nucleus — the most powerful phonological unit that serves to distinguish the type of the sentence. For example:

'Tom \ called me. (statement)

'Tom / called me? (general question)

The subsidiary allotones get realization in the pre-head or in the tail if there are any, for instance:

\ No.

\ No, Mary.

Oh, \ no, Mary.

The number of terminal tones indicates the number of intonation groups, which may be important for the meaning. Then the division of the sentence in two or more intonation groups conveys different ideas.

For example, let us analyze the following sentence: ‘*My partner who went away on business last month has just arrived.*’

The division in two intonation groups indicates that the speaker has more than one business partners:

My partner who went away on business last month, | has just arrived ||.

The division in three intonation groups means that he's the only business partner:

My partner, | who went away on business last month, | has just arrived ||.

Terminal tones also identify the semantic centre of the utterance and single out the information. For example, the unusual stress of form words instead of content ones expresses the speaker's feelings and attitudes:

I 'don't | like him. (neutral)

I | don't | like him. (annoyed)

Besides tonemes, the classification of phonological units constituting intonation patterns includes other abstract units: intonemes, accentemes, chronemes, etc. They also include variations.

§ 8. English rhythm

It's impossible to describe English intonation without reference to speech rhythm, because the interrelated prosodic components (pitch, loudness, tempo) and speech rhythm are inseparably connected. Rhythm makes up the framework of the spoken message.

A general term of 'rhythm' implies a regular recurrence of some phenomenon in time. Speech production is naturally connected with the process of breathing, it is conditioned by physiological factors and is characterized by rhythm. Rhythm as a linguistic notion is realized in lexical, syntactical and prosodic means, mostly in their combinations.

Speech rhythm is traditionally defined as a recurrence of stressed syllables at more or less equal periods of time in a speech continuum.

The type of rhythm depends on the language. There are two types of languages:

- syllable-timed languages (French, Spanish), based on the syllabic structure;
- stress-timed languages (English, German, Russian), based on the so-called 'beats' or 'stress pulses'.

In syllable-timed languages the speaker gives approximately equal period to each syllable no matter whether it is stressed or unstressed. This produces the effect of even rhythm.

In stress-timed languages the effect of rhythm is based on units larger than syllable. The so-called ‘stress pulses’ follow each other in connected speech at roughly equal periods of time no matter how many stressed syllables are between them. Thus the distribution of syllables within rhythmic groups is unequal and the regularity is provided by strong ‘beats’.

The more unstressed syllables there are after a stressed one, the quicker they must be pronounced, for example:

	One		Two		Three		Four
The	One	and	Two	and	Three	and	Four
	One	and a	Two	and a	Three	and a	Four
	One	and then a	Two	and then a	Three	and then a	Four

The peculiarities of English rhythm implying the regular stress-timed pulses of speech, create the abrupt effect of English rhythm. It has the immediate connection with such phonetic phenomena as vowel reduction and elision, placement of word-stress and sentence-stress.

The effect of English rhythm is also presupposed by the analytical structure of the language. It explains greater prominence of notional words and a considerable number of unstressed monosyllabic form words.

It is undoubtful that the most striking rhythmicality is observed in poetry.

Seminar 7

1. Why is intonation viewed as a language universal?
2. What are the levels of studying intonation? What language aspects do they comprise?
3. Discuss the priorities in the linguistic study of intonation in foreign linguistics. Explain the essence of the theories by: