

## Frequency pattern of speech act of categorical/non-categorical consent in business discourse

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**Abstract.** The article presents the results of an electro-acoustic analysis of frequency pattern of the speech act of consent in the English business discourse. Then author argues that the speech act of consent is a preferred act in business discourse since the key goal of this type of discourse is achieving an agreement; that means that speech acts of consent are more or less categorical in their nature as compared to those of dissent. However, depending on the communicative situation the subjective and modal meaning of categoricalness can be intensified, neutralized or eliminated; in this case speech acts are perceived as categorical, neutral or non-categorical correspondingly. Melodic, or pitch component of intonation is the one easily perceived by a listener's ear and having a maximum functional load. Thus, acoustic correlate of the pitch component – fundamental frequency, namely, the level and the interval of fundamental frequency, the direction of tone movement are analyzed from the standpoint of their power to differentiate various degrees of categoricalness.

**Keywords:** *speech act of consent, business discourse, categorical, non-categorical.*

**Introduction.** Speech act of consent is commonly perceived as preferred in any field of communication, but it gains crucial importance in the sphere of business, since doing business always implies achieving an agreement on particular issues. Consent in business discourse is a line of behavior which is implemented in concrete speech acts.

Based on the foregoing, speech act of consent as a 'desirable' one is quite categorical in its very nature. Nevertheless, the subjective and modal meaning of categoricalness depending on a certain situational context, speaker's intentions, register of communication may be intensified or eliminated. In this case pragmatic sense of the consent proper and additional sense of categoricalness/non-categoricalness overlap, and the structure of the speech act is modified at all structural levels – syntactical, lexico-grammatical, phonetical. At the intonational level this combination of pragmatic meanings results in overlapping of different intonemes, that either slightly modifies an invariant pattern of the speech act, or creates a completely new intonational contour.

In the focus of interest in the given study is the pitch component of intonation, namely, its acoustic correlate – fundamental frequency ( $F_0$ ), whose modifications are supposed to be capable of differentiating various pragmatic senses of the speech act of consent in business discourse.

**Theory outline.** The scope of studies related to the problem of the given research covers a number of issues – diversity of pragmatic senses of consent in business discourse (M. K. Liubimova), basic intonational features of business discourse (E. B. Karnevska, V. L. Romaniuk, Yu. S. Yartseva et al.), intonation of the speech act of consent in relation to the initial speech act (E. M. Andriyevska, P. Ogden), general intonational peculiarities of expressing categoricalness in various speech acts (A. D. Gartsev, Tolstokorova, P. Ogden).

According to the orientation on further action or mere acceptance of the interlocutor's words they distinguish consent-react (agreement to perform some action or agreement as to the performance of an action by somebody else) and consent-accept (agreement with the opinion of the communicator) (I. M. Rudyk, I. V. Galaktionova, N.V. Voitsekhovska et al.).

Investigating the intonation of consent R. Ogden arrives at a conclusion that consent does not have any

phonetic properties associated with it [2, p.1772]. In relation to the initial utterance speech act of consent is characterized by identical or a bit higher pitch in the speaker's range and general similarity of intonational organization with the initial utterance (relation of 'pitch concord') and the use of more dynamic pitch contour, slower tempo [2, p.1770; 3, p.201].

It was found out that one of the factors that has an impact on the intonational pattern of any speech act is register features of the discourse. Business discourse as an institutional discourse being strictly regulated sets certain limits to the prosodic pattern of the speech act of consent; among the most commonly recognized intonational features of this discourse are the following: slow or moderate tempo, a number of pauses of various duration – from extremely short to extremely long ones, medium loudness, low and mid falling and rising tones, descending pitch movement (E. B. Karnevska, E. I. Gavrilenko, V. L. Romaniuk, V. S. Slepovich, Yu. Dubovskii et al.).

Another factor of influence on the prosodic structure of the speech act of consent is the subjective and evaluative meaning of categoricalness. The commonest intonational features of categoricalness are level or descending scales with the abrupt decrease of the pitch, increase of intensity on the vowel of the nucleus, a very low level of the terminal part of the phrase, a medium or low level of the pre-head syllables etc. Non-categorical phrases are characterized by a narrower pitch span, faster tempo, a decrease in loudness, lack of dynamic pitch movement (1; 2, p. 1771).

The results of the analysis of linguistic literature on the issue concerned enabled us to conclude that albeit there are enough preliminary data for conducting further study, overall the problem of intonational and, particularly, melodic pattern of the speech act of consent in business discourse has been still topical and requires further research.

**Objective.** The study aimed to analyze the variations of fundamental frequency of the tone and define the contribution of these variations to differentiating the categorical and non-categorical consent in business discourse.

**Materials and methods.** The scope of the study involved 225 phrases implementing the speech act of categorical/non-categorical consent-accept taken as a

random sample from the audio-recordings of English (American variant) business discourses (business negotiations, meetings at different structural levels of state and private organizations, debates and other task-oriented business interactions). All the selected phrases were marked auditorily as categorical or non-categorical. The informants were 3 native American speakers, linguists without any special phonetic training. Having being marked as strongly categorical or non-categorical, the phrases were grouped into two samples and structured appropriately for further electro-acoustic analysis. The analysis was carried out with the help of special software Praat version 6.0.14 and WafeSurfer version 1.8. In the course of the study the following parameters were analyzed:

- level of fundamental frequency of the tone in a phrase and its segments (the pre-head, the head, the nucleus, the tail), measured in *Hertz (Hz)*;
- intrasyllabic interval of fundamental frequency of the phrase and its segments, measured in *semitones (St<sub>i</sub>)*;
- frequency interval of the phrase ( $F_{0max}/F_{0min}$ ), measured in *semitones (St<sub>i</sub>)*;
- the speed of tonal changes in the nucleus, measured in  $St_i/Ms$ ;
- the direction of the tone in the phrase and its segments.

To minimize the influence of individual features, all obtained absolute values were converted to relative values

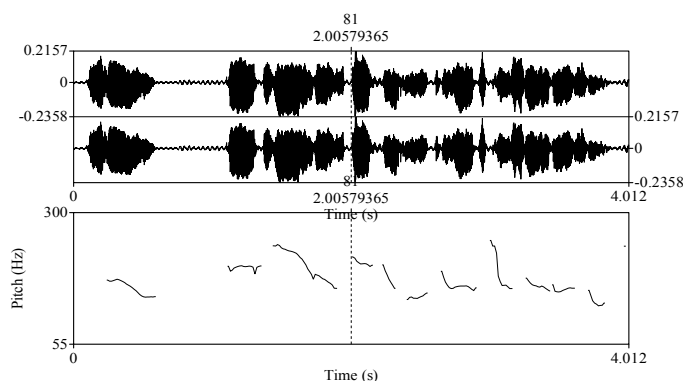
- r.v. (relation of an absolute value and a speaker's average) for further linguistic interpretation. To show the level of difference between the two compared values the coefficient  $K_f$  was used, it was calculated according to the formula  $K_f = f_1/f_2$ , where  $f_1$  stands for greater value and  $f_2$  for smaller. The validity of the final data was verified with the help of *t-test*.

**Results and discussion.** The results of an electro-acoustic analysis enabled determining parameters of  $F_0$  relevant for distinguishing categorical and non-categorical consent in business discourse.

Thus, the speech act of categorical consent in general was characterized by:

- the increased level of  $F_0$  in virtually all the segments of the phrase (approximately 152 Hz for male and 220 Hz for female realizations) with the exception of the terminal part – here mid and low levels were typical (80 Hz for male and 100 for female realizations);
- the increased  $F_0$  interval in pre-terminal and terminal parts;
- increased speed of tonal changes in the nucleus;
- wide frequency range of the phrase;
- descending and ascending stepping and scandent scales;
- falling terminal tone.

The example of average tonal changes is demonstrated in Picture 1.



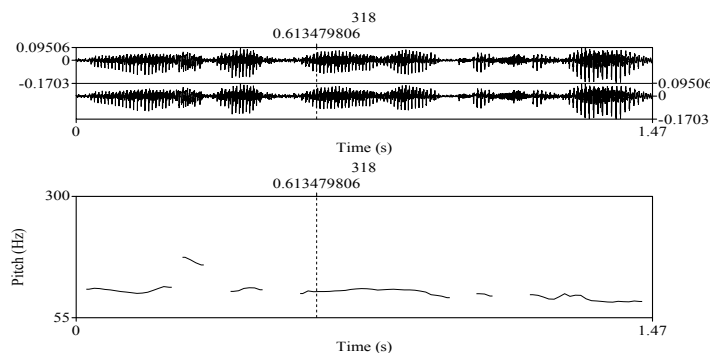
**Picture 1.** Tonal contour of the speech act of categorical consent

The typical frequency characteristics of the speech act of non-categorical consent were as follows:

- the decreased level of  $F_0$  in virtually all the segments of the phrase (approximately 125 Hz for male and 150 Hz for female realizations);
- the decreased  $F_0$  interval in pre-terminal and

terminal parts;

- decreased speed of tonal changes in the nucleus;
- narrowed and narrow frequency range of the phrase;
- great number of level and descending stepping scales;
- level or rising tone in the terminal part.



**Picture 2.** Tonal contour of the speech act of categorical consent

So, the distinctive features of fundamental frequency can be summarized as following.

The level of fundamental frequency serves as an indicator of categoricalness/ non-categoricalness. The higher level of fundamental frequency in all the segments of the phrase is typical of categorical consent. The speech act of non-categorical consent is characterized by a mid or low level of Fo. The pre-head for non-categorical consent is situated at the medium level. The level of the terminal

part for non-categorical consent occupies the low level as well as for the categorical consent, the difference here is produced by the interval – terminal part of categorical consent makes usually a visible contrast to the preceding part of the phrase, while in case of non-categorical consent such a contrast is almost completely absent. The summarized information on the level of Fo in segments of the phrase is given in Table 1.

**Table 1.** Average indices of the level of Fo in the segments of the phrase (r.v.)

Segment	Level of Fo		K <sub>r</sub>
	categorical	non-categorical	
The pre-head	1,1	0,7	1,6
The head	1,3	0,8	1,6
The nucleus	1,2	0,7	1,7
The tail	0,8	0,8	1

The frequency interval appeared to be another distinctive feature of categorical/non-categorical consent. The increased interval is found in most heads and nuclei of categorical consent; herewith the increased average interval of the segment is achieved primarily due to the widening of the intrasyllabic frequency interval.

Non-categorical consent is marked by rather narrowed interval of all the segments of the phrase with the a bit wider interval solely in the head. The summarized information on the interval of Fo in segments of the phrase is given in Table 2.

**Table 2.** Average indices of the interval of Fo in the segments of the phrase (r.v.)

Segment	Level of Fo		K <sub>r</sub>
	categorical	non-categorical	
The pre-head	1,1	0,7	1,6
The head	1,3	0,8	1,6
The nucleus	1,2	0,7	1,7
The tail	0,8	0,8	1

Another feature which is capable of differentiating categorical and non-categorical consent is the speed of the tonal changes in the nucleus – it is significantly higher than the average (1,3 r.v.) in most cases for categorical consent and lower (0,8 r.v.) for the non-categorical one.

The direction of the tone movement in the phrase revealed great diversity of options with the general tendency to use falling tones in terminal part for the

categorical consent, while the non-categorical consent is marked by the usage of falling-rising, level and rising tones. Falling and level heads are rather typical of the non-categorical consent, while for the categorical consent a number of rising tones in the head was found. The summarized information on the direction of the tone in segments of the phrase is given in Table 3.

**Table 3.** Direction of the tone in segments of the phrase (%)

Direction of the tone	The pre-head		The head		The nucleus		The tail	
	Categ.	Non-categ.	Categ.	Non-categ.	Categ.	Non-categ.	Categ.	Non-categ.
falling	35,6	43,8	55,5	64,5	67,6	5,7	72,5	26,5
rising	27,4	12,2	19,5	2,5	5,4	54,7	2,7	48
level	13	23,2	4,8	22,6	2,4	25,3	1,3	15,5
falling-rising	8,4	6	10,2	5,4	3,1	12,3	7,5	7
rising-falling	12	6,5	10	5	21,5	2	16	3

**Conclusions.** As the results of the conducted analysis have demonstrated there exists a strong correlation between the modifications of fundamental frequency of the tone and the degree of categoricalness in the speech act of consent. A perspective of further research lies in the

complex analysis of all other acoustic parameters of intonation and determining the role they play in the realization of different degrees of categoricalness in the speech act of consent in business discourse.

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#### **Частотная организация речевого акта категоричного/некатегоричного согласия в бизнес-дискурсе**

**А. А. Юмрукуз**

**Аннотация.** В статье излагаются результаты проведенного электроакустического анализа англоязычных фраз, реализующих речевой акт согласия на материале бизнес-дискурса. Целью такого дискурса является в конечном итоге достижение согласия, понимания по определенным вопросам, поэтому речевой акт согласия рассматривается как предпочтительный, желательный, что обуславливает относительную категоричность его природы. Тем не менее, в зависимости от ситуации общения и дополнительных субъективно-модальных значений степень категоричности может увеличиваться или уменьшаться, в таком случае речевой акт воспринимается как категоричный, нейтральный или некатегоричный. Степень категоричности высказывания отображается на средствах всех структурных уровней, и, прежде всего, на интонационной организации такого высказывания. В данной работе в фокусе внимания находится мелодический компонент интонации, а именно его акустический коррелят – частота основного тона; этот параметр анализируется с фонологической точки зрения как способный дифференцировать категоричное и некатегоричное согласие.

**Ключевые слова:** речевой акт согласия, бизнес-дискурс, категоричный, некатегоричный.