Tutorial overview

Discourse markers

Lawrence Schourup*

*Department of English Language and Literature, Osaka Women's University, Daisen-cho 2-1,
Sakai 590-0035, Japan*

Abstract

A rapidly expanding body of research deals with a functionally related class of connective expressions commonly referred to as discourse markers. The items typically treated in this research include non-truth-conditional uses of forms such as English *well*, *so*, and *now*. While it is widely agreed that such expressions play a variety of important roles in utterance interpretation, there is disagreement in regard to such fundamental issues as how the discourse marker class should be delimited, whether the items in question comprise a unified grammatical category, what type of meaning they express, and the sense in which such expressions may be said to relate elements of discourse. This paper reviews the principal issues in this research area with reference to several prominent frameworks in which discourse markers and closely related items have been studied. © 1999 Elsevier Science B.V. All rights reserved

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1. Introduction

An extensive body of pragmatic and linguistic research deals with a functionally related group of expressions most often referred to as *discourse markers* (henceforth DMs) but also known by a variety of other names, such as *discourse particles* and *discourse operators*. Items typically featured in this research include, for English, so-called 'conversational particles' such as *well* and *oh*, parenthetical lexicalized clauses such as *y'know* and *I mean*, and a variety of connective elements in speech and writing, including *so*, *after all*, and *moreover*. These expressions comprise a subset of those linguistic expressions thought not to affect the propositional content of utterances in which they occur.

* Phone/Fax +81 (075)-821-5507; E-mail: schour@bc4.so-net.ne.jp

Since the 1970s, interest in DMs has increased commensurately with growing interest in the production and comprehension of extended discourse and, more generally, in pragmatic and contextual aspects of utterance interpretation. This broadening of interest has drawn increased attention to those elements of linguistic structure that appear to be most directly involved in the relation of separate utterances. Within this new perspective many elements sidelined in sentence-based linguistic research have been brought into the limelight, including many expressions, such as *well*, and *y'know* in English, which had previously been regarded as a form of linguistic detritus unworthy of close attention. Research on DMs and similar phenomena has expanded continually throughout the 1980s and 1990s, with the result that such items now figure prominently not only in pragmatic and discourse analytic research but also in studies of language acquisition and language pedagogy, and in research on sociolinguistic topics ranging from gender variation to code-switching.

Unsurprisingly, for an area in which interest is so widely based, DMs have been investigated within a large number of frameworks reflecting divergent research interests, methods, and goals. With the profusion of approaches have come inevitable disputes concerning classification and function. These disputes have quickened in recent years as DMs have increasingly come to be seen not only as an underexplored facet of language behavior but as a testing ground for hypotheses concerning the boundary between pragmatics and semantics and for theories of discourse structure and utterance interpretation.

This overview will introduce the reader to several prominent sites of implicit disagreement and open controversy in DM research, sketching in the process some of the more productive frameworks in which DMs have been examined. Section 2 reviews general issues connected with terminology, definition, and the classification of DMs; Section 3 reviews issues bearing on the nature and determination of DM meaning; Section 4 treats the range of functions DMs are thought to perform; and Section 5 comments briefly on areas requiring further research.

2. Terms, definitions, and classification

2.1. Terminology

Numerous studies have attempted to specify the meaning or function of individual DMs or small sets of DMs in various languages (e.g. Goldberg, 1980; Östman, 1981; Carlson, 1984; Schourup, 1985; Erman, 1987; Aijmer, 1988; Bazzanella, 1990; Bell, 1994; Schwenter, 1996; see also references in Brinton, 1996 and Lenk, 1998), and several attempts have been made to characterize DMs in a more general way (e.g. Schiffrin, 1987; Maschler, 1994; Fraser, 1990, 1996; Lenk, 1998). Despite the quantity of research in this area, however, no consensus has emerged regarding fundamental issues of terminology and classification.

Terminology presents a particular difficulty. The term DM used in this review is merely the most popular of a host of competing terms used with partially overlapping reference. Brinton lists more than twenty such terms (1996: 29). A close sec-

ond in frequency of occurrence is the term *discourse particle* (DP) which predomi-
nated until the mid 1980s. Preference for DM to DP arises from considerations of
two kinds. In part it represents a shying away from difficulties perceived to be inher-
ent in the term DP. The increasing use of DM can also be attributed, however, to its
having acquired a narrower and more precisely specifiable reference than DP. Con-
sider these two factors in order.

'DP' may be regarded as a problematic label for three reasons. First, 'particle' has
traditionally been a syntactic term, whereas DMs are more often regarded as com-
prising a functional class that draws on items belonging to various syntactic classes.
Second, the term particle itself has a troubling referential latitude that carries over to
the term DP and renders it imprecise even when DP is intended as a syntactic label.
'Particle' is sometimes used to refer to elements of those traditional word classes
that are uninflecting ('invariable'), such as conjunctions, prepositions, interjections,
and adverbs; at other times it is applied to all invariables except adverbs, conjunc-
tions, and prepositions (see Hartmann, 1993: 2953); more often, though, and more
relevant to the use of the term DP, 'particle' is applied to items that do not fit easily
into *any* well-established word class. Zwicky points out that 'particle' is commonly
used to identify items that have idiosyncratic distributions and peculiar semantics:

"[T]here is no reason whatever to think that the whole class of particle words in any language constitutes
a unified group of items syntactically [...] [T]he class of 'particles' is distinguished entirely negatively:
particles are the words left over when all the others have been assigned to syntactic categories." (1985:
292)[1]

A final difficulty with DP as a label for the items under discussion here is the
competing use of this term in recent years to refer specifically to scalar and modal
particles as a group. Neither the category DP, in this more restrictive sense, nor the
classes of scalar and modal particles individually, is coextensive (or perhaps even
overlapping) with the DM category as typically described (cf. Abraham, 1991: 1–3).

Turning to the referential difference between DP and DM, this, too, is related, at
least in part, to the indeterminate reference of the term particle. Owing to this inde-
terminacy, DP tends to be used much more inclusively than DM. The greater inclu-
siveness is seen even early on, for example in the use of this term by Levinson to
refer to *all right* (1983: 163), by Schourup to refer to approximative *like* (1985: 62),
and by Wierzbicka to refer to *even* (1986: 519), expressions not ordinarily regarded
as DMs. It is seen more recently in Fischer's inclusion in the DP category not only
of typical DMs but also freestanding interjections like *ouch*! and response words like
mhm and *no* (1998: 112). Besides having more inclusive reference, the term DP,
probably owing again to the indeterminacy of the component term particle, tends to
be used in a more tentative or pretheoretical way than DM and is used, more often
than not, without definition. DP is parallel in this respect, to many other compound
labels (utterance particle, conversational particle, sentence particle, final particle,
etc.) which confer tentative grammatical status on a particular set of invariable items

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[1] If Zwicky's statement is correct, there would be no need for a comprehensive theory of particles of
the kind called for by Wierzbicka (1986: 524) and Lenk (1998: 39).

as a matter of convenience. As Zwicky points out, it is likely that most such items (perhaps excepting only DMs, in his view), can ultimately be assigned to more conventional word classes. He suggests, for example, that the German 'conversational particles' are simply adverbs with special restrictions on their occurrence (Zwicky, 1985: 297).

The term DM has a narrower range of reference and has been subject to more precise attempts at definition (as detailed in 2.2 and 2.3 below). This is not to say that DM has an agreed reference: within its restricted referential range DM is used in a bewildering variety of ways. Nevertheless, it is possible to identify a small set of characteristics on which nearly all variant uses of the term DM draw selectively and with varying emphasis. In the following section I identify and briefly discuss the features most commonly attributed to DMs (and to items referred to by other closely associated terms) beginning with those features most widely referred to.

2.2. Characteristics of DMs

2.2.1. Connectivity

The characteristic figuring most prominently in definitions of DMs is their use to relate utterances or other discourse units. Thus for Fraser a DM is "an expression which signals the relationship of the basic message to the foregoing discourse" (1996: 186); Hansen defines DMs as "linguistic items of variable scope, and whose primary function is connective" (1997: 160); and Schiffrin, in operationally defining DMs as "sequentially dependent elements which bracket units of talk", specifies that "brackets look [...] forward and backward [...] [T]he beginning of one unit is the end of another" (1987: 31).

The connectivity of DMs is most often taken to be a necessary characteristic (but see Schwenter, 1996). This connectivity is, however, conceived in different ways. There is, for example, disagreement about whether DM connectivity must involve more than one textual unit. Schiffrin and Fraser's definitions, and most others, specify that DMs relate two textual units, thus contributing to inter-utterance coherence (see also Levinson, 1983: 88). Claims that DMs mark boundaries between verbal activities (e.g. Maschler, 1994: 325) also imply relations between two textual units. Other writers, however (e.g. Blakemore, 1987; Blass, 1990), point out that it is undesirable to distinguish discourse-internal uses of a connective like *so*, as in (1), from discourse-initial uses, as in (2):

(1) A: You take the first turning on the left.
    B: So we don't go past the university (then). (Blakemore, 1987: 85)
(2) [Seeing someone return home with parcels]
    So you've spent all your money. (Blakemore, 1987: 86)

Blakemore argues that in both uses *so* marks an implicated conclusion and that it is preferable to view certain DMs not as necessarily relating two segments of text, but as relating the propositional content expressed by the current utterance to assump-

tions that may or may not have been communicated by a prior utterance.[2] Thus in (2) the speaker may be seen as relating the proposition expressed by the utterance to a proposition derived from "observation of a state of affairs" (Blakemore, 1992: 87, 106). Hansen echoes this viewpoint in his claim that DMs may link their host utterance not only to the linguistic co-text, but also to "the context in a wider sense" (1997: 1260).

Examples like (1) and (2) seem to force abandonment of the requirement that connectivity necessarily obtains *between* textual units or even between propositions they express. However, there has been reluctance to abandon this requirement. The obstacle to doing so is that discourse coherence, viewed by some as central to utterance interpretation, is most often defined in terms of 'local' relations between successive discourse units. To include such discourse-initial connectives in the discussion would demand treating them in another framework. This problem does not arise for writers like Blakemore (1987), Blass (1990), and Unger (1996) who regard coherence as a derivative notion and attempt to account for both initial and non-initial DMs in terms of the notion of relevance (see 2.3.4 below). The dispute over connectivity is thus tied to the more general debate between relevance theorists and proponents of coherence-based models of discourse, in regard to the nature of utterance interpretation (see, e.g., Giora, 1997, 1998; Wilson, 1998).

If connectivity, however formulated, is considered criterial for DM status, it can be used to distinguish DMs from various other initial elements, such as illocutionary adverbials (*frankly, confidentially*), attitudinal adverbials (*fortunately, sadly*), and from primary interjections (*yipes, oops*); however, connectivity alone is insufficient to distinguish DMs from coordinators joining intrasentential elements.

2.2.2. Optionality

DMs are frequently claimed to be optional in two distinct senses. They are almost universally regarded as syntactically optional in the sense that removal of a DM does not alter the grammaticality of its host sentence (e.g. Fraser, 1988: 22). However, DMs are also widely claimed to be optional in the further sense that they do not enlarge the possibilities for semantic relationship between the elements they associate. Therefore, if a DM is omitted, the relationship it signals is still available to the hearer, though no longer explicitly cued. Utterances (3) and (4), for example, may be understood in roughly the same way.

(3) The others are going to Stoke. However, I am going to Paris.
(4) The others are going to Stoke. I am going to Paris.

Brinton says that omitting the DMs she studied "renders the text neither ungrammatical nor unintelligible" (1996: 267). Despite such observations, it is never claimed that the optionality of DMs renders them useless or redundant. Even those who regard DMs as optional see them as guiding the hearer toward a particular inter-

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[2] Parallel arguments can be constructed for other putative DMs (see, e.g., Sidiropoulou, 1992; Schourup, 1998).

pretation and simultaneously ruling out unintended interpretations (e.g. Brinton, 1996: 34; Brown and Yule, 1983: 106). For example, the hearer of (3) is not free to select an interpretation in which the fact that the speaker is going to Paris is taken as a further reason for not scheduling a meeting the next day, while this interpretation is available for (4) (and could have been explicitly indicated by *moreover*). Thus, while DMs are typically said to 'display' or 'reflect' existing propositional connections rather than create them (e.g. Schiffrin, 1987: 9, 318, 320–321; cf. Brinton, 1996: 34; Schwenter, 1996: 861), they are also commonly said to 'reinforce', or 'clue' the interpretation intended by the speaker.

2.2.3. Non-truth-conditionality

DMs are generally thought to contribute nothing to the truth-conditions of the proposition expressed by an utterance (e.g. Blakemore, 1988: 183; Hansen, 1997: 161; DeFina, 1997: 340). Some (e.g. Fraser, 1996: 167) take this to mean that DMs do not affect the truth-conditions of *sentences*, but support has grown for the view that truth-conditions pertain not to sentences but to mental representations (see Kempson, 1986: 102; Blakemore, 1987: 16). Thus Kempson (1986: 21): "truth-theoretic content is defined solely with respect to propositional forms of the language of inference". In neither view are so-called DMs seen as contributing to the truth-theoretic content associated with the marked utterance (see further discussion in Section 3).

The non-truth-conditionality of DMs distinguishes them from uses of 'content' words, including manner adverbial uses of words like *sadly*, and from disjunctive forms which do affect truth-conditions, such as evidential and hearsay sentence adverbials (see Ifantidou-Trouki, 1992). Nevertheless, as noted by Quirk et al., a nonconjunctive adverbial and a DM can give rise to similar overall interpretations, as seen in the following examples (based on Quirk et al., 1985: 632):

(5) Owens is a respected drama critic. I tell you in addition that she has written ...
(6) Owens is a respected drama critic. In addition, she has written ...

Connectivity, optionality, and non-truth-conditionality are all frequently taken together to be necessary attributes of DMs. The remaining features to be discussed are less consistently regarded as criterial for DM status.

2.2.4. Weak clause association

DMs are usually thought to occur "either outside the syntactic structure or loosely attached to it" (Brinton, 1996: 34; cf. Hansen, 1997: 156). Quirk et al. classify many forms elsewhere included among DMs as *conjuncts* (see 2.3.1 below) which are considered to be clause elements but to have a detached role relative to closely interrelated clause elements such as subject, complement, and object (1985: 631). Although putative DMs are at best weakly related to more central clause elements, some clearly have their own internal syntactic structure (e.g. *on the other hand*) and some potential DMs (e.g. *y'know*) are clearly clausal despite their apparent non-truth-conditionality.

Weak clause association is frequently correlated with phonological independence. DMs are often said to constitute independent tone units (Hansen, 1997: 156), or to be set off from the main clause by 'comma intonation'. This is true of many DMs, as of conjuncts and disjuncts in general, regardless of whether they occur within the clause or at its extremes. Nevertheless, lack of intonational integration might not be a necessary characteristic of DMs. Hansen notes that some clause-internal examples of forms such as Fr. *donc*, and all uses of Fr. *puis*, forms that share the principal defining qualities of DMs described above, are intonationally integrated with the clause (1997: 156). Some initial elements frequently identified as DMs may also be intonationally integrated with a host clause (e.g. *So I refused*).

2.2.5. Initiality

DMs "prototypically introduce the discourse segments they mark" (Hansen, 1997: 156; cf. Schiffrin, 1987: 31–32, 328). Many items considered DMs, however, can appear parenthetically within clauses with functions fundamentally identical to those they serve initially:

(7) (After all/Now/However), corgis are an intelligent breed.
(8) Corgis, (after all/now/however), are an intelligent breed.

The tendency toward initiality must be understood to refer to the position of DMs in relation to the central clause elements rather than to the position of the first word in an utterance since items supposed to be DMs frequently cluster at utterance onset and elsewhere:[3]

(9) Well, now, you know, but that's not what it says in the instruction manual.

Although initiality is rarely considered criterial for DM status (see, however, Keller, 1979: 222), most items considered DMs are at least possible in initial position, and many occur there predominantly. The tendency of DMs to appear initially is probably related to their 'superordinate' use to restrict the contextual interpretation of an utterance: in general it will make communicative sense to restrict contexts early before interpretation can run astray. Views of DMs in which they are seen as bracketing elements of talk also predict that DMs will tend to occur at boundaries (cf. Maschler, 1994: 326). Items of marginal clause membership appearing exclusively in final position, such as Japanese sentence-final emphasis particles (*yo, ze, zo*), which clearly lack connectivity, are not generally included among DMs.[4]

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[3] The restrictions on such clustering are not yet well understood but may provide important arguments for semantic analyses of particular DMs (see for example Bolinger, 1989: 318–319).

[4] Watts (1989: 210–211) distinguishes between *lefthand* (initial) DMs and *righthand* (final) DMs, based on whether a DM begins or ends a tone unit, but it is not clear that any purely righthand DMs exist. The generality of the lefthand/righthand distinction is questioned by Lenk (1998: 444–445).

2.2.6. Orality

Most forms claimed to be DMs occur primarily in speech (e.g. *by the way, well, after all*; see Brinton, 1996: 33; Watts, 1989: 208), but no principled grounds exist on which to deny DM status to similar items that are largely found in written discourse (e.g. *moreover, consequently, contrariwise*). Association of a particular DM with the written or spoken channel is rarely strict and is often tied only to the relative formality/informality of the DM (e.g. *also* versus *moreover*). The meaning of a marker may also ally it to one channel or the other. For example, some putative DMs such as *conversely* and *in contrast* encode a high degree of utterance planning (compare such 'impromptu' speech-linked DMs as *before I forget* and *by the way*); other DMs may be associated with speech because their meaning presupposes a familiarity with the addressee not typical of impersonally addressed writing. *After all*, for example, encodes that the speaker has grounds for believing that the premise introduced by *after all* is already accessible to the hearer (see Blakemore, 1987: 81). Claims that all DMs are allied to speech may only reflect the fact that early work on DMs focused predominantly on conversational items like *well* and *oh*. It is still the case that most DM studies are based on speech data. But while it might be possible to distinguish predominantly oral from predominantly written DMs based on functional or semantic grounds, the grounds in question do not appear to be those on which DM status is usually determined.

2.2.7. Multi-categoriality

DMs are most often said to constitute a functional category that is heterogeneous with respect to syntactic class. On this view DM status is independent of syntactic categorization: an item retains its non-DM syntactic categorization but does 'extra duty' as a non-truth-conditional connective loosely associated with clause structure. Categories to which extrinsic DM function has been attributed include adverbs (e.g. *now, actually, anyway*), coordinating and subordinating conjunctions (e.g. *and, but, because*), interjections (e.g. *oh, gosh, boy*), verbs (e.g. *say, look, see*), and clauses (e.g. *you see, I mean, you know*), though many would wish to shorten or lengthen this list of categories. When DM status is seen, instead, as a matter of syntactic categorization, multi-categoriality is viewed diachronically and DMs are taken to arise from other categories through historical processes (see Section 5).

2.3. Delimiting the DM category

2.3.1. Grammatical properties of DMs

Although the characteristics of DMs just discussed do not amount to a consensus definition, they suggest that the typical DM referred to in the literature is a syntactically optional expression that does not affect the truth-conditions associated with an utterance it introduces and is used to relate this utterance to the immediately preceding utterance. Attempts to delimit the DM category rather than simply identify representative cases have tended to focus on the functional rather than grammatical status of DMs. Before turning to such functional definitions, however, it will be useful to survey the evidence for a grammatical DM category.

Perhaps the earliest explicit claim that DMs constitute a grammatical category is Zwicky's statement that based on distribution, prosody, and meaning, DMs comprise "a grammatically significant class of items, in English and other languages generally" (1985: 302f.). Zwicky classes together as DMs words such as *well, hey, okay, oh, like, y'know, no, uh, now, say, why, look, listen,* and *please,* and proposes that such items be co-classified, on distributional grounds, with exclamatory interjections like *ouch, gosh,* and *holy cow.* Zwicky's use of DM here is not equivalent to current uses of the term; in particular, some of the items on the foregoing list would now regularly be excluded (e.g. *no, uh, please*). Moreover, the emotive interjections Zwicky mentions would now typically be distinguished from DMs on grounds that the latter do not constitute 'independent lexical utterances' (see Ameka, 1992; Wilkins, 1992; Wierzbicka, 1992; Fraser, 1990).

A more recent attempt to treat DMs as a unified grammatical class is that of Fraser (1990, 1996). Fraser argues that DMs in the now predominant connective sense of the term, cannot be subsumed under a single traditional word class label, say 'adverb', and points out ambiguities like that between (10) and (11) (1990: 388):

(10) John left. Now, Mary was really frightened.
(11) John left. Now Mary was really frightened.

Fraser sees *now* in (10) as a 'focusing device' and in (11) as a preposed adverbial. In such examples, he claims, DMs cannot simultaneously serve both roles at once: "(T)his is, of course, what we would expect of a syntactic category" (1990: 389). As further grammatical attributes of DMs Fraser mentions their tendency to occur in initial position, their semantic optionality, and their shared semantic property of signaling a sequential discourse relationship. Fraser claims that DMs are easily distinguished from neighboring syntactic categories: from interjections on grounds of syntactic dependence and from both interjections and vocatives based on connectivity.

Most items known elsewhere as DMs are referred to by Quirk et al. as *conjuncts,* a subclass of adverbials (1985: 631–645). Like disjuncts (*Sadly,...; Frankly,...;* see Espinal, 1991), conjuncts are said to stand in a 'detached and superordinate' relation to the rest of the clause and therefore, as shown in (12)–(14), cannot be made the focus of a cleft sentence, cannot be the basis of contrast in alternative interrogation or negation, and cannot be focused by subjuncts (1985: 631):

(12) *It is nonetheless that you should send her the agenda.
(13) *Should you send her the agenda *nonetheless* or *therefore*?
(14) *You should only nonetheLESS send her the agenda.

Unlike disjuncts, however, conjuncts are claimed to have the function of conjoining independent linguistic units and of specifying how the speaker views this connection.

The linguistic units conjuncts link are said to be of variable extent: not only sentences, paragraphs, and even larger units, but, at the other extreme, words in a phrase or even parts of words:

(15) I object to his hearty and, *above all*, crude behavior.
(16) The patient was carefully observed in the pre- and *likewise* post-operative phase of treatment.

Many writers would exclude such uses as DMs, but it is difficult to see on what grounds they can be excluded since such uses appear to be non-truth-conditional, optional, and connective in just the way DMs usually are, aside from the nature of the units connected, and even tend to be, as DMs typically are, prosodically independent of surrounding clause elements.

Quirk et al. stress that connectivity alone is insufficient to demarcate the conjunct category, since connectivity between linguistic units can also be effected by clausally more integrated adjuncts. Compare (17)–(18) to (19)–(20) (Quirk et al., 1985: 633):

(17) It was snowing, and in spite of this Mona went cycling.
(18) ... and it was in spite of this that Mona went cycling.
(19) It was snowing, and nonetheless Mona went cycling.
(20) *... and it was nonetheless that Mona went cycling.

It is then, Quirk et al. claim, both connectivity and the property of "lying outside the clause structure which admits adjuncts" (1985: 633) which characterize conjuncts as a group.

If defined grammatically, the DM class must be regarded as more or less open. This is true to some degree of the class of conjuncts described by Quirk et al. Clearly, conjuncts like *firstly, secondly, thirdly*, etc., are in principle an unbounded set (1985: 634). The broad class of items encompassed by Fraser's definition of DM (see below) is also open. *By the way* is established, as is *before I forget*, but if the latter item is to be included as what Fraser calls a 'topic change marker' (see Section 4 below), then so must the less established *while this is still on my mind*, and presumably also neologistic entries like *before this passes through the sieve*, or *before this thought flies the metaphorical coop*. It is not difficult to imagine nonce replacements for other subcategories of DMs as well.

2.3.2. Coherence-based functional definitions

In spite of such evidence, it is more often assumed that DMs do not constitute a single well-defined grammatical class but comprise a functionally related group of items drawn from other classes. The functional definition that has received greatest attention to date is Schiffrin's preliminary working definition of DMs as "sequentially dependent elements which bracket units of talk" (1987: 31), later supplanted with a more elaborate description of markers as "propos[ing] the contextual coordinates within which an utterance is produced and designed to be interpreted" (1987: 315). In Schiffrin's view DMs provide contextual coordinates of two kinds. First, they are said to be deictic and to index utterances to preceding and/or following text and to the speaker and/or hearer. *But*, for example, is said to index the current utterance to the speaker in that it "continues a speaker's action" and to a "prior coordi-

nate" in that it "returns a speaker to an earlier point of the text" (1987: 324). Secondly, DMs are claimed to locate the current utterance in various "planes of talk". For *but* the three relevant planes are those of *ideational structure*, since *but* can mark contrasting ideas, *action structure*, since it can also mark contrastive speech acts, and *exchange structure*, since *but* can be used to continue a turn. Schiffrin posits two additional planes for the description of other DMs: *participation framework*, concerned with shifts in speaker attitude or orientation toward the discourse or toward speaker-hearer relations, and *information state*, which relates to speaker knowledge and meta-knowledge.

In Schiffrin's view DMs contribute to coherence by establishing multiple contextual coordinates simultaneously, thus facilitating the integration of various components of talk. Coherence is seen as constructed through relations between adjacent discourse units (1987: 24). Each marker is said to be primarily associated with one of the five planes of talk; with either speaker or hearer; and with prior and/or upcoming text. Thus, for example, *oh* is said to be related primarily to the information state plane (in that it marks information state transitions), and secondarily to both the participation framework (because it "displays speakers and hearers in particular productive and receptive capacities") and the action structure ("since it marks certain actions, e.g. clarifications, which are designed to manage information state transitions"; 1987: 316). DMs are distinguished from each other, Schiffrin claims, not only in being associated with particular discourse planes and deictic coordinates, but also by virtue of their conceptual semantic content, for markers claimed to have such content, and their syntactic properties. Particular DMs "*select* a meaning relation from whatever potential meanings are provided through the content of talk, and then *display* that relation" (Schiffrin, 1987: 318; emphasis in original).

Redeker (1991) proposes a closely related characterization of DMs. Her discourse model, like Schiffrin's, is based on coherence effected between adjacent discourse units. Redeker rechristens DMs as *discourse operators* and defines these as "linguistic signals of textual coherence links" (1991: 1139). More specifically, a DO is "a word or phrase [...] that is uttered with the primary function of bringing to the listener's attention a particular kind of linkage of the upcoming utterance with the immediately preceding discourse context" (1991: 1168). The new term DO is intended to correct a pragmatic bias Redeker sees as built into the term DM and is said to be justified because "propositional links are by far the largest and most frequent class" (1991: 1168).[5] Redeker eliminates two of Schiffrin's five planes of talk (participation framework and information structure) because they are concerned with individual utterances and so only indirectly related to inter-utterance coherence. The remaining three planes are reformulated as 'components of coherence'. Schiffrin's ideational structure is recast to represent structural relations between units of talk "in terms of relations predicated of the world the discourse describes (as opposed to relations that hold between discourse units of any kind)" (Redeker, 1991: 1163);

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[5] Redeker appears to assume that 'propositional' and 'pragmatic' are mutually exclusive. For an opposing viewpoint see Wilson and Sperber (1993).

action structure is renamed *rhetorical structure* and conceived as a relation between illocutionary intentions conveyed by two discourse units; and exchange structure, referred to as *sequential structure*, is broadened to include topic and other transitions in both interactive and noninteractive discourse. Redeker suggests that the links discourse operators signal can be described and classified in terms of these revised coherence elements.

Redeker's reformulations alter the boundaries of the DM class set by Schiffrin. For example, non-anaphoric uses of *now* are excluded, and adverbial uses of *now* are included. However, Redeker and Schiffrin both see DMs as primarily cuing coherence relations. The same may be said of the coherence-based definition proposed by Lenk for whom DMs "signal for the hearer how the speaker intends the present contribution to be related to preceding and/or following parts of the discourse" (1998: 52).

A definition of DMs proposed by Maschler – "a subcategory of metalingual expressions: those used to mark boundaries of continuous discourse" (1994: 325; cf. 1997: 284) – is similar in some respects to the foregoing definitions in that it is also based on relations between adjacent verbal elements, in particular between two verbal activities. In saying that DMs are metalingual, Maschler intends that they "frame" or provide a boundary for various parts of the text rather than referring to the extralingual world (1994: 334). Maschler's use of 'frame' and 'boundary' parallels Schiffrin's use of 'bracket'; that is, the term DM on this view does not encompass discourse-initial elements. There must be a shift between two verbal activities (see Maschler, 1994: 284; cf. 1996: 356).

2.3.3. Fraser

A somewhat different characterization of DMs is developed in a series of papers by Fraser (1988, 1990, 1996). Fraser's characterization of DMs is only partly functional. His primary concern is to locate DMs in relation to other linguistically encoded elements of sentence meaning. DMs, as a grammatical category, are seen as a subclass of *pragmatic markers* (PMs). PMs, which comprise all linguistic elements which contribute to non-truth-conditional sentence meaning, are "linguistically encoded clues which signal the speaker's potential communicative intentions" (1996: 168). Fraser posits four types of PMs corresponding to four distinct message types. *Basic markers* specify the force of the basic message, that is, the message which takes the 'sentence proposition' as its content. *Admittedly* in *Admittedly, I was taken in* is in this view a basic marker which signals that the proposition expressed by *I was taken in* is to be understood as an admission, and the declarative mood of *I was taken in*, also considered a basic marker, simultaneously signals that the basic message is to be taken as a claim or expression of belief. *Commentary markers* comment on the basic message. *Stupidly* in *Stupidly, Sara didn't fax the correct form in on time* conveys that the speaker thinks Sara's failure to send the fax was stupid. Commentary markers are said to have both a representational meaning specifying an entire message in itself, and a 'procedural' meaning (cf. section 3.3 below) specifying that the representational meaning is to be taken as commenting on an aspect of the basic message. Commentary markers include markers of assessment (*sadly*),

manner-of-speaking (*frankly*), emphasis (*mark my words*), mitigation (*if you don't mind*), and consequent-effect (*to sum up*), as well as evidential markers (*certainly*), and hearsay markers (*allegedly*). *Parallel markers* signal a message additional to the basic message (***Waiter**, please bring me another fork*; *Get your **damned** shoes off the table.*)

Within this framework, DMs are seen as a distinct fourth type of PM.[6] DMs (e.g. *after all, besides, as a result*) are said to signal how the basic message relates to the foregoing discourse. DMs are thus, here again, seen as necessarily connecting textual elements. Their meaning is distinguished from that of other types of PMs in that it contributes nothing whatsoever to the "representative sentence meaning".

Fraser's classificatory scheme provides a convenient and appealingly rational basis for assigning expressions to the category DM or excluding them and, in most cases, provides an alternative classification for excluded items. Fraser's definition of DMs is sufficiently broad to allow in most of what other definitions include. (A striking exclusion, however, is the 'prototypical' DMs *well* and *oh* which pepper English conversation. *Oh* is classed with basic markers (Fraser, 1996: 176), while *well* is exiled from the PM category altogether (1996: 189)). Moreover, Fraser's definition includes the two elements shared by most other DM definitions: non-truth-conditionality and connectivity. Nevertheless, Fraser's definition and the framework in which it is set have not met with universal acceptance. In particular, the definition has been claimed to be too inclusive. Blakemore (1996) has argued that in lumping together forms like *so* and *that is*, Fraser has placed together items which function in very different ways (see 3.3 below). More generally, Fraser's definition, by virtue of its restriction to relations between successive discourse segments, is subject to the criticisms which have been directed at accounts of DM function based on inter-utterance coherence.

2.3.4. DMs and discourse connectives

Within relevance theory (RT) many items elsewhere classed as DMs are referred to as *discourse connectives* (DC): "expressions that constrain the interpretation of the utterances that contain them by virtue of the inferential connections they express" (Blakemore, 1987: 105).[7] Two central properties attributed to DCs in RT are regularly also attributed elsewhere to DMs: connectivity and failure to contribute to the truth-conditions of the utterance. The notion that DCs guide interpretation of the host utterance is also applicable to uses of the term DM (e.g. Hansen, 1997: 160; Lenk, 1998: 52).

In coherence-based studies like those of Schiffrin and Redeker, and in Fraser's work, what is marked by DMs is the type of relation holding between adjacent discourse segments. As noted in section 2.2, however, DMs occurring discourse-initially have functions which appear to be identical to those they have when

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[6]   Only in the most recent version of Fraser's framework do DMs emerge as a category distinct from commentary markers, with absence of representational meaning taken as the criterion for membership.
[7]   The terms DC and DM do not designate coextensive sets of expressions. For example, *and*, and *because*, which are included by Schiffrin, are excluded from the DC class (see Carston, 1992: 158–159).

they stand between utterances. In such positions, and in one-utterance dis-
courses, inter-utterance coherence is not even an issue. In RT this fact is taken
as one indication that, while DCs might be said to contribute to perceptions of
coherence, this cannot be their primary function. A DC is seen, instead, as
expressing an inferential connection that "arises out of the way that one propo-
sition is interpreted as relevant with respect to another" (Blakemore, 1987:124),
even when the other proposition is not, for certain DCs, communicated by means
of a foregoing utterance (see Blakemore, 1987, 1988, 1996; Blass, 1990; Unger,
1996.)

While in the coherence-based accounts described above the production and
interpretation of texts crucially depends on the identification of the particular
coherence relation obtaining between two textual units, and DMs are seen as play-
ing a role in this identification, in RT the notion that there is a set of coherence
relations existing as primitive 'cognitive entities' has come under question (see,
especially, Unger, 1996). Within the RT framework no appeal is made to coher-
ence relations. Rather than attempting to identify such relations, hearers are seen
as attempting to determine, for any utterance, how that utterance achieves rele-
vance (see Blakemore, 1996: 328). On this approach, utterance interpretation is
constrained by the assumption that the utterance is consistent with the Principle of
Relevance (see Sperber and Wilson, 1995). This principle entitles the hearer of an
utterance to assume (a) that it will yield adequate contextual effects (that is,
roughly speaking, that it will be 'relevant' in the nontechnical sense of the word),
and (b) that no gratuitous processing effort will be required of the hearer in the
derivation of those effects. More specifically, the Principle of Relevance entitles
the addressee to assume that an utterance comes with a guarantee of its own *opti-
mal relevance*. An interpretation is considered to be consistent with the presump-
tion of optimal relevance if the speaker could rationally have intended it to be opti-
mally relevant to the hearer on that interpretation. The presumption of optimal
relevance entitles the addressee to expect a level of relevance which is high
enough to warrant attending to the stimulus, and which is the highest level of rel-
evance the communicator was capable of achieving given his or her means and
goals. Having accessed an interpretation consistent with the presumption of opti-
mal relevance, the hearer takes that to be the intended interpretation. (For detail,
see Sperber and Wilson, 1995; for a critique of the notion 'coherence relation', see
Unger, 1996; see also Section 3 below).

From the RT viewpoint coherence is a secondary, derivative notion (see, e.g.,
Blass, 1990: 19), and coherence relations are argued to have no cognitive reality
(Unger, 1996: 436). Some RT theorists have expressed doubt that the label DM
can be usefully applied to any unified group of expressions (Blakemore, 1996;
Unger, 1996: 403). Blakemore argues that the term DM, in co-classifying all
items which are both connective and non-truth-conditional, fails to respect an
important distinction between expressions of two distinct kinds: those which are
non-truth-conditional but conceptual, and those which are both non-truth-condi-
tional and nonconceptual. The term DC refers only to forms of the latter kind (see
Section 3).

2.3.5. Categorization

Most of the definitions of the term DM considered above focus on connectivity and non-truth-conditionality, but at this point no definition seems likely to win universal acceptance in view of the unresolved theoretical differences and varying background assumptions that inform these definitions. The fact that the DM class is characterized in very different ways means that a given item may be classified as a DM on one definition but not on another. It would be pointless to review here in detail all of the classificatory disagreements stemming from the variant definitions considered above and others. However, the flavor and extent of such disagreements can be appreciated by considering the fate, under subsequent definitions, of the set of forms originally treated by Schiffrin in the first general study of DMs, published in 1987.

Schiffrin discusses eleven English DMs in depth: *oh, well, and, but, or, so, because, now, then, y'know*, and *I mean*. Not one of these has met with unqualified acceptance as a DM in subsequent literature. Objections are even raised to including *oh, y'know* and *well* in the list, despite the fact that these items, all of which occur very frequently in English conversation, were the focus of much of the early work on English DPs out of which work on DMs grew (e.g. Östman, 1981; Heritage, 1984; Carlson, 1984; Schourup, 1985). Fraser excludes all three items: *oh* is passed by because it can stand alone as an interjection which encodes an entire message, and because it does not signal a discourse relationship (1990: 392); *y'know* is treated as a parallel marker (see 2.3.3 above) which signals speaker solidarity and is therefore also not relational; and *well* is labeled a 'pause marker' and considered to be neither DM nor PM (Fraser, 1996: 189). Fraser also excludes *I mean*, for not being relational, and *because*, which he regards as primarily a content formative. He points out that even in sentence-initial position *because* functions as a subordinate conjunction (A: *Why do you want to go?* – B: *Because I like ice cream*; Fraser, 1990: 392).

Even when an item is widely accepted as a DM, there can be disagreement about which instances of the item qualify. Both Schiffrin and Redeker admit *I mean* and *y'know* as DMs, for example, but while Schiffrin includes literal uses of these expressions (e.g. *Y'know what Hasidic is?*), Redeker excludes them. Another unsettled case is *now*. Schiffrin attempts to distinguish the adverb from the DM, claiming, for example, that the adverb must occur with the present tense (Schiffrin, 1987: 231). Redeker points out that the DM can occur with the past tense in examples like *They saw that they were now in the deepest part of the jungle* (Redeker, 1991: 1145) and claims that anaphoric instances of adverb *now* do qualify as DM uses. Fraser's view of *now* also differs somewhat from Schiffrin's. In examples like (21) Schiffrin considers the distinction between the adverb and the DM to be neutralized (1987: 263):

(21) I have so far considered phonology. Now let us consider morphology. (Schiffrin 1987: 263; cf. p. 231)

Fraser, however, sees DM status as incompatible with adverb status (1996: 169–170) and would thus have to assign the use of *now* in (19) to one category or the other on a given reading.

2.4. Summary

The term DM typically refers to a more or less open class of syntactically optional, non-truth-conditional connective expressions. There is, however, wide disagreement about the nature of the connection DMs express, the nature and extent of the elements connected, and the grammatical status of the DM category. An inconvenient result of such disagreements is that the items (and uses of items) designated by the term DM on one definition sometimes overlap only minimally with those designated on another definition. Equally inconvenient is the fact that the referential overlap between the term DM and other similar terms, such as pragmatic marker and pragmatic particle, can in some cases be as great as that between variant definitions of the term DM itself.

The overabundance of terms and definitions in this area cannot be ascribed to claim-staking or fashion. In general the term and definition used in each framework are chosen to reflect theoretical preoccupations, to avoid unwanted associations, or to rule in or out particular linguistic items or functions. Such variation is to be expected in an area that has only recently become a focus of intensive study and which bears on many different areas of discourse research, cognitive, social, textual, and linguistic. On the other hand, so long as such uncertainties exist, DM must remain a term with theoretical aspirations, but whose precise reference remains at issue.

3. DM meaning

Assigning meaning to DMs has proved no less troublesome than determining what a DM is. In one way, the two problems are related: accounts of DM meaning depend to some extent on which expressions are chosen to represent the category. Characterizing the meaning of a connective like *but* might involve very different factors than would be relevant for a word like *oh*. However, most general semantic issues involving DMs are not affected by how the DM class is defined. These issues concern not only DMs but also other items that resist analysis in terms of truth-conditional meaning, such as interjections and many of the items referred to as 'particles' (see, e.g., Uyeno, 1971; Tsuchihashi, 1983; Luke, 1990; Abraham, 1991).

3.1. Are DMs meaningful?

Recurrent claims that certain DMs lack meaning (e.g. Schiffrin, 1987: 127) may be taken to imply only that such DMs contribute nothing to the truth-conditions of the proposition expressed by an utterance. These claims usually do not entail that such DMs are entirely without a fixed linguistic value that might be considered semantic in some broader sense. Thus, for example, when Schiffrin claims that *well* and *oh* are "meaningless", she is not claiming that they are simply 'wild cards' which lack a specifiable content. Rather, she goes to great length to characterize these two DMs in terms of the discourse 'slots' they can fill. As examples like the following show, these slots are not identical:

(22) Next Jan opened the blue jar. Well /(?Oh), what do you suppose was in it?
(23) A: Did you arrive early? B: Oh (/*Well), why, of course.

Even in discourse frames in which *well* and *oh* are equally acceptable, their commu-
nicative effects can be strikingly different. Compare, for example, the different pos-
sible implications of answering 'Oh, yes' and 'Well, yes' to 'Are you happy?'
Examples like these suggest at least an encoded content sufficient to relate these
DMs to the respective 'slots' in which they can appear.
    Considered from this perspective, the issue, for such items, is not whether they
lack meaning or not, but rather what kind of meaning they encode. This is an issue
of long standing which rose to prominence in connection with the work of Grice
even before the current preoccupation in pragmatics with the items known as DMs.

3.2. Grice on connectives

    In Grice's view a DC like *so, therefore,* or *on the other hand* conveys a *conven-
tional implicature*. An implicature is a proposition conveyed implicitly by an utter-
ance. Such propositions are considered implicit in the sense that they are not part of
what is 'said'; that is, they are not part of the truth-conditional content of the utter-
ance which conveys them. Ordinary conversational implicatures, in the Gricean
sense, are implicit propositions which can be inferred from what is said based on
pragmatic principles, but a conventional implicature is an implicit proposition which
is encoded in a particular linguistic expression rather than inferred.
    For example, Grice proposed that the connective *on the other hand* encodes a con-
ventional implicature in utterances like (24) (1989: 362):

(24) My brother-in-law lives on a peak in Darien; his great aunt, on the other hand,
     was a nurse in World War I.

What is 'said' by the speaker of (24), according to Grice, is only that his or her
brother-in-law lived on a peak in Darien, and that the brother-in-law's great aunt was
a nurse in World War I. In addition to these two explicitly conveyed propositions,
however, the expression *on the other hand* is claimed to convey a further implicit
proposition to the effect that the speech acts represented by the two explicitly con-
veyed propositions contrast in some way. This implicit proposition must be seen as
encoded by *on the other hand* rather than arising through inference because it is pre-
sent with every use of *on the other hand* regardless of the context (though, of course,
the explicit propositions contrasted change from use to use), hence conventional.
    On the other hand, in this view, encodes a proposition which does not contribute
to the truth-conditions of the utterance. This amounts to claiming that if both of the
propositions conveyed explicitly by (24) were true but could not be viewed as con-
trasting, the speaker of (24) could not be accused of speaking falsely. The following
example will highlight this point:

(25) Kim pulled the plug on the fan. On the other hand, its blades gradually came to
     a stop.

Under usual assumptions about the operation of fans, (25) could be regarded as markedly odd, certainly, but probably not false, provided it is true both that Kim pulled the plug on the fan and that the blades of the fan gradually came to a stop.

According to Grice, the speaker of (24) is making "ground floor statements" about the brother-in-law and his great aunt, while at the same time contrasting these two lower-level speech acts of assertion by means of a third "higher-order" speech act of contrasting (Grice, 1989: 362). This higher-order speech act amounts to a conceptual meaning ('(a) contrasts with (b)'), though one which is not truth-conditional. If one wished to restrict the notion of 'meaning' to truth-conditional meaning, one would be entitled to say that *on the other hand* is 'meaningless', but it is clear that Grice himself intended conventional implicatures to be traceable to the meaning of particular words and phrases (1989: 18). The main force of Grice's arguments, then, is to show how an expression could simultaneously be meaningful and non-truth-conditional (see Wilson and Sperber, 1993.)

3.3. Procedural meaning

A reinterpretation of Grice's notion of conventional implicature is proposed by Blakemore (1987) and developed in an extensive body of literature on connectives in various languages (see references in Sperber and Wilson, 1995: 295, n. 21). In this work DCs are seen as being conceptually empty but possessing what Blakemore calls *procedural meaning*. The distinction between procedural and conceptual meaning proceeds from the rudimentary observation that for inferential comprehension to take place both the construction and manipulation of conceptual representations are necessary. That being so, one might expect a linguistic construction to encode either information contributing to the content of conceptual representations (as, for example the construction *a peak in Darien* does in (24)), or information about how conceptual representations are to be made use of in the inferential phase of comprehension (for example, in calculating implicatures).[8] In saying that DCs are "expressions that constrain the interpretation of the utterances that contain them by virtue of the inferential connections they express" (see 2.3.4 above), Blakemore is identifying DCs as expressions of the latter kind.

Blakemore's analysis of *so* will serve to illustrate her approach (see Blakemore, 1996: 332–333). Consider (26) (based on Hobbs, 1979: 78):

(26) a. Tom can open Bill's safe.
     b. He knows the combination.

If the proposition expressed by (26a) is taken as part of the context in which (26b) is interpreted, at least two interpretations of (26b) are possible. On one interpretation the proposition expressed by (26b) is relevant as evidence for that expressed by (26a); on the other interpretation, the proposition expressed by (26b) achieves rele-

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[8]   In RT, utterance interpretation is regarded as a two-stage process: a modular decoding phase and a central inferential phase (see Sperber and Wilson, 1995).

vance as an implication of that expressed by (26a). That is, the propositions expressed by the two utterances can stand either in a relation of conclusion-then-premise, or premise-then-conclusion.

Consider now (27):

(27) a. Tom can open Bill's safe.
     b. So he knows the combination.

The proposition expressed by (27b) is now unambiguously marked as an implicated conclusion, and the other interpretation is no longer available. In Blakemore's view all that *so* does is constrain the interpretation of an utterance it prefaces by constraining the inferential calculations into which the proposition expressed by the utterance may enter. *So* contributes nothing to any conceptual representation and its meaning is therefore considered entirely procedural.

On this view DCs differ in the way they constrain the interpretation of utterances they appear in. For example, the interpretation in which the proposition expressed by (26b) is a premise and that expressed by (26a) is a conclusion can be indicated in English by the DC *after all*:

(28) a. Tom can open Bill's safe.
     b. After all, he knows the combination.

After all additionally suggests that the speaker expects that the proposition expressed by (b) is already accessible to the hearer (see Blakemore, 1987: 81), but this extra element of meaning may also be regarded as procedural since it does not affect the proposition expressed by (28b) and simply provides a further constraint on the way in which that proposition may be 'taken'.

The claim that expressions like *so* and *after all* are procedural rather than conceptual cannot be regarded as equivalent to the claim that they do not convey truth-conditional meaning. The latter claim is, as we have seen, widely asserted in regard to DMs. In some recent work, the identification of non-truth-conditional with procedural meaning has been abandoned in the light of arguments by Wilson and Sperber (1993) which appear to indicate that the distinction between truth-conditional meaning and non-truth-conditional meaning is not coextensive with the distinction between conceptual and procedural meaning. Wilson and Sperber attempt to show that an expression may be simultaneously conceptual and non-truth-conditional, or simultaneously procedural and truth-conditional. This claim bears on the treatment of DMs because, if Wilson and Sperber are right that truth-conditionality and conceptuality are not the same thing, using non-truth-conditionality as a criterion for membership in the DM class can result in lumping together conceptual and nonconceptual items in the same class, despite the fact that they function in very different ways.

This suggests that items routinely included as DMs should be examined individually to determine whether they posses or lack conceptual meaning. To see what form support for a claim of conceptual meaning might take, consider the evidence given

to support the conceptual status of 'illocutionary' adverbials like *frankly* and *seriously* (see Infantidou-Trouki, 1992). *Frankly* in examples like (29), is generally regarded as contributing nothing to truth-conditions:

(29) Frankly, I find this color unappealing.

It is troublesome, however, to say that *frankly* and similar adverbials have no conceptual content. First, as Infantidou-Trouki points out, it is not clear that Mary's reply in (30) would be inappropriate, even if it is granted that *frankly* contributes nothing to the basic truth-conditions associated with Peter's utterance (1992: 208):

(30) a. Peter: Frankly, this party is boring.
    b. Mary: That's not true. You're not being frank. I've just seen you dancing with the blond beauty in blue.

Mary's reply appears to tease out the existence of a conceptual representation associated with (30a) which can be either true or false in its own right while still not affecting the overall truth-conditions of (30a). The continuation *You're not being frank*, then, draws attention to the falsity of this additional conceptual representation. (More specifically, in RT Peter's use of *frankly* would be said to contribute conceptually to a 'higher level explicature'; see Wilson and Sperber, 1993: 16–19).

Secondly, such adverbials may be semantically complex, as argued by Wilson and Sperber based on the following examples (1993: 18):

(31) a. Frankly speaking, he has negative charisma.
    b. Speaking frankly, though not as frankly as I'd like to, he isn't much good.

As Sperber and Wilson point out, the compositionality of such adverbials is difficult to reconcile with the claim that they lack conceptual content, as is the ambiguity occasioned by *seriously* in examples like the following (ibid.):

(32) Seriously, are you leaving?
(33) a. I ask you seriously whether you are leaving.
    b. I ask you to tell me seriously whether you are leaving.

Based on similar criteria, DCs like *so* and *after all* appear to Blakemore to fall on the procedural side of the fence. Consider (34):

(34) A: Tom can open Bill's safe. So he knows the combination.
    B: That's not true.

Blakemore's claim that DCs like *so* are purely procedural amounts to a claim that in examples like (34) B's response could only be heard as claiming the falsity of the proposition that Tom knows the combination, or perhaps of the proposition that Tom can open Bill's safe. It cannot under any circumstances be interpreted as denying the

truth of a 'higher level' proposition to the effect that one 'ground level' proposition is evidence for the other. If Blakemore is right, it should be impossible to tease out conceptual meaning from *so* by constructing examples parallel to example (30) above.[9]

If the distinction between procedural and conceptual meaning is granted, then the behavior of some expressions that have been included in the DM category on various definitions might cause them to be placed in the non-truth-conditional-but-conceptual category. Blakemore argues, for example, that the expressions *that is* and *in other words*, which Fraser regards as DMs, are conceptual.[10] She points out, for example, that the appositional expressions in question appear to be compositional (compare *in other words* to *to put it in other words* and *putting it more elegantly*). She also notes that if these items are not regarded as conceptual, it is impossible to explain the self-evident semantic relationship between their appositional, non-truth-conditional uses and uses in which they clearly do contribute to truth conditions (cf. 3.4 below), such as (35) and (36):

(35) *That is* the same thing as saying I'm fired
(36) He asked me to put it *in other words*.

Finally, Blakemore claims, somewhat more controversially, that "in contrast with a speaker who uses *so* or *after all*, a speaker who uses [*that is* or *in other words*] can be charged with untruthfulness" (Blakemore, 1987: 333).[11]

Wilson and Sperber propose another way of determining whether an item has conceptual content (1993: 16). They claim that items which have procedural meaning are more semantically opaque than items which have conceptual content. They ask, "If 'now' or 'well' encodes a proposition, why can it not be brought to consciousness?" Their answer: "Conceptual representations can be brought to consciousness: procedures cannot". Thus the difficulty of locating the propositional meaning of an item, in their view, can in itself constitute "direct evidence" for procedural meaning of the item.

The notion of procedural meaning is not unique to RT. As Wilson and Sperber point out (1993: 11), the idea that some linguistic expressions do not encode concepts but indicate how to 'take' a host sentence or phrase is developed in the work

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[9] It is not clear what Blakemore would say about examples like the following which appear to pose a problem for her analysis:
   (i) A: He insulted me. So I quit.
       B: That's not true. That's not why you quit.
[10] For an alternative analysis see Tanaka (1997).
[11] Blakemore supports her claim with the following example (1987: 334):
   (i) a. She said she no longer requires your services.
       b. In other words, she said I'm fired.
       c. That's not true. She didn't say that.
A problem with this argument is that the claim of falsity in (c) can apply to the proposition expressed by *she said I'm fired*. Another problem is that it may be possible to deny the truth of *so* (see n. 9 above; for another objection to Blakemore's argument, see Tanaka, 1997: 371.)

of Ducrot and his associates (Ducrot, 1972, 1973, 1984; Anscombre and Ducrot, 1983). Roughly similar notions also surface in RT-influenced accounts of items referred to as DMs, for example in Hansen's claim that DMs lack a conceptual core and "are basically instructions on how to process their host utterance in a given context" (Hansen, 1997: 160).[12]

Procedure-like statements may also be found in Schiffrin's formulation of the function of 'meaningless' DMs like *oh* and *well* in terms of the discourse 'slots' they may fill. However, Schiffrin's formulations of the meaning of the other nine DMs she discusses are at least partly conceptual. She claims, for example, that *so* in all its DM uses has the "semantic meaning" 'result', and that in examples like the following it marks "fact-based cause and result relations":

(37) He said, 'Carry yourself in the house! I ain't carryin' y'in!' So I went BOOM!
     (Schiffrin, 1987: 203)

In Schiffrin's interpretation *so* here marks that the interlocutor's refusal is the 'immediate provocation' for the speaker's reaction. In a purely procedural account of *so* like that of Blakemore, one could acknowledge the factual cause-effect relationship between the refusal and the reaction, but *so* would be seen as indicating only that the proposition expressed by *I went BOOM* is to be understood as an implicated conclusion. There would be no instruction to the hearer to relate 'I went BOOM' specifically to the previous utterance or to the proposition it expresses, though the proposition expressed by that utterance would be readily accessed by the hearer as a premise from which the marked conclusion follows (see Blakemore, 1988).

The notion that DMs encode procedures may be contrasted with the views of Halliday and Hasan (1976) concerning the cohesive devices they refer to as *conjunctive elements* or *conjunctions*. These devices include the forms referred to as DCs in RT. Halliday and Hasan describe cohesion as a semantic rather than a structural relation (1976: 6), but at the same time it is "the relation between sentences in a text" (1976: 227). Moreover, they note:

"in describing conjunction as a cohesive device, we are focussing attention not on the semantic relations as such, as realized throughout the grammar of the language, but on one particular aspect of them, namely the function they have of relating to each other linguistic elements that occur in succession, but are not related by other, structural means."(Halliday and Hasan, 1976: 227)

It is clear from this and from Halliday and Hasan's statement that conjunctions specify "the way in which what is to follow is systematically connected to what has gone before" (ibid.), that cohesion cannot account for uses of DCs in which they indicate a relationship between a proposition conveyed by an actual utterance and a proposition that has not been linguistically realized (see 2.2 above; cf. Blakemore, 1987: 106).

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[12]   In other respects Hansen's analysis differs markedly from RT treatments of DCs.

Brown and Yule claim that Halliday and Hasan are not concerned with how texts are understood, but with the "linguistic resources available to the speaker/writer to mark cohesive relationships" and with "*post hoc* analysis of a completed text" (1983: 204; cf. Halliday and Hasan, 1976: 5). DCs are seen as specifying the direction in which the hearer must look to find the relevance of the current utterance. The RT approach, including the characterization of DCs in procedural terms, places the emphasis not on text as a 'specimen' (see Halliday and Hasan, 1976: 1) or a 'passage' that forms a unified whole (ibid.) but on the dynamic processes involved in discourse comprehension (cf. Blakemore, 1987: 107, Wilson, 1998: 70–71). RT theorists like Blass (1990) argue that neither cohesion nor coherence is necessary or sufficient to account for either utterance interpretation or textuality, and that textuality can only be defined in terms of relevance. The notion 'discourse structure' is similarly regarded as derivative, and thus the RT view of connectives can also be contrasted with the view that DMs primarily mark 'discourse structure' (see, e.g., Lenk, 1998: 1).

The distinction between procedural meaning and conceptual meaning can have important bearing on the future of DM research. If the distinction can be maintained, it will, at the very least, require partitioning the current class of DMs into relational items of two very different sorts in terms of their contribution to conveyed meanings. This partitioning would, however, invite the conclusion that the term DM is of no explanatory or theoretical value, as suggested by Blakemore (1996; cf. Unger, 1996: 403).

3.4. Core meaning

Studies of individual DMs have in most cases attempted to isolate an invariant semantic content for each marker, usually referred to as its 'core meaning' (e.g. Schourup, 1985; Schiffrin, 1987; Fraser, 1990; Redeker, 1991: 1165; for a contrasting view see Luke, 1990: 39–45). Even when a particular DM is claimed to be semantically empty, it is usually nevertheless held to have an invariant core of some kind.[13] The working assumption that there is a single core for each DM is ordinarily abandoned only if the data will not support a unified treatment, but in practice it is rare to resort to the option of multiple cores. More often, when multiple cores are proposed, subsequent attempts are made to unify them into a general formula. An example is provided by three uses of *oh* distinguished in an early study by James (1974), illustrated in (38):

(38) a. Oh, I've forgotten my wallet!
     b. Sander would probably go for, oh, a nice Bordeaux.
     c. A: There sure aren't very many people here.
        B: Oh, more will probably come.

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[13] The semantic content of the omnipresent English conjunction *and*, and similar items, is a subject of continual debate. Both Schiffrin and Fraser consider *and* a DM and claim that it has a minimal core meaning. Others have proposed that *and* is richly polysemous. Some of the issues involved are reviewed by Schiffrin (1987: Ch. 6) and Carston (1992).

In (38a) *oh* seems to mark that the speaker has just found out or realized something. In (38b) *oh* appears to indicate that the speaker is selecting from among possible alternatives. In (38c) *oh* is very close in use to *well*, for which it can be substituted without shifting intonation and without much altering the meaning conveyed. In Schiffrin's 1987 analysis all uses of *oh* are covered by a single formula: "(Oh) marks shifts in speaker orientation (objective or subjective) to information" (1987: 101–102). Fraser, as noted earlier, treats *oh* not as a DM but an interjection, but still attempts to reduce *oh* to a single formula, attributing variant uses to a combination of the single core with marked intonation (1990: 392). Bolinger (1989: 268) regards the use in (38a) as genuinely distinct from other uses of *oh* but maintains that the two *oh*s differ in their phonological realization; thus even in his analysis only one meaning is assigned to a single form.

The working assumption that DMs have a single core is sometimes held to have privileged status. Bolinger holds that "the natural condition of language is to preserve one form for one meaning, and one meaning for one form" (Bolinger, 1977: x; see also Östman, 1995: 103). As Hopper and Traugott point out, however, Bolinger's one-form-one-meaning ideal is in conflict with "another optimality, that of associating like forms with like meanings, in other words, of developing polysemies" (1993: 72; see Haiman, 1985). The fact that the latter tendency is copiously exemplified in language makes it impossible to elevate 'one-form-one-meaning' to a point of dogma (König and Requardt, 1991: 64–65).

Cores are isolated by comparing the various discourse uses of a DM and attempting to determine what these uses have in common. Not surprisingly, this subjective exercise can produce conflicting results. A prime example is *well*, for which more than a dozen cores have been proposed (see, e.g., Schiffrin, 1987; Bolinger, 1989; Jucker, 1993; Schourup, 1998). Complicating the search for semantic cores is the difficulty of extracting the core from contextual elements necessary for the interpretation of particular examples and from information encoded in the host utterance. 'Contamination' of this kind can occur even when care is taken to eliminate its effects by comparing a wide range of contexts. It occurs because DM meaning is assessed in connection with the entire meaning conveyed by an utterance in which a DM appears. Meanings conveyed by the entire utterance and assumptions accessed in assigning it an interpretation 'leak', as it were, into the proposed DM core.

To see how this can occur in practice consider four examples:

(39) a. Why, what are you doing? (Jespersen, 1940: 500)
    b. Well, we're at the top. (Murray, 1979: 730)
    c. Well of all things! (Bolinger, 1989: 311)
    d. Will you help me? – Well, of course. (Bolinger, 1989: 320)

Jespersen claims that *why* indicates surprise, citing examples like (39a), but examples like (39a) cannot make the case since *What are you doing?* is itself readily heard as a surprised exclamation. Based on examples like (39b), Murray introduces an otherwise unsupported semantic element of 'hope or fear' into her formulation of the core meaning of *well*, borrowing an assumption from a readily available context.

Bolinger does something similar when arguing that examples like (39c) and (39d) justify his claim that *well* has a core meaning involving appeal to a 'norm'. He comments that *well* in examples like (39c) can be glossed as 'In view of the normal state of affairs, this bowls me over' and in (39d) as 'It is quite within the norm for you to ask'. In both cases the host utterance can be given the same gloss. The semantic claims of Jespersen, Murray, and Bolinger might be correct, but examples like those in (39) provide no support for these claims since omission of the DM does not affect the meaning ascribed to the utterance. The seemingly irresistible temptation to 'import' meaning into DM cores makes it particularly important to devise adequate means of evaluating proposals about DM meaning (see section 3.5 below).

Fraser adopts a minimalist perspective in relation to DM cores (1990: 392). If pushed to extremes, positing minimal cores can, as we have seen, lead to charges that a core is so vague as to have no descriptive utility (cf. König and Requardt, 1991: 64–65 on modal particles). If, on the other hand, core meanings are made highly specific, this can be difficult to square with the fact that many DMs occur, without a semantic or pragmatic clash, in an extremely wide range of discourse environments. The most general meanings of all can be expected for DMs which occur most frequently, such as English *well*, *oh*, and, *so*.

An issue arising frequently in discussions of DM core meanings is the relation of these meanings to any non-DM meaning(s) of a form. This issue has been approached from several perspectives. First, particular DMs are sometimes claimed to preserve the non-DM meaning, merely carrying it over to the relational or 'illocutionary' sphere. This is the position adopted, for example, by Bolinger in relation to *well*. His claim is that *well* in its adverbial and adjectival uses and the DM *well* are the same word, and that these uses share the same fundamental meaning of 'some plus on some scale of value or strength' (1989: 332; cf. Carlson, 1984; Hines, 1978, 1979).[14] It is clear, however, that this approach will not work for most DMs since they differ from their non-DM sources in ways that cannot be accounted for simply by a shift to the 'illocutionary' sphere. The generally held view is that DMs have evolved from non-DM sources through historical processes of grammaticalization which alter their original meaning (for discussion see Brinton, 1996: Ch. 2). Typically a semantic shift occurs toward more subjective meanings (Traugott, 1995). Such a shift can explain, for example, the additional meaning encoded by *in fact* when it appears as a DM (the newer use, according to the OED). Compare (40) and (41):

(40) Can you confirm that this is in fact your handwriting?
(41) Yes, I have met him. In fact, I am his nephew.

In fact in (40) is roughly synonymous with *definitely*, but in (41) *in fact* indicates not only that the proposition expressed by *I have met him* is true, but that the speaker is 'going himself one better' by presenting a proposition that is stronger in some rele-

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[14] The notion of 'norm', applied to the meaning of the DM, is understood as what is accepted, or acceptable; hence the link to 'value'.

vant respect than the immediately previous claim.[15] Since such 'extra' strands of meaning are the rule, Fraser may be right to suggest that "any reliance on content meaning is ill-founded, though perhaps interesting from a historical perspective, and that DMs should be analyzed as having a distinct pragmatic meaning" (1990: 393). A similar position is taken by Östman, who claims that "the pragmatic and proposi- tional functions [of pragmatic particles] are clearly separate in nature, with no scalar ties between the two" (1982: 153–154). On the other hand, as Lenk points out, the fact that DM meaning arises from lexical meaning through grammaticalization is also a good reason to expect there to be a relationship of some kind between the two (1998: 48). As evidence that Fraser's and Östman's strong claims are untenable, Lenk points to the obvious relationship between DM uses of *incidentally* and its con- tentive uses. Compare, for example, the familiar DM use of *incidentally* when intro- ducing a digression to the use in (42):

(42) Only incidentally did we board the same train.

Such uses, as Lenk notes, share the meaning 'subordinate or chance occurrence'. Schwenter also disputes the strict separation of literal and DM meanings in the case of supposedly 'content-less' forms. He notes that recent studies of grammaticaliza- tion (e.g., Hopper, 1991) show that such forms "retain both semantic and distribu- tional idiosyncrasies that can only be accounted for when these are traced back to their 'content-full' origins" (Schwenter, 1996: 871f.).

Schiffrin takes a similarly intermediate position on this issue. She sees DM mean- ings as in general "somewhat delimited by their semantic and grammatical status" (Schiffrin, 1987: 127). Brown and Levinson see a continuum of literality in pragmatic forms in general, such that, for example, the hedge use of *I guess* is clearly related to its literal meaning, while, at the other extreme, a form like *o.k.* has no specifiable lit- eral meaning (Brown and Levinson, 1978: 276–278; cf. Brinton, 1996: 60).

Approaches to DM core meanings may be broadly described as either linguistic or discourse-structural in orientation. In the first case, an attempt is made to determine the linguistic value of each DM, and the 'local' discourse functions of the DM are then regarded as derivative in the sense that they arise when the DM functions in particular interpretative contexts. On this approach, exemplified by Bolinger's in depth semantic (1989) analyses of DMs such as *well* and *oh*, these derivative func- tions are apt to be considered primarily for the light they shed on the linguistic core meaning of the form in question. The other approach to core meanings, exemplified by Schiffrin's work, focuses from the beginning on the functional role of each DM in discourse. The core meaning identified for each marker, on this approach, tends to be a summary statement of the contribution the item makes across a broad range of the discourse situations in which it is known to occur. The two approaches might be described, somewhat in caricature, as being about either what a DM *is* or what it can be used to *do*.

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[15] Such semantic differences may pose difficulties for those who wish to maintain that DMs synchron- ically belong to other classes and are impressed for duty as DMs.

These two approaches to core meaning are neither incompatible nor entirely distinct. Obviously, the linguistic value of a DM ought to bear some relationship to a generalization about its potential functions in discourse. Nevertheless, there is no reason to expect that the linguistic meaning assigned to a DM will look like a generalization about its function. An example is provided by Bolinger's claim, supported by numerous arguments, that *well* contains a kernel of epistemic meaning roughly capturable in the notion 'norm' (1989: 316). Nothing, on the surface of it, could be more different from a statement like Schiffrin's, also amply illustrated, that *well* "shows the speaker's aliveness to the need to accomplish coherence despite a temporary inability to contribute to the satisfaction of that need in a way fully consonant with the coherence options provided through prior discourse" (1987: 126; emphasis removed). The two statements are not simply different ways of saying the same thing; they are qualitatively different.

The linguistic and discourse-functional approaches are linked, however, by methodological necessity. The linguistic approach must justify statements of DM meaning by referring to the way in which the use of a DM influences the meaning of utterances. The case for a particular meaning can best be made by evaluating the effect of each DM across as wide a range as possible of its occurrences. The discourse-functional approach, to provide a convincing functional statement, must likewise aim for maximally comprehensive coverage of 'local' contexts. Assuming that the functions of a given DM are informed by a *single* core, this shared interest in comprehensive accountability to data might be expected, in the long run, to produce a convergence of sorts between semantic and functional formulas as greater and greater comprehensiveness of coverage is achieved. This is in fact the principal way in which DM cores are refined in successive research efforts. The process can be seen at work in, for example, Bolinger's attempt to demonstrate that his semantic formulation of the core of *well* applies to uses of *well* for which Schiffrin's functional statement can offer no explanation (Bolinger, 1989: 315), or in Blakemore's refinement of the meaning of *so* based on consideration of its applicability to discourse-initial uses of *so*. Such reanalyses embody a claim that faithful data-based analyses of DMs across a wide enough range of uses can eventually provide an adequate basis for comparing and evaluating semantic proposals.

3.5. Validating DM core meanings

Accurate determination of core DM meanings is essential to constrain theories of DM function. We have seen, however, that interference from context and cotext can bedevil the ascription of meaning to DMs. Moreover, even if this 'importation' of meaning to DMs from the surroundings can be controlled, there will still be no guarantee that hypothesized semantic cores will converge on the correct solution as more and more data is considered. Such worries are not, of course, unique to the study of DMs, but they are especially severe for DMs in view of their high degree of context dependence, their tendency to have extremely general 'one-size-fits-all' meanings, and the ever-ready ability of hearers to contextualize DMs almost wherever they might occur.

The fact that such difficulties are widely acknowledged to exist raises the question of how researchers have attempted to get around them. In a recent paper Fischer contends that no adequate response to these difficulties has been forthcoming. She claims that DM meanings have thus far been supported in the literature only by intuitions of plausibility (Fischer, 1998: 111). This is not entirely the case: many claims about DM meaning are in fact buttressed by other kinds of supporting evidence, as we will see. Nevertheless, the supporting evidence that has been used to support proposed DM meanings is often not sufficient to pinpoint such meanings, nor is it always sufficient to rule out competing claims.

Distributional tendencies are sometimes used to support hypothesized DM cores. For example, Schiffrin supports a claim that *well* is used when a response turns away from options projected by preceding discourse by showing that *well* is statistically much less likely before answers to yes-no questions that receive confirmatory or negative answers than before answers to such questions that depart from projected options, such as *I don't know* (Schiffrin, 1987: 107). The use of such evidence can be facilitated by the use of computer corpora. If the results are categorical, such evidence can be impressive, but it is difficult to know what to make of attributions of meaning supported only by strong statistical tendencies. Moreover, even categorical nonoccurrence in given data cannot be equated with impossibility; thus the researcher is apt to be thrown back on intuitive judgments.

Semantic claims are also commonly supported by means of various kinds of negative intuitive evidence. Bolinger, for example, claims that *well* cannot precede *therefore* because *well* has an epistemic, and therefore backward-looking meaning which conflicts with the meaning of *therefore* which is "oriented away from what is prior or extant" (1989: 319). Similarly, Murray argues that the fact that *well* cannot precede *by the way* demonstrates that *well*, unlike *by the way*, has a meaning inconsistent with the introduction of an unanticipated topic (1979: 731). Bell, in another such argument, claims that the deviance of (43) indicates that whereas the meaning of *yet* can be paraphrased as 'P despite Q', that of *nevertheless* cannot and must be instead be paraphrased 'despite P, Q' (Bell, 1994: 220–221):

(43) Emma ate three hamburgers. Yet/*Nevertheless, she didn't feel hungry.

Such arguments from negative data are not especially common in the literature. The primary reason for this is the ease with which DMs can be contextualized, mentioned earlier (see also Carlson, 1984: 68). Because DMs are so easily contextualizable, to make a negative argument stick it is usually necessary to specify, often in considerable detail, the specific interpretive context under consideration, and often as well the intonation of the utterance. This, however, can easily render the required intuitive judgments so subtle as to detract from the force of the argument.

We examined in 3.4 a further type of evidence that can be brought to bear on analyses of DM meaning: demonstrations that a particular formulation of the meaning of a DM is compatible with a wider range of data than a competing proposal. However, this depends on being able to accurately assess the relation of a proposed core to a particular DM use, rarely a straightforward matter. Moreover, the assump-

tion underlying such arguments is that the DM in question has a unitary core meaning, whereas it is not clear what criteria can be used to decide when a unitary core should be forsaken for polysemy. Genuinely distinct cores might mistakenly be collapsed; on the other hand, as noted above, collapsing uses can result in a core which is so vague that it becomes almost impossible to evaluate in relation to actual data. Thus, for example, Schiffrin's gloss of *oh* as marking "shifts in speaker orientation (subjective and objective) to information" (1987: 100) is open to the charge that it is insufficiently specific to predict where *oh* does not occur, or to distinguish *oh* from related items, such as *ah* and *hm*.

Certainly the most widely used means of validating hypothesized DM meanings, however, is the use of outright intuitive judgments of meaning. These appear to be the focus of Fischer's complaint that "[s]o far, there are no criteria other than plausibility for determining whether the meaning descriptions proposed in the various studies (of DMs) are really valid" (1998: 111). Fischer proposes, as a remedy, that DMs be validated by means of semantic test-frames. Her proposal relies on the use of Natural Semantic Metalanguage (Wierzbicka, 1986) to formulate DM meanings. NSM makes use of a small number of semantic primitives (e.g. 'happen', 'feel', 'want', 'bad', 'something'). Fischer proposes that DM meanings formulated in NSM be tested in frames similar to those devised by Cruse (1986) for testing the lexical semantics of nouns, but specially adapted and elaborated for application to DMs. Each DM is placed in various frames derived from natural corpora. The resultant artificial utterance is assigned intuitive judgments of normality, oddity, or contradiction designed to bring into focus hypothesized semantic components of the framed DM. For example, to test whether it contains a hypothesized semantic element 'uptake', Fischer places *oh* in the following frame:

(44) A: shall we take the fifteenth?
      B: (Oh) yes wonderful, that leaves Sunday, the sixteenth, for other activities,
          (+continuation)

In Fischer's view, a continuation of *and indeed I have heard what you said* is 'normal', while the continuation *but actually I have heard what you said* is odd, and *but actually I didn't hear what you said* produces a contradiction. On the basis of these judgments the presence of the semantic element 'uptake' is said to be confirmed.

Fischer acknowledges that such tests cannot distinguish semantic from pragmatic contributions to the meaning of the marked utterance: the tests treat all meaning as semantically encoded and thus cannot be reliably claimed to validate or invalidate semantic claims. Fischer also notes that the frames provide no direct way of ascertaining the meaning of a DM. They only permit existing semantic proposals to be tested; thus, there can be no guarantee that the semantic elements tested exhaust the meaning of the DM. A more troubling drawback is that the filled-in frames are often themselves hard to evaluate. They seem to replace the usual subtle intuitive judgments of meaning in context employed in most DM studies with even more subtle judgments of test frames. While each frame is derived from a natural utterance, the continuations used to fine-tune the frames so that they detect a specific meaning

component tend to render the frames bulky and unnatural. Moreover, the frames often do not test for the component they are designed to detect. Note, for example, that removal of *oh* from (44), does not affect the judgments of normality, oddity and contradiction assigned to the utterance, so that the results of the test are as consistent with the claim that *oh* does not express the meaning component in question as with the claim that it does.

The validation issue for DMs and related items has a long history. Wierzbicka (1986) points out that both Locke and Leibniz pondered this issue. The usual modern approach to DM meaning is similar to that recommended by Locke for particles in general: "[he] who would show what significancy and force they have, must take [...] pains, enter into their own thoughts, and observe nicely the several postures of his mind in discoursing" (Locke, 1959: 99). Leibniz, on the other hand, saw a need to go beyond introspection. He required semantic formulae to be substitutable for the particle in actual utterances:

"For a proper explanation of the particles it is not sufficient to make an abstract explication [...]; but we must proceed to a paraphrase which may be substituted in its place, as the definition may be put in the place of the thing defined. When we have striven to seek and to determine these *suitable paraphrases* in all the particles so far as they are susceptible of them, we shall have regulated their significations." (Leibniz, 1949: 366–367; emphasis in original)

Leibniz also takes a stand on the 'single core' issue. He recommends that if a single paraphrase cannot be found that will serve in all examples, then multiple paraphrases must be posited (1949: 365–366). This parallels today's practice of admitting polysemy for DMs only when absolutely necessary, but his criterion of paraphrasability is not widely used in relation to DMs. NSM equivalents have been usefully formulated to capture the conceptual content of interjections, (Ameka, 1992; Wierzbicka, 1992; Wilkins, 1992), but substitutable NSM paraphrases would not seem the right approach for items like *so* and *after all*, particularly if they are seen as nonconceptual.

As in pragmatics in general, there is in the field of DM research disagreement about the role of natural data in substantiating semantic claims. The most widely held view is that such claims should be founded on naturally occurring discourse rather than invented examples. Natural data are essential when conclusions are to be drawn about the normal usage or the social distribution of DMs. When the focus is more narrowly on linguistic properties of DMs or on their cognitive role, insisting on exclusive use of a corpus of natural data is more controversial. Schiffrin adheres strictly to a corpus of interviews in constructing her semantic analyses of DMs. She argues that this allows her to pursue complementary goals of *distributional accountability* and *sequential accountability* (1987: 69–71). The first goal requires that analysis of an item be based on the full range of its occurrences, and the second requires accounting for the interpretation and coherent sequencing of all the utterances in a particular body of data (cf. Labov and Fanshel, 1977: 354). Bolinger, on the other hand, argues almost entirely from fabricated examples in his analyses of DMs. He finds Schiffrin's methodology troubling. He notes first that "[s]tudying distribution [in a corpus] is a good procedure for discovering meaning, provided

something is already known about the meanings of the items distributed; but *accounting for* the distribution of meaningful items presupposes some theory of what the items mean" (1989: 301). Bolinger further claims that the criterion of distributional accountability is inconsistent with adherence to a single homogeneous corpus. He points out, for example, that a corpus of interviews like Schiffrin's is unlikely to contain theoretically crucial instances of *well* which have little or no relation to prior discourse (e.g. *Well look who's here!*).

For the moment, conclusions about DM meaning are largely dependent on subtle judgments, whether of meaning itself or of comparative acceptability. Such judgments remain the basis of our conclusions whether the data being examined are 'natural' utterances, fabricated utterances, or quasi-natural test frames.

4. Subclassification of DMs

DM function has been treated in outline in Sections 2 and 3. DMs may be seen as syntactically optional connective expressions which do not affect the truth-conditional content of utterances. The particular sense in which DMs may be said to connect, and what they connect are, as we have seen, controversial. On any view of DM function, however, each individual DM marks a particular *type* of interpretation, and it is therefore to the point to ask what kinds of intepretative relationships DMs may signal.

A convenient starting point is the classification of DMs into four principal types, suggested by Fraser (1996: 187–188). I will discuss Fraser's categories individually, noting where exception might be taken to the groupings and labels he proposes, and noting alternative categorizations proposed by Quirk et al. (1985) and Halliday and Hasan (1976).

4.1. Topic markers

Fraser sees one set of DMs (e.g. *before I forget, incidentally, speaking of X*) as indicating that the speaker sees the following utterance as a departure from the current topic (1996: 187). A smaller subgroup of topic markers is seen as refocusing attention on a part of the current topic (e.g. *in fact, indeed, now*; 1988: 28). Markers of both kinds are referred to by Quirk et al. (1985: 639) as *transitional*.

Since the notion topic can be applied to more than a single utterance, a topic change marker can presumably serve to relate a single utterance to a property of a longer stretch of discourse. Fraser's inclusion of topic change markers in the DM category thus opens the possibility that DMs, when they connect elements of text, mark not only local pairwise relations between utterances, but also more 'global' relations (see also Bell, 1994: 165–166). Schiffrin also allows for this possibility, but chooses not to discuss DMs of this kind (Schiffrin, 1987: 24). Lenk, however, focuses entirely on DMs she refers to as 'globally oriented', such as *anyway, actually*, and *incidentally*, which she sees as performing 'topical actions' such as closing digressions, returning to prior topic, changing topics, introducing a new topic, and

inserting a subjective aside. Most of the functions Lenk discusses are encompassed by Fraser's notion of topic change.[16]

The idea that DMs may mark 'topical actions' presupposes that the notion topic is useful in describing discourse comprehension. The term topic is, however, notoriously difficult to define, and as Fraser notes, many have avoided using the term. Fraser uses 'topic' loosely to refer to "what the discourse participants are 'talking about' at any given time" (1988: 27). Lenk defines the notion 'conversational topic' informally in the same way (1998: 25), but it is clear that, like many coherence theorists (see, e.g., Giora, 1997), Lenk takes the notion of topic to be important theoretically and sees it as central to the description of certain DMs. She stops short of rigorously defining the notion, but subscribes to the view of Bublitz that "determining the topic for the text at hand is a matter of a comprehending, interpretative ascription" (1988: 18f.). Some writers, on the other hand, have claimed that the notion 'topic' is of no theoretical importance whatsoever (e.g. Blass, 1990: 76). Sperber and Wilson argue that since the function of discourse topics is simply to provide contextual information required for comprehension, topic relevance is a derivative notion and can be dispensed with on a relevance-theoretic account (1995: 216–217; cf. Wilson, 1998: 68; for an opposing view see Giora, 1997). If topic relevance is a derivative notion which has no role in utterance interpretation, topic change markers might more appropriately be classified as 'change of context markers' (cf., Wilson, 1998: 72). Unger argues, more generally, that paragraphs and all other discourse segments have no status as primitive theoretical elements and that when particles, pauses, and other stylistic means appear superficially to indicate breaks between such units, such devices should be viewed instead simply as "facilitators of context change" (1996: 431).

4.2. Contrastive markers

Fraser sees contrastive markers, such as *but, conversely,* and *nevertheless,* as signaling that the following utterance is "either a denial or a contrast of some proposition associated with the preceding discourse" (1996: 187). Fraser distinguishes between contrastives which signal a sharp contrast in message content (e.g. *conversely, in contrast, on the contrary*), those which signal a sharp but unexpected contrast (e.g. *all the same, still, instead*), and those signaling a contrast between "a previous claim or like message [...] and the claim in the current message" (e.g. *I may be wrong but, that said*). Quirk et al. (1985: 634–636), who refer to a set of conjuncts as contrastive, recognize four subdivisions: reformulatory (*rather, more accurately, alternatively*), replacive (*again, on the other hand, better*), antithetic (*conversely, on the contrary, in comparison*), and concessive (*anyway, yet, all the same*). Halliday and Hasan refer to conjunctives of these kinds as *adversative,* and suggest a general distinction between *internal* and *external* uses (roughly, those expressing relations inherent in the phenomena language talks about and those inherent in the communication process), with further subdivisions (1976: 240–244).

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[16] An exception is the function of 'eliciting additional items on a list', which Lenk sees as topical (1998: 205) but Fraser would probably classify as elaborative.

Bell (1994) argues that the defining notion for most such markers should be one not of contrast or denial of expectations but of *cancelation*. Cancelation refers to the way in which aspects of information the hearer considers derivable from the prior utterance are considered to be non-operative with respect to the speaker's intended meaning. An example involving the prototypical cancelative marker *but* is (45):

(45) I went to the liquor store last Sunday but it was closed. (Bell, 1994: 152)

Bell sees *but* here as canceling an aspect of information contextually inferrable from *I went to the liquor store last Sunday*. What is canceled in particular is the inference that the speaker expected the store to be open. The notion of cancelation is not, of course, far removed from that of contrast: canceling information results in a contrast between the information or assumptions entertained before cancelation and those entertained afterward. Nevertheless, the notion of cancelation might be seen as giving more specific content to the somewhat vague notion of 'contrast'.

4.3. Elaborative markers

An elaborative marker (e.g. *above all, by the same token, moreover*) is in Fraser's view one which indicates that the following utterance "constitutes a refinement of some sort on the preceding discourse" (1996: 188). A similar category for conjuncts, *additive*, is proposed by Quirk et al., and divided into *equative* conjuncts (*correspondingly, equally, by the same token*) and *reinforcing* conjuncts (*further, moreover, in addition*). Quirk et al., however, place additive conjuncts within a more general category of listing conjuncts which also includes *enumerative* items, such as *in the first place, next*, and *finally*. Fraser considers the latter to be commentary markers with representational meaning (1996: 182).

Halliday and Hasan also use the term additive to refer to a class of conjunctive elements within which they distinguish three subcategories: additive (*and, and also, furthermore*), negative (*nor, and ... not*), and alternative (*or, or else, alternatively*). Also included among additives are conjunctions indicating afterthought (*incidentally, by the way*) which Fraser would classify as topic markers, and Quirk et al. as transitional conjuncts.

4.4. Inferential markers

According to Fraser, inferential markers, including *after all, so*, and *as a result*, have the function of indicating that "the force of the utterance is a conclusion which follows from the preceding discourse" (1996: 188). It is difficult to see why Fraser has restricted the function of inferential DMs to marking conclusions. This description clearly does not apply to *after all*, which marks not a conclusion but a premise for the deduction of the proposition expressed by a previous clause (as does *you see*; see Blakemore, 1987: 82, 89), but if *after all* and *you see* are excluded, it is not clear what other category might accept them. The alternative is to broaden the inferential category to include both markers of premises and conclusions, but this, too, is problematic, since if premise markers are allowed, *moreover* could be included here

rather than among elaborative markers because it links two premises offered in support of the same conclusion (see Blakemore, 1987: 91).

Quirk et al. also posit a class of inferential markers (*otherwise, in that case, in other words*) but distinguish these from resultive markers (*so, accordingly, as a result*) on the grounds that only the former indicate a conclusion based on "logic and supposition" (1985: 638). We have seen in 3.3 above that not all writers would concur either in identifying the notion of result as operative in the case of markers like *so*, or in the view that such markers do not indicate a conclusion based on "logic and supposition". The term inferential marker as used by Quirk et al. has a broader reference than the same term as used by Fraser and also from the use of the term inferential in the RT literature, where 'inferential connective' can substitute for DC. Halliday and Hasan refer to a broad class of inferential conjunctive elements as *causal*, a cover term for relations of result, reason, and purpose.

4.5. Discussion

The foregoing comments are sufficient to suggest that the subcategorization of DMs is no more settled an issue than that of how the superordinate category DM should be described. There are broad content similarities among the three systems of classification considered here. All three systems include major categories which are, roughly, additive, inferential, and contrastive, but beyond this superficial similarity lies a maze of disagreements. First, there is disagreement about the classification of particular items. *That is*, for example, is classed both by Quirk et al. and Halliday and Hasan as *appositive*, but while Halliday and Hasan regard such appositives as a subclass of additive conjunctions, Quirk et al. distinguish separate classes of appositive and additive conjuncts. Such disagreements reflect more fundamental disagreements about the basis of co-classification. Thus Halliday and Hasan see the additive relation as based on the logical notion 'and' (1976: 244), while Quirk et al. consider this relation to effect the strong integration of the conjoined elements (1985: 636). Fraser's similarly named category of elaborative DMs, on the other hand, focuses on the notion that one utterance is a refinement of the preceding one (1996: 188). Finally, there are differences in the number of general categories. Fraser and Halliday and Hasan require only four, while Quirk et al. posit seven. Differences of these kinds are at least in part linked to the way the superordinate category DM/conjunct/conjunctive is viewed. For example, it is the fact that Halliday and Hasan make no use of the notion of non-truth-conditionality in defining conjunctives that makes it possible for them to include a general class of 'temporal' items among conjunctives and to include in this class items such as *an hour later* and *at once* which would be roundly excluded from the DM class based on their truth-conditionality.

5. Questions for further research

This review has called attention to several issues addressed in existing studies of DMs and items designated by closely related terms. Other issues which have been

addressed less often in the literature, or less thoroughly, or not at all, are also important for an understanding of this area. Of the most immediate importance among such issues are those concerning the extent to which generalizations which have been made about English DMs can be carried over to other languages. Are there functions which have been overlooked in DM research because of over-dependence on English? Are there languages for which the DM category is either more or less highly restricted grammatically than in English? Do some languages lack DMs altogether, and if so what, if anything, do speakers of such languages do to carry out the same functions DMs perform elsewhere?

A question of great interest in the same general area is that raised by Fraser: "To what extent do all languages share a basic set of DMs with the same core pragmatic meaning?" (1990: 395). Fraser suggests it is likely that all languages will have DMs like *and*, *so*, and *now*, but he questions whether this is the case for markers like *notwithstanding*, *well*, and *anyway*. DMs which mark basic unembellished relations like contrast (or 'cancelation') might be expected to have more direct cross-linguistic parallels than do those which mark less basic or more narrowly specified relations or whose occurrence is syntactically more restricted. As Bell (1994: 203) has proposed for cancelatives, whether a given DM expresses a 'core' rather than a 'peripheral' relation might also correlate with the frequency of occurrence of the DM. Existing studies of non-English DMs (e.g. De Fina, 1997; Hansen, 1997) have offered only tentative and partial answers to these questions, and as yet no large-scale comparative studies have been undertaken.

Also important are questions concerning the evolution of DMs. Historical investigation of DMs obviously cannot rely on naturally-occurring spoken texts, but a great deal can be done with speech-affiliated DMs occurring, for example, in dramatic dialogue, conversational letters, and colloquially written diaries, and with DMs not strictly associated with speech. Brinton summarizes the most pressing questions historical work on DMs can be expected to address:

"First, can DMs [...] be found in the written texts of earlier periods? Second, will the same diversity of form and discourse functions occur, and can one detect a continuity of development? Third, do discourse functions derive from the semantic and syntactic properties of the particular forms, or does the opposite direction of derivation hold? Fourth is such derivation explicable by principles of semantic change? And finally, what accounts for the transience of DMs?" (Brinton, 1990: 49)

Answers to these questions, at least as they apply to English, are suggested by Brinton's own work and by studies like those of Finell (1989), Blake (1992, 1992–1993), Jucker (1997), and Stein (1985). Brinton's careful diachronic analyses of English PMs, including some forms readily classifiable as DMs, illustrate the potential importance of broadening current studies of grammaticalization (see, e.g., Traugott, 1982; Hopper and Traugott, 1993) to include DMs. Brinton shows that while not all characteristics of grammaticalization are applicable to DMs and other PMs, some are clearly present, including increase in frequency, decategorialization from more to less grammatical, and reanalysis to a different semantic category (1996: 64–65). Brinton suggests that DM meanings are derivable from their original lexical meanings via semantic processes which underlie grammaticalization:

metaphorical and metonymic transfer and conventionalization of conversational implicatures (1990: 65).

While comparative and historical studies promise to shed light on several of the more general issues discussed in this overview, such studies must be complemented by more exact synchronic descriptions of individual DMs and related expressions. The meanings and syntactic properties of many common DMs have not been precisely determined, and conclusions differ even about many items that have already been studied in some depth. The restrictions on cooccurrence of DMs and the use of DMs as components in combined expressions have not yet received sufficient attention; nor have functional contrasts between closely related DMs in the same language. Studies of these kinds can lead to a more refined understanding of individual DMs and thereby constrain more general claims about DM function and classification.

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