Feedback in Different Social Activities
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1.   Introduction

This is an exploratory study of feedback as it is relevant in a number of contexts, i.e.,
the use of feedback in different social activities, involving different individuals using
different means of communication and feedback in the context of language
acquisition and language disorders. The purpose of this chapter is to look at social
activity influence on feedback. Feedback will be analyzed in different activities,
using an approach to communication and pragmatics which under the names of
"Activity based Communication Analysis" (ACA) has been under development since
the mid 70's (cf. Allwood, 1976). The background for the ACA approach is
interdisciplinary, covering philosophy (e.g. Peirce 1940, Wittgenstein 1953, Austin
1962 and Grice 1975), linguistics (e.g. Firth 1957), anthropology (e.g. Malinowski
1922), psychology (e.g. Bühler 1934, Vygotsky 1978, Rommetveit 1974), and
sociology (e.g. Mead 1934, Goffman 1974, Garfinkel 1967 and Sacks, Schegloff and
Jefferson 1974). There have also been other approaches which show an affinity with
the ideas presented below, see, for example, Hymes 1971, Levinson 1979 and
Goldkühl 1982. For a discussion of this background, see Allwood 1995.

2.   An activity based approach to communication and pragmatics

2.1   Multilayered constraints and enablements

The first thing to notice is perhaps the complexity of the relations that are established
between the participants in an event of communication. At least the following levels
of organization are involved in any human activity, where each level provides
necessary but not sufficient conditions for the next main level and, thus, also
necessary but not sufficient enablements (resources) and constraints on human
communication whether it occurs in spoken or written form: physical, biological,
psychological (perception, understanding and emotion; motivation, rationality and
agency) (Grice 1975 and Allwood 1976) and social (culture, social institution,
language, activity and communication):

Since communication, in this way, involves a network of finely interwoven
enablements and constraints, the "glue" or "cohesion" at work in an activity and a
dialogue must be construed in a similar multilayered way. One of the consequences of
this is that communication and the successive contributions to an activity mostly are
characterized by such features as redundancy, predictability, recoverability and, given
the constraints on human perception and attention, a certain indeterminacy with
regard to the actual current relevance of its various dimensions.

2.2   The role of the activity

One of Wittgenstein's basic claims was that the meaning of linguistic expressions should be analyzed as their use in different language games. In activity-based communication analysis, this claim is further analyzed in the following way. The choice and meaning of linguistic expressions is seen as a product of the interaction between in inherent "meaning potential" of the expression and the use it is put to in linguistic constructions, communicative functions and joint social activities. The use is, thus, defined in terms of (i) collocations in different types of grammatical structure, (ii) participation in different types of communicative functions, and (iii) occurrence in a specific type of social activity.

Let us now briefly consider the notion of a social activity. A social activity can be characterized by the following parameters (cf. Allwood 1980 and 1984):
1.   Type/purpose/function: procedures
2.   Roles: competence/obligations/rights
3.   Instruments: machines/media
4.   Other physical environment

One of the means whereby an activity gets pursued, again and again, is by being associated with certain standard *activity roles*, i.e., standard tasks in the activity which usually are performed by one person. The role can, on the grounds of this association, be analyzed into competence requirements, obligations and rights, where the competence requirement can be seen as a precondition of the obligations. As an example, consider lecturing as an activity. *Instruments and machines* also play an important role for many activities and will, if they are used, create their own patterns of communication. Other *physical circumstances* can also be relevant, like sound level or lighting. We will now proceed to take a closer look at how the different parameters of social activities (i.e. type, roles, instruments and other physical environment) as well as other, more individual, features can influence how feedback is used in different activities. We will use samples from a database of different videorecorded and transcribed activity types.

3   The influence of the activity type and other factors

3.1   Methods and data

We will first compare activity types with respect to some quantitative feedback measures and also with respect to the use of repetition. Some of the relevant factors which can potentially influence the use of feedback are how well the participants know each other and the medium (here face-to-face vs. telephone interaction). Our sample, therefore, contains activity types where these factors occur in different combinations. We will then go on to take a closer look at some specific activities, first where we can compare the individual and activity roles, then where we can compare different subactivities involving different physical circumstances.

3.1.1 Quantitative measures

We will consider the following quantitative (automatic) measures
- Basic quantitate data:
    Utterances: number of utterances
    Words: number of words
- Overall amount of feedback
    Feedback words
    Feedback share (%)
- Feedback and structural position
    Utterances with initial FB
    Utterances with only FB
- Feedback and overlap
    FB initatied interruptions
    Back-channelling

Besides basic quantitative data such as the total number of utterances, words and feedback words, we will use the following four measures of feedback. The *share of feedback word tokens(FBW)* is a frequency measure which indicates how much feedback is used in relation to other linguistic means of communication in an activity. The share of utterances containing *initial feedback* units and the share of utterances containing *only feedback* indicate the role of feedback and the types of utterances dominating an activity. The share of *totally overlapped feedback units* can tell us if there is a great deal of *back-channelling* in an activity, e.g. because one or both of the participants produce long utterances (e.g. narratives or explanations), while the other participant gives support. The share of *interrupting feedback* shows if the participants interrupt each other frequently, e.g. because the interaction is fast. The measures were chosen since they are simple and informative (especially in combination), they can be obtained automatically and unambiguously from a transcription (Nivre 1995) and they seem to vary between activity types.

A fifth measure, the *share of repetitions*, is added for the main activities in the study. The share of repetitions is calculated as the percentage of utterances containing repetition of all or part of the preceding utterance.
Only categorematic words (nouns, verbs and adjectives) and adverbs are counted. (Adjectives are restricted to those determining the same noun in both utterances. Different inflectional forms in the two utterances are allowed.)

3.1.2 Activity types

The activity types chosen for comparison are: Doctor-patient and Yellow Pages corpora:
1. Interview involving strangers: doctor-patient interaction (face-to-face)
2. Information seeking involving strangers (Yellow pages information) (telephone)

This comparison is based on a large number of interactions of each type (14 doctor-patient interactions and 30 Yellow pages interactions). The two corpora were chosen for comparison, since they involve fairly stereotype, institutionalized interactions between strangers and represent face-to-face versus telephone interaction. The doctor-patient interactions all take place in an out-patient clinic, where three different doctors

see patients after an appointment. The interactions consist of a number of subactivites, the main ones being the taking of case history, the physical examination and the ordination. The Yellow Pages corpus consists of many short information seeking phone calls concering information in the Yellow Pages, in an experimental setting, where a customer phones an information giver about hiring a car, taking an insurance or finding a restaurant.

Three long conversations:
1. Conversation between friends (face-to-face)
2. Conversation between friends (telephone) (same persons as in 1)
3. Conversation between strangers (face-to-face)
This comparison is based on one long interaction of each type.

The three long conversations were chosen for addition of the possibilities to study the interaction between friends vs. interaction between strangers face to face, on the one hand, and to compare friends (also the same persons) in face-to-face and telephone interaction, on the other hand, since the individual influencing factor of familiarity is assumed to interact with activity based influenced factors. Although these conversations are long, we have to keep in mind that they are single samples and, thus, not necessarily representative of their activity type in the same way as the Doctor-Patient and Yellow Pages corpora. The same two persons, young men who are both students, take part in the two conversations between friends, while one young and one elderly man who have both worked in the same factory take part in the conversation between strangers. (We, thus, have potential influence also from the age difference between the participants and from the level of education.) The conversations were recorded in a studio.

The added specific activites chosen for the comparison of activity roles and individual factors are
- the conversation between strangers (T and B)
- a role play involving one of the participants in the conversation between strangers (B) and a researcher (S)
- the same type of role play involving the researcher S and a middle aged woman (E)
- the same type of role play involving S and E, but with the roles reversed.

The role plays are all of the same type, an argumentative scene, where a customer tries to return a shrunken sweater and get his/her money back from a sales clerk.

The comparison of subactivities and different physical circumstances was based on the Doctor-Patient corpus, where the subactivities of case history, physical examination and ordination were extracted and compared. The physical examination involves different physical conditions, compared to the other two subactivities.

3.2   Doctor-patient and Yellow Pages corpora

We will first turn to the description and comparison of the first two activity types (A1 and A2). They both involve strangers and institutionalized settings, but the doctor-patient interactions are face-to-face, whereas the information seeking interactions take

place over the phone[1]. There are, of course, also other differences, such as the more specific goals and the roles of the participants, which will not be in focus in our analysis.

Table 1. Feedback measures in two activity types of different types (+ number of utterances, words and feedback words).

	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupt-ing FB	Over-lapped FB	Repe-tition
Doctor-patient face-to-face	2420	19288	1846	9.6	23.3	28.0	3.5	8.5	6.0
Info-see ing phone	1243	10477	1116	10.7	32.0	25.4	2.5	6.3	19.0

We can see that the two activity types both contain about 10% feedback words (which is a relatively high share), very few feedback interruptions (around 3%), and relatively few totally overlapped feedback utterances.

Both activities, thus, involve using a great deal of feedback. The medium does not seem to influence the overall feedback frequency (cf. Nivre & Richthoff 1988), i.e., the feedback share is about the same in telephone and face-to-face interaction. The low share of Interrupting feedback can indicate that the turntaking is clearly structured and the speakers do not have to interrupt each other competing for the turn or produce totally overlapped feedback during long single speaker utterances (see example 1 below). This pattern could be a sign of politeness caused by the social situation and/or by the fact that the speakers don't know each other. It is even a little bit stronger in the telephone condition, indicating that the characteristics of the telephone medium with no face-to-face contact and no body communication promotes the same feature, i.e. a low share of interrupting feedback, as the social situation in an institutionalized setting and the fact that the participants don't know each other.

The fact that the telephone conversations contain more utterance initial feedback, whereas the doctor-patient conversations contain slightly more utterances consisting of only feedback, could point to the need for longer, more salient utterances when the phone medium is used and the participants have to rely on the auditory channel only.

In the doctor-patient interaction, the shares of utterances consisting of feedback only and utterances with initial feedback are the same. Utterances containing only feedback occur in relation to the participants presenting information in longer utterances or sequences of utterances to each other.

Repetition is used by both participants as a comprehension check, a possible way of coordinating their different perspectives on and interpretations of the illness and the treatment.

Example 1 illustrates the high share of feedback and the relatively high share of utterances with initial feedback and only feedback, in many cases as answers to questions, in some other with a supportive function, indicating that the other speaker should go on.

Example 1.

P: man vågar nästan inte gå ut ibland
   you dare almost not go out sometimes
D: säger du de ä de så besvälit då
   you don't say it is it so troublesome then
P: **ja ja**
   yes yes
D: **m** // **ha** / de kan ju bli så se du
   m // yes / it can become like that you see
P: **<jaha>**
   <oh yes>
@ <ingressive>
D: du ta den på morronen
   you take it in the morning
P: **nej** inte på morronen kan ja ju tar allti en promenad på förmiddan [å] då vill ja inte ha [den] medicinen å sen nä ja kommer hem möjligtvis
   no not in the morning can I always take a walk in the morning [and] then I don't want [that] medicine and then when I come home possibly
D: [**a**]
   [yes]
D: [**nä**]
   [no]
D: **m**
P: men förut så ordinera karlsson ja skulle ta dom på kvällen
   but before karlsson prescribed I should take them in the evening
D: **m**
P: men de gick inte alls [(...)]
   but that didn't work at all [(...)]
D: [**nä** (...)] de blir de arbetsamt **ja** /// ja du hur mår du annars då
   [no (...)] it becomes hard yes /// yes how are you otherwise then
P: **ja** de enda som krånglar de ä benet
   yes the only thing that makes trouble that is the leg

Example 2 below in addition shows the way repetition is used as feedback and comprehension check by the doctor in relation to the patient, especially when the patient presents information that is unexpected for the doctor.

Example 2.

P: för blodtrycket de va så hemskt högt då / å så va de benet också
   because the blood pressure it was so terriby high then / and then it was the leg too
D: **benet också**
   the leg too

P: jaa de ä alltså ont i ben (...) de e satt en ny led i de
   yees it is that is ache in a leg (...) it is put a new joint in it
D: va ä de e de HÖFTlederna där
   what is it is it the HIP joints there
P: i knät [i knän] (...)
   in the knee in knees (...)
D: [**knän**]
   knees

In the information seeking interactions, the telephone condition seems to influence the turntaking patterns, so that there is less overlap. The relatively low share of overlapped feedback consists of backchannelling from the customer, when the information service provides several pieces of information in a long utterance. It also occurs during repetition of an utterance. Repetition occurs very frequently in the telephone activity. In this specific activity type, repetition has two main functions:
i) as a response to a question where the information giver provides alternatives, repetition is used to indicate which of the alternatives the customer wants;
ii) as a response to the choice of alternatives by the customer, the choice is repeated by the information giver and as a response to information about phone numbers, addresses, etc. the information is repeated by the customer as a comprehension check, often simultaneously with writing down the information.

Example 3 shows the frequent use of utterance initial feedback, while example 4 shows the use of repetition, in information seeking over the telephone.

Example 3.

G: **aa** du vill alltså teckna försäkring och hemförsäkring **aa a** // har du några önskemål om om storleken på de här försäkringsbolaget / ska de va ett stort elle litet
   yes you want to have an insurance and a home insurance yes yes // have you any preferences as to as to the size of this insurance company / should it be a big or small one
A: **ja:** hellre **ett stort** tror ja
   yes: rather a big one I think
G: **jaa** / ö **ja** de finns ä sex stora försäkringsbolag här i göteborg som erbjuder hemförsäkringar
   yes / uh yes there are eh six big insurance companies here in gothenburg that offer home insurances

Both the coustomer (A) and the information giver (G) in example 3 start their utterances with feedback words for *yes*, although the preceding utterances are not yes-no questions. In G's first utterance, *aa* seems to signal the succeeding confirmation of the information in the customer's preceding utterance (i.e. understanding) and possibly also the start of the next step in the negotiation. After G's disjunctive question (*big or small*), where A might be expected to answer by simply chosing one of these alternatives, A responds with an initial *ja:* before giving the alternative. A's *ja:* contiains a lengthening of the vowel which indicates that the feedback word may be used for accepting the turn while hesitating about the answer. G then starts his second utterance with a *jaa*, a form of yes which indicates the confirmation of new information. After a pause and a hesitation sound, G resumes to initate the next step

by a *ja*. This *ja* might also have the function of signalling the end of the hesitation (where G is probably looking for the alternatives to present).
Example 4.

A: **nä** de e en mindre fritidsbåt en segelbåt
no it is a smaller leisure boat a sailing boat
G: **jaa en segelbåt** ja tror (...) flest av dom här ä bolagen klarar de
yees a saling boat I think (...) most of these companies can do that
A: **de gör dom** / i så fall så skulle ja gärna vilja ha / (...) telefonnumret till <ansvar å
länsförsäkringar å folksam>
*they do / in that case I would like to hav e / (...) the phone number to
<ansvar and länsförsäkringar and folksam>*
@ <slow>
G: **jaa till ansvar** så e telefonnumret sjutton sjuttinie noll noll
yees to ansvar the phone number is seventeen seventynine zero zero
A: **sjutton sjuttionie noll noll**
seventeen seventynine zero zero
G: till länsförsäkringar / sextitre åtti noll noll
to länsförsäkringar / sixtythree eighty zero zero
A: **sextitre åtti noll noll**
sixtythree eighty zero zero

In his first utterance, G repeats A's specification of the type of boat (*en segelbåt*) which then works as the topic of the utterance. A responds to G's utterance with a linking feedback phrase (*de gör dom* = that they do), i.e. a reformulation using a pronoun as well as a pro-verb (cf. chapter 4). He then asks for the phone numbers of three insurance companies which he names. G answers with a yes and then in his second and third utterances starts by repeating the names of the insurance companies and then gives their phone numbers. A responds to both these utterances by repeating the phone numbers.

3.3   Three long conversations

Next, we turn to activity types B1 - B3, i.e., the three long conversations involving friends face-to-face and over the telephone as well as strangers face-to-face. These three conversations are not part of any structured, institutionalized activities, but more informal in character, although they are recorded in a studio.

3.3.1   Overall comparisons

We start by an overview of the feedback measures for the three conversations.

Table 2. Feedback measures in three activities of different types (+ number of utterances, words and feedback words).

	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupt-ing FB	Over-lapped FB	Repe-tition
Conv. friends face-to-face	131	2611	139	5.3	19.1	42.7	4.6	24.4	2.3
Conv. friends phone	88	2423	100	4.1	23.9	23.9	4.5	5.7	1.1
Conv. strang-e face-to-face	344	2404	256	10.6	20.3	33.4	3.8	13.1	7.0

We can see that some of our findings from the comparison based on table 1 are further supported in this data.

Influence from the medium:
 (i) The overall frequency of feedback is not affected by the medium. The two friends have comparable rates of feedback words face-to-face and over the phone.
 (ii) The share of totally overlapped feedback is much smaller in telephone conversation, where turn taking patterns exhibit less overlap.
 (iii) The phone condition promotes more utterances with initial feedback and fewer utterances consisting of only feedback, perhaps for reasons of salience. There is somewhat more utterance initial feedback in the phone conversation between friends than in their face-to-face conversation, whereas there is a considerable difference in the rate of utterances containing only feedback, where the face-to-face conversation contains a much higher rate.

The share of interrupting feedback, however, shows no difference depending on the medium in these conversations.

Let us now consider influence deriving from the degree of familiarity of the participants. If we compare the two face-to-face interactions, we find support for one of our earlier assumptions.

 (iv) We find less feedback interruptions and less totally overlapped feedback in the conversation between strangers than in the conversation between friends. There are also fewer utterances containing only feedback in the conversation between strangers. This indicates a low share of backchannelling out of turn as well as a low share of interruption involving competition for the turn.
 (v) An additional finding is that the conversation between strangers contains the same share of feedback as the two earlier activity types A1 and A2, which also involved strangers, and that this share is higher than the one used by the two friends A and L.

(vi) The two conversations between friends, B1 and B2, contain very little repetition, when compared to A1 and A2 above, whereas the conversation between strangers, B3, contains about the same share of repetition as the doctor-patient interactions. This may indicate that there are specific uses of repetition in at least some more institutionalized activities like A2 and that interaction between strangers also promotes repetition, especially when there are information seeking question-answer sequences involved, as in A1 and B3.

3.3.2   The face-to-face conversation between friends

The face-to-face conversation is characterized by a low share of feedback. It contains a high share of totally overlapped feedback. There is a relatively low share of initial feedback and a very high share of utterances consisting of only feedback. Repetition is seldom used. These features reflect fast interaction with animated discussion containing relatively long utterances and a lot of backchannelling. In example 5 we can see how L is developing an argument, while A gives feedback, mostlu in the form of overlapped utterances containing only short feedback words (*ja* or *m*) as backchannelling.

Example 5.

L: // **a** som [precis] de du säger som de gäller att den som ligger ett steg före hela tiden
// yes like [precisely] what you are saying like you have to the one who is one step ahead all the time
A: [**m**]
A: (**m**)
L: tjänar pengar och de betyder att alla försöker va ett steg [före] hela tiden så den här utvecklingen den rasar [vidare] i allt snabbare takt
makes money and that means that everybody tries to be one step [ahead] all the time so this development it rushes [on] at an ever increasing pace
A: [**m**]
A: [(**ja**)]
[(*yes*)]
A: **javisst visst**
yes sure sure

3.3   The phone conversation between friends

The phone condition provides a clearer turn taking pattern and, thus, fewer utterances containing only feedback and overlapped feedback than the face-to face condition. Repetition in very rare. Utterances containing only feedback and utterances containing initial feedback occupy about equal shares in the phone condition. The fact that the participants know each other, seems to give the same low overall share of feedback as in the informal face-to-face interaction. This further supports the tentative hypothesis that there is less need for feedback in conversation between persons who know each other than in interaction between strangers. We can note that in this respect the medium does not make any difference. In example 6 we can see relatively long utterances and use of utterance initial feedback in the telephone interaction, as in the Yellow Pages interactions above, pointing to an influence of the telephone

medium in this direction, i.e., a need for salient utterances that should not be too short.

Example 6.

L: **amen** [hur kommer (...)]
   yesbut [how come (...)]
A: [då kommer ju] (för) plötslit folk å böa reagera va
   [then will] (because) suddenly people start to react you know
L: men hur kommer de sej att kvinner och kvinner me barn f framförallt har lättare för
   å se såna här ä längre samband än va vi gör
   *but how come women and women with children in particular can easier see such
   longer connections than what we do*
A: **ja** de beror ju säket på samma sak asså att dom dom upplever rent konkret i den
   situation dom e // att ä dom e är hotade av den här utvecklingen va
   *yes it must depend on the same thing // that they are threatened by this
   development you know*
L: // (**a**) [mer än va vi e men varför]
   // (a) [more than what we are but why]
A: [me sitt barn] // ja därför att ja mena ja tror att de e en de (e) en mer osjälvisk ä typ
   av känsloengagemang i genteMOT barn å sitt eget barn å sånt dä va
   *[with their child] // yes because I mean I think that it is a it (is) a more unselfish
   type of emotinal committment in against children and one's own child and so you
   know*
L: **amen** kan de inte va att man har närmare liksom mellan intellektet å känslena
   också att man inte lyckas förtränga dom här miljöhoten på samma sätt
   *yesbut can it not be that you have like closer between your intellect and your
   feelings too that you can't suppress those environmental threats in the same way*
A: <**jo jovisst**> men de e väl lite granna samma sak
   <yes yes sure> but it is a little of the same thing isn't it
@ <high pitch>

3.3.4   The face-to-face conversation between strangers

This conversation contains more feedback than the conversations between friends. The interaction is slower and more hesitant than between the friends. It is possible that the fact that the participants are strangers is the main reason for the slow and hesitant interaction (although age and ecucation factors can also be important here). The participants are trying to establish mutual frames of reference and mutual interests and this is mainly done by T posing questions to B or making statements and by B answering questions and making statements. The slowness of the interaction leaves ample time for feedback utterances. We can note many pauses within and between utterances. Perhaps this is also a politeness strategy. The speakers exchange short narratives about their work and the relatively many utterances containing only feedback make up the backchannelling. A fair anmount of repetition is used. The low share of initial feedback might have to do with the not so strict turntaking patterns of more informal face-to-face interaction. Example 7 shows a typical sequence of the face-to-face interaction between strangers, with frequent pauses and a high share of feedback, including repetition. In this part, T poses questions and B responds.

Example 7.

T: ...// såg du volvofilmen igår
    // did you see the volvo film yesterday
B: // **aa: lite grann**
    // yees a little
T: **lite grann**
    a little
B: **m**
T: du såg hur // hur nära dom va utan arbete
    you saw how // how close they were to being without job
B: **a** a // [kris **ja**]
    yes yes // [crisis yes]
T: [jobbarna] de va riktig **kris ja** // **ja** // men nu går de bra
    [he workers] it was real crisis yes // yes // but now it is good

In summary, we can make some tentative conclusions, based on the available data in tables 1 and 2 above. The activities which have the highest share of feedback words are the ones where the participants are strangers to each other. The medium (face-to-face vs. telephone) does not influence the overall feedback frequency. Totally overlapped feeback is more frequent between friends than between strangers in face-to-face interaction, which shows the effect of familiarity. Totally overlapped feeback is also more frequent in face-to-face interaction than in telephone interaction, indicating an effect of the medium. Information seeking between strangers over the telephone, however, contains more totally overlapped feedback than the telephone conversation between friends. The phone condition, thus, seems to neutralize the effect of the degree of familiarity, in this case. Utterances with initial feedback are used somewhat more in telephone interaction and in interaction between strangers. When the two factors lack of familiarity and telephone medium are added, there is a marked increase of initial feedback and less totally overlapped feedback. Compared to utterances with initial feedback, utterances containing only feedback show the opposite pattern with respect to activity types, but roughly the same as totally overlapped feedback. They are very frequent in face-to-face interaction, especially between friends. The doctor-patient interactions contain fewer utterances consisting of only feedback. In both types of phone conversations, finally, the share of only feedback utterances is low, i.e., on the same level as or lower than the share of utterances with initial feedback. The totally overlapped utterances containing only feedback contain mainly supportive feedback. Interrupting feedback is slightly more frequent in the conversations between friends than in the other interactions, indicating that familiarity might be important for this factor. (Note, however, that individual factors could also be important here.) Repetitions seem to be used more in institutionalized types of interaction, when information seeking is involved, and where the particants are strangers. The findings, thus, tentatively support the idea that the use of feedback is influenced by the activity type parameter of the medium, but also by the familiarity of the participants.

4　The influence of role structure and individual roles

We will now take a closer look at how the activity type differences are influenced by the role structure, artefacts, other physical circumstances and subactivity. In addition

to the activity types above, we will also consider three role play activities. This will enable us to analyze individual vs. activity role variation in the use of feedback.

The influence of the activity roles can partly be seen in the activity profiles and examples above, but it is really a complex issue. An activity often provides a role structure with specific roles, characterized by rights and obligations. On top of this, we have the individual backgrounds of the participants which also affect how they fulfil their activity roles. For example the roles of interviewer vs. interviewee can be assigned to participants by the role structure of the activity, e.g. the taking of case history in the Doctor-Patient interactions, where the patient becomes the interviewee. But it can also develop as a consequence of the individual background of the participants in situations where it is not given by the activity type, e.g. in a conversation between friends or strangers, where one participant is more active and takes on the interviewer role, while the other one is more passive and becomes the interviewee. The interplay between activity roles and actual individual role performance is influenced by individual background factors which, of course, will exhibit considerable variation. The activity type can impose more or less of a strict role assignment on the participants. We will start by looking at the doctor-patient interactions which have a very clear activity determined role assignment. Table 2 shows the feedback measures, utterances and words for doctors and patients in those interactions.

Table 3. Feedback measures, utterances and words for doctors and patients in consultation interaction.

	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupting FB	Over-lapped FB
Patient	1194	7981	1018	12.8	25.9	33.0	3.9	8.7
Doctor	1226	11307	828	7.3	20.9	23.1	3.1	8.3

The doctor generally talks more than the patient. The patient, as the more passive participant and more often the listener, produces more feedback, (feedback words, share of feedback and initial feedback as well as feedback only utterances). The two participants have about the same share of totally overlapped feedback and interruptions. More speech and less feedback in this case point to the doctor's more dominant activity role.

Next we will turn to the conversation between the friends L and A, which is a kind of argumentative discussion about economy and the environment. The roles are not determined by the activity type, but rather evolve activity-internally as the activity proceeds. The activity type, in this case, does not allow for any strong predictions concerning the share of feedback of the participants. It could, for example, be more or less equal. In table 4, however, we can see the actual outcome.

Table 4. Feedback measures, utterances and words for the friends A and L in informal conversation.

	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupting FB	Over-lapped FB
A	78	1296	91	7.0	19.2	53.8	6.4	35.9
L	53	1315	48	3.7	18.9	26.4	1.9	7.5

We can see that A has more utterances than L and that A and L produce roughly the same number of words. A produces considerably more feedback which consists of totally overlapped feedback only utterances, but also of some interrupting feedback. L, on the other hand, has a lower share of feedback. This difference seems to reflect an activity internal role assignment, where L is verbally dominant, with longer connected utterances, while A is the listener/commentator, using a great deal of feedback utterances. This activity internal role assignment in probably dependent on individual features of the participants, the topic being discussed or other factors.

Let us also investigate what happens when two different people have the same roles. We will take a brief look at two persons in the same roles in a role play activity, a man (S) and a woman (E). By comparing them both in each of the customer and sales clerk roles, we can see how much their individual role features are affected by the role reversal (see table 7).

Table 7. Feedback measures, utterances and words for subject S as sales clerk and customer and subject E as sales clerk and customer in role play.

	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupting FB	Over-lapped FB
S sales clerk	42	160	40	25.0	26.2	57.1	0.0	23.8
S cus-tomer	54	368	49	13.8	27.8	42.6	7.4	16.7
E sales clerk	49	868	39	4.5	34.7	12.2	6.1	4.1
E cus-tomer	33	609	23	3.8	15.2	9.0	0.0	0.0

We can see that the individual role features have a very strong influence on most of the feedback patterns. The share of feedback and totally overlapped feedback and the share of only feedback utterances show a difference between the individuals in both roles. In both roles, S has considerably more feedback, totally overlapped feedback and only feedback utterances than E. We can guess that E is the more active participant (she also produces many more words). She gives very little feedback at all and especially uses very few only feedback utterances (very little backchannelling

and few only feedback utterance turns). She rather tends to keep the turn, once she has it, and produces very long utterances. S, on the other hand, is more similar to B in the role play, with a high use of single feedback, including backchannelling. Judging by this comparison, it thus seems as if individual style might be a stronger influencing factor than activity role.

There is, however, also a difference between the roles, which is the same for both individuals. Both S and E produce more feedback, more totally overlapped feedback, more initial feedback and more only feedback utterances as sales clerks than as customers, so the sales clerk role promotes the use of feedback. Maybe the sales clerk role, given the instructions of the role play, is more passive (reactive), as the recipient of the customer's complaint and also requires more of politeness. The more passive (reactive) role is likely to promote all types of feedback. Feedback only (both overlapped and non-overlapped) could be reactions when listening to the customer's complaints. The sales clerk role could, in addition, demand smooth turn taking, which could involve utterance initial feedback and a more formal style. Feedback interruptions are more frequent in the second role play when S is the customer and E is the sales clerk (possibly because the participants and the activity are more familiar the second time). Based on this comparison, we could guess that B above might have had an even more passive role producing even more feedback had he been asked to play the sales clerk in the role play. Note also the differences between the measures for S as a sales clerk interacting with B and S respectively in tables 6 and 7 above.

5   The influence of artifacts

The influence of artifacts can be exemplified by the findings relating to the telephone condition and its interaction with other factors reported above.

6   The influence of other physical circumstances and subactivity

One example of how physical circumstances (other than artefacts only) can affect feedback is the doctor-patient interaction, which consists of sequences with very different physical circumstances. The main bulk of the interaction is a conversation carried out in a setting where the participants are seated opposite each other, whereas the physical examination part takes place in a separate part of the room. In the physical examination part, the patient can be partly undressed and placed lying down or in some other position suitable for the examination, while the doctor examines the patient's body by physical manipulation with his hands and different instruments. We, thus, have a situation where the same two participants communicate under different physical circumstances, the conversation in the subactivities of the case history and the ordination (with differences in topic and in main speaker role) and the subactivity of physical examination. Table 8 shows the feedback measures in the three subactivities.

Table 8. Feedback measures, utterances and words for doctors and patients in the case history physical examination, and ordination subactivities.

Sub-activities	Utter-ances	Words	Total Feed-back words	Feed-back share	Initial FB	Only FB	Inter-rupting FB	Over-lapped FB
Case history D+P	711	5680	530	9.3	23.6	27.4	2.8	8.0
Case history D	373	2315	249	10.8	18.2	32.7	2.4	12.6
Case history P	338	3365	281	8.4	29.5	21.6	3.3	3.0
Physical examin. D+P	492	3317	358	10.8	21.1	24.4	3.3	4.9
Physical examin.D	251	2166	176	8.1	20.7	16.7	2.8	4.4
Physical examin.P	241	1151	182	15.8	21.6	32.4	4.4	5.4
Ordina-tion D+P	831	7473	667	8.9	23.6	30.2	3.5	11.0
Ordina-tion D	410	5344	268	5.0	22.4	14.6	2.7	6.3
Ordina-tion P	421	2129	399	18.7	24.7	45.4	4.3	15.7

Our main concern is how feedback in the physical examination differs from feedback in the other two, more speech dependent, conditions. We can notice that the physical examination contains fewer utterances, words and feedback expressions than the other two conditions. The share of feedback, however, is higher in the physical examination. This is due to a relatively high share of feedback from the patients. Both the physical examination and the ordination contain considerably more totally overlapped utterances containing only feedback, from the patients than from the doctors. This indicates that the doctors are verbally dominant in both these conditions (although less in the physical examination than in the ordination). In the case history condition, however, the reverse holds, i.e., the doctors produce more totally overlapped feedback utterances. Here the patients are verbally dominant. The rate of utterance initial feedback is also the same for the physical examination and the ordination and roughly the same for both participants. This could be a consequence of the sequence of events, where the case history is the initial contact between strangers and therefore more polite (cf. above). The rate of interrupting feedback is the same for all the three conditions and only slightly higher for the patients than for the doctors. We can, thus, conclude that the feedback measures are perhaps more sensitive to the verbal dominance than to the physical condition, but that the physical examination condition involves verbal dominance from the doctors. It is therefore similar to the ordination, but different from the case history. We can also conclude that the physical

examination contains less feedback than the other conditions, on the whole. The examination contains less of narration and backchannelling (thus, fewer overlapped feedback utterances on the whole) and more of direct questions, answers and comments. The turn taking is slower and more structured. This could be caused by physical as well as secondary psychological circumstances. There is less eye contact between the participants, partly because they are no longer seated opposite each other, partly because they both tend to focus on some instrument or body part most of the time. The physical conditions of the examination could also, secondarily, make the examination into a more tense situation than the conversation. The feedback profiles show how the doctor has the initiative. He does not always have to start his utterances with initial feedback, but can change topic, ask a question etc. directly. In the physical examination condition, feedback is affected by the focus of the attention of both the participants on the ongoing events (body parts, instruments etc.). Feedback quite often occurs as a reaction to events, e.g. the result of some part of the examination, rather than to the previous utterance. A typical sequence is that the doctor asks a question, while at the same time concentrating on measuring something. This is quite often a yes-no question or another question requiring a short answer, which is then followed only by feedback from the doctor. Since the examination takes longer than the answer, however, the patient often goes on to fill the silence during the examination with a short comment after each of the doctor's feedback utterances, if there is no more question from the doctor. Some of the features of the examination can be seen in example 8. The doctor's first three utterances contain no initial feedback. The doctor questions the patient while he is measuring his blood pressure and the patient answers and comments. The last two feedback utterances are reactions of the participants to the result of the measurement (which is in this case uttered by the doctor).

Example 8.

D: ja ska ta de stående också om du ställer dej där borta
   I will take it standing too if you stand over there
P: **mm** (där **nej**) <patient gets up> de ä så stelt å resa sej <doctor measures blood pressure>
   mm (there no) <patient gets up> it is so stiff to get up <doctor measures blood pressure>
D: men du blir inte yr när du reser dej
   but you don't get dizzy when you get up
P: **joo ibland**
   yes sometimes
D: just när du [reser dej ur sängen]
   right when you get out of bed
P: [**joo** ja kan inte] kan inte resa mej hastigt [utan] tar de
   [*yes I can't*] *can't get up fast* [*but*] *take it*
D: **nähä** <doctor measures blood pressure>
   no <doctor measures blood pressure>
D: /// hundrasjutti sjutti
   /// *a hundred seventy seventy*
P: **jo då**
   yes then
D: **jaa**
   yes

If we look at the main purpose of the three subactivities, we find that the case history and the physical examination both have as their main purpose that the doctor should get the necessary information about the patient's condition for making the ordination. He collects this information verbally in taking the case history, but mainly by observation and manipulation in the physical examination. The patient is the main provider of information in the case history and is therefore encouraged to speak. The goal of this subactivity is cleary verbal. During the physical examination, however, the doctor still asks questions to a certain extent, but his main source of information is the physical examination in itself. The goal is, thus, non-verbal and there is not so much need for the patient to provide information verbally. The main purpose of the ordination is that the doctor should give the patient relief by prescribing some treatment. This is again done mostly verbally, by speech as well as writing prescriptions.

7   Conclusions

We have seen above how activity factors, i.e., the activity type, the roles of the participants, the use of artifacts, other physical circumstances and subactivity, as well as more individually based factors, such as the degree of familiarity of the participants, can affect linguistic feedback. Some of the ways in which these factors affect the use of feedback seem to be the following, in summary.

Interaction between friends contains relatively little feedback. But friends use a high rate of overlapping feedback in face-to-face interaction, while this is not the case when they interact over the phone. Strangers do not use much overlapping feedback. There are several possible explanations for this. Friends tend to communicate faster, thus they overlap more. They do not have to tune in to each other and be polite, like strangers, who therefore have a slower turntaking pace and more feedback. The phone condition imposes stricter turntaking restrictions, which do not favor overlap, but a slower turntaking pattern. A lack of familiarity seems to impose similar restrictions.

The person who has the more passive or less dominant role (given by the activity type, by individual factors, by the topic of conversation etc.) uses more feedback, especially more totally overlapped feedback and only feedback utterances, and fewer words than the person who has the more active or dominant role. The more passive role behavior is typical of both the listener role and the interviewee role (which can, for example, be held by the patients in the case history subactivity of doctor-patient interactions, but also more generally by the more passive participant in a conversation or role play where the more active participant takes the interviewer role).

Telephone interaction contains more utterance initial feedback and less overlapping feedback than face-to-face interaction. The clearer turntaking pattern and need for salient utterances impose this behavior.

In interactions where comprehension checks are needed (in our sample more institutionalized interactions and interactions between strangers, often involving sequences of information seeking), repetition feedback is used systematically for this purpose and repetition is, thus, much more frequent than in the other interactions.

We can conclude from the figures and examples above that the different activity factors and other factors take part in a complex interplay resulting in behavioral interaction patterns, which, among other things, involve linguistic feedback.

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