

From Cognitive Semantics to Lexical Pragmatics



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The Functional Polysemy of Discourse Particles

by

Kerstin Fischer

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Contents

1	Introduction: The domain	1
1.1	Aims	1
1.2	Definition	13
1.2.1	Semantic properties	16
1.2.2	Functional properties	18
1.2.3	Form-related properties	23
1.3	Corpora	27
1.3.1	The German corpora	29
1.3.2	The English corpora	34
1.4	Methods	35
1.4.1	Interpretative methods	36
1.4.2	Quantitative and computational methods . .	55
1.4.3	Linguistic models	58
1.5	The structure of the following	60
2	Contexts and categories: Functional interpretation	65
2.1	The functional spectrum of German <i>ja</i>	68
2.2	Category assignment	97
2.2.1	The descriptive inventory	99

2.2.2	Classification in artificial neural networks	110
2.3	Consequences for lexical representation: Constructions	120
3	Conceptual background frame: Evidence from extra-linguistic variables	125
3.1	The variable <i>communication partner</i>	126
3.2	The variable <i>speaker's gender</i>	157
3.2.1	Äh and ähm in human-to-human communication	157
3.2.2	Gender-related functional shifts in human- computer interaction	166
3.3	Consequences for lexical representation: Conceptual background frame	175
3.3.1	The relation lexeme – function	176
3.3.2	A frame of communicative domains	178
4	Lexical analysis	195
4.1	Semantic relations	197
4.1.1	Translation equivalents	199
4.1.2	Semantic fields	207
4.2	Semantic decomposition	219
4.2.1	Methodological considerations	219
4.2.2	Semantic tests for discourse particles	223
4.2.3	English <i>oh</i>	226
4.2.4	Tests for the features of <i>oh</i>	232
4.2.5	Further English discourse particles	239
4.3	Consequences for lexical representation: Invariant meanings	258

5	Lexical representation	261
5.1	A unified model of the meanings and functions of discourse particles	261
5.1.1	The contextual meanings of discourse particles	262
5.1.2	From contextual meanings to discourse functions	270
5.1.3	The different word classes	275
5.1.4	The general function of discourse particles	277
5.2	Aspects of the lexicon	284
5.2.1	General properties of linguistic lexica . . .	285
5.2.2	The structure of lexical entries	289
5.2.3	Types of lexical information	292
5.2.4	Linguistic generalisations in ILEX/DATR .	296
5.3	A frame- and construction-based lexicon for discourse particles	300
6	Conclusion and prospects	321
6.1	From cognitive semantics to lexical pragmatics . .	321
6.2	Automatic processing of discourse particles	323
	References	327
	Appendix A: Questionnaire	357
	Appendix B: DATR Program	359
	Index	367

Chapter 1

Introduction: The domain

1.1 Aims

This study concerns English and German discourse particles, small items such as German *ja*, *also*, *ne*, *oh* or *ach* and English *yes*, *yeah*, *oh* or *well* which predominantly occur in spontaneous spoken language. Discourse particles are “grammatically peripheral” (Fraser 1990: 391), that is, they do not enter any grammatical relationships with other parts of utterances, and they may fulfil such a broad range of functions that Hentschel and Weydt (1989) suggest the context-dependency of their meanings to be their most prominent feature, thus defining discourse particles as essentially syncategorematic. The current investigation addresses the problem of polysemy, “the occurrence of more-or-less discrete and more-or-less unitary bundles of semantic properties associated with particular word forms” (Cruse 1992: 2); since the most important contribution of discourse particles is in the pragmatic domain, particularly their functional polysemy, that is, the occurrence of more-or-less discrete and more-or-less unitary bundles of functional properties associated with particular word forms, will be investigated. In other words, this study attempts to account for the fact that a particular discourse particle lexeme may get different interpretations which are perceived as related in some way. Consider the following examples:¹

¹ The examples are from the Verbmobil corpus described in section 1.3.

2 Introduction: The domain

- (1) 13BAR: what about the 18th of December?
14RIC: <pause> *yeah, yeah*, that work.
- (2) 124ENG: so that won't work either.
125UMI: *yeah*, that's not good.
- (3) 1UMI: *yeah*, we've got to get together and discuss <pause>
Stufe A für die Studienordnung.²
- (4) 3RIC : I'm Ric and I am <pause> what do I do? (whispering) software . *yeah*, I'm working for a software account.

The function of *yeah* in the first example is to accept the proposal the communication partner has made, it functions as a feedback signal in the second example. In example (3), the function of *yeah* is to introduce a new topic, occurring in the first turn in the dialogue which refers to the common task to schedule an appointment. In example (4), it functions as a repair marker, reorganising the speaker's utterance after he was reminded of the identity assigned to him for the purpose of the recording (see the description of the corpora used in section 1.3). As the four examples show, *yeah* may fulfil at least four different functions. Thus, the questions that need to be answered in this investigation are the following:

- What is the relationship between a discourse particle lexeme such as *yeah* and its function as a feedback signal, an answer particle, a topic signal and a repair marker?
- Are the different readings of such a lexeme somehow related, i.e. is there some general mechanism behind its functional spectrum, or are the possible interpretations completely independent of each other?
- Is there an invariant component in all of the occurrences of a discourse particle lexeme?

² The speakers in these dialogues are native speakers of English who live in Germany.

- Can each lexeme fulfil an endless range of functions or is there a systematic restriction to its functional spectrum?
- What is the relationship between structural properties like the position in which a discourse particle token occurs and its interpretation?
- Is there a general mechanism for the interpretation of all discourse particles? Based on such a general mechanism is it possible to find criteria for a definition of the class?
- How is it possible that lexical items which function as discourse particles can often function in other word classes as well?

The goal of this investigation is to find a general systematic model of the polysemy of discourse particles, providing answers to the above questions and explaining not only how particular lexemes get their functional interpretations in particular contexts but also what the essential properties of the word class of discourse particles are and how this word class is related to other word classes. So far such a model of the polysemy of discourse particles does not exist; Abraham (1991) criticises that all “descriptions given so far have, almost without exception, resulted in multiple meaning distinctions represented by one single phonetic form, without ever accounting for a common core meaning and the conditions under which the variant meanings come to hold” (Abraham 1991: 203). Hentschel and Weydt (1989) describe the current research situation as suffering from the so-called “particle paradox:” On the one hand there are approaches which provide detailed studies of the individual functions which discourse particles can fulfil, without being able to explain how a particular discourse particle gets its different interpretations, how these readings are related, and why it fulfils just exactly these pragmatic functions and not others. Most of these studies just list the different functions (for instance, Wolski 1986); this approach is also referred to as the maximalist approach (Mosegaard Hansen 1998: 239). On the other hand there are analyses which try to isolate what is common to the readings of a certain lexeme, thus identifying an invariant component for each discourse particle. This perspective has been called the minimalist ap-

4 *Introduction: The domain*

proach (Mosegaard Hansen 1998: 240). These approaches leave open how the abstract kernel meaning relates to the observable functional interpretations.

Furthermore, most studies are restricted to a particular range of functions and thus their complete functional spectrum does not become apparent.³ Very few are concerned with a general mechanism by means of which the discourse particle lexemes are related to their complete range of functions. These studies, among them most influentially Schiffrin (1987), but also Östman (1983), Mosegaard Hansen (1998) Ehlich (1986), and Schourup (1983)⁴ are however not entirely satisfying. The former studies explain the functional polysemy of discourse particles by means of relations to different aspects of conversation, or “planes of talk” (Schiffrin 1987). Östman (1983) and Mosegaard Hansen (1998) both use only three such aspects and can therefore distinguish only three different functions of discourse particles, and in Schiffrin’s model the relationship between the discourse particle lexemes and the “planes of talk” is unclear (see also section 5.1 and Redeker (1991) for a detailed analysis). The latter two approaches attempt to identify a general function of discourse particles from which their other functions can be inferred. However, the fact that they arrive

³ Examples are, for instance, the analysis of interjections as expressions of emotions which neglects their textual functions (e.g. Angermeyer 1979); the very detailed study by Willkop (1988) which is restricted to functions with respect to the speaker-hearer-exchange system and the argumentation structure; or Maynard (1993) whose study focusses on aspects of subjectivity and emotionality. Jucker and Ziv (1998) write in their introduction to a collection of papers on discourse markers: “the first three papers (...) focus on text-structure signalling, the next set of papers (...) concentrate on cognitive aspects, and the remaining four papers (...) analyse contrastive markers, which display a range of attitudinal, cognitive and interactional properties, thus obviating the inherent problem of functional-domain specificity as criterial in the analysis” (Jucker and Ziv 1998: 5). Thus, even in this new book on the theory and description of discourse markers most studies are restricted to a particular functional domain.

⁴ These approaches are discussed in detail in section 5.1 when the model proposed in this investigation has been presented.

at completely different basic functions casts doubt on the plausibility of the relationship proposed. Consequently, so far no unified account of the range of the meanings and functions of discourse particles has been presented; the aim is therefore to develop a lexical representation for discourse particles which shows that there is a single mechanism which explains their functional polysemy and therefore also the characteristics of the word class.

The problem just identified for the description of the word class under consideration is however a general problem; what has been labelled the “particle paradox” holds for other word classes as well. The concept of polysemy, in contrast to homonymy, implies that the different senses of a single word form display a semantic relationship (Lyons 1977).⁵ The task is not just to match a number of word forms with a list of possible functions but to ask whether it is possible to get beyond simple enumeration, as Pustejovsky (1995) calls it. Therefore not only the meaning spectrum of each lexeme but also the conditioning factors which determine its variation must be analysed. The analysis thus needs to focus on the conditions under which a lexeme may get a certain interpretation, and on how these factors interact in order to provide a model of the interpretation of occurrences of the respective lexical item.

For other word classes, a number of accounts of the relations between the meanings associated with a certain lexeme have been proposed. Lyons (1977), for instance, discusses two ways of characterizing the relatedness of different word senses: historical development and shared semantic properties. With respect to both criteria he argues that they do not allow a categorical evaluation of relatedness since either may apply to different degrees. With respect to historical relatedness the question is how far back the analysis may go while still

⁵ The terms homonymy and polysemy furthermore both suggest that there are form-related properties which are constant while the functional or semantic features vary. Discourse particles, however, are extremely variable in their phonological and prosodic realisation, and their interpretation depends on the structural contexts in which they occur. In how far discourse particles can therefore be regarded as being formally stable and which realisations constitute a single lemma has to be considered in the investigation.

yielding plausible results, that is, results which are in accordance with the intuitive judgement of relatedness. Concerning the sharedness of semantic features the problem is likewise to identify the kind and number of shared properties necessary for the judgement of two meanings as being similar. Thus, the closeness of senses basically remains a matter of intuitive decisions.

More recently, further concepts to account for polysemy have been developed. Pustejovsky and Anick (1988), Pustejovsky (1991, 1995) propose a systematic relationship between senses based on the different aspects of the qualia structure, the semantic properties of nouns. For instance, the qualia structure may account for the opposition between *fast typist* vs. *fast driver*, and for the event structure of verbs (for example, *bake a cake* vs. *bake a potato*). The different aspects of the semantic structure are incorporated into the semantic interpretation of larger structures by means of rules of composition, including cocomposition and type coercion (Pustejovsky 1991: 437). The features employed in the description are not necessarily meant to be cognitively relevant but are assumed if needed for semantic composition.

The study of polysemy is also a central concern in cognitive linguistics, a number of different approaches to language which share “the cognitive commitment” (Taylor 1995: 4), the assumption that “language is a mental, i.e. cognitive phenomenon” (Taylor 1995: 4). This commitment does not imply a particular research strategy itself, and so different approaches can be subsumed under the term; for instance, in two-level semantics (e.g. Bierwisch 1983, Bierwisch and Schreuder 1992, Bierwisch and Lang 1989), which shares the cognitive commitment, an inventory of functions at the conceptual level is responsible for systematic polysemy. For example, words like *school* or *university* may mean the building, the institution, an ensemble of processes, or the institution as a principle (Bierwisch 1983: 81). Depending on the context, the polysemy is determined by a general conceptual function applied to the abstract semantic meaning of each lexeme, yielding the concrete reading, i.e. *school* as an institution or as a building. The respective lexical item is seen as under-specified and unambiguous. Polysemy in this approach, which distinguishes sharply between semantic and encyclopedic knowledge, the two levels, is thus a matter of world knowledge.

An alternative cognitive linguistic research direction is the wholistic, non-modular, content-oriented approach (cf. Gibbs 1996) advocated by, for instance, Lakoff (1987), Langacker (1991), Fillmore (1982). This approach will be referred to as *cognitive semantics* in the following. Initiated by findings from Rosch (1975), Rosch and Mervis (1975), Rosch et al. (1976), which indicate that natural language categories are not always based on necessary and sufficient criteria, the notion of prototype was developed to account for the relationship between word senses (e.g. Coleman and Kay 1981, Wierzbicka 1989, Geeraerts et al. 1984). This distinguishes between the core and the periphery of concepts and may result in word senses which do not share any essential properties at all (Lakoff 1987: 95). In network models (Langacker 1988, Norvig and Lakoff 1987), a central meaning for each word can be identified to which other senses are related; these relations belong to an inventory of cognitively relevant operations, such as metaphor, metonymy, profiling, etc. (Norvig and Lakoff 1987: 204). Lexical items thus exhibit radial structures (see also Lakoff 1987). In this variant of cognitive linguistics, word senses are thus not regarded to be similar because there are objective similarities between the objects denoted, but because of underlying conceptual structures, particularly metonymic and metaphorical relations (Lakoff and Johnson 1980), which provide the links between the different readings (e.g. Lakoff 1987, Sweetser 1990: 5). Thus, "word meaning is not necessarily a group of objectively "same" events or entities; it is a group of events or entities which our cognitive system links in appropriate ways" (Sweetser 1990: 9). In Sweetser (1990), metaphorical mapping was furthermore worked out to account for the polysemy and the historical development of English modals, conjunctions, and conditionals; by means of reference to three different conceptual domains, the polysemy of the three different kinds of linguistic phenomena can be explained.

Another cognitive semantic approach is presented by Fillmore and Atkins (1992) according to whom polysemy is constituted by two different concepts and their interaction: "Frame semantics makes it possible to separate the notion of the conceptual underpinnings of a concept from the precise way in which the words anchored in them get

used" (Fillmore and Atkins 1992: 101). They argue for a description against a structured experiential background which constitutes a kind of conceptual prerequisite for understanding (cf. also Fillmore 1975, 1982, 1994), and they consider the grammatical patterns of the particular item as a determining factor such that "the interrelations between two notions: semantic frame and syntax" (Fillmore and Atkins 1992: 101) must be specified to account for the relations between the senses of a lexical item. Frame semantics consequently allows the description of the interaction of the lexeme, syntax and a conceptual background frame.

Which model of polysemy is suitable for the description of the multifunctionality of discourse particles depends on what informational resources are found to condition the interpretation of their occurrences and how they interact. In this investigation, it will be argued that a cognitive semantic viewpoint is the best starting point. While not drawing on *a priori* distinctions between semantic and encyclopedic knowledge, as two-level semantics demands, cognitive semantic concepts such as metaphorical mapping and the reference to a conceptual background frame can explain the relationship between those factors which condition the interpretation of discourse particle occurrences. Furthermore, the inclusion of syntax in a model of polysemy, as in frame semantics, allows to consider the structural properties of discourse particles. This accounts for the fact that different discourse particles may fulfil similar functions, on the one side, and restricts the generative component of the model to actual, lexicalized meanings on the other. Thus, the functional polysemy of discourse particles can be described by means of the interaction of their contextual properties and a conceptual background structure that is constituted by aspects of the communicative situation to which speakers attend regarding their communication partners. As a means of associating a discourse particle lexeme with the conceptual frame, the cognitive semantic concept of metaphorical mapping between domains, as developed in Sweetser (1990), can be used to explain the reference of discourse particles to the background structure. The development of such an approach to the functional polysemy of discourse particles demands not only that the conditioning factors which are involved in the interpretation of dis-

course particle occurrences and their interaction are determined, it furthermore requires a device, such as the invariant contribution of the respective lexeme, which allows to show why one lexical item may fulfil a certain function and not another. It also needs to show that speakers really attend to the conceptual background frame proposed, and it has to explain why just these particular domains are involved as opposed to some others, as well as to account for how these types of information, which the hearer may use to interpret an occurrence of a discourse particle, interact with the distributional patterning and the surface features of the lexical item under consideration. For a lexical pragmatic account of the functional polysemy of discourse particles it therefore has to be determined:

- what the functional spectrum of a discourse particle is and what the structural contexts are in which it may occur (chapter 2);
- which domains determine the functional polysemy of the class (chapter 3);
- what the contribution of each lexeme is (chapter 4);
- how the different types of information interact and how the interaction can be formalised in a lexical representation (chapter 5).

An open question is thereby also the methodology for obtaining the information on the three interacting resources which condition the interpretation. Rather than adopting a particular linguistic methodology, this investigation will take a problem-oriented approach. It will propose methods to solve the problems occurring depending on the particular requirements for an explanatory account of the meanings and functions of discourse particles. So while the model to be developed will be based on concepts developed in cognitive semantics, a number of methodological questions will need to be addressed in the analysis of discourse particles and those factors which influence their interpretation. For instance, frame semantics has so far been predominantly employed for the description of nouns, verbs, and adjectives (Baker et al. 1998: 86). Thus far it is not clear:

10 *Introduction: The domain*

- how the different readings of discourse particles can be distinguished;
- what may constitute a frame for the interpretation of discourse particles and how it can be identified;
- how the invariant contribution of discourse particle lexemes can be analysed.

In this investigation methods will be proposed that can provide solutions to the methodological problems occurring, however, without comparing the methods chosen to other methods in all possible detail. Thus, this investigation can exemplify a number of different methods as solutions to particular problems, however, it cannot discuss all possible alternatives. The aim is instead to develop a methodologically sound model of the functional polysemy of discourse particles which is based on cognitive semantics concepts. In particular, it builds on a cognitive background structure to which the meanings of discourse particles refer such that the interpretation of discourse particles in context is guided not only by their structural properties, but also by a group of entities which are linked by our conceptual system in an appropriate way (Sweetser 1990: 9).

Since this investigation aims at the lexical representation of a number of linguistic items, the perspective is furthermore semasiological. This study involves the lexical representation of the pragmatic behaviour of these lexical items in so far as it accounts for their use in discourse on the basis of a number of partly new and partly well-tested methods. Consequently, in contrast to previous analyses in the area of lexical pragmatics (e.g. Mercer 1992, Blutner et al. 1996, Lascarides and Copestake 1995) which are primarily concerned with context-dependent and defeasible propositional information, the lexical pragmatic approach taken here concerns the distribution and the functions of the items under consideration with respect to pragmatic domains such as the structure of discourse, face work, or the management of speech (see also Levinson 1983: pp.47-53) in which the functions of discourse particles are located. The object domain is thus essentially pragmatics while the concepts and methods to be employed will be

largely drawn from studies in cognitive semantics. One of the main points of this investigation is thus that if the concepts developed in cognitive semantics are applied to questions of lexical pragmatics, that is, of the functional variation of certain lexical classes, a descriptively adequate model of the functional polysemy of discourse particles can be developed.

Such a model is desirable as there is so far no unified mechanism to account for the broad range of functions discourse particles fulfil has been proposed. In spite of the many interesting properties of discourse particles which have been discovered, researchers have so far failed to provide a unified description of all of their functions. Thus there is no comprehensive definition of the word class. It is also desirable because discourse particles display a quantitatively prominent status in spoken language dialogues. For example, in the corpora from the toy-airplane construction domain (Sagerer et al. 1994, Brindöpke et al. 1995), the proportion of discourse particles ranges between 3.8% in simulated human-to-machine communication and 9.8% in informal human-to-human communication. In particular the proportion of discourse particles of the 150 most common words is impressive (Fischer and Johantokrax 1995: 6): Even in human-to-machine communication, the proportion of discourse particles amounts to 6.6% with respect to the 150 most frequent words. Rudolph finds particles to constitute even 23.8% of the total number of words in her corpora of German conversation, including however different types of particles, such as modal, scalar, focus, and discourse particles (Rudolph 1991: 208). As long as there is no explanation of the functions of such particles in spoken language dialogues, we are lacking insight into almost 10% of speakers' linguistic efforts. Cognitive semantic approaches have so far focussed mainly on the relationship between linguistic structures and their cognitive motivation (see also Fischer 1999); the linguistic units under consideration were thereby largely abstracted from particular usage events. The motivation for this focus has been that while language use has always been addressed under a functional perspective, linguistic structures were for a long time considered as independent of other cognitive processes. The achievement of cognitive semantic and cognitive grammar approaches to language is that they show that linguistic struc-

ture is also deeply related to general cognition. Applying a cognitive semantic perspective on linguistic items such as discourse particles, which have their functions primarily in the pragmatic domain, bridges the gap between functional considerations developed in the analysis of talk-in-interaction and the perspective on linguistic structures developed in cognitive approaches to language. The result will be a lexical model which represents the conventional aspects of discourse particles and which can explain how these motivate the functions discourse particles may fulfil and how lexical and functional aspects interact. Thus, the model accounts for the relationship between the structured inventory of conventionalised linguistic units and their usage events. The model to be developed will therefore provide a missing link between cognitive semantic and functional approaches to language.

The unified model to be developed will have to serve not only to account for the broad range of functions discourse particles may fulfil; the functional variability of these items makes it also difficult to distinguish them from other word classes. The investigation of their functional polysemy therefore also concerns the definition of the class of discourse particles and its boundaries.

Regarding a definition of the linguistic domain under consideration, in the following, proposals for defining discourse particles on the basis of semantic, functional, and formal criteria will be discussed. The first step taken is a discussion of the properties of discourse particles proposed in the literature in order to develop a preliminary definition of the domain under consideration (section 1.2). As a precondition to concrete analyses, the data and the methods employed in the study will then be considered. It will be argued that a variety of methods are necessary to account for the plurality of functions and the methodological problems involved in their analysis, as well as the use of a number of different large corpora of spontaneous spoken language dialogues. Section 1.3 thus concerns the corpora used in the investigation while in section 1.4 the methods employed in the analysis of discourse particles are considered. The discussion of the motivations for this study and the methods to be employed will allow a further, more detailed outline of the structure of this investigation.

1.2 Definition

It is notorious in the literature on *discourse particles*, *discourse markers*, *interjections*, *hedges*, *connectors*, *segmentation markers*, *modal particles*, *feedback signals*, *cue phrases*, *filled pauses*, etc. that the scope of every investigation has to be defined anew (cf. also Fraser 1999). The great number of different descriptive terms for this heterogeneous group indicates that firstly there is no single accepted word class definition, and that secondly the terms chosen depend very much on the perspective under which discourse particles are studied. Thus, the term *connector* focusses on the connecting function of discourse particles while *cue phrase* indicates that discourse particles function in the speaker-hearer interaction system. Table 1.1⁶ shows the variability of the labels by different authors for the same English discourse particle lexemes, table 1.2⁷ shows the same regarding German discourse particles. However, the fact that the same lexemes are labelled with different terms by different authors points to the fact that the items under consideration actually constitute a more homogeneous group than suggested by the number of different descriptive labels.

Overviews of the domain, for instance, Keil (1994) and Willkop (1988); Schiffrin (1987) and Fraser (1988, 1990, 1999), describe the difficulties of drawing concrete lines between postulated word classes.

To be able to discuss the different proposals in the literature on discourse particles for distinguishing the different word classes, the distinctions implied by the different descriptive terms will be provisionally disregarded and (basically following Willkop 1988: 59) a tentative terminology will be used to refer to the items under consideration, irrespective of the terminology employed by the authors to be discussed. Anticipating the results of this investigation, those lexemes will be re-

⁶ dm = discourse marker, dp = discourse particle, pause = pause marker, int = interjection, cue = cue phrase, parallel = parallel marker, * = does not apply.

⁷ DP = Diskurspartikel, GP = Gliederungspartikel, MP = Modalpartikel, Int = Interjektion, Segm = Segmentierungsmarker, Antw = Antwortpartikel, * = does not apply, ja1 and ja2 being the discourse and the modal particle respectively.

Table 1.1: Terms for English Discourse Particles by Different Authors

	well	oh	ah	now	uh/um	I mean	but
Schiffrin '87	dm	dm	*	dm	*	dm	dm
Fraser '88	dm	int	pause	dm	pause	parallel	dm
James '74	int	int	int	*	int	*	*
Hirschberg and Litman '93	cue	*	*	cue	*	*	*
Schourup '83	dp	dp	dp	dp	dp	dp	*
Wierzbicka '91	*	int	int	*	*	*	*

Table 1.2: Terms for German Discourse Particles by Different Authors

	ja1	ja2	oh	ach	äh/ähm	also	mhm
Ehlich '86	*	*	Int	Int	Int	*	Int
Willkop '88	GP	MP	Int	GP	GP	GP	GP
Keil '94	Antw	MP	Int	Int	Int	Segm	Antw
Abraham '91	*	DP	*	*	*	*	*
Rasoloson '94	*	*	Int	*	Int	*	Int

garded as discourse particles that have under-specified meanings reporting on mental processes that are specified by means of reference to particular aspects of the communicative situation. Their general function is to mark an utterance as non-initial. Thus the items under consideration are indeed regarded as a homogeneous class with a single pragmatic function, discriminable by their semantic content and by the types of objects to which their indexical elements refer. *Discourse particle* will thus be regarded as the hyperonym of *segmentation marker*, *interjection*, and *hesitation marker*. Discourse particles will be considered as interjections when they signal the spontaneous expression of a cognitive state. As a starting point, some ostensive definitions are offered: English *oh*, *ah* and German *oh*, *ach* will be regarded as interjections, while lexemes that lack the spontaneous character of interjections, for example English *well*, *yes*, *okay* and German *ja*, *also*,

gut, *hm* will be counted as segmentation markers. Hesitation markers, for instance German *ähm* and *äh* or English *uh* and *um*, signalling on-going thinking, will also be considered part of the class of discourse particles. The term *hesitation marker* is thus a co-hyponym of *segmentation marker* and *interjection*. The term *modal particle* will refer to those items which occur utterance-medially and which are integrated in the phrasal intonation contour. The term *discourse particle* will be used because of its neutrality: Discourse particles occur in discourse and are small independent words (Zwicky 1985). *Discourse marker*, for instance, suggests that the respective items do not function in their own right but stand for something else, an assumption which will have to be investigated and which therefore should not be presupposed. The classification proposed and to be motivated during this investigation is shown in figure 1.1.

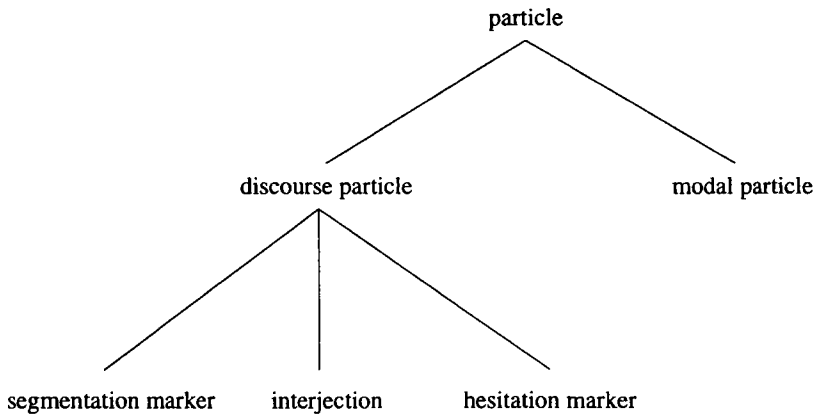


Figure 1.1: Taxonomy of Descriptive Terms

In the following an attempt will be made to find criteria for distinguishing these terms and for defining the nature of discourse particles on the basis of different proposals from the literature. In general, there are three different possibilities:⁸ the items involved may have different semantic features; they may be functionally different; or they may have different formal or distributional properties. In the following, these three options will be discussed.

⁸ A comprehensive overview on the literature on discourse particles provide Weydt and Ehlers (1987) and, more recently, Pons Borderia (1998).

1.2.1 Semantic properties

Most discourse particles contribute only weakly if at all to the propositional content of utterances. They are hardly needed in determining the information about the world the speaker conveys to the hearer. In particular computational linguistics and automatic speech processing, both based on formal theories of language, focus on the detection and analysis of the propositional information of utterances. The contribution of discourse particles to this task is not obvious. For instance, the German discourse particle *ja* can function as an answer signal and may thus contribute propositional information: cd1_g072a_TIS013: “*ja*, paßt mir wunderbar.” However, we can also find *ja* in connection with the rejection of a proposal: cd3_m024n_EVB010: “*ja*, da kann ich nicht.” If the description provides an entry for *ja* with *agreement* as its meaning, the analysis for the second example will result in a contradiction; the meaning seems to come from the context, not from the lexeme. Hentschel and Weydt therefore propose their syncategorematic content, i.e. a *non-lexical, context-dependent meaning*, as a semantic criterion to distinguish particles from other words, including interjections (Hentschel and Weydt 1989: 6).⁹ However, this is a negative criterion for the definition, dependent also on the respective semantic theory and the view of what constitutes lexical information according to which this definition is made.

A content-related criterion proposed to distinguish interjections from other words is their emotionality: “words whose only function is to express emotion” (Leech and Svartvik 1975: 134), “somewhat primitive expressions of feeling, only loosely integrated into the lin-

⁹ Hentschel and Weydt (1989) hold the distinction between particles and interjections to be most problematic: “Zu den wichtigsten und ungelösten Problemen gehört die Abgrenzung der Partikeln gegenüber den Interjektionen” (Hentschel and Weydt 1989: 17). On the basis of the criterion proposed, interjections should be autosemantica since they denote aspects of reality, such as sounds or emotions (Hentschel and Weydt 1989: 7). However, the authors feel the need to postulate a continuous region between interjections and particles to account for items like *na ja*, *ach so*, *tja* or *tschüß* (Hentschel and Weydt 1989: 17) which, in their view and in contrast to ‘normal’ particles, display some kind of semantic content.

guistic system" (Leech et al. 1982). For German interjections, Angermeyer (1979) argues that an interjection is an "Ausrufe-, Ausdrucks-, Empfindungswort" [*word of exclamation, expression, emotional involvement*] (Angermeyer 1979: 40), "wichtiger Bestandteil unseres sprachlichen Umgangs mit Tieren" [*important part of our way to deal with animals*] (Angermeyer 1979: 41). The classification he proposes distinguishes disagreeing from agreeing interjections; a more fine-grained categorisation concerns the emotions they express (Angermeyer 1979: 46). Consequently, the *emotional content* is proposed to constitute the basic trait of interjections.

Gelhaus (1995) writes in the DUDEN grammar that the function of interjections is "Interesse beim Hörer für die Gefühlslage des Sprechers oder für die geschilderte Situation zu wecken" (Gelhaus 1995: 374). They are denied a lexical meaning ("jedenfalls bedeutungsarm" (Gelhaus 1995: 369)), and a grammatical status.¹⁰ The emotionality of interjections is however not a reliable criterion to distinguish them from segmentation or hesitation markers; not all interjections have an emotional component but can refer to other cognitive states as well (Wierzbicka 1992b), and many segmentation markers also refer to the speaker's mental states, for instance, *now*: "it is tied to the speaker's now of actual utterance and it indicates but does not specify current covert thinking on the part of the speaker" (Schourup 1983: 105).

Wilkins (1992), basing his assumptions on the decomposition of the meanings of interjections according to Wierzbicka (1986, 1991, 1992b), argues that the semantics of interjections includes components such as *I, you, here* and *now*. Interjections are therefore considered as deictic items which refer to aspects of the communicative situation. The main property of interjections in this view is thus to contain *indexical elements* in their semantic structure by means of which utterances are anchored in the speech situation. This view is also held by Schiffrin (1987) and Östman (1983) regarding interjections, segmentation markers, and pragmatic routines (here: *you know*). Thus, this

¹⁰ In contrast to this, James (1972, 1973, 1974), for instance, argues for a competence-based use of interjections which, according to her, constitute an independent category in generative grammar.

property is not a criterion by means of which interjections could be distinguished from segmentation markers or speech routines. Furthermore, an indexical meaning has also been proposed for other word classes, for instance, for conjunctions and modal particles (Diewald and Fischer 1998). It seems that there is no single semantic property by means of which discourse particles or one of their subclasses could be defined.

1.2.2 *Functional properties*

Depending on the perspective of the investigation as well as on the background of the investigator, researchers have determined a number of different functions the items under consideration fulfil in spontaneous spoken language dialogues. However, these functions usually have been found to apply not only to a single word class but also to items from at least one of the other classes under consideration. Therefore, neither the subclasses postulated nor the class of discourse particles itself can be defined on the basis of the functional criteria, as the following overview of the functions proposed for discourse particles can show:

Gülich (1970) was the first to propose several main functions of (French) discourse particles, including interjections, conjunctions, adjectives, adverbs, and certain verb forms, all of which share the distributional property of occurring at text segmental boundaries (Gülich 1970: 9). These functions are to support the construction of discourse structure, to provide an orientation concerning the content and the structure of the conversation, and to provide help in the formulation process. She distinguishes narrative from dialogical texts; in the former, discourse particles fulfil mainly segmentation functions, marking the narrative structure (Gülich 1970: 54); in the latter, discourse particles fulfil the following functions: as opening signals they support addressing the hearer (Gülich 1970: 89), taking the turn (Gülich 1970: 100),¹¹ and introducing direct speech (Gülich 1970: 101); furthermore,

¹¹ The term *turn* is taken here to refer to “the continuous period of time during which a person is talking” (Oreström 1983: 23). Yet, as Oreström notices, “[t]here is unanimous agreement, however, that certain brief, spontaneous

inside turns they help to bring up a new topic or to stress information (Gülich 1970: 197), as well as help to deal with repairs and interruptions (Gülich 1970: 164). Finally, as closing signals, they create a relation to the hearer as post-determining question particles (Gülich 1970: 228-229). Gülich (1970) concludes that discourse particles fulfil the same functions in spoken language as punctuation marks do in written language and that they are only identifiable as a class if the object of study is the dialogue instead of the sentence (Gülich 1970: 301). The idea that the main function of discourse particles is the structuring of the dialogue is supported by Stubbs (1983): There "are several distributional facts about [discourse particles, KF], which cannot be explained by the syntax and semantics of single sentences" (Stubbs 1983: 73). Discourse particles thus seem to operate on units which are larger than sentences.

In addition to the large number of different items identified by Gülich (1970) (conjunctions, adverbs, interjections, etc.) which may fulfil structuring functions, Van Valin (1973) argues for a macro-structural function of mostly the modal uses of German *doch*, the function of this item predominantly being the structuring of the spoken language text for the hearer. He concludes his investigation by stating that "important natural language phenomena must of necessity remain beyond the linguist's grasp until a theory of discourse, a theory designed to deal with inter-sentential phenomena, is developed" (Van Valin 1973: 87). Likewise, Schiffrrin (1987) as well as Maschler (1994, 1997), Lenk (1998), Fraser (1999), and Heritage and Sorjonen (1994) argue for the role of discourse particles with respect to larger informational units than adjacent utterances such as topics. This observation is supported by results from psycholinguistic experiments (Bestgen and Vonk 1995) that the use of particular discourse particles influences the availability of information from previous utterances.

reactions from the listener (termed 'back-channel items' (...)) signalling continued attention, agreement, and various emotional reactions are not to be classified as turns" (Oreström 1983: 23). Thus he, and this investigation will follow his terminology here, distinguishes speaking-turns, or just "turns", from back-channel items.

The structuring function of discourse particles also concerns the information structure of dialogues, the informational organisation of discourse (cf. also Willkop 1988). For German discourse particles, including the hesitation marker *äh*, Rasoloson (1994) shows that the items under investigation are used, among other functions, to mark important information and to segment utterances in such a way that relevant information is grouped together (see also Rudolph 1985). Yet, Krivonosov argues for an argumentation-structuring function of German modal particles, such that they divide the content of sentences into given and new information (Krivonosov 1989: 33-35). Likewise, discourse particles may be used to comment on certain units of speech, for example, as meta-languaging devices, in bilingual communication (Maschler 1994), but also in monolingual conversation (Gülich and Kotschi 1996). A related function of modal particles may be their support of the interpretation process by indicating the respective speech-act (Kawashima 1989: 281), as 'illocutionary indicators' (Helbig 1977: 34).

For English, Fraser (1988, 1990), Schiffrin (1987), Blakemore (1987), Redeker (1990) consider discourse particles, including, for instance, conjunctions such as *but*, in their function to connect and segment utterances. That is, their role is "to bracket units of talk" (Schiffrin 1987: 34). Blakemore (1987) analyses discourse particles within the framework of relevance theory (Sperber and Wilson 1986) where they are looked at as meta-pragmatic instructions for the processing of utterances, i.e. discourse particles serve here to establish coherence between utterances. König and Requardt (1991) and König (1997) reach a similar conclusion regarding German modal particles.

It seems that all of the items under consideration, such as interjections, segmentation markers, hesitation markers, and modal particles, but also conjunctions (and even punctuation marks in written language) can be described as fulfilling structuring functions with respect to local and global content and structure of discourse, so that these cannot be seen as a distinguishing criterion between the different classes of particles.

With respect to the turn-exchange system, in ethnomethodological analyses the features of discourse particles with respect to the turn-

taking system have been analysed (Sacks et al. 1974, Schegloff 1982). Furthermore, Duncan and Fiske (1977) and Duncan (1972, 1974), who argue for a signal-based turn-exchange, hold that discourse particles, as well as non-verbal cues, serve the function to take, hold, yield or support a turn. For German discourse particles, their role with respect to the speaker-hearer-exchange system is investigated by Willkop (1988). Also for English interjections, segmentation markers, and pragmatic idioms, there are analyses that focus on functions with respect to the turn-exchange system (e.g. Schiffrin 1987: 293). For hesitation markers, their contribution to turn-taking has been investigated by, for instance, Maclay and Osgood (1959). A function regarding the speaker-hearer-exchange system has not been assigned to modal particles so that this functional property may be peculiar to interjections, pragmatic idioms, hesitation and segmentation markers, as well as non-verbal signs.

There is another domain with respect to which discourse particles may fulfil certain functions: Hockett argues that the phenomena of spontaneous spoken language do not reveal interesting facts about the language, but about the speaker's personality (Hockett 1958: 143). Thus, the function of spoken language items can be seen to provide a personal fingerprint in the conversation (cf. also Maynard 1993). The first to analyse the interpersonal functions of discourse particles systematically was Schourup (1983) (but see also Martin (1971)). As "evincives," discourse particles, including interjections, segmentation markers and pragmatic idioms, display a certain mental content for purposes concerning the speaker-hearer relationship, for instance, to make the speaker's mental processes transparent for the hearer. The effect may be that the speaker makes him- or herself trustworthy (Brown and Levinson 1987). Drescher (1997) writes for French interjections that "as manifestations of empathy they contribute once again to the emotional harmony essential to cooperative conversations" (Drescher 1997: 241). Brown and Levinson (1987) argue that discourse particles fulfil a role with respect to the *management of face*. Vismans (1991) describes the same function of Dutch modal particles.

For German discourse particles, Ehlich (1986) provides a theoretical framework to treat them as signs in the so-called expeditive

field, a functional domain which concerns the speaker-hearer relationship. For this purpose, he expands Bühler's sign model, adding the expeditive field to the deictic and the symbolic field. Similarly, especially modal particles have been found to *express speaker attitude*, "die sogenannte subjektive Modalität als eine subjektive Wahrnehmung des Geschehens" (Krivonosov 1989: 31). Discourse particles in reformulations can also be used to evaluate the part of discourse which is reformulated, and consequently express speaker attitude on the one hand and support the formulation process on the other (Gülich and Kotschi 1987, 1996). A function determining the relationship between speakers and hearers thus also does not seem to be peculiar to a particular word class.

Concerning speech management functions,¹² segmentation markers, interjections, and hesitation markers have been analysed in their role as repair markers (Jefferson 1974, Levelt 1983, Gülich and Kotschi 1996). In addition, hesitation markers have been discussed in particular with regard to in their function to provide time for speech planning (e.g. Goldman-Eisler 1958, Howell and Vetter 1969). While silence can serve speech planning purposes, too, this function has not been proposed for modal particles and may thus be a property which could distinguish them from the class of discourse particles.

To sum up, it can be concluded that the research situation concerning the functions of segmentation markers, hesitation markers and interjections is very heterogeneous; functional criteria as they have been proposed in the literature do not provide a reliable basis to distinguish the different subcategories of discourse particles. Furthermore, not only has a large functional spectrum been attributed to the different subclasses of discourse particles, but the functions proposed also do not seem to be specific to discourse particles since non-verbal cues, modal particles, speech routines and even punctuation marks have been found to behave similarly in several respects. Thus, neither the subclasses postulated nor the class of discourse particles itself can be

¹² The term *speech management* is taken here to refer to "Formulierungs-" and "Textherstellungsverfahren" (Gülich and Kotschi 1996: 37-41), that is, to the concrete effort of formulation and text production.

defined on the basis of the functional criteria arrived at in previous analyses. However, if it is correct that discourse particles are a functional, rather than a semantic or syntactic class, it may still be possible that it is not a single function which is characteristic of a certain word class but that the functional range of each class, i.e. the intersection of the different functions, may serve as a distinguishing trait of discourse particles. Combining the different properties proposed may thus be a method to distinguish discourse particles from other word classes; for instance, modal particles can be distinguished from discourse particles by their inability to fulfil functions regarding speech management and turn-exchange. However, defining a word class by means of negative criteria, such as functions it does not fulfil, or on the basis of a list of possible functions which largely intersect with those displayed by other word classes, makes it difficult to decide in concrete cases whether an item belongs to a particular class, and it remains unsatisfactory with respect to the essential properties of the word class. Regarding the subclasses of discourse particles, it has furthermore been shown that they are functionally very similar and that thus functional criteria do not serve as distinguishing criteria.

1.2.3 *Form-related properties*

Formal criteria proposed to define the class of interjections include the following (cf. Ehlich 1986, Willkop 1988, Wierzbicka 1992b):

- They are sentential: interjections constitute complete utterances;
- they bear no clear grammatical relationships to other elements in the sentence;
- they are not inflectable;
- they may be stressed;
- they may be phonologically ill-formed.

Segmentation markers, which “segment units of talk” (Schiffrin 1987: 34), on the other hand, are characterised by the following formal attributes (cf. Willkop 1988, Schiffrin 1987, Schourup 1983):

24 *Introduction: The domain*

- They bear no clear grammatical relationships to other elements in the sentence, being only loosely integrated;
- they are not inflectable;
- they may be stressed;
- they may be phonologically ill-formed;
- they connect utterances as a kind of “discourse glue” (Fraser 1988).

As can be seen from the two lists, there is a large overlap between the distinguishing formal properties of interjections and segmentation markers assumed so far. Those features which the descriptions do not share do not suffice to characterise the two classes as exclusive sets; thus, it was traditionally believed that segmentation markers and interjections can be distinguished by the fact that interjections always constitute entire utterances. However, segmentation markers may do so as well (cf. also Fraser 1988), for example:

- (5) 03I054: also irgendwas hab(e) ich wahrscheinlich eben falsch gemacht *aber*
[*well I have probably just made a mistake but*]

The frequency of this construction renders it unlikely that the speaker has intended to go on after the occurrence of *aber* (cf. Diewald and Fischer 1998) and that the utterance is just interrupted. A comparable example of English discourse particles in a sentential construction is (6):

- (6) 5UMI: Uhhh <pause> this week is completely out of the question for me. 6UMI: I’ve got <pause>
7ENG: Well, you’ve got a very heavy cold, *but well* <pause>
8UMI: ((laughs))
9ENG: Wh wh why is this week out of the question? (TP13, 7)

Other obvious examples of the sententiality of segmentation markers are those ones which may function as answer particles, such as German *ja*, *nein* or *mhm* and English *yes*, *yeah*, *no*, *uh-huh* or *okay*.

Concerning their position between utterances which they connect, Schiffrin (1987) argues for such a function with respect to English *oh*, a prime candidate for an interjection, as well as the conjunction *but* and the speech routine *y' know*. Regarding the distribution of the items under consideration, Zwicky (1985) argues that interjections and segmentation markers are similarly distributed, too. This is supported by Gülich's observation concerning the same locations at which interjections, segmentation markers, adverbs, adjectives, etc. can be found (Gülich 1970: 9). So it seems that it is not possible to find form- or distribution-related properties of interjections which could help to distinguish them from segmentation markers.

In contrast to discourse particles, which are usually found outside utterance boundaries, German modal particles are taken to occur in utterance-medial positions, in particular, in the middle-field of a sentence (Abraham 1991), and to refer to the whole proposition (Helbig and Buscha 1993, Krivonosov 1989: 93). So discourse and modal particles can be distinguished by means of their syntactic positions. Furthermore, most modal particles cannot be stressed; others allow both stressed and unstressed variants, but the stressed variant has a meaning different from the unstressed form.

Furthermore, discourse particles may be distinguished from sentence adverbs by the fact that the latter may also occur within clause boundaries. Willkop (1988) argues for a similar function of sentence adverbs if they occur in the same position as discourse particles; however, usually they are syntactically integrated, occurring in the 'Mittel- bzw. Nachfeld' of sentences in German (Willkop 1988: 63-64). For English, for example, Traugott (1995) argues for a continuous relationship for items such as *indeed*, *after all*, and *in fact* between their function as adverbs and as discourse particles. Adverbs can occur integratedly and can therefore be distinguished from discourse particles, yet they may also occur in the same positions as discourse particles and fulfil similar functions there as well.

To conclude, there are form-related criteria which allow to distinguish discourse particles from other word classes, for instance, the position with respect to the sentence they come along with and the integratedness into it, though adverbs can only be distinguished from discourse particles by the mere possibility to become integrated into the sentence structure. However, form-related properties do not suffice to distinguish the subcategories of discourse particles from each other.

A preliminary delimitation of the domain

The discussion of the semantic, functional, and form-related properties proposed in the literature on discourse particles has shown that the features suggested do not suffice for a distinction between the different subclasses of discourse particles. Therefore, in this investigation, criteria for the distinction between interjections, segmentation and hesitation markers will have to be developed. Furthermore, the borderlines of the class of discourse particles are not clear; the semantic, functional and form-related properties proposed do not provide necessary and sufficient conditions for their definition. Useful semantic features to distinguish this word class from others have not been determined at all, while functional and form-related properties can only be used as parts of large lists, describing prototypical instances of discourse particles. These lists however do not provide a characterization of the respective word classes.

On the basis of the previous discussion, as a preliminary delimitation of the object of study, discourse particles can be considered as those items which do not enter grammatical relationships with other elements of sentences; which usually occur outside sentence boundaries and constitute entire utterances themselves; which fulfil structuring, meta-languaging, turn-exchange, interpersonal and speech management functions and whose meanings contain pointers to the speaker and to other aspects of the utterance situation. Thus, the class of discourse particles can be looked at as an intersection of all of the properties proposed by previous authors. As the discussion has shown, these features are not essential characteristics of discourse particles,

peculiar only to them and not to other classes. Thus a definition that consists of essential instead of only accidental properties needs to be developed and defended throughout this study. The problems with defining the different classes under consideration may point to the fact that the phenomena are categorically indistinguishable. Contrastive analyses support the assumption of a functional continuum for items from several different word classes, covering also conjunctions (cf. also Sweetser 1990) and speech routines (Stein 1995), since translators use items from all of these categories as translation equivalents (cf. section 4.1.1). Likewise, English tag questions have been found to be used as translation equivalents for German modal particles (Kohler 1978, Fillmore 1981, Nehls 1989).¹³ Yet, in spite of this functional continuum and the apparent impossibility to provide a definition of discourse particles based on the functional, form-related, and semantic aspects proposed in previous studies, it will be shown in section 5.1 that the classes under consideration can be distinguished by means of their semantic properties.

The set of German discourse particles that will be considered here, all of which are in accordance with the criteria listed above and which occur often enough in the corpora to provide a reliable basis for a statistical analysis, consists of the following items: *ach*, *äh*, *ähm*, *also*, *gut*, *hm*, *ja*, *ne*, *nein*, and *oh*. The English discourse particles which will be discussed here in detail are *ah*, *oh*, *well*, and *yes*. However, in order not to restrict the scope of the investigation too much from the outset, in addition to the lexical items mentioned above, modal particles, tag questions and speech routines will be considered occasionally, not to provide a detailed description of their pragmatic functions, but so as not to lose the overall view of the phenomena.

1.3 Corpora

In section 1.2.2, the different functions discourse particles can fulfil were discussed as they have been proposed in the literature, among

¹³ Nehls (1989) also finds English auxiliary verbs to function as equivalents of German modal particles. This shows how fuzzy the functional borderlines even between particles and other linguistic classes are.

them the structuring of discourse and the regulation of the speaker-hearer relationship; these functions already indicate that the use of discourse particles must depend on the type of discourse and the relationship between speakers as imposed on them by the situation. That is, if discourse particles fulfil a particular function regarding the interaction with the communication partner, this function will differ depending on particular properties of the partner. For instance, the interpersonal functions of discourse particles will change in comparison with free natural conversation if the communication partner is an automatic speech processing system. Consequently, the choice of a corpus is an important question since it influences the obtainable results.

Many linguistic theories regard face-to-face communication as the most basic form of communication (Clark 1996: 8-9); written language and monologic speech are regarded as being derived from the main communicative functions of language in face-to-face interaction (Fillmore 1981, Diewald 1991, Petrič 1995). Consequently, determining the role of discourse particles in these kinds of dialogues should be the proper starting point since other uses may be explainable on the basis of their functions in natural face-to-face conversation. In this investigation, however, another starting point will be taken. The German task-oriented dialogues which will be analysed first allow the controlled comparison of the influence of certain variables on the functions and distributions of discourse particles, and thus support finding those factors which determine their meanings and uses. After that, for the analysis of English discourse particles, natural conversational data will be used in order to show that the results obtained on the dialogues from task-oriented, experimental, situations are in accordance with those for unconstrained face-to-face interaction.

All corpora under consideration consist of utterances by female and male speakers. In order not to confuse the reader, since the labels of each turn are not transparent with respect to the speaker's gender, in this investigation all speakers will be referred to as females, unless it is clear from the dialogue excerpts themselves that one of the speakers is male, or the speaker's gender is part of the investigation, as it will be the case in section 3.2.

1.3.1 *The German corpora*

For German, three corpora are available that allow the study of the variable *communication partner* since they are comparable in being recorded in the same task-oriented situation; they differ only with respect to the communication partners to whom speakers are talking. Consequently, in the first part of this investigation, these corpora will be analysed in order to identify the role of the speakers' aims concerning their (different) communication partners in the use of a discourse particle. In order to show that the results of the analyses of certain discourse particles are not only true of a particular corpus, another corpus of German task-oriented dialogues, the Verbmobil corpus, will be consulted.

Consequently, four German corpora are used in this investigation, all of which consist of task-oriented dialogues in which cooperativity is necessary to achieve the results required. The German examples used throughout this investigation will be glossed in English turn by turn in order to allow readers unfamiliar with German to follow the argumentation. The examples will be translated such that they are functionally equivalent to the source language turn and such that they preserve the structure of the original turn as much as possible.

The Verbmobil corpus (Verbmobil-Database 1995, Bade et al. 1994, Jekat-Rommel et al. 1994)

The Verbmobil corpus consists of a number of different corpora recorded in the same scenario but under different conditions. The biggest corpus consists of 226 dialogues and a total number of 67,801 words. The participants task is to agree upon a date, a time and sometimes on a place for an appointment. However, this corpus differs from natural conversation with respect to the setting in which the corpus was recorded and the recording modalities themselves. In particular, speakers were asked to press a button before they were allowed to speak. Therefore, the corpus contains very few instances of turn supporting feedback signals because very few speakers pressed the button just to communicate "I am listening" or "please continue" (Schegloff 1982); the turn-exchange system may therefore differ from natural communi-