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Benjamin Fagard, Laure Sarda

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CHAPTER 8

From local adverbials to discourse markers: three case studies in the diachrony of French

Benjamin Fagard and Laure Sarda

1.Introduction[1]

Adverbials constitute a highly heterogeneous and polyvalent word class, with a whole range of intra- and extraclausal functions. We focus here on extraclausal uses of adverbials, where they take on discourse-related functions as a result of what is now widely accepted to be a grammaticalization process (*cf.* for instance Schwenter & Traugott 2000), though probably not a prototypical one (*cf.* Lewis this volume). This process may follow various paths and be achieved to various degrees, yielding adverbials with very different discourse functions. Besides, even adverbials which have not undergone a process of grammaticalization can take on discourse functions: these are *framing* adverbials, which have referential meaning. Although they participate in discourse structuring, they are nevertheless distinct from *discourse markers* (hereafter DMs), which are grammaticalized and semantically bleached. We show in this chapter that the discourse functions an adverbial will take on can be partly predicted on the basis of its formal and semantic characteristics.

In order to do this, we start out in Section 1 with a brief general description of adverbials and their uses, focusing on framing adverbials.

1 We would like to thank the anonymous reviewers for their comments on the initial version of this chapter.

In Section 2, we present a diachronic corpus study of three locative adverbials which developed DM uses: *au fond* (lit. 'at the bottom', DM use close to 'actually'), *parallèlement* (lit. 'parallel to', DM use close to 'moreover') and *d'un côté* (lit. 'on one side', DM use close to 'on the other hand'). Finally, in Section 3, we show –drawing on these case studies and on data available in the literature– that the dichotomy between framing adverbials and DMs is linked mainly to two elements: the referential properties of their components and their morpho-syntactic complexity (*i.e.* presence *vs*. absence of a complement: *au fond de NP*[2], *parallèlement à NP*, *d'un côté de NP*).

2. Adverbials in discourse

Adverbials are a very loose category (see *e.g.* Quirk *et al*. 1985; Biber *et al*. 1999; Cinque 1999; Hasselgård 2010, and for French specifically Guimier 1996; Molinier & Lévrier 2000; Bonami *et al*. 2003), with different types of words and constructions, including not only adverbs, but also prepositional phrases and even subordinate clauses, as illustrated in Table 1:

a) Free constructions:
i) subordinate clauses, which include a complementizer and the clause it heads
These are distributionally and referentially free, with various possible structures, for instance [(simple or complex) conjunction + free noun phrase + verb phrase + complements], such as *when I got here, if you say so, since he forgot to do his homework,* etc.
ii) nominal or prepositional phrases, which include a lexical noun, and tend to take on framing uses
These are also distributionally and referentially free, with various possible structures, for instance [(simple or complex) preposition + free noun phrase], such as *on the table, in the field, before 3 p.m.,* etc.
b) Complex and simple adverbs, which do not include (lexical) nouns, and tend to take on DM uses
These are lexicalized prepositional phrases, without complement, such as *on the one hand, in fact, to the side,* as well as simple adverbs, completely lexicalized and (still) less referential, such as *otherwise, before, behind*, etc.

Table 1. Morphological typology of adverbials.

2 NP: Noun Phrase.

Note that this is a synchronic view of adverbials. In diachrony, complex and simple adverbs (b) are actually a grammaticalized subgroup of (a), and mostly of prepositional phrases (ii).

2.1. Intraclausal and extraclausal uses

It seems that most, if not all, adverbials can have intraclausal uses where they have an impact on the propositional or ideational meaning of the clause. Note that, from a syntactic point of view, intraclausal adverbials can be either extra- (1a-b) or intra-predicative (1c). These uses are well-known and fairly consensual, for example spatial, temporal, and manner uses (among many others), as illustrated in the examples below:

(1) (a) *He came to see me* <u>*in the kitchen*</u>. (prepositional phrase, spatial)

(b) *I finished a book* <u>*this afternoon*</u>. (nominal phrase, temporal)

(c) *He runs* <u>*fast*</u>. (adverb, manner)

It also seems that most adverbials can have extraclausal uses, in which they affect not only the ideational meaning of the clause but also discourse organization and management (*cf*. Dik 1997).[3]

However, discourse functions vary, and the distribution of these functions can be partly explained as a factor of the adverbials' semantics and morpho-syntax (as in Table 1). More specifically, there seems to be a dichotomy between 'framing adverbials', as we define them below (see also the introduction to this volume), and adverbials used as DMs.[4] Our claim is that there is a correlation between the two categories, with on the one hand free constructions which can take on framing functions, but not discourse-marker uses (type (a) in Table 1); and on the other hand complex and simple adverbs which seem to have no framing potential, but tend to develop other discourse uses (type b). This claim draws on Fischer (2006), who invokes a scale of integratedness. She argues that adverbials dedicated to conversation management function more or less as independent utterances, whereas adverbials fulfilling

3 It is worth noting that adverbs of *manner*, as in (1c), do not seem to display this tendency.

4 Note that discourse markers can develop out of many other word classes and constructs, as stated in Pusch (2006), Schiffrin (1987, 2001), *etc*.

connecting functions are more integrated into their host sentence. We also draw on Lamiroy & Charolles (2004, forthcoming), who depict a continuum of integratedness of adverbials at the periphery of the clause, from referential and integrated to metadiscursive and not (or less) integrated. Table 2 combines both representations.

-……Integratedness scale……..+								
Extraclausal domain	intraclausal domain							
discourse markers fulfilling conversation management functions	connectives	metadiscursive organizers	topicalizing adverbials	source of speech adverbial	abstract setting adverbials	represented setting adverbials	temporal setting adverbials	spatial setting adverbials

Table 2. Integratedness and discourse functions of adverbials – a continuum (based on Fischer 2006 and Charolles & Lamiroy forthcoming)

2.1.1. Framing functions

Framing adverbials are intraclausal (but extrapredicative) adverbials in clause-initial position which help structure discourse: they help dispatch the information flow into different 'files' or frames according to the criteria they define (Charolles 1997; Sarda 2005; Bestgen & Piérard this volume). Owing to their initial position, they set up frames of discourse, and can thus have scope over a number of clauses or sentences after their host sentence. For instance, in the following text excerpt, spatial adverbials in initial position refer to different European countries suffering from drought. The first sentence (underlined in the example) explains the topic of the paragraph (drought) and initiates the listing of the different countries concerned. A frame is then opened for each country by an adverbial in initial position (in bold in the example). Each frame contains information on the country, and the possibility of extending such a frame is illustrated by the sentence beginning with *In France* (underlined in the example). This listing or enumeration strategy is common in expository and narrative texts (*cf*. Ho-Dac *et al*. 2012).

(2) *<u>The European Commission is embarking on a four-year, £52 million study of climate change, named Epoch, as Europe braces itself for its third year of severe drought</u>*. ***In Czechoslovakia****, farmers face ruin after two years of drought,*

> ***whilst in south-eastern Spain****, people are compelled to buy bottled water after their depleted subterranean supply became contaminated with salt.* ***In Greece,*** *farmers expect disaster should there be no rain next year.* ***In France****, the drought has been the worst on record and unreplenished aquifers mean that underground water supplies are also at critical levels. Meetings are underway to redesign the country's water system, particularly as 75 per cent of France's power supply is generated by nuclear reactors which rely on water for their cooling systems.* ***In Britain****, water tables are expected to remain at a low level throughout the summer. The drought may lead to severe cuts in domestic and agricultural water supplies across Europe.* (BNC, *The Environment Digest*)

Because they can extend their scope over a number of clauses or sentences downwards (like *In France* in this excerpt), framing adverbials delimit discourse segments that are cohesive with respect to the interpretative criteria they set up. For instance, there is no need here to specify that the meetings "underway to redesign the country's water system" take place in France. The frame opened by the adverbial *In France* is the default location of elements mentioned in the following sentence.

According to Charolles (1997), the frame opened by such adverbials generally runs until the appearance of a 'closure cue', which can take on various forms. These include typographic elements such as the end of the paragraph, as well as the opening of a new frame (*In Britain* in (2)). Note that the opening of a new frame closes previous frames only when it does not refer to a subpart of the previous one (*e.g. In France… In Britain vs. In France… In the South*).

Temporal adverbials can also have framing uses, such as *In May* and *In September* (ex. 3).

> (3) ***In May*** *papal backing was given to her conditions for return; two legates brought letters urging the younger Despenser to assist the reconciliation of the king and queen, virtually a request for him to abandon the court, but they got no further than Dover where the king interviewed them and threatened them with death if they dared to publish the pope's*

> *letters.* ***In September****, open hostilities having been resumed in Gascony, Isabella, Mortimer and the prince, accompanied by a small force of Hainault and German troops, crossed from Dordrecht to East Anglia and were soon joined by dissident magnates and prelates.* (BNC, F9L 619: *Church and realm: 1272–1461*, 1988)

Spatial and temporal adverbials are traditionally considered to be *setting adverbials* (Chafe 1984; Lambrecht 1994). However, we saw in Table 2 that framing adverbials constitute a broader category, including not only spatio-temporal setting adverbials but also adverbials expressing represented setting, abstract setting, source of speech, topicalization as well as metadiscursive organizers (see also Fig 2 in the introduction to this volume). Without necessarily contributing to the ideational content of the sentence, they all contribute to the definition of the truth conditions of the clause. Moreover, they all display a cohesive function, with possible scope over several clauses. The examples below illustrate abstract setting adverbials (4), source of speech adverbials (5) and metadiscursive organizers (6).

> (4) *Hertfordshire is closing three degree courses – chemistry, social sciences and civil engineering. The main reason is that students are voting with their feet and are not signing up for degrees that don't have jobs at the end of them, according to Professor Neil Buxton, the Vice-Chancellor. The humanities are being particularly hard hit – subjects such as history, English and sociology. And the new universities seem to be taking the brunt.*
>
> ***In chemistry****, Hertfordshire University faces competition locally. "We just don't have the critical mass," Professor Buxton explains. And civil engineering, in common with most engineering subjects, has a national problem finding enough students.* (*The Independent*, online version, Thursday, 22 February 2001, accessed February 2011: http://www.independent.co.uk/news/education/educationnews/the-strange-case-of-the-disappearing-chemistry-lecturer-693550.html)

(5) *A public radio show in the US claims to have uncovered the top secret recipe to Coca-Cola, challenging listeners to brew their own pop at home. (…)*

***According to the recipe found in the Atlanta periodical**, the following are key ingredients to the soft drink's top secret mix, also known as 7X:*

List of ingredients:

Fluid extract of Coca 3 Lime juice 2 pints 1 qrt. Orange oil 20 drops

Drams USP [sic] vanilla 1 oz lemon oil 30 drops

citric acid 3 oz caramel 1.5 oz or more nutmeg oil 10 drops

caffeine 1 oz to color coriander 5 drops sugar 30 7X flavour Neroli 10 drops

Water 2.5 gal alcohol 8 oz cinnamon 10 drops

Since its creation in 1886, Coca-Cola has kept its formula a jealously guarded trade secret, spinning elaborate, public relations mythologies about the ingredients and the people who know them.

(6) *Will it be easier to work abroad? **In theory**, you already can; **in practice**, it's not so easy. The civil service, for example, doesn't have to consider employing foreign nationals, for security reasons – though this has been challenged.* (BNC, *Good Housekeeping*, 1992)

Framing adverbials are thus intraclausal, extrapredicative elements which contribute to text structure by bringing elements to the definition of an utterance's (*i.e.* one or more clauses, or a discourse segment) truth conditions, and may or may not add to or bear on the ideational content.

2.1.2. DM uses

'Discourse Marker' is not a consensual term (see the Introduction to this volume, section 2). The most common definitions of what we call DMs are given in functional terms; however, even the functions attributed

to DMs are quite varied, and include modalizing (*e.g.* conversation management or stance expression) as well as text- or discourse-structuring (*e.g.* linking functions, *i.e.* the work of connectives, *cf.* Fraser 1996). Their main functions are to "structure discourse, call for the addressee's attention, emphasize thematic progression and enable or facilitate turn-taking" (Fagard 2010: 247). As noted by Fischer, a purely functional definition of DMs may end up being circular:

> we call discourse markers those items that fulfill discourse marking function, and we call discourse functions those that are fulfilled by discourse markers (Fischer 2006: 5).

However, this type of definition makes it possible to extend the category beyond particles ("small uninflected words loosely integrated into the sentence structure", *ibid.*).

Here, we will take DMs to be elements which provide indications on the speaker/writer's point of view or attitude with respect to the utterance (termed Intersubjective Discourse Markers (IDMs) in the introduction to this volume). This means that they modalize but do not necessarily or directly contribute to text or discourse structure. This may explain why, unlike framing adverbials, their position is not a crucial constraint, as illustrated by example (7), in which we note possible uses of *actually* as a DM: it can be used in virtually any position, except within constituents (**much actually progress* definitely seems ruled out), given the right intonation.

> (7) [1Actually,] *There* [2?actually] *has* [3, actually,] *been* [4?actually] *much progress* [5actually,] *lately*[6, actually]. *Scientists explain that many discoveries are yet to be made, and say that the main problem is the lack of funding for new experiments.*

Not all positions illustrated above are equally natural, with positions 2 and 4, as indicated, probably least so; however, it seems to us that even these are not completely excluded.[5] Besides, as this example

5 This was checked on the Google corpus (with M. Davies' interface, American books section, 155 billion words). Looking for variants of the sequence *there has been* (which appears more than 2 million times), we found that all positions of *actually* are attested, albeit with different frequencies. In this sequence, and this corpus, the most frequent position for *actually* is 3 (*there has actually been*) with 1,458 hits, followed by 1 (*actually there has been*) with 303 hits, while the least frequent are,

shows, the truth-conditional meaning of *actually* is not available (*i.e.* not available for interpretation by the hearer/reader) when it is used as a DM: there is no conflict between *lately* ('in recent years') and *actually*, because *actually* no longer means 'in the present period'. Compared to the properties of framing adverbials, these characteristics of DMs are linked to a much higher degree of subjectivity (which appears, for instance, in their diatopic or regional variation, see Dostie 2009: 202), as well as, we claim, a higher degree of grammaticalization.

It seems that (simple or complex) adverbs are more prone to display DM uses than other adverbials, especially clausal adverbials. Prepositional adverbials, which are likely to develop framing uses, can also display DM functions. In the next section, we provide diachronic evidence showing that, in order to take on DM uses, prepositional phrases must first undergo a process of grammaticalization. For instance, the DM *enfin* ('at last', 'finally') (Buchi & Städtler 2008) was originally an adverb, based on the prepositional phrase *en fin* ('in (the) end').

3. Case studies

3.1. Hypothesis, theoretical framework and methodology

In this section, we investigate the grammaticalization of adverbials into DMs, and start out with Schwenter & Traugott's (2000) hypothesis that adverbials developing DM uses follow a 'grammaticalization chain', going through a fixed set of phases: sentence adverb > epistemic adverb > discourse marker. We focus on the correlation between the following parameters: syntactic position in the host clause, adverbial *vs.* prepositional use, subjectification (in the terms of Traugott 2003) and spatial *vs.* abstract (or concrete *vs.* notional) meaning. We test this hypothesis on three adverbials which achieved various degrees of grammaticalization and subjectification in French:

- *au fond* ('at the bottom') > 'actually', 'basically'[6],
- *d'un côté* ('to one side') > 'on the one hand', 'after all',
- and *parallèlement* ('parallel (to)') > 'at the same time', 'in the

as expected, 2 (*there actually has been*) with 265 hits and 4 (*there has been actually*) with 149 hits.

6 DMs, being highly subjective, are notoriously hard to translate. We provide indicative translations here, but will generally abstain from translating DMs in the examples.

same way', 'moreover', 'besides'.

The flood [Postcard, A. Sauvage, Editions ELD. Cartes postales AnciennesParis, 1910]
Dupochard – *D'un côté, c'est chouette, la crue !*
On n'a pas besoin de se baisser pour ramasser son chapeau (*Paris Inondé*, http://inondation1910.paris.fr/)

"Mr. Drunkard – [D'un côté], the flood has its good points! No need to bend down to pick up your hat"

Figure 1. Subjective discourse marker use of *d'un côté*

Among all the existing adverbials with subjective or intersubjective meanings (*alors* 'then', *maintenant* 'now', *du coup* 'so', *enfin* 'at last', *bon* 'well', *tout de même* 'still', *c'est sûr* 'of course'…), we chose these three on the basis of their spatial origin and because they display very different behaviors in terms of frequency, date of appearance, and degree of grammaticalization. As shown in Figure 1, *au fond* is both precocious and frequent; it has a high frequency as a DM in Modern French, whether spoken or written, formal or informal. *D'un côté* is highly subjective, but less frequent, as shown in the same graph which also reveals that *parallèlement* is more recent than both *au fond* and *d'un côté*, and much less frequent. *Parallèlement* seems less subjective; it displays mainly linking functions. However, in Modern French, all three display highly subjective DM uses. In such uses, the speaker/writer only presents the hearer/reader with part of the scene, and forces him to see it from his own point of view, as in this caption, in which *d'un côté* could very well be replaced with *au fond.*

The subjectivity of such adverbials when they are used as DMs is quite apparent in this example. Indeed, in this context, *d'un côté* has completely lost its concrete spatial meaning, and a translation by 'on the side' or anything similar is quite impossible. It could be glossed by 'all in all', 'all things considered', 'after all', with a very abstract and subjective meaning. Besides, it leaves unsaid an element which is

considered obvious: "sure, the flood is a disaster, but here's what I find nice about it", and the sentence cannot be understood if one does not take this into account.

The process which turns referential adverbials (time, space, or manner adverbials for instance) into DMs is by now quite well-known, as it has been thoroughly investigated in the last ten or twenty years (see *i.a.* Schiffrin 1987; Fraser 1996, 2006; Hansen 1998; Dostie 2004; Traugott 2007). However, one point is still unclear, as noted by Lewis (this volume): the respective roles of syntax and semantics, and particularly which one of them comes first. This is precisely the issue we will address in the course of our investigation.

In order to understand whether the evolution from the original concrete meaning to this final discourse use is driven by syntax, by semantics, or by both, we conducted a broad diachronic corpus study of the three adverbials, using various databases covering Old, Middle, Classical and Modern French (BFM, DMF, Frantext);[7] occasionally, we added examples taken from the Modern Spoken French database Clapi for comparison. Our corpus, as can be seen in Table 3, is not homogeneous in terms of size, containing more recent texts (17th to 20th c.: 58 million words per century on average) than old texts (12th to 16th century: 3 million words per century on average). Of course, this could be problematic in that it does not ensure comparability between periods. However, the evolutions we focus on in this chapter occur either between the 14th and the 16th or between the 17th and the 20th centuries. Besides, the weakness of a smaller corpus is the risk of over-representation of rare elements; however, since the frequency of our markers is very limited in older (and smaller) parts of the corpus, this over-representation effect seems not to play an important role in our study. This might be because even the smaller parts of the corpus are quite large (almost one million words for the smallest one).

7 We checked for various spellings of *fond* (*fond, fondz, fons, font, fonz*), *parallèlement* (*paralellement, parallelement, parallèlement, parallèllement*) and *côté* (*costé, côté, costes, costez, cotes*).

Data-bases	BFM									
				DMF						
						Frantext				
Century	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st
Number of words (in millions)	0,68	1,93	4,12	3,09	5,92	22,02	35,49	71,77	101,12	3,69

Table 3. Size of the databases (BFM, DMF and Frantext)

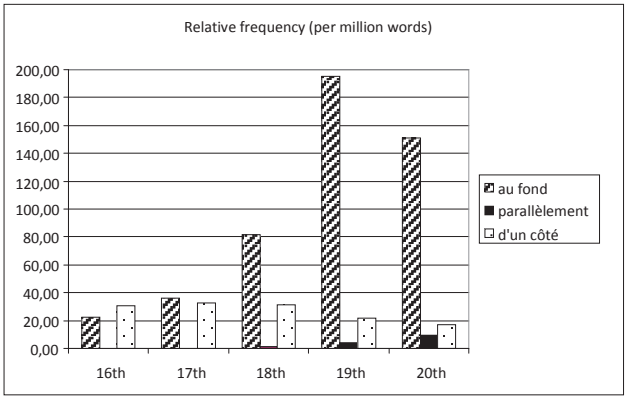

Figure 2. Relative frequency of the adverbials under study, after the 15th c., in our corpus

Our analysis bears on the evolution of the three adverbials from their first appearance in written texts all the way to Modern French, with different chronological sections: 100-year, 50-year and 25-year sections, which enabled us to zoom in on specific changes when necessary. We now turn to the description of this evolution, on the basis of philological evidence and corpus analyses.

3.2. Corpus study

3.2.1. Au fond*: from 'at the bottom (of X)' to 'actually'*

The noun *fond* ('bottom'), from Classical Latin *fundum* with roughly the same meaning, appears quite early on in Old French (11th c.). It is first used as a free noun, but soon enters near-adverbial constructions in which it is more of a 'spatial noun' or 'relational noun' (*cf.* Svorou 1994;

Aurnague 2004), with a less referential meaning. These constructions appear in our corpus from the 13th c. on, and involve four different prepositions: *en* ('in, into'), *à* ('at'), *sur* ('on'), *dedans* ('in, inside') (*en le fond, au fond, ou fond, sur le fond, dedans le fond*). In this study, we focus on the adverbial *au fond*, which is by far the most frequent construction (more than 75% of all occurrences in Medieval French), leaving aside the other constructions for further work. This specific construction *au fond* gains frequency until the 19th century, as can be seen in Figure 3.

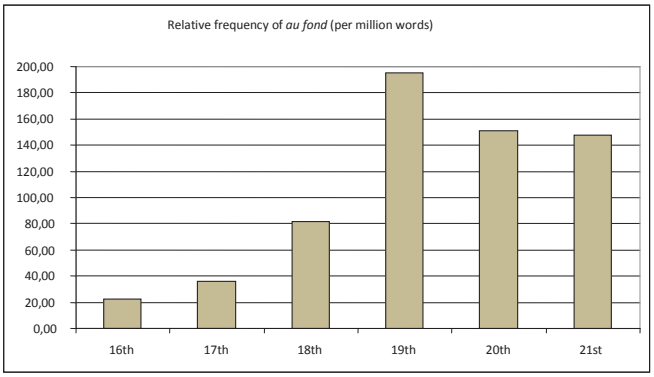

Figure 3. Relative frequency of *au fond* from Classical to Modern French.

For Old, Middle and Classical French, we took all the attested occurrences into account; from the 18th c. on, we extracted randomly a fixed number of occurrences (up to 250 occ. per c.), on account of the huge amount of data available. Some occurrences were then discarded for various reasons: homonymy, redundancies, noise, lexical uses, *etc*. The resulting number of occurrences we finally analyzed is given in Table 4.

Century	14th	15th	16th	17th	18th	19th	20th	21st	Total
Number of occurrences	20	14	111	238	177	204	201	51	1016

Table 4. Number of Annotated occurrences of *au fond*.

We annotated these occurrences according to various factors, including position, meaning, context and morphology. The details

of this annotation (the same for all three adverbials) are given in the Appendix.

Our results show a clear evolution from spatial to metaphorical and finally abstract uses. Indeed, the first recorded uses of *au fond (de X)* in our corpus are purely spatial, as in (8):

(8) *il dit que en demy jour ne venist pas une pierre* ***au fons***. (*Bérinus*, 1350, t. 1, 129)

'he says that even in half a day a stone would not fall all the way **to the bottom** [of the hole]'

Metaphorical uses appear sporadically quite early on (and already in the 14th century, though not in the earliest texts) and become increasingly frequent from the middle of the 16th century on. Two examples are given below (9-10):

(9) *pour venir* ***au fons de la vraye hystoire et matiere*** (Jean Froissart, *Chroniques*, 1390, III, 142)

'in order to get **to the bottom** [*i.e.* the truth, reality] **of the true story and matter**'

(10) *Ses mouëlles sont ja pleines D'un appetit dereglé, Et nourrist* ***au fond des veines*** *Un feu d'amour aveuglé* (Jean Bastier de La Péruse, *Odes*, 1550, quatrième livre, 383-386)

'Her marrow is full already of a vicious appetite, and she nurtures **at the core of her veins** a blind love-fire'

Note that a specific type of metaphor, with a temporal complement (*night, month, day*), is possible, though we found only one occurrence in our corpus (ex. 11) and around 150 occurrences (*i.e.* approximately 0.4% of the occurrences of *au fond*) in the whole Frantext database (ex. 12, taken directly from the Frantext database, not from our annotated subcorpus):

(11) (…)

Mais si d'un oeil foudroyant elle tire

Dessus mon chef quelque traict de son ire,

J'abisme ***au fond de l'eternelle nuit***. (Joachim Du Bellay, *L'olive*, 1550, LXXXI)

'But if with an angry eye she fires some thundering trait, I will fall down **in the depths of the eternal night**.'

(12) *C'est la musique éparse* ***au fond du mois de mai*** *Qui fait que l'un dit : J'aime, et l'autre, hélas : J'aimai*(Victor Hugo, *L'Art d'être grand-père*, 1877, 583)

'The music one hears here and there **in the midst of May** is what makes one person say: I am in love and the other, alas: I was in love'

More abstract uses appear sporadically early on, but become frequent only from the 17th century onwards (13-14).

(13) *[L'honneur] est bon en discours pour se faire estimer ; mais,* ***au fond,*** *c'est abus ; sans excepter personne, la sage se sçait vendre où la sotte se donne.* (Charles Sorel, *Les Satires*, 1609, 116-118)

'Honour… is of good use in speech, if one wants to be well thought of; but, **in truth**, it is excessive; with no exception, the wise woman sells herself while the fool gives herself away.'

(14) *Si vous n'avez dequoy, ne soyez plus revesche, quittez ce point d'honneur qui les esprits empesche, les bride et les retient, et qui n'est rien* ***au fond***. (Jacques Du Lorens, *Premières satires*, 1624, 149-150)

'If you do not have enough, let go of this honour which fetters souls and holds them back, and **in fact** is nothing.'

Among the more abstract uses of *au fond* are its uses as a DM. This use of *au fond* seems to be linked to a complex evolution:

(a) a global leftward drift which gradually brings *au fond* to a clause-initial position,

(b) a specialization of *au fond* without a prepositional complement, where the adverbial acquires an abstract

meaning that is almost completely absent from the occurrences of the construction *au fond de X*,

(c) once *au fond* has grammaticalized as a DM, it acquires *de novo* a relative syntactic freedom, and can appear in (almost) any position.

This seems to be a natural evolution for constructions such as *au fond (du cœur, de l'âme, de soi…)* 'at the bottom (of one's heart, soul, self)', with a metaphorical meaning of 'bottom' for the *essence*: these expressions are particularly frequent in the mid-17th century, just before the first uses of *au fond* with discourse functions (end of the 17th c.). The development of DM uses for *au fond* is thus a logical extension of this new abstract meaning, the transition being linked to the suppression of the complement (*of the heart, soul, self, etc.*), which explains the subjective meaning of the resulting 'simple' adverbial *au fond*, with a discourse use implying reformulation and thought adjustment (*cf.* Tanguy & Sarda 2013). Indeed, many DM uses of *au fond* could be glossed as *at the bottom of my soul*. Good examples of initial, abstract, adverbial *au fond* with discourse meaning are found in (15-17):

(15) ***Au fond,*** *le mariage est un grand sacrement*. (Georges de Scudéry, *Premières satires*, 1624, 39-40)

'**[Au fond]**, a wedding is a great sacrament.'

(16) *Il y a dans notre position des choses embarrassantes, mais il faut les supporter et nous en tirer ensemble.* ***Au fond,*** *j'ai eu tort de la laisser exposée à une situation dont elle-même m'avait averti.* (Benjamin Constant, *Journaux intimes*, 1816, 420-421)

'There are in our situation very embarrassing aspects, but we have to bear with them and escape together. **In fact**, I was wrong to leave her exposed to a situation that she had warned me about herself.'

(17) *On m'abandonna à moi – même en disant que je ne devais m'en prendre qu'*à moi. ***Au fond****, on était ravi de se*

*débarrasser des obligations qu'on s'*était imposées (George Sand, *Correspondance*, 1825, 196-197)

'They left me to myself, telling me I had only myself to blame. **[Au fond]**, they were very pleased to get rid of the obligations they had imposed on themselves.'

A statistical overview of the data confirms the order in which the steps outlined above take place. Our results show, quite strikingly, that the syntactic evolution – leftward movement – is almost simultaneous with the semantic evolution, *i.e.* the appearance of metaphorical and abstract uses. The semantic evolution can be observed in Figure 4, and the syntactic evolution in Figure 5.

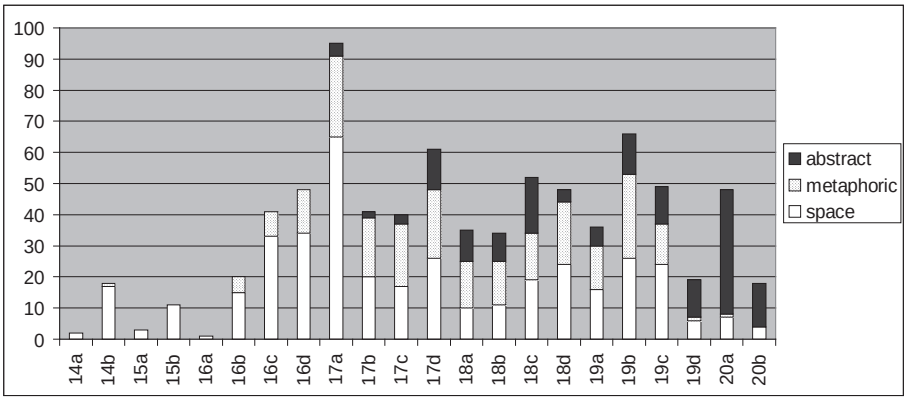

Figure 4. Semantic evolution of adverbial *au fond (de X)* in our corpus (raw frequency).[8]

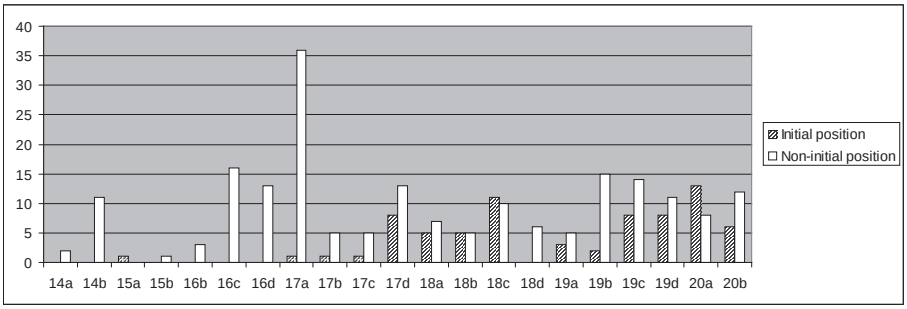

Figure 5. Syntactic evolution of adverbial *au fond* in our corpus (raw frequency).

The existence of metaphorical uses quite early on does not, in our view, invalidate our hypothesis: while the contextual reanalysis of *au*

8 As there is only one occurrence with temporal meaning, it is not shown here, for

fond as referring to the 'essence' of one's thoughts, for instance, has seemingly always been a possibility, it is only once *au fond* has come to be used frequently clause-initially that it acquires this meaning on a regular basis.

The global drift of *au fond* is the result of a grammaticalization process from referential (spatial) adverbial to DM –non truth-conditional adverbial–, *i.e.* uses in which it works as a highly subjective modal adverb, indicating the stance of the speaker/writer (or narrator). It acquires dialogic properties which are largely present in our corpus, with uses such as *au fond de moi / nous / vous / lui* ('deep down, I [narrator] / we [narrator & reader] / you [reader] / he [protagonist],' lit. 'at the bottom of myself / us / you / him'). In these uses (see examples 15-17 above), *au fond* must be interpreted in relation with the preceding context –whether asserted or presupposed– and tends to function like reformulative connectives (Rossari 1990; Lenepveu 2006, 2008); it could be considered as a more subjective equivalent of *en fait* ('actually') or *en réalité/ en vérité* ('in truth'). Its right scope does not change, however, as predicted by Charolles' (1997) and Lamiroy & Charolles' (forthcoming) hypothesis that adverbs which develop connective uses – typically leftwards – do not simultaneously develop framing uses (rightwards).

3.2.2. Parallèlement: from 'in a parallel to X' to 'moreover'

Similarly to *au fond (de X)*, *parallèlement* first appears with spatial meanings and only later develops metaphorical and abstract uses, including DM uses as a smooth topic-shifter (*cf.* Sarda & Charolles 2010)[9]. *Parallèlement* appears later than *au fond*, around the end of the 16th century (*Tlf-I*). We conducted a corpus study on occurrences taken from the Frantext database, in order to study its evolution more closely. We included all occurrences up to 1950, as shown in Table 5, and only excluded non-adverbial uses, such as references to Verlaine's poem entitled 'Parallèlement'.

convenience.

9 With elements that are co-oriented or not, as illustrated by the possibility of saying *mais parallèlement* ('but at the same time').

Period	1551-1600	1601-1650	1651-1700	1701-1750	1751-1800	1801-1850	1851-1900	1901-1950	Total
Number of occurrences	0	0	1	6	37	134	163	341	682

Table 5. Number of annotated occurrences of *parallèlement* in Frantext (with various spellings)

We analyzed these occurrences in the same way as for *au fond* (see Appendix).

In its earliest uses (in our corpus), *parallèlement* is purely spatial, and enters into one of two constructions, both including a prepositional phrase (PP): *parallèlement à X* ('parallel to X') or *parallèlement l'un à l'autre* ('parallel one to the other'). This PP acts as a sort of complement to *parallèlement*, as in example (18):

> (18) *Ce sont des couches de nuages minces, qui marchent* ***parallèlement*** *les unes aux autres* (Charles Bonnet, *Considérations sur les corps organisés...*, 1762, 2(5), 161)
>
> 'They are thin layers of clouds, which move forward **parallel** to each other…'

Only later does *parallèlement* display uses without such a complement, as in example (20) below. We can outline two steps in the evolution of *parallèlement*:

> (a) The first phase is the appearance of (spatial) *parallèlement* without a complement (shift from *parallèlement à X* to *parallèlement*) at the beginning of the 18th century, with a gradual increase in 'adverbial' *vs*. 'prepositional' uses.

At this point, a few uses seem to invite temporal interpretations, without being purely temporal, as in example (19). This "bridging context" (Heine *et al*. 1991: 164 *ff*.) could explain the shift to temporal and other abstract uses.

> (19) *L'aîle gauche, sous la conduite d'Ali-Dâher, fut laissée* sans appui contre les *oqqâls; mais on se reposait sur les frégates et les bateaux russes, qui avançaient* ***parallèlement***

à l'*armée en serrant le rivage.* (Comte de Volney, *Voyage en Égypte et en Syrie*, 1787, 108)

'The left wing, conducted by Ali-Dâher, was left unguarded against the oqqâls; but support came from frigates and Russian boats, which came forward **in a parallel to** the army, along the coast.'

(b) The second phase is more complex. Simultaneously, in the 19th c., there is

(i) a semantic evolution with abstract and metaphorical uses of *parallèlement*;

(ii) and a syntactic movement towards the beginning of the clause.

The interpretation of occurrences displaying these features is not always an easy task, as the abstract uses of *parallèlement* often take on a temporal connotation. For instance, in example (20), the two events are clearly presented as occurring simultaneously; however, the presence of *dans le même moment* ('simultaneously') seems to exclude a purely temporal interpretation of *parallèlement*. Here, *parallèlement* points to the idea that two things are being developed independently, just as two parallel lines never cross each other.

(20) *Ces paroles étaient, pour ainsi dire, le point de jonction de deux scènes qui s'*étaient jusque-là développées ***parallèlement*** *dans le même moment, chacune sur son théâtre particulier, l'une, celle qu'on vient de lire, dans le Trou aux Rats, l'autre, qu'on va lire, sur l'*échelle du pilori. (Victor Hugo, *Notre-Dame de Paris*, 1482, 296-297)

'These words were, so to speak, the meeting point of two scenes which had up to that moment developed independently and simultaneously, each in its own private theater, one of them – the one we have just read – in the Rat Hole, the other one, – which we will read now – on the pillory.'

Both (i) and (ii) become more marked as time goes by. Evolution (a) seems to be a natural precursor of (i), since uses of *parallèlement* without a complement both precede the appearance of abstract uses and

are markedly more abstract once these uses appear, as shown in Figure 6.

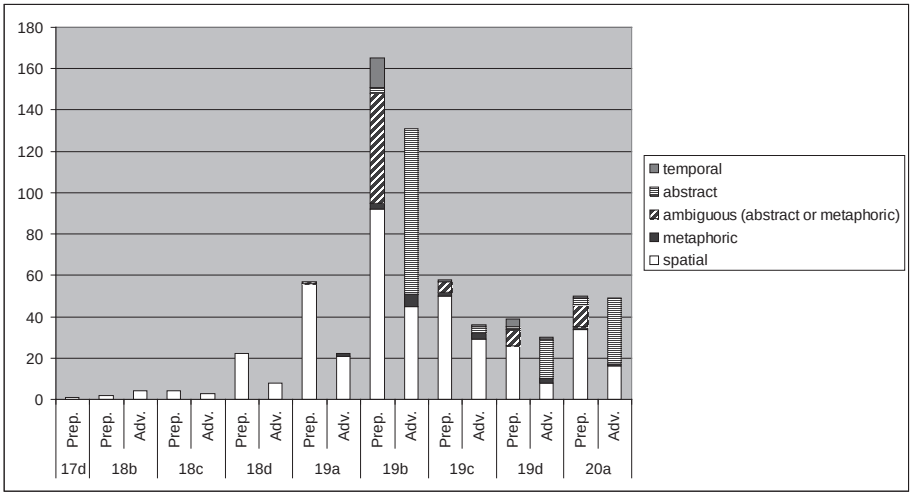

Figure 6. Semantic evolution of *parallèlement (à X)*, in our corpus (raw frequency).

Steps (i) and (ii) appear quite clearly in Figure 7:

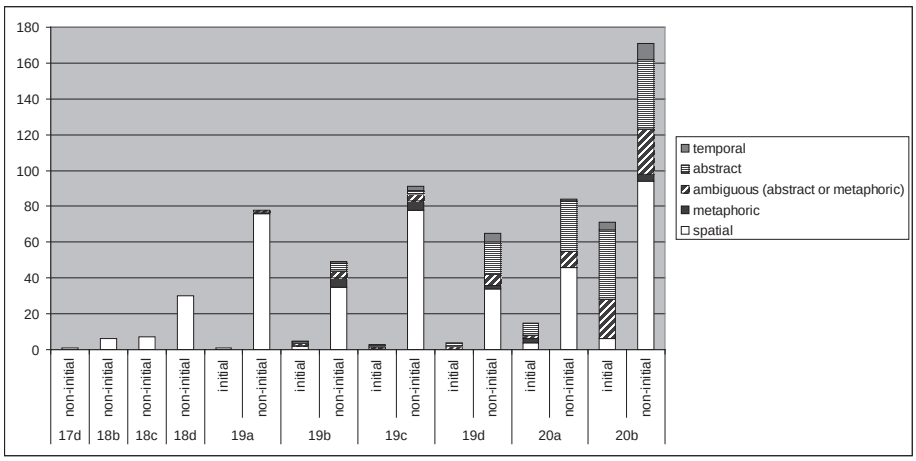

Figure 7. Position of *parallèlement (à X)* in the clause, in our corpus (raw frequency).

All in all, the initial uses of adverbial *parallèlement* clearly favour an abstract reading in the latest periods of our corpus, as can be seen in Figure 8.

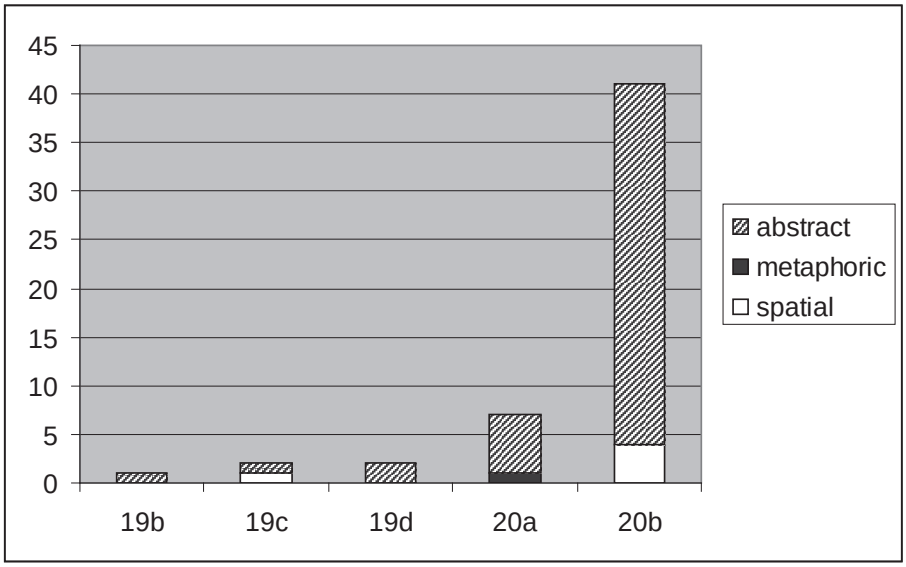

Figure 8. Semantic evolution of initial adverbial *parallèlement*, in our corpus (raw frequency).

The new initial, abstract, adverbial uses of *parallèlement* are precisely the context in which it shifts to discourse-marking uses, illustrated by examples (21-22):

> (21) *Cette substitution est devenue chez Pirandello une critique de la notion de réalité. Et,* ***parallèlement,*** *chez les dramaturges psychologues, plus particulièrement chez les français, un thème théâtral nouveau, (…) le "que suis-je" a pris la place du "comment agir ?" (…).* (Collectif, Arts et littérature dans la société contemporaine, 1936, t. 2, 3008)
>
> 'This substitution has become for Pirandello a way of criticizing the notion of reality. And, [parallèlement], for psychology-oriented play writers and particularly French ones, a new theatrical theme, (…) the "what am I?" has replaced the "what should I do?"'
>
> (22) *(…) des sentiments raffinés – et catalogués – s'expriment dans des mètres compliqués où entrent en jeu la quantité syllabique, la rime, l'allitération et même le calembour.* ***Parallèlement,*** *dans l'hindoustani des musulmans se*

> *perpétue l'*épigramme à la persane (Collectif, *Arts et littérature dans la société contemporaine*, 1936, t. 2, 5604)
>
> 'exquisite sentiments are expressed in complex structures where syllabic length, rhyme, alliteration and even word games are at play. [Parallèlement], Muslims continue writing, in Hindustani, Persian epigrams…'

Thus, *parallèlement* acquires uses in which the speaker/writer selects, and presents as being related, elements which are disconnected in reality. It then clearly has a discourse-structuring function, in-between connective and framing adverbs: it establishes a link with a previous segment and increases cohesion with the next one. From this point of view, it appears to be less grammaticalized and less subjective than *au fond*. Diachronically, the first syntactic change –the loss of the complement– precedes a complex change involving both syntax (movement to a sentence-initial position) and semantics (shift to temporal and abstract meaning).

3.2.3. D'un côté: from 'on the side (of X)' to 'on the other hand'

In this section, we explore the evolution of *d'un côté* ('on one side') from its appearance in Old French to Modern French. Dictionaries provide some information about its evolution: *costé* appears as early as the end of the 11th c., formed on Late Latin **costatum* 'rib' (*Tlf-i*). The evolution of *costé* is thus slightly more complex than that of *fond*: it initially refers to a body part, then is used as a relational noun (also found for *fond*, see above), entering into Middle French constructions such as *d'un costé*, which alternates with other constructions: *en l'un des côtés* ('on one of the sides'), *de tous costés* ('on all sides'), *etc*.[10]

It appears very early – actually, in the first occurrences of our corpus – in correlation with the construction *de l'autre costé* ('on the other side'), where *autre costé* is also used as a (morphologically complex) relational noun. According to Aurnague (2004), the presence of an opposition between two relational nouns gives them more referential autonomy (one being defined with respect to the other); this

10 These constructions seem to be replacing an older paradigm of adverbs and prepositions formed on the same root, *encoste*, *coste*, *pardecoste*, which have a similar meaning ('next to'), and a very low frequency in Old and Middle French (Fagard 2010).

might explain why *d'un costé* appears from the beginning without a complement.

Once it has lost its complement, *d'un costé* functions as an adverbial, initially with spatial meanings. These spatial adverbials with preposition (+ article) + *costé* appear quite early (à *costé* ('to the side'), 11th c.), but our corpus indicates that *de l'un costé* ('on the one side') and *d'un costé* ('on one side') appear slightly later, around 1330.

Focusing on *d'un costé*, we analyzed its morphological, syntactic and semantic evolution with a corpus study on occurrences taken from the BFM and Frantext databases. We included all occurrences from Middle French to Modern French, as shown in Table 6.

Century	14th	15th	16th	17th	18th	19th	20th	21th	Total
Number of occurrences	55	56	148	150	150	150	149	95	953

Table 6. Number of annotated occurrences of *d'un côté* in our corpus (with various spellings)

We analyzed these occurrences with the methodology used for *au fond* and *parallèlement* (see Appendix).

Like *parallèlement* and *au fond*, *d'un côté* first appears with spatial meanings. Unlike the other two adverbials, it presents uses without a complement from the very beginning. The shift from spatial to non-spatial uses is very quick, with contexts in which it is hard to distinguish 'real', geometric or topological localization and a more abstract opposition between two parties (in a lawsuit, a battle, *etc*.). These first abstract uses, in which a spatial interpretation is not ruled out, appear in the late 15th century (23); more abstract uses appear later, in the 16th c.:

(23) *Amour me mect en ung merveilleux trouble, qui* ***d'un costé*** *loue ma fermeté et* ***d'autre part*** *deffaict de seureté le vray lyen* (Marguerite de Navarre, *La Coche*, 1541, 174)

'Love troubles me strangely, **on the one hand** praising my firmness and on the other destroying the link'

True DM uses, as in example (24), appear even later:

(24) *Ma pauvre cervelle de piaf est bien assez remplie avec*

> *ma nouvelle histoire. Et puis ça recommence.* à *peu près de la même manière.* ***D'un côté****, je suis extrêmement romantique et ce n'est pas très facile de se fabriquer des états d'*âme quand on est inapte à la *flippette*. (Evane Hanska, *Les Amants foudroyés*, 1984, 15)
>
> 'My poor birdbrain is full enough with this new relationship of mine. And then it all starts again, in more or less the same way. [**D'un côté**], I am extremely romantic and it is not at all easy to pretend you are freaking out if you are incapable of stress.'

The picture which emerges from the analysis of the correlation between meaning, presence of a complement and syntactic position is quite different from the evolution presented by *au fond* and *parallèlement*. For *d'un côté*, the first interesting evolution is the appearance of abstract uses in the 15th c. (see Figure 9). This semantic shift slightly precedes the shift to initial position (Figure 10).

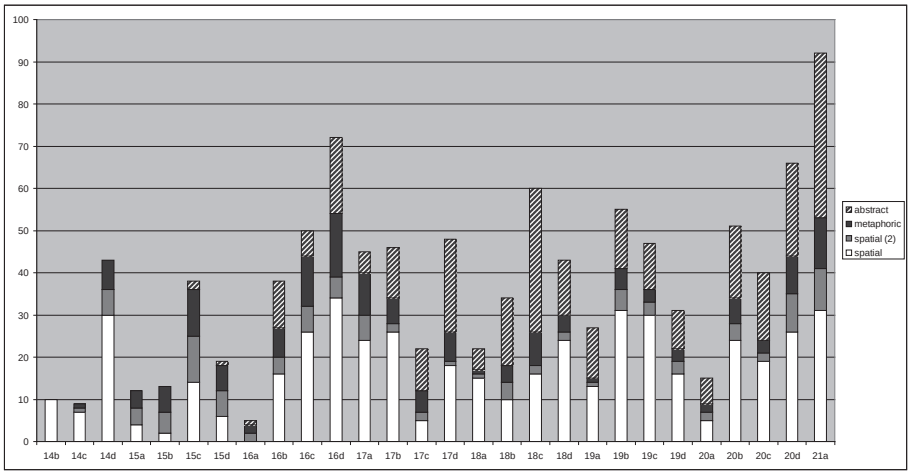

Figure 9. Semantic evolution of *d'un côté (de X)*, in our corpus (raw frequency).[11]

11 Spatial (2) is a specific subtype of uses in which there is clearly a spatial meaning, accompanied by various connotations (such as *on one side (of the battlefield*) = with or against someone).

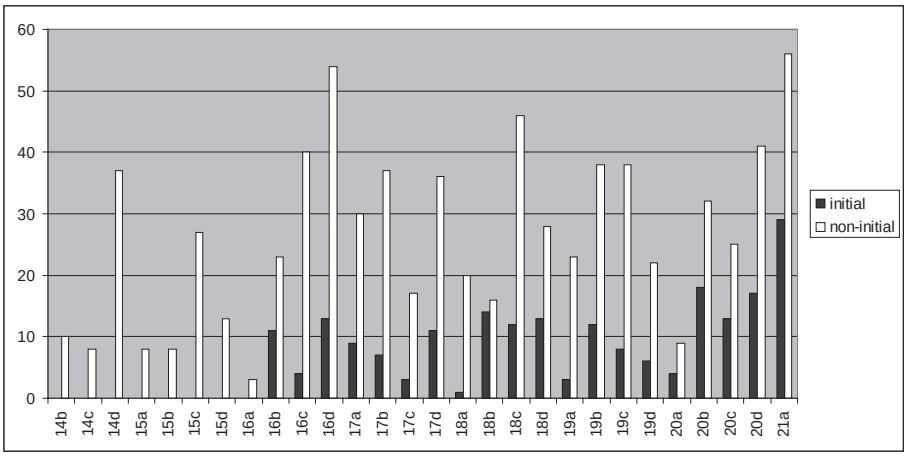

Figure 10. Syntactic evolution of *d'un côté (de X)*, in our corpus (raw frequency).

In this initial position, right from the start, abstract uses are overwhelmingly in the majority, and remain so (almost) all the way to Modern French, with a mean of around 80% of abstract meanings (Figure 11).

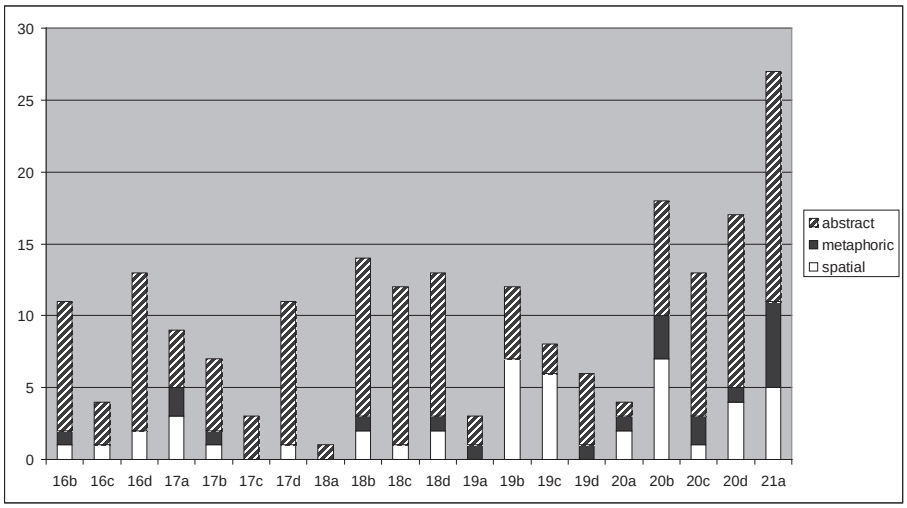

Figure 11. Semantic evolution of *d'un côté* in clause-initial position, in our corpus (raw frequency).

The main evolution is then the gradual increase in initial uses, which results partly from the increase in abstract uses: the percentage

of abstract initial *d'un côté* remains constant, and is higher than the percentage for median or final position. There is also a gradual progression of abstract uses in median and final position. Just as we saw in the case of *parallèlement*, initial, abstract uses seem to be the context in which subjective, discourse-marking uses emerge. However, there is a difference: the chronology of *parallèlement* indicates a rapid shift from initial abstract uses to DM uses, but in the case of *d'un côté* this shift seems to have taken much longer. This needs to be explained.

4. Discussion and conclusion

We now come back to our initial question – whether syntactic and semantic evolutions are linked, or rather in what way. The three case studies we conducted do not provide us with a straightforward answer to this question, because the three evolutions described are highly complex, involving different phases of syntactic *and* semantic change, some in sequence, others simultaneous. For instance, the leftward movement of *au fond* towards clause-initial uses is almost simultaneous with the appearance of metaphorical and abstract uses, and this complex change itself precedes the shift to DM uses. For *parallèlement* and *d'un côté*, we observed a complex change involving both syntax (movement to a sentence-initial position) and semantics (shift to temporal and abstract meaning), which appear to be simultaneous, or at least too close to disentangle. Thus, in all three cases, our study shows a coupled change in syntax and semantics.

However, one element clearly emerges from the observation of our results: the development of DM functions is linked, for all three adverbials, to the loss of the prepositional phrase it initially introduced (*à/de X*). Indeed, these 'compact' versions of the adverbials (*i.e. au fond, parallèlement, d'un côté* rather than *au fond de X, parallèlement à X, d'un côté de X*) are the first to develop sentence-initial uses, abstract uses and finally DM uses. This seems to indicate that the persistence of a referential meaning, which makes framing uses possible, as shown in Section 1, also hinders the development of DM uses. Going beyond the case of these three adverbials, we could link this result to the fact that, in French, many DMs are based on relational nouns, which are by definition non-referential, or at least not directly so. This is the case for instance of *par ailleurs* ('besides', lit. 'through elsewhere'), *à la limite*

('actually', lit. 'at the limit'), *en somme* ('to put it briefly', 'to sum up', lit. 'in sum'), *etc*. Our case studies show a common evolutionary process along these lines for *au fond*, *parallèlement* and *d'un côté*, which implies, as we saw above, the loss of the complement and the development of discourse uses.

Our results thus provide evidence for two positions outlined by Lewis (this volume): Hock & Joseph's, suggesting that "syntactic change produced the modal adverbs *hopefully*, *presumably* and *actually*" (1996: 194-6), as well as Hopper & Traugott's (1993: 207), who claim that "in general it can be shown that meaning change accompanies rather than follows syntactic change". We found no evidence that "conceptual / semantic shift precedes morphosyntactic and phonological shift" (Heine *et al*. 1991: 213, 260).

For further research, a detailed corpus study of adverbials such as *par ailleurs*, *à la limite* and *en somme*, or of equivalents of *au fond*, *parallèlement* and *d'un côté* in other languages, could help us find out whether the evolutions we have described are idiosyncratic or reveal more general linguistic trends.

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Databases and corpora

BFM: Base du Français Médiéval ("Database of Medieval French"), ENS Lyon & ICAR, http://bfm.ens-lyon.fr/.

Clapi: Corpus of Spoken Modern French, Université Lyon 2, http://clapi.univ-lyon2.fr/.

DMF: Database of the Dictionnaire du Moyen Français ("Middle French Dictionary"), ATILF, CNRS, http://www.atilf.fr/dmf/.

Frantext database, ATILF, CNRS, http://www.frantext.fr.

Google Books Corpus, http://googlebooks.byu.edu/.

Appendix – Coding procedure

We coded mainly for three factors: syntactic position (initial *vs*. medial or final), morphosyntax (presence *vs.* absence of a complement) and meaning (spatial, metaphoric, temporal and conceptual). However, we also coded all occurrences for metadata and degree of subjectivity, with a complex list of specifications. We give below a brief description of our encoding method.

1.1. Syntax: Position (in the clause, not the sentence)

Values: Initial / Median or Final / Parenthetical

Defining criteria: Initial elements can only be in the first position of a clause, or after coordinating or subordinating conjunctions. Parenthetical elements are between commas or other strong punctuation marks. Median or final

elements are in all other positions.

1.2 Syntax: Argument structure

Values: Verb-dependent (integrated adverbial) / Free adverbial

Defining criteria: a verb-dependent adverbial is essential to the verb's argument structure. A free adverbial can be erased without substantial difference in meaning.

1.3. Syntax: Correlations

Values: depend on the constructions found in the text (*e.g. d'un côté…* ***de l'autre****, d'un côté …* ***d'autre part***).

Defining criteria: the correlative element has to be clearly linked semantically to the adverbial under study.

2.1 Morphology: Spelling

Values: the exact spelling found in the text (as opposed to the standard spelling, where the case may be).

Defining criteria: reproduces the exact form found in the text.

2.2. Morphology: Construction

Values: the type of construction found in the text (*e.g. d'un côté vs. de l'un côté*)

Defining criteria: Spelling is not taken into account here.

2.3. Morphology: Dependence

Values: Adverbial / Prepositional

Defining criteria: Adverbial uses are those without *de* or *à* + noun phrase after the adverbial.

2.4. Morphology: Part of speech

Values: Adverbial / Noun

Defining criteria: we distinguish between nominal uses (*le fond* 'the bottom', *le côté* 'the side', 'the rib') in which there is a referent, and adverbial uses in which there is none.

3.1 Subjectivity: Discourse *vs*. Narration

Values: Discourse / Narration

Defining criteria: Discourse is only between quotes or in dialogues, except in older texts (up to the 18th c.) in which we had to rely on other indications such as speech verbs, *etc*., because the use of typographical marks is less systematic. Narration is everything that is not discourse.

3.2. Subjectivity: Speaker

Values: Presence of 1st person / of 2nd person / of neither.

Defining criteria: The presence of elements referring to a second person is considered to be the most indicative of (inter)subjectivity, because they

imply a dialogue; we therefore coded the presence of a 2nd person first (pronouns or verb forms), then the presence of 1st person pronouns or verb forms in all remaining occurrences, and finally the absence of both.

4.1. Semantics: Global meaning

Values: spatial *vs.* abstract.

Defining criteria: abstract occurrences have no possible spatial interpretation.

4.2. Semantics: Specific meaning

Values: a. for spatial occurrences: origin / goal / localization / fictive motion; b. for abstract occurrences: abstract / discourse / temporal.

Defining criteria: the distinction between origin, goal, *etc*. is quite clear. Discourse occurrences have no possible temporal interpretation and require subjective elements in order to be understood. Temporal occurrences have no possible abstract interpretation other than temporal.

4.3. Semantics: Referent

Values: Portion of matter / Portion of space / content / horizontal / vertical / complex / underspecified.

Defining criteria: Encodes the type of referent of the 'nouns' *fond* and *côté* (not encoded for *parallèlement*). Examples: Portion of matter (*il est émaillé au fond* = le fond de cet objet est émaillé, 'the bottom of this object is enameled') / Portion of space (*attendez-moi au fond de la vallée, au fond du jardin* = dans un espace dont une limite est constituée par le fond, 'wait for me at the far end of the valley, at the bottom of the garden') / content (*un fond de café*, 'a bit of coffee') / horizontal (*au fond de la classe*, 'in the back of the classroom') / vertical (*au fond du gouffre*, 'at the bottom of the abyss') / complex or underspecified.