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Contents

Þórunn Blöndal
Feedback in Conversational Storytelling ..... 1 – 17

Loredana Cerrato
On the Acoustic, Prosodic and Gestural Characteristics
of "m-like" Sounds in Swedish ..... 18 – 31

Nina Sværke Hansen
Observations on Danish feedback ……... 32 – 42

Feedback in Conversational Storytelling

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1. Introduction

It is common knowledge that it takes at least two persons to communicate in a dialogue. It is also a common belief that these two people have different roles that they assume in turn; one of them is responsible for contributing to the conversation, while the other one is the listener. These roles are thought to be similar in dyadic and polyadic interaction: in both cases, we have one who is responsible for talking. The difference is that, in the latter, there are at least two listeners. This picture is based on the monologist view, which focuses solely on the role of the speaker. From the dialogical perspective, on the other hand, the attention is directed not only toward the speaker but also toward the contribution of the 'other' in talk-in-interaction (Wide, 2001). In this paper I will examine conversational storytelling as an interaction involving two or more people and their joint effort.

Contribution to conversation is typically intended by speakers as a contribution to the floor, and such contributions are taken up and treated as such by their interlocutors. This definition implies that there are also utterances that do not end as acknowledged contribution to the dialogue. These utterances include response particles like *yes, mm*, and *no* when these are neither intended nor treated as attempts to gain the floor (Linell, 1998). These utterances, here called feedback words, are the topic of the present paper.

Feedback has not been investigated in Icelandic, and this paper should be looked at as a first attempt to deal with this extremely common, but at the same time almost invisible (or, more correctly, inaudible) feature of everyday conversation. I chose to begin by examining feedback in conversational storytelling (the reasons for my choice are stated explicitly in Section 3.2).

The questions discussed in the paper are several. How frequent is feedback in conversational storytelling? What feedback units are used in the stories? To what extent does their position coincide with syntactic/interactional boundaries? Which is the function of the feedback? Who is responsible for giving feedback in polyadic interaction – one of the ‘listeners’ or all of them? Does it affect the story, or the conversation as a whole, if feedback units are not used? Do silence and laughter function as feedback in any way?

The paper is organized as follows: Section 2 focuses on the various definitions of feedback in the literature and provides some background discussion on the function of feedback. Section 3 discusses my investigation on feedback units in Icelandic conversational storytelling. The focal points are both the form and frequency of the feedback units and their syntactic and interactional position. I also discuss the role of the listener in conversation and attempt to discover who it is who assumes the role of feedback giver. In Section 4, I sum up my findings and discuss the next possible steps in feedback research in the Icelandic language.

2. What is Feedback?

2.1 Definitions of feedback

The literature on feedback reveals that the researchers choose various viewpoints from which they look at the phenomena under discussion – or rather, to decide the scope of their research. The terms used to describe these units mirror this: 'continuers', 'encouragers', 'go-ahead signals', 'backchannel items', 'listener support items', 'hearer signals' (Bublitz, 1988) and even 'minimal responses' (see Linell, 1998 and his references). Green-Vänttinen (2001) uses 'acknowledgement tokens' ('uppbackning' in Swedish), but Allwood (1988) chooses the term 'feedback' ('återkoppling' in Swedish).

Two definitions of the phenomena give a good example of the variety in the definitions. First, Allwood (1993) describes how he uses the term 'feedback':

> ...the term feedback refers to the giving or eliciting of information concerning contact, perception, understanding and attitude, by regularised linguistic means, whether or not this is done by a speaker in or out of turn.

Allwood's definition is rather broad; he includes eliciting tokens and answers to direct questions, while most other researchers do not. Allwood has described how he sees the structure of dialogue. He describes four types of information in the communicative contribution, and we find feedback under the head of Interactive Communication Management (ICM) (Allwood, 1988). ICM 'consists of procedures and mechanism whereby interlocutors manage their communicative interaction. ICM includes, for example, systems for turn management, feedback and sequencing' (Allwood, 1988). Feedback is therefore a part of the interactive subsystem (Allwood, Nivre and Ahlsén, 1992).

Green-Vänttinen (2001), on the other hand, uses the method of conversation analysis (CA). Those who work in CA tend to define feedback in a narrow way and consider feedback tokens primarily as signals meaning 'please, go on' (Norrby, 1996).

In her research, Green-Vänttinen (2001) uses the following criteria for acknowledgement tokens:

They

- are not suitable for initiating a turn
- do not answer questions
- do not contribute to the conversation
- do not affect the next speaker's utterance
- do not conclude three-part exchanges
- are not followed by anything in the same intonation group

She adds that, in general, acknowledgement tokens immediately follow the utterance they respond to and are typically uttered in a low tone of voice (*sotto voce*).

What most of the researchers seem to agree on is that feedback tokens do not count as turns in the conversations and that feedback givers neither hold the floor nor claim it with their utterance. There is also a consensus amongst the researchers concerning the main reason for the giving of feedback units; they seem to agree that feedback is given in order to support the one who holds the floor and give him a sign that he may go on.

2.2 The function of feedback

The broad scope of feedback research is based partly on the various functions researchers have studied in feedback tokens. *Table 2.1* below reveals this in a clear way:

	contact	*perception/ attention*	*carry-on signals*	*understanding*	*emotion/ attitude*
Allwood (1988)	+	+	+	+	+
Bublitz (1988)	+	+	-	+	-
Goodwin (1986)	-	-	+	-	-
Hakulinen & Sorjonen (1986)	+	+	+	(+)[1]	+
Linell & Gustafsson (1987)	+	+	+	+	+
Nordenstam (1987)	+	+	+	+	+
Oreström (1983)	+	+	-	-	+
Schegloff (1982)	-	(+)[2]	+	(+)	-

Table 2.1 The various functions of feedback units (Green-Vänttinen, 2000)

[1] Hakulinen and Sorjonen claim that the use of feedback shows that the listener is active or, at least, that he is aware of what is under discussion (Green-Vänttinen, 2001).
[2] Schegloff says that words such as *uh huh* 'claim attention or understanding rather than showing it or evidencing it' (Green-Vänttinen, 2001).

Table 2.1 shows that there is no listed function upon which all the researchers agree (or which they take into consideration) in their research. Allwood, Bublitz, Hakulinen & Sorjonen, Linell & Gustafsson and Nordenstam look at the various functions of feedback units, while Goodwin, on the other hand, only deals with feedback functioning as carry-on signals.

This paper treats storytelling as an extended turn in conversation. The question is whether the role of one listening to a story is somehow different from the usual role of the listener in conversation. During the course of the storytelling, the listener is expected to respect the teller's right; i.e., the listener should refrain from talking (Erikson, 1997). My chief questions are whether the agreement on an extended turn is shown in the use of feedback, and what function various feedback units have in different parts of the story.

2.3 (No) need for categorizing

Catryn Norrby (1996) has indicated that, from a methodological viewpoint, the most important thing is not *how* one classifies feedback units but the fact that one *does* indeed classify them. I believe that this is necessary when researchers are conducting statistical research on feedback. In such research it is extremely important that it be clear from the outset what criterion is used to count the feedback units. All contrastive research must be based on a precise definition because the act of comparing that which is not comparable is inherently meaningless.

On the other hand, I see no need to categorize strictly when the method is qualitative, as it is in the present study. Therefore I make no attempt to formulate a waterproof definition of which units count as feedback units and which do not. If I reach a point where I am in doubt about whether a token is a feedback unit or not, I simply discuss it as it occurs.

3. Feedback in Icelandic Storytelling

3.1 Response and feedback units in Icelandic

My data are from ISTAL, the Icelandic corpus of spoken language, which first became available at the beginning of the year 2002. At present, ISTAL comprises just over 30 conversations (ca. 20 hours), all of which were tape recorded in the homes or workplaces of the participants and under as normal circumstances as possible. The participants are adult men and women, most of them between the ages of 30 and 60 years; they are all native speakers of Icelandic, and they talk together in mixed-gender and same-gender conversations.

ISTAL contains 184,295 words (tokens) and 14,297 word forms. Among the 50 most frequent words in ISTAL are some of the most common reply and feedback words in Icelandic: *já (yes)* occurs 7049 times and *nei (no)* 1694 times. Various forms of the most frequent response and feedback units in Icelandic are shown in *Table 3.1* as forms of *já*, *mhm,* and *nei.*

já 'yes'	**7049**	**m**	**402**	**nei 'no'**	**1694**
jájá	**880**	**mm**	**51**	**neinei**	**143**
jájájá	**24**	**mhm**	**157**	**neineinei**	**6**
jájájájá	**20**	**mh**	**1**	**neineineinei**	**10**
jájájájájájájá	**1**			**neineineineinei**	**1**
jább	**1**			**neh**	**1**
jáh	**1**			**nehei**	**11**
jahá	**9**				
jú[3]	**291**				
júújújújú	**1**				
TOTAL 'YES'[4]	**8.277**	**TOTAL'MHM'**	**611**	**TOTAL 'NO'**	**TOTAL 1866**
% of tokens in ISTAL	**4%**		**0.3%**		**1%**

Table 3.1 Frequency of basic response and feedback units in ISTAL

Due to ISTAL's being such a young data bank, no attempts have been made to categorize these feedback units. If we did, we would be faced with the question of where we draw the line between feedback and minimal response and other potential functions that these words have in the language. This question and the answer to it lie beyond the scope of my investigation, however, and will not be discussed further in this paper.

As is shown in *Table 3.1,* these three response and feedback units comprise 5.3% of all the words in the ISTAL corpus. Apart from these feedback units, there are a variety of other feedback resources that are similar to those found in other languages.

3.2 The stories

Stories or anecdotes in everyday conversations are familiar to everyone. I chose to look at feedback in storytelling for several reasons. Stories in conversation can be seen as a 'genre within a genre'; stories stand out of the conversation and have a certain status in the dialogue. Those who are 'accepted' to tell a story are given the floor for a longer time than the average turn takes. The listener knows the genre, he relies on the structure of the story as well as on grammatical clues and prosodic features, and he usually knows when a story is coming to an end:

> When hearing others' speech, we guess its genre from the very first words; we predict a certain length ... and a certain compositional structure; we foresee the end (Bakhtin, 1986).

[3] *Jú* is used as an objection to a negative statement or a question.
[4] 'YES', 'MHM' and 'NO' include occurrences of the various forms of *já (yes) , nei (no),* and *mhm* in ISTAL.

When a single participant has been accepted for an extended turn, it can be anticipated either that the other participants will simply sit quiet and listen to the story without any attempts to contribute to the conversation or that they will ignore the agreement of extended turn and try to take the floor whenever possible. The third possibility, of course, is that they will support the storyteller without trying to win the floor. The fact that the listener participates in the stories by giving feedback raises the question of why he does so; what function does the listener's utterance have for the process of the storytelling?

If we look at the functions discussed by various researchers in relation to feedback words (*Table 2.1*), we can expect that the function of contact might be seen as redundant in this environment. This leaves the listener with the role of encouraging the storyteller by giving some sign of perception, understanding, and emotion, and by giving him the message that he may carry on with his story. My primary interest was to discern the role of the listener when the floor was occupied by a storyteller.

> In choosing the stories, I considered Catrin Norrby's definition, which reads as follows:
> A story candidate re-creates a course of events limitative in time and space, and separate from the time of speaking. The course of events is either expressed overtly in the surface structure or can be understood by inference (1996).

My criterion for selecting the stories was quite simple; I chose from the corpus all stories that stood out in the transcription as stories and met the abovementioned criterion. The result was 11 stories; the shortest one (S9) is 101 words and the longest (S1) is 239 words. I have omitted numerous stories in the ISTAL corpus. My intention, however, was not to account for all the stories in the data bank but rather to scrutinise a selected few that seemed to share similar characteristics.

3.3 Form and frequency of feedback units in the stories

Table 3.2 shows which feedback units are used in the 11 stories and how frequently they occur. Obviously, the use of feedback varies in the stories; the normal frequency is 4 to 7 instances, with just two stories as exceptions: S4 has two instances of feedback, and S5 has just one, which is laughter. The reason for my counting laughter as feedback in the first place is that, when I listened to the stories and studied the transcript, it somehow seemed obvious that the laughter and feedback were related phenomena. This decision will be discussed further in Section 3.7.

	The 11 Stories											
Feedback units	**S1**	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**	**S8**	**S9**	**S10**	**S11**	**Total**
m		**1**					**2**	**4**	**1**	**1**	**1**	***10***
mhm				**1**		**1**		**2**			**1**	***5***
já 'yes'	**2**		**5**			**3**	**1**	**1**	**2**	**2**	**3**	***19***
jájá+'yes yes+'		**2**	**1**							**2**		***5***
nei 'no'[5]						**1**						***1***
laughter	**1**	**4**		**1**	**1**	**1**			**3**			***11***
not audible	**1**											***1***
other FB[6]	**1**		**1**				**1**		**1**	**1**		***5***
Total	**6**	**7**	**7**	**2**	**1**	**6**	**4**	**7**	**6**	**6**	**5**	***57***
-overlapping	**6/6**	**7/7**	**6/7**	**2/2**	**1/1**	**5/6**	**3/4**	**7/7**	**5/6**	**5/6**	**4/5**	***51/57***

Table 3.2 Form and frequency of feedback units in the stories

It is worthy of notice that the feedback units in the stories are exclusively chosen from what Allwood (1993) calls 'primary simple feedback units'; i.e., we find some forms of *já* and *mm* as the primary feedback units in the stories, together with laughter, which is relatively common in the position of feedback and seems to perform the function of feedback as well.

Table 3.2 shows that *já (yes)* is the most common feedback unit; there were 24 instances of *já* and *jájá* in the stories. Next in rank is *m* and *mhm,* with 15 instances.

It is obvious that the number of feedback items uttered does not necessarily coincide with the length of the story; for example, the shortest story (S9) and the longest (S1) contain the same number of feedback words.

3.4 Which feedback tokens?

As is shown in *Table 3.2*, various types of feedback units are used within the same story. It is logical, then, to ask why this is so. How do the feedback givers choose the (right) feedback type? Or do they indeed do so?

Below is an example from among the stories, *Driving with Granny (Að keyra með ömmu - S6),* which has a relatively high frequency of feedback words:

[5] Perhaps 'no' should not count as a feedback signal; see Bublitz (1988:181): '...one can safely state that *no* is never used as a hearer signal . . . it is always an expression of stating the speaker's position as to the current topic'.

[6] The 'other FB' consists of a phrase; *púff* (*puff*); *ókei já* (*OK yes*); *já+* (yes + a phrase or a sentence).

(1a)

Að keyra með ömmu

1.	C:	ég veit um einn sem að kom norður um páskana og (.)↑
2.		hann var orðinn til langeygur eftir að komast norður↑
3.		hann kom með ömmu sinni↑
4.	**A: →**	**mhm**
5.	C:	þetta var ungur strákur→
6.	**A: →**	**já**
7.	C:	hún keyrði allt of rólega (.)↑
8.		og þeir voru að hringja og senda honum SMS-skilaboð↑
		frændur hans þessir eldri↑
9.		til að gera at í honum↑
10.	**A: →**	**já**
11.	C:	sko hvort hann yrði kominn fyrir morguninn→
12.	**A: →**	**((hlær))**
13.	C:	eða eitthvað svoleiðis→
14.		og það var bara keyrt á sjötíu áttatíu alla leiðina↓
15.		og honum fannst það nú heldur dapurt↑
16.	**A: →**	**já**
17.	C:	(.) svo einn svo þegar hann var kominn norður →
18.		þá segir einn svona við hann hérna (.)→
19.		hvernig þetta verði sko með heimleiðina sko↑
20.		hvort að hvort að hann keyri ekki örugglega heim sko↑
21.		hann fékk ekki að keyra neitt→
22.	**A: →**	**nei ((hlær))**
23.	C:	þá sagði hann það að hann væri búinn að panta sér flugfar ↓

The English translation reads as follows:

(1b)

Driving with Granny

1.	C:	I know a guy who wanted to go north before Easter and (.)↑
2.		he had wanted so much to go north↑
3.		he drove with his granny↑
4.	**A: →**	**mhm**
5.	C:	this was a young guy→
6.	**A: →**	**yes**
7.	C:	she drove far too slowly (.)↑
8.		and they were calling and sending him SMS messages↑
		his cousins the older ones↑

9. to mock him↑
10. A: → **yes**
11. C: sko[7] whether he would arrive before the next day→
12. A: → **((laughs))**
13. C: or something like that→
14. and she drove at seventy eighty all the way↓
15. and he found it rather boring↑
16. A: → **yes**
17. C: (.) then when he had made it north →
18. then one said something to him *hérna*[8] (.) →
19. how it will be on the way home *sko*↑
20. whether he was not sure about driving home *sko*↑
21. he was not allowed to drive at all →
22. A: → **no ((laughs))**
23. C: then he said that he had already booked a flight↓

In *Driving with Granny* (S6), C is telling the story, and A is the only one of the three 'listeners' who gives feedback. The feedback units he uses are *mhm, yes, no,* and laughter. He starts with *mhm* and ends with *no*, and in between he says *yes* three times. Is it possible to infer something from C's choice of feedback units, or are they chosen at random?

The distribution of feedback units in my data is shown in *Table 3.3*:

	Orientation	**Complicating action**	**Resolution[9]**	**TOTAL**
'YES'	**10 (43.5%)**	**10 (40%)**	**4 (50%)**	**24**
'MHM'	**10 (43.5%)**	**4 (16%)**	**1 (12.5%)**	**15**
laughter	**3 (13%)**	**6 (24%)**	**2 (25%)**	**11**
other FB[10]		**6 (20%)**	**1 (12.5%)**	**7**
TOTAL	**23**	**26**	**8**	**57**

Table 3.3 Distribution of feedback units in various parts of the stories

[7] *Sko* is an Icelandic discourse particle that functions in various ways depending on its position; it is used initially, in a medium position, and in the final position at the end of utterances. It probably originates from the verb *skoða (look/see),* where the shortened form of the imperative is *sko* (the usual form is *skoðaðu* in 2. p. sg.); i.e., *sko hvað hún er orðin stór* would translate as 'sko (look) how big she has grown'. *Sko* was believed to be of Danish origin and related to the Danish *sgu* (see Guðmundsson, 1981); but researchers are doubtful about its relation to the Danish *sgu*, primarily because of the difference in function and origin (Hilmisdóttir, 1999).

[8] *Hérna* translates literally as 'here' but is used in this text as a filler.

[9] The terms of the different story parts are from Labov, 1972.

[10] Here the row 'other FB' consists of 'other' from *Table 3.2*, one instance of inaudible sound and 'no' which occurs just once.

It is obvious that most feedback is uttered at the beginning and in the middle of the stories (this could also be due to the fact that some of the stories did not have any concluding parts).

It has been argued that there is a functional difference in the various feedback words; for example, Gail Jefferson claims that people proceed from *mm* to *yeah* in American English when they prepare to take the floor. Jefferson's findings have been supported by further research on *yeah* and *uh huh* in telephone conversation, where *yeah* was an indication of change of speaker in almost half of the instances (see Green-Vänttinen, 2001 and her references).

As is revealed in *Table 3.3*, there is nothing in my data that supports this view. *Já (yes)* is widely used in all parts of the stories and not particularly at the end. There may be a tendency toward decreasing the application of *mhm* in the middle of the story and at the end, but the 11 stories discussed here do not allow for any generalization due to the limited amount of data involved. What we can say, however, is that most feedback is used at the beginning of a story and in its middle, while less feedback occurs towards the end. The exception is laughter, which is found most frequently in the complicating action and in the concluding part of the story.

Erikson (1997) describes the distribution of listeners' contributions in various parts of conversational storytelling among Swedish adolescents. He discovered that continuers, such as *mmhm* and *ja,* appear mainly during the earlier phases of the story in his data; the main function of these continuers is to 'display to the teller that the listener waives his or her demands for the turn, and that the teller therefore is free to continue' (292). The second type of feedback consists of utterances where the listener indicates appraisal of the story content; these occur close to the end of the story and at its peak. These tokens are of different types, and among them is laughter (see Section 3.7).

A different view on the use of diverse feedback units has been introduced by Emanuel Schegloff. He says that, by choosing the same feedback unit over and over again, the feedback giver runs the risk of showing lack of interest; on the other hand, if he uses a variety of feedback tokens, it can be interpreted as active listenership. This could conceivably be more important than the function of the various feedback units. Through variation in the use of feedback units, the listener can hide the fact that he does not contribute to the conversation; if, on the other hand, he uses the same unit over and over again, he draws attention to this fact (Green-Vänttinen, 2001 and her references).

3.5 The syntactic/interactional position of feedback units

As is discussed above, feedback is most often placed neatly in the short pauses on the syntactic boundaries / TRP[11]. In the narrative above ((1a) and (1b)), a general tendency can be seen: the intonation groups coincide with the syntactic/interactional boundaries. These places can therefore been seen as Complex Transition Relevant Places (CTRP); i.e., places where syntax, intonation, and pragmatics coincide (Ford & Thompson, 1996:154). Ford and Thompson *(op. cit.)* claim that, in their data, the pattern of speaker change matches best with CTRP. They have pointed out that 'syntax in itself is not the strongest predictor of speaker change. Syntactic completion is, however, one of the features associated with, though not definitive of, CTRPs, since intonational and pragmatic completion points regularly fall at points of syntactic completion' (156). My data suggest that CTRP is also the place where feedback belongs because, in most of the stories, these sentential/interactional boundaries coincide with the position of the feedback:

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total**
phrase/clause/ sentence boundaries /TRP	3	6	5	2	1	6	4	6	5	5	5	48
other positions	4	1	1					1	1	1		9
TOTAL	7	7	6	2	1	6	4	7	6	6	5	57

Table 3.4 Syntactic/interactional position of feedback units

In my data, 51 of 57 feedback units uttered in the stories do not overlap; their position is in a short pause after each sentential/interactional segment (see *Table 3.2*). The six instances where they do overlap are all easy to explain. They include instances where the storyteller is word searching and the feedback giver steps in and, with his utterance, completes the sentence. In these instances, however, he utters his *já (yes)* or *mm* to signify his understanding instead of filling in the missing word.[12]

The tendency here is quite clear: the aim is obviously to place the feedback in the 'joints' of the story. What could be seen as a misplaced feedback token has its explanation in the involvement of the listener (Tannen, 1989). As soon as he anticipates what is coming – after he has heard a preposition, perhaps, he will deliver his *hmh,* which means *'I know what you are saying'*.

[11] 'The split-second precision of the turn-taking system must rely on a method of prediction on the part of interactants as to where a turn is likely to be terminated; that is, where the "transition relevance place [TRP]" is" (Ford & Thompson, 1996:135).

[12] This could raise the question of whether filling in missing words should count as feedback because the two phenomena show similar things. Compare these artificial sentences: (1) *A. He went to.... B. Paris A. ...and he will stay there for two months.* (2) *A. He went to.... B. Yes A. .. and he will stay there for two months*. In both instances, B is simply showing his understanding of A's utterance and is trying to smooth over the trouble in the conversation, but he makes no attempts to win the floor.

Another thing that seems to support the theory that the feedback units belong to syntactic/interactional boundaries is that, when the listener has uttered his *mhm* or *já* in a place that is inappropriate, the storyteller sometimes begins with a new start: he repeats the words he had uttered before the feedback and then continues. This indicates that he too seems to be sensitive to the location of the feedback.

3.6 Who gives the feedback and why?

There is one more thing that was unexpected and interesting about the feedback givers in the stories. All the dialogues from which the stories are taken are polyadic; 3–4 people take part in the dialogues. In spite of this, a single participant is responsible for all the feedback units uttered in each story (with the exception of laughter in one of the stories, where two people laugh). What is the reason for this?

Goffman was one of the first to recognise the need to examine group conversation differently than conversation between two people. He introduced the term 'participation framework' to differentiate the roles of the listeners in multi-party conversation. The speaker designs his utterance according to the listener's background knowledge; his utterance is recipient-designed (Sacks, 1995; see also Green-Vänttinen and her references, 2001). The 'participation framework' seems to be relevant in feedback research. This could explain why only one person utters the feedback in the stories.

Per Linell (1998) says that all utterances display 'addressivity'; they are always addressed to somebody. In conversation, the addressee is often the prior speaker, who provided important parts of the input to the speaker as he was about to take over the floor. The speaker must 'try to accommodate to the addressee's presumed perspective' (103); a dialogue requires some degree of mutuality. Third, the addressee is normally an active listener and will act as a feedback giver and sometimes as a co-author. The targeted listener is expected to give considerable feedback during, and immediately after, the speaker's turn to talk. The addressee is somehow responsible for the flow of the conversation; he sometimes steps in, filling in missing words (or uttering the words he anticipates)[13].

It has also been discussed (Linell, 1998) that in polyadic interaction the participants must recognize the various communicative roles of the participants. There seems to be a tendency for the current speaker to select one listener at a time as his primary addressee. This could be the reason that one of the participants in the stories assumes the role of the feedback giver or is perhaps appointed by the speaker to do so.[14]

[13] See also Bublitz (1988) about 'primary speaker', 'secondary speaker' and 'hearer'; the 'hearer' is the one who gives 'hearer signals' (feedback).

[14] It is obvious that, when addressing a large audience – i.e., in the classroom or in a lecture hall – a speaker often tends to choose one person from the audience as his addressee for a while. The person who holds the role of addressee often appears to feel responsible for indicating his acceptance by showing some signs of approval, even though the circumstances do not allow him to participate actively.

3.7 Silence and laughter

One thing remains unsaid about *Table 3.3*: the role of laughter, which I counted as a feedback token without any explanation. Laughter is a metacommunicative activity and is uttered to display a given attitude toward what is said (Adelswärd, 1998). It seems obvious to me that, in the stories, the laughter functions as feedback; it is uttered at the same places as the other feedback tokens and seems to replace the usual feedback tokens.

Laughter does not always have the function of feedback; it can establish a 'common ground' in conversation (Bister, 2002), and it can be humorous (Häkkinen, 2002). Apart from this, laughter can show support, aggression, anxiety, and happiness; moreover, participants in a conversation can use laughter to draw attention to themselves (Adelswärd, 1998).

And people laugh together:

> That's special and interesting for conversation because there aren't many things that people do in talk together. Laughter is one of the few things lawfully done together. But not only is it lawfully done together; the thing about laughing is that to do laughing right, it *should* be done together (Sacks, 1995 (Vol. II):571).

Laughter is amongst the feedback units that Erikson (1997) classifies as evaluating tokens. Erikson also points out that the usual place for laughter in stories is at the peak of the story, in the complicating action. In my data, it is rarely seen in the settings or orientation, and it is most frequent in the middle part and the closing sequences. It is obvious that the laughter in the stories depends on what happens in the story; the function of laughter as feedback may be to show that the plot of the story is understood and valued by the listener. The function and occurrence of laughter will not be discussed further here, but it deserves closer attention.

Another thing that should be mentioned is the lack of feedback. The story *A Girlfriend in Spain (Vinkona á Spáni - S5)* contains no feedback at all with the exception of one instance, when A bursts into laughter. It does not seem to affect the storyteller at all. He invites his interlocutors to take part in the story, and there are pauses on the syntactic/interactional boundaries here as well as in the other stories, but nothing happens; the listeners do not use the opportunity to give feedback.

(2a)

Vinkona á Spáni

1.	C:	svo var einn sem var að vinna með mér sko (.)↑
2.	C:	hann (átt-) kærastan hans var á Spáni (.)↑
3.	C:	og hann skrapp sko↑ og kom svo til baka með tösku sem hún átti↑
4.	C:	og það var ekkert nema óhrein nærföt af henni og eitthvað svona drasl (.)→

5. C: og hann var svona (e-) svolítið svona rakaður um hausinn→
6. C: og hann var með eyrnalokk (.)↓
7. C: og það var nóg til þess að fleir kipptu honum (að koma) afsíðis sko →
8. C: og í leðurjakka (.) →
9. C: og hann var kominn alveg inn á nærbuxurnar (.)→
10. C: og þeir voru að skoða í í töskuna →
11. C: og þetta var náttúrulega orðið grunsamlegt →
12. C: ekkert nema óhrein kvenmannsnærföt↑
13. A: → ((hlær))
14. C: þótti svona kinkí sko↑
15. C: þangað til að hann asnaðist til að segja þeim að
16. C: hann væri að vinna í turninum sko (.)↓
17. C: þá bara (fits) ((söngl)) heyrðu út með þig góði minn↑

In English:
(2b)

A Girlfriend in Spain

1. C: then there was one [guy] who was working with me *sko* (.)↑
2. C: he (ha-) his girlfriend was in Spain (.)↑
3. C: and he went *sko*↑ and then came back with a bag of hers↑
4. C: and there was nothing but dirty underwear from her and some like trash (.) →
5. C: and he was like (e-) a sort of a skinhead →
6. C: and he was wearing an earring(.)↓
7. C: and that was enough for them to ask him (to come) aside *sko* →
8. C: and in a leather jacket (.) →
9. C: and he was almost standing there in his underpants (.) →
10. C: and they were searching the bag →
11. C: and this had of course become suspicious →
12. C: nothing but dirty women's laundry↑
13. A: → ((laughs))
14. C: [they] thought it was like kinky *sko*↑
15. C: until he blurted out that he was working
16. C: at the air control tower *sko* (.)↓
17. C: then (fits) ((singing) hey there clear off man↑

Can we interpret the silence as a kind of a carry-on signal in itself? Or is it rather what happens in the silence that counts? There are other kinds of feedback than the verbal type.

Head nods, gestures, facial expressions, and other types of non-verbal feedback could occur in the silence and encourage the storyteller to go on with his story. These signals play a significant role in the communication, and it would probably prove fruitful to study the ways in which verbal and non-verbal feedback units work together in a dialogue.

4. Concluding remarks

The aim of this small-scale study was to learn something about the form and function of feedback in conversational storytelling. My body of data – 11 stories – was quite small. Many new questions have arisen during the course of this work, and even if no answers have been given, I would like to believe that, with this study, a few steps towards some basic knowledge of Icelandic feedback have been taken.

What I see as fundamental problems in working on feedback are the classification of what counts as feedback and the question of where we should draw the line between a turn and a feedback unit. Verbal interaction is realized by turn-taking, and the turns can vary in length. In everyday conversation, there is no limit to how long a turn can be; it can be a single word, a clause, a sentence fragment, a full sentence, or a complete story (Sacks, Schegloff, Jefferson, 1974; Renkema, 1993). The turn-taking model developed by Sacks, Schegloff and Jefferson describes two components: the turn-construction component and the turn-taking component. Numerous objections have been raised to this model; one is that it does not make a clear distinction between turns and feedback units (Renkema, *op. cit.*). There are many grey areas where it is difficult to say whether the item should be classified as feedback or a turn.

In closing, I would like to mention some features of feedback that I would like to examine later. The first is the choice of different feedback units in different parts of the story; i.e., what governs the choice made by the feedback giver. Second, in my data a single participant in the conversation is responsible for giving the feedback in each story. This could be due to the various roles of the listeners in the conversation, and it is an interesting phenomenon to investigate. And last but not least, the interactional position and function of the feedback units are of immense interest and deserve further investigation.

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On the Acoustic, Prosodic and Gestural Characteristics of "m-like" Sounds in Swedish

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Abstract

The aim of the present study is to verify what communicative functions "m-like" sounds can have in spoken Swedish and investigate both the relationship between prosodic variation and communicative function and the relationship between the production of "m-like" sounds and their accompanying gestures.

The main hypothesis tested is that the different communicative functions carried by these "m-like" sounds are conveyed by means of different prosodic cues. To test this hypothesis, audio-recordings of two dialogues, elicited with the map-task technique, were used. A distributional and functional analysis of "m-like" sounds was first carried out. Afterwards, an acoustic analysis of these sounds was performed to find out how prosodic variation and communicative function are related.

The results show that the most common function carried out by "m-like" sounds is that of feedback. The general category of feedback can be further divided in sub-categories depending on the specific function that the short expression carries out in the given context. To each function it is possible to relate a prototypical F0 contour and acoustic characteristics.

For the analysis of the accompanying gestures of "m-like" sounds, two AV-recordings of spontaneous dialogues were used. The results of the distributional analysis show that 41% of all the analysed "m-like" sounds are accompanied by a gesture. The most common accompanying gestures are head movement s such as nods and jerks.

The relationship between the function carried by speech and the specific function of the accompanying gesture has also been coded and analyzed. Gestures co-occurring with speech can either have a "non-marked/neutral" function, which means that they do not add further information to what is being said with speech, or can be produced to add, emphasize weaken or contradicting speech.

When the function of these gestures is neutral, they tend to have a minimal extent, while when their specific function is to emphasize the information expressed by speech,

their extent tends to be bigger. This result might be related to the fact that gestures are often produced to emphasize information that is also focused by mechanisms like prosody in speech.

1 Introduction

Different kinds of "m-like" utterances occur often in Swedish spontaneous speech and seem to carry a variety of communicative functions.

Previous works (Cerrato 2002, Cerrato & D'imperio 2003) show evidence that the "m-like" sounds transcribed as "m" or "mm" are commonly used as short feedback expressions in Swedish and Italian and can have different specific functions depending on the context. In particular they can be used to give feedback in a minimal-intrusive way and signal turn-taking. The different functions are expressed by means of different acoustic and tonal characteristics.

A wide study on corpora of English (Gardner 2001) reports that although the most frequently occurring function carried out by "m-like" sounds is that of acknowledgement of comprehension, they can also have at least five other communicative functions: hesitation marker, repair initiator, answer, degustatory, lapse terminator.

The present study aims at verifying what communicative functions "m-like" sounds can have in spoken Swedish and test the hypothesis that it is possible to find some correlates between their acoustic characteristics and their specific communicative functions.

Moreover an analysis of how the speakers use specific gestures to serve important dialogue functions was carried out. The term gesture is used in the literature to refer to a variety of different phenomena occurring while people speak. On the one side the term is used to refer to the articulatory movements produced during the articulation of speech. These are usually called "articulatory gestures, speech gestures"(Lindblom 1991). On the other side the term gestures is used to refer to those non-articulatory movements, which can occur with speech. These movements can be of different types: facial displays, head movements, gaze direction, body and hand movements. All these movements are often referred to as non-verbal behaviour (Cassel 2000).

In this paper the term gesture is used to refer to those "accompanying gestures/mouvements d' accompagnement" produced to provide complementary information to speech (Teston 1998). However, the majority of these accompanying gestures are head movements and facial expressions (Cerrato & Skhiri 2003).

2. Materials and method

2.1 Corpora

To study "m-like" sounds two different kinds of material were used:

- **Corpus 1**: Audio recordings of 2 dialogues of the length of ca. 7 minutes each, elicited with the map-task technique, recorded at Stockholm University (Helgason 2002). Dialogue 1 is between a female and a male speaker and dialogue 2 is between two female speakers all from the area of Stockholm. The activity type is that of "instruction giving": one interlocutor has the role of information giver and the other has the role of instruction follower with the task of follow/draw a route on a map.
- **Corpus 2**: Audio-video recordings of 2 spontaneous interactions of the length ca. 8 minutes each, recorded at a travel agency in Gothenburg, Sweden, selected from the Spoken Language Corpus of the Linguistics Department of Gothenburg University (Allwood 1999). The dialogues are between a travel agent (a female speaker) and 2 different customers, a female one in dialogue 1 and a male one in dialogue 2, all from the Gothenburg area. The activity type can e defined as "information seeking": one interlocutor, the customer, seeks for information about prices, travel arrangements, etc., and the other interlocutor, the travel agent, has the role of giving all the possible information required.

2.2 Labelling

In both corpora all the instances of "m-like" sounds were labelled according to their function in the given context. The labelling was based on an *a-priori* categorization of "m-like" sounds in the 4 main categories reported in table 1.

These categories are quite general and they can all have sub-categories, for instance short answer can be positive or negative, disfluencies can appear as hesitation or as self-repairs. However since most of the "m-like" sounds identified in the two corpora was labelled as feedback, only the sub-categories for feedback are reported in details in table 2. These sub-categories are to be interpreted as reaction to the previous communicative act.

Function	**Label**
feedback expressions	FB
short answers	A
disfluencies	D
others	O

Table 1 Labels used to categorise the function of "m-like" sounds

Function	Label	Comment
Continuation	FB**CPUi**	I want to go on
Continuation	FB**CPUy**	you go on
Acknowledgement	FB**A**	acceptance
Refusal	FB**R**	refusal
Expressive	FB**E**	expression of a reaction or attitudinal behaviour

Table 2 Coding scheme for the sub categorization of "m-like" sounds with feedback function.

In order to be able to identify and categorize feedback expressions it is necessary to take into account contextual information. In this study feedback expressions are interpreted and categorized in terms of reactions to the previous communicative act and they are coded using an adapted version of the coding schema proposed in (Alwood 2001, pp 35-36)
An expression is coded as feedback if its primary function serves one of the following purposes:

1. show continuation of contact (C): when the interlocutor wishes to show that s/he is willing and able to continue the interaction;
2. show perception (P), when the interlocutor shows awareness and discernment of expression of the message;
3. show understanding (U), when the interlocutor shows that s/he has understood the message;
4. show acceptance (A) of the information received, which implies CPU, but explicitly means what in (Clark and Schaefer1989) is referred to as "acknowledgement", that is a hierarchy of methods used by interlocutors to signal that a contribution has been understood well enough to allow the conversation to proceed;
5. show refusal (R), which also implies CPU, but explicitly means that the interlocutor does not accept or does not agree with the information received;
6. show behavioral and attitudinal reactions (E) towards the meaning conveyed; this implies CPU and includes assent, negation or contradiction, assertion, surprise, disappointment, enthusiasm etc.

These functions are related to basic requirements of human communication. In order to obtain a successful communication it is necessary first of all that two participants establish a *contact* with each other, once the contact is established it is possible to produce a message, which should be *perceived* by a receiver, who must be able and willing to *understand* it. Once the receiver has got the message, s/he can accept it or refuse it.

Moreover it can be helpful for the participants in a conversation to give and get *attitudinal* and *behavioural reactions* as indicators of how well the intended message is transmitted.

Short feedback expressions having explicit CPU function can undergo phonological and prosodic variation to signal also turn-taking. When the short expressions signal the intention to get the turn the label **i** is added at the end of the feedback label, when the short expression signal the intention to let the other speaker continue to talk the label **y** is added to the feedback label.

Moreover feedback expressions are coded according to their "directional function type" which can be:

- Giving
- Eliciting
- Giving-Eliciting

The speakers give feedback when they wish to let the interlocutor understand that they are listening, paying attention, understanding or agreeing with what s/he is saying.

The speakers elicit feedback when they wish to know whether the interlocutor is listening, paying attention, understanding, or agreeing, disagreeing with what they are saying.*2.3,*

Gestures coding

For the audio-video materials of corpus 2, beside the labeling of the functions, an additional annotation of the gestures accompanying the "m-like" sounds was made. The annotation takes into account the type of gesture and its relationship with speech (Cerrato & Skhiri 2003).

The type of gesture produced at the same time of the production of "m-like" sounds were coded using the following labels:

- **nod:** is a forward movement of the head, which can be multiple
- **jerk :** is a backward movement of the head which is usually single
- **shake:** is a left-right or right-left movement of the head which can be multiple
- **waggle**: is movement of the head back and forth left to right
- **swturn:** *side-way turn* is a single turn of the head left or right
- **movef:** *move forward* is a forward movement of the whole trunk
- **moveb:** *move backward* is a backward movement of the whole trunk
- **hand:** refers to hand/s movement
- **shrug:** refers to shoulders shrug
- **eyebrow raising**
- **smile**
- **laughter**
-

The relationship between the function of speech and the specific function of the accompanying gesture has been coded using the schema reported in table 3. Gestures co-occurring with speech can either have a "non-marked/neutral" function, labeled as **N**, which means that the gesture does not modify the meaning of speech, or can be produced to modify the meaning of speech by either adding, reinforcing, weakening or contradicting what has been said vocally.(Poyatos 2002)

Relation to speech	**Label**	**Comment**
Neutral	**N**	the gesture doe not modify the meaning of speech
Addition	**A**	the gesture adds some more information to speech
Emphasis	**E**	the gesture reinforces what has been said vocally
De-Emphasis	**D**	the gesture weakens what has been said vocally
Contradiction	**C**	the gesture contradicts what has been said vocally (irony)

Table 3 Schema of the labels used to code the relationship between the function of speech and the specific function of the accompanying gesture

3. Technical equipment

Annotation, segmentation and measurement of the duration and F0 contour of the "m-like" sounds in the audio material were carried out with the help of the software package "Wavesurfer" (Sjolander & Beskow 2000). Temporal values were measured both from spectrograms and waveforms. Most of the items were produced in an utterance of their own, which means that they were produced between pauses, this made the segmentation easier. The onset was set at the appearance of energy, while the offset was marked at the disappearance of energy. In those cases where the "m-like" sound was coarticulated with preceding or following items, the transitions were included in the segmentation and in the measurement of the duration.

Annotation, segmentation and measurement of the duration of the "m-like" sounds and of the gestures produced during their production in the audio-visual material were carried out with the help of the Multitool package software, which simultaneously displays the video and the relative orthographic transcription of the dialogues (Allwood et al. 2002). A multi-tier annotation, consists of several tiers displayed on the *score lines* of Multitool, for our purposes the following tiers were used:

- **Text:** reports the transcription of the utterances per speaker
- **Function:** reports the function of the utterances under analysis.

- **Gesture:** reports the gestures accompanying the utterances of the speakers.
- **Gesture function**: reports the specific relation between the gesture and the related speech.
- **Gaze** which report the direction of the speakers' gaze as mutual gaze or non-mutual gaze.

4 Results

4.1 Corpus 1

In table 4 is reported the occurrence of "m-like" sounds per dialogue. Most of the "m-like" sounds in both dialogues were labelled as feedback, with directional function type "giving". There are no instances of "m-like" sounds produced to elicit feedback. There are few examples of "m-like" sounds used for other communicative function than feedback. This results is surely constrained by the material used for the analysis, which consists of only one activity type: instruction giving. A previous study of feedback expressions on instruction giving map tasks dialogues in Italian (Cerrato 1999) showed in fact that the speaker who has the role of the giver tends to produce more extended contributions, while the speaker who has the role of instruction follower has a propensity to show "active listening", and to do so s/he produces a great deal of feedback. It is likely that in other kind of activity types, other communicative functions might be carried out by "m-like" sounds

Dial 1 (between 1 female and 1 male speaker)	26
Dial 2 (between 2 female speakers)	39
Tot:	**65**

Table 4 Occurrence of "m-like" in corpus 1

In table 5 is reported the distribution of "m-like" sounds per communicative function.

	Feedback (FB)				**Short Answers (A)**		**Disfluencies (D)**	**Others (O)**
	CPUy	**A**	**E**	**CPUi**	**Positive**	**Negative**		0
Dial 1	8	9	2	5	0	0	2	
Dial 2	20	6	6	2	2	0	3	

Table 5 Distribution of "m-like" sounds per function in corpus 1

In 2 cases an "m-like" sound is produced as a short answer (positive) and in 5 cases as disfluency.

The acoustic analysis of F0 contour of the "m-like" items in corpus 1 show that it is possible to relate a prototypical F0 contour and other acoustic characteristics to specific communicative functions. The main trends are reported in table 6.

Category	**F0 contour**
FBCPUy	Rising (+50 Hz)
FBCPUi	Rising (or flat)
FBA	Rising (+50 Hz)
FBE{surprise}	falling-rising
FBE{doubt}	flat
D	flat

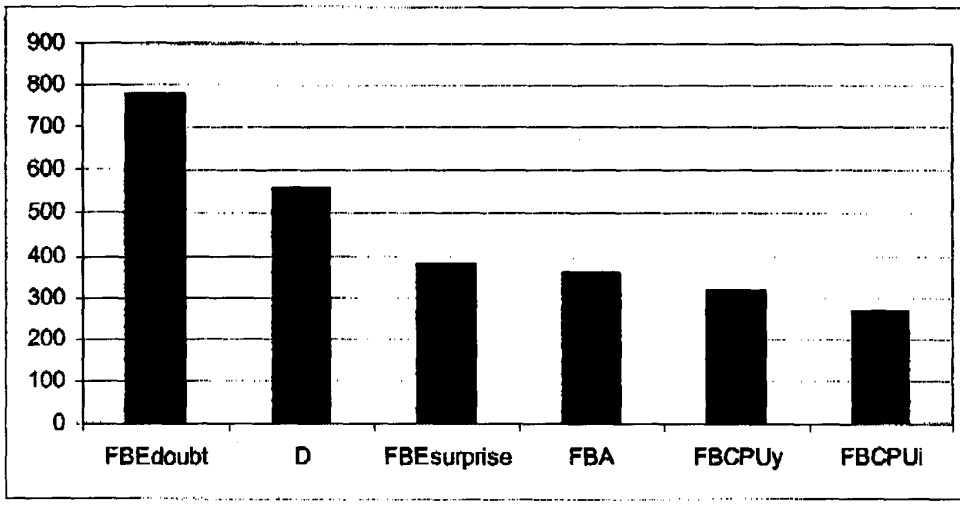
Table 6 Prototypical F0 contour related to different functions.

The main difference in the F0 contour seems to be between "m-like" sounds with flat contour and "m-like" sounds with falling-rising or rising contour. Flat contour is typical when the function of the "m-like" is to show hesitation and when "m-like" sounds are produced as disfluencies. Falling-rising contours are typical for more expressive meaning, when the "m-like" expresses an attitudinal reaction of surprise[15]. The rising contour is typical for "m-like" sounds produced as continuers (FBCPUy, FBCPUi) and as acceptance (FBA). The term continuer is here referred to those feedback expressions used when the speakers wish to show CPU with an active listening attitude and at the same time signal their intention either to get the turn or to let the other speaker continue to talk.

In the analysed material in only 7 cases speakers starts his/her turn by producing a "m-like" sound labelled as FBCPUi, this does not seem to be very common in spoken Swedish, while it is quite common in Italian (Cerrato 2002). In dialogue 1 the "m-like" sound labelled as FBCPUi were characterized by a rising F0 to signal the intention to get the turn. An example of a "m-like" sound labelled as FBCPUi in dialogue 1 is reported in table 7. This "m-like" sound was produced with a duration of 280 msec and a rising F0 contour.

In dialogue 2 the 2 "m-like" sounds labelled as FBCPUi show a flat F0 contour, which is an atypical contour for a continuer. Usually continuers show rising contours, while flat contours are more typical for expressions produced as disfluencies or to show doubt or hesitation.

[15] The attitudinal reaction is reported included in curly parenthesis after the label FBE.



These 2 cases might in fact be interpreted both as doubt/hesitations and as a feedback to signal the intention to get the turn. After the initial short "m-like" sound, the speaker takes the turn and in both cases asks for a clarification. In table 8 is reported an example of a passage from dialogue 2 in which a "m-like" sound labelled as FBCPUi is produced at the beginning of a longer utterance with a flat F0 contour and a duration of 215 msec.

<A133> and then shall we come very close to the river that connects the inlet on the south side and this fishing lake <B134> **mm** I also have a river

Table 7 Example of the occurrence of a "m-like" sound labelled as FBCPUi from dialogue 1.

<A37> so yu keep yourself between the perimeter of the island and the perimeter of the gulf <B38> **mm** how doI do with the crayfish then? <A39> yes you have to keep yourself away from them

Table 8 Example of the occurrence of a "m-like" sound labelled as FBCPUi from dialogue2

Figure 1 reports a bar diagram of the average duration of "m-like" sounds per category of function.

Fig. 1 Average duration of "m-like" sounds per function in Corpus 1

There is an evident difference between short "m-like" sounds and long "m-like" sounds. Short "m-like" sounds are usually produced with the function of giving feedback in a minimal intrusive way, in order to show continuation of contact, perception and understanding (FBCPUy, FBCPUi).

Longer “m-like” sounds are produced when the given feedback is intentionally adding some extra information, for instance, doubt/hesitation, surprise (FBE{doubt}, FBE{surprise}). In the case of expression of surprise, not only the “m-like” sound shows a longer duration and a falling-rising F0 contour, but it usually shows a disyllabic structure.

When speakers wish to express some doubt, skepticism about the information received, they can produce “m-like” sounds, which can be interpreted as a kind of semi negative feedback - *I am not sure I have understood you* -. These “m-like” sounds show longer duration and flat pitch contours. However they differentiate from those “m-like” sounds produced as disfluencies, which also show longer duration and flat pitch contour, because disfluencies are produced as nasalized vowels, and could be orthographically transcribed rather as “em”, “ehm” than “m” “mm”.

The most frequently occurring “m-like” sound is a monosyllabic bilabial nasal sound, with an average duration of 330 milliseconds. In some cases disyllabic “m-like” sounds are produced, and this occurs when the given feedback expresses a reaction of surprise.

In figure 2 are reported the waveforms of a disyllabic “m-like” sound, the upper one, and a monosyllabic one, produced by the same female speaker. The difference between syllabic and disyllabic “m-like” sounds is evident to detect on the waveform on the basis of the amplitude.

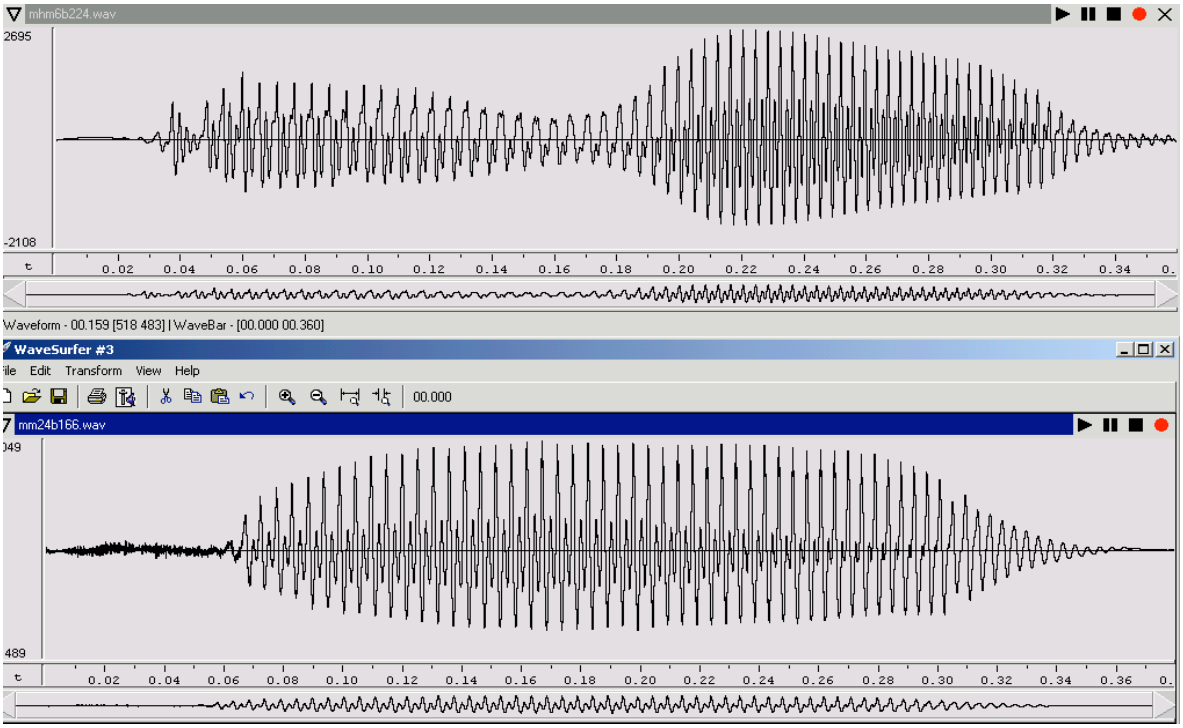


Fig. 2 Waveform of a disyllabic “m-like” sound, the upper one, and a monosyllabic “m-like” sound, the lower one, produced by the same female speaker. On the x axis is reproduced the time scale, on the Y axis the amplitude.

4.2 Corpus 2

The occurrences of "m-like" sounds in the 2 audio-video recordings are reported in table 9.

Dial 1 (between 2 female speakers)	19
Dial 2 (between 1 male and 1 female speakers)	15
Tot:	**34**

Table 9 Occurrence of "m-like" sounds in corpus 2

Also in corpus 2 the majority of "m-like" sounds in both dialogues were produced with feedback function, and there were very few examples of "m-like" sounds used for other communicative function, as reported in table 10.

	Feedback (FB)				**Short Answers (A)**		**Disfluencies (D)**	**Others (O)**
	CPUy	A	E	CPUi	Positive	Negative		
Dial1	8	6	1	1	1	0	2	0
Dial2	8	5	0	0	1	0	2	

Table 10 Distribution of "m-like" sounds per function in corpus 2

In dialogue 1 37% of the "m-like" expression is accompanied by a gesture.
In dialogue 2 66% of the "m-like" expression is accompanied by a gesture.
The most common accompanying gestures are nods, jerks and smiles.
The specific function of these gestures is mostly neutral. However there are some examples of gestures produced to add some attitudinal reaction or emphasis to the uttered speech, as reported in table 11.

Function of the m"like sound"	**Type of accompanying gesture**	**function of the gesture**
FBA, FBCPUy	Nod	Neutral
FBCPUy	Jerk	Neutral
FBE	Nod, Shake	Emphasizing
FBA,FBE	Smile	Emphasizing
A {positive}	Nod	Neutral

Table 11 Specific functions of the gestures accompanying "m-like" sounds in corpus 2.

When the function of these gestures is neutral the gesture tends to be minimal. This is consistent with the fact that "m-like" sounds intended as minimal intrusive feedback expressions are usually produced with a minimal articulation, with negligible labial closure and minimal vocal activity, for this reason it is not surprising that the gestures accompanying these "m-like" sounds are quite minimal, since they are not meant to

interfere with what the interlocutor is saying. When the function of these gestures is to emphasize the information expressed by speech, the extent of the gesture tends to be bigger.

Due to the quality of the recording it was not always possible to carry out F0 analysis of the "m-like" sounds produced in Corpus 2, however it was possible to measure their duration. The average duration of "m-like" sounds with feedback function in corpus 2 is 360 milliseconds.

A preliminary comparative analysis of the average duration of "m-like" sounds produced as acknowledgements (FBA) and as continuers (FBCPUy) with and without accompanying head nod was also carried out to verify the hypothesis that "m-like" sounds produced with accompanying gestures have a longer duration. The results, reported in table 12, confirm this hypothesis: when the "m-like" sounds are accompanied by head nod they have a longer duration (18%).

This difference might depend on the fact that the co-ordination of the gesture with the articulation of the verbal feedback expressions makes the articulation longer.

Another more plausible explanation can be related to the fact that when a head movement is produced to accompany a specific utterance, it means that the utterance carries some focus. Previous studies (Chovil 1992) have shown that gestures tend to emphasize information that is also focused by mechanisms like prosody, in particular head nods and eyebrow raising are correlated with emphasized linguistic items, and these emphasized items have a longer duration compared to the same items without prominent prosodic characteristics (Casper 2002). However a tonal analysis of these short expressions has not been carried out in corpus 2, mainly because in the analysed materials there were not enough instances of comparable items.

Item	**communicative function**	**gesture**	**gesture function**	**Duration**	**standard deviation**
"m"	FA, FCy	nod	N	380	16
"m"	FA, FCy	null	N	315	15

Table 12 Average duration of "m-like" sounds produced with and without accompanying gesture in corpus 2.

Conclusions

The aim of this study was to investigate what communicative functions "m-like" sounds can carry in spoken Swedish and test the hypothesis that it is possible to find some correlates between their acoustic characteristics and their specific communicative functions.

The results show that "m-like" sounds are mostly produced with a feedback function. They can be also used to answer short questions and appear as disfluencies. The obtained results are however constrained by the type of material used for the analysis, which only consisted of one activity type: information seeking. It is likely that in different communicative situation "m-like" sounds carry out other functions also in spoken Swedish, as reported by Gardner for spoken English.

The results of the acoustic analysis of duration and F0 contour show that it is possible to relate a prototypical F0 contour and acoustic characteristics to a specific communicative function, mainly: flat contour and short duration denoting a normal non-marked feedback function and longer duration and varying f0 contour showing a more marked attitudinal reaction in the expression of feedback.

As for the analysis of the accompanying gestures, the results show that a gesture accompanies 41% of all the analysed "m-like" sounds. The most common accompanying gestures are head movements such as nods and jerks.

The relationship between the function of speech and the specific function of the accompanying gesture has also been coded and analyzed. When the function of the gestures is neutral, which means that it does not add further information or does not emphasize, weakens or contradict what has been said, the gesture tends to have a minimal extent. When the function of the gesture is to emphasize the information expressed by speech, the extent of the gesture appear to be bigger.

An additional hypothesis stemming from the preliminary analysis of gestures is that there might be a relation between the extent of the accompanying gestures and the specific function carried out by the gesture. A follow up of this study will aim at verifying this hypothesis.

At the light of the results reported in this paper we would advocate in favour of a promotion of "m-like" sounds to the status of lexical expressions. Although they are very often produced in everyday conversations in Swedish (and in many other languages), especially as feedback expressions (they are the second most frequently occurring feedback expressions in spoken Swedish, after "ja" and its variants as reported by Allwood & Grönqvist in this volume) and although they carry out specific meanings which are conveyed by means of specific acoustic characteristics, they are not reported in Swedish dictionaries and they are still considered as non-lexical expressions.

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Observations on Danish feedback

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Abstract

This paper concludes the Ph.D course in Gothenburg, 19-24. of August 2002. The goal of the paper is to examine Danish with respect to the notion of feedback as described by [Allwood:1993]. The materials used for this purpose are selected from the Danish Corpus BySoc.

1. Introduction to the notion of feedback

The feedback mechanisms of a language are characterized as [Allwood:1993 – p. 2]:

> *Interactive functions*, i.e., linguistic processes and mechanisms where by the speakers manage the flow of interaction.

The type of language in question is spoken language, which differs significantly in structure from written language especially with respect to these interactive functions. They can take several forms: single words, several words, parts of a sentence, etc. We shall here focus on the single words and they will hence fort be mentioned as **feedback words**.

The direction of feedback can take several forms but I will here focus on **giving** and **eliciting**. These two directions can be explained by offering a reaction to the person that talks and as asking for a reaction from the listener.

Allwood [Allwood:1993 – p.3-4] divides the types of linguistic feedback into four categories:

> (i) *contact*(i.e., whether the interlocutor is willing and able to continue the interaction)
> (ii) *perception* (i.e., whether the interlocutor is willing and able to perceive the message)
> (iii) *understanding* (i.e., whether the interlocutor is willing and able to understand the message)
> (iv) *attitudinal reactions* (i.e., whether the interlocutor is willing and able to react and (adequately) respond to the message, specifically whether he/she accepts or rejects it).

These can furthermore fulfill several functions [Allwood:1993 – p. 8]: **acceptance**, **rejection**, **confirmation** and **agreement**.

Each feedback word found in the examined dialogues will be evaluated after the following schemata:

word	**speaker**	**direction**	**type**	**function**
The feedback word it self	interviewer	elicit	contact	acceptance
	informant	give	perception	rejection
			understanding	confirmation
			attitudinal	agreement

If the mentioned categories are not sufficiently describing the actual feedback situation an attempt to use another more fitting category will be used. Se table in Appendix A for distribution of annotations.

2 The Danish Corpus BySoc and the materials

2.1 The Danish Corpus BySoc

The Danish corpus BySoc was collected in the late 1980's in connection with a project called Projekt BySociolingivistik. The corpus consists of almost 80 conversations with common Danish people who where born and raised in the part of central Copenhagen called Nyboder. The inhabitants of Nyboder are characterized by being connected to the navy. The conversations, which have no predefined subject, are typically recorded in peoples own homes, and a great effort has been made to elicit an informal language.

The total of words in the Danish corpus is ca. 1.4 million words. The transcription formalism used is Dansk Standard 2, which contains coding for breaks, hesitation, rising intonation, stutter, citation and more. Furthermore is added comments on pronunciation, background sounds, interruptions etc. The corpus contains no grammatical information. There is free access for searching in the corpus BySoc at the following website:

http://www.id.cbs.dk/~pjuel/BySoc

When searching in the corpus, it is possible to save the obtained results in a file with HTML format. I would like to thank Peter Juel Henrichsen for his assistance and comments on this paper and for making the Corpus BySoc so easily accessible on the web.

2.2 Materials

The material used for this paper consists of two dialogues from the BySoc corpus: one male-male and one female-female. The total number of participants in each dialogue is 2:

the interviewer and the informant. The parts chosen for this paper are characterized by the informant being the most active part. To be sure to get as much spontaneous speech as possible the examined sections begin after the first 10-20 min. It should however be noted that the used intervals are not to be taken literally, since the durations noted on the website are estimated. This is due to the fact that the original information on duration was noted manually and does therefore not relate to measurements on the tapes.

Information about speakers and dialogues:

	Total time	**Used interval**	**Sex**	*Age*	Role	*Social class*	**Lives in Nyboder**
Dialogue 1 60000300	60 min	20 min	Male	29	Interviewer	?	no
			Male	14	Informant	Middle	yes
Dialogue 2 60000440	50 min	20 min	Female	29	Interviewer	?	no
			Female	34	Informant	Working	yes

The topics of conversation are for the male-male conversation: sparetime jobs, being the youngest in class, attending ninth grade, cakebaking and discipline, and for the female-female conversation: the language spoken in Nyboder, the informants husband, school, women in untraditional jobs and the apartments in Nyboder.

Even though the intervals used from each conversation have the same duration, they are not equally long. The 20 min female-female conversation takes up 11 pages whereas the 20 min male-male conversation takes up 7 pages. Apparently the women talks faster and the consequence of this is that the number of words and probably the number of feedback words are higher here.

3 Results

The focus on feedback words here lies on the ones that are primary[Allwood:1993 – p.4]. For the most part they are initial, but since, as we will se, feedback words in Danish often comes in pairs, some medial and final has been included as well. You will find an overview of the data in Appendix A. The method used for identifying feedback expressions is as explained in section 1 based on Allwood 1993.

3.1 Frequencies

The frequency of the Danish feedback words is listed below. The special symbol £ means 'a break', FF means female-female conversation and MM means male-male conversation. You will find an English translation in parenthesizes right after each feedback word:

Feedback words	FF	MM
Total number of feedback words	284	157
Pairs	38	24
ja (yes)	132	39
ja ja (yes yes)	11	4
ja £ ja (yes £ yes)	4	3
ja altså (yes but/sort a speak)	0	1
ja men (yes but)	2	0
ja nå ja (yes well yes)	1	0
ja nej (yes no)	1	0
jah (well yes)	0	2
jah det (yes that)	0	1
jamen (yes but)	9	0
jeps (yes (in a smart way))	0	1
jo (yes (negated context))	12	8
jo jo (yes yes (-"-))	1	0
nej (no)	35	12
nej nej (no no)	2	0
nej £ nej (no £ no)	1	0
ik' (wouldn't you say)	52	42
vel' (wouldn't you say(negated context))	4	9
mm (mm)	0	16
uhm (uhm)	1	0
nå (well/aha)	8	5
nå nå (well well)	0	1
nå nå nå (well well well)	0	1
nå ja (well yes)	2	1
nå men (well but)	3	0
men (but)	3	0
men det (but that)	0	1
så (so)	0	5
så det (so that)	0	2
så £ det (so £ that)	0	1
åh (oh)	0	2
Control	284	157

As expected the number of feedback words in the female-female conversation (284 words) is higher than in the male-male conversation (157 words). If this is due to the fact that women talk more than men or to the fact that they use more feedback words is difficult to say on the basis of such a small amount of data. Another reason could be the difference in age, since we are working with an agespan from 14 (youngest male) to 34 (oldest female) years. But still it is difficult on this basis to say what the feedback-frequency is caused by.

It is interesting to se that the distribution of the feedback words in the two conversations are somewhat similar. Apparently men and women use the same feedback words almost equally distributed. The conclusion that men and women use different feedback words can thus not be drawn. The five most frequent words are: *ja* (132/39), *ik'* (52/42), *nej* (25/12), *jo* (12/8), *ja ja* (11/4). That *ja* is the most frequent feedback word corresponds with observations made by Henrichsen[Henrichsen:2002]. He finds that *det* is the overall most frequent word in spoken Danish and that *ja* is the next most frequent. So when handling feedback words then it is quite natural that *ja* should be the most frequent.

3.2 ja and nej

The reason why *ja* is much more frequent than *nej*, is not, as one could hope for, that the Danish are very positive people, but that *ja* is used for many more purposes. The observations on *ja* shows that it bears the following characteristics:

type: perception, understanding, contact, attitudinal, trying to cut in
function: confirmation, agreement, acceptance

Whereas *nej* has the following characteristics:

type: perception, attitudinal, understanding
function: agreement, rejection, confirmation

ja is primarily used as the confirming answer to a question, very often as the listeners feedback showing that he or she is listening, but it is also used i several situations as a first feedback word that come into Danish peoples minds. It seems that it is easier to keep a positive atmosphere if the first reaction to a statement or a question is a yes or an agreeing or confirming word. Then afterwards, or maybe even as the last part of the feedback, it is possible to change it into a rejection if the person giving the feedback disagree.
Example from MM p.3:

$A: ja altså det er sådan en £ altså det er ikke rigtig en forretning længere
(yes but it is not really a store any more)

$B: hvad er det for en forretning ?
(what kind of store is it ?)

3.3 ik' and pairs

Another highly frequent word is *ik'*, which is used to seek confirmation from your conversation partner. This function of the particle has recently entered the Danish language. In the male-male dialogue the word *ik'* is more frequent than *ja*, this can be explained by the age difference between the speakers. The interviewer is 29 years whereas informant is only 14 years and he seems insecure and uses frequently feedback words to seek confirmation from the interviewer.

The phenomenon of seeking confirmation from the listener is very common in Danish. The most common words for this purpose are: *ik'* and *vel'*. Sometimes when the speaker talks fast then these words are used for ending sentences without expecting a feedback in return, but very often they come in pairs with a feedback word from the listener. The number of pairs (38/24) is close to the total number of occurrences of the word *ik'* (52/42). The pairs found in the two dialogues are:

Pairs	FF	MM
ik'	25	12
ja / ja ja		
ik'	0	3
mm		
ik'	8	2
jo /jo jo		
ik'	1	0
jamen		
ik'	0	2
åh		
vel'	3	1
nej / nej nej		
vel'	0	2
mm		
vel'	0	1
jo		
jo	0	1
nej		
ja	1	0
ja £ ja		
Control	38	24

The repetitions *ja ja, jo jo* and *nej nej* are here counted as the same phenomenon as if they were single, since their repetition does not change the meaning. The three most common pairs are *ik' – ja, ik' – jo* and *vel' – nej*, which are characterized, as listed, by being the positive feedback to a positive statement, the positive feedback to a negative statement and the negative feedback to a negative statement.

At this point it is natural to look at which one of the participants that elicit the pairs. The distribution is as follows:

Pairs and Speakers	FF	MM
Interviewer as		
Eliciter	17	5
Informant as		
Eliciter	21	19
Control	38	24

In the female-female conversation the role of eliciting feedback pairs seems evenly distributed, whereas in the male-male conversation the informant is the most active creator of pairs. This difference might be due to the observation mentioned earlier, that the 14 years old male informant seems insecure and constantly seeks confirmation from the interviewer.

3.4 ik', vel', nå and the consequence in meaning of feedback words

Does a feedback word always mean the same? We saw in section 3.2 that feedback words as *ja* and *nej* can have several meanings and purposes as feedback. Is this a special case or is this true for feedback in general?

Some of the occurrences of *ik'* and *vel'* – the words that appear as the first part of a pair – does not have a companion. Why is that? One explanation could be that the listener simply smiled or nodded and that this would be enough feedback for the speaker to go on talking.

A little word like *nå* with a relatively few occurrences in our data shows us several meanings and uses. The Danish songwriters Poul Henningsen and Bernhard Christensen has in 1937 even written the Danish song, called *Nå-visen,* about this little word. Depending on how *nå* is said and in which context, the meaning and function changes from refrain to refrain. This is a very typical characteristic for feedback words. The transcriptions of the BySoc corpus used for this paper does not supply information about other features of communication than information about the words said – except for a few comments on prosody. Feedback words are multifunctional and are closely related to other factors of communications such as gestures, facial expressions and head movements. This

fact is a strong argument for using multimodal recording and annotation when dealing with spoken language.

3.5 Most frequent use of feedback

I the preceding chapters we have looked at the most frequent feedback words, but we have also seen that the same word can be used for several purposes. So let us look at the most frequent purposes of feedback words:

Totals		FF	MM
Speaker			
	inf	97	99
	itv	187	58
	Control	284	157
Direction			
	Give	231	103
	Elicit	53	54
	Control	284	157
Type			
	contact	58	64
	understanding	30	7
	perception	173	65
	attitudinal	20	21
	trying to cut in	3	0
	Control	284	157
Function			
	acceptance	4	6
	agreement	27	13
	rejection	15	7
	confirmation	232	121
	pausing	0	10
	explaining	1	0
	wondering	1	0
	empty	4	0
	Control	284	157

The observations about distribution between speakers has already been treated, but observations concerning direction, type and function are new to us. The primary and most frequent direction of feedback is clearly giving feedback. Then when we look at the type of feedback we find that perception is the most frequent and that the most frequent type is

confirmation. This actually corresponds with the observations made about the word *ja* in paragraph 3.2. *Ja* is the most frequent feedback word encountered in both of the Danish dialogues and it is very often given by the listener to indicate and confirm that he or she is still listening and that the current speaker can go on talking. This is reflected in the dialogues by long coherent sections where the only person giving feedback is the listener, typically the interviewer. A name for this phenomenon could be active listening.

4 Reliability test

With all the statistics and the evaluation done, one last question needs to be asked: *How reliable are the assignment of the feedback categories (se section 1) defined in Allwood 1993 for Danish?* To test this I asked a colleague[16] to redo the job of assigning categories to 20 percent of the annotated feedback words.

	Total	Total agreement on assignment	Differences in type	Differences in function
Number of feedback words	89	35	48	15
Percent of tested feedback words	100%	40%	54%	17%

I presented my colleague with 3 pages of bare transcriptions from the Copus BySoc and the definition of the categories. I tried my best not to influence my colleague on what to choose. I have not taken the categories of speaker and direction into account since we fully agreed on these.

The numbers show that we agree fully in only 40% of the cases. This disagreement is mostly due to the categories of type: contact, perception, understanding and attitudinal. Which were also the categories where I myself doubted the most in the annotation process.

An interesting observation is that among the 89 examples there are 14 pairs (se section 3.3 for the definition of pairs) corresponding to 28 feedback words and we agree on all of them. This strengthens the observation made in section 3.3 that pairs are very common and well understood in Danish.

5 Conclusions on Danish feedback

To sum up some of the observations made about Danish feedback words, we now know that *ja* and *ik'* are the most frequent feedback words, and that *ja* (meaning yes) has more uses than *nej* (meaning no). *Ja* is also used to make communication smoother between participants.

A typical feedback construction for Danish is that feedback words come in pairs – the phenomenon that one feedback word elicits another. This is highly frequent and the words used for this are the overall most frequent feedback words of Danish.

It is difficult to describe feedback as an isolated part of communication since it is closely connected to other human factors having influence on communication.

We have also seen that different types of feedback are connected to the role of the specific participant of the dialogue – for example the role of the active listener is often connected to the interviewer. And that the most common type of feedback actually is the feedback of the active listener.

Sadly the reliability test showed us that the only the conception of the Danish pairs can be relied on, whereas the rest is very problematic specifically with respect to the assignment of the categories of type.

An observation for future work on feedback mechanisms is a strong need for working with multimodal recording to be able to capture all parts of the feedback situation.

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The Danish Corpus BySoc:
http://www.id.cbs.dk/~pjuel/BySoc

The Nordtalk NorFA project:
http://www.ling.gu.se/projekt/nordtalk/plans.html
http://www.ling.gu.se/projekt/nordtalk/about.html

[16] I would like to thank Anne Mette Saro Jensen for the time she sweetly volunteered to spend on this piece of work.

Appendix A:

This appendix contains an overview of the observations on Danish feedback from the dialogues.
For further information about the dialogues and the corpus see section 2.2:

ord	spk	direc	type	function	FF	MM	word	spk	direc	type	function	FF	MM
ik'	inf	elicit	contact	confirmation	30	38	jo	inf	give	understanding	confirmation	2	0
ik'	itv	elicit	contact	confirmation	22	4	jo	itv	give	attitudinal	agreement	1	1
ja	inf	give	attitudinal	agreement	1	5	jo jo	itv	give	perception	confirmation	1	0
ja	inf	give	attitudinal	confirmation	0	2	men	inf	give	trying to cut in		1	0
ja	inf	give	contact	confirmation	1	0	men	itv	give	attitudinal	rejection	1	0
ja	inf	give	perception	agreement	4	0	men	itv	give	understanding	rejection	1	0
ja	inf	give	perception	confirmation	25	11	men det	inf	give	contact	pausing	0	1
ja	inf	give	understanding	agreement	0	1	mm	itv	give	perception	confirmation	0	16
ja	itv	give	perception	confirmation	94	20	nej	inf	give	attitudinal	agreement	1	1
ja	itv	give	understanding	agreement	4	0	nej	inf	give	attitudinal	explaning	1	0
ja	itv	give	understanding	confirmation	3	0	nej	inf	give	attitudinal	rejection	6	6
ja £ ja	inf	give	attitudinal	agreement	0	1	nej	inf	give	perception	agreement	1	0
ja £ ja	inf	give	perception	agreement	0	1	nej	inf	give	perception	agreement	6	3
ja £ ja	inf	give	perception	confirmation	0	1	nej	inf	give	understanding	wondering	1	0
ja £ ja	itv	give	perception	agreement	1	0	nej	itv	give	attitudinal	confirmation	1	0
ja £ ja	itv	give	perception	confirmation	1	0	nej	itv	give	perception	agreement	1	0
ja £ ja	itv	give	understanding	agreement	2	0	nej	itv	give	perception	confirmation	13	2
ja altså	inf	give	attitudinal	rejection	0	1	nej	itv	give	perception	rejection	1	0
ja ja	inf	give	attitudinal	agreement	0	2	nej	itv	give	understanding	agreement	2	0
ja ja	inf	give	attitudinal	confirmation	0	1	nej	itv	give	understanding	confirmation	1	0
ja ja	inf	give	perception	confirmation	0	1	nej £ nej	itv	give	perception	confirmation	1	0
ja ja	itv	give	perception	confirmation	10	0	nej nej	itv	give	perception	confirmation	2	0
ja ja	itv	give	understanding	agreement	1	0	nå	inf	give	understanding	rejection	1	0
ja men	inf	give	trying to cut in		1	0	nå	itv	give	perception		1	0
ja men	itv	give	understanding	agreement	1	0	nå	itv	give	perception	acceptance	0	1
ja nej	itv	give	perception	agreement	1	0	nå	itv	give	perception	confirmation	0	1
ja nå ja	itv	give	attitudinal	agreement	1	0	nå	itv	give	understanding	acceptance	4	3
jah	itv	give	perception	confirmation	0	1	nå	itv	give	understanding	confirmation	2	0
jah	itv	give	understanding	agreement	0	1	nå ja	itv	give	attitudinal	confirmation	1	0
jah det	itv	give	contact	pausing	0	1	nå ja	itv	give	understanding	acceptance	0	1
jamen	inf	give	attitudinal	rejection	1	0	nå ja	itv	give	understanding	agreement	1	0
jamen	inf	give	understanding	agreement	1	0	nå men	itv	give	attitudinal	rejection	1	0
jamen	inf	give	understanding	confirmation	2	0	nå men	itv	give	trying to cut in		1	0
jamen	itv	give	attitudinal	agreement	1	0	nå men	itv	give	understanding	agreement	1	0
jamen	itv	give	attitudinal	rejection	2	0	nå nå	itv	give	perception	acceptance	0	1
jamen	itv	give	contact	confirmation	1	0	nå nå nå	itv	give	understanding	confirmation	0	1
jamen	itv	give	perception	confirmation	1	0	så	inf	give	contact	pausing	0	5
jeps	inf	elicit	attitudinal	confirmation	0	1	så £ det	inf	give	contact	pausing	0	1
jo	inf	elicit	contact	confirmation	0	1	så det	inf	give	contact	pausing	0	2
jop	inf	give	contact	confirmation	0	2	uhm	itv	give	perception	confirmation	1	0
jo	inf	give	attitudinal	rejection	1	0	vel'	inf	elicit	contact	confirmation	4	9
jo	inf	give	contact	confirmation	0	1	åh	itv	give	perception	confirmation	0	2
jo	inf	give	perception	agreement	1	0							
jo	inf	give	perception	confirmation	7	3	Control					284	157