Title: Frames, Constructions, and Invariant Meanings: The Functional Polysemy of Discourse Particles

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0. Introduction

Discourse particles are items that are notoriously difficult to describe regarding all linguistic levels involved (Wilkins, 1992: 155), and it is not even clear whether they constitute a class. The main problem in the description of discourse particles, however, is taken to be their functional polysemy.

0.1. Approach

The functional spectrum each discourse particle lexeme can fulfil is considerable, and their interpretation can vary very much depending on the situation in which they are used. Still, interactants seem to be able to interpret occurrences of discourse particles, and many previous studies show that discourse particles are not distributed randomly and that they cannot be used interchangably (e.g. Fox Tree and Schrock, 2002). The best starting point for an analysis therefore seems to take the discourse particle lexemes as the anchor point, and to investigate the different variables that determine their interpretation and use one by one. The approach taken here is therefore semasiological. That is, the perspective is to start out from particular linguistic forms, to describe their functional spectrum, and on this basis to develop a model of pragmatic interpretation.

One factor that influences the interpretation of a discourse particle occurrence seems to be the structural context in which it occurs (e.g. Heritage, 1984). Investigating the structural contexts of discourse particles provides us with information on the role of their position with respect to turn and utterance, of their prosodic properties, and on their role in the verbal and extra-linguistic action taking place. In order to get an idea about the possible variability of their functional spectrum, we then have to compare the results from our analysis with data from corpora recorded in different situations. Only by observing the way discourse particles can be employed in a variety of situations, can we hope to understand how the contribution of the properties attached to each particle morpheme, the word class, the structural context, and the situation contribute to the interpretation of its uses.

The approach taken here proposes three concepts to account for the contributions of the discourse situation, the structural context, and the morpheme respectively: frames, constructions, and invariant meanings. Thus, it is believed that the fact that not every discourse particle can mean everything is best accounted for by the postulation of invariant meaning components. In order to account for the extreme variability of the meanings and functions of discourse particles, a mechanism is needed by means of which it is explained how discourse particles get their particular functional spectrum. This is achieved in this approach by the postulation of a number of communicative domains to which speakers orient and which constitute a communicative background frame, i.e., a model of the situation attended to. Finally, in order to account for the interpretation of particular discourse particle occurrences in context, a number of constructions, i.e., general form-meaning pairs, are proposed.

0.2. Methodology

There are a number of methodological premises which have guided this investigation.
For instance, it is assumed that intuition is not reliable if we want to determine the
meanings and functions of discourse particles. Instead, it is necessary to base each
analysis on the close examination of corpora of spoken interaction, since, to use
Sacks' (1984: 25) words, "from close looking at the world we can find things that we
could not, by imagination, assert were there." Similarly, it is held that we have to be
very cautious about which explanatory concepts to use in our analyses; that is, the
descriptive categories employed should be those to which the speakers themselves
can be shown to attend. Thirdly, if we classify the data beyond the structural contexts
apparent in the sequential structure of dialogues, we have to ensure the explicitness
and intersubjectivity of the classification criteria.

The method mainly used is conversation analysis (CA). For instance, the different
possible interpretations of the discourse particle lexemes are identified by means of
CA methods. Using CA commits us to the use of attested corpus data and the focus
on speaker categories. However, a consequence of the focus on the interactional
relevance of the items under consideration is the close connection between particular
uses of discourse particles and their interactional contexts. Such a methodology does
not provide the means to address the connections between the different uses. Thus,
other methods have to be used for the development of a model of the polysemy of
discourse particles. Here, CA can be again very useful by providing methods for the
identification of the components of the model of the communicative situation as

domains attended to by the speakers. Especially in the comparison of different corpora these domains become apparent as speaker categories.

Comparing different corpora is crucial to the analysis here proposed because only if we understand how the mechanisms work that allow speakers to use discourse particles for so many different purposes depending on the situational requirements, can we arrive at a model that can deal with the flexibility observable. Such a model, it is assumed here, has to be based on the speakers' needs, and these cannot be assumed from an outside perspective but have to be categories to which speakers are really oriented. A comparative CA analysis can provide the different communicative tasks attended to differently in the different corpora as speaker categories.

For describing the invariant meaning components of each discourse particle morpheme, Natural Semantic Metalanguage (Wierzbicka, 1986, 1996) is taken to be, in spite of a number of methodological problems, the most useful descriptive language available. Core meaning descriptions however need to be validated. The formulations in Natural Semantic Metalanguage (NSM) proposed can be tested on corpus instances by means of tests outlined in Fischer (1998). These tests rely on judgements of oddity, based on Cruse's (1986) test frames. While there are a number of problems with tests of core meaning components (cf. Schourup, 1999: 255-7), the only alternative is to argue for the plausibility of the analyses.

For the representation of generalized structural contexts, the notion of construction (Goldberg, 1995, Fillmore and Kay, 1999) is proposed, and the influence of the communicative situation will be accounted for in a frame-based representation (e.g. Fillmore and Atkins, 1992).

0.3. Data

The functions identifiable for a given discourse particle crucially depend on the communicative purposes relevant in the situation in which it is used. Therefore, the corpus studied is of great importance. To use conversation as a corpus is of course the most natural starting point, yet some functions of discourse particles only become apparent when speakers aresimultaneously engaged in particular non-linguistic actions. For example, in task-oriented dialogues in which one speaker instructs another how to construct a part of an air compressor (Grosz, 1982: 154), the English discourse particle *okay* may be used to signal that the constructor of the compressor has finished a construction phase. In the following example, the expert (E) provides the apprentice (A) with an instruction. After a partial repletion of the expert's instruction, the apprentice uses *okay* to signal the completion of the task, as is apparent from the expert's reaction who describes the consequences of the successful completion of the working step:

(1) E: Open the top of the valve and let the water out. Just open the faucet up on
   top. Just like you were going to turn the water on.
   A: Oh, like I'm going to turn the water on. **O.K.**
   E: Now, that'll relieve the pressure.

It is unlikely, though not impossible, that such a reading of *okay* could be found in conversation as well, because the task, to signal the completion of an action

requested, will be rarely relevant in conversation. However, such uses are likely in naturally occurring service encounters (cf. Merritt, 1980).

The first set of data I will investigate here are American English appointment scheduling dialogues in unrestricted settings between two adult speakers, recorded at Carnegie Mellon University in the framework of the Verbmobil project (VM Database, 1995). The participants' tasks is to schedule appointments, and the calendars they use are not their own but have been set up by those collecting the data. For this reason, participants do not freely construct their topics. Yet, turn length, turn distribution and turn content are free to vary and thus the interactive processes between the participants are still close to those observable in conversation. Using task-oriented data has not only the advantage that we can investigate how discourse particles may be used to fulfil functions regarding the extra-linguistic context, but it also allows the controlled investigation of particular variables that may influence their usage.

The second set of data are correspondingly also appointment scheduling dialogues, yet they are held between humans and a (simulated) computer, that is, the participants believed to be talking to a computer while the computer output was actually simulated by a human 'wizard'. The dialogues were recorded in order to study how speakers react to communicative failure in dialogues with automatic speech processing systems, and thus, after a short cooperative phase, the computer output often exhibits misunderstanding, failed understanding, or synthesis errors. For details see Batliner et al. (2003).

0.4. Problem Statement

The focus of this paper is on the functional polysemy of discourse particles. While
their functional interpretations can vary immensely depending on their contexts of
usage, it is assumed here that there are some basic observations that, if accounted for,
allow a sufficient explanation of the functional spectrum observable as well as further
possible readings they may get in different situations. Thus, the model of the
meanings and functions of discourse particles proposed here attempts to account at
least for the following observations:

- The particular lexical item contributes to its interpretation; that is, although there
  is a huge range of possible interpretations for each discourse particle lexeme, not
  everything is possible. Instead, the use and interpretation of individual discourse
  particles seems to be learnable, and the interpretation of the individual
  occurrences is obviously possible. There is thus some morpheme-specific
  contribution by each discourse particle.

- It is a particular, rather than an arbitrary, range of functions discourse particles
  can fulfil. Although scholars disagree much about the functions of discourse
  particles, there is a range of functions that is commonly, and often cumulatively,
  attributed to them. This spectrum includes functions with respect to the turn-
  taking system, the indication of discourse relations, discourse structuring, the
  regulation of interpersonal relationships, speech management, or politeness. Most
  of these functions proposed are also fulfilled by items of other word classes and
  thus only the accumulation of the functions proposed in the literature seems to be
  specific to discourse particles. This functional spectrum, however, is directly

related to the tasks to which speakers can be shown to attend in the communicative situation.

- Discourse particles do not occur anywhere in a turn but in particular structural slots, and their position and intonational realization (cf. Ehlich, 1986) may influence their interpretation.

In order to account for these three observations, a tri-partite model of the functional polysemy of discourse particles will be presented below. Such a model may also allow a definition of the word class, and it will have particular consequences for several distinctions of general linguistic interest.

1. Definition

For the items discussed in this paper, the term *discourse particle* is used, rather than, for instance, *discourse connective* or *discourse marker*. The term *discourse connective*, for instance, would associate the whole class with a particular function, which would not do justice to the broad range of functions discourse particles are held to fulfil. The functional spectrum discourse particles can fulfil is indeed so broad that a definition on functional grounds does not seem justifiable. A functional definition indeed requires an independent model of the functional spectrum and the role of discourse particles therein. Without such a model, it appears as if the only thing that seems to connect the different functions is the fact that discourse particles can fulfil them. While indeed a general function can be assumed (see section 4.1), this general function does not explain the individual functional interpretations. The functional spectrum discourse particles can fulfil is only motivated by the

communicative tasks to which the speakers attend. Thus, the definition of the functional spectrum requires an explication of what the communicative situation consists of. This definition can of course vary from situation to situation. The functional spectrum of discourse particles can thus not be determined once and for all; just the mechanism by means of which they get their functional interpretations in the various contexts can be specified. It seems therefore necessary to take a particular, formally definable, class as the starting point for the investigation, rather than attempt a functional definition.

Of course it is true that a number of discourse particles are not particles, that is: small, syntactically, semantically and often prosodically unintegrated, uninflected words. For instance, *you know* is formally complex and, like *look* and *listen*, it can be held to be inflected. Yet they occur invariantly in this form and can thus be regarded as lexicalized. Therefore, they are both formally, regarding their unintegratedness into the utterances they may occur with, and functionally similar to discourse particles. The most typical members of the class under consideration (in English) are thus indeed small, uninflected words, yet the list of objects to be studied should include other lexicalized items with inflexible formal aspects. The word *particle* is thus used as a cover term because it calls up conveniently the association of not-integrated items, accounting for the fact that discourse particles are generally not part of utterances. More correctly, however, the class under consideration should be understood as unintegrated, lexicalized, idiomatic items, the prototype being particles.

Discourse particles also display a characteristic semantic structure. They are not believed to *mark* anything. Instead they are regarded as lexical items, i.e. lexicalized

form-meaning pairs, whose meanings are under-specified. In this way, they are similar to linguistic signs like plural morphemes, word order, or tense markers. Their semantic content consists in claims of ongoing mental processes, specified by reference to aspects of the communicative situation. Common to all discourse particles are thus not only their under-specified invariant meanings, which is why, for instance, Hentschel and Weydt (1989) and Weydt (this volume) have described them as *synsemantica*, but also the nature of their lexical meanings, which all report on the speaker's mental state. This does not mean that they really express the speaker's cognitive processes, but that they are claims (Schegloff, 1982) of ongoing mental processes that can also be employed strategically (Fischer, 1999). These under-specified signals of mental processes, for example, as a 'change-of-state token' (Heritage, 1984), are contextually specified by reference to a certain communicative domain on the basis of a model of the communicative tasks to which speakers attend.

Discourse particles can be distinguished from their "homonyms" in other word classes by the domains to which they refer. For instance, answer particles directly refer to the propositional information conveyed, while discourse particles refer to particular aspects of the speech situation (the communicative background frame, see section 3). Likewise, modal particles can be distinguished from discourse particles in that the former refer to the pragmatic pretext, to some kind of information presented to be 'at hand' (Diewald and Fischer, 1998, Diewald, this volume), or, in Ducrot's words, the "different points of view which are expressed within an utterance" (Ducrot, 1996: 68-69). Connectives (cf. Pons Bordería this volume) or text relation markers (Roulet this volume) refer to two elements: to a host utterance and to an aspect of the pragmatic pretext, the discourse situation (see example (2) in Mosegaard-Hansen this volume), or what Roulet (this volume) calls discourse

memory. Therefore, unlike discourse particles, connectives are not prosodically and structurally unintegrated but connected to some host utterance (cf. Lewis this volume).

By attributing the word class-specific properties of particles to different domains of reference, the model explains how the same particle morpheme may function in different word classes (cf. Abraham, 1991). Similar to Weydt (this volume), it is thus assumed here that "a certain particle can fulfil the function of a *Gliederungssignal* [a discourse particle, K.F.], **because of** the fact that it maintains its original meaning." The same morpheme may thus function in different word classes, from which different lexemes, i.e. discourse particles, modal particles, connectives, etc., may result. The contribution of the respective word classes, besides specifying the syntagmatic properties of the item under consideration, consists in specifying particular reference elements (cf. Diewald, this volume).

Now, discourse particles are semantically not an entirely homogeneous group. The different subclasses can be distinguished with regard to the kinds of mental processes signaled: Interjections, such as English *oh, ah*, and *oops,* all display the sudden recognition of some kind of information. Describing their invariant meaning components by using Natural Semantic Metalanguage, it can be found that all interjections contain an 'I now'-component (Fischer, 2000a). Hesitation markers, such as *uh* and *um,* in contrast, do not display a sudden change in the speakers' mental states but instead indicate a current process: 'I am thinking' (Fischer, 1999, 2000a). Segmentation markers, such as *well, yes*, or *okay*, which actually fulfil many more functions than just segmenting discourse, can be divided into two different kinds: those whose meanings directly involve the communication partner (e.g. for

English *yes*: 'I think that you and I think the same' (cf. Fischer, 2000a: 253-8)), and those which state the results of a cognitive process, such as English *well* ('after I have thought about all I know about it I say this' (cf. Fischer, 2000a: 245-9)). Thus, the mental processes displayed allow a classification of discourse particles regarding the sub-classes interjection, hesitation marker, and segmentation marker, while the domains to which particles may refer and which specify their under-specified meanings serve to distinguish discourse particles from other word classes.

2. Functional Spectrum

The functional spectrum of discourse particles will be exemplified here by an analysis of the discourse particle *okay* in the appointment scheduling dialogues described in section 0.3. *Okay* shares many functions with discourse particles signaling agreement, like *yes* or *yeah*, with topic structuring discourse particles like *well, uh, hm*, or *oh*, and with tag questions. The morpheme *okay* can furthermore function as an adjective or adverb, as in 'mjcb_5_04: *Wednesday's okay*' or in 'fkcf_5_05: *would one thirty be okay with you?*' Since *okay* participates in two word classes, it is a useful example for illustrating the contribution not only of word-specific, but also of word class-specific meaning aspects and their interaction.

In the human-to-human appointment scheduling dialogues investigated, we can find *okay*

- turn-initially,

- turn-medially, but in utterance-initial or second position (after another discourse particle), and

- turn-finally.

The first example of *okay* is turn-initial after a question. After the occurrence of *okay*, speaker fcaw_4 repeats the date and time previously proposed by her communication partner, summing up the information agreed upon. We can thus assume that *okay* constitutes a response to a proposal here, stating agreement regarding the date and time proposed:[1]

(2) mdkr_4_06: well, it looks like our only choice is gonna be Thursday, um I'm in a meeting till ten, and then I've got the rest of the day free right now, um so do you wanna say early afternoon? around one?

fcaw_4_07: **okay**. Thursday afternoon around, uh one o'clock, on June third'll work for me. why don't we make it then.

In the following example, there are two further turn-initial occurrences of *okay*. The first follows a suggestion for a date when to meet. Thus, *okay* occurs in a position in which agreement may be relevant, namely directly after a proposal, as we have seen in the previous example. However, *okay* is followed then by an occurrence of *uh* and a clarification question concerning which Tuesday her partner had meant in her proposal. The partner's reaction is correspondingly a clarification of the day meant, followed by a question containing the same proposal as previously made. Thus, the speaker does not take the previous occurrence of *okay* to mean acceptance of the proposal. In the next turn, speaker ffmv_7 utters a second *okay*, followed by an explicit statement that the date suggested suits her well. Thus, in the second case, *okay* can be taken as a signal of agreement regarding the content of the utterance,

whereas in the first occurrence *okay* has not been interpreted as such by her communication partner:

(3) menm_7_05: well, could you come in at eight o'clock on Tuesday, then we could do it from, eight to ten on, Tuesday.

ffmw_7_06: **okay**, uh do you mean Tuesday the twenty third?

menm_7_07: yes I do, Tuesday. November, twenty third. eight to, ten AM. how's that sound to you.

ffmw_7_08: **okay**, that's fine, I'll see you Tuesday November twenty third then. #paper_rustle# thanks.

Also in the next example, *okay* occurs turn-initially, however, it is not preceded by a proposal for an appointment, as the previous instances of *okay* investigated were. Instead, it occurs at the very beginning of the dialogue. Yet, the speakers do not greet each other because they have previously carried out another appointment scheduling dialogue. It thus occurs at a thematic break, the transition from one appointment scheduling phase to the next, possibly mediated by new instructions or the exchange of calendars by the person supervising the recordings. That is, *okay* marks here the beginning of a new phase in the interaction:

(4) fmjm_3_01: **okay** Danny, now that this meeting's over, we need to schedule another one so we continue, to get our work done on this project, and, the times that, I would have free, coming up, would be on the twenty fifth, in the morning, <P> twenty seventh in the afternoon, eh February third, in the afternoon, and that's about it, do you have any of those times free?

Consider two more turn-initial uses of *okay*. The first use of *okay* in the following example occurs after the communication partner has uttered *you know*, which seeks for a reaction of accordance from the partner (cf. Schiffrin, 1987:275, Östman, 1983). So *okay* may be a reaction to the tag question, signalling understanding. However, the utterance following *okay* does not refer to the information that the event will be a joint thing. Instead, *okay* and the statement that speaker fdlw_2 will bring something, occur in reaction to the partner's request to bring something to drink, formulated as a matter of fact at the beginning of the turn. Thus, *okay* may do many different things in this utterance: return to the previous topic, signal understanding regarding the preceding utterance and indicate an agreement with the whole scenario outlined by her communication partner:

(5) mggd_2_07: alright, I'll bring the donuts, and um you bring something to drink. maybe some coffee. or maybe some uh some coca cola. something, I dunno. it's gotta be like it's gotta be a joint thing. you know?
fdlw_2_08: **okay**, I'll do it, I'll bring something, I'll see you then, bye,
mggd_2_09: **okay**, bye, <P>

The second *okay* in the example occurs at the end of the interaction, after the communication partner has concluded both the appointment scheduling phase and the interaction itself by summing up and uttering '*bye*'. Thus, *okay* is used here to conclude the conversation, which is then ended by the second pair part of the closing '*bye*' (cf. Schegloff and Sacks, 1973).

The following example shows *okay* in second position within the turn, that is, it is preceded by another discourse particle, here *um*. The previous turn ended in a

question proposing two possible dates for an appointment. After the hesitation marker *um*, *okay* is used with falling intonation and a short pause, as indicated by the full stop in the transcript. The speaker continues by stating her restrictions with respect to times when to meet on those two days suggested. Thus, the speaker takes up the proposal and continues with relevant information, elaborating on her communication partner's proposal. So although acceptance of the proposal made is relevant here, *okay* may display here only successful perception and understanding to the communication partner, indicating that what is to come is related to her partner's turn. Thus it may be a signal of 'acceptance' of the communication partner's contribution (Clark and Schaefer, 1989):

(6) fmjm_1_01: hi Danny, /glottal/ now that we've finished our last meeting, we need to, arrange another one #begin_drawer_noise# within the next two weeks, and I'm looking at my schedule, and the days that I would have free, so we could meet and get #end_drawer_noise# it over with at a reasonable time would be the sixteenth, or the nineteenth. what do you think of that,
mdrd_1_02: um **okay**. the sixteenth, I'm, busy from nine to twelve, and the nineteenth I'm busy from eight to five, so anytime around there would be, hip with me. <P>

Okay can also occur turn-finally:

(7) mjay_6_01: #paper_rustle# hi Arthur, before we go, I think we should schedule a meeting sometime in the next two weeks, for at least two hours. **o/ okay**?
maem_6_02: sounds good. um let's see, on, Monday I have something from one to four, can you meet in the morning?

In this example, *okay* occurs at the end of the turn with rising intonation. The communication partner reacts to this with a signal of agreement: '*sounds good*'. Similarly, in the following example, *okay* is used turn-finally at the end of a statement summing up the joint plan. Also in this example, the communication partner reacts with a statement of agreement, in this case even with another instance of *okay* with falling intonation, followed by a repetition of the communication partner's previous words: *see you then*. We can conclude that the function of *okay* in turn-final position and with rising intonation is to ask for agreement.

(8) fdlw_1_14: sounds great. don't know about you but, um /begin_laughter/ it's been a hell of a week so, /end_laughter/ I'm ready to, uh to uh go tie one on, or /begin_laughter/ whatever you wanna call it. /end_laughter/ so, I'll see you then, **okay**? #microphone_adjustment_noise#

mggd_1_15: **okay**, um, see you then, <P>

The agreement asked for is provided in this example by another instance of turn-initial *okay*, followed by a repetition of the communication partner's linguistic material. The exchange serves furthermore to bring the conversation to a close.

To sum up, *okay* has been found in turn-initial position to signal agreement after proposals (example (2)), even if the proposal was followed by further explanations as in example (5). It was found to mark the beginning of a new appointment scheduling phase (example (4)). Furthermore, it has been found in a similar structural context as in example (2) to be used to continue relevantly with the same topic, yet without signaling agreement with the previous proposal (examples (3) and (6)). In example (8), it occurred as part of a closing sequence (cf. Schegloff and Sacks, 1973). Finally,

it has been found turn-finally with rising intonation in checking function (example (7)).

Previous analyses have identified a similar functional spectrum for *okay*. For instance, Stenström (1994: 67), investigating English conversation, holds *okay* to work as appealer, that is, as a turn-final checking signal, as an answer and acknowledgement signal, and as a framer, re-opening (1994: 124) or terminating topics (1994: 154). Regarding the framing function, example (4) in our data shows that the topic needs not be previously dealt with. Similarly, examples from Condon (1986: 80) illustrate that *okay* can be used at the beginning of a new decision sequence. Thus, 'resuming' or 'reopening' the topic would not be an accurate description of these examples. However, although the topics in example (4) and in Condon (1986: 80) have not been previously discussed, they have already been agreed upon by the participants. Condon (2001: 492) therefore argues that *okay* marks "transitions to some expected sequence of talk." This could explain that we have also found *okay* at the beginning of turns in which the speaker elaborates on the proposal previously made (example (6)) or in which she asks for further clarification (example (3)), thus continuing on the previous topic. Similarly, Bangerter and Clark (2003) and Bangerter et al. (2003) argue that *okay* is primarily used for vertical navigation of conversation, that is, to enter and exit joint projects. In particular, *okay* is used for signaling consent to beginning or ending a topic. To conclude the discussion of the topic function of *okay* we can summarize that *okay* can introduce new topics that have been jointly established before, it can continue on, re-open and terminate topics.

Grosz (1982: 153) identifies four functions of *okay* in task-oriented dialogues, which do not include the framing function. Instead, the function she identifies comprise signaling: 'I heard you,' 'I heard you and I understand,' 'I heard you, I understand, and I am now doing what you said,' and 'I'm finished (O.K. what's next?).' Similarly, Merritt (1980), in her conversation analytic study of *okay* in service encounters, shows that *okay,* in contrast to *yes*-like items which usually occur in response to requests for information, is generally used in response to requests for action. She therefore holds *okay* to fulfil a *bridging* function, namely to anchor non-verbal action in what has gone on verbally and to provide explanations of what follows (1980: 165). However, she argues that it is not always non-verbal action following, but that with *okay* the speaker may also acknowledge that it is her turn to take some action. A consequence is that *okay,* in signaling acknowledgement that it is one's own turn to act, releases the communication partner from further obligations. This is why, in her view, it can also occur after rejections (1980: 166).

Merritt's uses of *okay* in reaction to requests can be compared to examples (2) and (5) above in which *okay* occurs in reaction to proposals. In these examples, the speaker provides the communication partner with some behavior that is in accordance with the communication partner's wishes or suggestions. The point therefore does not seem to be whether the action the speaker commits herself to is non-verbal or verbal. Condon (1986: 87) argues that the behavior requested just cannot be the provision of information. Thus, in her view, *okay* cannot be used as a response to information questions such as `are your eyes blue?'. Correspondingly, in spite of its form as a yes/no-question, `Do you wanna say early afternoon' in example (2), which is replied to by means of *okay,* is treated as a proposal by the communication partner, not as an information question. Stenström (1994) supports

the restriction of possible responses after questions that exclude *okay* as an answer to a question. *Okay* therefore seems to be restricted to particular illocutionary acts. This relates to Helbig's (1988) suggestion that discourse particles function as illocutionary indicators. Yet, the question is whether speakers really attend to such information as informatory cues. It seems more likely that the inherent properties of *okay* constrain its usage.

Condon (1986) argues that the two functions identified by Merritt in service encounters, to acknowledge and to link two stages of an encounter (1980:168), can also be found in other types of discourse, such as the task-oriented family interactions she analyses. She identifies many instances in which *okay* is used to signal agreement in decision making sequences. The turn final response eliciting use of *okay* has also been found by Condon but was discarded from her analyses that focus on the framing function of *okay*. Condon concludes that *okay* is a "virtually contentless particle" (1986: 98), but argues for a strong correlation with the structural organization of the interaction. The organization function of *okay* which in her view consists in reflecting "the complex, difficult-to-identify structure of the interaction" (1986: 75) is further developed in Condon (2001). In this paper, she investigates the (quantitative) correlation between discourse steps in task-oriented dialogues and the occurrence of *okay*. The main question regarding such an analysis is only for whom *okay* reflects the discourse structure, i.e. whether this function is attended to by the participants in the interaction.

What we may ask now is which of the functions identified in the previous studies and the analysis above can also be found in human-computer appointment scheduling dialogues.[2] The question is how the functional spectrum of *okay* changes in this kind

of interaction, because only on the basis of an understanding of the mechanisms by means of which discourse particles get their interpretations in very different situations, can we identify the determining factors and develop a model of their functional polysemy.

First of all it has to be mentioned that in the seven dialogues of between 20-30 minutes, only three speakers used *okay* as a discourse particle in the main phase at all. In the other four dialogues it was used by three speakers just once and by the fourth speaker thrice, but exclusively in the cooperative phase at the beginning of the dialogues or directed to the conductor of the experiments.

The following example shows *okay* turn-medially in a context in which the computer has uttered nonsense. The speaker accordingly asks a clarification question first, before she utters *okay*. *Okay* can therefore not signal acknowledgement here:[3]

(9) s4011107: I have noted the appointment for you.

e4011107: <%><;whispers>

s4012101: blablurb was soll date?

e4012101: sorry? <P> <Cough> **okay**. what about Monday, the fourth of January? <P> from eight <P> till fourteen-hundred.

Similarly, in the next example, *okay* occurs in reaction to a display of a misunderstanding of her proposal, however, not immediately, but after pausing, breathing, sighing events and an instance of the hesitation marker *uh*. Thus, whereas in human-to-human communication speakers signal acceptance of the previous turn,

this is a highly unlikely interpretation here. Furthermore, the information presented after *okay* constitutes no relevant contribution to the previous topic:

(10) e4014302: <Cough> Wednesday, the thirteenth of January ninety-nine.

s4014303: the weekend is already occupied.

e4014303: <;groans> <P> <B> <;sighs> <P> uh **okay**. Tuesday, nineteenth of January ninety-nine?

In the following example from a different speaker, the context in which the first instance of *okay* occurs is the same as in the previous example. Likewise, *okay* cannot function as a signal of acknowledgement here because the rejection the computer has produced does not refer to the speaker's previous proposal. Thus, it is not even clear which weekend could be occupied. The second *okay* then is framed by two metalinguistic statements, the first one being interrupted. It consequently serves as a repair marker:

(11) e4072302: <Swallow> <B> <P> I have time on Thursday the twenty first of January <P> <B> at two pm.

s4072303: the weekend is already occupied.

e4072303: <B> <Smack> **okay**. <P> <B> let's try <P> <B> **okay**, I have a another suggestion. how 'bout Monday, <P> the eighteenth of January <P> <B> at twelve pm?

In contrast to those examples discussed in the human-to-human dialogues, these uses of *okay* do not function as acknowledgement of the content because the computer's reaction does not make sense, and the occurrences cannot plausibly be argued to

signal successful perception and understanding, either, because they occur delayed and after irrelevant or even not understandable utterances. Instead, they occur after communication problems and before new attempts initiated by the human speakers to make themselves understood. My suggestion is therefore that these occurrences of *okay* serve the speakers' speech management purposes, concluding a previous attempt to make oneself understood and starting a new one. This interpretation is supported by the speaker's use of metalanguage in example (11) that makes the switch of strategy explicit. They therefore fulfil structuring functions for the dialogue (cf. Condon, 2001).

To sum up, the functional spectrum of English *okay* seems to center around the two functions of signaling acknowledgement and framing, but a number of further functions has been identified as well. It can, for instance, occur as a repair marker in human-computer interaction, and it may signal the completion of a requested action. The model to be developed will have to account for this functional spectrum, including the variability of its interpretation with respect to different situations.

3. Model

The questions to be addressed regarding *okay* include an account of how the functions of *okay* identified above belong together. Thus, we have to ask how *okay* can signal acknowledgement in many instances but not in others, how it can open, re-open, continue and terminate topics, and how its functional spectrum can change such that the partner-oriented acknowledgement functions are lost when it occurs in human-computer interaction. Another question concerns the surface cues that make

the interpretation of *okay* possible. Furthermore it can be asked whether *okay* is really "virtually contentless", or whether it has invariant meaning aspects that license the different functions it can fulfil.

3.1. Discussion of the empirical results

The implications of the results from the empirical analyses for the model will be used here to illustrate and motivate the model presented in the next section.

First of all, we can notice some dependency between the structural context in which *okay* may occur and its interpretation. Condon (1986), for instance, proposes that the acknowledgement reading of *okay* is tied to its position as, or at the beginning of, a second pair part. This criterion, however, is not sufficient, since the structural contexts of examples (2) and (3) are very similar. The only difference is that the information following the utterance of *okay* constitutes a clarification question in example (2) and a repetition of, or elaboration on, the same information as proposed by the communication partner in example (3). We therefore have to distinguish between two structural contexts, one in which *okay* signals compliance with the proposal made or request issued, and another one in which it signals the successful acceptance of the communication partner's turn. Both structural contexts are quite different from the structural contexts in which *okay* functions to mark, for instance, the beginning of a new, jointly established topic. Thus, although the structural contexts may differ only slightly in some cases, they provide a useful means to distinguish different readings in general.

Regarding the relationship between the different readings, Merritt's proposal is that *okay* can fulfil the bridging function between different interaction phases on the basis of its acknowledging function. The acknowledgement is in such cases reduced to the acknowledging that it is one's turn to do something, therefore releasing the other one from further obligations. Taking up this proposal for an invariant contribution of *okay*, we still need to show how the whole spectrum of interpretations of *okay* can be accounted for. This is an additional, but necessary step since just postulating a core meaning would leave the actual uses of *okay* unspecified. The aim is therefore to find some common core and to define the extensions further. In particular we need to ask whether, if we take the idea that *okay* signals acknowledgement as a starting point, we can account for the individual interpretations. We may, for instance, ask what exactly *okay* acknowledges when it releases the communication partner from further obligations. Merritt's (1980: 166) example is repeated here:

(12) C: Do you have two dimes and a nickel for a quarter?

S: (rings cash register, opens drawer) We don't have any dimes left.

C: OK. Thank you.

The proposal made here is that the acknowledgement signaled by *okay* in this example refers to the successful perception and understanding of the communication partner's utterance. The relation of accordance expressed by *okay* thus refers to what is being said on the one side and what is being heard and understood on the other. The same applies to the uses of *okay* in dispreferred seconds, where *okay* does not, for instance, signal acceptance of the proposal made. Thus, the relationship of accordance expressed may refer to the content of the utterance in some uses or only

to the successful acceptance of the communication partner's presentation in other uses. This is the interpretation I would like to propose for example (3) above.

Similarly, the topic function of *okay* can be explained in the same way: *Okay* can either open, continue, resume, or terminate a topic. Thus, it does not seem to signal something like 'I'm opening/continuing/resuming/terminating the topic', because this would be redundant information, obvious from the same cues that would allow the disambiguation of the signal. The proposal made here is that *okay* only signals that the topic to be talked about has been agreed upon, that what is going to follow is in accordance with the supposed jointly acknowledged topic structure. This corresponds to Condon's (2001) finding that *okay* marks unmarked, default, discourse structures, and to Bangerter et al.'s (2003: 20) proposal that *okay* is a device "for seeking or giving consent to a proposed joint undertaking." In the case of opening a new topic, we have seen that it is used when the topic has been previously agreed upon or is situationally determined (as in the task-oriented dialogues investigated here and in Condon (1986, 2001)). In the case of continuing a topic, the acknowledged topic is the current topic, and in the case of terminating a topic, what is jointly achieved is the fact that it can be terminated (Schegloff and Sacks, 1973).

How about the function of *okay* as a repair marker and without partner orientation then, as it has been found in human-computer communication? Regarding speech management functions, the use of *okay* signals that after what has been said by the communication partner, it is taken to be obvious that the previous strategy needs to be abandoned and a new one has to be initiated. That is, the relation of accordance applies to the agreement between the communication partners that one should not continue like this. The domain of reference is the domain of speech management,

including speech planning and linguistic strategy selection (cf. Fischer, 2000a). In the action reading exemplified by Grosz (1982), it would signal accordance between the action requested and the action carried out, thus yielding the reading of completion of the requested action. So even the situation specific readings of *okay* can be explained on the basis of the underlying meaning proposed.

We can therefore conclude that to postulate a relationship of accordance as the core meaning of *okay* may account for all of its different uses. This core meaning can not only be assumed for the discourse particle *okay*, but also for its uses as an adverb. Thus, the question 'fkcf_5_05: *would one thirty be okay with you?*' can be understood as the question for agreement on the content level, i.e. as a question whether two states of affairs, here free time slots in the participants' calendars, are in accordance with each other.

This proposal is in contrast to Condon (2001) who argues that the acknowledgement reading of *okay* can be explained on the basis of its function to mark unmarked sequences. That is, in the same way as Schegloff (1982) has shown continuers to display understanding by their sequential placement at transition relevance places and by passing the opportunity to initiate repair, *okay* is proposed to mark a sequence as in accordance with one's expectations. However, such a proposal cannot explain the relationship with *okay* as an adjective or adverb, and it reverses the order of grammaticalization proposed by Diewald (this volume). It will therefore be assumed here that the acknowledgement reading of *okay* is the basic one.

If the relationship between the different readings a discourse particle can fulfil is explained by reference of the same core meaning to different communicative

domains, what is needed then is a list of the different domains to which discourse particles may refer. What is proposed here is that these domains correspond to those aspects of the communicative situation to which speakers attend as relevant. This can on the one hand be shown by conversation analyses of the speaker categories involved, preferably on the basis of analyses of a broader range of linguistic devices besides discourse particles. On the other hand these domains become apparent as being oriented to if the speakers can be shown to attend to them differently in different situations, for instance in human-to-human and human-to-computer communication. For example, we can see that speakers regularly signal to each other that they perceive and understand each other, especially in potentially face-threatening situations. That speakers in natural conversation really attend to their relationship to the communication partner, rather than, say, just 'mark' the dispreferred utterance, use the discourse particle to take the turn or to play for time, these functions thus being secondary, is supported by the fact that speakers do not do so when talking to an artificial communication partner Consequently, *okay* serves functions with respect to the regulation of the speaker-hearer relationship in human-to-human communication, whereas in human-computer interaction, which is characterized by communicative problems, speakers attend more to speech management by means of *okay*. Thus, the use of comparable corpora allows the identification of communicative domains as attended to by the participants.

3.2. The Ingredients of the Model

The model proposed consists of three parts, which interact. Each of the constituents of the model accounts for a particular aspect of the observations made.

3.2.1. The Invariant Meaning Aspects

The first part of the model is constituted by the invariant meaning of each discourse particle morpheme. The morphemic meaning accounts for the relationship between the different readings of the phonological/orthographic form of a particle, even across word class boundaries. To postulate one core meaning is of course not the only way to account for this relationship. Several different but related meanings may fulfil the same purpose. However, it is taken to be an issue of "methodological minimalism" (Foolen, 1993) to assume as few different meanings as possible.

The proposal for *okay* is to formulate its morphemic meaning as *'after all I know (from X or about Y) I think we think the same (about Z)'*, thus including both the conclusive meaning aspect and the relationship of accordance. This invariant meaning aspect accounts for the relationship between the different readings.

Reference to a particular communicative domain accounts for the relationship between the different readings and the particle morpheme. That is, the morphemic meanings may be under-specified in a number of respects. Their formulations in NSM may contain place holders such as *something* or *someone*, or they may, like *okay*, describe a relation of accordance for which it needs to be specified to what it applies. Thus, the same invariant meaning may evoke a considerable number of different readings, depending on how the slots are filled or the reference of the relationship expressed is specified. The different contextual meanings of *okay* are

created by reference to, for instance, those aspects the speaker knows about and about which she thinks the same as her communication partner.

In the case of *okay*, the communicative domains to which it can refer are perception, understanding, topic structure, the interpersonal relationship, action, speech management, and content. The different contextual readings resulting are the following:

- *after all I know from what I have heard, I think what you said and what I heard is the same* as a signal of successful perception;

- *after all I know from what have heard, I think that what you want to say and what I think you want to say is the same* as a signal of successful understanding;

- *after all I know I think we think the same about what to talk about* as a signal of accordance regarding the topic agreed upon;

- *after all you know, do you think the same?* as a search for agreement;

- *after all I know I think we think the same* as a signal of interpersonal accordance;

- *after all I know I think that what you wanted me to do and what I have done is the same* as a signal of completed action;

- *after all I know from what I have said and what you have said I think that we think the same about talking about something new next* as a speech management marker;

- *after all I know I say that we think the same about this* as a signal of agreement on content.

Formulations in NSM are admittedly a bit clumsy (cf. Wierzbicka, 1995: 104). However, describing the contextual meanings of discourse particles in this way allows showing the interaction between invariant meanings and aspects of the context

by specifying the under-specified meanings of discourse particle lexemes with context-specific, yet general aspects.

3.2.2. The Communicative Background Frame

Now, the model would be quite useless if everything was possible, if the model was completely unrestricted and the under-specified meaning aspects could be specified with anything. A model that explains the polysemy of lexical items[4] by reference to particular communicative domains (e.g Sweetser, 1990) needs to be so constrained as to allow only those readings that can be identified as speaker meanings in interaction. Consequently, we need to find a way to identify the domains of reference in a methodologically sound way. Here we can return to our empirical analyses of our comparable corpora: By showing that speakers in one situation attend to a communicative task but not in another supports the existence of independent, interactively attended to communicative tasks which serve as referential domains for the meanings of discourse particles. Therefore, the communicative background frame, which specifies the possible range of discourse particle readings, only consists of those communicative domains to which speakers attend as tasks they want to fulfil in a particular communicative situation.[5]

The communicative domains (see also Schiffrin, 1987, Aijmer et al., this volume, Frank-Job, this volume) postulated here are furthermore by no means peculiar to this particular model. For instance, it was proposed in the analysis of *okay* in the previous section that it may fulfil functions regarding perceiving and understanding the communication partner. The same communicative tasks have been found to be

attended to by speakers in telephone directory inquiries (Clark and Schaefer, 1989). Thus, the domains of perception and understanding (see also Grosz, 1982: 153) can consequently not only be shown to be relevant in the description of *okay*, but they have also been used as explanatory concepts in analyses of other linguistic material and are thus validated on independent grounds.

The communicative background frame thus accounts for the relationship between the different readings within the word class discourse particle. That is, the communicative background frame, by combining the functional domains related to aspects of the communication process itself (such as perception, understanding, speech management) and to aspects of the direct communicative situation (such as the accompanying actions) naturally accounts for the functional spectrum of the word class. Other particles display a different functional range because they refer to other aspects than the communicative background frame, for instance, the pragmatic pretext in the case of modal particles (Diewald and Fischer, 1998) or aspects of host utterances (Nyan this volume) that are related to aspects of discourse memory (Roulet this volume) as in the case of connectives.

The communicative background frames are therefore representations of the tasks that constitute relevant aspects of a particular situation for the participants. Some aspects are usually relevant in most situations, for instance, successful perception and understanding, while speech management is particularly attended to in situations in which communicative problems are likely. The situational descriptions resulting can be best conceptualized as frames (e.g. Fillmore and Atkins, 1992, cf. Fischer, 2000a).

3.2.3. Constructions: Form-Meaning Pairs

The third part of the model is constituted by linguistic constructions (Goldberg, 1995, Fillmore and Kay, 1999), which combine general form and meaning aspects of discourse particle occurrences They are general descriptions of the structural contexts in which discourse particles may occur, including, on the form side, the position with respect to the turn and the utterance and the intonation contour. On the functional side, it is assumed that the reference to the respective communicative domains is connected to the structural position. Thus, the meaning side of constructions determines the communicative function the respective discourse particle may fulfil.

The constructions are word class specific but not lexeme specific. That is, it is assumed that irrespective of which discourse particle functions as a repair marker, it will have particular structural and functional properties. Similarly, it is possible to signal perception and understanding in many different ways (cf. Clark and Schaefer, 1989). For instance, corresponding to example (3) of *okay*, the function to signal successful perception, understanding and topic continuity, can also be fulfilled by other discourse particles, such as *hmm, oh,* or *well*. However, all four discourse particles may do so in different ways, because of their different invariant meaning aspects, for example:

(13) flmb_6_07: well, I have a meeting from, <P> ten am until eleven pm, other than that I'm free. so, when are you free?

mkps_6_08: **hmm** upon looking at my calendar, it looks like uh, that day may

not work out so well after all. um when did you say you were free on Thursday?

(14) fjlv_5_02: either Tuesday afternoon or Wednesday afternoon. what do you think.

mjcc_5_03: **oh** Wednesday afternoon sounds good.

(15) mrac_3_07: the only day that's good for me next week would be Wednesday the third. ah sometime after twelve. between twelve and five.

fcaw_3_08: **well** I do have some time late Wednesday afternoon.

The construction *take-up* specifies that turn-initial occurrences with falling or integrated intonation contours will refer to the communicative domains perception, understanding and thematic organization, signaling successful perception and understanding and topic continuity. *Okay*, indicating agreement on the basis of broad evidence, fulfils these functions by stating a relationship of accordance between what is said and what is heard and understood and what is being talked about, while, say, *oh*, fulfils the same functions by indicating the receipt of new information (cf. Heritage, 1984).[6]

In this way, the constructions account for the relationship between functional interpretation and structural position by specifying the structural aspects of the particular reading and the different communicative domains to which a discourse particle may refer. The constructions can be specified more or less formally in order to allow an integration of discourse particles and modal particles in general grammatical descriptions.

4. Broader Perspective

A linguistic model should either be in accordance with and support established linguistic distinctions, or it should shed new light on discussions regarding less well established categories. In Fischer (2000b) I have argued that the model proposed can be used to draw a line between semantics and pragmatics and thus contributes to a discussion on the semantic/pragmatic interface. Furthermore, in that study a new way for understanding the role of discourse particles with respect to turn-allocation (Sacks et al., 1974) was proposed.

Here, I would like to outline two further contributions of the model to aspects of general linguistic interest. First, I would like to comment on the notion of communicative situation, since I believe that discourse particles can tell us very much about the aspects of a communicative situation to which speakers attend, thus supporting a CA analysis of context (e.g. Schegloff, 1997). Second, I would like to address the question of how discourse particles contribute to matters of politeness.

4.1. Discourse Particles as Contextualization Cues

The situations in which communication takes place have a strong influence on the linguistic properties of the utterances that occur. Sociolinguistics, register theory and text linguistics are, for instance, concerned with describing such relations. However, both inter- and intrapersonal variation in stable situations show that situations cannot

be defined by external criteria (Fischer, 2000c). What speakers consider the situation to consist in needs to be indicated to their communication partners in order to provide the information necessary for the interpretation of their utterances (cf. Gumperz, 1984).

One such contextualization cue can be the use of discourse particles. As we have seen in the previous section, discourse particles get their functional interpretation in reference to particular communicative domains. The functional spectrum of a set of discourse particles used in a given situation thus depends on, and at the same time indicates, the communicative tasks the speakers take to be relevant. In human-computer interaction, for example, the speaker-hearer relationship is not much attended to, whereas more weight is put on speech management. The communicative domains attended to thus determine the situation definition and the functional spectrum a discourse particle may fulfil. Situation definition, the communicative background frame, and the functional spectrum of discourse particles are thus intimately related. This is the reason why a frame-based representation seems more useful than, for instance, a once-and-for-all definition of discourse planes (cf. Schiffrin, 1987, but also Fischer, 2000a).

In line with Argumentation Theory, discourse particles are thus believed to contribute to the construction of context (cf. Nyan this volume). In particular they do so by claiming to display (cf. Fischer, 1999) the speaker's mental processes. In the case of the items discussed, it is both the speaker's (*locuteur*) and the producer's (*producteur empirique*) voices that constitute the context.[7] By bringing into play the speaker, the hearer, and the relationship between both, discourse particles anchor the speech produced in the situation. Thus, discourse particles make the human interlocutors

(with their hopes, fears, desires, and imperfections) part of the situation. It is in this way that they contribute to the authenticity of speech (cf. Weydt this volume). The elements of the speech situation indexed are however taken as given information. Discourse particles, like modal particles, do not present new information for the communication partner to consider (Clark and Schaefer, 1989). On the contrary, the general pragmatic function of discourse particles can be held to mark a contribution by the speaker as non-initial, as grounded in the utterance situation. That is, by relating the current utterance to some aspect of the communicative context, they minimize the speaker's role in the contribution by presenting the utterance as a natural consequence of the already given situation.

The idea that discourse particles are anchors in the utterance situation can also be found in other analyses (cf. Aijmer et al. this volume), yet often less explicitly so. For instance, Östman's (1983) analysis of *you know*, but also Merritt's (1980) analysis of *okay* and Weydt's (this volume) analysis of German *denn* imply such a function. For instance, Weydt paraphrases a sentence containing the modal particle *denn*: "I'm asking you [for] your name because something within the situation motivates me to ask this question". Thus, in this paraphrase the current utterance is presented as a natural consequence of the utterance situation.

Discourse particles may thus indeed guide the interpretation of utterances, yet not by providing processing instructions, but by constituting the situation and thus providing the interpretative frame of the utterance. They do so by contextualizing the speaker, her mental processes such as perception, understanding, or attitude, by indicating the role of the communication partner and the relationship between the participants, and by displaying the focus on particular tasks, such as extra-linguistic action or speech

management. Thus, discourse particles are signs that contribute to the construction and negotiation of context. Understanding the signals displayed as voices of the speaker allows us furthermore to relate the pragmatic mechanism proposed for the interpretation of discourse particle occurrences to approaches describing connecting devices or text relation markers. Because of the voices displayed in the host utterances, the argumentative nature of connectives is more obvious. However, as oppositely oriented discourse particle uses, for example, in dispreferred seconds, show, also discourse particles fulfil argumentative functions. It is thus furthermore in this sense that discourse particles contribute to context construction.

4.2. The Contribution of Discourse Particles to Politeness

Weydt (this volume) discusses different possible reasons why particles may be understood as 'friendly'. He argues that the reason is not that particles would "down-tone" an utterance, as the German label *Abtönungspartikel* suggests, or that there is something in the particles themselves that would cause this impression. In his view, particles "show that the actual speaker takes into account his partner's perspective on the subject, that he cooperates". In his words, "they create a network of relationships between the actual hearer and the actual speaker." On the basis of the model introduced in the previous section, we can specify this function now further.

Discourse particles, by displaying mental processes, may serve politeness functions, for instance, in dispreferred seconds, by showing that the speaker does not reject anything presented by the communication partner thoughtlessly (Fischer, 1999). Thus, the sheer playing for time by means of an *um* (cf. Levinson, 1983, Smith and

Clark, 1993) can already signal to the communication partner that the speaker is taking care of the other person's face needs. The polite effect is even increased if the speaker signals involvement by means of, for example, the interjection *oh*. It is thus in this way that discourse particles "mark" dispreferred utterances (cf. Fischer, 2000b).

Furthermore, discourse particles, by displaying relations of accordance and by referring to the domains perception, understanding and topic construction, for example, show the speaker's attending to the hearer and what she has to say. They allow a glimpse into what the speaker understands the situation to consist in, how she conceptualizes the flow of topics, what she perceives and understands. Thus, discourse particles contribute in making the speaker transparent to the hearer and thus allow a joint construction of the interaction.

Finally, by marking the current utterance as non-initial by relating it directly in the discourse situation, the speaker minimizes her own contribution to what is being said. Thus, she can be held less responsible for what is being said; the situation is then taken to provide the account (Heritage, 1988) of the utterance.

4.3. Conclusion

The study of discourse particles is, contrary to its treatment up to 40 years ago, not at all peripheral to the concerns of linguistics. The investigation of their functional polysemy and the factors conditioning their interpretation can be seen as a micro world study of pragmatic interpretation in general. So while I agree with Pons

Bordería (this volume) that a model of the polyfunctionality of discourse particles should be embedded in a theory of discourse, I think that the other direction of research, using the investigation of discourse particles as a starting point, is also helpful. We can now begin to analyze both how the three analytical concepts developed, frames, constructions, and invariant meanings, are related to other parts of the vocabulary, and what the three notions contribute to linguistic theory development.

Furthermore, as has been discussed in this paper, the relationship between language and discourse particles may contribute to the discussion of context, common ground, and situation, as well as to the discussion of another key notion of pragmatic research: politeness. The study of discourse particles thus allows a look at much more general phenomena that constitute core questions in linguistic research.

References

Abraham, Werner (1991). Discourse Particles in German: How Does their Illocutive Force Come about? In: *Discourse Particles: Descriptive and Theoretical investigations on the Logical, Syntactic and Pragmatic Properties of Discourse Particles in German.* [Pragmatics and Beyond 12]. (Werner, Abraham, ed.), pp. 203-252. John Benjamins, Amsterdam.

Aijmer, Karin, Foolen, Ad and Simon-Vanderveken, Anne-Marie (this volume). Pragmatics markers in translation: A methodological proposal.

Bangerter, Adrian and Clark, Herbert H. (2003). Navigating Joint Projects with Dialogues. *Cognitive Science,* **27**, 195-225.

Bangerter, Adrian, Clark, Herbert H. and Katz, Anna R. (2003). Navigating Joint Projects in Telephone Conversations. *Discourse Processes,* **37**, 1-23.

Batliner, Anton, Fischer, Kerstin, Huber, Richard, Spilker, Jörg, Nöth, Elmar (2003). How to Find Trouble in Communication. *Speech Communication,* **40**, 117-143.

Clark, Herbert H. and Schaefer, Edward F. (1989). Contributing to Discourse. *Cognitive Science,* **13**, 259-294.

Condon, Sharon (1986). The Discourse Functions of OK. *Semiotica,* **60**, 73-101.

Condon, Sharon (2001). Discourse *ok* Revisited: Default Organization in Verbal Interaction. *Journal of Pragmatics,* **33**, 491-513.

Cruse, D.A. (1986). *Lexical Semantics*. Cambridge University Press, Cambridge.

Diewald, Gabriele and Fischer, Kerstin (1998). Zur diskursiven und modalen Funktion der Partikeln *aber, auch, doch* und *ja* in Instruktionsdialogen. *Linguistica,* **38**, 75-99.

Diewald, Gabriele (this volume). Discourse particles and modal particles as grammatical elements.

Ducrot, Oswald (1996). *Slovenian Lectures*. ISH, Ljubljana.

Ehlich, Konrad (1986). *Interjektionen*. Niemeier, Tübingen.

Fillmore, Charles and Atkins, Beryl T. (1992). Towards a Frame-based Lexicon: The Semantics of Risk and its Neighbors. In: *Frames, Fields, and Contrasts.* (Lehrer, Adrienne and Kittay, Eva F., eds.), pp. 75-102. Erlbaum, Hillsdale, N.Y.

Kay, Paul and Fillmore, Charles (1999). Grammatical Constructions and Linguistic Generalizations: The *What*'s X Doing Y? Construction. *Language*, **75**, 1-33.

Fischer, Kerstin (1998). Validating Semantic Analyses of Discourse Particles. *Journal of Pragmatics*, **29**, 111-127.

Fischer, Kerstin (1999). Die Ikonizität der Pause. Zwischen kognitiver Last und kommunikativer Funktion. In: *KogWis99: Proceedings der 4. Fachtagung der Gesellschaft für Kognitionswissenschaft, Bielefeld, 28. September - 1. Oktober 1999.* (I. Wachsmuth and B. Jung, eds.), pp. 250-255. Infix, Sankt Augustin.

Fischer, Kerstin (2000a). *From Cognitive Semantics to Lexical Pragmatics: The Functional Polysemy of Discourse Particles*. Mouton de Gruyter, Berlin/New York.

Fischer, Kerstin (2000b). Discourse Particles, Turn-taking, and the Semantics-Pragmatics Interface. *Revue de Sémantique et Pragmatique*, **8**, 111-137.

Fischer, Kerstin (2000c). What Is a Situation? *Gothenburg Papers in Computational Linguistics*, **00**, 85-92.

Foolen, Ad (1993). *De betekenis van partikels.* Dissertation, University of Nijmegen.

Fox Tree, Jean and Schrock, Josef C. (2002). Basic Meaning of *you know* and *I mean. Journal of Pragmatics*, **34**, 727-747.

Goldberg, Adele (1995). *Constructions.* Chicago University Press, Chicago.

Grosz, Barbara J. (1982). Discourse Analysis. In: *Sublanguage. Studies on Language in Restricted Semantic Domains* (Kittredge, Richard and Lehrberger, John, ed.), pp. 138-174. De Gruyter, Berlin, New York.

Gumperz, John (1984). Communicative Competence Revisited. In: *Meaning, From, and Use in Context: Linguistic Applications* (Schiffrin, Deborah, ed.), pp. 278-289. Georgetown University Press, Washington, D.C.

Helbig (1977). Partikeln als Illokutive Indikatoren im Dialog. *Deutsch als Fremdsprache*, **14**, 30-44.

Hentschel, Elke and Weydt, Harald (1989). Wortartenprobleme bei Partikeln. In: *Sprechen mit Partikeln.* (H. Weydt, ed.), pp. 3-18. de Gruyter, Berlin, New York.

Heritage, John (1984). A Change-of-State Token and Aspects of its Sequential Placement. In: *Structure of Social Action: Studies in Conversation Analysis*

(Atkinson, J. and Heritage, John, ed.), pp. 299-345. Cambridge University Press, Cambridge.

Heritage, John (1988). Explanations as Accounts: A Conversation Analytic Perspective. In: *Understanding Everyday Explanation: A Casebook of Methods.* (Antaki, Charles, ed.), pp. 127-144. Sage, Beverly Hills.

Jefferson, Gail (1974). Error Correction as an Interactional Resource. *Language in Society*, **3**, 181-200.

Levinson, Stephen (1983). *Pragmatics.* Cambridge University Press, Cambridge.

Lewis, Diana (this volume). Discourse Markers: A Discourse-Pragmatic View.

Merritt, Marilyn (1980). On the Use of OK in Service Encounters. In: *Language Use and the Uses of Language* (Shuy, R.W. and Shunkal, A., eds.). Georgetown University Press, Washington, D.C.

Mosegaard Hansen, Maj-Britt (this volume). A Dynamic polysemy Approach to the Lexical Semantics of Discourse Markers (with an Exemplary Analysis of French *toujours*).

Nyan, Thanh (this volume). From Procedural Meaning to Processing Requirement.

Östman, Jan-Ola (1983). *You know: A Discourse Functional Approach.* [Pragmatics and Beyond II:7] Amsterdam: John Benjamins.

Pons Bordería, Salvador (this volume). A Functional Approach for the Study of Discourse Markers.

Roulet, Eddy (this volume). The Description of Text Relation Markers in the Geneva Model of Discourse Organization.

Sacks, Harvey (1984). Notes on Methodology. In: *Structure of Social Action: Studies in Conversation Analysis.* (Atkinson, J. and Heritage, John, ed.), pp. 21-27. Cambridge University Press, Cambridge.

Sacks, Harvey, Schegloff, Emanuel and Jefferson, Gail (1974). A Simplest Systematics for the Organization of Turn-Taking for Conversation. *Language,* **50**, 696-735.

Schegloff, Emanuel (1982). Discourse as an Interactional Achievement: Some Uses of 'uh huh' and Other Things that Come between Sentences. In: *Analysing Discourse: Text and Talk* (Tannen, Deborah, ed.). Georgetown University Press, Washington.

Schegloff, Emanuel (1997). Whose Text, whose Context? *Discourse in Society*, **8**, 165-187.

Schegloff, Emanuel and Sacks, Harvey (1973). Opening up Closings. *Semiotica*, **8**, 2289-327.

Schiffrin, Deborah (1987). *Discourse Markers.* Cambridge University Press, [Studies in Interactional Sociolinguistics 5]. Cambridge.

Schourup, Lawrence (1999). Discourse Markers. *Lingua*, **107**, 227-265.

Smith, Vicki L. and Clark, Herbert H. (1993). On the Course of Answering Questions. *Journal of Memory and Language*, **32**, 25-38.

Stenström, Anna-Brita (1994). *An Introduction to Spoken Interaction.* Longman, London.

Sweetser, Eve (1990). *From Etymology to Pragmatics. Metaphorical and Cultural Aspects of Semantic Structure.* [Cambridge Studies in Linguistics 54] Cambridge University Press, Cambridge.

Travis, Catherine (this volume). The Natural Semantic Metalanguage Approach to Discourse Markers.

Verbmobil Database (1995). Data Collection for a Speech-to-Speech Translation System – Scheduling Domain. Institut für Phonetik, München/ Carnegie Mellon University.

Weydt, Harald (this volume). What are Particles Good for?

Wilkins, David P. (1992). Interjections as Deixis. *Journal of Pragmatics*, **18**, 119-158.

Wierzbicka, Anna (1986). A Semantic Metalanguage for the Description and Comparison of Illocutionary Meanings. *Journal of Pragmatics,* **10**, 67-107.

Wierzbicka, Anna (1995). Lexicon as a Key to History, Culture and Society. In: *Current Approaches to the Lexicon.* (Dirven, R. and Vanparys, J., eds.), pp. 103-155. Peter Lang, Frankfurt am Main, etc.

Wierzbicka, Anna (1996). *Semantics: Primes and Universals.* Oxford University Press, Oxford.

¹ Transcription conventions: <P> = pause; ? = rising intonation; , = level intonation; . = terminal intonation.

² Condon (2001) looks at computer-mediated dialogues. However, the dialogues she compares differ not only with respect to mediatedness, but also with respect to mode: spoken face-to-face communication versus typed computer-mediated dialogues. The differences can therefore not be attributed to any particular variable.

³ Transcription conventions: e401 is the speaker ID, s401 the ID of the system, the digits following number the turn. <P>: pause, <B>: breathing event; <%> = unintelligible speech; ? = rising intonation; , = level intonation; . = terminal intonation.

⁴ The flexibility of the model is also intended to account for the dynamics of the discourse particle meanings through time, as demanded by Mosegaard-Hansen (this volume), cf. Diewald (this volume).

⁵ This may still allow more possible than actual meanings since some discourse particles do not refer to all communicative domains, and there are clusters of readings that regularly co-occur. The model therefore has to be restricted further by the third part of the model, the constructions.

⁶ For a discussion of *well*, see Aijmer et al (this volume).

⁷ Speech management functions are taken to be interactionally relevant (cf. Jefferson, 1974), and therefore also the producer's voice contributes to the context construction.