An investigation into gender specifics of communicants’ pitch attunement in natural English conversation

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Abstract
The present empirical research takes place within the framework of Communication Accommodation Theory, bringing to the fore the prosodic organization of this speech phenomenon. This paper presents some research findings concerning the melodic component of prosodic accommodation in natural conversation. In this study, prosodic accommodation is viewed from the perspectives of interactional linguistics and conversation analysis with special regard to the phonopragmatic approach. The paper provides the author’s observations about melodic manifestations of speakers’ intentions and presuppositions, as well as the prosodic realization of communicative dominance in natural conversation. The focus on gender specifics of speech accommodation is communicatively justified since, according to the findings, women and men have gender-related markers of prosodic alignment and employ different melodic strategies in naturally occurring social interaction. Female conversing demonstrates numerous units of recipiency (neutral or affiliating) prosodically designed so as to fit in continuous talk and not to break its coherence. Male talk, on the contrary, may contain instances of melodic divergence and competition for communicative dominance in conversation.

Key words: prosodic accommodation, gender, convergence, divergence, backchannel, self-repetition

Introduction
Contemporary research in the vast field of interactional linguistics has it that speech accommodation is an indispensable component of any successful interaction as it helps to ensure coordination between interlocutors. Leading contemporary linguists pay more and more attention to this phenomenon, primarily at syntactic and segmental levels of the language. As for the prosodic aspect of social interaction, it has become a fruitful area of interactional linguistic investigation since the mid-1980s, and it still remains an insufficiently explored sphere due to its complex nature, as well as great pragmatic potential.

In this paper, the conversation is viewed as a complex, dynamic and multifaceted activity that requires the active involvement of all the participants in order to construct and derive meaning. During this process, individuals apply their cognitive, linguistic, and psychological skills to facilitate mutual understanding and build effective social relations (De Looze, Rauzy, 2011). The fundamental role of prosody in this process consists in its collaborative use by the participants of the conversation. Being integral to all aspects of spontaneous spoken interaction, prosody covers interactionally relevant, suprasegmental aspects of talk, such as pitch, loudness, tempo, and voice quality. Research into prosodic accommodation of these characteristics of naturally occurring speech is rapidly beginning to take shape in interactional linguistics. The aim of this study is to identify melodic strategies of communicative accommodation in English conversation with regard to gender specifics of their implementation, which has been of limited focus on much of the research on the subject to date.

Leading linguistic research of prosodic alignment
As studying prosody in naturally occurring social interaction is located on the boundary of linguistic and social studies, this research requires consideration of pitch variation from several interrelated perspectives, i.e. Conversation Analysis (Sacks et al., 1974; Schegloff, 2009; Hoey, Kendrick, 2017; Kendrik, 2020), pragmatics (House, 1990; Hirshberg, 2003; Beňuš et al., 2011) and Communication Accommodation Theory (Giles, 1973; Giles and Coupland, 1991).

Current research in the field of interactional linguistics views prosody primarily as a means of sequence organization in social interaction. Thus the majority of empirical studies in this area investigate the role of prosodic cues in turn-taking (Couper-Kuhlen, Selting, 1996; Fox, 2001; Drew 2001; Drew, 2013; Couper-Kuhlen, 2020). In Conversation Analysis E. A. Schegloff (2007) defines turn-taking as a cognitive, dynamically evolving, pragmatic phenomenon that is fundamental for human interaction. In this respect, interactional linguists brought to light the significant role of prosodic cues in turn-taking, demonstrating that it is accompanied by temporal and rhythmic alignment, as well as pitch matching in any conversation. B. Szczepek Reed (2012) describes ‘prosodic orientation’ in dialogue as an omnipresent phenomenon that takes place regardless of different extralinguistic factors. Therefore, within this framework, researchers identify and analyze different prosodic patterns as ways of accomplishing certain conversational practices, which in the end contributes to a better understanding of participants’ managing of conversational sequences and actions.

While such conclusions appear to be justified, as no speech act can occur without employing prosodic clusters, it is also fair to note that communication as such cannot be studied separately from the socio-cultural and pragmatic context as it bears a crucial role in the correct interpretation of prosodic signals and more importantly – of the message itself (Pulverness et al. 2017). Prosody from such an extralinguistic perspective has attracted greater attention with the shift to a more pragmatic focus in those phonetic studies that strive to offer a different methodology for the analysis of spoken data (Brazil, 1997; Gussenhoven, 1990; House, 1990) instead of the long-standing tradition of investigating solely syntactic functions of prosody.

Within the scope of interactional linguistics, pragmatically oriented studies investigate the relationship between the variability in the temporal, rhythmic, melodic alignment in natural conversation and the pragmatics of interpersonal communication that this process entails. Thus, a phonopragmatic approach to the analysis of conversational data (Demina, Kartashevskaya, 2016; Demina, Shcheveleva, 2016) takes into consideration the prosodic manifestation of speakers’ pragmatic intentions, as well as their communicative dominance or submissiveness in speech, as expressed through the variation of pitch, tempo, and loudness. The asymmetrical relationships between interlocutors and the pragmatic role of timing in establishing common ground were thoroughly examined in the comprehensive research carried out by S. Beňuš, A. Gravano, and J. Hirscheberg (2011). The results of these pragmatically focused empirical studies show that conversational dominance, mutual common ground, communicative intentions, presuppositions, and implications are pragmatically constructed in social interaction through various prosodic accommodation patterns employed by the interlocutors.

Another aspect of many conversational studies that seems to be rather limiting for the purposes of the present research is their exclusive focus on the interactional function of prosody considered separately from speech accommodation phenomena. Thus, B. Szczepak Reed (2011) essentially distinguishes “prosodic orientation” from speech accommodation phenomena, insisting on studying the display of prosodic signals in turn-taking exclusively. As mentioned above, such an angle of investigation gives prominence to prosody as a means of structuring conversational sequences and ensuring coordination between the participants in the talk. However, this paper...
supports the view that prosodic synchronization between speakers is not just a matter of formality but a consequence of their, often unconscious, mutual attunement and, therefore, a manifestation of their speech adaptation, a process embracing the interlocutors’ overall communicative behavior during the conversation.

The issue of speech adaptation has come to the fore of linguistic research since the 1970s, with the appearance of Communicative Accommodation Theory (Giles, 1973), which explores the sociolinguistic features and social consequences of communicative adaptation. Work in this area has a strong focus on interpersonal relations, social hierarchies, and sociolinguistic variables. Communicative adaptation and convergence are broadly described as practices by which interlocutors adapt their general speaking style to that of a co-participant over the duration of an entire interaction. Nowadays, this field of study generates huge interest among scientists all over the world as the subject has broadened from purely verbal manifestations to paralinguistic phenomena, including gestural and prosodic aspects. The existing research on convergence focuses mostly on English-language settings. However, such languages as Japanese, Mandarin, Hungarian, Hebrew, and Dutch also demonstrate cases of phonological, temporal, or melodic convergence, proving it to be a universal phenomenon (Giles and Coupland, 1991; Giles and Noels, 2007; Tanaka, 1999; Tanaka, 2004; Clopper and Dossey, 2020; Weise, 2020).

In this regard, suprasegmental research in the field of communicative accommodation usually links matching prosodic behavior to displays of solidarity and camaraderie between the communicants (Kousidis, 2009, Tannen, 2005a, 2005b). For example, the evidence of pause duration adaptation between the interviewer and interviewee has been proved in recent research studies of unconstrained English conversations. According to the findings, the interviewees demonstrated a length of pauses that was well proportionate to that of the interviewer (De Looze, Rauzy, 2011; Heldner, Edlund, 2010). Another study provides examples of temporal convergence patterns as prosodic displays of solidarity, cooperation, and interlocutor-orientation in spontaneous English conversation, as opposed to divergence patterns signaling communicative dominance, rivalry, or hierarchy in social interaction (Demina, Ivanova, 2019).

Divergence, as the opposite strategy of communicative accommodation, refers to a process of explicitly marking one’s speech as being different from the dialogue partner’s. Divergence is rooted in the premises of Social Identity Theory introduced by H. Tajfel, who argues that a part of individuals’ self-esteem and identity is derived from values and beliefs of the social group they belong to (Tajfel, 1978). This means that phonetic divergence, for example, can be viewed as one of the means of emphasizes the person’s ethnic and class origin. While convergence is supposed to help interlocutors to establish communicative contact for the sake of efficient information exchange, divergence, in contrast, may create distance between speakers and, as a result, misunderstanding, and tension in the conversation. However, the communicative divergence has not been sufficiently explored in sociolinguistic studies focusing on prosody yet. The bulk of experiments conducted to demonstrate how divergence manifests itself linguistically centers mostly on the segmental side of language, particularly the use of pronunciation accent, leaving prosodic organization an almost unexplored sphere.

Another aspect of speech accommodation relevant to the present research is its type. The majority of existing studies on speech accommodation report on it as a linear process. It means that the degree of accommodation is being intensified gradually over the course of a conversation. In other words, interactants’ behavioral matching can be observed by comparing their speech behavior at the beginning and at the end of a conversation. This method proved to be quite applicable in a number of recent studies on prosodic adaptation of the communicants.
However, as spoken interaction is a dynamic process by definition, communicants do not stay equally involved in the course of conversation as they may change from being passive to talking. They may go through stages such as listening, information processing, asking a question or giving feedback. It can, therefore, be deduced that speech accommodation is exposed to similar dynamic changes in spontaneous spoken interaction. Thus, in recently conducted experiments, it has been shown that the degree of prosodic accommodation (regarding mean F0, mean intensity, and pause duration synchrony) changes several times during free-flowing conversations (De Looze, Rauzy, 2011; De Looze et al., 2014).

So prosodic accommodation can be viewed both as a linear and a dynamic phenomenon depending on the degree of analysis. R. Levitan and J. Hirshenberg (2011) single out the conversational level, where measuring takes place during the whole conversation, and the turn-level, where the focus stays on the periods of turn-taking. As their analyses have shown, a linear manifestation of adaptation can be ascribed to the level of conversation while dynamicity is more likely to appear at the turn-exchanges where speakers accommodate to their interlocutors. As a result, some parameters may demonstrate a chiefly linear rate of accommodation that increases or decreases gradually over the course of a conversation while others will fluctuate within the same interaction (De Looze et al., 2014).

Following these findings, it can be assumed that the type of accommodation will as well depend on pragmatic factors. For instance, its dynamic mode may be induced by the speaker’s degree of emotional involvement in the conversation. The same can be applied to the change of communicants’ roles and intentions that can also affect the extent of their speech adaptation.

Material and Methodology
The corpus for this research is based on real-time female (speakers W1, W2, W3, W4, W5) and male (speakers M1, M2, M3) social interactions in Standard British English. These spontaneous conversations touch upon private issues such as family background and professional ups and downs and thus provide revealing and emotional discussions.

The main stages of the analysis include (1) recording and transcribing real-time female and male conversations; (2) compiling the narrow corpus (76 minutes) for the instrumental analysis by selecting the most representative and coherent samples of spontaneous talk; (3) conducting a thorough contour analysis of the selected speech samples based on perceptual judgment, i.e. identifying intonation groups and registering contour elements in them; (4) conducting a detailed acoustic analysis of the narrow corpus using computer software PRAAT, with the main focus on F0 (Fundamental Frequency) values (the pitch level and pitch range) in the intoned interactional samples.

The conducted contour analysis (stage 3) was based on the approach introduced by prominent British scholars with an intonation group as a fundamental unit for analysis that may comprise such constituent parts as Pre-Head, Head, Tone, and Tail (O’Connor and Arnold, 1973; Brazil, 1997; Wells, 2006; Cruttenden, 2014). In this paper, intonation refers to changes and variations in pitch through time. The system of intonational symbols applied in work is largely founded on J. D. O’Connor and G. F. Arnold’s (1973) notation that was further elaborated by professors of Moscow State Linguistic University for teaching purposes at the Department of English phonetics (Vasilyev, 2009). The notation symbols used in this paper include:
Results and discussion
Melodic accommodation in female conversation

Pitch is the overall positioning of a participant’s voice in a higher or lower speaking range. In the conversation analysis, as B. Szczepk Reed specifies, individual pitch values first have to be interpreted in the context of the other pitch events that surround them. Secondly, pitch values have to be interpreted in the light of a speaker’s overall pitch range. A certain pitch value may be high for one speaker but not for another, depending on their overall speaking range. Thirdly, pitch values only become meaningful in the context of the local pitch register a conversational participant is using at the time of speaking (Szczepk Reed, 2012). Therefore, Table 1 contains mean F0 values of the communicants’ speech which provide the general pitch context of the conversation. Conventionally, female participants have higher F0 indexes and a wider range than male ones.

Table 1: Mean F0 values (Hz) and pitch range (st) of the female speech

| Speaker | F0min | F0max | Mean F0 | Range |
|---------|-------|-------|---------|-------|
| W1      | 101   | 381   | 195     | 23    |
| W2      | 107   | 467   | 211     | 25    |
| W3      | 119   | 386   | 184     | 20    |
| W4      | 93    | 307   | 170     | 22    |
| W5      | 79    | 375   | 153     | 27    |

Pitch is made meaningful by participants in interaction in many ways. Pitch level carries socio-cultural information in English being associated with such concepts as distance, politeness, interlocutor-orientation, involvement etc. (Brazil, 1997). For the purposes of this research, pitch peaks (F0 max) proved to be most informative in the female conversation. The results reveal that women are more oriented to the melodic component of communication and interpret prosodic cues of turn-taking more successfully. Female speech has demonstrated a number of cases of melodic “pitch up”. In extract 1 from a conversation between two female speakers W1 and W2, “pitch up” helps W1 preserve a friendly atmosphere in the talk, avoid awkward pauses and maintain a smooth speech flow.

Extract 1

W2: [1] If it’s too housie or it’s too clubby, it d...It’s got to be...that ^h0l^h1t^s^h0, it’s not...^h0l^h2t^s.

W1: [2] So it sounds quite chemical then...
The Incomplete High Fall [2] in the example above is melodically echoed in the following utterance by W1 with the help of High Pre-Head [3]. On the acoustic level such attunement is achieved by high F0 max figures (W2: 467 Hz; W1: 372 Hz) (Figure 1). Such a pitch “catch up” helps W2 and W1 avoid a noticeable on the level of perception audible pause at the interface of utterances.

![Oscillograph chart and pitch movement of the turn-change at the interface of utterances](image)

**Figure 1:** Oscillograph chart and pitch movement of the turn-change at the interface of utterances: “(W2)...those 'hits. (W1) ’So it...”

*Extract 2* illustrates almost identical intonation patterns at the end of utterances, i.e. High Rising terminal tone with post-nuclear ascending stressed syllables.

**Extract 2**

W1: 'Has 'socializing been a 'big ,part of ↞your ] pro'fessional 'life?

W5: 'Yes, 'why, 'I was just at 'Daze 'party 'last 'night.

Here the synchronized intonational organization manifests itself in corresponding high F0max indices (W1: 365 Hz; W5: 300 Hz) and wide pitch range of the rising contour (W1: 13 st; W5: 15 st). These findings conform to the observations about ‘prosodic orientation’ of the second communicant’s speech made in other conversational studies, where matching prosodic parameters of replies include intonation contour, pitch range, duration of stressed syllables, and the quality of voice (Szczepek Reed, 2006). Similar findings reflecting pitch level and pitch range adaptation on the basis of English task-based dialogues have been presented in the works of C. De Looze (2011, 2014).

Some researchers of naturally occurring conversation argue, though, that this correspondence occurs unconsciously and regardless of social factors. However,
the melodic convergence of the selected speech stretches appears to be communicatively and pragmatically justified as it not only signals the right interpretation of prosodic cues of turn-taking by the female speakers but also ensures the atmosphere of understanding, agreement, and empathy between them. Therefore, such instances are attributed to displays of conscious melodical accommodation in the study. Because of this alignment, turn-change happens almost untraceably without awkward pauses. Melodically synchronized speech acts prove that communicants are literally “on one wave”.

**Acoustic properties of prompts and backchannels in female conversation**

The dynamic nature of melodic accommodation comes to the fore in the examples of communicative support in female speech, i.e. prompts (Table 2) and backchannels (Table 3).

**Table 2: Mean F0 and intensity values in prompts and context utterances in female speech**

| Extract 3 | Mean F0 (Hz) | Mean Intensity (dB) |
|-----------|--------------|---------------------|
| W3: you → know, to → leave... | 179 | 69 |
| W2: Pale out, gracefully | 208 | 70 |
| W3: to pale out \(\text{gracefully}\) | 176 | 69 |

| Extract 4 | Mean F0 (Hz) | Mean Intensity (dB) |
|-----------|--------------|---------------------|
| W4: you’re ’not just a’llowed to ‘do → sort of... | 166 | 69 |
| W2: What, ever | 187 | 70 |
| W4: what’ever | 180 | 72 |

| Extract 5 | Mean F0 (Hz) | Mean Intensity (dB) |
|-----------|--------------|---------------------|
| W5: you ‘shouldn’t be ‘playing, you → know, ’ | 129 | 66 |
| W2: ’Obvious, stuff | 153 | 68 |
| W5: → Blur\(\text{V}\) and like \(\text{Pulp}\) | 150 | 72 |

According to the findings, F0 and intensity\(^1\) values of prompts are considerably higher than those of the preceding utterances. Table 2 provides three examples of W2’s prompts each time initiated higher and louder than the mean values of the active speaker. Such instances, though introducing potential interruption to the speech flow, are meant to act solely as communicative support, as they exhibit a descending pitch pattern (Falling tones) signaling their finite character. Nevertheless, it appears that prompts are partly interpreted as a communicative challenge, since they provoke a general increase of F0 and intensity values of the active speakers’ utterances too (extracts 4 and 5 in Table 2). Functionally, prompts introduce fresh ideas to the talk, or words the current speaker has been struggling with, therefore, they express great involvement in the conversation but at the same time – seek to attract attention.

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\(^1\) The measurement of intensity indices appeared to be a concomitant aim of the research conditioned by the frequent correspondence and interdependence of F0 and intensity parameters of voice. Thus, for example, mean vocal intensity adaptation in spontaneous English interactions was observed in many recent experimental studies alongside with pitch level accommodation of communicants’ turns (Kousidis, 2009; De Looze, Rauzy, 2011; Heldner, Edlund, 2010; Levitan et al., 2011).
Table 3: Mean F0 and intensity values in backchannels and context utterances

| Extract 6 | Mean F0 (Hz) | Mean Intensity (dB) |
|-----------|--------------|---------------------|
| W1: Just sur\'ving | 211 | 72,6 |
| W4: Sur \'ving | 129 | 70,8 |

According to the data, backchannels are pronounced with lower F0 and intensity indices (Table 3). These findings agree with the results of previous empirical studies focused on the pitch adaptation of backchannel utterances in spontaneous conversations, according to which speakers adapted the pitch of their backchannel utterances to the pitch of their interlocutor’s preceding utterance (Heldner, Edlund, 2010; Levitan et al., 2011).

Communicatively, backchannels usually link back to the previous utterance and very often repeat its wording (Levitan et al., 2011). Since pragmatically, they do not introduce new information and just confirm or support the already mentioned, there is no need for communicants to make them more salient in their prosodic organization. In this respect, these acoustic findings contribute to the discussion of the discourse value of intonation (Brazil, 1997), confirming that Incomplete Falling tones may equally as well state the “given” information in spoken discourse, as long as they are lower in their intensity and pitch height than the overall prosodic context.

Melodic convergence and divergence in male conversation

The acoustic analysis of the male conversation has demonstrated a convergence tendency in communicants’ pitch patterns as well. In extract 8 M3’s utterances begin “in tune” with M2’s questions, as the speaker employs High Falls of different configuration on the first word in his answers [2, 4, 6] and, thus, demonstrates a melodic attunement to the questions M2 asked with a High Rising tone [1, 3, 5].

Extract 8
M2: [1] …you’re from a ‘big *family’ or an ‘only *child? M3: [2] \No,\ I →have,\} I ‘have a \sister. M2: [3] ‘Younger ‘sister? M3: [4] ‘Younger ,sister. M2: [5] ‘Are you ‘close? M3: [6] ‘Yes,\ we \are.

Acoustically such attunement is manifested in correspondingly high F0 figures, i.e. [3] shows F0 max = 134 Hz and is immediately followed by [4] with practically the same index F0 max = 136 Hz on the first word. Similar melodic alignment can be observed in the next adjacency pair, i.e. [5] has F0 max = 200 Hz and is supported by F0 max = 180 Hz in [6].
Table 4: Mean F0 values (Hz) and pitch range (st) of the male speech

| Speaker | F0 min | F0 max | Mean F0 | Range |
|---------|--------|--------|---------|-------|
| M1      | 75     | 197    | 103     | 16    |
| M2      | 74     | 198    | 88      | 17    |
| M3      | 74     | 193    | 87      | 16    |

In *extract 8* M3 clearly accommodates his utterances melodically to M2’s pitch level, as his speech generally demonstrates the lowest mean F0 values (87 Hz) of all the male speakers (Table 4). However, *extract 9* with the same participants demonstrates a clear case of melodic divergence.

**Extract 9**

**M2:** [1] 'Are you a ‘gambler?'
**M3:** [2] 'I →don’t ]]' gamble in *terms of →cards V [3] or 'anything \else.

Here M3 doesn’t follow the previous pattern of melodic alignment and doesn’t begin his answer with a High Falling tone, which acoustically manifests itself in considerably low F0 values and demonstrates a drastic change of tone as compared to the high indices of M2’s question (Table 5). Moreover, in the final intonation unit of M3’s utterance F0 values are almost identical, and the pitch range narrowing reaches its minimum – 2 st.

Table 5: Mean F0 values (Hz) and pitch range (st) in *extract 9*

| Speaker | Intonation units [1, 2] | Intonation unit [3] |
|---------|-------------------------|----------------------|
|         | F0min  | F0max  | Mean  | Range | F0min  | F0max  | Mean  | Range |
| M2      | 77     | 281    | 152   | 22    |         |        |       |       |
| M3      | 74     | 108    | 91    | 7     | 80      | 86     | 81    | 2     |

The melodic divergence is even more obvious if we consider the average parameters of the communicants’ speech provided in Table 4. M2 demonstrates an increase of F0 and pitch range values in *extract 9* as compared to the average acoustic properties of his speech (F0 max = 281 Hz vs. 198 Hz; pitch range = 22 st vs. 17 st). His interlocutor M3, on the contrary, shows considerably lower indices in *extract 9* as compared to his average speech parameters (F0 max = 108 and 86 Hz vs. 193 Hz; pitch range = 7 and 2 st vs. 16 st) (Tables 4 and 5).

These findings tend to align with conclusions about the dynamic nature of speech accommodation referenced above, demonstrating that melodic attunement is not an omnipresent linear phenomenon in conversation but is rather a socially and pragmatically conditioned communicative event. M3 was ready to comply with the prevalent melodic pattern of the conversation (elevated pitch level) and show his involvement and active participation as long as the topic agreed with him. However, a challenging question about gambling did not meet the same enthusiastic reaction from M3, who expressed his disagreement and disapproval melodically. The founder of Communication Accommodation Theory, H. Giles (1979), believes that divergence is
chiefly employed to demonstrate a domineering or powerful position in a conversation. In this case M3’s unwillingness to echo melodically the question and continue his prosodic attunement to the interlocutor, clearly signals the speaker’s objection to the suggested topic and even irritation, which he does not try to conceal.

**Acoustic properties of self-repetition in male conversation**

The analysis of overlaps in the male talk has revealed interesting results. According to the research findings, male interaction does not have many examples of overlaps expressing communicative support to the active speaker. Male participants do not seem to take an overlap as a sign of communicative support from the interlocutor as it happens in female talk. Rather an active speaker perceives an overlap as an attempt for interruption and therefore, repeats the wording which has been intervened into, sometimes several times, trying to finish up their utterance (extracts 10, 11, 12).

**Extract 10**

M3: ...'one of the 'things that 'Rob in'sisted ,on was a 'company 'bike (M2: You’re absolutely 'right!) 'everybody →else... (M2: I 'thought you 'forgot about the 'company 'bike) [laughter] Everybody →else, everybody →else had a →company...} everybody →else... (M1: 'Oh I 'thought it was your 'nickname) [laughter] I →can’t re... (M2: 'You're 'so 'bad) I can’t re'member what it →was...

**Extract 11**

M3: They 'haven’t \changed , much, \certainly (M2: 'What \did you...) 'all the 'Victorian 'ones are \listed (M2: 'What did you \do? 'What did you \do when you were \there?)

**Extract 12**

M3: ...and that was actually the \thing that should 'never be \on it, \otherwise (M1: And \now...) there →should be... M1: And \now} you’re 'giving \way to where the 'dames \are.

In extracts 10, 11, 12 self-repetitions have practically identical wording and intonational organization. Acoustic analysis of these utterances proved them to be instances of competition and rivalry for a domineering position in male conversation (Table 6).
Table 6: Mean F0 and intensity values in self-repetitions in extracts 10, 11, 12

| Extract 10                  | Mean F0 (Hz) | Mean intensity (dB) |
|-----------------------------|--------------|---------------------|
| M2: You’re absolutely ‘right!| 190          | 72                  |
| M3: ‘everybody → else...     | 129          | 74                  |
| M2: I ‘thought youforgot about the ‘company ‘bicycle | 200       | 72                  |
| M3: [laughter] ‘everybody → else... | 159       | 74                  |
| M3: ‘everybody ‘else had a → ‘company... | 160       | 70                  |
| M3: ‘everybody ‘else...      | 166          | 72                  |
| M1: ‘oh I ‘thought it was your ‘nickname | 148       | 69                  |
| M3: (laughter) I → “can’t re... | 106       | 70                  |
| M2: ‘you’re ‘so ‘bad         | 291          | 69                  |
| M3: ‘I can’t re ‘member what it → was | 146       | 70                  |

| Extract 11                  | Mean F0 (Hz) | Mean intensity (dB) |
|-----------------------------|--------------|---------------------|
| M3: They ‘haven’t ‘changed ‘much, → ‘certainly | 111          | 65                  |
| M2: ‘What → ‘did you…       | 143          | 71                  |
| M3: ‘all the ‘Victorian ‘ones are ‘listed | 105          | 70                  |
| M2: ‘What did you → ‘do?     | 153          | 72                  |
| M2: ‘What did you → ‘do when you were , ‘there? | 150       | 65                  |

| Extract 12                  | Mean F0 (Hz) | Mean intensity (dB) |
|-----------------------------|--------------|---------------------|
| M3: and ‘that was ‘actually the → ‘thing ‘that should ‘never be ‘on it, ‘otherwise… | 98              | 65                  |
| M1: ‘And → ‘now…            | 114          | 69                  |
| M3: ‘there → ‘should be…    | 102          | 66                  |
| M1: ‘And → ‘now            | 119          | 63                  |
| M1: you’re ‘giving ‘way to where the ‘dames ‘are | 108          | 63                  |

In extract 10 M3’s repetitions demonstrate a significant increase of F0 values as they are aimed at winning back the communicative turn, each attempt pronounced higher than the previous one (129 > 159 > 160 > 166 Hz). Meanwhile, the correlation of melodic and dynamic parameters remains variable in the conversation. In extract 11 M3 not for long manages to keep his active, communicative turn by increasing the loudness of his utterance from 65 to 70 dB. However, M2 in his attempts to interrupt M3 employs the strategy of increasing both prosodic parameters (153 Hz and 72 dB) and eventually succeeds in getting his question across. Interestingly enough, when M2 wins the communicative dominance in this competition, the prosodic properties of his speech show lower indices (150 Hz and 65 dB).

Extract 12 also demonstrates the relative nature of the pitch-loudness correlation. The strategy of increasing both of these parameters does not help M3 to maintain his communicative turn, and he yields to M1, whose F0 values are increasing. Judging by these results, it is fair to conclude that the correlation between F0 and intensity in natural conversation remains an open question and requires further detailed investigation. In this experiment, pitch appeared to be more meaningful and significant in the processes of turn-change and turn-maintenance, as well as establishing communicative dominance in the male conversation.
Conclusion

This study has looked into gender-specific patterns of melodic accommodation in natural conversation. The findings make it possible to conclude that women are more prosodically oriented to the melodic aspect of speech as they demonstrate synchronized intonational contours in adjacency pairs and echo their interlocutors’ pitch level and range in subsequent speech stretches. Moreover, female speech is abundant in overlapping phenomena, namely backchannels and prompts, both of which seek to give communicative support to the active speaker. As the results show, prompts are pronounced louder and higher in pitch but have a falling terminal tone signaling no intention to interfere in the speech flow any further. However, prompts are still met with the active communicant’s increase in F0 and intensity indices, meaning to demonstrate that the speaker accepts the challenge and is holding to the current communicative turn. On the contrary, backchannels are characterized by a decrease in F0 and intensity values as compared to the previous context. Such cases of “melodic divergence” are communicatively justified as backchannels only confirm the already stated. Phonpragmatically, prompts and backchannels are manifestations of the opposition of “new vs. given” information, which prosodically is expressed by high or low F0 and intensity values as compared to the active speaker’s speech parameters.

Melodic convergence in natural male conversation is present to a smaller extent. Moreover, the conducted analysis has revealed cases of intentional melodic divergence in their speech. Prosodically, it is manifested in a noticeable mismatch of melodic indices in adjacency pairs. Such instances are context-dependent and appear mostly in situations when one interlocutor is uncomfortable about the topic of conversation and, therefore, gives a reluctant reaction. It is worth mentioning that females’ key strategy of communicative support is not an omnipresent feature in male conversations as they rather demonstrate a verbal rivalry for communicative dominance. A pragmatic intention to interrupt the current speaker and win back the active, communicative turn results in numerous instances of self-repetitions. It appears that male speakers do not welcome communicative support from their interlocutors with the same enthusiasm as women. Acoustically this key strategy of men’s communicative behavior is expressed by an increase of F0 and often intensity figures meant to get their point across by all means.

To conclude, the conducted research contributes to the investigation of gender-related prosodic patterns in natural conversation, which is still in its early stages of development as a discrete subject of study. Although there exists a large body of research on gender specifics of the speech, there is little coverage of gender impact on prosodic accommodation in conversation (Hopper and LeBaron, 1998; Tannen, 1991; Holmes, 1995; Clopper and Smiljanic, 2011; Demina and Kartashevskaya, 2017). The impact of gender and social interaction on prosodic patterns also merits further discussion and investigation. In this respect, communicative accommodation should be studied in an interdisciplinary way, taking into account psychological and pragmatic implications as well, since the application of a single framework cannot sufficiently describe such a multifaceted phenomenon.

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