

What are discourse markers?*

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Abstract

This paper is an attempt to clarify the status of discourse markers. These lexical expressions have been studied under various labels, including discourse markers, discourse connectives, discourse operators, pragmatic connectives, sentence connectives, and cue phrases. Although most researchers agree that they are expressions which relate discourse segments, there is no agreement on how they are to be defined or how they function.

After reviewing prior theoretical research, I define discourse markers as a class of lexical expressions drawn primarily from the syntactic classes of conjunctions, adverbs, and prepositional phrases. With certain exceptions, they signal a relationship between the interpretation of the segment they introduce, S₂, and the prior segment, S₁. They have a core meaning, which is procedural, not conceptual, and their more specific interpretation is ‘negotiated’ by the context, both linguistic and conceptual. There are two types: those that relate the explicit interpretation conveyed by S₂ with some aspect associated with the segment, S₁; and those that relate the topic of S₂ to that of S₁. I conclude by presenting what appears to be the major classes according to their function. © 1999 Elsevier Science B.V. All rights reserved.

1. Introduction

Discourse markers (hereafter, DMs), are expressions such as those in bold in the following sequences:

- (1) a. A: I like him. B: So, you think you'll ask him out then.
b. John can't go. And Mary can't go either.
c. Will you go? **Furthermore**, will you represent the class there?
d. Sue left very late. **But** she arrived on time.
e. I think it will fly. **After all**, we built it right.

* I have benefited from comments of Kent Bach, students at Boston University and from the participants in the 3rd Rasmus Rask Conference, ‘Pragmatics: The loaded discipline?’, Odense, November 1996. For my view of how discourse markers fit into a theory of semantics, see Fraser (1996a).

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During the past ten years, the study of DMs has turned into a growth industry in linguistics, with dozens of articles appearing yearly. Unfortunately, the term has different meanings for different groups of researchers, and we find work on DMs done under a variety of labels including, but not limited to cue phrases (Knott and Dale, 1994), discourse connectives (Blakemore, 1987, 1992), discourse operators (Redeker, 1990, 1991), discourse particles (Schorup, 1985), discourse signalling devices (Polanyi and Scha, 1983), phatic connectives (Bazanella, 1990), pragmatic connectives (van Dijk, 1979; Stubbs, 1983), pragmatic expressions (Erman, 1992), pragmatic formatives (Fraser, 1987), pragmatic markers (Fraser, 1988, 1990; Schiffrin, 1987), pragmatic operators (Ariel, 1994), pragmatic particles (Östman, 1995), semantic conjuncts (Quirk et al., 1985), sentence connectives (Halliday and Hasan, 1976).¹

Drawing on the work of these researchers as well as my own recent work, I will set forth in this paper what seems to me to be a coherent and fruitful statement of what discourse markers are. I will first review past theoretical work on DMs to provide an idea of what major issues have been raised. Following this, I will characterize DMs and describe the role they play in discourse. Finally, I will indicate the many areas for future research that lie ahead.

2. Past research

An early reference to DMs as a linguistic entity was made by Labov and Fanshel (1977: 156) in discussing a question by Rhoda that began with *well*. They wrote:

"As a discourse marker, *well* refers backwards to some topic that is already shared knowledge among participants. When *well* is the first element in a discourse or a topic, this reference is necessarily to an unstated topic of joint concern."

Only a few other comments were mentioned in passing about the topic.

In his 1983 book entitled *Pragmatics*, Levinson considered DMs as a class worthy of study on its own merits, although he did not give it a name. He suggested that

"... there are many words and phrases in English, and no doubt most languages, that indicate the relationship between an utterance and the prior discourse. Examples are utterance-initial usages of *but*, *therefore*, *in conclusion*, *to the contrary*, *still*, *however*, *anyway*, *well*, *besides*, *actually*, *all in all*, *so*, *after all*, and so on. It is generally conceded that such words have at least a component of meaning that resists truth-conditional treatment ... what they seem to do is indicate, often in very complex ways, just how the utterance that contains them is a response to, or a continuation of, some portion of the prior discourse." (Levinson, 1983: 87–88)

Levinson, also, did not pursue DMs beyond these brief comments.

Zwicky expressed an interest in DMs as a class when he wrote:

¹ See Pons (1997) for a broader and more complete set of references.

"Within the great collection of things that have been labeled 'particles', we find at least one grammatically significant class of items, in English and in languages generally. These have been variously termed 'discourse particles' and 'interjections'; here I will call them 'discourse markers' ... On the grounds of distribution, prosody, and meaning, discourse markers can be seen to form a class. But like the 'particles' discussed ... they are independent words rather than clitics ..." (Zwicky, 1985: 303)

Zwicky does not provide supporting evidence that what he holds to be discourse markers form a class, but he does state that DMs must be separated from other function words, that they frequently occur at the beginning of sentences to continue the conversation, and that they are prosodically independent, being both accented and prosodically separated from their surrounding context by pauses, intonation breaks, or both. He adds that they are usually monomorphemic but can be morphologically complex, and are syntactically insulated from the rest of the sentence in which they occur and form no sort of unit with adjacent words: "Discourse markers ALL have the latter, pragmatic functions [e.g. the role of relating the current utterance with a larger discourse] rather than the former, narrowly semantic, ones" [e.g. indicating sentence type] (Zwicky, 1985: 303–304).

Within the past ten years or so there has been an increasing interest in the theoretical status of DMs, focusing on what they are, what they mean, and what function(s) they manifest, as well as how individual DMs such as *but* or *so* pattern. I will focus here on four research efforts which, taken together, capture the issues surrounding DMs. Each research effort started in the mid-1980s, and apparently each researcher was unaware of the other efforts, at least in the initial stages.

The first and the most detailed effort is that reported in Schiffrin (1987), who is concerned with elements which mark "sequentially-dependent units of discourse". She labels them 'discourse markers' and analyzes in detail the expressions *and*, *because*, *but*, *I mean*, *now*, *oh*, *or*, *so*, *then*, *well*, and *y'know* as they occur in unstructured interview conversations.²

Schiffrin suggests that DMs do not easily fit into a linguistic class. In fact, she goes so far as to suggest that paralinguistic features and non-verbal gestures are possible DMs. She writes that we should

"... try to find common characteristics of these items to delimit what linguistic conditions allow an expression to be used as a marker. But such an approach would require not only discovery of the shared characteristics of an extremely diversified set of expressions, in English: it would require analysis across a wide body of typologically diverse language to discover what other linguistic resources are drawn upon for use as markers." (Schiffrin, 1987: 328)

Nevertheless, she then sets forth some tentative suggestions similar to those suggested by Zwicky as to what constitutes a marker (*ibid.*):

- "It has to be syntactically detachable from a sentence.
- It has to be commonly used in initial position of an utterance.
- It has to have a range of prosodic contours.

² Schiffrin was very broad in what counts as a DM. Based on the criteria I propose below, *now*, *I mean*, *oh*, and *y'know* are not DMs.

It has to be able to operate at both local and global levels of discourse .
 It has to be able to operate on different planes of discourse.”

Schiffrin maintains that “except for *oh* and *well* ... all the markers I have described have meaning” (1987: 314) and she suggests in several places that each DM has a ‘core meaning’, although she doesn’t expand on this notion. Examining only 11 expressions, she realized that her focus is somewhat narrow and suggests a number of other cases which bear consideration as DMs: perception verbs such as *see*, *look*, and *listen*, deictics such as *here* and *there*, interjections such as *gosh* and *boy*, meta-talk such as *this is the point* and *what I mean is*, and quantifier phrases such as *anyway*, *anyhow*, and *whatever*. (1987: 328)

Her primary interest is the ways in which DMs function to “add to discourse coherence” (1987: 326). She maintains that coherence is “constructed through relations between adjacent units in discourse” (1987: 24), and claims that there are five distinct and separate planes, each with its own type of coherence (1987: 24–25, adapted):

“**Exchange Structure**, which reflects the mechanics of the conversational interchange (ethnomethodology) and shows the result of the participant turn-taking and how these alternations are related to each other;

Action Structure, which reflects the sequence of speech acts which occur within the discourse;

Ideational Structure, which reflects certain relationships between the ideas (propositions) found within the discourse, including cohesive relations, topic relations, and functional relations;

Participation Framework, which reflects the ways in which the speakers and hearers can relate to one another as well as orientation toward utterances; and

Information State, which reflects the ongoing organization and management of knowledge and meta-knowledge as it evolves over the course of the discourse.”

She then proposes that DMs typically provide contextual coordinates for an utterance by: (i) locating the utterance on one or more planes of talk of her discourse model (outlined above); (ii) indexing the utterances to the speaker, the hearer, or both; and (iii) indexing the utterances to prior and/or subsequent discourse. She sees DMs as serving an integrative function in discourse and thus contributing to discourse coherence.

Schiffrin pointed out that some discourse markers relate only the semantic reality (the ‘facts’) of the two sentences while others, including *so*, may relate sentences on a logical (epistemic) level and/or a speech act (pragmatic) level. She wrote (1987):

“A fact-based causal relation between cause and result holds between idea unit, more precisely, between the event, state, and so on, which they encode. A knowledge-based causal relation holds when a speaker uses some piece(s) of information as a warrant for an inference (a hearer-inference). An action-based causal relation holds when a speaker presents a motive for an action being performed through talk – either his/her own action or an interlocutor’s action.”³

³ Causal conjunctions [which include *so*] in the speech-act domain, indicate a causal explanation of the speech act being performed, while in the epistemic domain a causal conjunction will mark the cause of a belief or conclusion, and in the content [semantic] domain it will mark ‘real-world’ causality of an event.

Redeker (1991, but see also 1990) provides a critique of Schiffarin (1987) and then proposes several significant revisions. She writes approvingly of the notion of core meaning for DMs (she calls DMs *discourse operators*),⁴ suggesting that “the core meaning should specify the marker’s intrinsic contribution to the semantic representation that will constrain the contextual interpretation of the utterance” (Redeker, 1991: 1164). She is concerned that the definition of DMs has not been adequately addressed and suggests that “what is needed is a clearer definition of the component of discourse coherence and a broader framework that embraces all connective expressions and is not restricted to an arbitrary selected subset” (1991: 1167). She goes on to suggest that a discourse operator 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 immediate discourse context. An utterance in this definition is an intonationally and structurally bounded, usually clausal unit.” (1991: 1168)

She then provides some examples of what are not DMs: clausal indicators of discourse structure (for example, *let me tell you a story, as I said before, since this is so*); deictic expressions as far as they are not used anaphorically (for example, *now, here, today*); anaphoric pronouns and noun phrases; and any expressions whose scope does not exhaust the utterance (1991: 1168).

The other part of Redeker’s paper is more critical. After showing that nearly all of Schiffarin’s 11 markers participate in all five planes, she concludes that Schiffarin’s Information Structure and Participation Framework (see above) are not independent of the other three and thus should be incorporated into them. She writes:

“The cognitions and attitudes composing those two components concern individual utterances, while the building blocks on the other three planes are relational concepts. The speaker’s information status and attitude should better be seen as contributing indirectly to coherence by motivating the speaker’s choices at the pragmatic planes: markers function in action or exchange structure by virtue of indicating or predicting changes in the speaker’s cognitions and attitudes.” (Redeker, 1991: 1169)

The result is a revised model of discourse coherence based on three components: Ideational Structure and Rhetorical Structure (roughly equivalent to Schiffarin’s Ideational Structure and Action Structure, respectively), and a Sequential Structure (roughly equivalent to an extended version of Schiffarin’s Exchange Structure). She emphasizes (not inconsistent with Schiffarin’s position) that “any utterance ... in a discourse is then considered to always participate in all three components, but one will usually dominate and suggest itself as the more relevant linkage of this utterance to its context” (1991: 1170).

Redeker further argues for a definition of discourse coherence, independent of DMs, “to allow for implicit coherence relations and for the simultaneous realization of semantic and pragmatic coherence links, irrespective of their being signaled by a

⁴ In a confusing comment, she writes that “since propositional links are by far the largest and most frequent class, the term *discourse operator* seems more appropriate than the more pragmatically biased label *discourse marker* ...” (Redeker, 1169: 1169).

DM" (1991: 1168). Taking a position similar to Sanders et al. (1992), who write that "a coherence relation is an aspect of meaning of [between-BF] two or more discourse sentences that cannot be described in terms of the meaning of the sentences in isolation", she proposes the following model of discourse coherence. Two discourse units are related:

- (a) **Ideationally**, if their utterance in the given context entails the speaker's commitment to the existence of that relation in the world the discourse describes. For example, temporal sequence, elaboration, cause, reason, and consequence (Redeker, 1991: 1168);
- (b) **Rhetorically**, if the strongest relation is not between the propositions expressed in the two units but between the illocutionary intentions they convey. For example, antithesis, concession, evidence, justification, and conclusion (Redeker, 1991: 1168);
- (c) **Sequentially**, if there is a paratactic relation (transition between issues or topics) or hypotactic relation (those leading into or out of a commentary, correction, paraphrase, aside, digression, or interruption sentence) between only loosely related (or indirectly related adjacent discourse sentences (1168). "When two adjacent discourse units do not have any obvious ideational or rhetorical relation ... their relation is called sequential" (Redeker, 1990: 369).

The second approach is that of the present author, who approached DMs from solely a grammatical-pragmatic perspective. In Fraser (1987), I wrote about a group of expressions which I called "pragmatic formatives" (now called "pragmatic markers" – cf. Fraser, 1996a). These pragmatic markers, usually lexical expressions, do not contribute to the propositional content of the sentence but signal different types of messages. My third type of pragmatic formative, described in the 1987 paper as "commentary pragmatic markers", includes what I am presently calling DMs. In later works (Fraser, 1988, 1990, 1993) I focused on what DMs are and what their grammatical status is. Specifically, I characterized a DM as a linguistic expression only (in contrast to Schiffrin, who permits non-verbal DMs) which: (i) has a core meaning which can be enriched by the context; and (ii) signals the relationship that the speaker intends between the utterance the DM introduces and the foregoing utterance (rather than only illuminating the relationship, as Schiffrin suggests). In these papers I suggested that there are four or five naturally occurring classes of DMs based on the type of relationship they signal and presented some of the details of these classes.

The third theoretical perspective is provided by Blakemore (1987, 1992), who works within the Relevance Theory framework (cf. Sperber and Wilson, 1986). She treats DMs as a type of Gricean conventional implicature, but rejects his analysis of a higher order speech act (Grice, 1989: 362; Blakemore, 1992: 148), and focuses on how DMs (she calls them "discourse connectives") impose constraints on implicatures. Blakemore proposes that DMs do not have a representational meaning the way lexical expressions like *boy* and *hypothesis* do, but have only a procedural meaning, which consists of instructions about how to manipulate the conceptual representation of the utterance. (cf. Blakemore, 1987, 1992, 1995)

Blakemore maintains that DMs should be analyzed as linguistically specified constraints on contexts and suggests that there are at least four ways in which information conveyed by an utterance can be relevant (1992:138–141):

- “It may allow the derivation of a contextual implication (e.g., *so, therefore, too, also*);
- It may strengthen an existing assumption, by providing better evidence for it (e.g. *after all, moreover, furthermore*);
- It may contradict an existing assumption (e.g. *however, still nevertheless, but*)
- It may specify the role of the utterance in the discourse (e.g., *anyway, incidentally, by the way, finally*).”

These four categories are roughly equivalent to those suggested by Fraser (1990).

A fourth approach to the study of DMs is provided by researchers working in the field of discourse coherence. Beginning with Rhetorical Structure Theory proposed by Mann and Thompson (1987, 1988), and including work by Hobbs (1985), Sanders et al. (1992), Knott and Dale (1994), and Hovy (1994), among others, researchers have addressed the nature of relations between the sentences of a text such that “the content of one sentence might provide elaboration, circumstances, or explanation for the content of another” (Knott and Dale, 1994: 35).⁵ The work of these researchers has resulted in various accounts of discourse coherence, where the discourse relations are sometimes made explicit by the use of discourse markers (they call them ‘cue phrases’). This approach of developing the relationship as a tool for text analysis is, in a sense, opposite to the other three approaches, where a linguistic entity, discourse markers, was the primary unit of study, and their effect on the interpretation of discourse was secondary.

Both the number of discourse relations and their justification has been the focus of research from this fourth perspective. One approach is to identify and justify a ‘standard’ set of relations, and one way of realizing this goal is to rely on DMs, with the resulting taxonomy of coherence relations mirroring the DM differences of meaning. Another approach is to identify these relations as psychological constructs that people use to create text. An interesting attempt is made by Knot and Dale (1994), who attempt to combine these two approaches, replacing ‘cue phrases’ with a new term, ‘relational phrases’. They carry out an elaborate analysis of these relational phrases taken from written text, and, using a test based on substitutability, construct a hierarchical taxonomy of relational phrases in terms of their different function for signaling discourse relations.

3. What are discourse markers?

To answer this question I will address several subquestions: What do discourse markers relate? What are not discourse markers? What is the grammatical status of discourse markers? What are the main classes of discourse markers? I shall not touch on the role of discourse markers in establishing discourse relations, since this is not critical to the notion of DM, *per se*.⁶

⁵ The term “text” is used to encompass both written and oral discourse.

⁶ This is dealt with in Fraser (forthcoming).

3.1. What do discourse markers relate?

Whether they are called discourse markers, discourse connectives, discourse operators, or cue phrases (I shall use the term ‘discourse marker’), the expressions under discussion share one common property: they impose a relationship between some aspect of the discourse segment they are a part of, call it S₂, and some aspect of a prior discourse segment, call it S₁. In other words, they function like a two-place relation, one argument lying in the segment they introduce, the other lying in the prior discourse. I represent the canonical form as <S₁. DM+S₂>.⁷

There are, however, several issues which I must mention here. First, consider the following examples, which illustrate that the segments related by a DM need not be adjacent.

- (2) a. He drove the truck through the parking lot and into the street. Then he almost cut me off. After that, he ran a red light. **However**, these weren’t his worst offenses.
- b. A: I don’t want to go very much. B: John said he would be there. A: **However**, I do have some sort of obligation to be there.
- c. [on entering the room and finding the computer missing.] **So**, where’d you put it?
- d. You want to know how my garden grew this summer. **Essentially**, the tomatoes grew well. The broccoli was fair as were the peppers. The eggplant and carrots were terrible.

In (2a), the *however* relates the segment it introduces (‘These weren’t his worst offenses’) with not just the immediately prior segment (‘After that, he ran a red light’), but with several prior segments, including the immediately preceding one. In (2b), the *however* does not relate to the segment immediately prior but to the one before it. In (2c) the *so* has no linguistic context at all preceding it (cf. Blakemore, 1995; Rouchota, 1996), while in (2d), the *essentially* relates to not only the segment it introduces but also to several following segments. Thus, although a DM typically relates only the segment of which it is a part to the immediately preceding segment, this is not always the case.

Second, a DM need not strictly ‘introduce’ S₂, but may occur in medial or final position as well, as the examples in (3) illustrate.⁸

- (3) a. Harry is old enough to drink. **However**, he can’t because he has hepatitis.
- b. It is freezing outside. I will, **in spite of this**, not wear a coat.
- c. We don’t have to go. I will go, **nevertheless**.

⁷ I will use ‘discourse segment’ as a cover term to refer to ‘proposition’, ‘sentence’, ‘utterance’ and ‘message’ unless more specificity is required.

⁸ Almost all DMs occur in initial position (*though* being an exception), fewer occur in medial position and still fewer in final position.

A third issue involves the grammatical status of the discourse segments. There are four cases to consider. The first case is illustrated in (4), where the DM relates independent sentences, S1 and S2 (the canonical case noted above).

- (4) a. We left late. **However**, we arrived home on time.
- b. The picnic is ruined. The mayonnaise has turned rancid. There are ants in the chicken. **Furthermore**, the beer is warm.
- c. The bank has been closed all day. **Thus**, we couldn't make a withdrawal.
- d. This dinner looks delicious. **Incidentally**, where do you shop?

The second case is illustrated in (5), where two independent clauses are joined by a coordinate conjunction, in this case *and*. The form of these sequences joined by a DM may be the canonical one, <S1. DM+S2>, as in (5a), or <S1, DM+S2>, as in (5b).⁹

- (5) a. Jack played tennis. **And** Mary read a book.
- b. Jack played tennis, **and** Mary read a book.

Contrary to the DMs in (4), whose occurrence is restricted to introducing an independent clause, the examples in (5) show that *and* (as well as *but*, *or* and so) can relate S2 to S1 in an alternative way. This raises the question of whether or not *and* (*but*, *or*) should be considered a DM in an elliptical sentence such as 'Jack and Mary rode horses'. I think not. A DM introduces a separate message with its propositional content, whereas the *and*, in this and similar elliptical sentences, functions purely as a conjunction within a single message. See below for a clarification on the grammatical status of DMs.

A third case involves DMs such as those in (6):

- (6) as a result (of that), because of this/that, besides, despite this/that, for this/that reason, in addition (to this/that), in comparison (to/with this/that), in spite of this/that, in this/that case, instead (of this/that), on this/that condition

These can occur in the canonical form, <S1. DM+S2>, as in (7a), and in two additional forms as well, as illustrated in (7b) and (7c), respectively.

- (7) a. There was considerable flooding. **As a result (of that)**, farmers went bankrupt.
- b. **As a result of** considerable flooding, farmers went bankrupt.
- c. Farmers went bankrupt **as a result of** considerable flooding.

⁹ Note that there are some sequences such as (i–iii), which seem to resist combining into a single sentence:

- (i) The clock struck the hour. **And** Martha was nowhere to be found.
- (ii) I tried to get there. I failed. **And** I tried to call you but no one answered.
- (iii) It is awfully big. **And** how am I going to carry it home?

Here, only in (7a) is the prepositional phrase (*as a result of that*) functioning as a DM. In (7b) and (7c), the expression *as a result of* is functioning simply as a preposition with a nominalization formed from S1 as its object, and, like the elliptical sentence above, it does not introduce a separate message. Thus, it is not functioning as a DM.

A fourth case involving expressions such as *since*, *because*, *while*, and *unless* does not permit the canonical form, but only the patterns <S1, DM+S2> and <DM+S2, S1>, as shown in (8).

- (8) a. Mary is angry with you **because** you ran over her cat with your car.¹⁰
- b. Harry will not go, **unless** he is paid an appearance fee.
- c. **While** she is pregnant, Martha will not take a plane.

Because the DM is syntactically a subordinate conjunction, it cannot introduce a sentence which stands alone, but requires that the previous independent clause be present. Thus, in (9a),

- (9) a. B: **Unless** he is paid an appearance fee.
- b. B: Harry will not go. **Unless** he is paid an appearance fee.
- c. A: Harry will not go. B: **Unless** he is paid an appearance fee.

the contribution from B requires something such as ‘Harry will not go’ to precede it, either spoken by B, as in (9b), or an earlier speaker, A, as in (9c).¹¹

Contrary to my earlier writing (Fraser, 1990, 1993), in which I treated as DMs only those expressions which could introduce a separate sentence, thereby excluding expressions such as *since*, *because* and *although*, I have now come to the conclusion that all the marked expressions in (10) should be considered as DMs, first, because I cannot find any principled basis to distinguish among them, and second, because each of the expressions relates two separate messages, which I take to be a sine qua non of DMs.¹²

- (10) a. He didn’t go. **However**, he wasn’t sorry.
- b. Jack played. **And** Mary read.
- c. Jack played, **and** Mary read.

¹⁰ There is at least one other use of *because* as in ‘Harry rode his bike today. (I say this) **Because** his car is in front of his house’.

¹¹ Note that most DMs can occur between two clauses, as do subordinate conjunctions, if they are prefaced by *and*, *so*, or *but*, as the following examples illustrate:

- (i) Harry felt sick. **And what is more**, acted that way.
- (ii) I won’t go in since we are late, **and besides**, I hear it’s a lousy play.
- (iii) Mary, **but more to the point** Jane, read for four hours.
- (iv) George is fairly heavy, **so in comparison**, Nancy is relatively light.

¹² The complimentizer marker *that* also does not function as a DM since it does not relate two separate messages, the S2 message being properly embedded in the S1 sentence and thus there is but one message.

- d. He didn't go. **In spite of that**, he wasn't sorry.
- e. He didn't go, **since** he wasn't prepared.

None of the researchers of DMs have addressed this issue explicitly, but their comments and examples would suggest they are not in disagreement.

Fourth, the interpretations of the discourse segments S2 and S1, not simply their semantic readings, must be compatible with the particular DM used in order that a sequence be considered coherent. Consider the following sequences which display a variety of the aspects of interpretation which must be considered.

- (11) a. Murdock bought WNAC-TV in Boston. **Therefore**, he couldn't buy *The Globe*.
- b. I just love Boston drivers. **However**, I seldom yell at them.
 - c. I will help you. **Similarly**, I will take care of Martha.
 - d. We started late. **Nevertheless**, we arrived on time.
 - e. A: How did Harry drown? B: We put a flotation device on him. ***Nevertheless**, it slipped off.
 - f. The U.S. policy is crazy. **Furthermore**, I love you anyway.

In (11a), *The Globe* is ambiguous between the newspaper and the company, and this ambiguity must be resolved before the sequence becomes coherent, while in (11b), S1 has to be interpreted as ironic for the sequence to be acceptable. In (11c), segment S2 must be interpreted as a promise, or at least not as a threat. Replacing *similarly* with *furthermore* lessens this requirement. Sequence (11d) requires the explicit S2 message to be contrasted with an implied S1 message ('We arrived late'). Sequence (11e) is incoherent for me, as it stands, but would be alright if the conversation were about someone who drowned and the steps that were taken to save him. And I see no way in which the sequence (11f) can be interpreted as coherent, though this may be a failure of my imagination. However, with the DM *however* replacing *furthermore*, the sequence becomes acceptable. In general, the speaker meaning (what messages the speaker intends to convey with the utterance) must be considered in any coherence determination.¹³

In most of the examples thus far, the DMs have related the explicit speaker meaning of S2 (the explicit message conveyed), and S1, as illustrated in (12).

- (12) a. Jim is ready for the exam. **In contrast**, Jack is quite unprepared.
- b. We are late. **So that** means I can't go.
 - c. He is poor. **Moreover** he is uneducated.

But now consider the sequences in (13):

¹³ I am talking about explicit basic messages, where the propositional content of the sentence serves as the message content. Additional explicit messages which are signaled by commentary markers such as *frankly*, *certainly*, and *stupidly* simply add to the complexity. See Fraser (1996c).

- (13) a. We left late. **In spite of that**, we arrived on time.
 b. [Boss to assistant] A: Box up my entire office. B: **So**, he fired you too.
 c. A: I realize that Jack is sick. **But** you know Jack is not sick.
 d. A: Here is a triangle. B: **But** it has four sides.
 e. John has been absent lately, hasn't he? **Before I forget**, when are you leaving?

Here, the DM relates the explicit interpretation of S2 to a non-explicit interpretation of S1. In (13a–b), it is an implied proposition associated with S1 which is referenced by *in spite of that* and *so*. In (13c), it is a presupposed proposition, in (13d), it is an entailed proposition, while in (13e), what is related are not propositions at all but the topics of S2 and S1. How widespread this phenomenon is with DMs awaits further study.

From this discussion I think it is clear that a DM does not 'display' a relationship, as Schiffrin (1987) would have it, any more than a verb displays a relationship between a subject and object. Rather, as Blakemore (1992) and Fraser (1990) suggest, a DM imposes on S2 a certain range of interpretations, given the interpretation(s) of S1 and the meaning of the DM, a topic to be discussed subsequently.

3.2. What are not discourse markers?

Given this characterization of DMs, many segment-initial expressions are excluded. For example, consider sequences like (14):

- (14) a. A: Harry is old enough to drink. B: **Frankly**, I don't think he should.
 b. I want a drink tonight. **Obviously**, I'm old enough.
 c. A: We should leave fairly soon now. B: **Stupidly**, I lost the key so we can't.

In (14a–c), *frankly*, *obviously*, and *stupidly* do not signal a two-placed relationship between the adjacent discourse segments, but rather signal a comment, a separate message, that relates to the following segment. These are commentary pragmatic markers (cf. Fraser, 1996b). Also excluded for the same reason are focus particles, such as *even*, *only*, *just*, as in (15a–b) and pause markers, such as *Hum ...*, *Well ...*, *Oh ...*, *Ahh ...*, as in (15c–d):

- (15) a. The exam was easy. **Even** John passed.
 b. They are fairly restrictive there. **Only** poor Republicans are allowed in.
 c. What am I going to do now? **Well** ... I really don't know.
 d. A: Do you know the answer? B: **Ah** ..., I will have to think about it.

Modal particles are said to not occur in English (but consider 'He did **indeed** do that yesterday'), but they are found in German, e.g. 'Wer wird **denn auch ebenso** etwas probieren?' However, they, also, are excluded as DMs.

Vocatives, as in (16), are excluded since they signal a message in addition to the primary message conveyed by the sentence, and do not signal a relationship between

segments. For similar reasons, interjections such as *Oh!* (included as a DM by Schiffrin, 1987), *Wow!*, and *Shucks!* are excluded.

- (16) a. A: We shall arrive on time. B: **Sir**, I fear you are sadly mistaken.
 - b. A: Are there any questions? B: **Mr. President**, what do you think of Mr. Dole?
 - c. Who knows the answer. **Anyone**?
- (17) a) A: The Chicago Bulls won again tonight. B: **Oh!**
 - b) **Wow!** Look at that shot!
 - c) A: You have to go to bed now. B. **Shucks!** I really wanted to see that movie.

They must be treated as pragmatic idioms, which constitute an entire, separate message.¹⁴

3.3. What is the grammatical status of discourse markers?

Syntactically, it seems clear that DMs do not constitute a separate syntactic category. There are three sources of DM – conjunction, adverbs, and prepositional phrases – as well as a few idioms like *still* and *all* and *all things considered*. Coordinate conjunctions *and*, *but*, and *or* function primarily though not exclusively as DMs.¹⁵ Subordinate conjunctions such as *so*, *since*, *because*, and *while* also function as DMs, although they function in other ways as well, as illustrated in (18).

- (18) a. **Since** Christmas, we have had snow every day.
- b. The book was **so** good that I read it a second time.
- c. You should read **while** doing that.

Second, there are adverbials which have been pressed into service, uniquely as a DM as in (19a–b), or ambiguously, as in (19c–f).

- (19) a. Sue won't eat. **Consequently**, she will lose weight.
- b. Bill likes to walk. **Conversely**, Sam likes to ride.
- c. I believe in fairness. **Equally**, I believe in practicality.

¹⁴ Note that *oh* has at least three distinct roles within a grammar:

- (i) Interjection, as in 'Oh! I wasn't aware of that. Thanks'.
- (ii) What James (1972) called *oh*₂, as in 'There were ... oh ... perhaps 20 or so lying there uncovered'.
- (iii) Emotional/Pause marker, as in 'Oh, Harry, why don't you just shut up'.

The interjection *Oh!*, like other interjections, takes an intonation contour which, for example, conveys disappointment, anger, or relief, which is additional to the meaning conveyed by the simple *Oh!*

¹⁵ For example, we find a number of uses of *and* ('Oil **and** water don't mix') and of *but* ('He called all **but** one') which do not seem to be related to the DM function.

- d. I treat everyone **equally**.
- e. A: I can't see the buoy. B: **Then** don't leave.
- f. Will he be able to leave **then**?

And third, there are prepositional phrases which function uniquely as DMs, as in (20a–b), and those which are ambiguous, as in (20c–f).

- (20) a. Harry shut his eyes. **As a consequence**, he missed the bird.
- b. You shouldn't do that. **In particular**, you shouldn't touch that brown wire.
- c. We should have ice cream for dessert. **After all**, it's my birthday.
- d. He didn't go **after all**.
- e. He didn't want to go. **On the other hand**, he didn't want to stay.
- f. One hand was unadorned. He had a colorful tattoo **on the other hand**.

It is difficult to see how a subset of conjunctions, adverbials, and prepositional phrases could be cobbled together to form a syntactic category, particularly since their individual syntactic patterning follows their obvious syntactic lineage: conjunctions patterns like conjunctions, and so forth. Moreover, the syntactic environments where an expression functions as a DM are, as far as I can tell, different from those environments where it occurs, for example, as an adverbial. That is, the environments for their different functions are in complementary distribution.

Semantically, there are several aspects to the meaning of an expression when it functions as a DM. First, when an expression functions as a DM it relates two discourse segments and does not contribute to the propositional meaning of either segment. The DMs in the following sequences,

- (21) a. I want to go to the movies tonight. **After all**, it's my birthday.
- b. John will try to come on time. **All the same**, he is going to be reprimanded.
- c. A: Harry is quite tall. B: **In contrast**, George is quite short.

may be deleted with no change in the propositional content of the segments. However, where the DMs are not present, the hearer is left without a lexical clue as to the relationship intended between the two segments. Of course for cases like *since*, *while*, *whereas*, and *because*, there are syntactic reasons why the DM cannot be deleted.

Second, the meaning of a DM is procedural not conceptual. An expression with a conceptual meaning specifies a defining set of semantic features, as is the case with *boy* and *hypothesis*. On the other hand, an expression with a procedural meaning specifies how the segment it introduces is to be interpreted relative to the prior, subject to the constraints mentioned earlier.¹⁶ For example, consider the DM *in contrast*. When it occurs, it signals that the segment it introduces, for example (22), makes a specific contrast with the S1 along two specific contrast areas, in this case the subjects and their relative weight:

¹⁶ As far as I know, Blakemore (1987) first applied the term 'procedural' to distinguish DMs from other lexical expressions.

- (22) John is fat. **In contrast**, Jim is thin.

In contrast imposes a more specific contrast than do *but* and *on the other hand*, shown in (23a–b), and cannot occur in a context where *nevertheless* is found, shown in (23c–d):¹⁷

- (23) a. A: Harry is honest. B: **But/*In contrast** he is NOT honest.
 b. He hasn't been feeling that well. **On the other hand/*In contrast**, he shouldn't have acted that way.
 c. I don't care for peas. **In contrast/*Nevertheless**, I like carrots.
 d. We started late. **Nevertheless/*In contrast**, we arrived on time.

Third, every individual DM has a specific, core meaning. For example, the DM *so* signals that the following segment is to be interpreted as a conclusion which follows from the prior discourse. In some of the following examples, the *so* appears to take on a more complex meaning, but careful inspection will reveal that this elaboration can be attributed to the discourse context, both linguistic and non-linguistic:¹⁸

- (24) a. Susan is married. **So**, she is no longer available I guess.
 b. John was tired. **So**, he left early.
 c. Attorney: And how long were you part of the crew?
 Witness: Five years.
 Attorney: **So**, you were employed by G for roughly 5 years, right?
 d. Teenage son: The Celtics have a game today. Father: **So**?
 e. Son: My clothes are still wet. Mother: **So** put the drier on for 30 minutes more.

Or consider the following sequences with *but*:

- (25) a. She's good looking. **But** he's ugly as sin.
 b. He's good looking. **But** that isn't going to get him a job in this market.
 c. A: He's late. B: **But** he's not late at all.
 d. You say that Mary is coming. **But** we weren't talking about Mary at all.
 e. A: James is not in his office. B: **But** I just saw him there.

Are there five (or more) DM *buts*? I think not. Rather, the core meaning of simple contrast coupled with the context will render the notion of *but* plus whatever additional interpretation is present. Of course, such elaboration must be derived and is not present in the encoded meaning of the individual DM. There is an interaction between the DM and the discourse slot in which it occurs: on the one hand, the DM

¹⁷ See Fraser, 1997 for a detailed analysis of contrastive discourse markers in English.

¹⁸ The *so*, spoken by a grandmother, as in 'So, tell me about the young man you are seeing', is a parallel pragmatic marker and not an inferential DM like those shown in the examples. See Fraser (to appear) for a detailed discussion of *so*.

forces a relationship between the segments S2 and S1 by virtue of the DM meaning, while on the other hand, the context, both linguistic and non-linguistic, elaborates and enriches the relationship based on the details present.

My conclusion is that DMs, with the exception of a few idiomatic cases, are expressions drawn from the syntactic classes of conjunctions, adverbials, or prepositional phrases, have the syntactic properties associated with their class membership, have a meaning which is procedural, and have co-occurrence restrictions which are in complementary distribution with their conceptual counterparts. For those expressions such as *however*, *equally*, *since*, and *then*, which have conceptual counterparts, the lexical items must be considered ambiguous, even if the difference in meaning is small, such as between *and*, when used as a conjunction and when used as a DM. Both for those prepositional phrases such as *as a consequence* and *in particular*, which have no conceptual counterparts, as well as *after all* and *on the other hand*, which do, the meaning will have to be stipulated, associated with the phrase, since it is not compositional. I suggest that DMs be considered as a pragmatic class, so defined because they contribute to the interpretation of an utterance rather than to its propositional content. Here, again, whether this concept will hold up awaits further research.

3.4. What are the main classes of discourse markers?

I have found there to be two main classes of DMs:

(25) *Discourse markers which relate messages*

- a. Contrastive markers
- b. Collateral markers
- c. Inferential markers
- d. ...

(26) *Discourse markers which relate topics*

The first class involves DMs which relate some aspect of the messages conveyed by the segments S2 and S1. In some cases, the discourse relationship involves the (propositional) content domain, (27a), in others it involves the epistemic domain (the speaker's beliefs), (27b), while in still others it involves the speech act domain, (27c).

- (27) a. Since John wasn't there, we decided to leave a note for him.
 b. Since John isn't here, he has (evidently) gone home.
 c. Since we're on the subject, when was George Washington born?

I will not discuss the details here.¹⁹

There are three main subclasses and a number of very minor subclasses in this first class. As an illustration of the first subclass, relatively robust, consider the sequences in (28).

¹⁹ These distinctions were first introduced by Schiffarin (1987) and Sweetser (1990).

- (28) a. John weighs 150 pounds. **In comparison**, Jim weighs 155.
 b. We left late. **Nevertheless**, we got there on time.
 c. A: Chris is a happy bachelor. B: **But** Chris is female.

In these examples, the DM signals that the explicit interpretation of S2 contrasts with an interpretation of S1. For example, in (28a), *in comparison* signals that the S2 content is in contrast with the explicit S1 content along a dimension which lies on a continuum, in this case weight. In (28b), *nevertheless* signals that the explicit S2 message is in contrast with an unexpected implied message associated with S1, while in (28c) it is an entailment of S1 with which the explicit S2 message is contrasted.²⁰

I have labeled such DMs Contrastive Markers. This group includes:

- (29) (al)though, but, contrary to this/that, conversely, despite (doing) this/that, however, in comparison (with/to this/that), in contrast (with/to this/that), in spite of (doing) this/that, instead (of (doing) this/that), nevertheless, nonetheless, on the contrary, on the other hand, rather (than (do) this/that), still, though, whereas, yet.

This subclass, distinguished by subtleties of meaning, can be divided as:

- (30) a. **but**²¹
 b. however, (al)though
 c. in contrast (with/to this/that), whereas
 d. in comparison (with/to this/that)
 e. on the contrary; contrary to this/that
 f. conversely
 g. instead (of (doing) this/that), rather (than (doing) this/that)
 h. on the other hand
 i. despite (doing) this/that, in spite of (doing) this/that, nevertheless, nonetheless, still

A second subclass of DMs relating aspects of S2 and S1 messages is illustrated by the following sequences:

- (31) a. The picnic is ruined. The mayonnaise has turned rancid. The beer is warm. **Furthermore**, it's raining.
 b. You should always be polite. **Above all**, you shouldn't belch at the table.
 c. They didn't want to upset the meeting by too much talking. **Similarly**, we didn't want to upset the meeting by too much drinking.

²⁰ For purposes of this discussion, I consider presuppositions and entailments of a proposition as messages, given off though not necessarily intended.

²¹ The separation within the subclass indicates additional distinctions. Interestingly, the paradigmatic contrastive DM is *but*, which co-occurs with each of the other contrastive DMs (e.g., 'He didn't go. **But instead**, he worked through the night.'). A similar phenomenon is found with *and* and *so*, for their respective classes. See Fraser (1997) for a detailed analysis of contrastive DMs.

In these cases, the DM signals a quasi-parallel relationship between S2 and S1. In the first example, (31a), *furthermore* signals that the content of S2 is to be taken as adding yet one more item to a list of conditions specified by the preceding discourse (not necessarily just S1), while in (31b), *above all* signals that the content of S2 is to be taken as the foremost exemplar of the concept represented by S1 or S1 and the preceding discourse. In (31c), *similarly* signals that there is a similarity along some unspecified dimension between the content of S2 and the content of S1. In all cases, these DMs indicate a relationship in which the message of S2 parallels and possibly augments or refines the message of S1.

This subclass of DMs, which I have labeled elaborative markers, includes:

- (32) above all, also, analogously, and, besides, better yet, by the same token, correspondingly, equally, for another thing, furthermore, in addition, in any event, in particular, I mean, likewise, more to the point, moreover, namely, on top of it all, or, otherwise, similarly, to cap it all off, too, well, what is more

Finer distinctions include:

- (33) a. and
 b. above all, also, besides, better yet, for another thing, furthermore, in addition, moreover, more to the point, on top of it all, too, to cap it all off, what is more
 c. I mean, in particular, namely, parenthetically, that is (to say)
 d. analogously, by the same token, correspondingly, equally, likewise, similarly
 e. be that as it may, or, otherwise, that said, well

A third subclass is illustrated by the following sequences:

- (34) a. The bank has been closed all day. **Thus**, we couldn't make a withdrawal.
 b. It's raining. **Under those conditions**, we should ride our bikes.
 c. There's a fearful storm brewing. **So** don't go out.

In these sequences, the DM signals that S2 is to be taken as a conclusion based on S1. In (34a), *thus* signals that the segment following is to be taken as expressing a conclusion for which the content of S1 (and perhaps additional segments) provides justification. In (34b), *under those conditions* signals that S2 should be interpreted as a conclusion, if the facts stated in S1 are found to hold, while in (34c), the *so* signals that the advice following is based on S1.

This group I have labeled inferential markers. It includes:

- (35) accordingly, all things considered, as a (logical) consequence/conclusion, as a result, because of this/that, consequently, hence, in any case, in this/that case, it can be concluded that, of course, on that condition, so, then, therefore, thus

These markers can be (tentatively) divided up into the following subclasses in terms of the subtleties of the S2 conclusion.

- (36) a. so
- b. of course
- c. accordingly, as a consequence, as a logical conclusion, as a result, because of this/that, consequently, for this/that reason, hence, it can be concluded that, therefore, thus
- d. in this/that case, under these/those conditions, then
- e. all things considered

Finally, additional subclasses have relatively small populations. One is illustrated by the following examples.²²

- (37) a. I want to go to the movies. **After all**, it's my birthday.
- b. I'm not going to live with you anymore, **since** I can't stand your cooking.
- c. Take a bath right away, **because** we have to get going.

Whereas the inferential group of DMs related a conclusion, S2, which followed from S1 (that is, S1 provided grounds for drawing the conclusion), the present group specifies that S2 provides a reason for the content presented in S1, whether it is asserted as in (37a–b) or is an imperative as in (37c).

This group includes:

- (38) after all, because, for this/that reason, since

While the first class of DMs involved the relationship between aspects of the explicit message of the segment S2 and either an explicit or non-explicit message of S1, the second class of DMs, topic relating discourse markers, involves an aspect of discourse management (Schiffrin's Exchange Structure; Redeker's Sequential Level), and this level only. Consider the following sequences.

- (39) a. This dinner looks delicious. **Incidentally** where do you shop?
- b. I am glad that is finished. **To return to my point**, I'd like to discuss your paper.

In (39a), *incidentally* signals that S2 is to be interpreted as a digression from the topic of S1, while in (39b), *to return to my point* signals the reintroduction of the previous topic of the discourse. It is the topic to which S1 is contributing, rather than its message, which is related to the topic presented by S2. DMs included in this type, labeled topic change markers, include:

²² There are other groups, for example, *after*, *before*, *while*, which specify the time of S2 relative to S1, and compound markers such as *although ... yet*, *if ... then*, but I shall not go into them here.

- (40) back to my original point, before I forget, by the way, incidentally, just to update you, on a different note, speaking of X, that reminds me, to change to topic, to return to my point, while I think of it, with regards to

If this analysis of two classes of DMs is correct, it suggests a rethinking of Schiffrin's/Redeker's position whereby each DM had a potential effect on all three levels: the Ideational, Rhetorical, and Sequential, and the Topical level was not even considered.

4. Conclusion

To summarize, I have defined DMs as a pragmatic class, lexical expressions drawn from the syntactic classes of conjunctions, adverbials, and prepositional phrases. With certain exceptions, they signal a relationship between the segment they introduce, S₂, and the prior segment, S₁. They have a core meaning which is procedural, not conceptual, and their more specific interpretation is 'negotiated' by the context, both linguistic and conceptual. There are two types: those that relate aspects of the explicit message conveyed by S₂ with aspects of a message, direct or indirect, associated with S₁; and those that relate the topic of S₂ to that of S₁.

Even given this progress, there is much we don't understand. What DMs can co-occur? For example, '**And so**, what are we to do now?' is perfectly acceptable, but '**And however**, ...' or '**So and**, ...' are not. And how do they interact with other pragmatic markers? For example, the sentence, '**However, frankly**, you didn't do very well', seems acceptable whereas, '**Frankly, however**, you didn't do very well', seems much worse. Is such co-occurrence a rule-governed, principle-governed, or an idiosyncratic matter?

Will the division of DMs into the present subclasses withstand the test of further research, or is it in need of revision? What is the nature of core procedural meaning and are there any expressions other than DMs which have it? Are there really equivalents such as *nevertheless*, *despite that*, and *still*, or will further research show that there are subtle, and perhaps not-so-subtle, differences, such as register distinctions, between *despite that*, which is found in general speech, and *notwithstanding*, which is relegated to formal written texts?

What is the role of DMs in coherence? If DMs are taken, as I have taken them, as signaling a relationship, are there just the three relationships that Sweetser suggests or are there others permitted in discourse? Are there relationships without distinct markers? If so, do they pattern in any particular way?

Finally, how do DMs compare across languages? Some preliminary data, for example, Fraser and Malamud-Mokowski (1996), Permkipkul (1997), and Su (1997) suggest that there is a general correspondence between the markers, but certainly not an exact mapping. If so, to what extent are they similar, to what extent different, for example, can a DM be a bound morpheme? In the acquisition of a second language, which DMs are learned first, and is this influenced by the native language?

Questions like these abound in the field of discourse markers and await research.

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