Is pragmatics of discourse possible?

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This paper is about discourse and pragmatics. It presents the fundamental claims Anne Reboul and I have extensively developed in a book published in 1998 (Reboul & Moeschler 1998). In this book, we claim that discourse is not a linguistic unit, but a pragmatic one, that is, an emergent 1 unit and not an emergent 2 unit like utterances. I present the basic assumptions of discourse pragmatic (coherence is an effect of the accessibility to a global hypothesis) and show how current researches in theoretical and experimental pragmatics can give new directions for discourse pragmatics. I illustrated that point with a central issue for discourse coherence, that is, temporal reference and inferences.

Envoy

Sorin Stati was not my Professor, even if he has been one of my mentors. As I was a young researcher, he invited me to the third IADA meeting at Bologna (Moeschler 1991) and to a round table on dialog analysis (Moeschler 1992). The next year, I was one of the keynote speakers at the fourth IADA Workshop in Basel (Moeschler 1993). Our last meeting took place in Milano at a conference on connectives (Moeschler 2007). I was impressed how Sorin Stati was a high-level thinker in the domain of linguistics at a time that was an important crossroad between formal approaches, discourse and text approaches and pragmatics. All the papers I was committed to write under his kind invitation were for me the opportunity to develop some of the ideas Anne Reboul (mainly) and I formulated more completely in our book Pragmatique du discours (Armand Colin, 1998). This article is a new reflexion on how articulating pragmatics and discourse analysis.

1. Introduction

In 1998, Anne Reboul and Jacques Moeschler published a book, Pragmatique du discours (Paris, Armand Colin), whose main purpose was to demonstrate how and why the discourse analysis research program could not satisfy criteria required by a scientific approach to language. The argument, based on Lakatos’s (1978) concept of research program in science and the notion of emergent units (Searle 1994), has shown that a discourse is not a linguistic unit as a sentence is, and thus any attempt of linguistic definition for discourse is doomed to fail, as well as any restricted linguistic approach to discourse. Discourse is defined in our book as a non-arbitrary string of utterances, that is, emergent 2 units, whose properties are not the causal outcomes of its
components. The non-arbitrariness of discourse yields an interesting mapping between linguistic emergent 2 units, that is, morphemes, characterised by an arbitrary relationship between form and meaning. Nevertheless, the main theoretical issue is the following: the parallelism grounding a linguistic theory of discourse, that is, the correspondence between sentence and grammaticality in the one hand and discourse and coherence in the second, is false. Most of discourse theories tried to define empirically and theoretically what a discourse is from notions as coherence and markers of cohesion. What is shown is our book is that coherence is not a concept that allows attributing discourse the status of an emergent 2 unit (discourse is only an emergent 1 unit), and the best way to build a theory of discourse is to use principles of a theory of utterances interpretation, that is, a pragmatic approach to utterance interpretation. Central concepts of pragmatics are thus used to build a pragmatic theory of discourse, as local informative intentions, associated to utterances, and global informative intentions, associated to discourses, admitted that discourse coherence is depending on the possible accessibility to a global informative intention as a result of a non-demonstrative process of hypotheses formation. We illustrate these assumptions by showing how markers of cohesion as tenses, connectives and referential expressions function in discourse. This book gave rise, in the French domain, to almost no discussion, because our theses were so common sense grounded or on the contrary contradictory to many decades of works in discourse analysis. Our proposals, which claim that very few progresses have been made in the discourse analysis paradigm since its emergence in the seventies, is nowadays no more refuted by current works in discourse analysis, where discourse is now investigated in new directions, mainly in relationship to new technologies (computational linguistics, quantitative linguistics, prosody and intonation).

Nowadays, it is a fact that the domain on which our argumentation was based, that is, post-Gricean pragmatics, did not stagnate. Recent works in lexical and non-lexical pragmatics (Carston 2002, Moeschler 2009), as well as new discoveries in acquisition and development of language, theory of mind, autism (Reboul & Foudon 2008), as well as quantitative scales, negation and argumentation, show that the pragmatic foundation of a theory of discourse is of current relevance.

This article has as a main purpose to show that what happened in the last ten years in the domain of post-Gricean pragmatics allows reinforcing the hypotheses of Pragmatique du discours, and that pragmatics of discourse is not only possible, but is in fact a work in progress. Examples of fiction will be used to show how discourse is processed. Finally, the chapter gives a general explanation on how coherence judgements are based and on which principles coherence can be grounded. These hypotheses will be used, as a last resort, to discuss the case of conversation.

2. Discourse pragmatics: a short introduction

Discourse pragmatics was born from two statements: first, cognitive approaches of utterances interpretation never introduces external (social or discursive) constraints on utterance interpretation processes; second, no general or specific rule has been theoretically or empirically demonstrated since the emergence of works in discourse analysis.
The first statement is at the origin of pragmatics, defined as a theory of utterance interpretation: since Grice’s work (Grice 1989) it is admitted that principles triggering utterances interpretation rely on general principles of communication and human rationality. The cooperative principle and the conversational maxims are not cultural rules that would be accurate in western culture and vary from one culture to another. Classical counter-examples are just erroneous interpretation of conversational maxims. For instance, if a Greek passer-by gives you an answer on your road and his answer is false, it simply means that the first maxim of quantity wins over the second maxim of quality, whereas Western European culture would prefer the superiority of the maxims of quality on the maxims of quantity. Cultural variations are therefore not counter-examples of the maxims of conversation, but constraints on the hierarchy of pragmatic rules. (1) is a preference of some cultures in which it is impossible not to answer a question, whereas (2) is another preference:

(1) Maxims of quantity > maxims of quality
(2) Maxims of quality > maxims of quantity

It is possible to show that the example given by Grice to illustrate (2) in Logic and Conversation, generally receives a different interpretation as the one Grice intended, that is, an interpretation that satisfies (1):

(4) Gricean interpretation satisfying (2): B does not know precisely where C lives.
(5) Non-Gricean interpretation satisfying (1): B knows where C lives, but is reluctant to tell it to A.

In the classical Gricean interpretation, B gives the strongest information, what authorises A to infer that he cannot give a more precise information and he does not precisely know where C lives. In the non-Gricean interpretation, B does not give the strongest information, what allows B to conclude that he is reluctant to tell him where C precisely lives. In that case, not satisfying the first maxim of quantity does not depend on the risk to violate the second maxim of quality, but depends on the wish to control the quantity of information necessary to draw the implicature that the hearer is invited to draw. Answers like No comment! given by politicians do not mean that they do not want to say anything, but that they are reluctant to give the expected information.

The second statement, that is, the absence of specific discourse rules does not mean that discourse is not minimally constrained in its organization, but that discourse rules do not play any role in utterances interpretation. Let us take a classical example of an exchange:

(6) Grock: Do you know the famous pianist Paderewski? The pianist: Paderewski?
   Grock: Yes. The pianist: No. Grock: Well, he even plays better than me!

This example, used to show subordination relation in discourse (exchange embedding in moves), is an illustration of a trivial fact: some illocutionary acts create expectations of relevance. For instance, a question requires an answer, and if a question follows a question, it means that an answer to a second question is required to answer to the first question.
Rules of conversation, if they exist, seem to be linked to questions of interpretation; utterances give rise to expectations, and acts of asking (Sperber & Wilson 1986) require acts of saying, not acts of asking or of telling.

If discourses are constrained by general principles guiding their interpretations, the question is whether there are no minimal general principles accounting for a fact observed by most of approaches to discourse: well-formed discourses are coherent, in the sense utterances do not follow each other in an arbitrary way. In other words, the question is to know if principles of coherence exist, that is, principles that would play a role not only in utterances interpretation, but also in their production.

That is exactly the point where discourse pragmatics claim is the strongest, because it can be demonstrated that rules of discourse are neither necessary nor sufficient conditions for their coherence. In discourse pragmatics, discourse is defined as a string of non-arbitrary utterances. Indeed, single utterance discourses are seldom and atypical. For instances, anonymous letters or SMS typical one-utterance discourses:

(7) You’re goanna die!
(8) Let’s meet at the Linguistics Building at noon.

Secondly, discourse units are not sentences or clauses, because sentences or clauses are maximal linguistic units, composed by lexical and functional morphemes. We demonstrated in Pragmatique du discours that discourse is not a relevant scientific unit (Searle 1994), because it can be reduced in a string of non-arbitrary utterances, whereas utterances cannot be reduced to the combination of morphemes, as sentences can. Our position is thus radical, in the senses that we state the following propositions:

Morphemes are not reducible to units they are composed by, because phonemes combinations do not explain their properties of higher-order units.

Sentences can be described as the combinations of morphemes, lexical as well as grammatical. However, syntactic rules are not directly derived from the properties of morphemes that compose them. So compositional semantics is closely related to syntax, and the position of morphemes in the sentence does not produces the same results from the meaning point of view, as shown by contrasts between (9) and (10)

(9) Tous les étudiants n’ont pas réussi leur examen. ‘All students didn’t pass their exam’
    = no student pass his exam
    = some students didn’t pass their exam
(10) Pas tous les étudiants n’ont réussi. ‘Not all students passed their exam’ =
    some students didn’t pass their exam
    ≠ no student passed his exam.

An utterance is the combination of a sentence and a context. This explains why a great number of utterances take different meanings in different contexts, because of the presence of indexical, as in (11), but also non-situational words as anaphora (12):

(11) a. I am happy here.   b. The weather is fine here.
(12) a. They are still increasing taxes. b. In Geneva, they are driving like fools. c. The boss fired the worker because he was a convinced communist.

These examples are well known and do not demand deep comments. On the other hand, the consequence is that if the definition of utterances is projected at the level of relevant units, the conclusion is that utterances are no more linguistic units, but pragmatic ones: understanding utterances requires to be able to determine the linguistic meaning and its interaction with contextual elements to access its sense. In other words, sentences can have different meaning (they can be linguistically ambiguous), but utterances do have a unique sense.

If utterances are not reducible to sentences, defined as the linguistic maximal units, the utterances are the unique units at the pragmatic level being relevant scientific units. Why then, if discourses are composed of strings of non-arbitrary utterances, would they not be relevant scientific units, that is, non-reducible to elements that compose them (utterances)? The issue is crucial because we claimed that discourse interpretation is not reducible to the interpretation of utterances. Why are discourses not candidates for relevant scientific units, that is, emergent 2 facts (Searle 1994)?

The argument is twofold: on the one hand, in order to be emergent 2, and not emergent 1, discourses should be defined by rules that would be independent of the units they are composed by; on the other hand, the interpretation of discourses is the result of complex hypotheses formation and confirmation processes, which are not reducible to the sum of the interpretation utterances that compose them.

These two points are based on empirical and theoretical arguments.

From an empirical point of view, a great number of discourses are coherent without the presence of linguistic markers of cohesion. Worse, it is easy to find examples where the presence of marks of cohesion does not insure the coherence of discourses. (13) is an illustration of the first case and (14) of the second:

(13) a. John knew that his wife’s operation would be very expensive. There was always Uncle Harry… He reached for the suburban phone book. (Shank & Abelson 1977, 428).
   b. Veni, vidi, vici.
   c. Grass is green. It rained the whole summer.

(14) a. John knew that his wife’s operation would be very expensive, but there was always Uncle Harry.
   b. Veni et vidi et vici.
   c. Grass is green because it rained the whole summer.

In (13a), the invited inference is that Uncle Harry can pay for the operation; the first two discourse segments are in a coherence relation, because the second disconfirm the conclusion drawn from the first (“it will be impossible to pay for the operation”). (13a) could have been realized by (14a), that is, a more explicit version of (13a). The famous Caesar’s sentence simply signals temporal order through the order of propositions, and could have been realized through a more explicit version (14b). Finally, in (13c), the reverse order triggers the causal interpretation, which is made explicit in (14c) through the connective because.
In (15) on the other hand, all marks of cohesion (connectives, anaphora) are present, but the discourse is not coherent.

(15) John bought a cow. Indeed it is red-haired like a squirrel. It lives in the forest and hibernates during the winter. But it is very cold in this part of the world. (Reboul & Moeschler 1997)

The conclusion is that no empirical argument can support the claim that discourse would be the by-product of specific discursive rules. If that conclusion is confirmed, then the thesis that discourse is an emergent 2 unit is difficult to support. This is not really surprising, because only radical supporters of a constructivist approach to discourse adopt such a claim, that is, sense is not associated to units as utterances, but is the result of an interactive construction realized in conversation.

Let’s come back to the second point, that is, the nature of the content of the interpretation of discourses. In Pragmatique du discours, we distinguish two layers of comprehension, the local level (utterance) and the global one (discourse). Our hypothesis is Grice’s theory of non-natural meaning, that is, utterances interpretation is not only commanded by the recovery of the speaker’s informative intention (what he wants to communicate) but also by the recovery of his communicative intention (his intention to communicate his informative intention). The consequence is that utterance and discourse interpretation refers to a double process of informative and communicative intention. We can thus formulate the issue of discourse interpretation in the following terms:

Discourse interpretation is based on the speaker’s global informative and communicative intentions; in other words, the hearer has to be capable, if possible at any time of the interpretive process, to determine the speaker’s global informative and communicative intentions.

Global intentions are determined on the basis of local informative and communicative intentions, associated to utterances.

As the interpretation process is a hypotheses confirmation process, the determination of the global informative intention (what the speaker wants to communicate in his discourse) cannot be reduced to the sum of local hypotheses.

Now, we have defined the main lines of a pragmatic theory of discourse. It is based on the construction of local/global informative/communicative intentions. These processes are hypotheses formation and confirmation processes, and are not specific to discourses: they simply belong to higher-level cognitive processes.

Which are the current researches in pragmatics? Do the last developments confirm or disconfirm our hypotheses? I would like to give some elements based on theoretical and experimental researches that show the main lines of our theory are more confirmed than invalidated.

3. Theoretical and experimental pragmatics

What fundamentally changed since the publication of Relevance in 1986 and its second edition in 1995 is a more precise integration of pragmatic researches in the field of cognitive sciences, namely
the idea that Grice’s definition of non-natural meaning is a special case of activation of the Theory Mind (ToM) (Baron-Cohen 1995). In other words, if we are able to read into other minds, that is, if we are mind-readers, this ability is neither random nor the result of social or linguistic conventions, but the result of the application of what Dennett (1987) called the intentional stance: we attribute to others intentions, beliefs, briefly speaking mental states. In other words, the theoretical foundation of pragmatics has been reinforced by theoretical and empirical discoveries as ToM. As an illustration of a recent work, Sandrine Zufferey’s PhD dissertation (Zufferey 2007) analyzes the acquisition of causal connectives parce que ‘because’, car ‘for’ and puisque ‘since’ in French. She demonstrated that linguistic phenomena associated to metacognition are acquired later than phenomena implying metacommunication: for instance, the order of acquisition of the connective parce que in French (17) confirms the order of cognitive complexity and shows that abilities on metacommunication are cognitively easier than metacognition. So causal and speech act parce que are acquired earlier than its epistemic (metacognitive) uses (see Sweetser 1990: 77 for such classification of uses):

(16) a. Jean est revenu parce qu’il l’aimait. causal
John came back because he loved her.
b. Qu’est-ce que tu fais ce soir, parce qu’il y a un bon film qui passe? speech act
What are you doing tonight, because there’s a good movie on.
c. Jean l’aimait, parce qu’il est revenu. epistemic
John loved her, because he came back.

(17) Causal parce que (a) & speech act parce que (b) < epistemic parce que (c)

Now, the cognitive turn had general theoretical implications on the description of the process of utterances interpretation. Relevance Theory recently introduced in an explicit way a comprehension procedure, which is directly linked to the accessibility of hypotheses (Wilson & Sperber 2004, 613):

(18) Relevance-theoretic comprehension procedure:

a. Follow a path of least effort in computing cognitive effects: Test interpretive hypotheses (disambiguation, reference resolutions, implicatures, etc. in order of accessibility. b. Stop when you expectations of relevance are satisfied (or abandoned).

The path of least effort requires looking for the most relevant interpretation, that is, the one that minimize processing costs to obtain positive cognitive effects. The comprehension procedure thus implies no superfluous cognitive efforts in the computation of cognitive effects. Moreover, the accessibility of the speaker’s informative intention does not pass through a procedure going from the more to the less literal meaning. On that point, works by Gibbs (1994) show that subjects access the meaning of a metaphor without accessing its literal meaning and the discovery of its falsehood (contra Searle 1979).

Although experimental works are now available on metaphors, scalar implicatures, logical connectives, irony, comparisons (see Gibbs 1994, Noveck 2001, Noveck 2004, Jorgensen, Miller & Sperber 1984, Reboul 2004 among others), and allow concluding that secondary meanings are acquired later than the acquisition of lexicon and grammar, the most important empirical
contribution of pragmatics is now engaged in the domain of lexicon. The label *lexical pragmatics* is now well accepted, and reinforced from Larry Horn’s work on scalar implicatures (Horn 1972, 1984, 1989, 2004, 2007) and more recently in Relevance with the work by Deirdre Wilson and Robyn Carston (Carston 2002, Wilson 2003, Wilson & Carston 2007).

I would like to give some examples showing how simple phenomena of pragmatic enrichments affect the interpretation of lexical items. Let us exam the following examples:

(19) a. Mary is looking for meeting a *bachelor*.
    b. Holland is *flat*, so ideal for bike vacations.
    c. Axel *cut* the lawn.
    d. *Some* students passed the pragmatics test.

(20) a. Federer is the new *Sampras*.
    b. I need a *Kleenex*.
    c. I cannot eat: my steak is *raw*.
    d. Our garden is a 2500 m² *square*.

(21) a. My teaching assistants are *gems*.
    b. Abi is a *princess*.
    c. Jacques is a *bulldozer*.
    d. This surgeon is a *butcher*.

How can we explain the precise meaning of italicized words? More precisely, how to understand that in (19), *bachelor* means ‘young man eligible for marriage, well fit and that will suit to Mary in a future life project like marriage’, that *flat* means ‘without mountains or uphill slopes, agreeable for biking and no-sportsmen’, *cut* ‘removing the superior part of the grass with a lawn mower, *some* ‘only some. Similarly, but with different effects, *Sampras* in (20) means ‘the best tennis payer in the world, whose playing is elegant, fine and efficient’, *Kleenex* ‘disposable paper towel’, *raw* ‘not enough cooked’, *rectangle* ‘geometrical form resembling approximately to a rectangle’. Finally, *gems, princess, bulldozer, butcher* cause the emergence of meanings varying from contexts to contexts. In the intended context for (21), these lexical units respectively implicate ‘person working in a diligent, intelligent and efficient way’ (*gems*), ‘beautiful, adorable girl likely to find in her adult life a charming prince’ (*princess*), ‘person who destroy anything in his passage’ (*bulldozer*), or still ‘bad surgeon’ (*butcher*).

In these three examples series, concepts which are associated to lexical entries are specified, that is, more precise (19), less precise or broadened (20), or extended in resemblance domains (21). In a more precise way, we can present the meaning of *bachelor, raw or pearl* in the following way:
Figure 1: Specification: the extension of BACHELOR* is more specific than BACHELOR

![Diagram of Specification]

Figure 2: Broadening: the extension of RAW* is larger than RAW

![Diagram of Broadening]

Figure 3: Metaphorical extension: the donation of GEM* is in non-null intersection with GEM

![Diagram of Metaphorical Extension]

In Relevance, CONCEPTS* are called *ad hoc concepts*. Without entering in a discussion on the relevance of ad hoc concepts (see Reboul 2007 for a radical criticism), I would like to indicate the following points (Carston 2004):

- In Figure 1, the specification implies a rise of information on the set of hypotheses defining the encyclopaedic entry of the concept: BACHELOR* contains more information than BACHELOR.
- In Figure 2, the broadening implies on the contrary a modification of the logical entry of the concept: RAW* does no more entail NOT-COOKED, as RAW does it, but implies COOK AT AN INSUFICIENT DEGREE TO BE EATEN.
- In Figure 3, what is happening is both a modification of logical and encyclopaedic entries of the concept GEM for the definition of GEM*.

The hypothesis of Relevance lexical pragmatics is thus that very general processes, linked to encyclopaedic and logical entries of concepts, are at the origin of pragmatic enrichments, that is, specification, broadening and metaphorical extension. Those processes are sufficiently general to give rise to an homogenous and identical treatment of phenomena that were before expressed in ad hoc and unsatisfactory ways – see for instance Searle (1979) on metaphors.
We saw that the rescue of pragmatics was necessary for lexical processing. What we have developed recently (Moeschler 2009, chapter 2) is a generalized explanation of the semantics-pragmatics interface, among others by showing the crucial role of explicatures. Here are the examples that we used:

(22) a. Some linguists know logic.
   b. Some linguists don’t know logic.

In the neo-Gricean interpretation (Horn 1989, 2004, 2008), (22a) Q-implicated (23a), and (22b) Q-implicates (23b):

(23) a. It is false that all linguists know logic.
   b. It is false that no linguist knows logic.

In other words, positive and negative particulars implicate the negation of positive and negative universals, respectively. With Aristotle’s logical square (Figure 4), we can state the logical relations (entailments) and pragmatic relations (generalized conversational implicatures) given in (24), following the general principle of scalar implicatures given in (25):

Figure 4: the logical square

(24) a. Logical entailment
   (i) $A \rightarrow I$
   (ii) $E \rightarrow O$
   b. Conversational implicatures
   (i) $I \rightarrow A$
   $O \rightarrow E$

(25) If $S$ and $W$ belong to a quantitative scale $<S,W>$, where $S$ is the strong term and $W$ the weak one, then
   a. $S \rightarrow W$. $W \rightarrow \neg S$
In Moeschler (2009, chapter 2), we show that if <all, some> is a quantitative scale, <no, some…not> is not. We demonstrate that if the relationship in (26) is correct, it is not the case with (27):

(26) Some linguists know logic -> it is false that all linguists know logic.
(27) Some linguists don’t know logic -> *it is false that no linguist knows logic.

Our solution is that some and some not receive a more specific pragmatic reading, given respectively in (28):

(28) a. Only some linguists know logic.
    b. Only some linguists do not know logic.

Then, we escape Larry Horn’s aporia, according to which (22a) and (22b) communicate the same information, that is the conjunction of both particulars, that is, (29), which is trivially true:

(29) Some linguists know logic and some linguists do not know logic.

Now, what the neo-Gricean perspective on generalized conversational implicatures (Levinson 2000, Gazdar 1979, Horn 1984) defines as scalar implicatures is in fact explicatures of the logical forms of the utterances. In other words, explicatures are truth-conditional aspects of utterances, and not non-truth-conditional aspects of utterances, as implicatures are.

Pragmatics, in a restricted sense, consists in an intrusion into semantics for the determination of meaning. This conclusion is not trivial: it is fundamental for the perspective we adopt on discourse (pragmatics in a broad sense). Indeed, it is generally assumed that those semantic phenomena are not contaminated by usages and that semantics is strictly a linguistic coding-decoding process. As we saw, pragmatic intrusion is permanent, from the utterance level, and every discourse interpretation is contaminated by pragmatic intrusion phenomena.

I would like to show how such an intrusion works, especially in case of interpretation revision, as in metalinguistic uses of negation. In the classical semantic interpretation, utterances with metalinguistic negation are revisions of ordinary uses of negation. In other words, utterances (30) are processed as in (31): so, in (32), lexical implications and presuppositions given in (33) are cancelled, since their revisions lead to a contradiction. Propositions in (32) logically entail propositions in (33) and in (34), since they are stronger:

(30) a. Anne has not three children.
    b. We don’t like Bridget.
    c. Mary regrets to have failed.

(31) a. Anne has two children.
    b. We dislike Bridget.
    c. Mary failed.

(32) a. Anne has not three children; she has four.
    b. We don’t like Bridget; we love her.
    c. Mary regrets to have failed, since she succeeded.
(33)  
  a. Anne has four children.
  b. We love Bridget.
  c. Mary succeeded.

(34)  
  a. Anne has three children.
  b. We like Bridget.
  c. Mary didn’t fail.

Formally, the revision strategy supposes that linguistic meaning of negation is its narrow scope, that is, negation scopes the predicate. The wide scope of negation, which cancels implicatures and presupposition, would thus be a specific pragmatic phenomenon, occurring when the default value is contradicted by new linguistic information. The question is the following: is the revision strategy legitimate? Recent works on scalar implicatures (for instance Chierchia 2004, Chierchia, Fox & Spector to appear) and negation (Carston 2002, Moeschler 1997) make a different hypothesis: linguistic meaning is the broader meaning, and uses in context suppose a semantic narrowing.

What are the consequences of lexical pragmatics approaches? The most immediate consequence concerns discourse: if we want to understand how discourses are interpreted, we must activate pragmatic devices at first, utterance by utterance. So, at the local level – what we called local informative intention – we already are in a complex pragmatic processing, implying among others the search for cognitive effects and more specific or broader interpretation than semantics requires. So, can we give a precise description of the interpretation processes in discourse?

4. Back to discourse

How can lexical pragmatics contribute to a general approach of discourse pragmatics? We would like to give some arguments, based on empirical facts, on how inferential processes are activated in the course of discourse interpretation.

At first, discourse interpretation is conceived as a dynamic process. It means that discourse interpretation is based on information that can be partial and comprehension necessarily produces provisory conclusions, based on anticipatory hypotheses.

Our capacity to anticipate, that is, to project hypotheses, can among others be manifest in narratives. In narratives, time moves along discourses, the crucial issue being the location of eventualities in the flow of time. The capability to identify time reference is either linguistically signalled (through verbal tenses for instance), or left to the responsibility of the reader, and thus pragmatically inferred.

In French, the tense system is remarkable, because it defines a set of sufficiently precise signs, but also sufficiently flexible to allow contextual revisions. In Moeschler et al. (1998), we claim that the French passé simple makes the time go forward, the French imparfait offers an internal perspective on events, the French passé compose is directionally neutral and the French plus-que-parfait has a backward temporal direction. In other words, French past tenses induce the following temporal movements:
The following examples illustrate these four cases:

(35) Axel frappa Abi. Elle hurla de douleur.
    Axel hit Abi. She yelled with pain.

(36) Axel frappa Abi. Elle lui était insupportable.
    Axel hit Abi. She was unbearable.

(37) Axel a frappé Abi. Elle a crié.
    Axel hit Abi. She cried. (or Abi cried. Axel hit her)

(38) Axel frappa Abi. Elle avait poussé son cri insupportable.
    Axel hit Abi. She had yelled in an unbearable manner.
The temporal movements are simple and relatively easy to compute. Verbal tenses give signs and allow self-location on the time arrow.

Here is an example of a diagram whose function is to follow time movement from one utterance to another:

![Figure 9: An example of temporal path](image)

In that path, time goes forward, but only in e4. Nothing more is required to understand temporal relations: the imparfait indicates that time does not go forward, and the participial clause (*assise dans son giron - in her lap*) can be constructed on the same temporal line as e4, as shown in Figure 10:
What is the relationship between this example and our initial topic? First, the example shows that these complex processes can be represented in a very simple way: the comprehension procedure requires reaching the most accessible assumptions. As soon as an event determines a reference time in the course of the narrative, it is used to construct the temporal reference of the next event. It is obvious that such schemas are progressively abandoned except the calendar markers. So, the title of the chapter *Aboard TPA 545, 5:18 am*) requires to embed the set of events of the chapter inside the indicated place and to start the temporal reference at 5:18 am:

Now, if discourses were built only with steps of punctual inferential computations, with a memory permanently updated and a system of reference temporal calculus with a size limited cursor, we should not need a pragmatic devise of formation and confirmation of global anticipatory hypotheses. For Crichton’s readers, the incipit of his novel, given in (39), is a sign that the quietness in the TransPacific flight for the passengers waking up will follow a series of catastrophic events. Because the reader is engaged in a thriller, he builds a disaster context in which the morning quietness triggers the inference that it is temporary and the passengers’ life potentially in danger. Such inferences are made plausible because besides the simple computation of the initial events a dramatic event is inferred. It is exactly what the concept of global informative information is made
for. The reader thus suspects that quietness is only apparent: he is going to contextualise initial events inside a larger context, because of the title of the novel (*Turbulences*): he is thus expecting that turbulences happen in the end of the flight.ix A horizon of expectations is now given, which will be confirmed in the next pages, however without accessing the causes of such events at that point of the story. The context of the first global hypothesis is thus the following:

![Diagram](image)

5:18 am  e4'

\[
\begin{align*}
&\text{e1} \rightarrow \text{e4} \\
&\text{e2} \rightarrow \text{e5} \\
&\text{e3} \\
\end{align*}
\]

\text{turbulences}

Figure 12: the context of the incipit

5. Conclusion

In this contribution, we tried to show the main lines of a research program for discourse pragmatics. We saw that a model for discourse interpretation cannot be but pragmatic, in the sense of inferential pragmatics, integrating the concepts of global intention and anticipatory hypothesis.

Now, a crucial question arises: why formal models of discourse, as RTS, DRT or SDRT for instance (Mann & Thompson 1988, Kamp & Reyle 1993, Asher & Lascarides 2003) could not be appropriate models, for instance for the computation of temporal reference and the discourse relations between events? In fact, the representations given in the previous section can easily be translated in the formalism of SDRT, which instantiates variables for individuals, events and time, and also compute temporal relations though a set of discourse relations, as Narration (for our horizontal relations) and Elaboration and Background for vertical relations (see also ter Meulen 1995 for a similar representation of temporal coherence). In the last chapter of *Pragmatique du discourse*, we mention that these approaches are in harmony with ours.
However, I would like to indicate two main differences, explaining why we choose a pragmatic framework, that is, an under-specified approach for discourse comprehension. The first difference lies in the determination of discourse relations, for instance for the computation of reference: we claim that discourse relations are neither necessary nor sufficient conditions for discourse interpretation. Wilson & Matsui (2000) have argued that in the case of bridging (‘pontage inférentiel’), discourse relations are not required for the comprehension of the inferential link. If discourse relations are not necessary, are they sufficient for discourse comprehension? In that case, the result of Roussarie’s thesis (Roussarie 2000) shows that a SDRT framework for text generation fails in producing well-formed texts, because they lack a fundamental property of discourses: the convergence towards a global intention. Now, remember that this concept is basic in *Pragmatique du discours*.

This point has a very strong implication and leads to the following question: are there criteria that could measure what is lacking to discourse theories like SDRT, that is, discourse quality or coherence? What a pragmatic theory of discourse must be able to predict is conditions for of discourse coherence. In *Pragmatique du discours*, Anne Reboul and I have made a precise proposal: coherence judgements depend on two criteria, the complexity of the global hypothesis and its accessibility:

\[(40) \text{Conditions on coherence judgements:} \]
\[\begin{align*}
\text{(a). The more complex the global hypothesis is, the stronger the judgement of coherence.} \\
\text{(b). The more accessible the global hypothesis is, the stronger the judgement of coherence.}
\end{align*}\]

We have now two precise criteria for coherence judgments: these criteria can be tested experimentally, validated or falsified, and also questioned. However, and it is not a weak contribution, they are the logical result of a consistent theory of discourse.

**End notes**

1 Here is the formal definition of an emergent 2 unit:

“A fact \( F' \) is emergent 2 iff

(i) \( F' \) is emergent 1.

(ii) \( F' \) has causal powers that cannot be explained by the causal interaction between \( a, b, c \ldots \).”

(Reboul & Moeschler 1998: 43; my translation)

2 Here is the formal definition of emergence 1:

“A fact is emergent1 iff

(i) \( F \) is composed of elements \( a, b, c \ldots \)

(ii) \( F \) has properties that are not, or not necessarily those of \( a, b, c \ldots \)

(iii) The properties of \( F \) are explained by the causal interactions produced between \( a, b, c \ldots \): they are causally emergent characteristics”. (Reboul & Moeschler 1998: 43-4; my translation)
3 Newmeyer (2009) shows in a parallel view that recursion property of natural languages has no linguistic motivation: it is a handicap to the syntactic parsing. On the other hand, recursion has fundamentally a cognitive function, because thought is recursive (see also Sperber & Wilson 1986). On the role of recursion for language and its origin, cf. Hauser, Chomsky & Fitch (2002).
4 The theory of mind is particularly important in two empirical domains: fiction and mental pathologies, as autism for instance. See Reboul (2008) and Reboul & Foudon (2008) for an approach to the auctorial irony and autism.
5 It is not the case for butcher which, associated to surgeon, always yields the same connotations.
6 (37) is trivially true because it corresponds to the logical meaning of the sub-contraries propositions: sub-contrary propositions cannot be false together, but they can be true together, as show the truth-table of the inclusive disjunction (∨):

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We can add that the implicature becomes very odd, since if some makes a restriction in its pragmatic meaning (some X ≠ all X), the conjunction of some some F are G and some F are not G gives as a result the inclusion of the two sub-sets (linguists not knowing logic and linguists knowing logic).
7 We are not so far from Ducrot’s approach to pragmatics, notably his idea of integrated pragmatics (to semantics) (cf. Moeschler 2006 for a general presentation). The label used nowadays, pragmatic intrusion, signals that the issue is more a usage rather a linguistic issue.
8 Note that this approach is constant in any pragmatic approach coming from Grice’s work, that is, approaches adopting the principle of the Modified Occam’s Razor (Grice 1978), which claims that “senses are not to be multiplied beyond necessity” (Grice 1979:118-9). A good example of this kind of mechanism is given by the logical connective or: its semantics is the inclusive meaning of the disjunction (the broader one) and its pragmatics is the restricted and exclusive meaning of the disjunction. See Moeschler & Reboul (1994) for an explicit illustration.
9 This is a special effect due to the choice of the French title of the novel: Airframe gives rise to another context, linked to the constructions of airplanes, in fact the main topic of the novel.
References


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“A fact F’ is emergent 2 iff

(i)  F’ is emergent 1.

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(Reboul & Moeschler 1998: 43; my translation)

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“A fact is emergent iff

(i) F is composed of elements a, b, c…

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