

Title: Discourse Topics and Digressive Markers

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Introduction

This article aims at clarifying some of the theoretical orientations underlying linguistic studies on topic shifts and digressive markers. In Section 1, I argue that, following the pioneering work of the Prague School on thematic progressions, the hypothesis that each everyday conversation or written text develops a specific discourse topic (DT), different from the themes or topics of its sentences (ST), was introduced in the 1970s by Van Dijk and Kintsch (Van Dijk 1972, 1977a, 1977b; Kintsch & Van Dijk 1978; and Van Dijk & Kintsch 1983). Nevertheless, the question quickly arose whether this notion of DT was really necessary to account for the coherence of discourse.

As I will show in Section 2, most of the models of discourse coherence, from the late 1980s until now (such as those initiated by Hobbs, Mann & Thompson, Asher & Lascarides, Sanders and many others), do without DT, for the reason that the rhetorical relations¹ they advocate were sufficient, with co-reference relations, to explain commonsense intuitions on the topical (dis)continuity and (in)coherence of discourse. In Section 3, I present and discuss Kuppevelt's model which is based, on the contrary, on topical discourse structures, without rhetorical relations. Section 4 deals with markers of topic shift and digression, presenting and discussing Fraser's Topic Orientation Markers (2009b) and Pons Bordería & Estellés Arguedas' (2009) paper on the very existence of digressive markers. Lastly, in section 5, I compare the functions of *d'ailleurs* (lit. 'from elsewhere') and *par ailleurs* (lit. 'by elsewhere') in contemporary French. This comparison illustrates the difference between rhetorical discourse markers (connectives) and framing adverbials that can announce, at the metalinguistic level, topic shifts and digressions.

¹ This term is used in this paper for all models that rely on taxonomies of discourse relations specifying why one unit of discourse (UDⁿ) is enunciated after another one (UDⁿ⁻¹).

1. Earlier attempts at defining discourse topic

1.1 The Prague School's thematic progressions

The problems of discourse occupy an important place in the work of the Prague School, which put forward the idea of communicative dynamism and of thematic progressions (Daneš 1974, Firbas 1971, 1992). Among these progressions are the following three classical ones:

Linear progression: $T_1 \rightarrow R_1, T_2 (R_1) \rightarrow R_2, T_3 (R_2) \rightarrow R_3$ (the Theme (T) of S_n is taken from the Rheme (R) of S_{n-1})

Constant theme iteration progression: $T_1 \rightarrow R_1, T_1 \rightarrow R_2, T_1 \rightarrow R_3$

Derived theme progression: $T_1 \rightarrow R_1, T_2 \rightarrow R_2, T_3 \rightarrow R_3$ [T = subsuming hyper-theme T1, T2, T3]

These transitions are supposed to guarantee the continuity of the theme as the discourse progresses. But if we admit that each sentence has a thematic component that anchors an entity, and a rhematic component that brings new information about that entity, there is no need for the notion of discourse theme. Sentence themes are sufficient to represent the continuity or discontinuity of the sequences. With derived progressions, the theme moves from one sentence to another. Continuity is ensured by the fact that the T of S_2 is a component of the R of S_1 , whereas with iterative progressions, the transition continuity is due to the fact that the same T is maintained from one sentence to another. The case of derived theme progression is a little different. Either the hyper-theme is not explicit and the listener/reader must infer it, in which case we can say that the discourse, by its content and its arrangement, implicates a discourse local theme, valid for the sequence in question; or this hyper-theme is made explicit in the form of a priming sequence, which is expected to precede the sequence in order to fully play its role.

Note that none of these progressions guarantee coherence. It is very easy to imagine a text progressing linearly from a person to the piano on which she/he plays, then from that piano to the region in which it was made, then to the wine that this region produces, and so on *ad libitum*. Likewise with constant theme progressions. For

instance, Fayol (2013) in a publication on young children's acquisition of writing, after noting (p.96-97) that "texts written by young children (...) include productions that adults find difficult to consider coherent", mentions (1) produced by a child in the first year of primary school:

(1) Je prends l'train. Je regarde les pâquerettes. Je prends l'auto de papa. Je vais à la chasse avec papa. Je garde les vaches avec tonton Jeannot
I take the train. I look at the daisies. I ride in Dad's car. I go shooting with Dad. I keep the cows with Uncle Jeannot.

This text, which reports the actions accomplished by the author, should be felt as coherent, but maintaining the same referent subject from one sentence to another is not enough to give meaning to the whole. The text lists very different facts that do not constitute a story or the beginning of a story. As for the derived theme progression, it is not for instance because one announces that some decision will have such and such consequences that these consequences will be understood as forming a coherent whole pointing to one and the same conclusion. If this is not the case, their grouping under the same hyper-theme will have served no purpose.

1.2. Van Dijk and Kintsch's Discourse Topics (DT)

The notion of DT was introduced in the 1970s by Van Dijk and Kintsch. Their model of text comprehension predicts that subjects associate each sentence with a propositional semantic representation (roughly a predicate and its arguments). In addition to developing such structures (from phonemic / graphemic treatments to semantic and pragmatic ones), they claim that subjects also enrich them as they move through discourse, by establishing and recording the links between the arguments of the following propositions, links that are crucial for local coherence. The processing involved in all these treatments is very heavy, too heavy, explain Kintsch and Van Dijk, for listeners/readers who cannot keep track of the content of the propositions and nor keep their links in their working memory for a very long time. Hence the need to schedule, in the model, phases during which listeners/readers recycle the currently active propositional representations (and the relations they entertain) in their working memory. The operations involved in these recycling treatments consist in the elimination or compacting of information, in order to deduce a "macroproposition" synthesizing the content of a sequence of propositions.

Van Dijk (1977b) points out that it is perfectly possible to consider that the sentence topic (ST) of (2) is the referent denoted by the NP 'Eva':

(2) Eva went to Prague

In the absence of context, the reader understands, by default, that the sentence is "about" the subject that is marked syntactically and semantically. But, asks Van Dijk, "could we say that 'Eva' is the topic of (3)?"

(3) Eva awoke at five o'clock that morning. Today she had to start with her new job in Prague. She hurriedly took a shower and had some breakfast. The train would leave at 6:15 and she did not want to come late the first day. She was too nervous to read the newspaper in the train. Just before eight the train finally arrived in Prague. The Office where she had found the job was only a five minutes' walk from the station (...)

This is not excluded but, says Van Dijk, "we would in general not merely answer that some story 'is about' a girl. Rather we briefly specify what the girl did". So a better formulation of the discourse topic (DT) of (3) would be:

Eva took the train to Prague and started her new job

which "would at the same time be an acceptable summary of the fragment" (p.56). The inference of this DT is to be made by applying "rules of deletion, generalization and integration" (cf. Van Dijk 1977a, chap.5), the details of which I will not go into, and by mobilizing common knowledge on the situations mentioned in the text.

This notion of DT has been used mainly in psycholinguistics, in work on comprehension, with for instance experiments on the role of headings, paragraphing, and other signals of continuity or discontinuity. Reinhart (1981), on sentence topics, mentions Van Dijk's (1977b) paper on discourse topic, "although this is not a commonly accepted terminology" (p.54). But it is no longer discussed in the rest of her paper, when she returns to the problems of discourse, where she explains that:

"the various devices for linking adjacent sentences in a discourse can be reduced to two types of link: the one is referential links between their expressions [...] and a semantic link between the propositions expressed by the two sentences [...] Any of these two types of link is sufficient to produce a

cohesive discourse, and it is necessary that at least one of them will hold” (p.74).

Together with Brown and Yule’s (1983) criticisms of Van Dijk’s conceptions of DT, this explains why this notion has had so little visibility in linguistics.

1.3. Discourse Topic (DT) and local/global relevance/coherence

The idea that a text or a conversation can develop a DT whose emergence and evolution could be reconstructed in the way intended by Van Dijk and Kintsch, is valid only if the text and the conversation in question are sufficiently coherent. This condition is a prerequisite. Given that it is very difficult to specify what can be understood by “sufficiently coherent”, this problem has given rise to a considerable literature since the “text grammars” of the 1970s, of which Van Dijk was one of the initiators². This body of work was profoundly influenced by Grice’s article on “Logic and Conversation” (1975) and then by Sperber and Wilson’s (1986) Relevance Theory. First, Grice’s principle of cooperation and maxim of relevance were called upon to explain why subjects who encountered sequences of sentences with no obvious semantic links were generally not willing to accept this simple observation. Assuming that what was communicated to them should have a meaning and thus a certain coherence, they were inclined to go beyond what was said, by developing contextual implicatures and “bridging” inferences (Clark 1977), as is the case in dialogues such as (4) where it is necessary to restore a link of coherence between the two statements:

(4) A: *The bin is full*

B: *I’m exhausted.*

Brown and Yule (1983) relate these developments of inferences to Grice’s maxim of relevance, and more specifically to a so-called Topicality Principle – a convention of conversational discourse, requiring that contributions be “relevant in terms of the topic framework” (p. 84).

With the development of Sperber and Wilson’s Relevance Theory, the links that may have existed between the early studies on relevance and those on coherence in discourse analysis have become quite loose (see Wilson & Matsui 2012, Chap. 9). The main reason for such discrepancies is that the very general and cognitive ‘Optimal

² - Cf. For relatively recent syntheses see Ruiz Moneva (2010) and Bublitz (2011)

Relevance Principle' defended by Sperber and Wilson and followers, is intended to explain the interpretation of isolated statements in context. It thus does not need to be "supplemented" in order to describe what can happen when they appear following one or more other statements. The procedures that can be observed at text or discourse level do not present any particularity, and it is not very clear, under these conditions, what would be the point of talking about topicality and what is more, at the same time, of coherence (and relevance) of discourse.

The discussion goes back to Giora (1997: 22-23) who contests some of Sperber and Wilson's (1986) analyses and argues that "an informative discourse is well-formed if and only if it:

- (a) conforms to the Relevance Requirement in that all its propositions are conceived of as related to a discourse-topic proposition. The discourse-topic is a generalization, preferably made explicit, and placed in the beginning of the discourse. It functions as a reference point relative to which all incoming propositions are assessed and stored (...),
- (b) conforms to the Grade Informativeness Condition which requires that each proposition be more (or at least not less) informative than the one that precedes it in relation to the discourse topic (...)
- (c) marks any deviation from Relevance and Graded Informativeness by an explicit marker e.g. "by the way", "after all" (...)."

In her response to Giora (1997), Wilson (1998) notes that:

"Giora does not believe that local coherence is analysable in terms of a set of local coherence relations holding between adjacent segments in a text" (p.65).

This point is confirmed by Giora (1998) in her reply to Wilson. She sees no interest in including factors other than her Relevance Requirement and Grade Informativeness Conditions to provide an account of the judgments of coherence that can be made on texts or text fragments. There is no doubt that some texts are structured in the way specified by Giora. "Informative discourse" (cf. above), or "well planned academic articles" (as Wilson 1998 notes) are frequently structured in this manner. But the problem does not only arise with certain kinds of text. It is much more general, because it is linked to the limitation of the processing abilities of listeners and readers (cf. Kintsch, Van Dijk above).

2. Discourse Rhetorical Structures (without Discourse Topical Structures)

2.1. From Discourse Rhetorical relations to Discourse Rhetorical Structures

Since the 1990s, work on discourse coherence has mostly increased under the influence of researchers in Computational Linguistics. Hobbs (1976, 1978, 1990), who was one of the pioneers in this field, starting from the idea that conversations and texts are expected to be coherent, developed a model based on an open list of discourse relations such as temporal succession, explanation, parallelism, exemplification, etc. This list was not particularly original, except that these relations were not intended to subcategorize discourse markers, but to note how subjects understand that a Discourse Unit (DU) could be coherently related to a preceding one, be that relationship marked or not. What was even more intriguing in Hobbs' theory was that, according to him, "coherence in discourse can be characterized by means of a small number of coherence relations which are definable in terms of the operations of an inference system" (Hobbs 1978: p.3-4).

A large body of theories has been developed in the wake of Hobbs. They include Rhetorical Structure Theory (RST), promoted by Mann and Thompson (1986, 1988), the Cognitive approach to Coherence Relations by Sanders *et al.* (1992, 1993, 1997), and Segmented Discourse Representation Theory (SDRT) by Asher and Lascarides (2003), which offers a model of dynamic semantics, including rhetorical and referential relations. Many labs working on these well-known theories – or others, more or less similar – began to annotate these relations in fairly large corpora, usually of written texts (cf. Carlson & Marcu (2001), Taboada & Mann (2006), Webber & Joshi (2012), Danlos et al. (2012), and Péry-Woodley *et al.* (2011)). These systematic annotations by experts make explicit the semantic links (causal, temporal,...) they establish between the situation denoted by each incoming Discourse³ Unit DUⁿ and the situation

³ The segmentation of discourse into basic DUs poses many problems. The difficulties are not the same for speech or written corpora, already analyzed morpho-syntactically and/or intonation-wise. For the annotation of rhetorical relations, the problems concern mainly clause constituents such as infinitives, relatives, etc., as it is questionable whether they are integrated in their host sentence, and properly asserted. This also concerns adverbs such as *frankly* or prepositional phrases introduced by *according to X* which, when they do not depend on a sentence constituent, seem to be the subject of a specific speech act. These cases are in principle documented in the annotation manuals or in the preamble of papers presenting annotation data (for specific

denoted by DU^{n-1} , as well as the pragmatic links (justification, concession,...) they establish between the uttering of DU^n and the uttering of DU^{n-1} . These pragmatic links record the speaker's/writer's communicative intent when producing a DU^n just after a DU^{n-1} .

To provide an idea of this type of approach and of the discourse structures it reveals, let us consider the beginning of the following Wikipedia entry on Stevenson:

*(5) [Stevenson est parfois considéré comme un auteur de romans d'aventures ou de récits fantastiques pour adolescents] $_{DU^1}$, [**mais** son œuvre a une tout autre dimension] $_{DU^2}$: [il a **d'ailleurs** été salué avec enthousiasme par les plus grands de ses contemporains et de ses successeurs] $_{DU^3}$. [Ses nouvelles et romans manifestent **en effet** une profonde intelligence de la narration, de ses moyens et de ses effets] $_{DU^4}$. [Il exploite tous les ressorts du récit comme la multiplication des narrateurs et des points de vue] $_{DU^5}$, [**et** pratique **en même temps** une écriture très visuelle, propice aux scènes particulièrement frappantes] $_{DU^6}$. Wikipedia – July 2018)*

Stevenson is sometimes considered an author of adventure novels or fantasy tales for teenagers] $_{DU^1}$, [but his work has a whole other dimension] $_{DU^2}$: [moreover he has been enthusiastically acclaimed by the greatest of his contemporaries and successors] $_{DU^3}$. [His short stories and novels show indeed a deep understanding of narration, its means and its effects] $_{DU^4}$. He exploits all the powers of narrative such as the multiplication of narrators and points of view] $_{DU^5}$, [and at the same time practices a very visual writing, conducive to particularly striking scenes] $_{DU^6}$.

The statements DU^1 through DU^6 have a primary illocutionary value of assertion. The first DU^1 has no other illocutionary value. By contrast, we understand that DU^2 is produced to deny an inferable assertion that 'Stevenson is a second class author' (DU^1). This assertion is left implicit by *mais / but* which negates the propositional content of DU^1 . The connective is required; it marks this concessive interpretation ("denial of expectation") which specifies the primary assertion value of DU^2 . *Mais / But*

studies on segmentation problems, cf. Hempel & Degand 2008, Degand *et al.* 2009, Ho-Dac & Péry-Woodley 2009, Péry-Woodley *et al.* 2011, Danlos *et al.* 2015).

also indicates that the content of DU¹ (and therefore of DU¹) can no longer be retrieved in the immediate continuation of the text (Ducrot 1980). The assertion of DU³ is understood as supporting DU² (and not DU¹). This is signalled by both the punctuation (the colon indicating a continuation) and *d'ailleurs*⁴ / *moreover* (cf. 4.4. hereafter). DU⁴ confirms DU², as indicated by *en effet*⁵ / *indeed* and then its content is elaborated in DU⁵ and DU⁶.

The composition of rhetorical relations called for in (5) can be represented by Figure 1, which schematizes the continuity and coherence of the speakers' / writers' communicative purposes. In such structures, some nodes, once covered by other nodes, are no longer accessible, as I have just noted about "mais" / "but". Some rhetorical relations can also be hierarchized. For instance, a statement that justifies or confirms another statement may be considered less important than the latter, so that, if necessary, it would be better to keep the content justified than the content justifying it. This is precisely what RST proposes when, as mentioned above, it distinguishes nuclei (in bold in Fig. 1) and satellites.

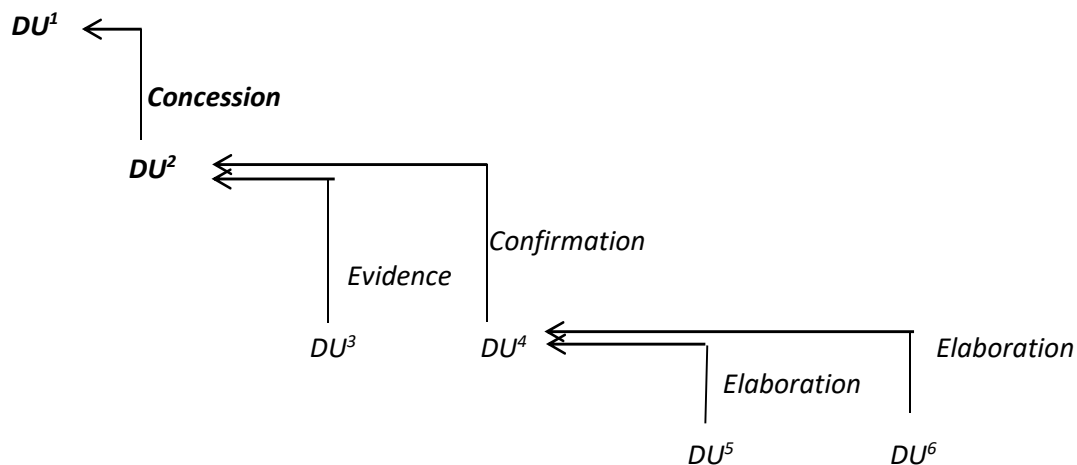


Figure 1
Rhetorical structure of (5)

This kind of analysis can theoretically be carried out on texts of indefinite length but the fact of having to develop a single root structure quickly leads, with lengthy texts, to structures of practically unmanageable complexity. However, as noted above, some models like RST offer opportunities to rank DUs according to their relationship to their

⁴ Literally: *from elsewhere*.

⁵ Literally: *in effect*.

predecessor(s). This possibility partly responds to Van Dijk and Kintsch's concern of providing simplification procedures (in this case the elimination of some DUs) to relieve the memory of annotators and of ordinary readers.

2.2. Relevance of Discourse Topics

Rhetorical structures such as the one in Figure 1 represent the local coherence of a discourse fragment. Their construction and updating does not require a DT: it schematizes an interpretation of the situations mentioned in the successive DUs which explains in a plausible way why the speaker/writer produced DU^n after DU^{n-1} - except, as Asher (2004a) explains, that some rhetorical relations include in their meaning topical links between the situations mentioned⁶.

Asher (2004a) argues that the notion of DT is necessary for at least some discourse relations, implying that the situations denoted by the related DUs share certain properties. This is particularly the case with Alternation⁷, Parallel, and Contrast relations, which "incorporate a notion of topic into their semantics that bears some resemblance to the notions of discourse topic" (p.171). With Alternation for instance, as in *Either there's no bathroom in this house, or it's in a funny place*, in order to account for the pronoun (*it*) reference, one is obliged to assume that there is a local DT common to both statements, namely the question "*Where's the bathroom?*" which presupposes the existence of a bathroom in the house. Concerning Elaboration⁸, Asher notes that "discourse topics do play a role in Elaboration, but the notion is built into the semantics of the relation itself; if one can infer an Elaboration between two constituents, then the constituent whose contents is elaborated on is a discourse topic of the elaborating; that is just part and parcel of the analysis of that discourse relation" (Asher 2004b: 257).

⁶ Asher's (2004a) article is followed by four commentary articles by Kheler, Oberlander, Steede and Zeevat, and an answer subtitled "Troubles with topics" by Asher (2004b).

⁷ In SDRT, the rhetorical relation of "Alternation" refers to a disjunction between two clauses. Typically marked, in French, by *ou (bien) S1 ou (bien) S2, soit S1 soit S2 (either S1 or S2)*. Its equivalent in RST is "Disjunction", and in the Penn Discourse Treebank (PDTB) "Alternative Conjunctive /Disjunctive" (cf. Sanders 2018, p. 20).

⁸ In SDRT: Event Elaboration (one segment describes a sub-event of a previously introduced one) and Entity Elaboration (one segment describes an entity already introduced in another segment). In PDTB: Restatement (Specification / Equivalence / Generalization). In RST: Elaboration (Additional / Genre-Espèce / Part-Whole / Process-step / Object-attribution / Set-Member / Instance (cf. Sanders et al., 2018, pp. 60-62).

DTs play a role mainly within Narration, Continuation and also Background relationships. In the following fragment of discourse (6) from Asher's (2004a) paper, there is one topic covering the description (Background) of Kathleen (i+ii), and another one covering the Narration (iii + iv):

(6) Kathleen teaches in the Philosophy Department (i). She's really nice (ii). Yesterday she called me (iii) and we went out to lunch together (iv)

with a DT that subordinates the two static DUs (i+ii) and the two dynamic DUs (iii+iv) so that: "there is a topic shift from Background to Narration from (ii) to (iii), as well as an aspectual shift, that triggers a topic change and a relation of Background between topics" (Asher 2004a: 198).

The introduction of DTs (in SDRT notation) between several DUs linked by relations such as Narration, Continuation or Background, etc. eliminates some connections for the arriving units and influences the referential accessibility of entities (depending on whether they appear in DUs grouped or not under the same Topic). As a result, the DTs play a role for instance as "summarizers providing antecedents for plural anaphors" (Asher 2004b: 189). Whether or not a given DU can be used as a point of attachment for an incoming DU depends on its position in the actual discourse structure. The Right Frontier Constraint, introduced by Polanyi (Polanyi 1988), predicts that, in a tree discourse structure, not all nodes are equally accessible for the attachment of an arriving unit. Only nodes located on the right edge of the tree above the last integrated unit are open for attachment. This principle also plays a role in SDRT, which distinguishes between non-hierarchical coordination relationships such as Narration, and subordinate hierarchical relationships such as Explanation (Asher 2005, Asher 2008, Asher & Vieu 2005). For instance in (7a):

(7a) [Mary took a slice of pie.]_{DU¹} [She was very hungry.]_{DU²} [She hadn't eaten for two days.]_{DU³} [Paul ordered a taxi.]_{DU⁴}

DU² is understood as explaining DU¹, and DU³ as explaining DU². As DU² is subordinate to DU¹, when DU³ appears, DU², which is the last processed unit, is accessible. But DU¹, which subordinates DU², is also accessible :

(DU¹ (DU² ← DU³

After subordinating DU³ to DU², DU⁴ appears in a context where DU³, DU², and DU¹ are also accessible (all on the right edge)

(DU¹ ((DU²) (DU³ ← DU⁴

The connecting of DU⁴ to DU¹ is not a problem, except that DU² and DU³ are no longer accessible afterwards:

(DU¹ ((DU²), (DU³))) DU⁴

This makes a sequence like (7b) less acceptable, since DU⁵ explains DU³, which is less accessible after DU⁴:

(7b)[Mary took a slice of pie.]_{DU¹} [She was very hungry.]_{DU²} [She hadn't eaten for two days.]_{DU³} [Paul ordered a taxi.]_{DU⁴} [There was no meal service on the flight.]_{DU⁵}

What is striking in Asher's analysis is that the added DTs do not allude to any other "aboutness" than those already recorded in the rhetorical relations between the DUs. In (6), the relationships of Background between (i) and (ii), and of Narrative between (iii) and (iv) are reflected in (i)-(ii) and (iii)-(iv), where (i)-(ii) serves as the Background to (iii)-(iv) which advances the narration. In (7b), DU⁴ is related to DU¹ by a Narration relation but it is not clear what DT could be inferred to synthesize the events they denote, as is the case with the Elaborations that summarize the situations they subordinate. Concerning the relation of Narration, Asher recalls that he proposed (in Asher 1993) to introduce a "non-redundant Topic" constructed around the same main verb and the same situation and "summing arguments of the same type" (p.182)⁹. But this goal, recognizes Asher (2004b), "has not really proved feasible beyond a few toy examples". Thus, all in all, one can agree with Kehler's commentary (2004) on Asher's paper: it seems that a discourse topic cannot be constructed without first establishing coherence, making the former an epiphenomenal notion" (p.238).

3. Discourse Topic Structures (without Discourse Rhetorical Relations)

3.1. A different conception of Discourse Topics?

⁹ This non redundant DT seems reminiscent of Kintsch and Van Dijk's macro-propositions and macrorules (cf. 1.2. above).¹⁰ Kuppevelt's model has multiple ascendants, the first of which is Klein and Stutterheim (1987) - reported by the author. To which one can add Winter (1977) and Hoey (1991), cf. for a synthesis presentation Georgakopoulou & Goutsos (1997), Chap "Lexical patterning" (1) and (2) pp.110-118. For a recent study on QUD and Discourse coherence Benz & Jasinskaja (2017).

Van Kuppevelt (1995a, and 1995b) takes a completely different view from that of Asher and his commentators. Van Kuppevelt's model¹⁰ offers, as he explains: "an alternative theory in which a uniform topic notion, comprising both the notion of sentence topic and topic of larger discourse units, is taken as the general basis of discourse structure" (1995a: 109).

In an exchange such as (8), the Topic of A1 corresponds, Van Kuppevelt explains (1995a), to the part of A1 that answers question Q1, in this case 'x,y,z, ... called me up' presupposed by Q1, the Comment being 'John, Peter and Harry':

(8) A: Late yesterday evening I got a lot of telephone calls

Q1 B: Who called you?

A1: John, Peter and Harry called me up

And it would be exactly the same with (8') wherein the question is implicit:

(8') Late yesterday evening I got a lot of telephone calls. John, Peter and Harry called me up.

The first sentence of (8) and (8') has no DT, it does not answer any questions, it simply serves as a "feeder" (F) for the orientation of the next sentence. John, Peter and Harry constitute the Comment of the explicit or implicit Question, the crucial assumption being that:

"a discourse unit U – a sentence or a larger part of a discourse – has the property of being, in some sense, directed at a selected set of discourse entities (a set of persons, objects, places, times, reasons, consequences, actions, events or some other set) and not diffusely at all discourse entities that are introduced or implied by U. This selected set of entities in focus of attention is what U is about and is called the topic of U." (van Kuppevelt 1995a: 112).

Van Kuppevelt (1995a) deals with expository monologues and dialogues such as (8) whose structure responds to "WH questions and questions that are derived from them" (p.117). In (8), the feeder F1 could raise several other questions, such as "at what

¹⁰ Kuppevelt's model has multiple ascendants, the first of which is Klein and Stutterheim (1987) - reported by the author. To which one can add Winter (1977) and Hoey (1991), cf. for a synthesis presentation Georgakopoulou & Goutsos (1997), Chap "Lexical patterning" (1) and (2) pp.110-118. For a recent study on QUD and Discourse coherence Benz & Jasinskaja (2017).

time?", "what about?", calling for many answers, which gives rise to "a non-hierarchical linear structure":

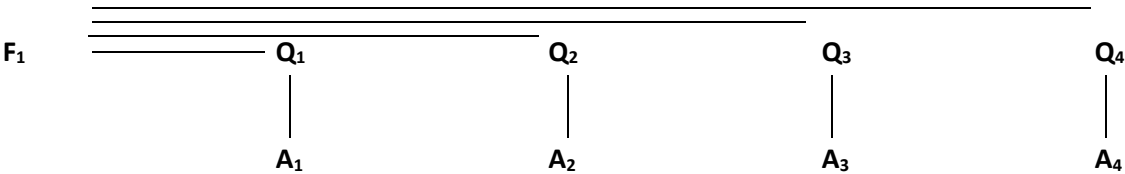


Figure 2
Question – Answer Structure of 8
Non hierarchical linear structure

A feeder can call up a question which leads to an answer which itself gives rise to one or several other sub-question(s) as in the following excerpt (9). A₂ initiated a subquestion Q₃B, which is closed by the answer and Q₄B returns to A₁:

- (9) F₁ A: It's sensible for Tom to buy a car now
- Q₁ B: Why?
- A₁ A: Buying a car is probably favourable for him now and it won't be bad for his health
- Q₂ B: Why is buying a car probably favourable for him now?
- A₂ A: Car expenses are expected to decrease
- Q₃ B: For what reasons?
- A₃ A: Gas will become substantially cheaper
- Q₄ B: Why won't a car be bad for his health?
- A₄ A: He jogs every day

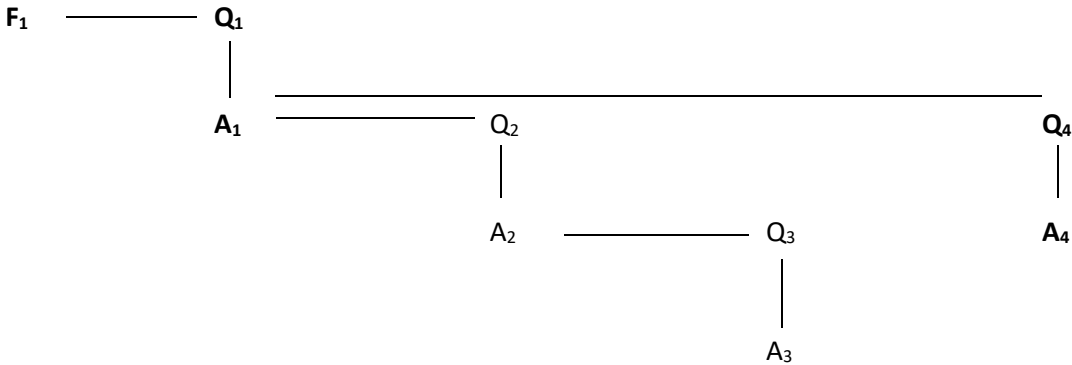


Figure 3
Question – Answer Structure of (9)
Hierarchical linear structure with subtopics

(10) is an example of discontinuous discourse with two independent discourse topics:

(10) F₁ A: Mary is on holiday

Q₁ B: When did she leave?

A₁ A: Yesterday

F₂ A: Tomorrow, after many years, George will again apply for a job

Q₂ B: Why?

A₂ A: A competitor of the company he works for has invited him to apply for the position of assistant manager



Figure 4
Question – Answer Structure of (10)
Discontinuous Discourse

In discontinuous discourses like (10) a new feeder is introduced “from outside”. The incoherence of the passage could be softened by the insertion at the head of F₂A of *by the way* which is a “topic shift marking phrase” (van Kuppevelt 1995a: 131).

In principle, discourses are continuous or “bound” (van Kuppevelt 1995a: 139): “the main structure of a bound discourse is determined by one leading discourse topic constituted in one production step at the beginning of the discourse. The development of such a discourse is, with regard to its main structure, from the beginning, bound programmatically by the set of topic constituting questions defining DT¹”. Bound discourses are opposed to free (unbound, spontaneous) discourses: “the substructure of a free discourse is determined by a set of discourse topics {DT¹, ... DTⁿ} containing one or more topics (n ≥ 1), of which the constitution takes several production steps. The development of a free discourse is thus not bound programmatically by a single discourse topic defining set of topic constituting questions which have arisen in one step at the beginning of the discourse unit” (1995a: 131).

Topic constituting questions are an ingenious way to follow the development of bound and unbound discourses: an initial DU sets up a new content that lends itself to different questions, the next unit answers one of these questions, which is used as a reference for the next question, whether the next question answers another question on the same original content or on the content of the answer given (subtopic). On this basis, it is possible to associate to each discourse or fragment of discourse DU a DU^{DT} (Discourse Topic) which brings together all the Topics (Tp) of “main higher order topics” (van Kuppevelt 1995a: 137). For example in (9) above the discourse topic $DU^{DT1} = \{ T1, T3 \}$ does not include T2 which is subordinated to T1:

$DU^{DT1}[F_1 DU^{T1} [Q_1 A_1 DU^{T2}[Q_2 A_2]] DU^{T3}[Q_3 A_3]]$

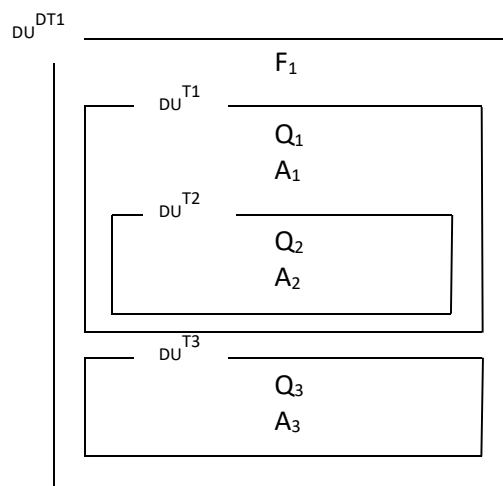


Figure 5
DT Structure of (9)

3.2. From associated subtopics to digressive side sequences

In (11) from van Kuppevelt (1995a), A_1 answers question Q_1B , Q_2B is about A_1 , but it has no link with the Feeder F_1 :

(11) $F_1 A$: *We won't see Jones in the pub this afternoon*

$Q_1 B$: *Why not?*

$A_1 / F_2 A$: *He has to meet his daughter at the airport again*

$Q_2 B$: *Where has she been this time?*

$A_2 A$: *This time she has been to Africa to work for VS*

For usages of this type Van Kuppevelt talks of “associated topic shift” because Q_2B is about Jones' daughter and the reasons why he has to pick her up at the airport:

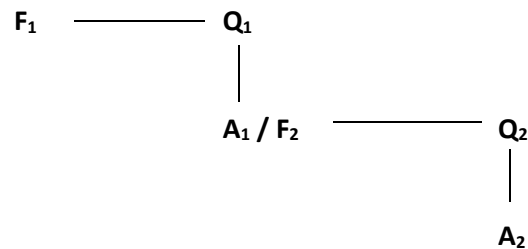


Figure 6
Question – Answer Structure of (11)
with associated topic shift

In (12) below, (again from van Kuppevelt), question Q_2 is not subordinate to Q_1 ¹¹, “it cannot be interpreted as having been asked with the purpose of completing the answer to question Q_1 either in a quantitative or qualitative way” (1995b: 828):

(12) F_1 ...

Q_1 A: *Whatever happened to RJ?*

A_1 B: *Six years ago, she mysteriously disappeared.*

Q_2 < *What kind of person was she?* >

A_2 : *She was a nice person*

Q_3 < *Then what happened?* >

A_3 : *Though the authorities had a suspect, their investigations stalled*

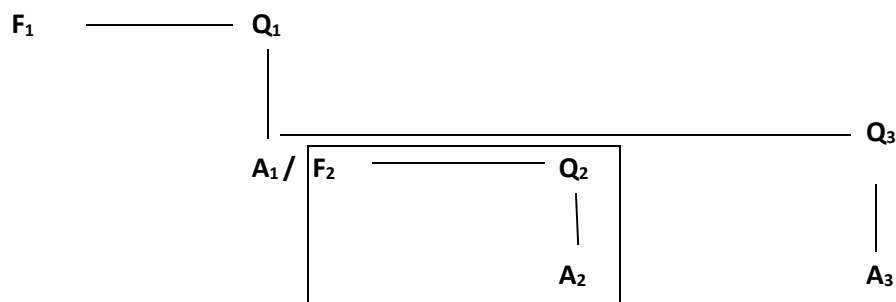


Figure 7
Question – Answer Structure of (12)
with digression

¹¹ In (12) and (Fig 7), A_1 is linked to the initial Feeder F_1 via Q_1 . It functions as an associated subtopic A_1/F_2 , because it introduces A_2 which is not linked to F_1 . This configuration is different from what happens in (9), where A_1 refers to two arguments favorable to F_1 , namely : A_2 (explained by A_3) and A_4 . In (9), A_1 does not function as an associated subtopic, the transition is much easier than in (12) where there is a digression and where the transition would need a topic shift discourse marker

The topic shift is even clearer than in (11): Q_2 could be preceded by *by the way* and Q_3 / A_3 brings us back to A_1 . The sequence is typically digressive, it constitutes a substructure inserted into the main structure which is narrative:

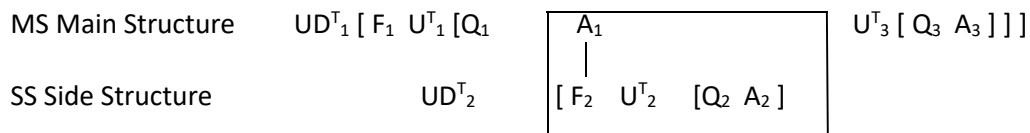


Figure 8

van Kuppevelt (1995b: 822) defines topic digressions as follows:

“The explicit or implicit questions Q_p introduce a topic digression relative to some preceding topic T_{p-n} if it meets the following three criteria:

- (i) Q_p is asked as a result of (a part of) the preceding discourse
- (ii) Q_p is not a subquestion of the topic constituting question defining T_{p-n} but achieves a topic shift
- (iii) In accordance with the DPTT [Dynamic Principle of Topic Termination] T_{p-n} has not lost its actuality in the discourse at the moment question Q_p is asked.”

Of course, digressions can include subtopics. However, as the third condition stipulates that the initial topical T_{p-n} remains accessible, it can be expected that the digressive sequence will not be highly developed. This point is not mentioned by van Kuppevelt (1995b: 821) for whom “a topic digression may be temporary or definitive”. The idea that digressions can be definitive is rather counterintuitive, since one rather expects them to be closed quickly “with an explicit utterance such as “getting back to ... or anyway” (Grosz & Sidner 1986: 195).

van Kuppevelt’s model is based on two main constraints: a question satisfaction constraint and a precedence constraint, *i.e.* any incoming discourse unit DU^n is expected to answer a question about DU^{n-1} or a Feeder. This conception seems far removed from models with rhetorical relations such as RST and SDRT which are based on such relations as Explanation, Evidence, Contrast, etc. But the gap between the two approaches is not as wide as it seems. For instance in (9), A_1 , A_2 and A_3 answer questions in “why” and “for what reason” which would be annotated as Explanation in

RST and SDRT. van Kuppevelt's model simply does not take into account the semantics of the Topic Constituting Question: the clustering of several DUs in the same substructure (as in 9) is due only to the fact that they answer questions going back to the same subtopic or feeder.

The two approaches can be seen as complementary and it would seem likely that the construction and updating of rhetorical relations precede and condition that of topic relations which are more metalinguistic, as noted by Kehler (2004) in the discussion of Asher's paper on DT. To illustrate this point I will analyse the following sequences:

(13a) [Paul ne viendra pas.]_{DU¹} [Il est malade.]_{DU²} [Il a trop bu hier soir.]_{DU³}

[Paul won't come.]_{DU¹} [He's sick.]_{DU²} [He drank too much last night.]_{DU³}

(13b) [Paul ne viendra pas.]_{DU¹} [Il est malade.]_{DU²} [Marie m'a prévenu.]_{DU³}

[Paul won't come.]_{DU¹} [He's sick.]_{DU²} [Marie warned me.]_{DU³}.

In (13a), the second statement (DU²) is understood as explaining (rhetorical relation) Paul's absence; it answers an implicit topical "why" question bearing on DU¹, the initial Feeder. It is the same with DU³, which explains DU². In (13b), the fact denoted by DU³ justifies (Evidence) that the speaker states DU². DU² answers an epistemic sub-question (*How do you know that ... ?*). The two models provide similar representations:

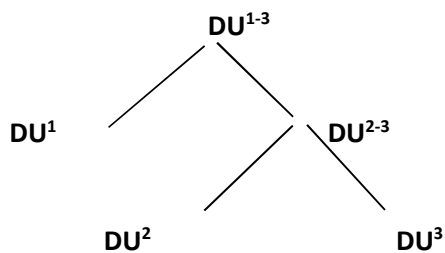


Figure 9
Rhetorical structure of 13a-b

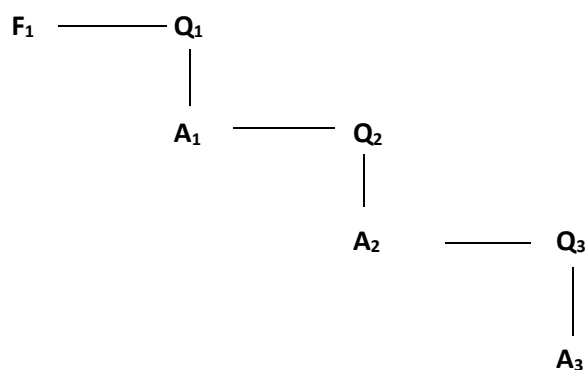


Figure 10
Q/A Hierarchical linear structure of 13a-b

With (13c) the analysis is slightly more complicated:

(13c) [Paul ne viendra pas.]_{DU¹}. [Il est malade.]_{DU²}. [J'ai vu Marie à la cafétéria.]_{DU³}.

[Paul won't come.]_{DU¹}. [He's sick.]_{DU²}. [I saw Marie at the cafeteria.]_{DU³}.

(13c) licenses an interpretation in which DU³ is stated to justify DU², as in (13b). This rhetorical interpretation is the most coherent one. It implies a bridging inference: DU³ implicitly states a proposition (DU³) saying that Mary communicated DU¹ and DU² to the speaker of (13c). Although this interpretation is rather costly, it tends to prevail over the one in which DU³ would be literally understood as a topic shift. The latter interpretation would typically be indicated by *autrement* (lit. *otherwise*) or *par ailleurs* (lit. *elsewhere*):

(13d) [Paul ne viendra pas.]_{DU¹} [Il est malade.]_{DU²} [Autrement / Par ailleurs, j'ai vu Marie à la cafétéria.]_{DU³}
 [Paul won't come.]_{DU¹} [He's sick.]_{DU²} [Otherwise / Besides I saw Marie at the cafeteria.]_{DU³}

Assuming that we apply Van Kuppevelt's approach to (13c), his model could only derive an associated topic shift structure as in figure (11):

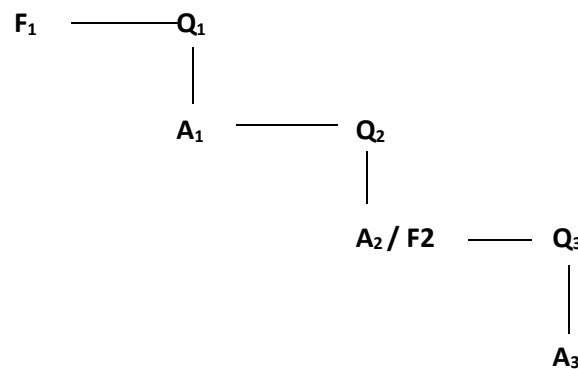


Figure 11
Q/A Hierarchical linear structure of 13c

It would miss the interpretation of (13c) in which there is no topic shift but simply, as in (13b), a derived subtopic structure (Figure 9). This finding confirms that it is better to make the hypothesis that the update of the DTs occurs after the rhetorical relations that influence coherence have already done their work.

4. Topic shift markers and digressions

4.1. Fraser's Discourse Management Markers (DMM)

Among the many classifications of Discourse Markers (DM) that have been proposed, the one by Fraser (1996, 2009a, 2009b) has the advantage of situating them within the

larger set of Pragmatic Markers (PM) whose function is to indicate how the utterance in which they appear fits into the context. PMs can provide indications on the illocutionary value of the statement in which they appear (*Please*), on how the speaker supports their conceptual content (modals), and on the reasons motivating their enunciation after a previous statement or set of statements. As for markers indicating relationships between successive utterances, Fraser distinguishes “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” (Fraser 1999: 950). The first type of markers comprises what we usually call connectives, a vast family, within which Fraser distinguishes four subtypes according to the relations they indicate, namely: Elaboration (prototypically expressed in English by *and*), Contrast (*but*), Inference (*so*) and Temporality (*then*).

DMs of topical links are discussed in Fraser (2009b) where they are grouped under the heading of “Discourse Management Markers” (DMM) which are used to signal “a meta-comment on the structure of discourse” (p.893). Markers in this category can be subdivided into three subcategories:

- Discourse Structure Markers: “to convey the contribution of the following segment within the overall structure of discourse” (p.893): *First, ... then, ..., In summary I add that ...*
- Topic Orientation Markers “by which the speaker’s intentions concerning the immediate future topic of the discourse can be conveyed” (p.893).
 - Back to a previous topic: *back to my point, to return to the prior topic, I would like to go back to what I was discussing, ...*
 - Continuing an ongoing topic: *as I was saying, if I might go on, to continue,...*
 - Digression: *before I forget, by the way, I almost forgot, I just remembered, I totally forgot, incidentally, in passing, parenthetically, speaking of, that reminds me, to update you, ...*
 - New topic: *but, if I might change the topic; let me broach an entirely new topic, not to change the topic but, on a different note, to change the topic, turning to a new topic, ...*

- Attention Markers “indicate a topic change is in the making” (p.893): *Ah, alright, anyway, anyhow, hey, in any case, in any event, now, now then, oh, ok, so, so good, well, well then, ...*“But they do not typically indicate the nature of the change ... often signalling contrast (*well, alright*), consolidation (*so*), reflection (*now, now then, so*) or surprise (*but, oh*) and they co-occur very often with Topic Orientation Markers that they precede (*Oh, that reminds me, ...*)” (p.896).

Classification of Pragmatic Markers From B. Fraser [FRA 96] [FRA 09a] [FRA 09b]			
Basic Markers	Commentary Markers	Discourse Markers	Discourse Management Markers
<i>please</i>	<ul style="list-style-type: none"> • Assessment markers : <i>fortunately</i> • Manner of speaking markers: <i>frankly</i> • Evidence markers: <i>certainly</i> • Hearsay markers: <i>reportedly</i> 	<ul style="list-style-type: none"> • Elaboration : <i>and</i> • Contrast : <i>but</i> • Inference : <i>so</i> • Temporality : <i>then</i> 	<ul style="list-style-type: none"> • Discourse Structure Markers: <i>first ... then ..., in summary</i> • Topic Orientation Markers <ul style="list-style-type: none"> ○ Return Markers: <i>returning to</i> ○ Addition Continuation Markers: <i>let's us go on</i> ○ Digression Markers: <i>by the way, in passing</i> ○ Introduction: <i>on a different note</i> • Attention Markers: <i>alright, anyway, in any case</i>
Table 1			

Fraser states that he treats “the concept of discourse topic in non formal terms”: “what the discourse is currently about, what the participants recognize they are talking about from what has been contributed to this point” (p. 893). Discourse topics are not the same as sentence topics, but they remain local; it is a question of following the immediate progress of current fragments of discourse, not of global topics. The fact that Fraser (2009b) classifies Topic Orientation Markers (TOM) in a broader class that he calls “Discourse Management Markers” indicates that these markers operate at a later (and strategic) level of production and interpretation than connectives, which is in line with the hypothesis I just defended at the end of the previous section. At this metalinguistic level, it would imply that speakers/readers organize the informational content, once the relationships between the situations denoted by the statements and the acts of language expressing them are assumed to have been coherently established by the addressees.

TOMs differ from connectives in that they encode relationships that are oriented towards the incoming discourse, as noted by Fraser when he says that they profile the “immediate future topic of the discourse”. This orientation contrasts with that attributed to connectives which impose a reprocessing of the preceding discourse. Fraser points out that TOMs are in English semantically more transparent than connectives, which is probably not unrelated to the fact that they are also frequently preceded by “Attention Markers”. Among these markers, we find, explains Fraser, expressions like *and* (homophones of *and* connective) that announce a “Continuation of Topic”. The same holds with *but* to announce a “New Topic”, or *well* to announce a “Continuation/Return to Topic”.

4.2. Digressions and Digression Markers

Pons Bordería & Estellés Arguedas (2009) argue that “digression markers do not exist” (p.935). More precisely, the authors explain that the so-called markers are members of a subtype of markers they name “New Relevant Information Markers” (NRIMs) which involve language subacts, language acts or interventions. The authors illustrate their analyses through the use of *por cierto* (*by the way, incidentally*) in oral and written Spanish. When *por cierto* involves a subact it cannot be detached from its host sentence and cannot have a scope on the following ones. When *por cierto* concerns units that are acts of language and *a fortiori* interventions it works as “a two-place operator of a connective nature” (p.932). By “connective nature” Pons Bordería & Estellés Arguedas mean that “the relationships established [by *por cierto*] between those acts define a coherent cluster which is in contradistinction to previous acts” (p.933). The transition between this cluster and the previous discourse is perceived as abrupt, as abrupt as the change of intervention (*i.e.* change of speaker) and this would explain why, according to Pons Bordería & Estellés Arguedas, “digression markers” are simply topic shift markers.

Indeed, any digression implies a topic shift but not every topic shift implies a digression. As already noted by van Kuppevelt (1995b), in any digression, the new DT introduced must be closed and then followed by a return to the previous DT as in:

(i) [DU¹ DU² DU³ [DU⁴ DU⁵] DU⁶

Topic Shift

The constraint of returning to the previous topic excludes that the new DT introduced be subject to a large number of continuations as in (ii) or (iii).

(ii) [DU¹ DU² DU³ [DU⁴ DU⁵ DU⁶ DU⁷

(iii) [DU¹ DU² DU³ [DU⁴ DU⁵ [DU⁶ DU⁷

For a discourse marker to be analysed as a digression marker, it would have to encode an interpretative instruction encapsulating these constraints, which go beyond the signalling of a simple topic shift. Pons Bordería & Estellés Arguedas (2009) are sceptical that such markers exist, unlike Fraser (2009) who reserves a significant place for them in his classification of Topic Orientation Markers.

The question remains open but the scope and sequencing relationships involved in topical structures are relatively few and fairly simple; much simpler than the ones encoded by connectives. Goutsos (1996) who speaks of topical change “techniques” distinguishes (like Fraser 2009b) three techniques namely “introductory”, “continuation”, and “closure” techniques that are unequally marked. Continuation generally does not need to be marked, being expected by default as stated in Brown and Yule’s *Principle of Analogy* (1983: 65), which states that readers assume that “everything will remain what it was before, unless they are given specific notice that some aspect has changed”. As for closure, it may not be marked as such, the introduction of a new topic implying the closing of the previous one. To these rather elementary techniques Goutsos adds a “framing function” which consists in changing “the scene by setting a new domain for the following text” (p.508) and he gives an example in which framing is indicated by both a paragraph change and two “fronted adjuncts”: “accordingly”, “over the last decades”. Framing, he notes, is “an optional technique – although actual examples in which there are absolutely no signals of framing before introduction are difficult to find” (p.508).

Framing is a very general phenomenon linked to the fact that some expressions or constructions weakly integrated in their host sentence may extend their scope to following sentences. This integrative potential can be observed not only with lexicalised discourse markers. For instance, it is well known, at least since Thompson

(1985), that in English infinitives of purpose¹² can relate to several sentences specifying the means used to achieve a certain purpose. A series of studies have been devoted to the expressions and constructions possessing this capacity, which have been termed “framing adverbials” in French where they had not been the subject of systematic studies (cf. Author 3, Author 4, Author 13 Author 14).

For instance, a case study of the NP “un jour” (“one day”) in two 18th century literary texts (*Les confessions* of J-J. Rousseau and *Gil Blas de Santillane* of Lesage) showed that it functions very often as a temporal framing adverbial, especially when detached at the beginning of a sentence, of a paragraph, or of a chapter. These uses were annotated, and the data (Author 5) showed that *un jour (one day)*, when detached at the beginning of a sentence, does not have a larger extra sentential scope than when inserted or postponed. However, its extension is more often explicitly closed than when *un jour (one day)* is inserted or postponed. Similarly, psycholinguistic experiments have shown that spatial prepositional phrases such as *on the parking area, in the street, etc.* in short narratives are not treated in the same way depending on whether they are detached at the beginning of their host sentence or not detached at the end of it (cf. Author 10, Author 2).

Framing adverbials index semantic criteria that are relevant for the interpretation of the incoming discourse, which brings them closer to the “New Relevant Information Markers” of Pons Bordería and Estellés Arguedas (2009). This feature can be a dimension of the situations denoted by the DUs (typically: a scenic spatial / temporal dimension) or a property of the reported information for example its source (cf. “selon NP” / “according to NP” epistemic adverbials which are frequent in expository discourse). Among these criteria there are classical topicalizers such as “à propos de” / “about SN” (Prévost 2011), and praxeological topicalizers such as “dans le domaine Adj” (lit.) “in the Adj field”, “en matière Adj” “in Adj terms”, etc. (cf. Author 9) which are partly lexicalized. One can also add to these expressions, in texts, the titles, subtitles, etc. which are semantic and demarcating DT markers, and paragraphing and other punctuation devices which are demarcating indicators.

¹² Cf. Author 2

4.3. Lexicalized DT markers

In French, the lexicalized DT markers¹³ *au fait* (D'hondt, Willems 2012) and *à propos* (Prévost 2011) are typically opening markers. They introduce a new topic, which implies closing the topic that was current until then:

(14) *Au fait, la voiture, tu l'as garée où ?*

By the way, where'd you park the car?

(15) *A propos, est ce que Paul a téléphoné ?*

By the way, did Paul call?

Similarly, the adverb *alors* (*then*) which has many other uses in French (anaphoric temporal adverb, consecutive connective, expressive marker,...) is frequently used in conversations to introduce a DT while also pointing out that it has already been the subject of previous exchanges, an indication that can be related to its original anaphoric meaning (Hansen, 1997):

(16) *Alors, cette prof de piano ?*

So that piano teacher?

Some markers, such as *bon* (Hansen 1995), *toujours est-il que* (Lenepveu, 2015), *de toute façon/manière*, etc. are typically closing:

(17) *Bon, je vais en parler à la Présidente*

Well, I'll talk to the president

(18) *Toujours est-il qu'il ne m'a jamais soutenu*

The fact remains that he never supported me.

(19) *De toute manière, je n'ai pas un sou*

Anyway, I don't have a dime

The adverbial phrase *en réalité* (*in reality*) is very often used in contemporary French as a rectifying connective, but in some contexts where it is opposed to *en apparence* (*in appearance*) and where its descriptive meaning still persists, it combines the two functions of connective and of framing adverbial (Author 8). Similarly, *en effet* (*indeed*) can be used as a pro-sentence of agreement (equivalent to *yes*), a confirmative connective (*Il m'avait promis de venir et en effet il est venu / He had promised me to come and indeed he came*) or a marker of confirmation (Author 6, Author 7). In the latter use, it is expected that *en effet* (*indeed*) will introduce a whole supporting

¹³ Cf. Lagae (2010) for a typology of a large set of French DT markers.

sequence, and thus include in its scope several statements as in (20). This would be impossible with *car* (*because*) and *mais* (*but*) that are pure connectives (Author 6) and have no extra sentence scope as can be seen in the following example:

(20) *Cet appartement ne me plaît pas du tout. En effet/*Car il est grand, il est proche de mon travail, je l'ai visité trois fois, mais il est très sombre*
*I don't like this flat at all. Indeed/*because it is big, it is close to my work, I visited it three times, but it is very dark.*

5. A case study: *d'ailleurs* and *par ailleurs* in French

In this last section, I focus on *d'ailleurs* and *par ailleurs*, which are mainly used in Present Day French as discourse markers (for a diachronic study, cf. Author 15). These two prepositional phrases (PPs) are formed with the locative deictic/anaphoric adverb *ailleurs*, etymologically meaning *elsewhere*, preceded by the prepositions *de* (*of, from*) indicating origin, and *par* (*by, through*) indicating path. Of course, *d'ailleurs* and *par ailleurs* can be used with their compositional spatial meaning, as in:

(21) *'Les cinquante clichés de l'album, présentés comme des 'fresques photographiques', sont accompagnés d'un CD de trente minutes, évoquant les sons et les cultures d'Afrique, d'Extrême-Orient ou d'ailleurs.*

The fifty pictures in the album, presented as 'photographic frescos', are accompanied by a thirty-minute CD, evoking the sounds and cultures from Africa, the Far East and elsewhere.

(22) *Ce sont là certainement des dépenses utiles, mais si elles ne sont pas compensées par ailleurs au moyen de sévères économies, les finances de la Ville, jadis si prospères, ne tarderont pas à périliter.*

These are certainly useful expenses, but if they are not offset elsewhere by severe savings, the city's once so prosperous finances will soon decline.

In (21) and (22), the two PPs are perfectly integrated in their host sentence: they are governed by a SN (in 21) or a verb (in 22). In (22), *par ailleurs* may switch with *ailleurs* (*elsewhere*), the preposition *by* indicating the means. These two examples are taken from a corpus of the daily newspaper *Le Figaro* (1890-95-96) and (2002). They are much less common than their uses as discourse markers, as can be seen in the following Table:

Period	Marker	Total annotated	Prep + Ailleurs	Lexicalised DM
1890-95-96	<i>D'ailleurs</i>	100	1	99
2002	<i>D'ailleurs</i>	100	2	98
1890-95-96	<i>Par ailleurs</i>	17 ¹⁴	7 (41%)	10 (59%)
2002	<i>Par ailleurs</i>	100	5	95
Table 2				

In (23) and (24) *d'ailleurs* and *par ailleurs* are clearly used as discourse markers:

(23) *Cette décision va dans le sens d'une tendance générale à la suppression des espaces fumeurs. Dans l'avion, d'ailleurs, le tabagisme est interdit depuis longtemps.*

This decision is in line with a general trend towards the elimination of smoking areas. On the plane, by the way, smoking has been banned for a long time.

(24) *Philips (...) devrait être dans le rouge sur l'ensemble de l'année 2002 mais parviendrait à dégager un bénéfice hors charges exceptionnelles, selon le directeur financier. Philips va par ailleurs vendre sa division d'analyse par rayons X à Spectris pour 150 MEUR. Le CA de Soitec au 1^{er} trimestre 2002 / 2003 est de 27,9 MEUR (+ 63 %).*

Philips (...) should be in the red for the whole of 2002 while remaining able to generate a profit excluding exceptional expenses, according to the financial director. Philips will also sell its X-ray analysis division to Spectris for €150 million. Soitec's turnover for the first quarter of 2002 / 2003 was EUR 27.9 million (+63%).

The interpretative instructions encoded by *d'ailleurs* and *par ailleurs* seem quite similar. In (24), it is possible to replace *par ailleurs* with *d'ailleurs*. However, the meaning is not exactly the same. In the version with *par ailleurs*, the fact that Philips is going to sell one of its divisions is presented as independent of the fact that the Company is expected to make a profit in 2002. This is quite well translated by *also* which is purely additive. On the contrary, in the version with *d'ailleurs*, the fact that Philips is about to sell one of its divisions is presented as an argument supporting the assumption that Philips should make a profit in 2002.

¹⁴ Total number of occurrences *par ailleurs* in Le Figaro for the period.

To schematize what can happen in the above attested examples, I will examine successively (25a), without any discourse marker, then (25b) and (25c) which are identical to (25a), except that DU³ begins with *d'ailleurs* and (25c) with *par ailleurs*. I will temporarily leave aside the problem of translating *d'ailleurs* and *par ailleurs*.

(25a) [*C'est une excellente candidate*]_{DU¹}. [*Elle connaît bien le monde agricole*]_{DU²}. [*Elle a travaillé dix ans chez Bertin*]_{DU³}.

[*She is an excellent candidate*]_{DU¹}. [*She is familiar with the agricultural world*]_{DU²}. [*She worked for ten years at Bertin's*]_{DU³}.

(25b) [*C'est une excellente candidate*]_{DU¹}. [*Elle connaît bien le monde agricole*]_{DU²}. [*D'ailleurs, elle a travaillé dix ans chez Bertin*]_{DU³}.

(25c) [*C'est une excellente candidate*]_{DU¹}. [*Elle connaît bien le monde agricole*]_{DU²}. [*Par ailleurs, elle a travaillé dix ans chez Bertin*]_{DU³}.

Since DU¹ expresses a judgment in favour of a candidate, DU² is expected, in the context of hiring someone, to provide an argument justifying this assertion. DU² having a positive appreciative meaning, it is understood, by inference, as justifying DU¹. In (25a), DU³ is understood in the same coherent manner as introducing another argument supporting the candidate, although its content is not expressly marked as positive. The updating of the relations between the situations denoted by DU¹, DU² and DU³ can be considered as a continuation (application of the same justification relationship); it is also cumulative. By attachment to the right frontier, we understand that DU³ justifies DU¹ as justified by DU²:

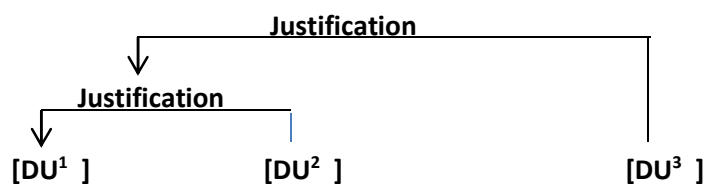


Figure 12
Structure of (25a)

But there is no obligation to infer that Bertin is a company linked to agriculture: it is sufficient to consider for instance that the company in question has a good reputation in the country.

In (25b), with *d'ailleurs*, we are forced to understand that DU³ justifies DU². This relationship is imposed by the marker, as it is coded in its procedural meaning, and it requires us to infer that Bertin has something to do with agriculture. The incrementation of discourse relations is more complex than in (25a). The first step is to link DU² to DU¹ by a justification relation, as in (25a). Then, we need to take into account *d'ailleurs*, which is a topic shift marker and a justification marker. This latter operation requires calculating the relation between DU³ and DU², regardless of the links that DU² has with DU¹. *D'ailleurs* opens a topical frame that includes DU² and DU³, and it is this emerging unit (DU²-DU³) that is linked to DU¹ by another justification relation. This two-step justification simulates, as explained by Ducrot (1980), a subtle enunciative movement: the assertion of DU³ is presented by the speaker as superfluous and digressive evidence added as an afterthought (Ricci, 2007), as if DU¹ and DU² had already convinced the audience:

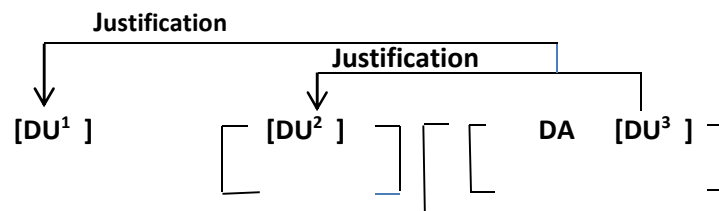
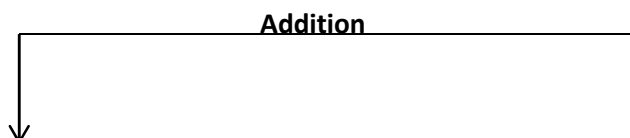


Figure 13
Structure of (25b) with *d'ailleurs* (DA)

In (25c), *par ailleurs* blocks the connection of DU³ to DU², unlike what happens with *d'ailleurs* in (25b). With *par ailleurs*, the topic shift is stronger than with *d'ailleurs* and it forces us to understand that Bertin is a company unrelated to agriculture. But as *ailleurs* (lit. *elsewhere*) remains deictic-anaphoric, *par ailleurs* must be linked to another unit previously introduced in the model, which can only be, in the present case, DU¹:



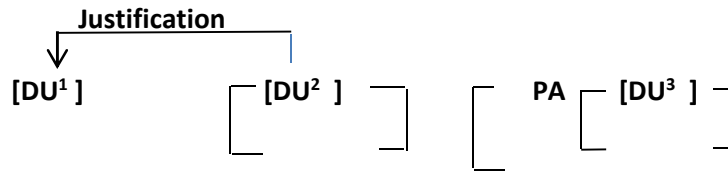


Figure 14
Structure of (25c) with *par ailleurs* (PA)

After DU³ has been attached to DU² (in 24b), or to DU¹ justified by DU² (in 25c), the two Local Discourse Topic (LDT) frames¹⁵ introduced by *d'ailleurs* and *par ailleurs* remain open, as in Figure 13 and 14. But we can expect the frame opened by *d'ailleurs* to be much less accessible than the one opened by *par ailleurs*. To test this hypothesis, let us consider (25d), corresponding to (25b) and (25c) including the two following new UD's:

(25d) [*C'est une excellente candidate*]_{DU¹}. [*Elle connaît bien le monde agricole*]_{DU²}. [*D'ailleurs / Par ailleurs, elle a travaillé dix ans chez Bertin*]_{DU³}. [*Elle parle couramment l'anglais*]_{DU⁴}. [*Elle s'y connaît en comptabilité*]_{DU⁵}.
 [*She is an excellent candidate*]_{DU¹}. [*She is familiar with the agricultural world.*]_{DU²}.
 [*D'ailleurs / Par ailleurs, she worked for ten years at Bertin.*]_{DU³} [*She speaks fluent English.*]_{DU⁴}. [*She knows a lot about budget accounting.*]_{DU⁵}

With "d'ailleurs", DU³ must first be rhetorically linked to DU² before the DU²-DU³ block is linked to DU¹, which is only possible if this block is closed, at least temporarily, while its relation to DU¹ is established. The problem does not arise with "par ailleurs", which goes back to DU¹ over DU². With "par ailleurs", DU⁴ and DU⁵ are linked to DU¹ by an addition relationship which, unlike the justification relationship, is not hierarchical (i.e. subordinate in SDRT).

The functional differences between "d'ailleurs" and "par ailleurs" appear clearly in (25e). (25e) is identical to (25d) with "d'ailleurs", except that DU³ begins by "par ailleurs". The transitions are slightly cumbersome, but remain acceptable:

(25e) [*C'est une excellente candidate*]_{DU¹}. [*Elle connaît bien le monde agricole*]_{DU²}. [*Par ailleurs elle a travaillé dix ans chez Bertin*]_{DU³}. [*Par ailleurs, elle parle couramment l'anglais*]_{DU⁴}. [*Elle s'y connaît en comptabilité*]_{DU⁵}.

¹⁵ The opening and closing of the frames is indicated by large opening or closing brackets

*[She is an excellent candidate]*_{DU¹}. *[She is familiar with the agricultural world.]*_{DU²}.
*[D'ailleurs, she worked for ten years at Bertin]*_{DU³}. *[Par ailleurs, she speaks fluent English.]*_{DU⁴}. *[She knows a lot about accounting.]*_{DU⁵}

"Par ailleurs" simply indicates that DU⁴ and DU⁵ are relevant for the interpretation of DU¹. Additive relations only make it possible to coordinate the DUs, which leaves a great flexibility for the incoming discourse:

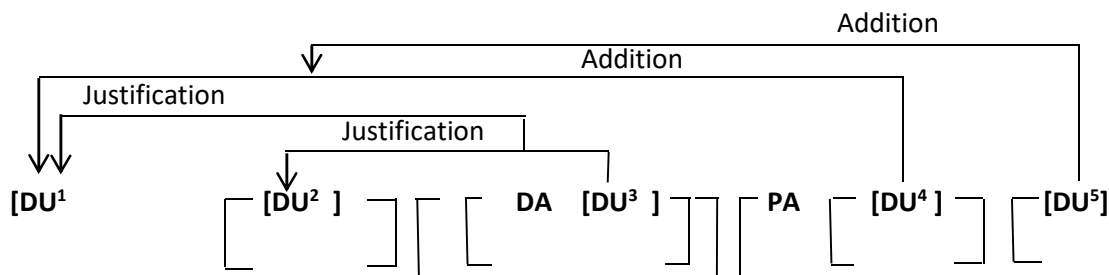


Figure 14
Structure of (25e) with *d'ailleurs* (DA) and *par ailleurs* (PA)

The facts denoted by DU⁴ and DU⁵ are only related by their relevance for the interpretation of DU¹. They add new properties of the candidate, these properties are different, and their enumeration, once engaged, is very open, with the risk of arriving progressively at facts that would appear less and less as arguments for hiring the candidate, such as for example:

*(25e)continued : [She'll get bored very soon on this job.]*_{DU⁶}. *[She won't be staying long]*_{DU⁷}. *[I need someone who stays on the job for a long time]*_{DU⁸}

In this version, *par ailleurs* no longer leads back to DU¹. It rather announces a topic shift. In such far-reaching uses, it would no longer be possible to consider that *par ailleurs* is a digressive marker, since there would not be a return to a Local Discourse Topic (LDT).

To describe what is similar and what is different in the uses of *d'ailleurs* and *par ailleurs*, it is necessary to take into account at least three binary criteria:

- the rhetorical relation encoded by the marker, which can be either a justifying or an additive one;
- the intensity of the LDT Shift, depending on whether it is weak (+) or strong (++);

- whether or not there is a return to the LDT in progress at the time the marker is used: with return (Digressive +) or without (Digressive -).

Configuration	Connective Links Rhetorical relations	Framing links			
		Local Discourse Topic (LDT)			
C1	Justifying	TopShift ++	Digressive +		
C2	Justifying	TopShift ++	Digressive -		
C3	Justifying	TopShift +	Digressive +	<i>D'ailleurs</i>	<i>By the way</i>
C4	Justifying	TopShift +	Digressive -		
C5	Adding	TopShift ++	Digressive +		
C6	Adding	TopShift ++	Digressive -	<i>Par ailleurs</i>	<i>In addition</i>
C7	Adding	TopShift +	Digressive +		
C8	Adding	TopShift +	Digressive -		

Table 3

For instance, in (25e), *d'ailleurs* DU⁴ justifies DU³: the LDT Shift is not very strong, because the marker leads us to infer that DU³ is related to DU², and there is a return to the LDT in DU⁴, which follows DU³. This configuration corresponds to configuration C3 in the table above. As for *par ailleurs*, it corresponds to configuration C6: the LDT Shift is significant (from the candidate's experience in agriculture to her competence in English) and there is no return. C3 and C6 are predestined to be expressed in French by *d'ailleurs* and *par ailleurs* respectively, translated (possibly) in English, by *by the way* (cf. Traugott, this issue) and *in addition*¹⁶. C1 and C7 differ on three features, like C3 and C6. (25f) illustrates configuration C1, which satisfies the following three features: Justifying, Strong LDT Shift ++, Digressive +:

(25f) *C'est une excellente candidate. Elle connaît bien le monde agricole. D'ailleurs/Par ailleurs elle a été championne de ski. Elle convient parfaitement pour le poste.*

¹⁶ With (25e), the DeepL machine translation platform offers in first place *by the way* for *d'ailleurs* and *in addition* for *par ailleurs*.

*She is an excellent candidate. She is familiar with the agricultural world.
D'ailleurs/Par ailleurs, she was a ski champion. She is perfectly well adapted for
the position.*

The configuration with justification and return to DU1 (digressive +) should favour *d'ailleurs*, but as there is a strong LDT Shift, the example is not very good (it is difficult to understand how the fact that a person has been a ski champion can argue for the fact that she/he knows the agricultural world well). The configuration is better with *par ailleurs* which only adds an additional property to the character. However, the trouble with *par ailleurs* is the immediate return to DU1¹⁷.

Configuration C8, which satisfies the following three features: Addition, LDT Shift + and Digressive -, refers to rather different uses than those associated with C1. (25g) illustrates C8:

*(25g) C'est une excellente candidate. Elle connaît bien le monde agricole.
D'ailleurs/par ailleurs, elle vit à la campagne. Ses parents étaient éleveurs de
bétail.*

*She's an excellent candidate. She is familiar with the agricultural world.
D'ailleurs/Par ailleurs she lives in the country. Her parents were cattle breeders.*

(25g) would be better with *par ailleurs*, as there is no subsequent return to the LDT introduced by DU1¹⁸.

Not all configurations are equally interesting, but we can expect those that are only differentiated by a single feature, such as C4 and C8, to be less often expressed by markers. It can also be expected that in contexts of this type, translations (if there is translation) will diverge the most. We will illustrate these points with two more excerpts from *Le Figaro*, and their translation into English.

¹⁷ DeepL Translate gives for the translation in English of *d'ailleurs* *in fact*, which is not very suitable, and then suggests *in addition*, but not *by the way*. For *par ailleurs*, DeepL gives *in addition*, and then *in other respects* which seems better than for *d'ailleurs*.

¹⁸ DeepL Translate gives for the translation of *d'ailleurs* *besides*, and then suggests *in fact*, *by the way* *moreover*. For the translation of *par ailleurs*, it gives: *also*, *further*, *even*, *actually*. These choices partially confirm our prediction: " *by the way* is only mentioned for *d'ailleurs* but it is preceded by *besides* which is additive and, curiously, by *in fact* which does not seem very appropriate.

Of course, *d'ailleurs* is not always used to justify a previous DU (Baider (2018), Collin (2017), Luscher (1989, 1994), Modena (2009), Paillard (1991), Franckel & Paillard (1997), Ricci (2007)). This is the case in (26) where it is not at all clear which thesis could support the host sentence of *d'ailleurs*:

(26) *Quant à son ciré jaune, Cécile Tabarly l'a 'piqué' à Erwan. 'J'aime bien me recréer un look en prenant à droite et à gauche des articles assez typés ou même classiques du sport. D'ailleurs, chez Armor-Lux, un pro de la mode marine, on a pensé à tout pour les vacancières du littoral. Avec son best-seller la marinière en interlock tissé en double rangée de coton comme les sous-vêtements, on est sûr de résister au climat capricieux. (Le Figaro 2002)*

As for her yellow oilskin, Cécile Tabarly 'pinched' it from Erwan: 'I like to recreate a look by taking fairly typical or even classic sports articles from various places. D'ailleurs, at Armor-Lux, a pro of marine fashion, we have thought of everything for holidaymakers on the coast. With its best-selling interlock knit striped top in double-weave cotton like underwear, you are sure to withstand the capricious climate.

It should also be noted that in this excerpt there is no change in the LDT: the whole issue is about clothing and the seaside, which means that there is no need at the end to return to this subject. These features correspond to configuration C7 in Table 3, hence the intuition that *par ailleurs* would be more appropriate in the context than *d'ailleurs*¹⁹.

(27) with the three following features: Additive, LDT Shift +, and Dig +, corresponds to configuration C7. In (27), *par ailleurs* appears at the beginning of a small clause, which does not strongly depart from the ongoing LDT. Parenthetical uses of this type are more frequent with *d'ailleurs* than with *par ailleurs*. *D'ailleurs* would be possible in such a context²⁰:

(27) *Falstaff a fleuri un peu partout sur la scène européenne durant l'année Verdi, aussi bavard et polyphonique que les opéras de Strauss. Le Festival d'Aix*

¹⁹ The first translation proposed by DeepL for *d'ailleurs* is not *by the way* but *moreover*. *By the way* is proposed only in fourth place, after *moreover*, *in fact* and *besides*

²⁰ But the first translation proposed by DeepL is *also*, and only much lower down in the list of choices *moreover*, which is closer to *par ailleurs* than to *d'ailleurs*.

-en - Provence n'a pas manqué à cet hommage, par ailleurs assez maigre en France, Montpellier excepté.

(27) Falstaff flourished everywhere on the European stage during the Verdi Year, as verbose and polyphonic as Strauss' operas. The Festival d'Aix-en-Provence did not miss this tribute, which was par ailleurs quite meager in France, except Montpellier.

Conclusion

The idea that texts or conversations follow some kind of common thread is firmly rooted in the intuition of speakers, who generally react to the slightest deviation in this matter. For over fifty years, this idea has given rise, in linguistics, to a large number of studies on discourse coherence. The notion of discourse topic (DT), introduced in the seventies by Van Dijk and Kintsch, is not yet well established in discourse studies. Their model, in which the declarative DTs are macro-propositional contents supposedly derived from micro-propositional contents to unload the working memory of the speakers and allow the processing of incoming Discourse Units, has had more success in psycholinguistics than in linguistics. Linguistic studies on coherence focused on discourse relations and rhetorical structures, with the development of computationally based dynamic models such as RST, which does not provide a place for DTs, or SDRT, which provides a place for DTs but only when they are involved in a rhetorical relation. Conversely, the notion of DT occupies a central place in van Kuppevelt's structural (but not rhetorical) model. Van Kuppevelt associates to each Discourse Unit (DU) a non-declaratory local DT (a "Topic constitutive question") and to each discourse fragment a more global DT grouping the "main higher order Topics" of the constituent DUs²¹.

While these differences are noticeable, some of them are purely technical. Above all, however there are convergences in the design of these models. Far from assuming

²¹ The choice of comparing Asher's SDRT to Kuppevelt's model is very limiting. It is justified by the fact that the two models are not, from our point of view, completely incompatible, and above all by the fact that Asher and the other authors reacting to his article mention and discuss Kuppevelt's analyses. Obviously, as suggested by a reviewer, it would be interesting to compare the Kuppevelt model with that of Grosz & Sidner (1986) who devote, at the end of their article, two parts on "interruptions" (including "digressions") and their markers ("cue words"). Kuppevelt's model should also be compared with Givon's analyses of topic continuity (Givon 1983), which have been extensively reported and discussed.

that DTs should be declarative contents that pre-exist and guide the formulation of discourse, the models reviewed are all more or less dynamic. All seek to explain how discourse can bring out, as it progresses, content facilitating its continuation. In this respect, we have seen all the advantages that can be drawn from rhetorical structures, which make it possible to connect in a hierarchical view the content of DUs and to favour certain connections for incoming units. Nonetheless, we are still far from being able to model precisely how listeners-readers can induce DTs from what they have just heard or read, and how they can update these DTs as they progress in the speech. This situation is rather problematic, but it cannot be ruled out that the processes by which speakers (and linguists) can assign DTs to the speech they have just heard or read are not accessible to them. They may not be interested in formulating them, for the good reason they don't see the benefits they could gain from this task. They may only sense, intuitively, when their expectations in this matter are not met.

So, it may be interesting to focus on cases where speakers or writers feel the need to point out that their speech may deviate from the current intuitive DT. Many markers capable of performing this function are available in French. The brief analysis (Section 5) we devoted to *d'ailleurs* and *par ailleurs*, which are digressive markers, illustrates what can already be drawn from studies on Topic Orientation Markers (Fraser), on the segmentation of discourse (Goutsos 1996, on framing adverbials (AUTHOR XXXX)), and on (markers of) Rhetorical relations, to which we should add the markers of referential relationships. The approach we have adopted is very integrative, and opportunistic, it is also oriented towards interlingual comparisons, as suggested by the remarks on the translation of French *d'ailleurs* and *par ailleurs* into English.

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