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INTONATION OF ENGLISH PERSUASIVE DISCOURSE

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У дослідженні аналізується інтонація дискурсу, що має за мету переконати слухачів у певних поглядах промовця. Визначено особливості інтонаційної організації дискурсу переконування в англійській мові на підставі аналізу основних просодичних характеристик, зокрема часової та частотної організації усного тексту. Установлено комплекс інтонаційних ознак, що характеризують досліджуваний тип дискурсу.

Ключові слова: інтонація дискурсу, функція переконування, акустичні показники, прагматичне спрямування

Данная статья представляет собой исследование структуры просодической единицы, выполняющей функцию убеждения. Результаты анализа подтверждают гипотезу о существовании определённой программы, заложенной в памяти человека, состоящей из совокупности интонационных характеристик, служащих порождению и восприятию дискурса с воздействующей направленностью. Интонаема, соотносимая с функцией убеждения, локализуется как в ядерном речевом сегменте, так и в предъядерной его части и выполняет прагматическую направленность при помощи определённого интонационного оформления.

Ключевые слова: интонация, дискурс убеждения, акустические показатели, прагматическая направленность.

The article explores the prosodic structure of persuasive discourse with respect to time and frequency organization of oral texts, which carry out persuasive function.

Key word: intonation, persuasive discourse, acoustic indices, pragmatic function.

Verbal communication is the process of transmitting a verbal message from a sender (speaker, addressor) to a receiver, listener, addressee/through a channel or medium [18 p. 61]. For sending messages the communicators use a code: "any systems of signals used for sending messages. The senders are said to encode the message, and the receivers – to decode it" [16]. Encoding is a process of putting the speaker's thoughts, feelings, emotions, attitudes into a form recognizable by the listeners. The encoded message is then transmitted via a particular channel to a listener. Usually in verbal communication the communicators use a verbal code – language, which exists in its two material forms: oral and written. Oral language has its sound material substance and written form – its graphic system. When language is used for verbal communication the communicators apply language skills (listening, speaking, reading and writing) to put their knowledge of language resources (vocabulary, grammar, phonology) into action to produce discourse [2].

To understand the nature and functioning of oral communication it is necessary to analyze the main two

concepts: language and speech. Each of them can structurally be divided into smaller units. Ch.W. Kreider [26] divides the language units into: text, sentence, syntagm, word, morpheme, phoneme, toneme. The speech units are divided into: discourse, utterance, intonation group, rhythmic group, syllable, allophone, allotone.

Discourse can be described as a continuous stretch of speech, a product of using language for communication. It is a text realized in speech.

An utterance is a stretch of speech produced by a single speaker, with silence before and after. It is a sentence realized in speech.

An intonation group is a stretch of speech which has a describable melody, one out of a fairly small inventory of intonation contours that exist in language. It is a syntagm realized in speech.

Rhythmic groups are smaller chunks into which tone or intonation groups are broken. They are made up of a stressed syllable and of following unstressed ones.

A syllable can be defined as one or more speech sounds forming a single uninterrupted unit. It consists

of at least one segment and usually more than one. These segments are the allophones or “sounds in the mouth” of the phonemes or “sounds in the mind” (the term suggested by Peter Roach).

An allotone is the realization of a toneme or an intonation pattern in speech.

The word “discourse” (Latin *discursus* means “running to and from”) was first used by James Kinneavy who viewed it as the full text of an oral or written situation. His work gives us a framework for understanding what is produced when people practice rhetoric, using language purposefully to communicate ideas to an audience.

James Kinneavy bases his theory of discourse on the communicative triangle the three points of which are: the speaker (or writer), the audience (or reader), the outer world (the reality) and the triangle itself which represents the text or the message. He relates these four components to four purposes of discourse: expressing oneself, eliciting a particular response from listeners (readers), picturing reality as clearly and logically as possible and giving pleasure.

If the primary emphasis is on the speaker (writer) and the speaker’s aim is self-expression then the result is expressive discourse (protest, declaration).

If the primary stress is on eliciting a particular response from an audience and the speaker’s aim is to convince, to persuade or even stimulate to action, the result is persuasive discourse (political speeches, sermons).

If the primary emphasis is on the subject matter or reality talked or written about the result is referential discourse (scientific interviews, dialogues).

If the aim is to give pleasure then the result is literary discourse. These four kinds of discourse fulfill the function of communication.

The discourse focused on in this article is persuasive one. It is the speech of the former prime minister of Great Britain Gordon Brown, delivered in Copenhagen on the 17 of December 2009 at UN Climate Change Conference in which he tried to convince and persuade the people to use all possible means to contribute into the preservation of our planet’s climate.

Discourse intonation is based on the view that it is purpose-driven rather than sentence oriented. It is speaker controlled, interactive, co-operative, context-changing [6, p. 26–29]. The communicative value of intonation is concerned with the choices that speakers make, and their reactions to the ongoing task of making sense to their hearers in context in real time [12].

The choices of discourse intonation are in line with those who call for the examination of intonational meaning and the way intonation effects the communicative value of English utterances as part of a communicative event to better determine their pragmatic and situated meanings [9, p. 9].

Discourse intonation is pragmatic in function. As noted by Brazil [7, p. 46] “The significance of intonation is related to the function of the utterance as an existentially appropriate contribution to an interactive discourse.”

Discourse intonation is motivated by real time and situation-specific decisions by speakers to add extra layers by interpersonal meaning to words as they are spoken. It is concerned with “the speakers’ moment-by-moment context-referenced choices [12, p. 11–12].

The communicative value of the utterance is affected by intonational variations on the basis of a small set of choices which relates to “a set of meaningful oppositions that together constitute a distinctive subcomponent of the meaning-potential of English [9, p. 12].

Discourse intonation can in part be traced back to the works of Halliday [20; 21] who was concerned with developing a phonological typology based on meaning-making grammatical choices. He views intonation as highly structured, consisting of three hierarchical systems: *tonality, tonicity and tone*. *Tonality* refers to the division of speech into intonation/tone groups. Each tone group contains a single unit of information and represents the speaker’s perceptions and management of the whole message. *Tonicity* refers to the placement of accents, i.e., the assignment and realization of the most prominent word in a tone group, indicating the focus of information. *Tone*, the contrasting pitch movements in each tone group, expresses different speech functions and status of information [22, p. 36].

Discourse intonation offers a different description of intonation to the grammatical (see [14; 27; 29]. Sentence-based models which view intonation as grammatical regard tones typically chosen with particular syntactic structures such as rising tone with general questions and falling tone with special questions, statements and commands.

This position differs from that of discourse intonation. As stated by Brazil [8], in purpose-driven talk, although syntax and intonation have a relationship, they are considered separate areas of choice and there is no normal relation between tone units and clauses. In fact, discourse intonation moves beyond the context of a single sentence and describes the rules which govern the pitch movement beyond and between the borders of tone units (intonation groups) rather than sentences.

Brazil [6, p. 238] argues for a need for stating the communicative value of intonation “in terms of the projected contextual implications of the tone unit: only if we regard intonation as a situation-creating device,.. we can give proper recognition to its ability to carry independent meanings”.

Discourse intonation is also different from the descriptions of intonation which view the attitudinal function of intonation as primary and central [28; 15–17].

In their description of the intonation of speech O’Connor and Arnold [28, p. 4] remark that “a major function of intonation is to express the speaker’s attitude to the situation in which he is placed at the moment of speaking.” They attach attitudinal meanings to each of ten tone groups combined with each of four sentence types: statements, questions, commands and exclamations.

Cruttenden [17, p. 97–99], for instance, describes the rising tone as having the attitudinal meaning of “reassuring” with wh-questions and “non-committal” or “grumbling” with declaratives. The “rise-fall” tone can mean “impressed” with yes/no questions and declaratives, or “challenging” with clauses of any syntactic type (ibid: 92–93).

While O’Connor and Arnold [28] and others highlight the role of intonation in expressing a speaker’s attitude

at the moment of speaking about the current situation, discourse intonation [9] highlights the role of intonation in communicative interaction and meaning contrasts. It views the description of intonation as “one aspect of interaction” and argues that “intonational choices carry information about the structure of the interaction, the relationship between the discourse function of individual utterances; the interactional “givenness” and “newness” of information, and the state of convergence and divergence of the participants [5, p. 3] Ithard and Johns 1980:3) implying that “when intonation seems to fulfill different functions, this is because of other factors in the situation and not because of intonation at all” [5, p. 98]. Cauldwell and Hewing [10, p. 51] contend that meanings like surprise, irony, sarcasm, grumpiness are features

of particular contexts of interaction, but not directly attributable to any tone choice.

Having said this, discourse intonation does not discount an association between intonation and attitudinal meanings. Cruttenden [17] observes that some parts of the local meanings of almost all of the five tones in discourse intonation (rise, fall-rise, fall, rise-fall and level) are attitudinal. In specific contexts of interaction the association between discourse intonation and the speaker’s attitude can be observed. Nevertheless, in discourse intonation [9, p. 76] any attitudes associated with a tone choice are determined locally and are not fixed.

Discourse intonation comprises four systems of speaker’s choice: prominence, tone, key and termination. These systems contain a total of thirteen choices summarised in the following table:

| System | Choices | Number |
|-------------|--|--------|
| Prominence | prominent, non-prominent syllables. | 2 |
| Tone | fall-rise, fall, level, rise, rise-fall. | 5 |
| Key | high, mid, low | 3 |
| Termination | high, mid, low. | 3 |

Each of them has a general meaning which takes on a local meaning with in a particular context [9, p. 11]. These are moment-by moment judgments made by speakers and are based on their assessment of the current state of understanding between the participants.

Brazil [8] sums up the essential descriptive categories of the discourse intonation framework as follows:

1. Used language is divided into “tone units”.
2. The tone units of used speech normally have one or two prominent syllables.
3. The last prominent syllable in each tone unit is the tonic syllable and it carries one of the five tones.
4. At all prominent syllables there is a possibility of choice in three-term system of pitch levels: high, mid or low. The pitch level of the first prominent syllable establishes key which has distinctive functions in discourse. The last prominent syllable establishes termination. In a tone unit with only one prominent syllable key and termination are established simultaneously. Brazil [8, p. 240–246; 7, p. 8–9] defines a tone-unit as “the basic building block of speech” [8, p. 240–245].

As you see Brazil’s understanding of intonation is reduced to changes in the pitch of the voice. This idea is shared by many English phoneticians such as D.Jones [23, p. 275), L.Armstrong and Ward [4, p. 1], R.Kingdon [24, p. 1], A.Gimson [19, p. 243–244] J.O’Connor and J.Arnold [28, p. 1] and others.

Vassilyev V.A. calls this definition of intonation narrow and opposes it to a broad one which is shared by A.Cruttenden [17, p. 2–3), D.Crystal [16], V.A.Artemov [1, p. 290]. On the perceptual level he defines intonation ‘as a complex unity of four components, formed by communicatively relevant variations in: (1) voice pitch, or speech melody; (2) the prominence of words or their accent; (3) the tempo (rate), rhythm and pausation of the utterance, and (4) voice-tamber that serves to express adequately, on the basis of the proper grammatical structure and lexical composition of the

utterance, the speaker’s or writer’s thoughts, volition, emotions, feelings and attitudes towards reality and the content of the utterance [32, p. 290].

This definition of intonation is used in our research.

The main task of this investigation is to give general characteristics of oral persuasive discourse, to determine its functional purpose, to define the main intonation data as the factors influencing the audience.

Public speech is a monologue which has a direct contact or indirect form of realization. Its purpose is not only to give necessary information but to persuade the audience that the speaker’s evaluation of reality is correct, to change the listeners’ mind and even to call them to action.

So the speaker has to communicate information, to make the audience share his feelings, his emotional state, his views and his understanding of the objective reality. All in all his speech is a means of influencing the audience.

Persuasive discourse is characterized by the fact that there is only one speaker and many listeners. It is impossible to change the roles of “speaker - listener.” The orator is oriented on a definite complement of listeners. The communication is official, the realization of speech is oral and it is quasi-spontaneous. It is oriented on a large audience, limited time, previously prepared speech, which is performed live. Only from time to time the speaker consults the text to check the succession of his presentation, to read the extracts with figures or quotations.

The effect of speech depends on the relation of the achieved result and the set purpose. Persuasive discourse is characterized by special means of influencing the audience. Persuasion as verbal ways of influencing people foresees awareness, comprehension of the information perceived by the listeners, active and creative approach to its content. Accordingly, the primary means of persuasion are: logical structure of speech, distinct and emotional expression.

Persuasion is qualified as psychological state which includes not only intellectual but emotional and volitional spheres. It may be expressed by the following statements: "I am sure" in comparison with "I know", "I suppose".

The phonetic side of the oral speech realization plays the leading part in optimization of speech influence. Verbich [3, p. 17] underlines that intonation fulfilling the part of pragmatic actualizer is very important in making speech impressive and thus ensure the most optimum influence upon the audience making it submissive to the speaker.

The prosodic or intonation structure of the given piece of persuasive discourse was first subjected to the auditory analysis.

As speech melody is the main component of intonation it became the object of the investigation in the process of which the intonation patterns or tone groups introduced by J.O'Connor and G.Arnold were used.

The results of the auditory analysis showed that the most frequently used intonation patterns are represented by (Low pre-head+) Falling head +Low fall (38%) and (Low pre-head+) High head + Low fall (20,5%). Less representative are (Low pre-head+) Stepping head+High level (12,8%), and High head+High level (5,2%). The tone groups consisting only of nuclear tones preceded or followed by unstressed syllables are: Low falling (7,6%) and High level (5,4%). The most frequently used nuclear tones are: Low fall (69%) which makes the speaker sound categorical and certain and High level (26%) which adds the speech a shade of elevation. High falling (2,6%) and Falling-rising (2,4%) tones are used rather rarely.

This is an extract from the speech subjected to the analysis.



Sentence stress in 85% of utterances was defined by the listeners as normal and only in 15% – as logical.

The acoustic analysis of this piece of persuasive discourse carried out with the help of speech analyzer showed that changes in the pitch of the voice which take place in the pre-head of the intonation groups are represented mostly by low level tone (44%). Its average height is 118 Hz. (The pitch range of the speaker is 200–100 Hz). Mid level (150 Hz) is traced in 21% of utterances, high level (170 Hz) – in 16%, rising tone (150–170 Hz) – in 12% and falling (150–130 Hz) – in 8%. The average rate of rise is 0,25 Hz/mc, the average rate of fall is 0,08 Hz/mc.

The changes of the pitch in the first stressed syllables of the intonation groups are: rising (160–200 Hz) in

27%, falling (170–140 Hz) in 27%, high level (180 Hz) in 26%, rising-falling (170–185–170 Hz) in 13% and falling-rising (170–150–170 Hz) in 7%.

Most of the unstressed syllables following the first stressed ones are said on the level tone (58%). 33% of them have the average pitch (140 Hz) which is lower than the pitch of the preceding stressed syllables. In 25% of the intonation groups they are said on the same level or even higher (190 Hz). Falling tones are traced in 33% of unstressed syllables. The average change of the tone is 192–166 Hz. The rate of fall is 0,14 Hz/mc. 17% of unstressed syllables are pronounced with falling-rising tone (172–155–168 Hz). 46% of the second stressed syllables are said on the level pitch the average height of which is 153 Hz. So in comparison with the pitch of the first stressed syllables (180 Hz) they are said a step lower. In 26% of syllables falling tone is traced (150–120 Hz). The average rate of fall is 0,1 Hz/mc. The rising tone (150–175 Hz) is realized in 9% of the second stressed syllables with the rate of rise 0,1 Hz/mc. The rising-falling tone is used in 9% of the syllables.

The average change of the tone in the unstressed syllables following the second stressed ones is from 150 to 140 Hz with the rate of fall 0,17 Hz/ms. In 75% of intonation groups the third stressed syllables are said on the pitch which is higher than the pitch of the preceding stressed syllables (170 Hz) and in 25% – on the same pitch (150 Hz). In the process of the auditive analysis this phenomenon was marked as "accidental rise". In 50% of the syllables level tones are realized, in 25% – falling (160–150 Hz) with the rate of 0,1 Hz/ms and in 25% – rising (175–190 Hz) with the rate of 0,1 Hz/ms.

The changes of the pitch in 58% of the nuclear syllables of the intonation groups are falling. In 64% of them the voice falls from 150 to 100 Hz with the average rate of 0,3 Hz/ms. In 36% of the nuclear syllables the fall reaches 130 Hz, and the unstressed syllables carry the pitch down to the bottom of the speaker's voice (100 Hz).

27% of the nuclear syllables are said on the level pitch. 80% of them are pronounced at the height of 150 Hz which is considered to be mid-level, the rest are said on the lowest pitch.

In 10% of the nuclear syllables falling-rising tone is realized (150–100–130 Hz) and in 5% – rising-falling (130–150–130 Hz).

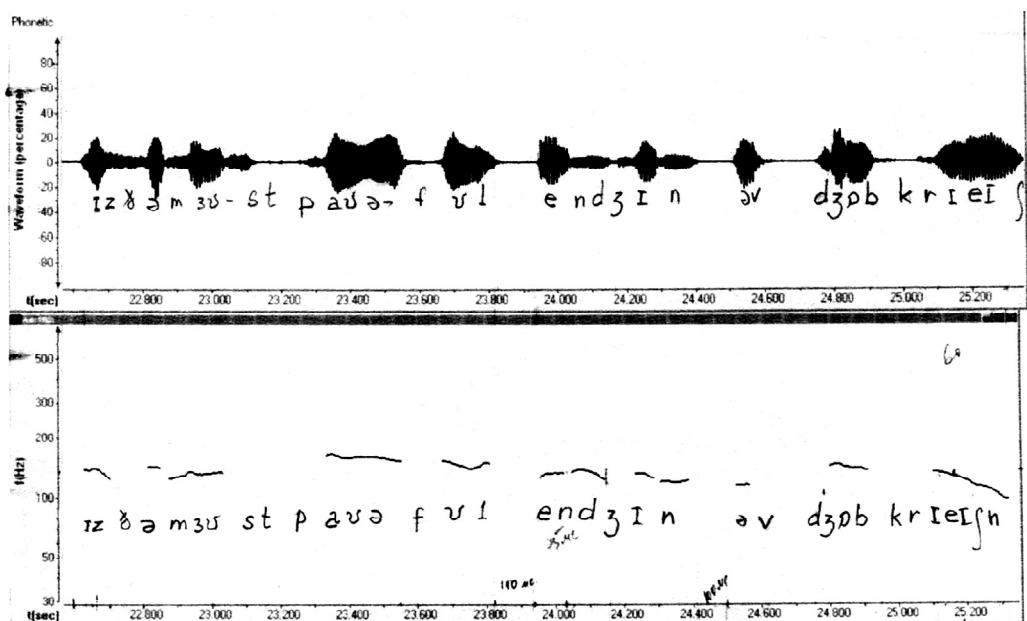
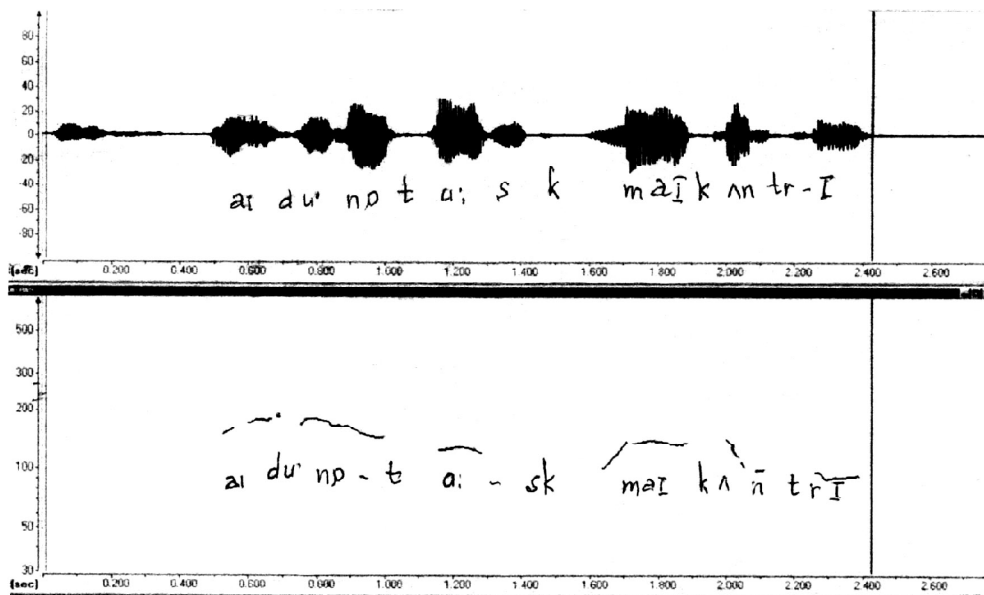
The syllables of the tails carry the pitch down to 90 or even 80 Hz. So to summarize the pitch variations of the given piece of persuasive discourse we can see that the most frequently used intonation pattern is (low pre-head) falling head + low fall (falling tail).

The tables below illustrate the tonal and temporal changes in the following intonational groups.

Speech tempo is the relative speed of utterance which is measured by the rate of syllable succession and the number and duration of pauses in a sentence. The average rate of delivery may contain from about two to six syllables per second for *slow* speech, from about three to six syllables for *normal* speech, and about three to six syllables for *fast* speech [3, p. 219].

The listeners defined the tempo of the piece under investigation as normal.

Speech analyzer confirmed this statement. As normal tempo is characterized by uttering from three to six syllables per second, each of them can last from 333 ms



to 167 ms. In 87,5% of the given piece of discourse the average length of syllables is within the limit of 275–168 ms. And only in 12,5% their length is shorter(60–128 ms). The average length of the

intonation group is 1922 ms which is almost 2 seconds. The table below shows the average length of syllables within the whole intonation group and the average length of pauses between them.

| Pre-head | 1-str syll. | unstr. | 2-nd str | unstr.. | 3-d str.. | unstr.l | 4-th strl | unstr n | uclear. | tail | pause |
|----------|-------------|--------|----------|---------|-----------|---------|-----------|---------|---------|------|-------|
| 128 | 247 | 168 | 214 | 187 | 221 | 190 | 275 | 97 | 249 | 234 | 580ms |

The average pause between the utterances is 975 ms.

The analysis of the rhythmical structure which characterizes this piece of discourse shows that it corresponds to the accepted statement that English is a stressed-timed language. Each intonation group is pronounced at approximately equal periods of time. The average length of intonation groups is: 550/400/400//370/500// .

The carried out auditive and instrumental research of the investigated piece of discourse enabled us to define

the role of prosodic components in expressing the function of persuasion in English discourse. They could be defined both on the auditive and acoustic levels.

The results of the acoustic analysis testify to the fact that:

- the set of the tone contours is rather limited;
- the maximums of the main tone frequency are realized in the first stressed syllables;
- the heads are stepping, falling or high;
- the nuclear tones are low falling, falling-rising, rising-falling and level.

The results of the temporal characteristic showed:

- the tempo of speech is normal and stable;
- the longest is the duration of the first and the last stressed syllables;
- the presence of medium length pauses (580 ms) between intonation groups and long ones (975 ms) between utterances
- underlining the meaning of some words with the help or short pauses/300 ms;

- the number of short intonation groups prevails.

To conclude, the results of the auditive and the acoustic analysis of the given piece of discourse proved the hypothesis about the existence in the human memory of a definite programme which consists of the complex of intonation patterns serving the outcome of different types of discourse.

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