

In recognition of the enthusiasm he has brought to all aspects of the study of spoken verbal interaction, we dedicate this series to Professor Dr. Aldo di Luzio, University of Konstanz.

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## **InLiSt No. 27**

### Interaction and Linguistic Structures

Prosodic Orientation in Spoken Interaction

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## 1. Introduction<sup>1</sup>

The focus of this study is on participants' prosodic collaboration during talk-in-interaction, and this phenomenon is introduced here as "prosodic orientation". The term "orientation" has been used in conversation analysis to describe many forms of observable reaction by one participant to another:

Throughout the course of a conversation or other bout of talk-in-interaction, speakers display in their sequentially 'next' turns an understanding of what the 'prior' turn was about. That understanding may turn out to be what the prior speaker intended, or not; whichever it is, that itself is something which gets displayed in the next turn in the sequence. We describe this as a next-turn-proof-procedure, and it is the most basic tool used in CA to ensure that analyses explicate the orderly properties of talk as *oriented-to* accomplishments of participants, rather than being based merely on the assumptions of the analyst.

(Hutchby and Wooffitt (1998:15); emphasis mine)

The term prosodic orientation describes one speaker responding *prosodically* to another speaker's *prosody* in the immediately following turn. It does not encompass any other form of orientation which participants may display in conversation, as for example laughter or meta-linguistic comments.

An orientation to a speaker's prosody by laughing has for example been analysed by Flowe (2000:107ff). In Flowe's extract, a second participant begins to laugh after a stylized intonation phrase. "His laughter at exactly this point can be taken as an indication that he is orienting towards Carleson's prosodic highlighting." (109) What Flowe calls "orienting" is not what is thought of in this paper as prosodic orientation.

An orientation by way of a meta-linguistic comment on another conversationalist's prosody can be found in Local/Wootton (1995:160), where a mother tells her son *talk slowly Kevin*. Meta-linguistic comments such as this refer explicitly to an aspect of a previous speaker's prosody. Such comments, which could be understood as another form of orientation to prosody, are also not in the scope of this paper.

Neither does this study contribute to what has become known as accommodation theory (see for example Giles 1973; Giles/Taylor/Bourhis 1973), which among other things is

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<sup>1</sup> An earlier version of this paper was presented at the Euro-Conference on Interactional Linguistics at Spa, Belgium in September 2000. I am grateful to Peter Auer, Elizabeth Couper-Kuhlen, Paul Drew, William C. Flowe, Christine Gohl, Gabriele Klewitz, John Local, Geoffrey Raymond, Darren Reed, Emanuel A. Schegloff, Margret Selting, Marja-Leena Sorjonen and Bill Wells for their extremely helpful comments.

concerned with speakers' gradual change of regional accent, depending on who their co-participants are.

The present paper is concerned only with the orientation that manifests itself in the prosodic make-up of a next speaker's utterance with respect to another speaker's prior utterance.

The collection of prosodic orientations underlying this study consists of slightly more than 600 cases. The collection was made from recordings of informal radio programmes, both phone-ins and studio interviews, and private conversations among friends and family members. The language is for the most part Northern and Southern British English and North American English from either Minnesota or California; there is one speaker of Irish English.

From this data corpus, four different types of prosodic orientation have emerged. They have been termed prosodic matching, prosodic non-matching, prosodic completion and prosodic complementation. All four will be presented and analysed in the following.

## **2. Prosodic Matching**

Prosodic matching is understood here to mean speakers' repeating others' prosodic parameters, such as intonation contour, pitch register, pitch jumps, volume and speech rate. Matching of voice quality and of the phonetic production of individual sounds will also be included, although they are located on the fringe of what is typically called prosody.

Prosodic matching may occur singly on one parameter and at other times in a cluster of parameters, and it is by far the most frequent type of prosodic orientation that has come up in the data.

Matching of one or more of the above mentioned parameters has been found to be important in certain conversational contexts. Prosodic matching is, for example, similar to a form of prosodic replication which Couper-Kuhlen (1998) has discovered in reported speech sequences and calls "the phenomenon of 'chiming in', when recipients participate in the voicing of a particular figure." (1998:10). Klewitz (1998) likewise finds that "different speakers are found to use the same prosodic design for a certain character" during reported speech (1998:38). Schegloff (1998) has analysed a form of "negotiation over pitch level" in telephone openings. Couper-Kuhlen (1996) has looked at the relation between matching in pitch register and verbal repetition in quoting and mimicry:

(Speakers) use this kind of prosodic repetition together with a high degree of verbal repetition to imitate, and at the same time critically comment on, another speaker. (1996:401)

Orientation in rhythm has been left out of the current study because it has already received close attention from Couper-Kuhlen (1993) and Auer/Couper-Kuhlen/Müller (1999), who analyse participants' integration of each others' rhythm into one isochronous pattern:

"Participants are sensitive to their interlocutor's rhythm and indeed are able to 'tune in' to it with enough precision for an isochronous pattern to arise across turns. The pattern is created through a pooling of appropriately timed prominences by two or more speakers. (...) Having a common rhythm counts as a display of mutual endeavour; it turns the sequence of turns into a conversational 'duet' (Falk 1980) with speech rhythm serving as a unifying frame." (1999:59)

However, prosodic matching as such has not yet been described as a distinct phenomenon. In the following the individual parameters with respect to which participants orient prosodically to each other will be presented through analyses of conversational data extracts.

## **2.1 Prosodic Matching of Intonation Contour**

The most frequent occurrence of prosodic matching has proven to be a matching of intonation contour: the current data corpus holds 251 clear instances. An intonation contour is understood to be a melodic pitch movement which can be heard as a coherent whole, typically transcribed as an intonation unit. One such contour and unit routinely holds minimally one primary accent, and potentially secondary accents and non-accented syllables. The first accented syllable is called the 'onset'.<sup>2</sup> Prosodists have identified the terminal part of an intonation unit as vital for turn taking: a slightly rising or falling and a level contour can project more to come from the same speaker, a high rise or a low fall can signal the completion of a turn constructional unit and project a transition relevance place.<sup>3</sup>

After a contour has been produced, a second participant may repeat this same contour in his/her own next turn, as will be illustrated by a first example. The recording is of a Northern English radio phone-in, the host's name is Dick Hatch. The caller Mark has been talking about a new book, the author of which suggests that the then still alive Rudolf Hess, imprisoned in Berlin, is not really Rudolf Hess but an impersonator:

(1)

Who the heck

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<sup>2</sup> Couper-Kuhlen (1986)

<sup>3</sup> Selting (1995)



1 DH: well-  
 2 YEAH;  
 3 ALRIGHT then.  
 4 let me ASK you.  
 5 if it Isn't HESS,  
 6 -> <<h> ↑who the `heck ↑IS `it.>  
 7 -> MA: <<h> ↑i've `no `I`↑DE`A.>  
 8 (0.5)  
 9 [well you sEE-  
 10 DH: [but I mean how HOW can you persuADE somebody;  
 11 to spend dOnkey's years (.) in PRison;

In line 7 Mark copies Dick Hatch's contour of line 6: both begin with a high onset on the first syllable (*who*; *I've*), take a steep declination across the next syllable/s (*the heck*; *no*), then rise steeply on the following syllables (*is*; *ide*-) and fall on the last one (*it*, *-a*). Both turns also match in their high pitch register.

This instance of prosodic matching is used in a second pair part: Hatch has put a question to Mark, who seems to have fewer doubts about the truth value of the book in question than the host. This possibly explains the rather animated prosodic and verbal design of Dick Hatch's question *who the heck is it*. Such animation seems to call for a similarly designed prosody from the recipient in next turn, even if the response itself is a negative one, as in this instance. Mark's choice of a strongly animated prosody on his *I've no idea* is a repetition of the previous speaker's prosodic design; however, other options would of course have been open to him.

A second example comes from the recording of a radio phone-in programme in Minneapolis, the host is Barbara Carleson:

(2)

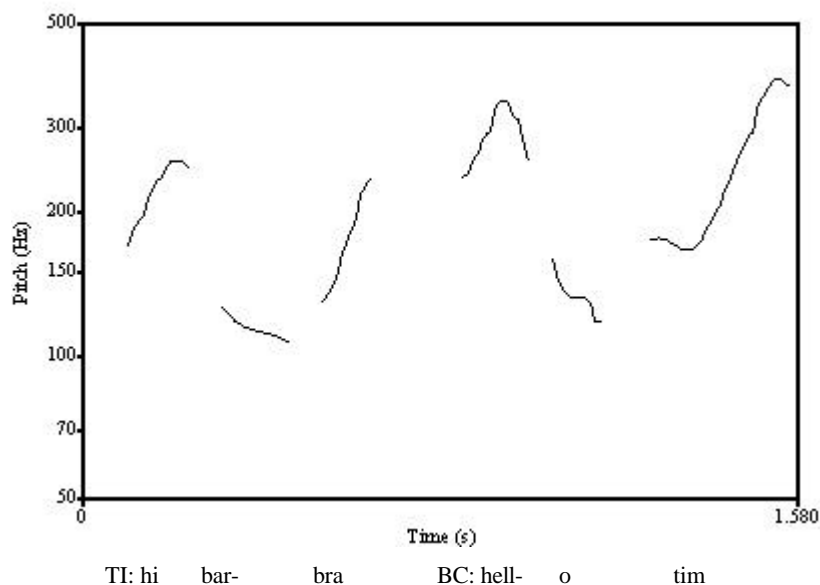
Tim good morning

1 BC: `YES peter?  
 2 (.)  
 3 `LINE TWO;  
 4 you want me to go to `LINE TWO,=  
 5 TIM.  
 6 good MORning.  
 7 -> TI: <<h> `HI `BARBra?>  
 8 -> BC: <<h> `HELL`O TIM?>=  
 9 TI: <<l> haven't tAlked to you in a `LO::NG TI:ME.>  
 10 BC: <<h+held> hOw are thIng:s in the LAUND>ry business.

The turns in question are lines 7 and 8 in the transcript, where Barbara Carleson repeats Tim's contour on *hi Barbra* with her *hello Tim*. Both contours are a rise-fall-rise, with a first rise on the onset syllable (*hi*; *hell*-), a fall on the following stressed syllable (*barb*-; *-o*) and a

high rise at the end of the intonation unit (*-ra; tim*). Again both turns are produced in high pitch register.

This repeated contour can be visualised in the frequency analysis<sup>4</sup>. The seemingly falling end of Barbara's contour in the analysis picture is probably due to the closing of the vowel towards the consonant [im]. There is no fall perceptible in the recording of the actual sequence.



The prosodic matching here occurs in a telephone opening sequence. It is interesting that Barbara Carleson has already opened the interaction with her *Tim good morning*. Instead of joining in with the prosodic design of this utterance, namely a falling contour, Tim produces a different contour (line 7). Thus, his token *hi* does not do a second greeting to Barbara's potential first, but starts a new greeting sequence.<sup>5</sup> His new and non-orienting intonational design contextualizes his greeting as another first and thereby makes a second greeting from Barbara Carleson conditionally relevant: his distinctive falling-rising contour, which is produced in a high pitch register, triggers the expectation that it will be followed by a similar

<sup>4</sup> The frequency and acoustic analyses for this study have been made with Praat 3.8.31, see [www.fon.hum.uva.nl/praat/](http://www.fon.hum.uva.nl/praat/)

<sup>5</sup> Tim thus contextualizes Barbara's *Tim good morning* as a summons, rather than a first greeting. This phenomenon has been described by Couper-Kuhlen (1993): "Callers to the phone-in programs are kept waiting on line until some sign comes from the studio that they are on the air. One such sign is the moderator mentioning the caller's name (presumably noted at the switchboard when the call arrives) and appending a token of greeting such as *hello, how are you*. Such a turn works much as a summons (Schegloff 1972), announcing that the line is open from studio to caller and requesting an answer from caller to studio to confirm the connection. (...) In such cases a round of greetings typically

high register utterance. The register and intonation contour are indeed taken up by Barbara Carleson with her second greeting.

It is important to note that Carleson chooses the same contour, but not the same verbal material in her second greeting: instead of Tim's *hi* she uses *hello*. Firstly, this gives her the opportunity to match the number of syllables in the two utterances: by using a two-syllable greeting token (*hello*) with the one-syllable name (*Tim*), she matches the three syllables in the previous turn, which come from a one syllable greeting token (*hi*) and her two syllable name (*Barbra*).

Secondly, doing the same prosody with a different choice of words is distinct from doing the same in both channels. There is a roughly comparable example in the data corpus, taken from a Manchester radio phone-in programme<sup>6</sup>:

(3)

Hi Gary

```
1      DA:  fIrstly to BOLTon.
2          and GArY mcdONald.
3  ->      `HI `GArY,
4  -> GA:  <<all> ``HI!>
5  -> DA:  <<all + nasalised> ``HI!
6          how ARE ya.>
7      GA:  nOt so bad THANKS,
8      DA:  GOOD.
```

Similar to the above example, Dave, the host, produces a first greeting *hi* Gary after having introduced the caller to the listening audience (lines 1-2). To this Gary responds with the same greeting token as Dave: *hi*. Prosodically, the two turns do not match completely: Dave produces a rise on his onset *hi*, followed by a fall on the subsequent accent *ga*- and then rises again on the unaccented *-ry*. Gary's *hi* contains a rise+fall which resembles Dave's first two pitch movements, however he signals a clear transition relevance place by a distinctive fall-to-low at the end of the intonation unit. In addition to this, Gary's greeting token is uttered at a high speech rate.

It is to this turn that Dave orients and matches both contour and speech rate in his next turn *hi*. He produces the same rising-falling contour with the addition of a nasal voice quality. By this time, the same greeting token has been used three times, as opposed to extract (2), "Tim good morning", where the three turns contain three different greeting tokens (*good morning*, *hi*, *hello*). In both cases, the first greeting mentions the caller's name, but

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follows next. This can be seen as support for the claim that the first exchange actually functions as a summons-answer sequence despite the greeting tokens used." (1993:231)

<sup>6</sup> See Couper-Kuhlen (1993) for a rhythmic analysis of this opening sequence.

only in (2), “Tim good morning”, do the speakers go on using each others’ names after the first greeting.

One difference between the two extracts is the sequential development after the third greeting from the host. In (2), “Tim good morning”, there is a speaker change after Barbara’s last greeting (*haven’t talked to you in a long time*), whereas in (3), “Hi Gary”, Dave continues his own turn (*how are ya*).

Another difference is that although there is no change in choice of words, David’s second use of *hi* does more than just greet back. It takes on an element of non-seriousness which is communicated through the nasalization, and thereby enters a meta-communicative level: there is a sense of light mockery in David’s third use of the token, which seems to have its source in Gary’s use of *hi*. A possible explanation for this meta-communicative stance is Gary’s use of a greeting which is not prosodically and verbally orienting to Dave’s first address in line 3: Gary does not repeat the end-rising contour which Dave produces, nor does he address Dave by name. This seems to make a new, prosodically orienting greeting token relevant, although *hi Gary* could already have counted as one. Thus, Dave’s light sense of irony on his prosodically orienting greeting could be a subtle commentary on the fact that he has indeed already said *hi*, but has not been treated as if he had done so.

## 2.2 Prosodic Matching of Pitch Jump

Another parameter with respect to which speakers have been found to frequently match their prosody is pitch jumps, by which is meant a sharp rising movement on one syllable, with a steep fall following on the same or next syllable. A recognisable matching of pitch jump does not necessarily have to hit the same absolute Hertz value: we perceive an orientation also when there is roughly the same width between the previous value and that of the jump up, relative to the respective participant’s voice range.<sup>7</sup>

There are 76 unambiguous instances of matchings of pitch jumps in the current data corpus. An example is the following recording of a radio phone-in programme on the first night of the 1991 Gulf war with Leo Laporte as host<sup>8</sup>:

(4)

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<sup>7</sup> For a discussion of relative and absolute values in intonation analysis see Crystal (1975).

<sup>8</sup> Although orientation in pitch jump can generally be shown well in frequency analyses, this particular example, chosen because it holds such an abundance of jumps, produces an unreliable wave form, as almost all of them are in overlap with other talk.

## Dumb

1 LE: <<l> DUSTin on the line from Antioch;=  
2 YOU'RE on the giant sixty eight knbr.>  
3 DU: you GOT me.  
4 LE: GOT you dustin,  
5 DU: how ye DOin lEO,  
6 LE: thAnks for CALLing.  
7 GOOD.  
8 DU: uh i've an oPINion question for you.  
9 LE: <<all+l> alright;>  
10 DU: is (.) the s sad↑DAM husseEin.  
11 is he is he PLAYing naIve?  
12 or is he just STU [pid.  
13 LE: [is he jUst DUMB.  
14 DU: <laughs>  
15 LE: bOY BEATS ME.  
16 -> he's ↑NOT dumb;  
17 <<all> i ll tell you something;>  
18 -> DU: <<h> ↑NO he's [↑NOT dumb;>  
19 LE: [he's NOT DUMB.  
20 -> DU: he ↑cAn't be DUMB i mean,  
21 LE: but [he is  
22 -> DU: [the ↑POwer he has.  
23 -> LE: he ↑MIGHT be crAzy, (.) [uh:.  
24 -> DU: [↑HITler was crAzy,  
25 -> LE: he ↑MIGHT be crazy,  
26 uh: you have the mA:n is living in a BUNker, (.)  
27 uh:: with a MA:ZE,

The first jump up by Leo occurs in line 16 on a response to an earlier question from Dustin (*is he playing naïve or is he just stupid*), which he has first responded to negatively (*boy beats me*). He then produces the TCU in question (*he's not dumb*). Dustin orients to this by producing two jumps up in line 18 and another two in lines 20 and 22. Dustin's first jump up in line 18 is part of an agreement (*no he's not dumb*).

The latter part of Dustin's utterance in line 18 is overlapped by Leo's repetition of his own material in line 19, however without the earlier jump up in pitch (*he's not dumb*). In the immediately following turn (line 20), Dustin begins to elaborate, which Leo does not react to. Even though Dustin is in the process of turn production, Leo begins to continue his own turn in line 21 (*but he is*), again without repeating the jump up, which Dustin has by this time produced three times. Dustin, however, does not react to Leo's turn and continues his in line 22 (*the power he has*), again with a matching pitch jump. In line 23 Leo does finally orient to the jumps up and produces one on *he might be crazy*. The impression from this point onwards is of a pitch jump being passed back and forth between the two speakers. Dustin does one immediately afterwards in line 24 (*Hitler was crazy*), and Leo then again produces one in line 25, this time repeating his utterance in line 23.

It seems that by joining in the string of jumps up, Leo succeeds in regaining the floor which he has lost earlier in the course of his response to Dustin's question. This type of alignment is different from fights for the floor that have been described as typically involving higher volume and pitch from the illegitimate incomer and higher volume only on the side of the speaker who legitimately holds the floor.<sup>9</sup> In the above sequence, Leo manages to return to his role of primary speaker by aligning prosodically with his co-participant rather than by the above mentioned non-alignment typical of interruptions.

In addition to the purely prosodic alignment that is created by a passing back and forth of the prosodic design of particular syllables, there are other forms of alignment going on in this extract. In line 3, Dustin's reply to Leo's opening is not a conventional greeting token but *you got me*. This sets up a familiarity between the two, which Leo takes up in his reply *got you Dustin*. The verbal repetition of the unconventional and informal type of greeting creates an informal stance from the very beginning of the conversation.

For an additional instance of an orientation in pitch jump see extract (15) "Taken", in section 3 on prosodic non-matching.

## 2.3 Prosodic Matching of Pitch Register

Matching of pitch register is understood to mean a repetition in the use of high or low overall pitch, i.e. covering an extended stretch of talk, in contrast to the single syllable that is being matched for the pitch jump<sup>10</sup>. Couper-Kuhlen (1996) has described co-ordination of pitch register for cases of quoting and mimicry. However, there are other conversational environments in which participants have been found to match their register. In the corpus for this study there are 64 clear cases; the following instance comes from a family dinner conversation. Beverly is about to travel to Australia, a trip that her sister Martha and Walter have taken before. She questions them about the travelling procedure. Lines 12-16, however, refer to a bag that an Australian relative has given Martha and Walter to bring Beverly as a present. It has been referred to several times before, and Beverly seems to have it in front of her.

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<sup>9</sup> French/Local (1986)

<sup>10</sup> The term *register* is adopted from Couper-Kuhlen (1996), who introduces it in order to avoid confusion over the notion of *key*, a term often used in the literature for this prosodic parameter (Crystal 1969:149, but also Brazil, Coulthard and Johns 1980:60ff cited in Couper-Kuhlen 1996:369). It only partially overlaps with the use of the term *register* in the vocal arts, which covers notions such as head or chest register.

(5)

Nice

1 BE: do you have to have a HEALTH certificate.  
2 (1.1)  
3 MA: yes [you  
4 BE: [you de  
5 MA: no they they you get pro´Vided with that;  
6 when you go IN.  
7 BE: OH.  
8 DA: ´If you can WALK, (.)  
9 you're ´HEALthy.  
10 BE: .h.h.h.h.h  
11 (-)  
12 -> <<extra h> Oh Isn't ↑that NI:CE ↓though.>  
13 -> MA: <<extra h> YE:S;>  
14 WA: VErY nice.  
15 (2.0)  
16 -> MA: <<extra h> there you ´ARE you see;=  
17 -> i carried it ´A:LL the way BACK [FO:R YOU:,>  
18 WA: [cos it's a constant damn  
19 NUIsance;  
20 that you're you're suddenly called upon for PASSports or.  
21 BE: YEAH;  
22 WA: called upon for TICKets.

In line 12 Beverly opens up an insertion sequence about the present. The verbal praise – *nice* - is not in itself very original. It is the various contextualization cues that give the utterance its weight: the discourse marker *oh* re-establishes the present as an item worthy of renewed attention, even though it has been around for a while – physically and conversationally. The pitch register in which this utterance is produced is a high falsetto, which communicates great enthusiasm.

Martha in line 13 agrees (yes). However, it seems she not only agrees with the verbal content (*nice*), but also with the enthusiasm behind it – she matches her pitch register with Beverly's and also speaks in falsetto. Again, as in extract (4) "Dumb", pitch matching is used with the action of agreement. Walter also agrees but does not match his register. However, as if to make up for the lack of enthusiasm in his prosodic design, he inserts the intensifier *very* on the verbal level.

After a 2 second pause, during which we hear only eating and clattering noises, Martha continues to speak at this high pitch in her next utterance (*there you are you see I carried it all the way back for you*), which initially seems rather unmotivated. Why should she choose an alignment in register at this point?

A possible interpretation lies in the stance of the insertion sequence: the previous sequence was begun by Beverly in a serious key<sup>11</sup> when she asked whether one needs a health certificate to travel to Australia. Martha treats this question as a serious request for information and responds in line 3, 5 and 6. Beverly acknowledges this as a piece of news she is slightly surprised at in line 7 (*OH*). In lines 8f, Daniel, Beverly's husband comes in with a sarcastic comment about the presumed laxity on the side of the airport staff in giving out these health certificates. This possibly gains sarcastic weight from the fact that all four conversationalists are pensioners.

This change in key from seriousness to sarcasm is only reacted to by Beverly in line 10. Her laughter is a very hoarse one which shows her to be rather appreciative of the joke. Nobody else reacts: neither while she is laughing, even though laughter after a joke-telling routinely calls for others to join in; nor during the pause afterwards, the whole time between Daniel's comment being 1.2 seconds – more than enough for the other participants to signal some sort of reaction, had they chosen to. Beverly's topic change via the rather trivial comment *isn't that nice* and extreme pitch register introduces a new key again: she does not take up Daniel's sarcasm about the laxity of the health officials, but neither does she return to the seriousness of the conversation before Daniel's comment. Her choice of key is a light one, possibly functioning as a bridge between the earlier seriousness and later sarcasm. Her enthusiasm, communicated via the high pitch register, is an important part of this bridging.

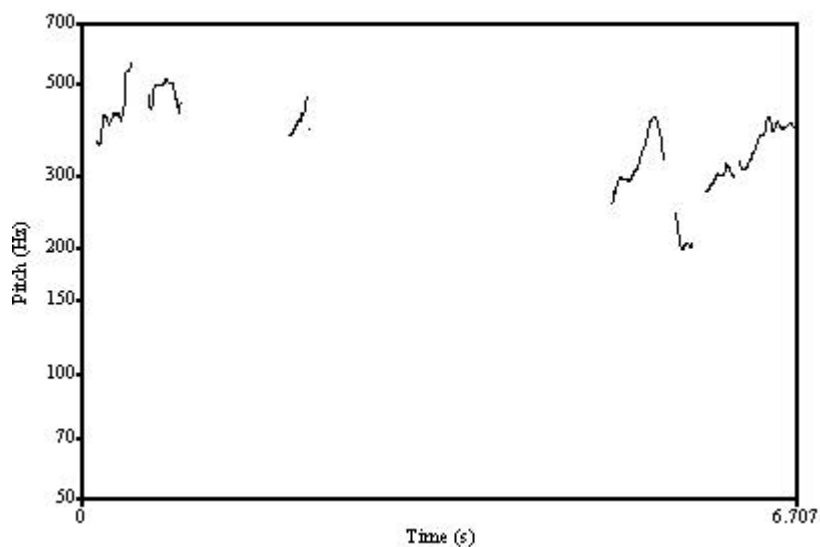
By joining in this high register, Martha signals that she is taking part in the insertion sequence, plus that she is co-participating in the key that Beverly has chosen. Walter, on the other hand, does not join in 'properly', he does not take up the high register in line 14, and in fact continues the earlier, more serious talk about documents required at the airport in overlap with Martha (line 18-22).

A frequency analysis shows the two sisters' matching of pitch register, although not Martha's final pitch movement on *yes*, which overlaps with a short clattering of plates. It can be heard as a truncated fall and has been transcribed as such. Walter's comment *very nice* produces stray values and has therefore been omitted, as has the last part of Martha's utterance *for you* which occurs in overlap with Walter's *cause it's* and thus is not reliable:

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<sup>11</sup> The notion of "key" will be adopted from Hymes (1974) to describe "the tone, manner, or spirit in which an act is done. It corresponds roughly to modality in grammatical categories." (57) In German linguistic literature the term "Interaktionsmodalität" was introduced by Kallmeyer (1978) and recently developed by Flowe (2001, forthcoming).





BE: oh isn't that  
nice though

MA: there you are you see  
I carried it all the way back

On a different interpretation one could hear Martha's prosodic orientation, and a possible alignment with her sister which it can communicate, as neutralising a comment which might otherwise be taken as a reproach (*there you 'ARE you see;= i carried it 'A:LL the way BACK FO:R YOU:,*).

Another case of orientation in register is the following. Anne, a caller to Barbara Carleson's phone-in programme, has tried to launch a complaint about organisations which offer courses to prepare high school students for their college entrance exam. Carleson does not agree with the notion that this is something to complain about:

(6)

I don't either

1 BC: <<h> do you know what I would DO as a PAREnt,  
2 AN: hm;  
3 BC: and I have been a pAREnt;>  
4 .h I'd sEnd the ch- uh CHILD to one of those cOURses.=  
5 =because i 'DO thiInk;  
6 .h that they 'KNOW:: the type of questions that are On  
7 that s a t s- c- s- course,  
8 or uh that s a t TEST,  
9 .hh and uh i think it's imPORTant for your kids to do as  
10 wEll as they cAn.  
11 AN: .hh we-  
12 BC: [and-  
13 AN: [I aGREE;=  
14 but dOn't you think it's Interesting that that the KIDS;  
15 THEY think the kids maybe don't 'KNOW as much?  
16 -> BC: <<h+rising> I don't think they ↑DO.>  
17 -> AN: <<h+rising> I don't ↑EITHer.>  
18 BC: I DON'T think they DO.  
19 PRiVate schOOls -

```
20      PUBLIC schOOls -
21      it DOESn'T make any difference.=
22      i think the kIds can ALways be mUch more .h highly
23      Educated.
```

This instance seems to be a straightforward, very definite agreement from Anne: she produces her *I don't either* (line 17) with exactly the same pitch register and contour as Barbara Carleson used in her previous turn. Her agreement might be prosodically designed the way it is because she, too, does not think their kids know enough, although she draws different conclusions from this fact than does Barbara Carleson.

A second interpretation is also possible. If one takes into consideration the fact that the two have been disagreeing for a while before the extract begins, it can be seen as odd for Anne to agree so strongly on a subject which she found debatable before, the impression of a “strong” agreement arising from the interplay of prosodic matching (high register plus intonation contour) and verbal repetition (*I don’t*). It seems as if the extreme prosodic design of Carleson’s turn triggers an equal extreme in the design of the agreement. The dynamics of prosodic expectation possibly override an otherwise expectable next turn from Anne, which, on this interpretation, could have been in the form of a slight disagreement or at least a modification of Carleson’s turn.

## 2.4 Prosodic Matching of Volume

The previous sections have been concerned with types of prosodic matching which involve pitch. In this section we will turn to matching of a different prosodic parameter, that of volume. The data corpus holds 19 definite cases. The following example comes from another Minnesotan radio show, in which the two hosts Don Vogel and Mitchky are engaged in a playful teasing sequence about their respective skills at being radio host:

(7)

## Let's talk about you

1 DV: <<all> would you TALK a minute;=  
2 I have to look for my Other NOTES here.>  
3 MI: AlRIGHT,  
4 i was BORN: the septEmber of nine [teen ninety-  
5 DV: [(<<f+h> no DON'T give  
6 us when you were BORN [for cryin out;  
7 MI: [alRIGHT,  
8 DV: uuuuuhaaa  
9 (-)  
10 [keep GOin;  
11 MI: [no i'll just lEt you GO [buddy,  
12 DV: [keep GOin;

13 MI: if you're gonna DIctate what i TALk about,=  
 14 then YOU just (-) .hh  
 15 DV: RIGHTyo.  
 16 come ON;  
 17 MI: [YOU just ( ) buddy,  
 18 DV: [let's `GO EH,  
  
 19 MI: [YOU just ( )  
 20 DV: [let's `GO EH,  
 21 let's ↑TALK about some'pn Interesting.  
 22 -> MI: <<f+h> let's tAlk about YOUR FAILure to be prepared for  
 23 -> this rAdio show.  
 24 -> SHALL we?  
 25 -> [<<extra f+h> HOW many years have you bEEen in this  
 26 -> BUSiness?>  
 27 -> DV: [<<f+h> let's tAlk about 'YOU;  
 28 -> let's tAlk about 'YOU;  
 29 -> MI: <<extra f+h> sEventeen YEARS,  
 30 -> [and you can't get rEAdy for a SHOW?>  
 31 -> DV: [<<f+h> hAngin out in HERE;  
 32 -> while I was outSIDE;>  
 33 -> MI: <<f+h> yeah I [was here OUT'SIDE.>  
 34 -> DV: [ <<f+h> with the 'PEOPLE.  
 35 -> I wAsn't SNObbish.  
 36 -> I was out here with the PEOPLE.  
 37 -> so THERE.>  
 38 (-)  
 39 how about `THAT eh,

From line 22 onwards, the two speakers match their prosody both in volume and pitch register across several turns. They are teasing each other with mutual accusations: Mitchky accuses Don Vogel of not being prepared for the show, Don Vogel in turn accuses Mitchky of being snobbish, of not being out there with the people.

The orientation sequence starts with Mitchky's TCU *let's talk about your failure to be prepared for this radio show shall we*. He does this in a noticeably higher pitch register than before, and also slightly louder. His next TCU, *how many years have you been in this business*, rises to a even higher volume, and also pitch level. Don Vogel comes in in overlap and speaks also at a volume and pitch that is higher than before. In the ensuing turns, the two speakers come to match their volume, and Mitchky remains at a higher pitch register throughout.

The prosodic matching in this instance seems to be a cue for both speakers to signal that they are engaged in playful accusations. This sequence is representative for a large number of instances in my corpus where prosodic orientation is employed in conversational play. It is of course only one of several characteristics in these sequences, another highly frequent one being verbal repetition, which is also employed in the above piece of data. First Don Vogel repeats the verbal frame “let's talk about – “ after Mitchky – he does this twice for the opening of his accusing sequence. Later on, when he shouts “hangin' out in here while I was outside”, Mitchky repeats “I was outside”.

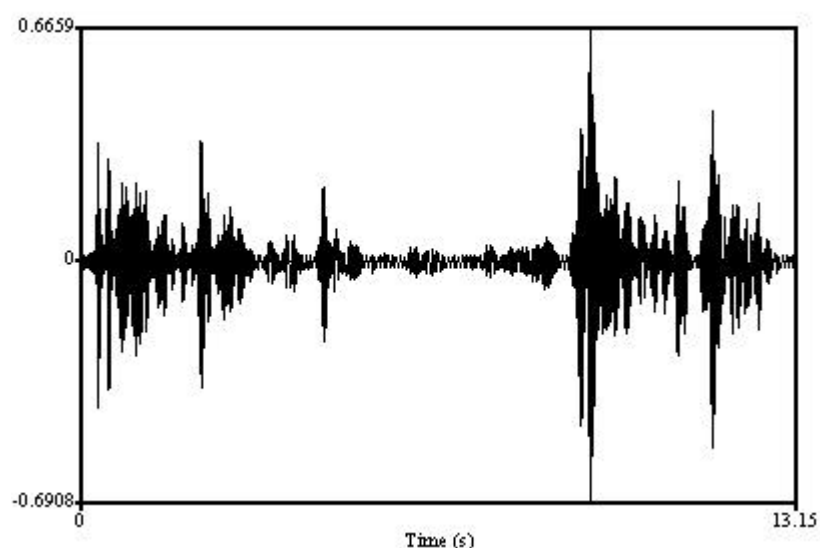
Another instance of orientation in volume is recorded from a conversation among friends, two North Americans and an Irishman:

(8)

Can't imagine

1 TO: that that that's the e<sup>↑</sup>SSential reason that the the wElsh  
 2 were LAW abiding;  
 3 and 'uh the Irish were NOT.  
 4 (.)  
 5 -> JA: <<p> can't i'MAGine.>  
 6 (.)  
 7 -> TO: <<p> can't iMAGine.>  
 8 JA: mhmhmhmhmh  
 9 TO: but that is the e<sup>↑</sup>SSential reason why why why the welsh-  
 10 but the wElsh is <sup>↑↑</sup>VERY widely spoken.

The orientation here is in low volume: for the short instance of the verbal repetition, both participants speak very quietly, as can be seen in the wave form:



TO: that that that's the essential	JA: can't	TO: can't	TO: but that is the essential
reason that the the welsh were	imagine	imagine	reason why why why the
law abiding and the irish were not			the welsh- but the welsh is
			very widely spoken

Tom is engaged in talking about the history of the Gaelic language. Janet and Anna, his two co-participants, from time to time throw in comments like “say something in Gaelic”, thereby introducing a more playful stance. In this instance, Janet’s little comment (line 5), in which she says she cannot imagine the Irish not being law-abiding, is probably an instance of light sarcasm, addressed to Tom and his being Irish.

Janet's turn is designed as a humorous aside, both in its content - it has nothing to do with the history of the Gaelic language – and its prosodic make-up – the low volume. Tom's rejoinder aligns with the aside both verbally, he repeats it, and prosodically in that he adopts its volume. By that he acknowledges it as an aside and collaborates in it, only to then return to his previous topic.

However, his intonation contour is not the same as Janet's. Whereas her contour is high-rising and then falling, his remains at low and then falls further down. After Janet's humorous comment and use of wide pitch range, alignment could have been done more emphatically, both prosodically by also using a wider pitch range, and verbally, by doing slightly more than repeat, especially after Janet's chuckle in line 8. However, Tom seems to be interested in moving on with his talk; but not without giving Janet's aside its due credit.

## 2.5 Prosodic Matching of Speech Rate

The data collection contains 28 clear cases of participants' matching each other's speech rate, by which is meant the number of syllables articulated per second, pauses subtracted if occurring within a stretch of fast talk. The following example includes speakers' orientation to both fast and slow speech rate. It is again a recording of the 1991 Gulf war phone-in programme with Leo Laporte as host. Lowell has called in to enquire whether the government will start drafting if the war turns into a prolonged ground war.

(9)

Local representative

```

1      LE:   but again to quote the selective service at least the: uh
2  ->      <<all> Local representative;=
3          NO.>
4      (0.5)
5  -> LO:   <<all> oh thank you very MUCH.>
6      LE:   are you DRAFT AGE?
7  -> LO:   <<len> I am 'jUst 'tUrning TWENTy.>
8      (0.6)
9  -> LE:   so that must be a <<len> PLEAsant PROspect> for you.
10 -> LO:   oh it's it's <<all> pretty ↑GOOD;> he
11 -> LE:   well i: <<all> let's HOPE it doesn't come to that
12          lowell.>
13 -> LO:   well <<all> THANK you.>
14 -> LE:   <<all> THANK you.>

```

Line 1 sums up Leo's response to Lowell's question about drafting. It ends in a very high speech rate on *local representative no* (line 2). Lowell does not react for 0.5 seconds, but

when he does he matches his speech rate with Leo's (line 5). The orientation occurs with a thanking, and typically the thanks would have been expected to come immediately after Leo's information, thereby keeping Leo's speech rhythm.<sup>12</sup> However, the prosodic alignment in the matching of the speech rate communicates also a conversational alignment, which can be heard to make up for the dispreferred pause before (line 4).

Lowell responds to Leo's ensuing question *are you draft age?* (line 6) at a noticeably slower speech rate than before: *i am just turning twenty*, which together with its intonation contour communicates a sarcastic tone with the implication that he indeed is of the right age to be drafted. This time Leo takes some time to reply, and then does what Lowell has done before: after a rather long pause, he aligns with Lowell's slow speech rate, and in this case also in the sarcastic conclusion that Lowell's age opens up a *pleasant prospect* for him.

From this point onwards, both speakers return to the fast speech rate of their earlier interaction, at least over certain stretches of talk within their turns. Lowell agrees in line 9, and Leo expresses his sympathy in lines 10f. A sequence of prosodically orienting *thank yous* (lines 13f) closes the call.

No frequency analysis or wave form would help to illustrate speech rate, however with the wave form it is possible to extract the exact amount of time for each stretch of talk. In every line with either allegro or lento passages, the number of syllables in the respective stretch of talk have been counted and divided by the exact time in which they were spoken, for example line 5 *oh thank you very much* was produced in 0.77 seconds and contains six syllables, thus the speech rate is 7.79 syllables/second (s/s). Of course, these numbers are only a rough guide for our perception of the respective utterances as fast or slow, as certain syllables are more time consuming phonetically than others.<sup>13</sup> For comparison, Leo's first utterance in line 1 is given as a relatively unmarked speech rate<sup>14</sup>:

Line	Text	Syllables	Seconds	Syllables per Second
------	------	-----------	---------	----------------------

<sup>12</sup> Although Couper-Kuhlen (1993) has "ample evidence (...) to suggest that the equation of temporal 'immediacy' with preference and of delay with dispreference is overly deterministic" (254), her investigation still yields the following result: "For the majority of sequences, the establishment or maintenance of a rhythmic structure can be regarded as the preferred option. It produces an effect which might be labelled 'harmony', 'interaction proceeding smoothly' or 'take no notice', as the case may be. The destruction or breaking down of a rhythmic structure is on the whole a dispreferred option, producing by contrast effects such as 'disharmony', 'we have a problem', 'notice this', depending on situational factors." (267)

<sup>13</sup> For a discussion of methods for measuring speech rate see Barden (1991).

<sup>14</sup> The speech rate in line 1 is perceived as rather unmarked (5.42 s/s), although the syllables per second seem similar to those in line 7 (5.5 s/s), which is perceived as slow. These judgements are of course dependant on context and must always be taken as relative.

Line 1	<i>but again to quote the selective service at least the uh</i>	15	2.77	5.42 s/s
Line 2-3:	<i>local representative no</i>	8	0.96	8.3 s/s
Line 5:	<i>oh thank you very much</i>	6	0.77	7.79 s/s
Line 7:	<i>I am just turning twenty</i>	7	1.26	5.5 s/s
Line 9:	<i>pleasant prospect</i>	4	0.9	4.4 s/s
Line 10	<i>pretty good</i>	3	0.44	6.81 s/s
Line 11:	<i>let's hope it doesn't come to that lowell</i>	10	1.09	9.17 s/s
Line 13:	<i>thank you</i>	2	0.31	6.45 s/s
Line 14:	<i>thank you</i>	2	0.3	6.6 s/s

## 2.6 Prosodic Matching of Voice Quality

Voice quality has typically been considered a paralinguistic rather than a prosodic element of speech. However, it is at times used intentionally – one can ‘put on’ a particular voice quality which need not be an inherent dimension of one’s voice. In the data it has been discovered to be a parameter with respect to which speakers orient to each other, and therefore it will be considered along with the more traditional prosodic parameters.

There are 13 cases of clearly noticeable matchings of voice quality in the corpus. A first example comes from a Minnesotan radio show, the hosts are Barbara Carleson and Peter Theo:

(10)

I am wild

```

1      BC:   and <<h> MY fEElIngs get HURT!
2          YES sirEE.>
3          when the .h edi'torial 'board of the 'SOUTHern 'TRIBune
4  ->      <<becoming harsh> goes After me,
5  ->      <<harsh+h+f> I::: A::M ↑W:I::LD.>
6  -> PT:   you're <<harsh+h+f> ↑OUTRA:::GED.>
7      BC:   <<h> OH->
8      PT:   you and MOLLy YARD.
9      BC:   <<p+breathy> YES;;
10         'JUST OUtraged.>
11         .hh hello PHIL?
12      PH:   hello BARbra?
```

This is an instance of strong alignment between the two participants. Barbara Carleson describes her feelings *after* having got bad press (*I am wild*), and her co-host Peter Theo

aligns with her expression of emotion by offering an equally strong term (*you're outraged*) in an equally extreme voice quality.<sup>15</sup>

In line 4, Barbara begins to adopt a harsh voice. Line 5 is produced in its entirety with extreme harshness, high pitch register and loud volume. The way in which she designs her voice is iconic of the wild state which she is describing: it sounds rather wild itself. When Peter Theo aligns with her not only verbally but also in this voice quality, he acknowledges her state of mind and joins her in the iconic expression of it, so that the two speakers are engaged in a collaborative enacting of being “wild” and “outraged”.

It is interesting to compare this form of iconicity to the prosodic design of lines 9 and 10. Here, Barbara also uses a rather distinctive prosody, she speaks quietly (but still intensely) in a very breathy voice. This utterance also carries an element of iconicity: it sounds annoyed and frustrated, representative of the kind of voice quality one might expect from someone who is tired and frustrated. However, this kind of iconicity does not underline the verbal content of her utterance, as it is not another impersonation of an “outraged” voice. Rather than being iconic of the semantic content of the utterance itself, the iconicity here lies in the attitude and emotive state which the prosody conveys about the utterance.<sup>16</sup>

A second example for matching of voice quality is (11), “Other things”, which comes from another radio phone-in programme. The host is Herb Homer, a tax advisor, who talks to Catherine about her daughter and son-in-law:

(11)

Other things

```
1      CA:    well ↑thEY're YOU::NG;  
2            and they're newly WE:D;  
3            and they really didn't KNOW.  
4  -> HH:    <<l(+creaky)> they're (.) you mean their MINDS are on  
5  ->        OTher thIngs.>  
6      (-)  
7  -> CA:    .hh <<l+creaky> WELl erm;>  
8            'mAYbe YES;
```

---

<sup>15</sup> He does so by using Barbara's syntactic construction personal pronoun + verb *to be* + adjective, which in combination with the matching of voice quality allows it to be interpreted as a continuation of Barbara's syntactic gestalt begun in line 3: *when the editorial board of the southern tribune goes after me...* Thus, Peter's turn *you're outraged* is a collaborative extension (Szczepek 2000a) of Barbara's prior turn rather than a reply to it.

<sup>16</sup> Cf. Bolinger (1985) on the iconicity of intonation: “intonation is part of a gestural complex, a relatively autonomous system with attitudinal effects that depend on the metaphorical associations of up and down.” (106). However, while intonation requires the intermediate stage of a (however universal) metaphor, the prosody of a quiet and breathy voice is iconic in a more direct way, as it can be associated with the physical effects of exhaustion.



Catherine, from line 1 – 3, is engaged in a list of reasons why the young couple do not know much about financial issues. Herbert, probably with reference to line 2, teases her by concluding that she meant *their minds are on other things* (line 4f), which is of course putting words into her mouth. He does so in a very low pitch, which increases the impression of a teasing aside. The sexual implication of the comment is untypical for this programme and of course surprises Catherine, of which the pause can be seen as an indicator. Her rejoinder is an embarrassed *well erm*, in a voice that noticeably reaches down to the very bottom of her voice range. Her prosodic design is one in which she orients to Herbert's voice, interestingly not only in its low pitch register, but also in its creakiness. In his case, the creakiness is a characteristic that seems to come with his male voice (thus *creaky* has been put in parentheses in the transcript, line 4). In hers, it is one she has to make an effort to produce. The orientation to the male voice perhaps contextualizes an understanding on Catherine's part that for a sexual joke a male voice is more appropriate.

A last example of matching voice quality is the following. It is again taken from the 1991 Gulf war phone-in programme:

(12)

Hi Leo

```

1      LE:    <<all> marie on the line from paCIfica;
2            YOU'RE on the giant sixty eight knbr;
3  ->        <<becoming breathy> thAnks for CALLing marie.>>
4  -> MA:    <<p+breathy> HI lEO.>
5  -> LE:    <<p+breathy> HI.>
6      MA:    I had a cOmment about the PROtesters,
```

The orientation here happens once more in the course of a telephone opening. It is started by Leo, whose voice begins to become breathy during his first address to his caller Marie. His aim in doing this radio show, as he has frequently stated, is to create a forum for people to share their views and fears about the current war situation. This explains the personal stance he takes towards the conversations with his callers. His voice becoming breathy on his address to Marie carries an element of complicity: it is not a voice one would typically expect to be used between strangers. However, against the background of the unsettling political atmosphere, the expression of which is the subject of this radio show, familiarity with complete strangers seems justified. Breathiness also seems to show Leo's orientation to a female caller.

Marie aligns with this prosodic expression of familiarity and orients to Leo's breathy voice via prosodic matching. Her voice is now extremely breathy and in addition, her part of

the opening is piano, which adds an impression of hushedness. Leo aligns with her by now not only matching his voice quality but also his volume to hers. After this collaborative alignment, Marie turns to the reason for the call.

## 2.7 Prosodic Matching of Phonetic Sound Production

A last parameter that will be considered here is the production of individual sounds, when in noticeable orientation towards the sound production of a previous speaker. Again, this parameter is not part of what is traditionally subsumed under prosody, as it is a segmental aspect, in contrast to the suprasegmental character of all other prosodic parameters. However, a matching very similar to the above described forms can be shown in at least one example. It comes from the same family as in (5), “Nice”. They are talking about their Australian relative who is a musician:

(13)

Had it out

```

1      MA:   the LAST- (.)
2          no i think it was the time beFORE. (.)
3          that we were THERE, (-)
4          she presented me with a tape that she'd made of her
5          own PLAYing on the ORgan,
6      BE:   MM,
7      MA:   and er (-) of old australian SONGS.
8      (2.0)
9          erm (-) i don't think there's any VOcals on it though.
10         it's oh the old hOmestead and stuff like THAT.
11      (1.0)
12         erm
13      (1.5)
14         and i must (.) i'm SORRY to say i have; (-)
15         it's tucked away in the DRAWer;
16         in my BEDroom;
17 ->       and i've never even had it ``OUT.
18 -> BE:   ``OW.
19 -> MA:   <<acc> well i HAD ONCE.>
20         when i was (-) working in the BEDroom;
21         i `DID have it out once;
22         BUT-
23      (1.0)
24         er ``THAT might be of interest to some people,
25      (-)
26         but Anyway.
```

The relative and her self-composed music have been the topic of the conversation for quite a while, and the music has actually been described by Martha's husband as “a bit of a dirge”. Now Martha comes up with the news that she actually has a tape of their relative's playing (lines 1-5). Beverly's recipient token *MM* is done with orienting intonation in the rising contour

that Martha has produced in line 5. Another possibility for a recipient token would have been an 'oh' to suggest news receipt<sup>17</sup>, which would have signalled slightly more enthusiasm if prosodically designed as a high jump up in pitch and a falling contour<sup>18</sup>.

Following this, Martha displays several forms of hesitation in her ongoing turn. In line 7 there is the hesitation marker *er* and a pause. Line 7 is syntactically, prosodically and semantically the end of the current TCU, with a possibility of speaker change. None occurs, however. After a 2 second pause Martha goes on to describe the tape (lines 9-10). Another 1 second pause, another hesitation marker from Martha, another 1.5 second pause, and still no one else takes the floor. There seems to be an obvious unwillingness on the part of the other participants to talk about the tape, let alone ask her to bring it out and play it.

Lines 14-17 seem to be a verbalisation of this disinterest on Martha's part: She, too, has never been interested enough to listen to it. Martha's sister Beverly signals surprise at this (line 18). She does so by using a verbal item that is not a conventional recipient token of surprise: *ow*. The routinely used token would have been an 'oh'. However, *ow* seems at least in part to have been triggered by Martha's last syllable *out*. Whether this is a conscious orientation on Beverly's part or not, the result is a verbal item that is much more associated with an expression of sudden pain, 'ouch', than one of mere surprise, an expression of sudden pain being certainly a sign of extremely negative surprise.

Martha seems to treat it as such: her next turn is a quickly spoken contradiction of her own words: *well I had once*. However, her following assertion about her actual listening (line 19-22) is again only met by a 1 second pause, and so is her appeal *so that might be of interest to some people*, to the effect that she eventually closes down the topic: *but anyway* (line 26).

The prosodic matching of phonetic sound production in this case is not necessarily something which Beverly designed for her recipient. It seems to be the case that certain sounds project other sounds, as proposed by Sacks (1995, i.e. Lectures of February 19, March 4, March 11 in Winter 1971), who speaks of *sound-sequence relationships* or *sound sequence patternings* between words which contain similar sounds, and Jefferson (1990), who discovers the third position of a list construction as a place for frequent *acoustic consonance*. This phenomenon seems to occur at a level of planning that is below that of prosodic planning, i.e. speakers may be even less aware of it than they are of orientations in volume or intonation contour. However, as extract (13) seems to show, it can be taken up by participants and affect a conversational sequence in a fashion similar to other kinds of prosodic matching.

---

<sup>17</sup> cf. Heritage (1984), (1998)

<sup>18</sup> cf. Local (1996), Flowe (2000)

### 3. Prosodic Non-Matching

Now that matching of prosodic parameters has been shown to be one way in which participants orient to each other prosodically, a second way can be discussed, involving marked non-alignment with a prior speaker's prosody. The current data corpus holds 15 clearly perceptible instances.

It is important to stress here that it is much more difficult to show prosodic orientation when an incoming participant does something different from the prior speaker, than when s/he does the same thing. Therefore it is safest to consider only those instances to be potentially orienting in which a first speaker's turn is designed as one prosodic extreme, and the following turn by another speaker as the opposite extreme, i.e. *forte* followed by *piano*, high pitch followed by low pitch, rather than *forte* followed by an unmarked volume or high pitch followed by an unmarked mid-range. However, a possible implication from this ongoing study is that in some sequential environments a matching of prosodic design is expected, and thus a next turn which does not join in the prior speaker's prosodic realisation can be experienced as marked. Perhaps such instances can also be considered non-matching, and (14) below will contain such a debatable case, along with a clear case of a non-matching of extremes. The data come from the same family as the prior extract:

(14)

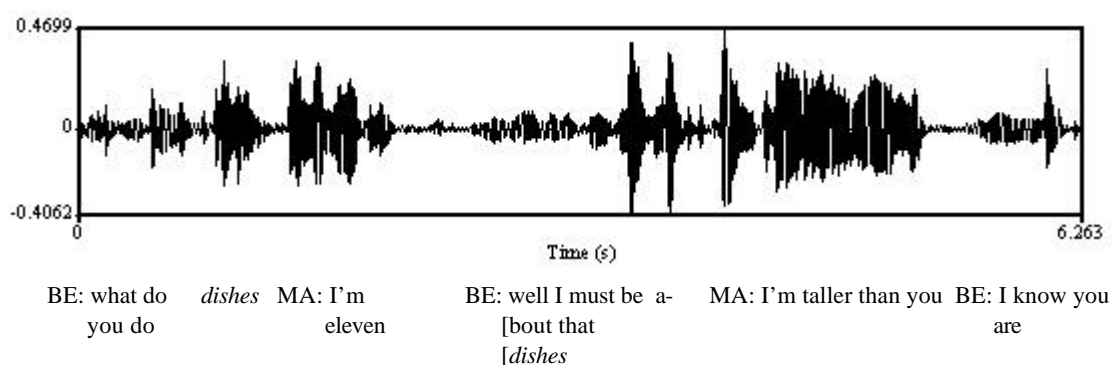
Taller

```
1      BE:    I go well over uh on thee on the Other side of ten and a
2            half STONE.
3            what do YOU do.
4      dishes
5      MA:    <<f> i'm eLEVen,>
6      BE:    well 'I must be a [bout that,
7                                [dishes
8                                [(      )
9  -> MA:    [<<h+f> i'm ↑TALLer than ``YOU,>
10 -> BE:    <<l+p> I knOw you ARE,>
11          I 'shOUldn't BE as much as that.
```

Lines 8 and 9 illustrate an instance of non-matching of prosodic design in register and volume. Martha and Beverly are sisters, talking about their weight, a subject that has proven touchy earlier in the conversation. Now Beverly reveals her weight and asks Martha about hers (lines 1-3). After a brief pause, Martha responds. Her rising intonation contour implies possible continuation, however Beverly treats it as a completion point and takes the floor again making an interactionally aligning comment (*well I must be about that*), which plays

down the difference between her weight and her sister's. In line 8, Martha interrupts Beverly in a loud and high voice, justifying her greater weight by the fact that she is taller than her sister. Beverly confirms this (*I know you are*) in a low and quiet voice.

The crass non-matching of prosody despite the verbal agreement between the two women makes for an almost comic effect: in contrast to Martha's extreme prosody, Beverly's creates the impression of a low monotone, and thereby of someone who has heard this argument many times before. Beverly does not seem to acknowledge the markedness of Martha's explanation for her weighing more than her sister. As Martha's high pitched *I'm taller than you* occurs in overlap with Beverly, only the perception of volume can be visualised in a wave form:



Another reading could treat Beverly's non-matching of prosodic design as an aligning move: had she matched Martha's marked prosody, she could have been heard as joining in the treatment of Martha's weight as marked, and thus requiring justification.

Earlier in this extract, lines 5 (*I'm eleven*) and 6 (*well I must be about that*) can also be heard as non-matching, if we extend the notion of non-matching beyond its initial definition above. Sometimes it is not that an incoming speaker does the opposite of what a previous speaker has done which can be heard as non-matching, but also that an incoming speaker simply does not take up the prosodic design of a previous speaker, typically when it is marked. This happens in line 6, where Beverly does not take up the louder volume of her sister's turn, but remains at the volume she was speaking at before. However, Martha does not join in this lower volume, but goes on raising her volume and pitch register even further (line 9).

It seems that with respect to particular prosodic parameters, correspondence between speakers within a sequence is the unmarked form, whereas an incoming participant's not joining in those parameters is already a marked form of prosodic design.

Possibly, volume is such a parameter. With other parameters not joining in could be the unmarked form, whereas matching could imply mimicry.<sup>19</sup>

Another instance of prosodic non-matching, followed by a matching in pitch jump, is taken from the 1991 Gulf war phone-in programme:

---

<sup>19</sup> cf. Couper-Kuhlen (1996).

(15)

Taken

```
1      TE:   if I walk into a 'SUpErmarket;
2          .hh is the plAcE gonna be bLOwn to bItS with mE and this
3  ->      baby ↑IN there.
4  -> (1.1)
5  -> LE:   <<l> YOU don't have to wOrry about thA:t i don't thInk.>
6  -> TE:   uh hu↑↑he: <<h> but i'm so i'm so NERvous;>=
7          and i mean this whOle thIng has got me .hh you know just
8  ->      <<breathy> Absolutely (.)↑ThAKen.>
9  -> LE:   yeah it's ↑TERrible.
```

Teresa, the caller, has voiced a fear that terrorists might bomb civilian places in the US. Her intonation reaches a high pitch on *in* (line 3). Leo's rejoinder in contrast to this is very low in pitch after the onset on *you* (line 5).

The pause of 1.1 seconds between these two utterances is interesting and potentially significant. However, the sense of hesitation which the pause could communicate is not confirmed by Leo's following utterance (line 5) with its combination of content (*you don't have to worry about that I don't think*) and prosody (low in register and falling still further), which is in stark contrast to Teresa's.

Teresa reacts to this soothing utterance with a rather high laugh and an ensuing expression of her current emotions. From her in-breath in line 7, her speech takes on a breathiness that cumulates on *taken*, with an additional jump up on this word. Leo matches this jump up in his next turn *yeah it's terrible*.

Teresa has expressed fear and nervousness. It is Leo's job to calm her down, as he cannot possibly agree with her on the air, and thereby risk encouraging widespread fear of terrorist attacks, when the whole atmosphere in the country is already a very unsettled one. The first practice he employs is prosodically doing the opposite of what Teresa does: he tries to soothe her by telling her not to worry in a low voice, which contrasts with her high pitch. Her reaction to this is to show even more nervousness, both in the content of her utterance and in her voice. Leo now takes a different route and designs his ensuing utterance in partial alignment with hers: he matches her prosody by repeating her jump up in pitch and he agrees with her about the frightening nature of the situation on a verbal level, using both an agreement token and an additional assessment of the situation.

## 4. Prosodic Completion

A third way in which conversationalists have been observed to orient to each others' prosody is by completing a prior prosodic pattern rather than taking it over. The only parameter that seems to allow for completion is the intonation contour. In these instances, a first speaker has produced a contour that can be heard as incomplete<sup>20</sup>, that is we expect it to go on, typically in the same TCU. If another participant takes over this contour and TCU bringing it to completion, the result is a collaboratively produced contour and turn. The contour in question can be of the kind described and encountered above, namely a melody line perceived as a local whole and ending in non-final, or less frequently in final intonation. However, a more global melodic movement can usually also be discerned, which encompasses potentially more than one non-final local contour, until it reaches a potential prosodic completion point. Both kinds of contours, local and global, may be completed by incoming speakers. The current corpus holds 46 unambiguous cases.

The example which first suggested this form of orientation is again one from the above mentioned English family. The family members are recapitulating a trip on which they ate horrible sausages, which leads to the following sequence:

(16)

Rubbish

```
1      DA:   but you CA:N use quality meat [for SAUSages.
2      BE:                                     [VEAL actually,
3      RI:   ↑oh you no you you CA:N,
4            and and they DO,
5            [in in GERmany ↑And swItzerland,
6      DA:   [but the but the ma↑JOriety of sAUsages,
7  ->       A:RE,
8  ->       [(wha-)
9  -> BE:   [↑RUbbish.
10     (1.2)
11     DA:   what they CAN'T sEll as ROASTing -
12           BOILing -
13     BE:   that's ↑RIGHT;
14     DA:   FRYing joints.
```

Daniel's pitch movements on *sausage:s*, and *a::re*, both start rather low and rise steadily across the lengthened syllables (-*ge:s*; *a::re*). These two local contours are so prominent that they have been transcribed as two individual intonation contours; however they then move towards an intonational climax, which Beverly provides in her collaborative incoming

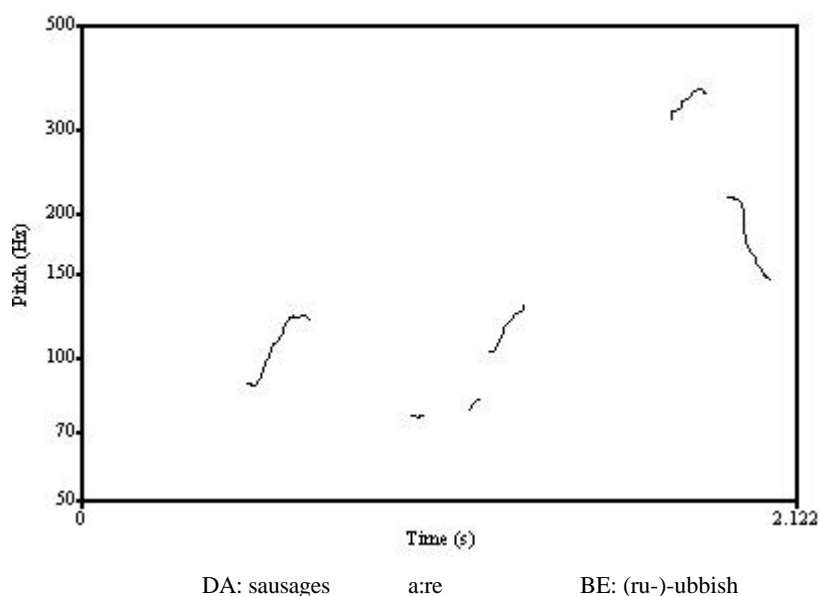
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<sup>20</sup> In very few cases, the first contour can be locally heard as final, but the incoming speaker "re-completes" it, and thus shows that s/he did not interpret the contour as complete. In those instances



↑*rubbish*. The result is the collaboratively produced global contour “*sausage::s, a::re,- rubbish.*” and a case of prosodic completion.<sup>21</sup> Beverly’s incoming here is not only prosodic collaboration, however. She also collaborates sequentially in that by completing Daniel’s contour she completes his turn as well, while with regard to actions, she collaborates in his assessment of sausages.

This collaborative contour is visible in a frequency analysis of the sequence *sausages are rubbish* (the short overlap on *ru-* and something that Daniel says have been omitted):



In the above instance, the completion occurs after two non-terminal intonation units, each ending in a rise. In the varieties of English considered here, rising intonation has been recognised as signalling incompleteness of some kind:

Eine steigende Bewegung hat, wie in der Musik, kohäsive Kraft, weil durch sie Erwartungen geweckt werden, die nach späterer Auflösung verlangen. Dieses Phänomen ist nicht nur *innerhalb* der Toneinheit zu beobachten, z. B. in zusammengesetzten Toneinheiten der Art ‘+`, wo eine steigende Bewegung auf das spätere Erscheinen einer meist ausgeprägteren fallenden Bewegung hinweist. Es kommt auch *zwischen* Toneinheiten vor, wobei eine auslaufende, steigende Bewegung ein Moment der musikalischen Spannung mit sich bringt. (Couper-Kuhlen (1983:80))

The above extract comes from a collection of collaborative productions, as do all of our instances of prosodic completion. The prosody of collaborative incomings has been defined

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the intonation contour of the second speaker does not have an onset, but continues the prior contour at a very low pitch.

as “prosodically linked to the prior contour so that the incoming part can be heard as a continuation of the previous speaker’s intonation.” (Szczepek 2000a:9) This suggests that many cases of collaborative productions are likewise instances of prosodic completion<sup>22</sup>, in that a non-final intonation contour is completed by an incoming speaker who adds some sort of terminal contour without a new pitch reset on the first accented syllable. We will consider two more extracts in which the completing material is very short and therefore more salient.<sup>23</sup> The following instance comes from the same group of conversationalists as in (16), “Rubbish”. The general topic is television programmes:

(17)

Boring

```

1      BE:   now anIta rice does have a family ↑`TREES programme;
2      MA:   YES:.
3  -> BE:   which i fInd rather - (.)
4  -> MA:   `BO:Ring.
5  -> BE:   `BO:Ring.
6      MA:   I don't SEE it.
7      BE:   YES.

```

Beverly begins an intonation contour in line 3 (*which i find rather*). Her utterance ends on a level pitch, which is clearly perceptible as incomplete and is followed by a pause. Martha then comes in with an item which is prosodically (and syntactically) a completion of Beverly’s unfinished turn (*boring*). The prosodic completion is realised as a very slight rise on the first syllable (*bo-*), which is lengthened and provides the nucleus of the previously incomplete contour; and a terminal fall on the last syllable (*ring*). Both the very subtle rise and the vowel lengthening can be heard as an iconic representation of the lexical item itself: “boring”. As if

<sup>21</sup> For an indepth analysis of this extract see Szczepek (2000b:29f).

<sup>22</sup> There is not a complete overlap, though. One form of collaborative production is extensions which follow a potentially complete intonation contour, but continue it without a new onset (Szczepek 2000a). These instances are not prosodic completions, as the first speaker’s prosodic design has already come to a potential completion.

<sup>23</sup> For another interesting case of prosodic completion see Szczepek (2000b):

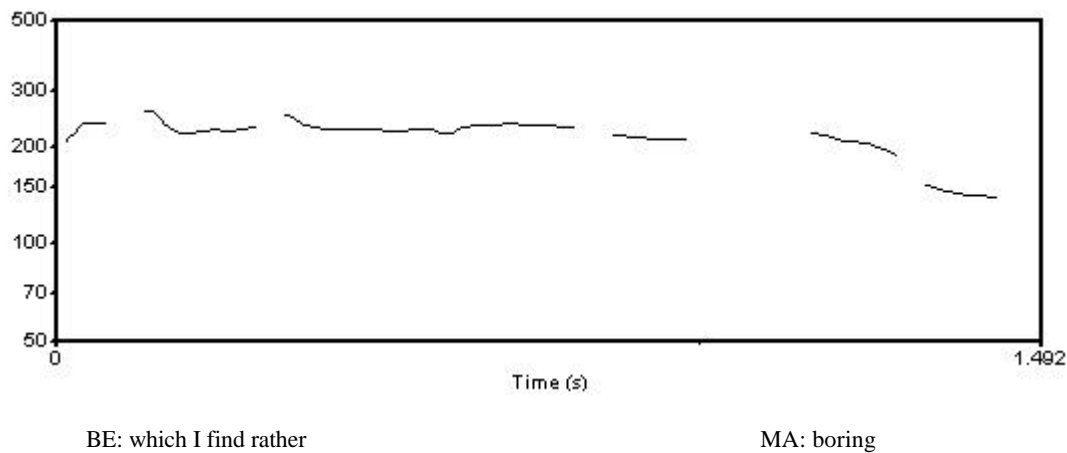
Let her go

```

1      HE:   I had to make a decision with my MOther,=
2           =who was eighty seven years OLD, .hh
3           i'm an only CHILD,
4           a:nd I had to make the decIsion whether or NOT; .hh
5           to conTInue - .hh
6           hAve her continued O:n maCHI:NES, (.) .hh
7      BE:   <<p> mhm,>
8      HE:   O:R to let her GO:,
9  ->       and i ´mAded the decIsion to [lEt her ↑GO.
10 -> BE:   [ <<p> lEt her ↑GO.>
11      HE:   and it was (.) .hh VErY very ↑DIFFicult.

```

to confirm this, Beverly produces precisely the same prosodic design on her own completion in third position. For the collaborative contour see the following frequency analysis:



A third extract comes from the Manchester radio phone-in programme; Dave is host, Sue the caller:

(18)

1967

```

1    DA:  now then are you (a) MARRied sUE?
2    SU:  YES i AM.
3    DA:  how long have you been MARRied sUE,
4    SU:  uh:: FOURTEEN YEARS.
5    DA:  <<h> 'HAVE ``you; >
6    SU:  yeah;
7    -> DA:  so you were married in (ululululu); (.)
8    ->    <<len> NINETEE:N SIXTY:, (.)
9    -> SU:  SEVen.
10   DA:  nineteen sixty ↑SEVen;
11   SU:  yes.

```

In line 7 Dave begins to search for the year in which Sue was married, and in line 8 produces the decade (*nineteen sixty*) with lengthening on two syllables (*tē:n*, *ty:*). This utterance remains incomplete, with a rising movement on *-ty* and an ensuing pause, until Sue completes it both syntactically and intonationally with her terminal fall on *seven*.

## 5. Prosodic Complementation

Finally, the term ‘prosodic complementation’ is used here to describe another way in which participants have been found to collaborate intonationally: a first speaker has produced a contour which in itself is complete, but we expect it to be followed by a particular contour from the next speaker. Both contributions constitute complete turns respectively. However, although the first participant’s turn signals turn completion prosodically, syntactically and pragmatically<sup>24</sup>, the second contour seems to complement the first so that the two together form a prosodic pair. In all 18 instances in the current data corpus prosodic complementation co-occurred with two turns which were adjacency pairs on the level of conversational actions.

The typical contours in the current corpus are a contour ending in a terminal rise, followed by one that, irrespective of what happens before the end, ends in a terminal fall. A first example comes from a dinner conversation among friends, one of whom (Janet) has just served dessert:

(19)

Rhubarb

```
1      AN:      ↑RHUbarb.
2      JA:      ˈRHUbarb,
3                and STRAWberrry.
4      AN:      aw::: [::
5      MA:      [(      )
6  ->          OUR rhUbarb?=
7  -> JA:      =↑OUR rhubarb.
8  -> AN:      ˈyOUR ˈOWN ˈrhUbarb?
9  -> JA:      ˈmY ˈown ˈRHUbarb.
```

The turns in question are lines 6-9. Mark, Janet’s partner, asks whether the rhubarb comes from their own garden (*OUR rhUbarb?*), and Janet confirms this (*- OUR rhubarb.*). Mark’s question ends on a high rise, and Janet’s answer begins with a very high onset. One could say that this is a very clear form of prosodic complementation, as the second speaker begins where the first speaker left off.

Following this, Anna asks whether the rhubarb is indeed Janet’s own (*ˈyOUR ˈown ˈRHUbarb?*) and Janet confirms again (*ˈmY ˈown ˈRHUbarb.*). In this adjacency pair, Anna’s contour rises on every syllable throughout the intonation unit. The following turn similarly rises on the onset (*ˈmY*) and on the syllable following it (*ˈown*), but falls on the nucleus and tail (*ˈRHUbarb.*).

The two questions, which are both requests for confirmation, are posed without any markers of a grammatical question, but are realised only via rising intonation. The answers gain their status as confirmations via verbal repetition, matching of stress pattern and intonational complementation.

Asking for confirmation, followed by confirmation by a second participant, is the typical format for prosodic complementation in the present corpus. Another example is (20), which comes from a conversation with the same set of participants as (19):

(20)

South Carolina

```
1      JA:    maybe even near south caro`LINA or `sOomething.
2  -> AN:    YEAH?
3  -> JA:    YEAH.
4  -> MA:    HUH?
5      JA:    i hAve the address upSTAIRS.
```

Again, a terminally rising contour, this time on one syllable, is followed by a terminally falling one (lines 2/3). The same lexical item (*yeah*) is used both to ask for confirmation and to provide it.

In line 4, Mark contributes another rising contour, this time on a repair-initiating *huh*. The following terminally falling turn (*I have the address upstairs*) does not seem to directly orient to Mark's *huh*, however, and therefore shows that it could be problematic to consider a terminal rise followed by a terminal fall as always prosodically orienting to each other. In the examples in the current corpus, prosodic orientation of this kind always co-occurs with partial or complete verbal repetition. Moreover, the second speaker's pitch always begins where the first speaker's left off.

However, asking for confirmation is not the only sequential context in which prosodic complementation is found.<sup>24</sup> The following piece of data comes from the Manchester radio phone-in programme; caller and host are in the process of closing the conversation:

---

<sup>24</sup> See Ford/Thompson (1996) for these three aspects of turn completion.

<sup>25</sup> Asking for confirmation does of course not necessarily involve prosodic complementation or indeed any form of prosodic orientation. The following extract, for example, involves prosodic matching:

Get away

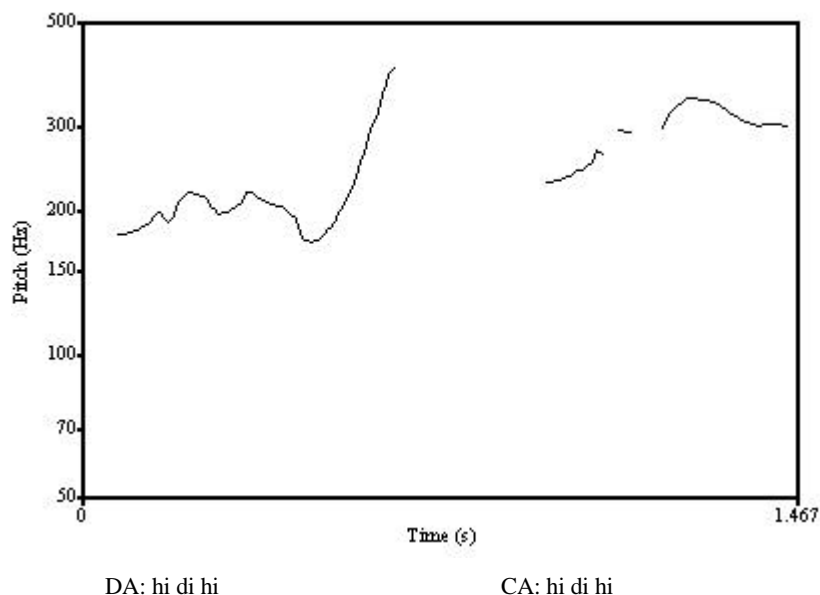
```
1      JE:    let's get away.
2      JI:    i'd L:OVE to.
3              you know i was talking to KEri tonight,
4              i gave KEri a call,
5              and uhm;
6      JE:    wow;
7  ->      at MICHAel's?
8  -> JI:    uh-huh?
```

(21)

Hi di hi

```
1      DA:   O:kay,
2          THANK you for coming On,
3      CA:   O[kay;
4      DA:   [hi-
5  ->       <<h> HI di HI::?>
6  -> CA:   `HI di `↑`HI:: -
7      DA:   <<h> bye ``BYE::;>
8      CA:   <<h> BYE::;>
```

Dave, the host, begins to close the conversation (line 1-2) and Cathy agrees to the closing. Part of Dave's closing is a *hi di hi* to Cathy: the expression originates from a television situation comedy called "Hi di hi", where "Hi di hi" was a ritualised saying that was always responded to by another "Hi di hi". So it can be considered a kind of first pair part which strongly projects a particular response. Regarding the intonation, the first *hi di hi*, is a complex fall-rise-fall-rise pattern (falling on the first *hi*, rising on *di* and falling-rising across the second *hi*), which seems to trigger the expectation that the second one will carry similarly animated pitch movement and end in a falling movement. Cathy produces such a contour by rising on the first *hi*, and rising even higher up to a pitch jump on the second *hi*, followed by a down step to a level. The two pitches on this last syllable are musical tones, i.e. there is a fall from an F to an E flat.



Cathy's fall on the last syllable *hi* is not a typical final fall-to-low but is stylized through the musical interval. This form of stylization is not uncommon in closings and is thus also perceived as complementing Dave's first pair part.

## 6. Conclusion

The aim of this study has been to describe a conversational practice<sup>26</sup> in which participants show orientation to the prosodic design of a prior speaker's turn via their own use of pitch, volume, duration, voice quality and/or sound production. The four types of orientation presented above are the ones that have been observed in the data collection underlying this investigation. Other ways may, of course, exist but not have emerged in this particular data corpus. Others may be impossible to show empirically. Prosodic orientation, although as a phenomenon limited to the prosodic design of participants' contributions, is also an orientation in the conversation analytic sense: it reveals to the analyst a participant's taking notice of a particular conversational incident. If the surface of an interaction is bare of observable orientation in prosody, i.e. if one speaker's prosody is trivially unmarked and so is the prosody of the participant speaking next, orientation is simply not possible to show.

As with other contextualization cues, prosody is an element of talk-in-interaction which is rarely referred back to explicitly by participants themselves, and it is an element which speakers are not held liable for<sup>27</sup>.

“(Prosodic signals) are not ‘accountable’ in the same way that words are (Garfinkel 1967). Speakers can be held responsible for (i.e. criticized, blamed, asked to apologize for, etc.) their choice of words, but it is difficult to take them to task for their prosody.” (Couper-Kuhlen (2000 to appear))

Although it seems that in particular interactional environments the parameters volume and speech rate can be referred to, as in the example from Local/Wootton (1995) mentioned above,<sup>28</sup> pitch is a parameter which participants seem particularly reluctant to mention explicitly. An extract from a face-to-face conversation between two girlfriends illustrates this:

(22)

Voice

```
1      AL:    no JAN talked the whole time=
2  ->      <<falsetto + extra high + all> in a voice like THIS -
3  ->      <<higher> HIGH::: alina i'm so happy to see YOU;>>
4          hehe and we're going;
5          <<laughing> GO::D;
6      ( - )
7  ->      TURN the VOLume DOWN;>
```

---

<sup>26</sup> Schegloff (1997)

<sup>27</sup> Cf. Auer (1999:172)



Alina is engaged in a piece of reported speech, which she delivers in an extremely high falsetto and also very fast (lines 2f). Yet although the distinctive feature of the Alina's representation of Joan's voice is its extreme pitch register, what she refers to in her comment about it is its volume (line 7).

Prosodic orientation may be a way for conversationalists to get as close as possible to referring back to the prosody which has been employed by other participants. By using prosodic orientation in their utterances, they bring a prior speaker's prosody to the surface, call attention to it and place it in a new context. In doing so, they are able to construct a relationship between the previous utterance, whose prosody they are taking notice of, and the current utterance, on which they are using the other's prosody.<sup>29</sup>

From the data extracts that have been considered, the central interactional element of many instances of prosodic orientation seems to be the alignment which it creates between two turns, and therefore between two speakers. Especially if the participants are engaged in an action that is aligning on other levels, too, the prosodic orientation intensifies the alignment (cf. (10) "I am wild"). In other cases, an action may in itself not be openly aligning but may receive an element of alignment from the prosodic orientation (cf. (8) "Can't imagine").

However, alignment is not inherent in prosodic orientation: the latter can also be part of an interactionally dissenting move (cf. (7) "Let's talk about you").<sup>30</sup> Still, even in these cases participants seem to signal that their second turn, which is designed prosodically like the previous speaker's, is in some way rooted within that first turn.

Prosodic orientation thus seems to create a bridge between two turns that could not be achieved by verbal means alone. To come to a better understanding of this bridging function can be a goal for further research.

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<sup>28</sup> Couper-Kuhlen (p.c.) suggests that this is especially true for interaction between caretakers and children.

<sup>29</sup> Another way in which participants „refer back to“ prosody occurs in prosodic repair, when speakers correct their own intonation contour, for example from a terminal contour to a non-terminal one or vice versa, by repeating the relevant material with the new contour.

<sup>30</sup> Possibly there are certain restrictions concerning orientation with respect to different prosodic parameters – with some parameters it could be more acceptable to match than with others.

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# **Prosodic Orientation in Spoken Interaction**

**InLiSt, forthcoming**

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