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WHEN TEMPORAL EXPRESSIONS DO NOT TELL TIME:
A PRAGMATIC APPROACH TO TEMPORALITY,
ARGUMENTATION AND DISCOURSE

Thèse de Doctorat présentée à la Faculté des Lettres
et Sciences humaines de l'Université de Neuchâtel,
Institut des Sciences du Langage et de la Communication

Juin 2015

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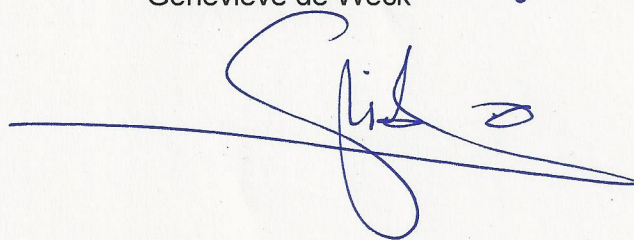
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Abstract

Using temporal expressions to indicate relations other than temporal ones is a well-documented phenomenon. This study aims to tackle the problem from a procedural pragmatic perspective, an approach that considers that certain expressions – temporal adverbs and connectives in this case – encode instructions guiding the addressee to infer the relevant relations between the constituent parts of utterances to obtain the most appropriate interpretation. Here, a dozen English and French temporal expressions are described and analyzed with the aim of understanding how and why they could be used non-temporally, and proposing a general outline for the type of procedure such expressions could encode.

Keywords / Mots-clés

Procedural Pragmatics, Temporal Linguistics, Temporal adverbs, temporal connectives, Non-descriptive Usages, Discourse Markers.

Acknowledgments

I would like to express my deepest appreciation to my advisor, Professor Louis de Saussure for his guidance and support throughout my research, whether it was a word of encouragement before a conference presentation, or an opposite view of how things worked, the brainstorming sessions and verbal jousting all helped me to arrive at the end of what I started. For being both mentor and friend, un grand merci.

I would also like to extend my gratitude and appreciation to the members of my committee Professors Paul Chilton, Laurent Gosselin and Andrea Rocci for taking the time to thoroughly review my research, and for their many insightful comments and helpful suggestions.

Many thanks to all my colleagues and friends both in Neuchâtel and Geneva, whether we shared an office or a table, while at work or at play, every one of them contributed in some way – with a helpful hint, an encouraging phone call or email, resonating strings, beat of a drum, and many tossed dice.

To my dear colleagues and (nonetheless) friends, Steve Oswald and Alain Rihs, I extend my heartfelt thanks in the form of an upwardly-moving five-digit salute that makes a sound even when no one is around to hear it – for the talks, here and abroad, on foot or by train, in earnest or in jest; my time at Neuchâtel was both lightened and enlightened working with them.

I would like to thank my mother and father dearly for their continuous faith and support in me, even when I had exhausted the usual amount allotted to children by their parents. Countless thanks to Eric for lending an ear whenever it was needed, for his encouragement and faith in my ability to complete this dissertation, and for not always knowing what I meant by what I said.

Muchos thank yous to Oscar for listening to me ramble on about connectives without really knowing why I was rambling on about them; for all the off-topic discussions, complete with stratifications and time spent covering this or that song, or playing one of our own.

My heartfelt thanks and *huah!* to my friends Alex, Dave, Dimitri, Laurent, Lucas, Ralph, Seb for helping keep me sane by talking about literature, music, games, movies and just about anything, even linguistics.

To Fanny, who can never sufficiently be thanked for all her love, support and encouragement, big and small, in all moods, in all weather, in all states of being, she was there for me, reminding me what a real connection was even when my mind was on words that linked clauses and discourse rather than on us.

Last and never least, to my son Jacob, who did not arrive on time, yet in a timely manner, to help put all the time waiting to be finished writing about time and non-time into perspective.

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“[Linguistic signs] occur much as do properly placed signposts on human paths; as long as there is only one unambiguously recognizable way, there is no need of signposts. But at crossings, where the situation becomes ambiguous, they are quite welcome.”
- Karl Bühler
Theory of Language: the Representational Function of Language,
1990

1. Introduction

In all types of conversations and written texts, one can hear/read temporal expressions being used to do something other than give the time of the event described, the time of the utterance itself, or specify any temporal relations between one or more events. Instead, they are used for a variety of purposes: to order argumentative clauses, to structure discourse, they may be responsible for indirect speech acts, or may even be a means of explicitly marking a subjective attitude or point of view. Temporal expressions – be they tenses (i.e. tense morphemes), adverbs, adverbial phrases, or connectives – are found in practically all linguistic productions. Thus, the fact that they may be used to express something more than straightforward temporality is essential to research in temporal linguistics in particular and to the study of natural languages in general. Investigating this phenomenon should provide a better understanding of precisely how temporal adverbs, connectives and indexicals (or deictics) function in a given language – here, English and French – and hopefully grant insight into these expressions’ (basic) semantic meaning and their (actual) pragmatic meanings in use. The argumentative and discursive usages of temporal expressions are well-known phenomena acknowledged by several approaches and traditions as we shall see further on (chapters 2 & 3). Let us now turn to a few examples to help illustrate what it is we will be examining. Below, when listing government officials (1) is argumentative (establishing a hierarchy) but (2) is not (it is temporal):

(1) First comes the president, *then* the vice-president, *then* the secretary of state...

(2) ?First comes the president, *afterwards* the vice-president, *afterwards* the secretary of state...

Furthermore (2) is strange because of the present tense, which favors a generic interpretation (which is true regardless of who is president) versus a specific interpretation (which is true if the President is at this moment entering the room just

before the Vice-President). This is also the case in French, as (3) and (4) below illustrate, where (3) is argumentative and (4) is not:

(3) Jean et Marie se voient souvent, *maintenant*, je ne sais pas s'ils sont amants. (Nef, 1978)

(4) ?Jean et Marie se voient souvent, *en ce moment*, je ne sais pas s'ils sont amants.

The commonly accepted “time metaphor” surrounding this type of transfer is oversimplistic – it fails to capture the intricacies of the phenomenon; we must therefore reject the idea that within argumentative or discursive speech or text, the passage of time simply equates progression. More importantly, there is no theory on offer that satisfactorily handles the very specific cognitive-pragmatic enrichment of a semantic form denoting time to a pragmatic meaning expressing discursive, argumentative or other relations. Thus, I suggest that this kind of enrichment does not principally rely on discursive features – as the textual linguistics or discourse grammar traditions suppose – but is instead achieved through pragmatic processing via the contextualization of the linguistic form, for instance through the search for *relevance* (Sperber & Wilson 1986, 1995)¹. I will show that there is much more complexity involved in this enrichment than is usually admitted or supposed; and I aim at spelling out the part of it which is determined by the procedure encoded by the expression itself and the part which is dealt with by contextualizing operations.

1.1. Initial problem

The object of this research is the description and examination of utterances and sentences wherein temporal expressions are used to communicate something other than time – in addition to, instead of, or even in spite of any extant temporal meaning. Our perspective will both integrate the semantics and pragmatics of such linguistic productions and include notions from studies on argumentation and input from cognitive trends in contemporary linguistics and pragmatics. In our definition of *temporal expressions*, I include tenses, temporal adverbs, connectives and indexicals. When I say ‘communicating something other than time’, I mean *not principally denoting temporality*; whether or not a temporal utterance can be completely devoid

¹ No doubt other pragmatic approaches, namely Gricean or post-Gricean ones, would prove equally effective in this endeavor; the choice of Relevance Theory is partly one of affiliation with the Geneva pragma-semantic school of thought, and partly because of the direct lineage from Relevance Theory to the conceptual/procedural distinction. More on this in sections 2.4 and 3.1.

of temporality will be considered as well (though this is a secondary concern, and does not overly affect our principal thesis). Finally, I will argue that temporal expressions understood in this way are used argumentatively or discursively as defined further along, and have an effect on the subjectivity (or point of view) of the utterances in which they appear. For instance it may be that a particular perspective is made more salient with such usages – though we are not claiming that temporal expressions themselves are non-subjective² when used temporally – indeed, temporal expressions are usually calculated from a particular speaker’s perspective, or index (in the sense of Korta & Perry 2011). This approach is by no means widespread, and I will try to account for such occurrences, using tools and data from several different approaches, such as theories or approaches whose focus is on describing and analyzing discourse and utterances, and Relevance Theory, which have yet to be fully corroborated.

Past and current research on the subject has been undertaken in various fields, including philosophy of language, narratology, studies in rhetoric or even critical literary theory. For this research, I will mainly adopt Sperber & Wilson’s (1986, 1995) Relevance-Theoretic framework, particularly the work dealing with the conceptual/procedural distinction, first posited by Blakemore (1987, 1992) and developed by Luscher & Moeschler (1990), Luscher (1999), Moeschler (2002) and more recently Saussure (2003, 2011) into a *procedural pragmatics*. Saussure’s procedural pragmatics provides us with an algorithm geared for dealing specifically with temporal expressions used non-descriptively (though not necessarily non-temporally, 2003: 276-284). Naturally, I will include insights and data from several fields but will subsume them to a predominantly procedural form of cognitive pragmatics in order to give as unified an account as possible. This perspective is hearer-oriented, specifically focused on what a hearer’s interpretation of a given utterance is and how they achieved this understanding (though of course utterances will also be considered from the speaker’s perspective).

These principles, and the observations of these expressions so far, prompted me to formulate the following series of questions, which I will attempt to answer throughout this study:

² The quality of ‘subjectivity’ can be found in both temporal expressions and certain categories, like indexicals or demonstratives. It may be that this ‘subjectivity’, if inherent to these types of expressions, is precisely what allows at least part of the non-descriptive usages.

1. *why and how is it that temporal expressions do not necessarily yield a temporal interpretation?*
2. *how do hearers arrive at an understanding of this sort, and be reasonably confident that this interpretation is what was actually intended by the speaker?*
3. *what specific conditions must exist, or, in what context(s) do these temporal expressions function in this way?*

These questions will be looked at from several angles; as suggested above, the non-descriptive use of temporal expressions leads one to consider their argumentative potential, discursive structuring and their effects on point of view. A temporal expression which does not denote (only) temporality will be assumed to be used non-descriptively, that is, for the purpose of something other than *describing* temporality – be it the time of an eventuality, temporal ordering or temporal relations between eventualities. Consider the following:

(5) Qu'allait-il faire *maintenant*?

(6) What was he to do *now*?

where in French the *imparfait* coupled with *maintenant* in (5) can express the perspective of a character in Free Indirect Speech (FIS). In English, this is also possible and hinges on the use of *now* in this specific (fictional narrative) context, as (6) illustrates. In both cases, the present time coincides with the narrative present, so there remains an element of temporality in these fictional contexts. I suggest that a perspective-shift is induced by *now* and *maintenant*, likely due to the indexical nature of both terms. Additionally, I hope to show that this is possible with other connectives – not necessarily indexical ones – because of something embedded in the expressions' core meaning. I will come back to this later (cf. sct. 3.1-3).

In (7) and (8), spoken after hearing the doorbell ring, the future tense is not used to describe a future moment, but a present one. Furthermore, these examples express a strong probability, approaching certainty (i.e. if the mailman is expected).

(7) Sarà il postino. [a case of epistemic future use in Italian]

(8) That'll be the mailman. [a case of epistemic future use in English]

The use of temporal adverbs such as *then* in (1) or *yet* in (9) below, and tenses as in (7) and (8) all show examples of utterances not used descriptively; despite this fact, they are perfectly understood by native speakers as being regular linguistic productions. Indeed, there is no confusion between the intended meaning of *yet* in (9) and (10) and

the one in (11) or (12), below:

(9) Those paintings are ugly and expensive, *yet* people buy them.

(10) The sun was bright, *yet* cold.

(11) John hasn't seen Mary *yet*.

(12) Are we there *yet*?

These are but a few of the occurrences of temporal expressions that can be found in various languages that produce different effects, according to the context of course, but also – perhaps especially – because of procedural elements encoded within them. Therefore, I think an essentially procedural pragmatic model will enable us to better describe the way temporal expressions, and ultimately connectives, illocutionary adverbs, certain adverbials, and indexicals, function.

Our goal is to present a method capable of accurately predicting how hearers construct relevant interpretations of utterances containing such expressions (whether used temporally or not). More generally, our research aims to provide some answers regarding the specific contributions that conceptual information can bring to implicatures and inferences, on the one hand, and the actual constraints that procedural information imposes on implicatures and inferences, on the other.

This is not a dissertation on the meaning of Time, or a debate of its existence, but a study of the meaning of expressions that are used to tell time – and especially of the particular aspect of their meaning that allows for non-temporal interpretations. However, a brief discussion of what Time is and how humans perceive Time is helpful for considering some of the notions a language may attach to this phenomenon. Thus, I will touch on what Time is and how it is construed from a few different viewpoints in the first section. In section 2, I will address how temporal expressions have been, and still are, described and understood by several linguistic and philosophical schools of thought. The general paradigm and methodology used in subsequent sections will be addressed at the beginning of section 3. This will be followed by the analysis proper, in section 4, where we shall first look at examples of the expressions we have worked on, and proceed to describe and then analyze the way they function more in-depth. Section 5 will present the concluding arguments.

1.2. Time & temporality

In this section, we will consider a brief and approximate definition of time and temporality, how they can be measured, and how these notions can be represented in language. Can time be regarded as a reality, or is it only an abstraction created by human minds? Alternatively, is temporality the same thing as Time? The goal is not to answer these questions thoroughly or definitively here. I do however think it necessary to have at least a basic understanding of time from three linked, but different, perspectives: Time as a physical phenomenon, Time as a psychological and biological phenomenon and, finally, Time as a linguistic phenomenon. Thus, this dissertation may appear to be of a multidisciplinary study; this is not really the case, but looking at Time from three vantage points will better enable us to define Time and temporality in language, and from there see what they are not.

1.2.1. Physical Time³

A detailed account of physical time goes beyond the scope of this research. Instead, I propose an approximate description of physical time: the physical time a non-specialist can talk about. In other words, our notion of ‘physical time’ is a naïve or commonsensical one and what I mean by ‘physical time’ is ‘*real time*’⁴. Therefore, very simply put, Time is something external to human consciousness, which would exist even if we humans were not here to witness it – much like the sound the proverbial falling tree makes all alone in the woods.

Physical time is, approximately, the continuous modification or transformation of matter. Although it exists regardless of human perception – and can thus reasonably be called ‘objective’ or ‘real’ for the majority of human affairs – it can be and is measureable through instruments, or our own perceptual systems: our senses and mind. The decay of matter and energy – known as entropy⁵ – are good indicators

3 “Although time may not exist at a fundamental level, it may arise at higher levels—just as a table feels solid even though it is a swarm of particles composed mostly of empty space. Solidity is a collective, or emergent, property of the particles. Time, too, could be an emergent property of whatever the basic ingredients of the world are.” “Is Time an Illusion?”, Callender, C. p16 in *Special Edition: A Matter of Time*, in Scientific American, vol. 21, no.1, spring 2012.

4 “Ultimately it doesn’t matter whether it really exists. Our reverence for time rests on a deep psychic need to recognize meaningful milestones.”— Gary Stix (2012). “Real Time” in *Special Edition: A Matter of Time*, Scientific American, vol. 21, no.1, spring 2012, pp 6.

5 As per the Second Law of Thermodynamics.

of the existence and passage of Time. Causality is another good indication of the existence of time, when observing that eventuality A is the cause of eventuality B for instance; there is a lapse of time, however small, between the two. Observing natural objects⁶ in motion – from the sun and moon to a bird or cloud passing overhead – is also a hint that Time exists, and that it is passing⁷. Indeed, human observation of the sun’s movement across the sky or the life cycle of trees was undoubtedly one of the first ways of telling time humanity had. We have been organizing life around objectively observable phenomena – the alternating cycle of day and night, perceived as different from the preceding and succeeding days and nights – for many thousands of years. Similar observations have been and still are made using the lunar cycle (months) and the seasons, (years, and aging). Measuring time, by noting the length of shadows cast by objects, or clocks, all derive from observations such as these. This is, in all likelihood, the main reason we construe time as past-present-future.

Now it seems we are enmeshed in the conception of linear time, from past to present to future, and this is already human consciousness coloring what Time is. That being said, we cannot directly perceive whether or not time is as quantum mechanics describes it to be (many of us don’t have access to the devices or knowledge which could allow one to (in)directly perceive Time). We must thus adopt a humanly understandable conception of time, that is, regarding how natural language encodes this notion of time without complex encyclopedic knowledge. Perhaps the most interesting point is that whether Time actually exists or not, our limited human perceptions of a set of physical phenomena we construe as Time play a role in how we represent Time in our minds and languages. Crucial for our representations of time and temporality are the notions of change, duration, intervals, directionality and causal order⁸ – all of which are described in commonly accepted temporal linguistics.

6 Fillmore (1997: 48-49) speaks of “sequentially recurring event types” provided by nature, e.g. changes in the moon’s appearance, alternation of light/dark, seasonal changes.

7 “... in general relativity, time retains a distinct and important function: namely, that of locally distinguishing between “timelike” and “spacelike” directions. Timelike-related events are those that can be causally related. An object or signal can pass from one event to the other, influencing what happens. Spacelike-related events are causally unrelated. No object or signal can get from one to the other. Mathematically, a mere minus sign differentiates the two directions, yet this minus sign has huge effects. Observers disagree on the sequence of spacelike events, but they all agree on the order of timelike events. If one observer perceives that an event can cause another, all observers do.” (Callender, 2012: 17)

8 Akin to Pöppel, E. (1978)’s “elementary time experiences”: (1) duration, (2) non-simultaneity, (3) order, (4) past and present, and (5) change.

1.2.2. Psychological Time⁹

First, our minds, in consort with the visual and other sensual faculties, establish an order in things, whether the order is correct or not depends on various factors: whether the telltale signs of Time were correctly perceived or not, whether our brains are tired or altered in some way, etc. For many philosophers and cognitive scientists (Plato, Descartes, Newton, Kant, Schopenhauer, Fodor, Dennett, to name a few), our thoughts are representations of observable or imaginable objects (whether the objects are real or not). In other words, when I look at any present object – tree, dog or table – my eyes send information to my brain which forms a mental image of the perceived objects. Naturally, these ‘images’ are not real outside of my mind, and will not be ‘seen’ in exactly the same way if they were conjured up by another human being. Nevertheless, I now possess an idea, an approximation of these objects, which becomes a representation if and when I consciously think of them or wish to talk about them with another person. Now, if we accept this conception of how our mind deals with objects in the world – through representations – and extend these representations to actions and events – i.e. not only do I see things, I can see them move – then how the human mind deals with time becomes clearer: through representations.

Time and temporality existed biologically¹⁰ in the human brain before human cultures developed a metaphysics of time. The succession of days, lunar phases and the seasons all existed before the first calendars, and humans were undoubtedly capable of reckoning by these variations since the human body is regulated according to such natural circadian, infradian and supradian rhythms – all of which make up our “biological clock”. Recent neurological research on time in the mind supports this view (see footnote #9). For instance, the notion of “elapsed time” has been shown to not only exist but to be crucial to information processing: taking action based on past

9 Let us add here that we consider Psychological Time to be inherently biological, since it is the brain that effectively handles the data pertaining to Time. A few neurological studies have pinpointed the basal ganglia and right parietal cortex as being responsible for managing timekeeping functions: see the reports by Harrington, D. et al. (1998) “Temporal processing in the basal ganglia”, *Neuropsychology* 12(1) and also Rao et al. (2001), “The evolution of brain activation during temporal processing”, *Nature Neuroscience* 4(3) to name just two.

10 Further reading in chronobiology: <http://plato.stanford.edu> “Experience and Perception of Time” & “Temporal Consciousness” entries.

experiences and/or present events, or by anticipating outcomes and consequences¹¹ of future actions.

For us there is no question that Time is a real sensation, that it is a physiological/biological phenomenon. Indeed, why would human cells – each and every living cell, no matter how basic – have a mechanism (circadian rhythms¹²) that exists to measure time, if some part of our bodies did not in fact perceive time in a meaningful way? Let us now turn to the linguistic representation of time, and a particularly useful mental faculty – the metarepresentational capacity – that is used for describing time and a wide array of temporal relations.

1.2.3. Linguistic Time¹³ and Metarepresentation

“...time is arbitrary. You pick your zero point anywhere you want, that way you can shuffle each person's time line sideways till they all coincide.” (Thomas Pynchon, *The Crying of Lot 49*, 2006[1965], p.117)

The last point I will discuss in this section is the existence of Time in language. Unsurprisingly, every language has a way to express Time and temporality – typically lexemes, morphemes, intonations, or other markers, that allow speakers of a given language to temporally situate eventualities on a timeline of some sort (or perhaps even several overlapping timelines). Time in language is, to put it simply, the linguistic ordering and structuring of eventualities: if we perceive the gathering of storm clouds (eventuality A) and precipitation (eventuality B), we place A before B (since it cannot rain from clear skies, under normal conditions); already we are constrained by our linguistic productions to describing a certain temporality. We could of course have said “the rain fell shortly after the storm clouds had gathered” but the two eventualities still occurred in the same order, regardless of how they are indicated via linguistic means. Often mentioned with temporality are aspectuality and modality, and these two elements, complete fields in their own right, will be considered secondary to Time and temporality in this research.

11 See Wittmann (1999; 2009) and Eagleman et al. (2005) for a more thorough and nuanced discussion of time and temporal perception.

12 This report is particularly interesting: Hastings M. (1998). “The brain, circadian rhythm and clock genes.” *BMJ*. 317: 1704-07.

13 Let us point out that the notion of Time and Temporality is of course more complex than the picture painted here. For our present purposes we will mostly leave aside aspectuality and modality. For more detailed approaches to aspectuality and temporal reference see Reichenbach (1947), notably the R point, or Gosselin's (2005) interval model of aspectual-temporality. See also Boogarts (1999) for a detailed discussion of aspectuality and its relation to temporality.

Aspectuality and Aktionsart are both central to a proper temporal linguistics theory. The intricacies of these two notions go beyond our purposes here regarding the non-temporal (or sometimes, non-aspectual) uses of temporal (or aspectual) expressions. Though it is true that some of the expressions studied here should perhaps more adequately be called aspectual adverbs – for instance *already* and *déjà* – their non-standard usages can be analyzed without using an aspectual component, so long as aspectuality is subsumed to temporality. This is the perspective adopted here; aspectuality in the present context should be viewed as a temporal component that concerns the temporal reference of events with respect to *completion*, *duration* or *progression*. If and when aspectual information for a given expression is particularly salient for, or even crucial to, interpreting said expression's non-descriptive usage this will be addressed accordingly. Regarding modality¹⁴, which can be roughly described as the domain that deals with beliefs and attitudes, and possibility and necessity, its role in a linguistic representation of time can be seen as ways of presenting thoughts and beliefs about time. For our part here, we will not address modality directly in any detail for most of the expressions dealt with – the only exception being in section 4.3 where epistemic uses of English *will* and the French future tense are discussed.

Though I will not go into the particulars of McTaggart's take on time, his famous essay "The Unreality of Time" (1908) addresses the problem of temporal ordering. For McTaggart, change is essential to Time and he further sketches out two types of (linguistic) temporal sets, which he calls the A-series and the B-series. It is the first series (the A series) that addresses change, and therefore, he reasons, it is the A-series which properly constitutes time. It would seem that no matter the cultural and/or linguistic representation of Time – linear, cyclical, quantum etc. – there is at least one basic observation that holds: there is a 'now', a 'before' and an 'after'. McTaggart proposes two series of temporal ordering of events – the A-series and the B-series¹⁵ – each pointing to commonly accepted aspects of time; for the A-series it is change, and tensed time – past, present, future, and for the B-series it is tenseless time – before and after.

14 Jaszczolt (2009) addresses the question of how humans represent (conceptualize) time and temporality, and her answer is: through modality. The thesis Jaszczolt presents is that temporality (past, present, future) can be construed as degrees of epistemic modality.

15 McTaggart also proposes a C-series, which is both without tense and without change, it is a series that describes order but not time.

In other words, all natural languages have a present, a past and a future, or to put it yet another way, a T_0 , T_{-n} and T_{+n} – despite whether a given language has distinct markers for these temporal categories or not, and regardless of how we represent time. It is not too difficult to see that there is an eventuality B which succeeds A, and precedes C, on a time-line, and this is also the case for a circular (cyclical) conception of time. Fillmore (1997) sums this up nicely:

“The first thing to notice about time is that it is one-dimensional and unidirectional. If two events can be said to take place at different moments of time, it is necessarily the case that one of them is earlier, the other later. Since time is unidirectional, the relationship between that which remains the same at different times and the time dimension itself is frequently thought of by the human mind as movement.” (Fillmore, 1997: 45)

For Fillmore *earlier* and *later* are “basic temporal notions, not based on a movement metaphor” (46) and are in fact an example of how movement and space is mapped onto time, in his words understanding “the front/back axis for an object in motion presuppose[s] an understanding of unidirectional time” (ibid)¹⁶. Fillmore’s claim that *earlier* and *later* are (the) basic time expressions suggests that Fillmore could be seen as a B-theorist of time in McTaggart’s framing of temporality. It should be noted that for there to be an *earlier* and a *later* time, there must be a point in time from which to measure them – for instance the *now* or *present* time of speech.

Of course, the time and temporality of languages are also representations. Moreover, these representations naturally depend quite strongly on our psychological perceptions and mental representations – thus, in this sense, linguistic time and temporality are mostly a matter of *metarepresentation*.

Metarepresentation is a way of describing a human cognitive capacity and the ensuing use of this capability to understand human behavior. Some scholars claim we use this capacity to ascribe mental states to one another with the goal of (approximately) comprehending their behavior, both verbal and non-verbal (Sperber (ed.), 2000). Initially, our understanding of the term *metarepresentation* was to take this notion as being what Sperber & Wilson (1986, 1995) call an “interpretive usage”.

¹⁶ The remainder of Fillmore’s lecture on Time though insightful is not of direct use to our analysis of temporal expressions used non-temporally.

It turns out, this is much too limited a definition of metarepresentation for our purposes.

Many linguists, cognitive scientists and philosophers of language and mind accept a common (and somewhat obvious) definition of *metarepresentation*, namely that a metarepresentation is a representation of a representation (Jacob 1998, Récanati 2000, Sperber 2000, Wilson 2000, Carston 2002). However, these same scholars also point out the need for additional criteria – they all agree on at least one: that a *metarepresentation must have content* of some sort, and also must be recursive and compositional (ibid.). They also agree that there is some sort of metarepresentational capacity in human cognition, which is necessary to attributing mental states to others (beliefs, desires, thoughts, and utterances)¹⁷; this faculty is used by both speaker and hearer in communication.

Consider Jacob's (1998) example of metarepresentation, which goes beyond quotation and embedded sentences/utterances: the following utterance, spoken by Mary: "It is hot in here" can lead the hearer to interpret the following conclusion:

"[Mary intends [me to believe [that she wants [me to open the window]]]]" (1998: section 2.).

Jacob points out that a hearer of the aforementioned utterance can and most likely will reach a conclusion that is itself a complex metarepresentation, based on the actual utterance, the context and the hearer's *inference* of Mary's intention in producing the utterance¹⁸.

I accept here several claims surrounding metarepresentation¹⁹; namely that we as humans possess this cognitive faculty, that we use this capacity in our

17 In Wilson (2000: 411-414), we find an overview of the various perspectives of metarepresentations: i) Theory of Mind's perspective – thoughts & attributed thoughts; ii) The Gricean perspective – attributed speaker's meanings, from attributed utterance to attributed thought; iii) Perspective of the Literature on quotation – utterances & attributed utterances; iv) "Non-attributive" perspective – propositions, sentences & abstract representations where "the higher-order representation is an utterance or thought and the lower-order representation is an abstract representation..." (413). According to Sperber humans are capable of at least three types of metarepresentation: mental (or private) metarepresentations that deal with mental representations (i.e. thoughts), public metarepresentations dealing with public representations (i.e. quotes, utterances) and abstract metarepresentations that deal with hypotheses and concepts (2000: 127).

18 "As Grice (...) and other pragmatists such as Sperber & Wilson (...) have observed, communication is at bottom a matter of determining an intention, i.e., a mental state." (Jacob, 1998, Proceedings of Conference on Memory, section 2).

19 See for instance Sperber (2000), and Récanati (2000).

communication (verbal or no), that to be an authentic metarepresentation there must be content, and especially that this faculty is used by humans to ascribe mental states, including intentions, to other humans. Human verbal communication is inherently metarepresentational and that this is so both for descriptive uses and for interpretive uses. Obviously, this will not suffice for our purposes; I thus make the claim that our object of study – *interpretive usages of English and French temporal expressions* – is but one specific type of metarepresentation.

It is possible that metarepresentations of interpretive uses of language are more complex than this; indeed, we could say that the more interpretive an utterance, the more there are levels of metarepresentation, but for now, let us keep in mind that language in general is a metarepresentational faculty, and that when a given utterance is descriptive it is representational and when it is interpretive it is metarepresentational (or representational at a higher level). As a final note, the mechanism of metarepresentation, coupled with the abstract qualities of physical, psychological and linguistic time and temporality are perhaps the very factors that allow for temporal expressions' versatility in usage.

1.3. Discourse and argumentation

Finally, as stated above, when temporal expressions such as *now* or *since* are not used to give temporal indications, they are understood as expressing other types of information, namely two that we will develop in this study: discursive and argumentative information. By discursive information, I mean information that indicates an attitudinal or subjective relationship between the speaker and the proposition expressed by them – clauses, utterances or discourse units. Another type of discursive information is intersubjective or interactional information – something we will not go into here, as it goes beyond the scope of this study. By argumentative information, I mean information that helps natural language-users establish ordered relations between clauses, utterances, sentences or units of discourse. This is by no means restricted to ‘argumentative’ usages, of course. What makes an utterance or discourse unit ‘argumentative’ also largely depends on the speaker’s intention – for instance the goal of debating a law or convincing someone to adopt a specific view. Thus, a speaker expresses a (or several) proposition(s) whereby they wish to bring the hearer to consider a specific conclusion, for instance by prompting the hearer to make a relevant deduction based on the arguments they express.

There is some overlap between these two categories, and quite often, the goals of speakers using an expression to effectively argue a point coincide with speakers’ discursive intentions. All else being equal, expressions or utterances used with an argumentative orientation can be seen as a subset of a type of discursive information. Schematically discursive information can be portrayed as relational information (in the widest sense), which can further be divided into subtypes such as argumentative relations (e.g. the speaker makes it clear to the hearer that they are concluding Q from P), attitudinal relations (e.g. the speaker portrays their belief(s) about a specific proposition or state of affairs), or interactional relations (e.g. the speaker marks the utterance in relation to the current exchange or a wider social context). Finally, discursive (and argumentative) information is what contributes to overall coherence and cohesion in discourse, and temporal expressions (whether used temporally or non-temporally) fulfill this function.

1.4. Hypothesis & Rationale

We observed in examples (1-4) that temporal expressions can be, and are, used to express something other than time or temporal relations. In Relevance Theory (which will be laid out more thoroughly further along) utterances are said to be either descriptive or non-descriptive, and this latter category is what I claim is the case of temporal expressions used non-temporally. If this is so, what makes *now* temporal (descriptive) in “Get out *now*!” and non-temporal (non-descriptive) in “*Now now*”? For Relevance Theory it is the *relevance* of the appropriate usage in the appropriate context that allows for such usages; this seems perfectly plausible, but there must be something more to it than that.

My principal hypothesis is that temporal expressions – adverbs and adverbials, connectives, deictics and tense morphemes – are procedural expressions; this means I consider that the semantics for each of these expressions contains instructions (or, in the terms adopted here, a procedure) that helps guide the hearer/reader to interpret the relevant usage. This idea underlies why and how temporal expressions may yield non-temporal interpretations: being procedural expressions, they encode instructions that are applied according to their context of use. Therefore, hearers may arrive at non-temporal readings of utterances containing temporal expressions where the context clearly calls for a reading other than the standard one(s). This can be set out in more detail as:

procedural temporal expressions encode both temporal instructions and non-temporal (i.e. argumentative or discursive) instructions – and thus, temporal expressions, though they may be used non-temporally (non-descriptively), are temporal by default, and are pragmatically modified to fit the context

We shall return to our hypotheses after an overview of most of the major approaches that have touched upon the problem of linguistic expressions used non-standardly, especially temporal expressions. I will further discuss these hypotheses and their sub-hypotheses in section 3.2.

2. State of the Art on standard & non-standard usages of Temporal Expressions

Throughout this chapter, I will discuss several influential linguistic and philosophical schools of thought, each of which proposes various ways of understanding temporal, argumentative and discursive relations in utterances, texts, conversations. Given that the actual temporality of temporal expressions is not the primary concern here, and given the abundance of research on temporality in linguistics, it goes beyond the scope of this dissertation to exhaust all the literature on the subject; instead, the focus will be on the different theories' or approaches' main arguments, and more precisely on what they say about argumentative and/or discursive relations. It will quickly become apparent that some of the approaches dealt with here develop this aspect more thoroughly than others, and with these approaches there will be more to say.

Thus, the first subsections will be a general overview of the various proposals these approaches have to our problem; in the final two subsections, I will more thoroughly discuss the outlooks proposed by approaches that yield insights and tools that can readily be used in this study. Section 2.1 is a brief discussion of how several language philosophers deal with notions like reference, denotation, indexicality and so forth. Section 2.2 summarizes a few semantic traditions and how they handle temporal or other relations (e.g. discursive). Section 2.3 is a brief summary and critique of a theory that was crucial for the development of procedural pragmatics – Anscombe & Ducrot's theory of argumentation within language. Section 2.4 is an overview of Relevance Theory and how this model is used to describe and analyze non-temporal uses of temporal expressions. Finally, in section 2.5, I will review several different linguistic traditions – from text linguistics to discourse analysis – which treat a class of expressions they call 'Pragmatic' or 'Discursive' markers, and whose function is close to that of the temporal expressions we will be looking at here.

2.1. Philosophy of Language

Philosophy of Language offers a wide range of perspectives on temporality, argumentation and subjectivity, though in several instances these insights are not the central point of the research. There is of course much work in language philosophy that is important to a more general theory of language; we cannot give it a sufficiently thorough treatment here. Instead, I will focus on just a handful of philosophers whose work has been most relevant and influential to my research. We will not concern ourselves overmuch with truth-conditions, possible worlds or intensions and extensions here, and reference will be important especially insofar as determining how expressions used non-descriptively behave – e.g. do they function similarly to indexicals²⁰ in Direct Reference Theories?

For instance, if and when an occurrence of *now* is used non-descriptively, this will mean that *now* does not refer to the present (time of speech). Naturally, *now* is no ordinary referring word – hence work like Kaplan’s on demonstratives had an influence on how the present model was conceived – and we will see further along just what *now* may in fact be referring to in such cases. Thus reference is perhaps the most important concept retained from language philosophy: since I think that the function of these temporal expressions used non-descriptively may be dependent on just what they can be used to refer to, if they do refer to anything, our search for these expressions’ basic (or ‘core’) semantic meaning must at least consider the question of reference.

Let us now turn to Kaplan’s model that specifically addresses indexicals and demonstratives. Many of his ideas apply equally well to adverbs and connectives (much like Lyons 1977), at least those used non-descriptively, as is the case of the temporal adverbs and connectives we’re interested in. Furthermore, Kaplan’s notion of *character* – “that component of the sense of an expression which determines how the content is determined in context²¹...” (1978: 359) – is central. In the present view, what I call procedural expressions address precisely this question: *how* to use

20 For Bühler deictic signs point to things (real or abstract) while conceptual signs “do not point, but mean” things directly (Bühler 1990: 40).

21 In the Kaplanian view, context can be construed as a set that includes the speaker, the time of speech, the place of speech and corresponding possible world ; we replace the latter with ‘encyclopedic knowledge’. In a sense we can consider procedural expressions as fulfilling character functions.

contextual elements to arrive at the most relevant interpretation. For Kaplan there is also a resemblance between ‘demonstrations’, ‘depictions’ and ‘descriptions’, which he calls ‘indicative devices’ (cf. Kaplan, p. 350 fn23 [p355])²²; this points to the importance of the (sometimes subtle) relationship between speaker, context, the expressions used and what they are used to refer to, or what they are used for if not used to refer to something. For Kaplan the role of indexicals is to “tell us what is referred to. Thus they determine the content for a particular occurrence of an indexical. But they are not part of that content²³” (Kaplan, 1989: 523). In other words indexicals are extra-propositional, that is not part of the proposition itself but nonetheless playing a major role in the utterance’s interpretation, and I note that this also applies to certain adverbs and connectives (such as the temporal expressions analyzed here).

For Kaplan, the relationship of *character* to content resembles the one traditionally regarded as the relationship of sense to denotation; character is a *way* of presenting content (542). Perhaps one of the most interesting aspects of Kaplan’s theory of demonstratives is his claim that indexicals do not encode concepts but rather rules which determine the content of the utterances in which they appear; this is not too far from the proposal that certain expressions (i.e. ‘procedural expressions’ which includes indexicals) encode rules that help determine the saturation of variables and the selection of the correct background information to obtain a ‘full’ interpretation. And the question of whether it can be applied to the temporal expressions we will be looking at – besides the obvious direct application for *now* and *today* etc. – remains an open one. I predict that it should function well with *yet* and *then*, and most likely can be successfully applied more broadly to all the expressions studied here.

22 For Kaplan the establishment of parallels between demonstrations and descriptions leads him to consider “...the possibility of a demonstrative analysis of descriptions. If pointing can be taken as a form of describing, why not take describing as a form of pointing?” (Martinich, 2008 [1970]: 350) I like this imagery of ‘description as a form of pointing’; we take this idea a little further by stating that *now* when used temporally (i.e. descriptively) points to time, and when used non-temporally (i.e. non-descriptively) it points to a relation between clauses or between the speaker and their utterance, the situation or the hearer. In brief for Kaplan a demonstration is simply pointing at/out, demonstratives are expressions that point at/out and the *demonstratum* is that which is pointed out/at.

23 The extra-propositionality of demonstratives/indexicals is mentioned a few other times: “demonstratives... have both a sense and a demonstration. (...) according to the demonstrative analysis the sense of the demonstration does not appear in the proposition. Instead the sense is used only to fix the *demonstratum* which itself appears directly in the proposition.” (Kaplan, 1978: 350)

Finally, more recently, two philosophers in particular, Récanati (1993, 2000, 2001, 2007) and Corazza (2002, 2004a, 2004b), address the problem of indexicals both in terms of temporality and as operators affecting the point of view within utterances. Both have researched the relation between thought and language, with a perspective engaging at once the semantics and the contextual data of various utterance types. What is of particular interest to our project is their treatment of temporal expressions such as *now* and *then*, which both see (albeit in slightly different terms) as being indicators of perspective²⁴ in addition to, or instead of, denoting time. Interestingly, for Corazza (2002:441-443) *now* and temporal indexicals in general are ‘pure indexicals’²⁵ (in keeping with Kaplan’s indexical/demonstrative dichotomy); while for Récanati it is the opposite: they are ‘impure indexicals’, if indeed indexicals at all. Instead Récanati favors the term ‘perspectivals’ to describe *here* and *now* (2001:125-126). Yet despite these seemingly opposed views (perhaps due to a terminological difference) both embrace the importance of perspective as being central to our understanding of these terms. To sum their viewpoints up roughly, lexical items like *now* or *here* trigger a shift in the hearer’s perspective, thus prompting the hearer to adopt a point of view consistent with the speaker’s about the given proposition. Since I argue that temporal expressions can be used non-temporally to indicate argumentative or discursive meanings, their notion of ‘perspective’ was influential to my view of non-descriptive usages. As the view adopted in this study is a pragmatic post-Gricean one, this idea of perspective can simply be considered contextual information for our purposes here.

24 See also Gherasim’s work on indexicals and subjectivity (2003 and forthcoming), wherein she explores the mechanisms of indexicality vis-à-vis Récanati’s ‘perspectivals’; this last notion informed our appreciation of how certain classes of expressions can sometimes set off interpretations of unexpected points of view.

25 Corazza (2004:289-290) proposes that *now* (and *here*) is a (pure) indexical when it is used to refer to the time of the utterance, but works as an anaphoric term when it does not. Given this notion, the usages of *now* analyzed hereafter would not be considered indexicals by Corazza, though arguably the non-temporal usages we will see are not anaphoric either.

2.2. Semantic Traditions

Several approaches²⁶ to time and temporality exist in the field of semantics, including Vendler (1967) and Dowty's (1986) seminal *aspectual semantics* which consider the temporal properties of predicates as being directly linked to their encoded aspect, aspectual classes and the notion of telicity. Thus, it is widely admitted that (cf. Boogaart 1999) if a predicate is atelic the normal progression of time is blocked; otherwise, temporal progression is not only allowed, but also mandatory. This point may be of some importance since aspect is a feature of sentences that could play an unexpected role in triggering the non-descriptive readings.

For the “traditional” semantic approach, Lyons' two-volume *Semantics* (1977) gives a comprehensive general overview of deixis and spatio-temporal coordinates, nicely summed up below:

“The term ‘deixis’ (...from a Greek word meaning ‘pointing’ or ‘indicating’) is now used in linguistics to refer to the function of personal and demonstrative pronouns, of tense and of a variety of other grammatical and lexical features which relate utterances to the spatiotemporal co-ordinates of the act of utterance.” (Lyons, 1977/2: 636)

Seeing that a very similar deictic function can be performed by expressions not normally associated with deixis is of crucial importance to our own approach to temporal expressions. As suggested in the previous section and in keeping with what Lyons states above, all the temporal expressions we will be looking at here are in a sense deictic, in that they indicate coordinates or relations in utterances and discourse²⁷ – and can thus be considered deictics understood in this way. Whatever we call these expressions, the problem remains the same: how do they allow for such a variety of usages?

Further along Lyons more explicitly links tense to deixis: “Tense (...) is part of the deictic frame of temporal reference: it grammaticalizes the relationship which

26 Other important studies include: Leech (1969), Comrie (1976, 1981, 1985), Bach (1981), Martin et al. (1981), Smith (1978, 1981), Franckel (1989), Kleiber (1990b), Declerck (1991), Vet (1991), Quirk et al. (2004 [1985]), ter Meulen (1995), Moeschler et al. (1998), Molendijk & de Swart (1998).

27 “By deixis is meant the location and identification of persons, objects, events, processes and activities being talked about, or referred to, in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and at least one addressee.” (Lyons, 1977/2: 637)

holds between the time of the situation that is being described and the temporal zero-point of the deictic context.” (1977/2: 678). So for Lyons, time is deictic, a now widely accepted notion. This view is appealing from a logical standpoint (cf. Reichenbach, 1947) and also has good explanatory potential for many if not most utterances; however, aspect is not considered deictic for him (1977/2: 705). I am tempted to say that it is, in that the attribution of specific reference times for e.g. an interval of time is dependent upon precise indications, one of which could indeed be telicity (though this goes beyond the scope of this research). However, the main point here is that if time (and aspect, and modality) is deictic, then referential linguistic theories can be straightforwardly applied to temporal expressions and utterances.

Formal dynamic semantics, of the type proposed in Discourse Representation Theory (henceforth *DRT*) by Kamp (1981), Kamp & Reyle (1993), Vet (1985, 1991) and in Segmented Discourse Representation Theory (*SDRT*) by Lascarides & Asher (1993) and Asher & Lascarides (2003), refer to *rhetorical relations* which operate upon properties of temporal order, based on their hypothesis that temporal relations are linked to general discursive relations. Other recent works within *DRT* include Molendijk & De Swart (1998) and Molendijk (2005). These semantic approaches have essentially been concerned with the contribution of tenses to the truth conditions of utterances with respect to temporal ordering and causal sequencing in discourse; they have yielded complex truth conditional mechanisms for temporal expressions’ production of meaning. Though insightful, these approaches have a few limits: with *DRT* we have a strong model which handles standard usages well, but is somewhat at a loss for non-standard (i.e. non-descriptive) usages; with *SDRT* the picture is slightly better – the model is more predictive and more thorough, and it is fully capable of adequately describing and predicting a variety of temporal relations – but again, when dealing with non-standard uses of temporal expressions, *SDRT* falls short of painting a complete picture.

So, for our purposes here, these theories are too strongly dependent upon logical form and default relations; a major consequence of this is a dependence on a predominantly truth conditional appreciation of natural language (including temporal expressions), and too much difficulty explaining phenomena that fall outside *SDRT*’s list of default relations. Depending so strongly on truth conditionality is too restrictive, and these approaches cannot adequately handle non-truth conditional

phenomena of the type we are interested in – at least not without some level of modification. Furthermore, aspectual and formal semantics do not sufficiently relate the importance of the context in utterance comprehension (see Saussure 2003 for a detailed discussion).

Though this study has a predominantly pragmatic orientation, there are a few key concepts from a handful of semantic traditions which will be mentioned throughout, though in all likelihood I will not necessarily make much use of them. The idea being that these elements will be discussed where appropriate for a more semantic take of what is occurring with the expressions studied here. I may sometimes mention semantic tools like these merely to make clear the approach a more semantic study would take to our problem and to eventually highlight a bridge between the pragmatic and semantic way of dealing with temporal expressions used in a non-standard way.

Thus I may, for a similar group of examples, point out how a ‘standard’ semantic approach would address the fact that *now* or *next* for instance are used non-descriptively. In brief though, semantic theories like DRT and SDRT (would) posit that language-users have a database of contextually-dependent non-standard meanings that are accessed whenever “appropriate” – that is, a language-user will access their database when contextually triggered during the process of disambiguation, saturation etc. I can agree with this idea, though it needs to be adapted somewhat for the present model, but in essence, we are looking for the (semantic) variability of temporal expressions, when these usages occur, and how (and hopefully why) these usages can occur. Furthermore, this study’s pragmatic orientation means we start from the context that affects expressions, not from expressions “searching” for the appropriate contextual parameters²⁸ that are necessary to flesh out the full semantic meaning of these expressions. A final note: it is the ability of inference that allows one to interpret non-descriptive usages, and arguably attributing rhetorical relations in a discourse or text also depends upon inference²⁹.

28 Such as the ‘Appropriateness Condition’: A context *c* is appropriate for an LF Φ only if *c* determines a variable assignment *gc* whose domain includes every index which has a free occurrence in Φ . (Heim & Kratzer, 1998: 243)

29 See Blass (1990) and Reboul & Moeschler (1998) for a relevance-theoretic take on rhetorical relations, coherence and cohesion.

2.3. Integrated Pragmatics (or ‘Radical Argumentativism’)

Anscombe & Ducrot’s (1983) work on connectives in utterances, which they consider as being predominantly argumentative, offers a wealth of information in the form of well-formulated analyses of typical French connectives (*et, mais, ou, donc, enfin, ensuite* etc.). Their framework considers the use of language as being non-truth conditional, as such it is strongly anti-descriptivist. That which is of most interest to us is Ducrot’s consideration that connectives do *not* encode concepts (as do for instance “horse” and “door”) but rather instructions (which we will refer to as procedures) which tell one in what way an utterance is to be understood or interpreted. Another notion that we must keep in mind is the fact that utterances can be *metalinguistic* and that connectives can be used metalinguistically; this enables a speaker to refer not to the content of an utterance but to the utterance itself.

Indeed, though I agree with Anscombe & Ducrot’s idea that utterances can and are used argumentatively and/or metalinguistically, their approach seems too extreme with regards to their assertion that not only is language essentially non-truth conditional, but also that it is “illusory” (their term) to believe that language can be used for anything other than argumentation, since it is its ‘argumentative orientation’ which, for them, determines the meaning of utterances (Anscombe & Ducrot 1983: 79-102). This postulate leads almost inevitably to a relativistic conception of language and linguistics. More importantly, the type of enrichment that leads the hearer to a non-temporal interpretation of a temporal expression is not solved, since the French ‘integrated pragmatics’ tradition adopts the view that language terms integrate both the semantic and the pragmatic, thereby leaving little room for outside influence (context). However, if relevant, I will take into account the observations³⁰ made in relation to our topic by the scholars of the Ducrotian tradition, notably Rossari’s staff in Fribourg (see also Rossari 1997, 2000, 2002, 2006).

Corinne Iten’s (1999) paper offers a thorough review and convincing criticism of Anscombe & Ducrot’s work, from a relevance-theoretic perspective. Iten has this to say on how Anscombe & Ducrot use the deep/surface structure opposition in their “integrated pragmatics” to describe utterance interpretation:

³⁰ Rossari’s ‘polyfunctionality’ (in Fischer 2006) when discussing connectives is quite close to our procedural pragmatic take on such expressions.

“According to Ducrot (1984: 181-183), the signification of a deep structure is a set of instructions as to how to assign sense to the utterance. Thus to know the signification of the deep structure underlying [a given utterance], is to know what to do to interpret an utterance of it.” (Iten, 1999: 44-45)

Iten makes a good case of what is wrong with Anscombre & Ducrot’s Argumentation Theoretic account; she convincingly goes over the numerous contradictions in Argumentation within Language Theory³¹, which we believe makes this theory an overly complex linguistic analysis at best. One strong objection to Anscombre & Ducrot’s approach to argumentation within language is their heavy reliance on polyphony (inspired no doubt by Bakhtin’s ideas on polyphony and dialogism); which, by itself, adds no relevant explanatory value to the analysis of conversation and discourse – though it may be more useful for written texts, particularly fictional ones. Luscher (1994, 2002) also provides a description and critique of Anscombre & Ducrot’s model. His three main objections to integrated pragmatics are that 1) the semantics must foresee every situation/context, and is thus overloaded – as a consequence some simple uses of connectives are described with too much (unnecessary) complexity; 2) not all discourse/speech is argumentative in and of itself; and 3) the description of some utterances may still be undertaken in three stages (as prescribed by Anscombre & Ducrot), even if these stages are not visible (2002: 26-27).

For us, the real objection to the Ducrotian view is not with the idea that language is non-truth-conditional³² but rather with the idea that all language expressions are inherently argumentative – a corollary to the absence of distinction between semantics and pragmatics. It is true that language can be used argumentatively, but to claim that “argumentativity” resides in every expression used in all utterances would be to completely neglect speaker intention and hearer interpretation – in other words, this hypothesis would completely sideline the interlocutors’ cognitive processing in language production and reception. A more reasonable view would be to say that some categories of expressions contain an element that allows a speaker to give utterances a specific orientation (argumentative or otherwise).

31 Iten refers to Anscombre & Ducrot’s approach to argumentation within language as Argumentation Theory, which is quite distinct from classic logical or rhetorical models or the contemporary Pragma-Dialectic theory most commonly researched and practiced today.

32 Iten calls Anscombre & Ducrot’s “integrated pragmatics” a “non-truth conditional semantics” (Iten, 1999: 43-44).

2.4. Cognitive or Radical Pragmatics

This heterogeneous theoretical framework aims to explain communication by means of an ostensive-inferential interpretation mechanism, and has two principal traditional views of this type of mental or cognitive processing: the Gricean and Neo-Gricean perspective and Sperber & Wilson's (Post-Gricean) Relevance-Theoretic approach. The Gricean model of natural language processing is perhaps the first truly pragmatic take on how people communicate. Grice's model of language use is now well known and generally accepted, whether one admits all four maxims, three of them (Levinson 1987: Q, I and M Principles), two maxims (Horn, 1984: Q and R Principle) or just one (Sperber & Wilson, 1995[1986]: 'manner', or *relevance*). But the maxims are mostly just fluff, as the crucial Gricean contribution is his theory of conversational implicature – the idea that 'what is meant' is more than just 'what is said', that an expression's literal meaning is insufficient for a hearer to completely grasp what a speaker actually meant by saying what they did. This opened the door to a more widespread understanding of utterances as necessarily being more than just the semantics of the expressions composing them – the speaker's intention and the context in which expressions and utterances appear are essential as much as, or more so, than an utterance's logical form. Additionally, since Grice, pragmatic models of communication rely on underlying cognitive principles, namely, inference and deduction, which are used by hearers to flesh out the full meaning of utterances.

Neo- and Post-Gricean models more or less follow Grice, perhaps more strongly focusing on the economy behind a given linguistic production and its interpretation, construed as cost and effect. This can be seen in the interplay between Levinson's Q, I and M Principles, Horn's Q and R Principles or simply as the overall cost (for the hearer) of interpreting an utterance and the cognitive payoff achieved by comprehension. Here, the Relevance Theoretic model is favored; it is sounder, simpler and proposes a more adaptable framework – it is also, thanks to its "fast and frugal heuristics" (S&W, 1995, 2002), more straightforward in its application. Though this theory is not specifically tailor-made to describe temporality, as more grammar-oriented or some narrative approaches have been, it does present several studies which will be crucial. I have already mentioned the distinction between conceptual encoding and procedural encoding, and Sperber & Wilson address both this

distinction (1995) and, more recently, some aspects of time and temporality (1998). This framework posits the importance of context since in this model utterances are perceived as semantically underdetermined and in need of a cognitive pragmatic mechanism to achieve full (or at least optimal) comprehension. Saussure's procedural model (2003) was central to our research as it both addresses temporality and postulates the importance of procedural encoding within temporal expressions. We will look more closely at Saussure's model in section 3.1.3.

Sperber & Wilson's *Relevance Theory* though stemming from Grice's approach and adopting many of his general principles, retains but one of his maxims, that of *manner* or *relevance*. They add or (re)define certain notions essential to their communication theory, namely, *informative* and *communicative intentions*³³, *cognitive environments*³⁴, *mutual manifestness*³⁵, and *ostensive-inferential communication*³⁶ – all of which, for Sperber & Wilson, are present when communicating. The notion of metarepresentation we mentioned above (sct. 1.2.3) is particularly relevant to intentions, cognitive environments, mutual manifestness, and ostensive-inferential communication. These notions all help build up to their main point, the “principle of relevance”:

“Every act of ostensive communication communicates a presumption of its own optimal relevance.” (S&W 1995: 158)

Sperber & Wilson further develop this general principle of relevance, and specify what they mean by “Presumption of optimal relevance”:

“(a) The set of assumptions I which the communicator intends to make manifest to the addressee is relevant enough to make it worth the addressee's while to process the ostensive stimulus. (b) The ostensive stimulus is the most relevant one the communicator could have used to communicate I.” (S&W 1995: 158).

33 “Informative intention: to inform the audience of something; Communicative intention: to inform the audience of one's informative intention.” (S&W 1995: 29).

34 “A cognitive environment of an individual is a set of facts that are manifest to him.” (S&W 1995: 39)

35 “Any shared cognitive environment in which it is manifest which people share it is what we will call a mutual cognitive environment. In a mutual cognitive environment, for every manifest assumption, the fact that it is manifest to other people who share this environment is itself manifest. In other words, in a mutual cognitive environment, every manifest assumption is what we will call mutually manifest (S&W 1995: 41-42).

36 “The communicator produces a stimulus which makes it mutually manifest to communicator and audience that the communicator intends, by means of this stimulus, to make manifest or more manifest to the audience a set of assumptions I.” (S&W 1995: 155)

It should be noted that this is the ideal communicative situation, hence the “optimal relevance”, although it seems to us that the underlying principle should apply equally well to utterances which may not be the *most* relevant, yet remain “relevant enough” to be worth processing. It seems here that there is a potential for understanding relevance as a matter of degree – and indeed, that is what occurs in many communication acts. This, to me, makes more sense than an all-or-nothing reading of this principle; and in Sperber & Wilson’s own words “communication is governed by a less-than-perfect heuristic”, which suggests they are more than aware of the possibility of more or less relevant utterances, some being just relevant enough and others optimally so³⁷.

Sperber & Wilson’s distinction between descriptive and non-descriptive (or interpretive) usages of representations is central to the type of procedural pragmatic analysis I will develop here:

“Any representation with a propositional form, and in particular any utterance, can be used to represent things in two ways. It can represent some state of affairs in virtue of its propositional form being true of that state of affairs; in this case we will say that the representation is a description, or that it is used descriptively. Or it can represent some other representation which also has a propositional form – a thought, for instance – in virtue of a resemblance between the two propositional forms; in this case we will say that the first representation is an interpretation of the second one, or that it is used interpretively.” (S&W 1995: 228-229)

Clearly, the non-temporally used temporal expressions studied here fit in the non-descriptive (interpretive) category, for instance sentence-initial *still* in the following example:

(13) *Still*, their car was in the driveway.

(14) Their car was *still* in the driveway.

where the main point i.e. the optimally relevant point of this utterance in (13) is a non-descriptive usage – *still* is used argumentatively, not temporally (descriptively) as opposed to (14). We will elaborate on this further in chapter 3 (and esp. section 4.2.4.) below.

³⁷ Sperber & Wilson remark quite rightly that it is rather amazing that communication can occur at all: “...failures in communication are to be expected: what is mysterious and requires explanation is not failure but success” (S&W 1995: 45).

There is quite a bit of research on temporality, modality, perspective and discourse connectives, and it goes beyond the scope of this work to enumerate them all here. Some relevance-theoretic developments on temporality and point of view include: Wilson & Sperber's article on using Relevance Theory to explain how time is communicated (1998); work from Sthioul (1998a) on tense and perspective in French; Saussure & Sthioul's description of narrative uses of the French *imparfait* (1999, 2005); Rocci's analysis of epistemic future tense usage in Italian (2000); Nicolle (1997, 1998, 2000, 2007)'s work on *be going to* and *will* and tense markers in general (which was doubly insightful in that his research is both on temporal markers and conceptual/procedural encoding). Relevance-theoretic work on connectives and on the conceptual/procedural distinction in English has been carried out by Blakemore (1987), Wilson & Sperber (1993), Jucker (1993), Blakemore & Carston (1999), and more recently Hall (2007) and Schoroup (2011). And in French, Luscher & Moeschler (1990), Sthioul (1998b), Saussure (2000b, 2003a, 2007, 2008, 2011), Tahara (2004), Saussure & Morency (2006) and Morency (2010) have researched aspectual, modal and temporal expressions from a procedural perspective. The more relevant works listed above will be dealt with more in Chapter 3.

The state of the art on the conceptual/procedural divide³⁸ and on discourse markers is not limited to Relevance-theoretic research; Fraser (2006) and Nicolle (2007) for instance, propose alternative (but similar) accounts of this divide. And there is also Bach's (1999: 342) approach to these terms³⁹, which he claims "function as operators on that material [the content of the utterance] to yield the additional propositional contents that they do". This insight makes sense – we could subsume diverse classes of expressions, like indexicals (e.g. 'now'), adverbs (e.g. 'already') and connectives (e.g. 'yet') under this one term based on how they behave in utterances, according to their *function*. This is key, given that the non-descriptive usages of temporal expressions are possible precisely because they may have different functions.

38 In addition, the semantics/pragmatics divide also complicates the matter. Jaszczolt's *Default Semantics* (2005) blurs the semantics/pragmatics distinction somewhat. It is not clear to me how exactly Jaszczolt's compositionality-intentionality merger account would deal with our expressions, and I am not claiming here that these expressions underspecification is what makes them so versatile – in fact, if they were strongly underspecified purely conceptual expressions, the present approach would be inadequate.

39 Bach makes a distinction between *content connectives* and *discourse connectives* (1999: 342) – the former connect contents of an utterance, while the latter connect an utterance's content with something else, something extra-propositional.

2.5. Psychological, Cognitive, Textual, & Discourse Approaches

Discourse analysis and textual linguistics have both made a number of contributions to the study of time and temporality; Benveniste (1966, 1974) and Weinrich (1964, 1973) in particular, whose work on temporal expressions and argumentation has inspired more recent theorists, such as Adam (1992, 1994, 1996). Their work has pointed out the variation in the behavior of tenses according to the utterances' situation: verb forms will depend, for instance, on whether they are in the context of a fictional story, a newspaper article or a historical text. This is plausible for temporal adverbs and connectives as well, but for us this is simply another contextual variable to be factored into the overall interpretation, rather than an actual constraint that necessarily focuses such items according to this principle.

2.5.1. Psychological Approaches

Benveniste's most important contribution to our research is the distinction between the (subjective) time of enunciation and (objective) chronological time. This notion led linguistics to more systematically take into account subjective or psychological factors in utterance interpretation. Most contemporary philosophical or pragmatic approaches consider the psychology of speakers as being much more important to utterance interpretation than was previously believed. Though some of the notions will be relevant for us, our proposed theoretical framework will consider phenomena that occur across different types of utterances and sentences – which is why these approaches are only of secondary importance to us here.

Two influential Saussurian principles, as quoted by Benveniste (1966: 93):

1. *la langue est forme, non substance*

'language is form, not substance'

2. *les unités de langue ne peuvent se définir que par leurs relations*

'language units can be defined only by their relations'

The second point is essential for us since it is precisely the study of the relations⁴⁰ that certain expressions (i.e. procedural ones) establish or suggest that we are interested

⁴⁰ Though here Ferdinand de Saussure was concerned with the relations between signifier and signified, or how words relate to the concepts they are meant to refer to. In contrast, we will consider the relations between the concepts themselves; we will return to this in chapter 3 & 4.

in⁴¹. Though we shall distance ourselves somewhat from a truly *structuralist* (or a functionalist) conception of linguistics here, the notion of *system* and *structure* are of course requisite to understanding how words or clauses are articulated in context to ultimately allow a speaker to convey some specific meaning to the hearer. Another central claim made by Benveniste is that a linguistic system (like any system) is a structure composed of mutually affecting units, and these units may combine differently: some are frequent, others rare, and some never occur though theoretically they could (Benveniste 1966: 96)⁴². I agree that there are indeed, in what we are looking at here, certain combinations – which suggest certain relations and not others – that occur more frequently, and if this is the case, it is because these combinations are “essential” ones. Concerning the type of relations procedural expressions such as discourse markers commonly introduce, we can pinpoint several that are absolutely essential to all languages: *causal* relations, *spatial* relations, *temporal* relations, *argumentative* relations. Each of these can be further broken down to encompass the totality of relation-types most commonly used in language.

Causal relations are those that primarily deal with cause & effect, consequence, result.

Spatial relations are used to describe relative situation (proximity, distance), absolute location (location, x,y,z coordinates).

Temporal relations deal with notions of relative time (sooner, later), absolute time (dates), chronology.

Argumentative relations are those used to mark contrast, reinforcement, lessening, opinion.

Guillaume’s earlier (1929) psychological perspective of language was also insightful, and here I will recast his perspective for our analyses of temporal expressions used non-descriptively. Notably, Guillaume’s “psychomechanical” take on language offers us at least one specific component: an anti-polysemic paradigm which posits that for any given linguistic form there is a permanent central element in its meaning that generates every possible meaning – Guillaume calls this the *signifié de puissance*, the “potential meaning”. This view of language fits in well with our search for the semantic

41 Benveniste’s first point does not however equate to McLuhan’s “medium is the message”; rather, this means that the substance (or content) that goes with language is not in language but in the minds of Natural Language users.

42 “Chaque système, étant formé d’unités qui se conditionne mutuellement, se distingue des autres systèmes par l’agencement interne de ces unités, agencement qui en constitue la structure. Certaines combinaisons sont plus fréquentes, d’autres plus rares, d’autres enfin, théoriquement possible, ne se réalisent jamais...” (96, our italics)

nucleus or “core meaning” contained in temporal adverbs and connectives. Bélanger (1999) sums up Guillaume’s notion of potential meaning as follows:

“The notion of potential meaning is at the heart of Psychomechanics research. The axiom states that words (as well as other parts of the language) all have a potential meaning responsible for all the observable (actualized) meanings – the various senses – the word has in its use. The potential meaning is a unified meaning from which spring out all the particular shades of a given word; it is the single prior condition at the source of the senses of the word.” (Bélanger 1999: 11)

The very term “psychomechanics” suggests to us that Guillaume’s view of language would actually be compatible with a procedural pragmatic account such as ours. I take this term to mean that Guillaume sees language as largely dependent upon cognitive ‘mechanics’ or functions – in other words, from our perspective his is a pragmatic and semantic approach to language. It is semantic in that there exists a central element for a given linguistic form that means something in itself, and it is pragmatic in that the linguistic form can generate more than one meaning, and this occurs in usage. So for instance with *but* the *signifié de puissance* would perhaps be the notion of ‘contrast’ which can then be ‘actualized’ into a variety of meanings – akin to what Relevance Theory would call ‘narrowing/loosening’ (Sperber & Wilson, 1995), also known as ‘pragmatic enrichment’ *enrichissement pragmatique* (Saussure 2003). I will not dwell on this much more in this study, but Guillaume’s notion of “signifié de puissance” will remain in the background, having informed our understanding of the fact that the same words can mean several things.

2.5.2. Cognitive Linguistics Approaches

Another influential psychological or cognitive approach is that of Cognitive Linguistics, which proposes a framework often portrayed as being at odds with a Chomskyan view of language (also a cognitive approach). We need not go into that here since it is of no real consequence to our approach – however, it must be said that cognitive linguistics and Chomskyan linguistics are two models of language that have human cognitive abilities as their cornerstone. One of the major differences, perhaps the most important one, is in the application of each approach: the former is more often connected with modeling the conceptual part of meaning while the latter is linked to the structural part of meaning (which is unsurprising given that it is a theory of syntax). The two principles (given below) put forth as the basis for the Cognitive Linguistics program are a desire to describe language and language usage in a simple and straightforward manner.

“These are (1) the ‘Generalization Commitment’: a commitment to the characterization of general principles that are responsible for all aspects of human language, and (2) the Cognitive Commitment: a commitment to providing a characterization of general principles for language that accords with what is known about the mind and brain from other disciplines.” (Evans & Green, 2006: 27-28)

Neither of these principles is specific enough to give more than an indication of what cognitive linguistics would like to do; the first principle is a likely choice for any theory or approach. It is the second principle that appears to be what sets cognitive linguistics apart from other theories. However, this characterization would be misleading, as most contemporary linguistic models do this in some form. Though I may agree with some of the basic principles⁴³ of cognitive linguistics such as dissatisfaction with some formal theories of language, or a view of the mind as having conceptual structure, or even the desire to do away with too-strongly depending on truth-conditions, considering (almost) everything to be conceptual is far too reductive. Such a broad take on language would be all encompassing and could easily lead to linguistic relativism; what is more, it lacks precision when addressing more local phenomena, depending too heavily on set expressions (such as common metaphors). The polysemic stance adopted by cognitive linguistics will also be rejected here, for reasons given previously; furthermore, many of the aspects and processes tied to the

43 See Evans, V. & Green, M. (2006) for a thorough general overview of Cognitive Linguistics.

“embodied cognition thesis” such as ‘image schemas’ and ‘conceptual projection’, and ‘experiential realism’ are, for all practical purposes, just different ways of modeling the human language faculty⁴⁴. For instance Lakoff & Johnson’s (2003: 126) metaphorical construal of linear order is an oversimplification:

“We speak in linear order; in a sentence, we say some words earlier and others later. Since speaking is correlated with time and time is metaphorically conceptualized in terms of space, it is natural for us to conceptualize language metaphorically in terms of space.”

It is quite natural to correlate speaking with the passage of time; and one could also say that time is correlated to space (i.e. the physical nature of time & space), but to say that time is (always) conceptualized, metaphorically, in terms of space goes a little too far. At any rate, taking this observation for granted seems counterproductive. In particular it must be asked why time must necessarily be conceptualized in terms of space, since for us there is nothing (not much) metaphorical about it, it is simply physics: going from point A/*here* to point B/*there* takes time, this is not metaphor, it is mechanics. Of course we *can* use space to measure time (and, arguably, vice versa), and when we do, we conceptualize this using language, though metaphor is not required to do so. The main problem with the strong version of Conceptual Metaphor Theory, where every concept is metaphorical, is that it fails to give a fully satisfactory explanation to the how and why of temporal expressions used non-temporally (and other expressions used non-standardly).⁴⁵ Therefore, whether this model is correct or not (even in its weak version), it does little to advance our understanding of procedural expressions’ core meaning. All that Conceptual Metaphor Theory can do is describe a non-temporal usage of a temporal expression as a metaphorical extension of its conceptual temporal meaning; the explanation for why this is possible also depends on conceptual metaphor. Take for instance the non-temporal usage of “*now now*” said by a parent to their child to scold them for the child’s action (say throwing food on the wall). What exactly maps onto what for there to be a (metaphorical) transfer from “present time of the utterance” to “don’t do that”?

44 For a concise description and critique see Wildgen, W. (1994: 16-17). *Process, Image and Meaning: A Realistic Model of the Meaning of Sentences and Narrative Texts*. Amsterdam: John Benjamins.

45 In a recent article, Wilson (2010) draws attention to recent research aiming to reconcile relevance theory and cognitive linguistics’ approaches to metaphor. Though insightful for dealing with metaphors (in the mind or in language), this new research does not give us a reason to change our stance regarding temporal expressions used non-standardly.

Perhaps other models from the Cognitive Linguistics tradition have a more direct bearing on non-temporal usages of temporal expressions, such as Prototype Theory, Frame Semantics or Radial Categories. Prototype theory⁴⁶ is an interesting approach to lexical expressions with clear conceptual content (esp. for its depiction of “family resemblance” as applied to taxonomy for instance), but not for the type of expression we address here. It appears that prototype theory is better suited to describing and analyzing nouns and verbs, or for creating sets of objects among things, e.g. a grammatical category – in this sense prototype theory could be a useful model to group temporal expressions, or a set of discourse markers⁴⁷. If we were to use *prototype theory* to describe non-temporal usages, our analysis would fall short. Let’s come back to our example of “*now now*” where a parent is scolding their child. What prototype, and what extension of that prototype, can adequately describe what the two “*nows*” are doing? If the prototype for *now* is the present, or the time of the utterance, how do we get to the scolding sense of “*now now*”? It is not at all obvious what type of cognitive process allows for such extension, some component is missing⁴⁸.

Fillmore’s *Frame Semantics* proposes a view in line with ours insofar as he views linguistics as a system containing structures; his view also fits in with Benveniste’s notion that language is a system of mutually-affecting units as per his definition of “frame” which is “any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits” (Fillmore, 1982: 111). However, the use of frame semantics to understand the use and function of temporal expressions used non-temporally is, again, inadequate. Beyond highlighting that certain non-temporal effects occur more or less often in certain frames (or contexts in our terms), frame semantics is incompatible with a procedural approach. This is because a procedural approach proposes a rule of use encoded in a given expression that is actualized in a given context and which subsequently brings about a

46 See for instance Rosch (1998[1978]) and especially Kleiber (1990a) for a more detailed account of Prototype theory and its principles.

47 But see Mosegaard-Hansen (1998: 241) where she claims that one can make use of prototype theory in relation to expressions that do not denote concepts.

48 One might be tempted to see a similarity between the notion of *prototype* and Guillaume’s *signifié de puissance* (cf. section 2.5.1), but the former is construed as the most central or exemplary member of a category, whereas the latter is understood as a fixed sense that generates other senses in context – the *signifié de puissance* would be situated above the prototype, if one could combine the two approaches. At any rate, *prototype theory* describes a central entity with extensions to other entities, while *psychomechanics* describes potential meaning, and actualized uses (in context).

specific interpretation (or, a meaning derived by the hearer). Pointing out the frame or schema this given expression belongs to does not help with discovering its procedural content, although useful for specifying the type of context in which it can appear. Fillmore adds that some words “exist in order to provide access of knowledge” of certain frames (119) – we could consider such words as “frame-indicators” – and this seems as close as this model could get to describing procedural expressions.

Finally, let us turn to Lakoff’s radial categories, which can be construed as an outgrowth of Prototype Theory and Conceptual Metaphor Theory. Roughly, Radial Categories start from a prototype or stereotype (the ‘central’ expression) and then extend outward – ‘radially’ – with possible interconnections between the different ‘spokes’ thus resembling a kind of web. This is really just another way of schematizing categories of things (real and abstract) and their subcategories; and using central and non-central extensions to describe how specific (sub-categorical) meanings may be obtained (e.g. through metaphor or metonymy). For our purposes here, if we looked at *maintenant* through the lens of radial categories, we could say that its central category is its temporal sense of ‘time of the utterance’, and its non-temporal usages would be seen as ‘non-central extensions’. So for instance the usage in example (3) repeated below:

(3) Jean et Marie se voient souvent, *maintenant*, je ne sais pas s’ils sont amants.

Where *maintenant* is used to highlight what is asserted in the first clause and the speaker’s subsequent rejection of what that first clause implicates (e.g. seeing each other often = being lovers) in the second clause. In this case, the non-temporal usage is non-central since it is not the most salient element of the speaker’s utterance.

Mosegaard-Hansen makes use of Lakoff’s Radial Categories in her analysis of French *alors* (1997) and *toujours* (2004). She describes a radial category as:

“a category comprising central and less central members, where the latter are not predictable from the former, but nevertheless motivated by them. One important characteristic of radial categories is that there need be no one property which is common to all members, rather such categories are structured by chaining links from one member to another.” (1997:170-171, our emphasis)

So basically she sees all the non-temporal usages of *alors* as non-central extensions of the central temporal meaning of *alors* (which, she notes, is actually quite rare, 1997: 171), which is what we noted above with *maintenant*, and would presumably be the case with all the other temporal expressions looked at here. The problem with this

approach, and specifically the fact that it is unnecessary to have a single property common to all members, is that one could theoretically link numerous words together which have little to nothing in common. How does saying that *now* can be linked to *at present*, *currently*, [utterance time] and to *and* or *yet*, or still to the scolding sense of *now now* help us identify how *now* actually functions? If there need be no common property, and if we are merely dealing with extensions, and especially non-central ones, it is hard to circumscribe the actual range of possibilities of *now*, and harder to predict them.

In light of what we have seen of several Cognitive Linguistic approaches, one could come away with the idea that temporality may not be considered “real” – this is not the case, and it was not the intent in the previous pages to lead the hearer to this conclusion. In fact, Evans (2004) explicitly points out that for cognitive linguistics “temporality is a real and directly perceived subjective experience” traceable to “neurological states, processes and structures” (31), which is a perspective we can completely agree with. The problem for us, however, is that when Evans claims that thanks to “metaphoric structuring” we can better “model, extend and understand the subjective experiences which we are consciously aware of...” (31-32), there is reason to doubt that simply applying a conceptual (metaphorical) structure to non-descriptive uses of temporal expressions would yield a sufficiently fine-grained explanation of the why and how of these phenomena. Furthermore, if temporality is a “real and directly perceived experience” why is understanding time and temporal relations invariably analyzed in terms of metaphor (spatial or otherwise)? Finally, how conscious are speakers and hearers of their use and interpretation of temporal expressions used non-descriptively? It is possible that cognitive linguistics would see the type of metaphoric transfer from spatial to temporal terms commonly held to be at work as similar, if not identical, to a transfer from temporal items (e.g. *yet* or *still*) to argumentative or discursive items. In conclusion, applying Cognitive Linguistics approaches to our problem is insightful in reframing our descriptions of these expressions’ meanings, but in the end, these approaches raise more questions than they answer.

2.5.3. Textual Linguistics

At first it may seem that Textual Linguistics could offer us some tools and ideas in the form of the notions of “coherence” and “cohesion” (see Halliday & Hassan 1976⁴⁹; Beaugrande & Dressler 1981; Sanders, Spooren & Noordman 1992; 1993)⁵⁰ but in fact these notions, though present, are of only minor help for our problem; I will take the stance here that expressions such as those we will be analyzing here do not in fact directly encode coherence and cohesion, in line with Blass (1990), Moeschler & Reboul (1994), Saussure (2003).

Beaugrande & Dressler’s research proposes “Seven standards of textuality”⁵¹ (1981: 3-10): *cohesion*, *coherence*, *intentionality*, *acceptability*, *informativity*, *situationality* and *intertextuality*; for them, these seven criteria are what makes a text a text. In our words, these notions correspond respectively to ‘syntactic relations’, ‘semantic relations’, ‘speaker’s intention’, ‘hearer’s interpretation’, ‘salience & relevance’, ‘context’ and ‘co-text and encyclopedic knowledge’; all of which are of course necessary for understanding communicative language acts generally, not just written texts or prepared discourse⁵². The objection to this linguistic theory lies in the fact that though these standards exist (in some form or other), textual linguists of this tradition did not go much beyond checking texts for these criteria; this strand of linguistics is descriptive without being sufficiently analytical.

49 For Halliday & Hasan “Cohesion is part of the system of language. The potential for cohesion lies in the systematic resources of reference, ellipsis and so on that are built into the language itself.” (1976: 5)

50 See Ben-Anath (2005) for a general overview of Textual Linguistics, especially of empirical studies on connectives.

51 Cohesion: “all of the functions which can be used to signal relations” (3); Coherence: “the ways in which the components of the textual world, i.e. the configuration of contents and relations which underlie the surface text, are mutually accessible and relevant.” (4); Intentionality: “concerning the text producer’s attitude that the set of occurrences should constitute a cohesive and coherent text instrumental in fulfilling the producer’s intentions, e.g. to distribute knowledge or to attain a goal specified in a plan.” (7); Acceptability: “concerning the text receiver’s attitude that the set of occurrences should constitute a cohesive and coherent text having some use or relevance for the receiver, e.g. to acquire knowledge or provide cooperation in a plan.” (7); Informativity: “concerns the extent to which the occurrences of the presented text are expected vs. unexpected or known vs. unknown/certain.” (9); Situationality: “concerns the factors which make a text relevant to a situation of occurrence.” (9); Intertextuality: “concerns the factors which make the utilization of one text dependent upon knowledge of one or more previously encountered texts.” (10)

52 “Text” is not only limited to these meanings, in the German tradition of Text Linguistics, and in contemporary literary theories, it is used to mean any type of verbal expression, written or oral.

Blass' 1990 work quite thoroughly discusses the main points of the text linguistics tradition; we will use her comments on "cohesion" and "coherence" here since her approach fits our framework quite well. Blass (1990: 16): "More generally, all anaphoric devices, or constructions involving interdependency among elements of a text, e.g. *so*, *therefore*, are seen as contributing to cohesiveness." And she adds: "There are a number of reasons for thinking that cohesion alone is neither necessary nor sufficient for textuality, and is thus inadequate to account for well-formedness." (ibid). She also references Blakemore's (1987) comment on the fact that these "so-called cohesive devices (...) do not always link explicit elements of the text." (ibid). Instead certain 'cohesive devices' – such as some of the expressions we are interested in here – "encourage the hearer to access certain implicit assumptions from the context (not the co-text), and use them in processing the utterance. It seems, therefore, that, although Halliday & Hasan may be right that cohesive devices are rooted in language, what these devices connect are not always explicit elements of the text." (Blass, 1990: 17). Blass explains that coherence can be split into two types: textual coherence and 'comprehensional' coherence. She says of the first: "Coherence is connectivity of semantic or pragmatic content." (ibid). She defines comprehension as "the recognition or imposition of coherence relations" which is dependent upon "those assumptions necessary for the recognition of the coherence relations in terms of which the text is to be understood." (20)

Blass' take on coherence is that it is "superfluous". She sees relations of coherence and cohesion as "merely a superficial symptom of something deeper (...) what is crucial to discourse comprehension is the recognition of relevance relations, which are relations between the content of an utterance and its context." (Blass 1990: 24-25)⁵³. Given these observations, which I agree with, we will forego using textual linguistics' notions of cohesion and coherence beyond pointing out in passing that the examples we will be working with do adhere to these two principles, but that this fact alone tells us next to nothing about how temporal expressions used non-descriptively actually function.

⁵³ Schoroup also sees little explanatory value in *coherence* and *cohesion* in his analysis of *now*, instead adopting a relevance theoretic account to describe such phenomena (2011: 2114-2115).

2.5.4. Discourse Analysis Theories: Discourse Markers⁵⁴

Discourse Analysis approaches are of particular interest for our purposes, since their strongly discourse-oriented perspective has the advantage of directly discussing the type of expression we are looking at here. Though not all of what is said about temporal adverbs or connectives is readily portable to our own approach, many of the observations and descriptions are accurate or at least adequate, and as such may make an excellent starting point for our own observations in chapter 4.

Though there are a great many scholars who may perhaps be more central to Textual Linguistics, I see Schiffrin and Fraser as two of the more influential Discourse Marker researchers, as we will see in what follows. Fraser especially proposes a model for Discourse Markers (and Pragmatic Markers in general) which addresses some of the temporal expressions studied here and we will retain several ideas to be integrated into our own approach. Schiffrin's work on Discourse Markers, though not entirely compatible with our chosen framework, is nonetheless one of the seminal studies on the phenomenon, and many of her descriptions are accurate as far as their functions are concerned. Unfortunately, her model does not account for *why* such expressions function this way, as her study is primarily a descriptive one. A third scholar who has done a great deal of work on French Discourse Markers is Mosegaard-Hansen – we will allude to her work in Chapter 4 when dealing with certain French temporal expressions (*alors*, *déjà*, *encore*, *toujours*).

For Schiffrin both deixis and anaphora are indexical expressions, defining them as “expressions whose meaning can be resolved only by reference to how an utterance is situated.” (1990: 245). By “situated” she means “contextually situated”, and of course given our perspective of the importance of context in utterance interpretation, her view coincides with ours. Important to her description of such phenomena are the notions of proximity and distance: i.e. *now*, *here* are proximal, while *then*, *there* are distal. (246), and we shall see this will have some relevance for our analyses. In her work, she mostly examines *then* in its temporal usages, where she calls it a “shifter, an expression that locates events reported in utterances relative to shifting reference

⁵⁴ There are several names for the class of expressions we are looking at here: *discourse markers*, *discourse connectives*, *discourse particles* or *discourse operators* – all of which describe expressions having the same (or very similar) functions. See Schoroup (1999: 230-234) for a thorough review and discussion of the characteristics and criteria of Discourse Markers .

points (similar in function to tense).” Schiffrin also notes that *then* is anaphoric in texts, conveying “succession or overlap between the events reported in texts”, or that it is a connector relating events described in utterances (248). I cannot but agree with her construal of *then* in its temporal instantiations.

Schiffrin considers *now* to be a temporal deixis (a view shared by many), and gives the following definition for this term:

“now is a deictic element, i.e. it relates utterances to the spatial, situational, or temporal coordinates of the act of utterance. Their dependence on extra-linguistic contextual features allows deictic elements to be used to index a speaker’s utterance to other features of the situation, and to express additional social meanings. We will see that the context to which now indexes an utterance is often the discourse itself.” (1982: 242-243)

Thus for her *now* is discursively used to make salient a contrast in the topic of conversation/discourse by “bracketing” the utterance it is a part of (243). By “bracketing” I take her as meaning the utterance which *now* has scope over. A bit further she claims that if *now* is being used as a discourse marker then it must be utterance-initial (243), adding that “Not all propositions whose reference time overlaps with speaking time (...) force an initial *now* to function only as a temporal adverb” (244). We will check whether she is in fact correct in saying that *now* is discursive only when utterance-initial, something I have reservations about – I will come back to this in section 4.2.1.

Schiffrin continues listing the many uses of *now*, saying it “marks a speaker by differentiating topics, steps or modes of presenting information” (247), adding that it may be combined with other metalinguistic markers for ‘attention-getting’ (for example *hold it*), ‘terms of address’, ‘imperatives for attention’ or even markers which “set up an expectation of comparison” (such as *it depends*) (248) or ‘focusing constructions’ (like *there’s where*) (249). Also, changes in topic (249-250), differentiation (250), changes from ‘description to interpretation’ (ibid), changes from ‘declarative to interrogative’ (251) which she sums up as “changes in speaker orientation” with regards to how information is presented, and how this information is used in discourse (ibid.). Schiffrin notes still more ways (interactional this time) that *now* can be used as a discourse marker with a “highlighting or foregrounding effect”: 1. “speakers mark with *now* instructions to their hearers for preferred interpretations for upcoming discourse” (256); 2. “speakers highlight the propriety of

their own views by contrasting them with others' views and showing them to be ill-founded" (Schiffrin calls them "contrasts"; *ibid*); 3. "used to report a struggle and to implicate prior disagreement [marking] the viewpoint with which the speaker currently agrees" (257); 4. "now occurs in competitive interludes, for example in turn-taking struggles" and she then elaborates on these interactional usages – which represent what she is most interested in – further along (258-270). To sum up: *now* can be used discursively in many ways, and it would seem almost too many with all the different combinations Schiffrin proposes. We can reduce these discursive categories of *now* to just three: topic-focus, topic-shift and topic-contrast. I agree with Schiffrin's claim that reference time, event time, and discourse time (or speech time) all influence the discursive usages of *now* and *then* (and presumably other such expressions) (1987: 230). For our purposes here this information can be seen as part of the utterance's context (and mode of presentation), though I claim that the type of usages we're interested in – non-temporal ones – cannot be fully explained by using Reichenbach's coordinates (E, R, S) alone.

The fact that *now*, *then* etc. can be described by various 'grammatical' or linguistic categories just clouds up the whole picture of such terms. Indeed, we can say that *now* is a) a deictic/an indexical, b) a temporal adverb, c) a discourse marker, maybe even d) a connective – our goal will be to describe these expressions mainly by their most generic function. In the case of *now*, its generic (and primary) function is to focus the proposition it qualifies or modifies in a certain way – this 'way' is wholly determined by context. So in (15) the context calls for a temporal reading, in (16) a discursive one, and in (17) an argumentative one:

(15) Paul is at home *now*.

(16) *Now now*, Paul's home (no need to worry).

(17) *Now*, I know you think Paul can't be trusted with the baby, but...

Naturally, syntactic relations (whether *now* is utterance-initial or not, for example) are also a part of the global context of any utterance. For us, context is a pragmatic dimension that includes semantic elements (choice of words) and syntactic elements and relations (how the words are arranged), as well as morphological (e.g. tense) and phonological elements (intonation). Interestingly, the expression "now now" can be used both to reassure someone like with example (16) or to reprimand someone, as in "Now now, watch your mouth" (with a harsher prosody, the "disciplinarian" reading

would prevail). Overall, Schiffrin's descriptions of these non-temporal usages of *now* and *then* quite closely resemble our own. The only thing lacking is a strong/adequate explanation as to why exactly this is possible, which will be addressed in chapter 4.

Fraser's work on Pragmatic Markers and Discourse Markers, though not undertaken in a Relevance-theoretic vein is close to their and our approach to the problem of non-temporal usages. We will see that many of Fraser's observations are similar to ours, and I think his approach to Discourse Markers is one of the best on hand. Fraser makes a list of DMs, from which I retain those most relevant for our purposes here: *next*, *now*, *still* (incl. *still and all*), *then* and *again* (1990: 388). For instance, with the following example pair:

(18) A: John left. *Now*, Mary was really frightened.

(19) A: John left. *Now* Mary was really frightened.

Fraser notes that in (18) "*now* functions as a focusing device, while in (19) it serves as a time adverbial in preposed position." (ibid.) He states a little further that

"when an expression functions as a discourse marker, that it is its exclusive function in the sentence. While it may have a homophonous form which is analyzable differently (...) it does not serve in both roles in the same sentence. This is, of course, what we would expect of a syntactic category. What follows from this is the fact that a discourse marker has no effect on the content meaning of a sentence." (1990: 389).

Said in our terms, when an expression – here *now* – is used in an utterance it will be interpreted as having one meaning (the most relevant one according to the given context), trumping other potential senses of the expression; I therefore quite naturally agree with Fraser that an expression which can be used in more than one way – descriptively and interpretatively according to our approach – will only have one of its meaning's 'activated', or 'recovered' by the hearer, and this is the meaning interpreted by the hearer.

I suggest that though there may be a residual element of temporality in temporal expressions used interpretatively, this residue of temporal meaning has no effect on the interpretation and comprehension of the utterance when it is used interpretatively. In such cases, temporality will simply not be factored into the utterance's interpretation (since it is not the most relevant). Thus, Fraser's claim of the exclusiveness of one function – or 'usage' – fits perfectly with our view. Fraser also

states that “the presence or absence of a discourse marker does not alter the potential discourse relationship between the message which follows and the foregoing discourse. That is, a discourse marker does not create meaning (...) but only orients the hearer.” (1990: 390); a conclusion I have also come to and which will be discussed for some expressions in chapter 4. In other words, discourse markers are extra-propositional and do not contribute to the utterances’ truth conditions⁵⁵ in any meaningful way.

“In this sense, discourse markers are extremely useful guides for clarifying a speaker’s communicative intention – what Schiffrin refers to as ‘selecting’ but not ‘creating’ a relationship.” (ibid.) This coordinates well with the postulates that 1) procedural expressions establish *relations* between things, clauses, utterances, and 2) that more often than not we can omit an adverb or connective (used descriptively or non-descriptively) from an utterance or a pair of utterances and still infer the intended relation, albeit at a slightly higher processing cost⁵⁶.

Fraser has a ‘minimalist perspective’ of discourse markers, i.e. he suggests that discourse markers have some core meaning, pretty much in the same way as I hypothesize further along (sect. 3.2.3.); for him discourse markers “should be analyzed as having a distinct pragmatic meaning which captures some aspect of a speaker’s communicative intention” (1990: 393) and he convincingly illustrates his position with several examples using *so*. (1990: 392-394) Saying that the core pragmatic meaning of *so* “should capture only that the speaker takes the message following to have a consequential relationship to the prior material” (1990: 394). Though I will attempt to point out these expressions’ core semantic meaning, the idea is actually quite similar – I take it that there *is* a meaning, perhaps of a very minimal sort, which remains at these expressions’ core; however, the actual usage of these expressions in context is of course pragmatic, i.e. the semantic meaning of *so* in our view, can be reduced to ‘consequentiality’, while the pragmatic meaning of *so* can be construed as a procedure roughly meaning: ‘establish a relationship of consequence

55 More recently Fraser says this more explicitly: “[Pragmatic markers] occur as part of a discourse segment but are not part of the propositional content of the message conveyed [i.e. proposition expressed in RT terms], and they do not contribute to meaning of the proposition per se.” (2006: 189).

56 “A DM does not ‘create’ a relationship between two successive segments, since the relationship must already exist for the S1-DM-S2 sequence to be acceptable.” (Fraser 2006: 193). See also Luscher (1998) for more on relations and processing costs.

between P & Q'. Fraser proposes the following two hypotheses:

H1: There is a single, primary Contrastive Discourse Marker in every language (in English, it is but).

H2: The uses of these primary CDMs are the same across languages. (2006: 73)

which inspire us to think that with 'non-primary' CDMs, that is, discourse markers such as *now*, *yet*, or *still*, what makes them out to be CDM-like is their non-descriptive usage(s). And the view would be similar for French *maintenant* – Fraser's second hypothesis may also be the case for the secondary CDMs. Thus the argumentative – contrastive – non-descriptive usage of *now*, French *maintenant*, Spanish *ahora*, Italian *ora*, German *jetzt*, and Russian *сейчас* would also tend to support this hypothesis. But is this the case? Fraser thinks that any universal property of discourse markers would tend to be true with discourse markers like *but*, *so*, *and* but not with discourse markers like *rather*, *consequently*, *furthermore* (74), and he may well be right, but what about expressions (temporal adverbs and connectives) that have argumentative *and* discursive usages? Used in these ways they are discourse markers and the question that remains is whether they are used in a way that is identical, similar or not at all compatible across languages.

Finally, Fraser provides a thorough classification of discourse or pragmatic markers (1996, 1998, 2009), which is a comprehensive list of most of the usual markers, including several of those analyzed here. Besides *now* (mentioned above), Fraser discusses *still*, an expression he includes in the same sub-group of "contrastive DMs" along with *but*, and *nevertheless*, and (correctly, in our view) he states that "These discourse markers signal that the speaker intends the explicit message conveyed by S2 to contrast with an explicit or indirect message conveyed by S1." (1998: 306; NB: S here means 'segment'). Thus he picks up on the interaction between the explicit and implicit that is frequently behind different usages of these markers – and this feeds into our way of dealing with the function of several of the temporal expressions we look at later on (such as *then/ alors* or *still/ encore* to name a few). Let us finish by pointing out that for Fraser, temporality is but one of several possible functions for discourse markers⁵⁷.

⁵⁷ "For a sequence of discourse segments S1 – S2, each of which encodes a complete message, a lexical expression LE functions as a discourse marker if, when it occurs in S2-initial position (S1 – LE – S2), LE signals that a semantic relationship holds between S2 and S1 which is one of: a. elaboration; b. contrast; c. inference; or d. temporality." (2006: 191).

Another scholar, Claridge (2001), addresses this problem as well. For her *now* can be used both to indicate backward reference (59-60), like *just now*, and forward reference (64-65), though she notes ambiguity between a forward referencing *now* and an ‘information-giving’ *now* – i.e. an indicator of what is actual or salient in a section of discourse⁵⁸. She also points out that future reference *now* is often accompanied by a future tense marker like *shall* or *will* as in “I shall/will *now* X”. In our view, what *now* does here is pick out a starting point from which the action (X) proceeds onward. So *now* does not really reference the future (the future tense markers do that) it does however explicitly mark a starting point from when the future tense markers’ take effect (in a temporal reading), but the most important function of *now* in such cases is discursive (and subjective; for instance engaging the speaker more explicitly in a case such as “I shall/will/am going to *now* X”, akin to a promise).

In the information sign sense, now is accompanied as a rule by verbs in the present tense, in particular often with the progressive aspect. In both examples above, now is used to clearly restrict the reference of the statement to one particular part of the discourse, thus adding to the precision. Next, which can occur both as an adverb or as an adjective modifying terms such as assertion, section, thing, enquiry, query, or in the phrase in the next place, is similar to now, insofar as the very moment that it is mentioned, the point it refers to is already being treated. (Claridge 2001: 68)

We will not be as definitive as Claridge is by claiming *now* is ‘as a rule’ paired with present tense verbs (for the “information sign sense”) – as we will see, in some instances *now* needs no such accompaniment in order to be (“correctly”) interpreted. All in all, Claridge also presents many interesting arguments on the function of expressions like *now* or *next*. This only reinforces the idea that discourse or pragmatic markers would be best served by a general pragmatic theory, rather than being constrained to any specific school of thought (more on this in the conclusion in Ch. 5).

⁵⁸ “With all *now* statements, the point referred to immediately follows. Of course, an alternative interpretation of this usage of *now* would be to regard it not as deictic but as a marker of transition. In that case, it would count rather as an information sign.” (2001: 65, our italics).

3. Procedural Pragmatics

3.1. Theoretical framework

A. Relevance Theory

The theoretical approach adopted here owes much to Sperber & Wilson's Relevance Theory (1995 [1986]), as already mentioned in section 2.4 above. To briefly recap: their approach is a cognitive pragmatic one, based on a Gricean ostensive-inferential communication model, which treats natural language utterances and sentences as being semantically underdetermined and thus dependent upon these linguistic productions' context and the interlocutors' background knowledge for overall comprehension. This perspective also makes Relevance Theory less anchored to truth conditions; rather, it is the interpretative process undertaken by the hearer which yields cognitive effects and not the linguistic productions' truth conditions. In addition, Sperber & Wilson's model relies on a cost-effective cognitive mechanism which regulates the process, the idea ultimately being that to achieve optimal relevance a speaker must produce an utterance that costs as little effort to interpret as possible while granting the greatest cognitive effect possible for the hearer. Thus, in Relevance Theory (and other post- and neo-Gricean models, and several other pragmatic approaches besides), when the hearer, assuming that communication is successful, has achieved comprehension, they will have discovered the speaker's intended meaning.

In brief, the speaker has a certain set of assumptions (roughly equivalent to thoughts) about a state of affairs in the world and wishes to share them with their audience – the hearer – and the first step will be in the utterance's logical form (a set of concepts) which will then be decoded by the hearer into its propositional form (after disambiguation, reference-assignment etc.) yielding the speaker's explicit content as well as the most appropriate implicit content within the given context. Thus communication is not a simple straightforward process; instead, it is an approximate one, due in part to the hypothetical inferences at work in the hearer's mind during the comprehension process.

If I have chosen to use this theory as the primary methodological framework for the analysis and description of temporal expressions which denote something other than time, it is essentially for the theoretical soundness of this theory and its adaptability (since it is a general theory of human cognition) to virtually any type of linguistic production in a number of situations. It is one of three major pragmatic theories that stem from the Gricean tradition, and it is a widespread theory of communication that either allows those familiar with it to directly use it to analyze and describe temporal expressions (and other pragmatic markers), or it may be adapted by those familiar with neo-Gricean pragmatic theories. Additionally, Relevance Theory makes a distinction between descriptive and non-descriptive usage of language, which is central to our problem. The former use deals with utterances that represent the speaker's thought(s) about an actual or desirable state of affairs; while the latter are utterances that represent the speaker's thoughts about attributed thoughts a propos a state of affairs. For a more detailed account see *Relevance: Communication and Cognition* (1995: 224-231).

B. Procedural Pragmatics⁵⁹

The general idea behind procedural pragmatics is that the cognitive processes taking place in a language user's mind occur because they are triggered by ostensive expressions (or a particular intonation, or even gestures) used in communicative acts. The processes occurring in the brain during communication are themselves represented in the expressions and gestures – these representations are the procedures mentioned earlier that tell the language user what is meant (or most likely to be meant) by what is said. For many expressions the procedure is simply a referral to the concept conventionally represented in a particular expression; e.g. the procedure for *snake* is simply that whenever the expression appears it must be given the appropriate (conventional, default) meaning – if there are several meanings possible, a higher-level cognitive procedure manages the relevant selection (for

⁵⁹ Note on the term “procedural”: It has been pointed out that the term “procedural” is problematic because it confuses the terminologies of linguistics and computer science. Though it is true that the terms “procedure” and “procedural” are part of the computer science vocabulary, the original sense of “a series of steps followed in a particular order” is much closer to the way we portray the term here. The terms “procedure” and “procedural” as used in this work refer to instructions embedded in natural language expressions which (help) guide users of that language establish the correct (i.e. normative or conventional) relations between two or more elements of utterances or sentences.

instance when *snake* is used metaphorically to refer to a human being). For many other expressions the procedure is of another type; here, the procedure handles relations between the concepts conveyed by the surrounding (conceptual) expressions. This can be schematically rendered as:

Conceptual Expressions: $x \rightarrow \alpha \text{ or } \beta \text{ or } \gamma \text{ etc.}$

Procedural Expressions: *if* x , *then* y ; *else*, z

Here our focus will be on procedural expressions, so an algorithmic perspective of the temporal expressions analyzed in chapter 4 is what will be most relevant to their description. What will be proposed further along, after each of the expressions, is an outline for each expression's algorithm⁶⁰. I will discuss the function of the procedures more in-depth when we examine each expression in turn in the following chapter. For now I will quickly review those researchers whose procedural take on Relevance Theory is most relevant and influential to how I have developed the model used hereafter.

⁶⁰ Let me make it clear at this point that obtaining a complete algorithm for each of the expressions was the initial plan; instead I have settled on the idea of providing a sketch of an algorithm – further work is needed to fully flesh out these sketches or outlines into actual algorithms.

3.1.1. Blakemore

It is Blakemore who first explored (1987) and later proposed a clear-cut distinction between ‘conceptual’ and ‘procedural’ expressions (2002); she is also one of the foremost scholars working on discourse connectives and *inferential connectives* in particular (e.g. Blakemore’s work on *and*, *but*, *so*; 1987, 1988, 2000 & 2005)⁶¹. The following two examples (20) and (21) taken from her 1988 text on *so* illustrate the stance adopted here as well:

(20) There was \$5 in his wallet. *So* he hadn’t spent all the money.

(21) She’s your teacher. *So* you must respect her. [our italics]

The fact that *so* “introduces a proposition which is deducible from the preceding one” is indeed evident with (20 & 21); though Blakemore also describes the non-inferential-connection usages – those of cause and consequence – and resolves the choice of interpretation by applying the principle of relevance and a procedural view of *so*. In (20) *so* expresses an inference the speaker has made based on physical evidence, while in (21) it expresses an inference the speaker made based on moral or personal values. In both instances *so* makes it clear that it is the speaker’s deduction (or that they are presenting it as their deduction); without *so* both utterances would have slightly different meanings, and it would be somewhat costlier to reach them.

Blakemore’s *Semantic Constraints on Relevance* (1987) is the first work to make explicit the conceptual/procedural distinction mentioned in Sperber & Wilson’s Relevance Theory. This seminal work focused on *but*, *after all*, and *even* concerning the ways these expressions (and others like them) can semantically constrain the relevance of utterances they are a part of. One of Blakemore’s most important contributions is precisely her notion of contextual constraints; in her own words:

‘According to this framework, hearers interpret every utterance in the smallest and most accessible context that yields adequate contextual effects for no unjustifiable effort. This means that if a speaker wishes to constrain the interpretation recovered by a hearer, he must constrain the hearer’s choice of context. And since the constructions [i.e. discourse connectives] we are considering ensure correct context selection at minimal processing cost, they can be regarded as effective means for constraining the interpretation of utterances in accordance with the principle of relevance.’ (1992:137)

⁶¹ See also Allison Hall (2007, 2008 and 2009) for more recent work on discourse connectives in a relevance-theoretic framework.

From this I understand Blakemore as meaning that procedural expressions – discourse connectives or markers – help to constrain an utterance’s possible contextual implications in order to make the utterance less costly to process while retaining the extra effects, thus helping to make utterances more relevant (138-139). Again, in this sense, connectives need not necessarily be used to connect two segments of discourse (139)⁶² – I endorse this idea completely. Blakemore proposes three ways an utterance can be relevant, based on Sperber & Wilson 1995:

1. *It may allow the derivation of a contextual implication.*
2. *It may strengthen an existing assumption (by providing better evidence for it).*
3. *It may contradict an existing assumption.* (138)

Though this refers to overall relevance of utterances, it stands to reason that it is equally applicable to the relevance of connectives – after all, their presence in utterances helps make them relevant, by lowering processing costs at least, and sometimes even by adding strength to implicatures that may be generated by them. Let us take another look at example (21) above where, without *so*, the two clauses would be more costly to process, and furthermore, one would not necessarily obtain the causal link “you must respect her *because* she’s your teacher”.

In a more recent work (2002, esp. chapter 4) Blakemore discusses procedural meaning and discourse markers – a category that encompasses *connectives* – pointing out that discourse markers do not directly encode the conceptual representations of utterances but rather that they “(...) encode information about the inferential process that the hearer should use” (90). It is of course this information on the inferential process which is considered to be procedural; I take this to be one of the guiding principles behind the function of temporal expressions used non-descriptively. Blakemore defines discourse markers according to the cognitive effects they may prompt such as the three mentioned above – in other words she defines DMs according to the types of relevance they may yield (2002: 95). She pushes this a bit further to claim that beyond simply prompting cognitive effects, discourse markers “directly encode the type of cognitive effect intended” (ibid.). As we will see in the following chapter, this notion is crucial to an algorithmic appreciation of non-

62 For Unger as well the scope of discourse connectives can go beyond the utterance-level, for him discourse connectives can also have scope over ‘paragraphs’ (i.e. anything larger than sentence or utterance size (1996: 405-408).

descriptive usages of expressions that function as discourse markers. It is arguable whether or not such encoding is devoid of conceptual information, and what exactly is meant by cognitive effects could also bear some fleshing out. For now I shall briefly review the contributions researchers from the Geneva School have brought to this paradigm.

3.1.2. The Geneva School: Luscher, Moeschler and Sthioul⁶³

Shortly after Blakemore's proposal, several other researchers – in particular the Geneva School, which is the focus of this section – working toward a slightly modified version of Relevance Theory, further explored the conceptual/procedural paradigm with the aim of better apprehending and describing temporality. The Geneva School thus continued Anscombe & Ducrot's, and Blakemore's, work and used it to define in some depth what 'procedurality' was about, and especially, how it could be used for temporal or causal expressions – most notably Luscher & Moeschler (1990), Luscher (1994, 2002[1998]), Moeschler (2002), Sthioul (1998a, 1998b) and Saussure (2003, 2007, 2011 – we will return to his work in section 3.1.3). Their aim was to treat temporality (and later, causality) in a procedural manner, at first with just a few key expressions (some of which had already been dealt with by Ducrot) and eventually considering all temporal expressions as somehow encoding procedures for interpretation. Moreover, the Geneva School proposed that procedurality sits more on the pragmatic side of the divide than the semantic one (somewhat like Ducrot 1984 or Blakemore 1987, 1992). Among the most detailed research is Saussure's work on the function of French tenses both used descriptively (temporally) and interpretatively (argumentatively or discursively)⁶⁴.

3.1.2.1. Luscher's contribution

Previously (sct. 2.3) I mentioned Luscher's reservations to Anscombe & Ducrot's model. Here we will quickly review his version of procedural pragmatics. Within this framework it is now a given that utterance meaning can be explained by a set of instructions (i.e. procedures) which indicate how the utterance-in-context is to be processed to achieve a complete meaning, and for the hearer to most adequately interpret the speaker's intended meaning. Luscher spells this out in a way similar to Blakemore, identifying (and retaining for his own model) one aspect of Anscombe & Ducrot's analysis in particular – "that *P* and *Q* are propositions and not sentences: the connective ties together propositional contents and not linguistic segments." (1999:

63 All the quoted texts in the following sections were translated by me from their original French versions.

64 Over the course of 2005-2009 I worked with Saussure on a project (FNS Project #100011-108149) describing temporal adverbs and connectives in French, furthering the Geneva School's goal of an accurate in-depth analysis of temporal linguistics.

89). When utterances contain one or more connectives, Luscher says the connectives describe a “semantic structure like *P connective Q* which provide information on the characteristics of the arguments *P* and *Q*” within those utterances (ibid.). In this sense, meaning is a conglomerate of meanings, which is ultimately interpreted by adding contextual information to the whole.

In an earlier work Luscher (1994) defines markers: “A marker has the property of designating the function of a discursive element that it introduces or in which it appears. The term thus designates the discursive structural role of the considered object.” (175). Like Blakemore, Luscher sees markers as designators of function (as do we, and other scholars such as Fraser (1996, 1998) or Bach (1999)). I understand Luscher as considering connectives to be one type of marker, where the functions they designate specifically handle relations between clauses, and that connection occurs “at the global level of discourse and not simply between two terms or two propositions” (181).

He adds, a little further, that connectives are “referentially empty” – meaning that connectives do not refer to a concept – and of course must be interpreted in context. For Luscher this fact “invites one to effectively invest them with roles according to the goal one wishes to reach or the hypothesis one wishes to elaborate.” (ibid). In parallel with Blakemore’s notion that connectives impose semantic constraints on relevance, Luscher proposes the following three reasons for the instructions carried by connectives to be considered essentially pragmatic:

- “(i) [*connectives*] guide the interpretation and the type of operations they have scope over are indeed pragmatic;
- (ii) the inferential engine that pushes one to continue or abort the interpretive process is the Principle of Relevance;
- (iii) for a single morpheme we distinguish the constant use of semantic operators from the variable use of pragmatic connectives.” (189).

Luscher also lists the possible occurrences for connectives in French, which have the following form(s):

- P therefore/but/and/then Q*
- P then. / So Q.*

Luscher then discusses the *scope* of connectives from a dual perspective: that of syntactic scope – the connectives’ position in an utterance and how that pertains to

syntactic properties; and that of pragmatic scope – dealing with inferential instructions and how they play out in overall utterance interpretation. (217). Scope is essential for a procedural approach and, as stated earlier, the expressions analyzed here are extra-propositional, an idea that fits in well with Luscher's notion of pragmatic scope (though it is also semantic). Importantly, Luscher describes utterance interpretation as a sequential process. So, for an utterance with the sequence *P* connective *Q*, one will interpret the first proposition *P*, then interpret the connective and finally conclude with the second proposition *Q* – inferential procedures are thus (somewhat) dependent on the respective positions of *P* and *Q*, with the connective determining the exact role and scope for each proposition (220). For utterances that contain more than one connective Luscher notes that the *P* connective *Q* relation will of course be guided by two or more sets of procedures. He points out two cases of “connective sequences”:

(i) the additive sequence, (ii) the compositional sequence. (i) In an additive sequence, the connectives have the same syntactic scope, but the scope of the instructions for each connective is different. (...) (ii) In a compositional sequence, not only is the syntactic scope of the connectives the same, but their instructions are also partially shared.” (222).

The end result is that connectives, by virtue of the procedures they encode, will guide and facilitate the overall interpretation. And the sequential nature of utterance processing leads to considering however many sets of instructions in turn, each contributing to the interpretation, while sometimes modifying the other procedures present. For instance, *P then Q so R* will be processed in the order written/read or spoken/heard, with *so*'s procedure depending on the previous resolution of *P then Q*.

3.1.2.2. Moeschler's contribution

Moeschler and associated authors (Jayez, Kozłowska, Luscher, Saussure & Sthioul) propose an analysis of temporal reference using a Relevance-theoretic procedural approach to the phenomenon. The justification for this is that the usual thesis of linguistic determination of the interpretation is inadequate, mainly for two reasons: first, linguistically, this thesis is descriptively inadequate since (for Moeschler *et al*) temporal markers are taken to encode procedures and not concepts; secondly, from a cognitive perspective, it is doubtful that the representation of events and their relations is specific to a particular language – they propose instead that the capacity to

represent eventualities is universal, regardless of the language. (1998: 4-5). In brief, they adopt the position that the human language capacity is modular (see Fodor 1983; Cosmides & Tooby 2000[1994]; Sperber & Wilson 1995) and that the central cognitive processes are universally shared. Therefore, the *context* and *procedure* are the necessary elements for fleshing out the full meaning of (underdetermined) utterances containing expressions that mark time and/or temporal relations between eventualities (1998: 5).

“What is at stake here is the question of the combination of procedural data between themselves on the one hand and the combination of conceptual information with procedural information on the other hand.” (1998: 9)

Moeschler et al. suggest that these relations can be summed up as follows: (i) Procedural information is stronger than conceptual information. (ii) Contextual information is stronger than procedural information and/or conceptual information (1998:10)⁶⁵. In other words contextual information allows one to process the procedural and conceptual information in an utterance, with the procedural information determining the relevant conceptual information to be processed and how it is processed for the overall interpretation of that utterance. Schematically:

Context > Procedural Expressions > Conceptual Expressions

Though this may not actually always be the case⁶⁶, it is relevant to our position insofar as each instance of speech or writing does seem to have an order in which its different elements must be considered for the overall interpretation. In our view it is just as likely that there is a form of feedback between procedural and conceptual expressions and the context in which they appear. Thus, a given utterance, composed of procedural and conceptual expressions will immediately trigger contextual information according to salience and relevance, said context will (or should in principle) in turn trigger disambiguation, saturation etc. and once this is achieved the instance of speech or writing will at last be fully worked out.

Finally, Moeschler et al. consider connectives as being the example of procedural expressions *par excellence*, which they list according to the following grammatical

⁶⁵ See also Reboul & Moeschler (1998), *Le temps des événements* for their view of the conceptual/procedural distinction (chapter 7 in particular).

⁶⁶ We could for instance imagine that some expressions (conceptual or procedural) could resist contextual information, for instance if the expression is extremely specific, such as a medical term, or some highly-specialized technical jargon whose meaning is the same in every context.

categories:

- a) Coordinating conjunctions – *mais/but, et/and, ou/or, ainsi/thus, donc/therefore*
- b) Subordinating conjunctions – *malgré/though, même si/even if, de sorte que/so that, parce que/because, puisque/since*
- c) Adverbs – *cependant/however, même/even, de fait/indeed, de plus/moreover, finalement/finally*
- d) Adverbial phrases – *en bref/in brief, à la fin/in the end, tout considéré/all things considered* (1998: 149)

Let us add that it is not necessary for us to differentiate between the above categories, since they are all connectives of some sort – and besides, the temporal expressions we are interested in could also be classed according to different categories. Reboul & Moeschler (1998) say as much in their definition of pragmatic connectives, which are a type of linguistic marker that “a) articulates maximal linguistic units or discursive units, b) gives instructions on how to link these units, c) requires the interpretation of conclusions which would not have been the case had the connectives been absent” (77). Within the class of pragmatic connectives they include coordinating and subordinating conjunctions, adverbs and adverbial phrases. So, again, what matters most to us here is not the grammatical (or other) category of the expressions to be analyzed, but only that the temporal expressions herein are procedural expressions.

3.1.2.3. *Sthioul's contribution*

Sthioul is among the researchers who adopt a procedural approach to temporal expressions, and what is most relevant to us here is how he deals with the phenomenon of “subjectivization”. Basically, by this he means that interlocutors “retrieve a conscious subject” (1998a: 200) when processing an utterance – that is, they can obtain the speaker’s point of view from the utterance, or at the least hearers can reasonably attribute a point of view to a speaker based on what the speaker said, and meant. This is often the case, but with temporal (or spatial) expressions such a perspective is central to understanding utterances, particularly in cases where indexicals and anaphors are used. In other words, it is (optimally) relevant to the utterances’ interpretation that the event(s) described be referentially salient. Put somewhat differently, temporal and spatial expressions need the correct deictic anchoring for the hearer to be able to interpret the perspective intended by the

speaker and from which the relevant information is to be retrieved. Sthioul's goal here is to show how "subjectivization effects can be inferred from the necessity to reconcile – in the process of determining the temporal reference of a process/event – contextual constraints with the constraints of the verbal 'pigeonhole' which is used." (219). Thus 'subjectivization' arises when contextual constraints and lexical constraints are factored in together for overall utterance interpretation. We will see further below that subjectivization effects are often the *raison d'être* of several of the non-descriptive usages examined below.

3.1.3. The Geneva School: Louis de Saussure's model

Finally, let us turn to Saussure's model of procedural pragmatics; building upon Luscher, Moeschler, Sthioul and his own previous work, Saussure (2003) proposes a more fully developed and computational approach. Saussure considers the very process of utterance interpretation as a procedure (2003:139), with the aim of proposing a general algorithm for overall utterance interpretation, including within it one or more "local" algorithms specifically addressing the temporal procedures of expressions like *ensuite* or *puis* or the French *imparfait* or *plus-que-parfait* tenses. I also take this stance here, namely that the mind's cognitive processing of language can reasonably be seen as a general procedure for interpreting speech and writing, and that specific procedures govern each procedural expression, or a set of such expressions, within the speech or writing that is to be interpreted. If looked at from a bottom-up perspective, we can see that one interprets a word, which is contained in a clause, contained in an utterance, sometimes contained in a piece of discourse – at each level there is some processing involved, and the higher up one goes, the more contextual and encyclopedic information factors into the processing. Adopting the position that the mind uses a general procedure for overall utterance or discourse interpretation is a straightforward assumption and easily fits into the modular theory of mind (i.e. Fodor 1983, Sperber & Wilson 1995, Cosmides & Tooby 1994, 2000, Sperber 2005), adopted here as a plausible view of how we think.

Saussure's starting point for his procedural model is that temporal expressions in general can be separated into two categories: conceptual expressions and procedural expressions. This hypothesis was developed by Saussure based on Blakemore's (1987) descriptions and analyses of connectives and on Moeschler & al. (1998) and especially Saussure's work on temporality and negation (2000b) and his research of verb tenses (2003). For Saussure, tenses are all procedural and their potential enrichment into non-descriptive uses is due either to their inherent procedure or to natural pragmatic enrichment. This procedural model is situated within Relevance Theory and considers the interpretation process as a computation based on an utterance's constituents' semantic properties, pragmatic derivation and according to instructions (procedures) encoded within certain expressions. Following Relevance Theory's postulate that interpretation is not only a matter of decoding, Saussure's model proposes to describe

what precise linguistic procedures can be recovered from expressions, and how the mind's reasoning capacities deal with these instructions to reach the appropriate conclusions. More specifically for this research, which can be viewed as a continuation of Saussure's work on temporal expressions, his procedural pragmatics model makes much use of the conceptual/procedural distinction; this will be an appropriate orientation for our analyses of temporal expressions used non-descriptively.

Saussure's algorithmic model of utterance interpretation is built on many Gricean and Post-Gricean principles, and can thus easily work within frameworks of those types. Whether the algorithmic model can be applied to other non-pragmatic frameworks is not our main concern here (though there should be no problem with this *a priori*), but for us it is clear that his goal was not for these algorithms to be limited to any particular theory or approach. That said, Saussure's model was built upon Relevance Theory and below I list the principles adopted from this approach into his own:

- *under-determinacy – which is important in the sense that if expressions were all fully determined beforehand there would be little room for procedures (let alone algorithms)*
- *the narrowing and loosening processes (pragmatic enrichment in Saussure's terms) – these processes are themselves procedures of a more general cognitive type.*
- *the principle of relevance – essential to calculating the algorithms' stopping point.*
- *context, mutual manifestness and encyclopedic knowledge – essential for saturating any variables in the algorithms.*
- *the descriptive/interpretive distinction*
- *the conceptual/procedural distinction*

All of these principles are essential to his understanding of temporal expressions and the establishment of the algorithms behind them. Saussure adopts for the most part Luscher's definition of *procedure* but adds the following criterion: "a procedure is the application (...) of the same principles that handle the establishment of computer procedures" (166). This addendum is understandable given his goal to model temporal linguistic terms so as to be computational – though of course this in no way prohibits the use of procedures (seen this way) to be compatible with a plausible cognitive pragmatic model. For Saussure a procedural model of communication cannot be an entirely semantic one. In other words, a model that returns the same output for the

same input every time cannot properly handle the mental inferences required for a functional procedural model, to say nothing of the importance context plays here (see 2003: 169-173 for a thorough discussion). So, in a nutshell, ideally the hearer follows the preferred paths of interpretation in the procedure, and this can be for reasons of salience, plausibility, encyclopedic knowledge, and/or because instructions⁶⁷ are encoded in some expressions of the given utterances.

Saussure further delves into the notion of what is procedural and what is conceptual. For him, a procedure is essentially a series of “interpretive choices” made by a hearer regarding a “set of possibilities” (2003: 170). I see this search for possibilities as an active investigation of the most adequate (i.e. relevant) choices of possible meanings based on a given item’s potential meaning and its actualization in a specific context (akin to Guillaume’s “psychomechanical” view). Regarding conceptuality, Saussure sees “contextual relations” – “scripts, causal relations, stereotypical relations” (204) – as quintessentially being “conceptual relations”. He calls contextual relations “conceptual relations” because they group together concepts and eventualities (and how the latter are conceptualized). As an outgrowth of this stance, he rejects the formal semantic (SDRT) notion that such relations are in fact *rules*; Saussure favors the pragmatic take on these relations as being firmly within the (pragmatic) realm of implicatures instead (204). For Saussure, it is mainly thanks to the speakers’ and hearers’ encyclopedic knowledge that the “correct” or appropriate inferences can be drawn. Since he is focusing here on temporality, he postulates three relations that facilitate the inference of temporal relations: a) an event is the cause of another; b) an event necessarily precedes another; c) an event generally has a causal or temporal relation, whatever it is, with another, by virtue of the habitual or stereotypical relations accessible in the hearer’s knowledge of the world (ibid.). Moreover, Saussure will develop this notion of conceptual relations⁶⁸ by dividing them into those that are causal and those that are not, and those that are necessary and those that are not (206). “Not all causal relations are necessary relations, and, conversely, some non-causal relations are necessary” (ibid.). For instance, in the case

67 For Saussure and I both, the procedural descriptions of pragmatic expressions all function in this manner (adverbs connectives, verb tenses etc.)

68 See Saussure (2003: 209) for his definition of these relations, and see page 211 for an explanation of his hierarchy of constraints for conceptual relations: 1. necessary causal conceptual relations (strongest), 2. necessary stereotypical relations, 3. non-necessary causal conceptual relations, and 4. non-necessary stereotypical relations (weakest).

of a car crash, there is no necessary causal relation between the car crashing and death of the vehicle's occupants – many car crashes are without fatalities. But of course if a person dies in a car accident, the cause will (most often) have been the crash (except in cases where the driver's death is the primary cause of the crash). This is a type of non-necessary causal relation. On the other hand, some relations are necessary but are not the cause of subsequent events, for instance the fact that a plane has landed is necessary for the passengers to disembark, but is not the cause of their disembarking.

He adds three further explanations for these conceptual relations: 1) non-necessary conceptual relations can be triggered by having recourse to more encyclopedic knowledge, rather than resorting to “usual” situations or circumstances; 2) some of the so-called “necessary relations” can be canceled; and 3) the cognitive status of said relations. The third is the most crucial to us here, where Saussure again rejects the SDRT notion that these relations depend on a set of rules that the hearer has at their disposal as is, and from which they may choose the most appropriate (212). Instead, Saussure claims it is for a question of the (Relevance-theoretic) economy of processing effort and storage, by considering “*that the hearer does not dispose of preexisting conceptual rules, or that they only have a small number of such rules at their disposal*” (212, author's emphasis). Thus he proposes that if there are rules, they are few and general ones – thus echoing Relevance Theory's take on “fast and frugal heuristics” (Sperber & Wilson 2002); I see them as the kind of rules which are necessary to general conceptual cognitive processing. Saussure adds that the hearer does not necessarily access a rule directly but instead infers an *ad hoc* relation based on the knowledge they have concerning the eventualities (actions, activities, events) described in the utterance(s) (212-213)⁶⁹. Finally, to sum up this discussion, Saussure states that “conceptual relations are not relations that are *a priori* linked to the predicates for purely lexical reasons (with the exception of lexical implications), but are implicatures the hearer considers relevant or not with regard to the speaker's informative intention” (213, author's emphasis). Finally, for Saussure a temporal connective trumps any conceptual relation, no matter what its strength (213) – this is a good starting point for our model of procedural pragmatics.

69 See also Sperber & Wilson (1998) for more on *ad hoc* concepts treated in a Relevance-theoretic vein.

We will see that temporal connectives such as those analyzed hereafter keep to this observation; I claim that this is of course because of their extra-propositional nature. Thus we will always see such expressions as having scope over the propositions they augment, restrict or otherwise affect/modify – even when they are not temporal (i.e. when they are non-descriptive). But Saussure’s algorithmic model represents a problem for our hypotheses; namely, the fact that its basic architecture – $\forall n : \{R=tx ; E=ty\}$ ⁷⁰ – and the basic premise “instruction temporelle par défaut” (‘default temporal instruction’) are so engrained in his 2003 account makes it somewhat difficult to reconcile with the idea that temporal adverbs, connectives, or indexicals are not necessarily default temporal procedures. As stated previously, throughout this study I will explore whether the terms are in fact temporal by default, or if, instead, the procedures which are encoded in these expressions are in fact more general and open-ended. All in all however Saussure’s algorithm for temporal expressions used temporally is functional; what needs to be done in our case is some modification of what should be considered the default in these expressions.

70 Where $\forall n$ designates a two-dimensional temporal variable n ; R and E are the Reichenbachian coordinates for the Reference point and Event point respectively, serving as indexes for the overall temporal interpretation. See Saussure (2003: 276-277) for a more detailed account.

3.1.4. Other views

There are a few other language models that could perhaps be used to tackle the problem that is dealt with here. There are notably a few lexical semantics or pragmatics traditions which could integrate a procedural view of language with relatively little modification. For instance, Clark (1996), for whom “language use is really just a form of *joint action*” (3), which requires “solvability”, “sufficiency”, “immediacy” and “joint salience” for one to succeed in communication. Viewing language as a *joint action* is not too far from the Gricean view of *cooperation*⁷¹. The *Principle of joint salience*, defined as “the ideal solution to a coordination problem among two or more agents is the solution that is the most salient, prominent, or conspicuous with respect to their common ground⁷²” (67), could just as easily be defined in terms of *relevance*, *encyclopedic knowledge* and *mutual manifestness*. I will retain the notion of *salience* in addition to *relevance*, since, though something that is salient can be relevant, this need not be the case. But salient information (unless one is being manipulative) contributes to the informativeness of a given utterance. I take procedural expressions, particularly connectives and adverbs, to be salient markers, in that they make explicit a restricted set of possibilities. Seen this way, *salience* has some measure of importance for the (procedural) pragmatic selection of a non-descriptive usage of our temporal expressions.

Three of Clark’s stated premises, those of *solvability* – whereby interlocutors can assume that the initiator of an exchange (“coordination problem”) chooses its topic, the form it should take, has a predetermined goal (“solution”) and finally believes it to be interpretable (“participants can converge on that solution”; 68); *sufficiency* – where participants in the exchange can assume that the initiator gave all necessary information to achieve understanding (69); and *immediacy* – where interlocutors can reasonably expect to achieve understanding immediately (ibid.) – all have their place within a procedural pragmatic model of language processing. For a relevance theorist this would all be a part of optimal relevance, but I think this may be useful in establishing an algorithm for our temporal expressions. After all, a speaker cannot use

⁷¹ Grice’s *Cooperative Principle*: “Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.” (1975: 173).

⁷² Clark uses this Stalnakerian notion to describe the “sum of [speakers’] mutual, common, or joint knowledge, beliefs, and suppositions.” (1996: 93).

now or *then* non-temporally and not expect the hearers to correctly interpret their utterance, and the hearers can reasonably expect the speaker to be trying to actively communicate something despite using a temporal expression non-temporally. In other words, a non-descriptive usage is *solvable* – one can indeed interpret it, *sufficient* – one need no further information to interpret it, and *immediate* – one need no more than an instant or two to interpret the utterance.

This prompts a few questions: could it be that these terms arose to be used as metalinguistic operators, able to equally specify temporal, discursive or argumentative relations? What if the semantic instructions of such operators made systematic appeals to the mind's pragmatic-processing "module"? Would this mean the *index* is the semantic procedural core of meaning of an expression and the *tokens* are the pragmatic, context-dependent applications to salient and relevant *referents*? This seems a plausible view of these expressions; the perspective adopted here is that the mind is of course responsible for general processing operations, and it must do so efficiently. Arguably, indexing specific cognitive and linguistic items contributes to efficient cognitive processing. Thus, the mind, upon interpreting a given utterance, breaks down the input into items that need specific referents, and items that require specific inferences – thus an utterance is interpreted in terms of representations of the world and relations between those representations. In section 2.1 we looked at Kaplan's take on demonstratives, and saw that his notion of *character* could play into the present approach. Higgenbotham (2009), when discussing demonstratives, makes an interesting use of Kaplan's terminology:

"... let us broadly divide the linguistic pieces of an utterance into those with meanings, and those with rules of use. Ordinary nouns and verbs have meanings (...). Words like 'this' do not have meanings, but have rules of use that are as much common coin as meanings are, which specify how they are to be employed in setting up an utterance to be evaluated for truth or otherwise appraised." (183-184, our emphasis)

This distinction fits nicely with the procedural pragmatic account endorsed here: for us *meaning* is equivalent to 'conceptual meaning' and conceptual expressions, while *rules of use* is equivalent to 'procedural (or instructional) meaning' and procedural expressions. However, I resist the notion that these "rules of use" set an utterance up to be evaluated for truth; instead, I propose that they are used to set an utterance up for incorporating a salient (and relevant) element into the utterance's interpretation;

it can then also be truth-evaluated as a whole, and the truth of the proposition expressed will sometimes be the most relevant element to be interpreted, but this need not be the case.

At any rate, such “rules of use” also have some form of meaning – what I called “core meaning” earlier – and function as extra-propositional operators. Put differently, if a conceptual expression has a meaning, it is because its semantics encodes an index that refers to the relevant concept, which is represented in the language user’s mind. A procedural expression has a basic type of meaning, which encodes “rules of use” which are also indexed in such a way as to refer to the relevant relations which are to be established between an utterance’s various parts. If such is the case, we have here a way of integrating more formal semantic models into the appreciation of temporal expressions used non-temporally. We will set this aside for the present.

3.2 Framework & Methodology

3.2.1. Some Theoretical Assumptions: ‘Procedurality’ & the Conceptual / Procedural Continuum

Our approach to this phenomenon of temporal expressions used interpretively is largely based on Relevance Theory for several of its underlying principles and notions (Relevance, context etc.) and especially for the procedural/conceptual distinction. However, the goal here is to propose a rules-light way of describing the processing and interpretation of these expressions, and one that need not depend only upon Relevance Theory, though of course it should be an inferential theory of communication that, if not essentially a pragmatic one, must at least appropriately take pragmatics into consideration. As such, it will probably not be as detailed and precise as some would like; nevertheless, at the very least I propose to sketch out an outline procedure for each of the expressions dealt with here. In later research, these outlines can be fleshed out into more formal and functional algorithms. Ideally, a unique ‘meta-algorithm’ (one for each language treated here: English, French) that could schematically account for the different functions these expressions may adopt, would be an outcome to work toward in subsequent research.

The first order of business before beginning the analysis proper is to elaborate somewhat upon the theoretical approach adopted here - procedural pragmatics⁷³. Simply put, procedural pragmatics is a theory that considers that there exist two types of expressions (in the largest sense, i.e. including morphemes): those that encode concepts - such as *tree* or *love* - and those that encode procedures - such as *but*, *yesterday* or *-ing*. This approach originates with Ducrot’s view that some expressions, namely connectives, encode ‘instructions’ for how these expressions are to be interpreted in utterances where they appear. Classic examples of expressions analyzed by Ducrot are *même* (‘even’) or *mais* (‘but’). Later, Blakemore adopted a more moderate view of Ducrot’s ‘expressions-encode-instructions’ idea and proposed an analysis of ‘semantic constraints on relevance’ wherein she renamed Ducrot’s ‘instructions’ *procedures* and considered only certain types of expressions as encoding

⁷³ Again, procedural pragmatics should not be seen as a purely Relevance-Theoretic approach, the idea being that procedural pragmatics can be integrated into any (cognitive) pragmatic account.

information on how to interpret utterances containing them⁷⁴. The stance I take here on procedural pragmatics is for the most part derived from the above researchers' insights into how such expressions function.

For our purposes here, “procedural” is understood as an equivalent of “algorithmic” and this may be misleading: do conceptual expressions not have an algorithm which searches and retrieves the contextually appropriate meaning of these expressions? I will not go into this in much detail here – I will say that in a computational model of language processing algorithms intervene at different levels: at the level of individual expressions (words or clauses), at the utterance or sentence level, and at the more general level of overall comprehension. The goal of procedural pragmatics is to ‘discover’ or model the algorithms responsible for establishing the relations between the concepts (propositions) which they link or affect (and have scope over) in temporal adverbs, connectives and indexicals. At the most basic level one can imagine there being a kind of ‘switch’ that guides a hearer along the appropriate interpretive path (cf. Luscher 1994, 2002) – temporal or non-temporal, incidentally choosing between a descriptive or non-descriptive usage.

Ideally the algorithm should a) store the utterance's constituent parts, b) check the context, which includes saturating the utterance's variables, then c) retrieve the relevant relational information from memory (encyclopedic knowledge, conventions etc.) and d) make the (intended) interpretive path most/more salient to the hearer. Overall, procedural expressions can be seen as interpretive expressions in that they aid one's mind to choose the most adequate (i.e. optimally relevant), *intended* interpretation of a given utterance. This would of course operate conjointly with the mind's general language processing capacity. Such algorithms can be viewed as two-step procedures, schematically:

Evaluation procedure: a procedure that takes the input (an expression) and an environment (its context) as its arguments

Application procedure: a procedure that takes two arguments: a procedure and a list of arguments (to which the procedure is applied)

The linguistic part of the mind evaluates an expression according to its environment (i.e. context), for instance the expression *already* in the environment ‘Strawberries

⁷⁴ Ducrot and his school of thought will eventually adopt Blakemore's notion of semantic constraints in later work, in e.g., “Argumentation and the lexical topical fields” in *Journal of Pragmatics* 24 (1995): 99-114.

already have sugar.’, and then the language module interprets the expression by selecting the most likely meaning(s) from a) a list of conventional meanings, b) a list of non-standard meanings or c) outputs a novel meaning by inference from a) and/or b). For the purpose of language analysis, *data* would comprise lexical items and context, while *procedures* are both the cognitive processes and a special class of non-lexical expressions (grammatical or procedural expressions); thus when an utterance reaches the parts of the mind which process language, a set of general procedures which includes disambiguation, saturation of certain variables etc., “crunch” the given information and then, if necessary, more specific (partly) linguistically-coded procedures are prompted by specific expressions and run in the mind’s general language-processing module (with another set of procedures) to finally obtain a relevant result (sometimes *the* most relevant, but need not be so).

It is interesting to note that temporal adverbs and connectives, when used temporally, are “stronger” than other temporal indicators. It is these expressions which most unambiguously indicate temporal information to the hearer, and with the least amount of processing effort. For Saussure and for us here, these expressions can be viewed as strong constraints (2003: 193) on temporal interpretation that “do not call for complex inferences but rather encode clear instructions.” (2003: 194). For instance *already* in “The sun is *already* up” encodes that [sun, be up] was the case previous to and concurrent with the time of speech or reference (additionally there are other inferences to be drawn, e.g. “you are late for work”). Let us recall that in our view, temporal expressions may or may not have only, or primarily, temporal instructions encoded in them; instead, it may be the case that time and temporal relations are actually (perhaps mostly) inferred by our cognitive processing; and temporal expressions can be seen as indexes to the specific mental operations that lead one to cognitively work out the appropriate temporal information. I think this is also the case for Saussure’s “conceptual relations” – i.e. it is thanks to our minds’ cognitive processes that we can work out these relations. Basically, we either have an utterance such as (22) below where only general cognitive procedures sort through the linguistic information and establish the necessary relations, while in (23) both general cognitive processing and processing governed by specific procedural information encoded in the connective are used to establish the necessary relations:

(22) The sun is up.

(23) The sun is *already* up.

The difference between (22) and (23) is that with the first utterance, the speaker is merely describing a state of affairs, that the sun has risen, and thus that it is daytime. With (23) the speaker is describing the same state of affairs as in (22) but in addition, the speaker is commenting on this state of affairs, for instance noting that the state of affairs is somehow surprising. Through pragmatic inference based on encyclopedic knowledge the hearer understands that the speaker cannot mean that the sun having risen is itself surprising, therefore the hearer must search for something more relevant. In this case, the hearer could interpret the utterance as meaning that the speaker believed it was earlier than what is actually the case – further inferences could lead the hearer to deduce that the speaker is late, overslept, even going so far as to infer (given contextual information) that the speaker stayed up too late or had gotten inebriated the previous night. On the surface, it would appear that (22) takes less processing effort to interpret than (23), but let us not forget that the net benefits for interpreting (23) outweigh those interpreting (22). It is possible for a hearer to infer something similar with (22), but more mental processing effort would be required to obtain such an interpretation. In other words, the speaker/writer of (23) intends the hearer to *necessarily* infer additional information, and by so doing, reduces the hearer's processing cost, just as with Blakemore's constraints. Recall what was said about metarepresentation earlier (sct. 1.2.3.); here it should be evident that such a capacity is being used by both speaker and hearer for the full impact of the utterance in (23).

One of the background assumptions concerning temporal expressions – whether temporal adverbs or temporal connectives – along with modal expressions (*may*, *will*, *possibly* etc.) is that the information they carry is, more often than not, of an extra-propositional nature. This is clearly the case with adverbs and connectives (temporal or no), as can be seen in the following examples:

(24) George *already* finished filling out his IRS forms!

(25) Those paintings are expensive and unappealing *yet* people buy them.

(24') *already* [George, filling out forms, finished] or *already* [P]

(25') [paintings, expensive & unaesthetic] *yet* [people, buy (paintings)] or [P] *yet* [Q].

Since expressions of this type operate on a higher level than propositional contents, that is, since they have scope over such content, the question of truth conditions will not be addressed here to any extent; like Sperber & Wilson and other Relevance Theorists, I am most interested in whether the utterances are relevant, and how they are relevant. In other words, we will not ascribe truth conditions to adverbs and connectives since doing so would be not only difficult to justify in many cases, but also often trivial in connection with the problem at hand. Take for instance example (24) above, where the relevant, salient information that is to be interpreted cannot be captured by a truth-conditional approach (whether semantic or pragmatic): what is communicated by *already* in this example is something akin to “the speaker [of (24)] is stating/asserting that [George, filling forms, finished] is the case (or, is true) and this ‘fact’ is surprising to the speaker”. This notion of surprise is not included in the semantic content of either *already*, or the proposition [George, filling forms, finished] but is interpreted through a pragmatic, inferential process which takes into account background assumptions/encyclopedic knowledge, in this case dealing with the amount of time it takes to fill out IRS forms. In Kaplan’s terms, what we are addressing here is the *character* of utterances such as (24) or (25) – or *how* one is to interpret such utterances (and recall that *character* is non-truth-conditional).

There is currently a lively discussion as to where exactly to situate the conceptual/procedural divide, and even to redefine what “conceptual” and “procedural” actually mean (Escandell-Vidal et al. 2011) – so far there is no consensus. At least one researcher (Nicolle 1998a, 1998b, 2007), has returned to the original conceptual/procedural distinction and proposes that there are in fact three classes: conceptual, conceptual-procedural and procedural expressions⁷⁵. Fraser (2006) also questions the conceptual/procedural dichotomy and proposes a third category he calls *combinatorial* which “specifies with what constituents and in what way it may combine to produce more complex semantic structures”. For Nicolle, this is a choice based on observations in grammaticalization, and for Fraser the reasoning is that most Discourse Markers have some conceptual content even as they have procedural content (a view close to that adopted here). A strict conceptual/procedural dichotomy

⁷⁵ “...there is in principle nothing to prevent a single expression encoding both conceptual and procedural information [which] accounts for the phenomenon of semantic retention, whereby a gram may continue to give rise to specific interpretations derived from the semantic content of its lexical source.” (1998b: 30)]

is also rejected in what follows, as it seems to limit the versatility these expressions have in usage.

We will adopt the idea of a continuum, which to me seems equally plausible, but only insofar as we add some nuance to the meaning of procedural expressions. Granted, the continuum model proposed here is perhaps not the simplest way to model procedurality⁷⁶. Indeed, choosing the conceptual/procedural dichotomy may in the end prove most straightforward, but this choice would not do justice to the finesse and complexity of the language module⁷⁷. The continuum model I imagine is not exactly that proposed by Nicolle in his grammaticalization research, nor quite what Fraser proposes with his *combinatorial* category.

A working hypothesis on those procedural expressions that *do* have some conceptual content is that this conceptual content only serves to reinforce the encoded procedure and perhaps further constrain the possible interpretations of how to apply a certain procedure. If such expressions exist, we will primarily be interested in their procedural usages. In addition to saying that procedural expressions encode instructions, I want to specify that the instructions concern first and foremost the *relation* between concepts (or representations)⁷⁸; thus, for our purposes here, the limit is not whether some expressions have both types of information or not, but between those that have exclusively conceptual information (conceptual expressions) and those that have procedural information, whether or not the conceptual information is completely absent.

Thus far, we have not really entertained the notion that grammaticalization could be a (major) reason why certain expressions (i.e. those examined here) can be used the way they are. Indeed, it could very well be the case that *now/maintenant*, *already/déjà*, and most other expressions described in Chapter 4, are all expressions somewhere along the grammaticalization⁷⁹ path. This, if true (and it is a plausible

76 If this perspective is proposed here, it is a programmatic and theoretic choice, and the continuum model may not be crucial to the procedural approach to the expressions undertaken hereafter (although it could modify the algorithms' architecture).

77 The mind's architecture is not our primary concern here, and whether the mind is massively modular or not (cf. Cosmides & Tooby (1994, 2000), Sperber (2005) to name just a few), I do endorse a modular and complex conception of the mind. In this conception there are central processing systems, and peripheral processing systems of several types – what is said here concerns only the parts which process language and discourse.

78 Close to what Luscher (1994, 1998) proposes in fact.

79 Mosegaard-Hansen (1998b: 237-238) makes this case for discourse markers.

hypothesis, though not one we go into here), should not affect the procedural approach we have to these expressions. Nicolle (1998b) makes a strong case for certain expressions encoding both conceptual and procedural information. In his account, expressions like *be going to* are undergoing grammaticalization, which he sees as a gradual occurrence, and as such maintain (i.e. “semantic retention”) some conceptual content that can, and in some circumstances⁸⁰, is accessed to render a relevant interpretation for utterances where such expressions occur. The view proposed here is that our temporal expressions (used as discourse markers) function in a way similar to *be going to* and other modal auxiliaries insofar as encoding both conceptual and procedural information⁸¹. That is, it could very well be that grammaticalization is the underlying reason that the expressions examined in Chapter 4 have both a conceptual and a procedural content.

This is not something Saussure (2003) considered when proposing his algorithmic architecture for tenses. Furthermore, Saussure’s more recent view (2011) is one based on a strict dichotomy between two different, mutually exclusive types of information – an expression cannot simultaneously be both. At this stage, I must draw attention to my divergence with Saussure on a few points: one is a major concern, the other relatively minor. The first has to do with Saussure’s (2011) approach to the procedural/conceptual distinction. The second deals with how he proposes to treat procedural expressions (via his algorithm). With regards to the second point: Saussure (2003: 251-252 & 260-261) uses an algorithm based on Reichenbach’s temporal coordinates; the problem is with his exclusive usage of temporal coordinates, and a temporally-oriented algorithm for dealing with temporal expressions. In light of this, his model works very well given two conditions: 1) that temporal expressions are, at their core, temporal by default and 2) that one restrict oneself to the description of verb tenses and temporality. If the chosen expressions are not temporal by default or if one deals with temporal expressions other than verb tenses Saussure’s algorithmic model cannot accurately account for (or predict) the types of usages we will be looking at here.

80 “If (...) the resulting interpretation does not result in adequate contextual effects, or if the context is such that the choice between *be going to* and an alternative future expression, such as *will*, could result in a different proposition being conveyed, the conceptual information also encoded by *be going to* will be recovered and inferentially enriched.” (1998b: 29)

81 See also Bybee et al. (1994: 15-19) on “semantic retention” and its consequences.

The other divergence with Saussure's approach is his desire to maintain a strict dichotomy between conceptual and procedural expressions. Again, I hypothesize, in line with a few others (Nicolle 1998a, 1998b, 2007, Moeschler 2002, Fraser 2006), that this dichotomy may not in fact exist. Instead, there could be a continuum going from one end of the spectrum to the other. Thus, when Saussure puts forward the claim that the verbs *have* or *avoir* have two separate entries in the lexicon, I believe the claim too strong; I propose, unlike Saussure, that auxiliary verbs (and modal verbs) are astride the middle mark of the conceptual/procedural continuum (akin to what Nicolle 1998a proposes for *will* and *be going to*), being conceptual – that is, more conceptual than procedural – when used as full verbs, and procedural – that is, more procedural than conceptual – when used as auxiliaries. Another (more minor) point of divergence is Saussure's reluctance to endorse the idea that all connectives (and grammatical expressions) are procedural – something I claim is the case – but this is understandable given his interest in maintaining a strict conceptual/procedural dichotomy (Saussure 2011: 57-59).

Saussure goes on to argue that it is cognitively unfeasible that there be three types of expressions – he claims that it is cognitively less costly to have to choose between just two types of expressions, as far as storing the entries in memory (57). The real question is whether we have to actively choose or not, and why this choice must be restricted to one of two things; it seems just as cognitively plausible that the language-processing part of the mind need only access a single continuum of meaning for a given expression and move along that axis, stopping where the (pragmatically enriched) meaning fits the speaker's intention and context. Or, seen differently, the mind could choose between three, four or more types of expression, especially since the mind does not necessarily function sequentially – something Saussure himself agrees with. I propose that – as we shall see with the temporal expressions' outline procedures in Chapter 4 – there is a dichotomy, one between descriptive and interpretative usages (a continuum representation at this level would only complicate matters). However, once within the interpretative side of things, a continuum is much more plausible given the variety of meanings that can be obtained. So, the dichotomy is between when *now* is used temporally, and when it is not. When *now* is used interpretatively the mind's language parsing module makes use of a continuum of meaning. Let us be clear, this is not a continuum where all the meanings of *now* are

indexed, with the mind merely picking out the relevant one, the continuum envisioned here is one where the mind accesses *now*'s potential meaning (recall Guillaume) and “moves” this core sense along a spectrum of contextually relevant outputs, selecting in the end the most appropriate one for the utterance currently being processed. This view is not as open-ended as the relevance theoretic notion of *ad hoc* processing, it is more readily comparable to Blakemore's semantic constraints, except that what is being constrained at this level is *now*'s potential meaning, its core sense.

Another recent claim made by Saussure (64) portrays procedural expressions as not being subject to narrowing or loosening (see Sperber & Wilson 1995; Carston 2002; Wilson 2004), based on his view that there is a clear-cut distinction between conceptual and procedural expressions (and that only concepts can be enriched in this way). We will return to these notions in Section 3.2.3, for now I will simply propose the idea that (given an acceptance of continuum of meaning) if there is a general primary procedure for temporal adverbs and connectives, the selection of one output over another may indeed be a type of narrowing or loosening in itself (perhaps at the meta-linguistic level). Indeed, there is no reason why the narrowing/loosening ‘mechanism’ could not be equally applicable to individual expressions, to clauses, or even to entire sentences and utterances. Saussure's idea that some expressions use conceptual content as a parameter for the interpretation of the procedural relation seems both relevant and solid, although he downplays the importance of this when he says that “Incorporating a notion of ‘contrast’ in the analysis of *but* does not bring anything useful vis-à-vis the procedural analysis.” (2011: 65). Again, our views diverge: to me this notion of ‘contrast’ is the semantic core of *but* and is on a level preceding the conceptual/procedural distinction, without it, there would be nothing for the expression to start out from. Indeed, as noted in Chapter 1, I hypothesize that all expressions (whether conceptual or procedural) have some primitive semantic meaning from which instructions for assigning the relevant *denotation* or the relevant *relation* necessarily stem.

In the present view, *but* (and other procedural expressions) does encode a concept, albeit a very skeletal one, and this must be the case I surmise, since *but* encodes instructions that constrain utterances in which it appears. The type of instruction – for instance, establishing a contrast between two sentence clauses – must be dependent upon some form of meaning. I understand Saussure's above claim

as meaning that the notion of contrast is derived pragmatically from the immediate cotext – the two clauses joined by *but* – and thus the expression *but* need not have a semantic component meaning “contrast”. Though it is indisputable that one can infer contrast between two clauses in absence of *but*, this does not necessarily imply that *but* cannot have this meaning. Saussure is, I believe, overlooking that it is precisely the fact that *but* does incorporate “contrast” which makes it such a useful procedural expression – especially seen through the relevance theoretic lens whereby utterances where *but* is present are optimally understood as setting up a contrast between two elements, without the added cost of having to infer one from the context.

If we turn for a moment to *now* we can see that it too – considered here as a procedural expression – encodes at the least a basic concept of the present time (of the utterance). It too constrains the utterances in which it appears, to signal a temporal relation in some cases, or to establish a relation of a different sort when not used temporally. To situate *now* (and the other temporal expressions) decisively on one side or the other of a conceptual/procedural divide seems a difficult feat, and one that is not really necessary if one entertains the idea that there is a continuum rather than a strict dichotomy. Saussure’s (and others’) strict dichotomy is sound as far as economy of effort goes, and if it is the case that the mind works in a linear, sequential way. With a modular conception of mind, one where several modules work conjointly to establish meaning in language, the idea of a continuum model is equally plausible. Furthermore, a continuum model is compatible with Guillaume’s “potential signified” if one accepts that the potential meaning generated can easily slide up and down a continuum according to the actualization (in-context prompts). As a final word on the conceptual/procedural continuum I will add that the continuum I envision is not necessarily restricted to a two dimensional line, I think it equally tenable that, within the confines of an organ geared towards abstract symbol manipulation, this continuum be a three dimensional affair (and possibly more)⁸².

So, to sum all this up, I think it is quite plausible that the mind has a meta-procedure for overall interpretation which would be something like: assign the correct denotation or relation to every X in the utterance U (X being the variable expression)

⁸² This idea was prompted by the geometrical representation of movement using Cartesian coordinates. Recent work by Chilton (2014) applies a three-dimensional model to the conceptualization of spatial expressions along similar lines, albeit within a different and recent paradigm (Deictic Space Theory).

– thus the mind assigns the relevant meaning to each expression in an utterance (or group of utterances) to obtain the overall interpretation – sometimes there are no explicit procedural expressions, but the mind can, and does, nevertheless compute the relevant relations between expressions or clauses within an utterance, or between utterances. Assigning the correct (i.e. relevant) denotation or relation depends on the instructions encoded in each expression present in the utterance being computed.

Furthermore, our take on conceptual and procedural expressions is that both encode procedures of a sort: conceptual expressions encode a procedure that identifies the most relevant *denotation* for interpreting an utterance (or part of an utterance); procedural expressions encode a procedure that identifies the most relevant *relation* in an utterance (or between two or more utterances). For our present purposes, only those expressions that encode rules for relations are to be considered ‘procedural’⁸³. In short, (mostly) conceptual items refer to real and abstract things (objects, actions, states) in the world, while (mostly) procedural items refer to *relations* between real or abstract things. Let us be clear: for us procedural expressions are semantic in that they do in fact *mean* something, and they are pragmatic in that they mean what they do according to the various contexts in which they are to be found (as with, for instance, Kaplan’s “character”).

⁸³ This is somewhat similar to Saussure’s proposal, though he does not dwell as much on the notion of relation, as I do here. Saussure prefers the term ‘operations’ (2011:59).

3.2.2. Hypotheses

I have already mentioned the main hypothesis in the introduction, but I restate it here and will further develop it in what follows. The principal hypothesis and the hypotheses given below were prompted by the research questions stated in the introduction, and represent an attempt at answering them. I repeat them here for ease of reference:

1. *why and how is it that temporal expressions do not necessarily yield a temporal interpretation?*
2. *how do hearers arrive at an understanding of this sort, and be reasonably confident that this interpretation is what was actually intended by the speaker?*
3. *what specific conditions must exist, or, in what context(s) do these temporal expressions function in this way?*

The principal hypothesis given in the introduction is reiterated here:

procedural temporal expressions encode both temporal instructions and non-temporal (i.e. argumentative or discursive) instructions – and thus, temporal expressions, though they may be used non-temporally (non-descriptively), are temporal by default, and are pragmatically modified to fit the context

The following three hypotheses and two sub-hypotheses are a development of the above hypothesis. Restating the main hypothesis this way served a twofold purpose: first, as a means of delineating the several ideas contained within more precisely; and second, as a means of offering slightly different versions of the overarching proposal.

Hypothesis 1. temporal expressions, when used descriptively, are used to establish temporal relations between eventualities or situate an eventuality temporally.

Hypothesis 2. temporal expressions, when used non-descriptively, are used to establish relations other than (or in addition to) temporal relations, for instance argumentative or discursive ones.

Hypothesis 3. temporal expressions – adverbs, connectives, indexicals and verb tenses – are procedural expressions⁸⁴, as such they encode procedures for their usage.

Sub-hypothesis 1. temporal expressions encode both temporal procedures and non-temporal (i.e. argumentative or discursive) procedure – and thus, temporal expressions, though they may be used non-temporally, are, by default, temporal.

Sub-hypothesis 2. temporal expressions encode instructions that are interpretable in context as temporal, argumentative or discursive – and thus such expressions

⁸⁴ Recall that in the terminology used here *procedural expressions* contain (or retain) an element of meaning, however slight, but are considered procedural because that is their crucial role in language use.

are not temporal by default (time is not inherent to their core sense.

The first hypothesis needs little or no proof, it is common knowledge: temporal expressions by definition bear a direct relation to temporal linguistic phenomena. Perhaps the only point of contention is the inclusion of relevance-theoretic terminology – descriptive versus non-descriptive usages (see sections 2.4 and 3.1). The second hypothesis was perhaps controversial at some point, but today no one could reasonably discount the fact that temporal expressions can be, and are, used to denote something other than time (see the examples already given above and the numerous examples that will follow in chapter 4). What remains somewhat controversial is why this can occur (see the brief discussion of various language models and theories in chapter 2). Now, our third hypothesis and its two sub-hypotheses may require more justification via experimental work, we do not have the space for that here. Nonetheless, the sub-hypotheses represent the most interesting aspect of this research in our view; we will return to this in our conclusion⁸⁵.

Priority will be given to the second sub-hypothesis, though slightly more radical and *a priori* somewhat less likely, and confront it with the descriptions and analyses of the temporal adverbs and connectives herein; I think that, this way, we will better be able to expose these expressions' meaning and function by stripping them down as much as possible to their core sense. And, if this second hypothesis proves false or is inconclusive, then it will be a simple affair to fall back to the first, more likely, hypothesis. In fact, by invalidating the second hypothesis, the first should be reinforced (perhaps even confirmed).

The first sub-hypothesis is based on aforementioned observations of temporal expressions that denote an argumentative, discursive and/or subjective value over the temporal reading. Thus, these expressions will be said to be used *non-descriptively* as per the distinction between descriptive and non-descriptive usages. This hypothesis poses no problem as to its validity within the relevance-theoretic framework. Furthermore, it is compatible (or can easily be made so) with other pragmatic approaches, particularly Gricean or neo-Gricean models of utterance interpretation. If this option proves to be more adequate, then we must take temporal expressions to be

⁸⁵ These two sub-hypotheses are best understood as specifications of what is encoded by temporal expressions, that is the precise nature of their procedures. In addition, they are clearly incompatible with one another: either Sub-hypothesis 1 is correct or Sub-hypothesis 2 is.

temporal by default, and to somehow being pragmatically enriched (though not necessarily narrowed or loosened, in the usual sense) when used non-temporally. In this case, it must be explained why and how non-temporal usages are possible.

The second sub-hypothesis stems from the observation that expressions can be construed as conceptual or procedural. Thus, I will posit that procedural expressions either authorize or prohibit non-descriptive usages according to their interpretative algorithm. When they do authorize such usages, the algorithm will specify *ad hoc* the conditions of this particular pragmatic enrichment as well as the different outputs possible. In this way, we shall be able to explain the possible meanings and nuances with the required high level of granularity necessary to pragma-semantic analysis. If this option proves to be the most adequate, then we must see temporal expressions as being merely one instantiation of a more general type of expression. In this case, we must find out what class of (meta)expression such items belong to, and justify their being placed within this class.

Conceptual expressions lead to regular pragmatic enrichment through inference wherever the context permits it, as required by the search for relevance. Pragmatic enrichment can concern either the meaning to be attributed to the expression itself – in which case it occurs at the level of the explicatures – or it will take place for the interpretation of the utterance as a whole, for instance a non-literal proposition – and in this case the communicative act is produced by implicature. As already noted, in the case of enrichment centered on a particular expression, the non-descriptive usage can be obtained through narrowing or loosening.

We have seen Sperber & Wilson's distinction between a descriptive use – the utterance is a representation of the speaker's thought(s) about a real or desirable state of affairs – and a non-descriptive use – the utterance is a representation of the speaker's thought(s) about an attributed or relevant representation (for instance someone else's thought(s) about a real or desirable state of affairs). Initially, I thought of adding two further categories of usage – 'argumentative' or 'discursive' – but this seems unnecessary since these two usages are characterized more by the speaker's informative intention than by whether they are actually descriptive or not. However, for our purposes here we must distinguish between the descriptive or non-descriptive usage of specific expressions – temporal ones in this case – and the descriptive/non-

descriptive use of complete utterances in which temporal expressions appear. Clearly for us, when a temporal expression is used in a context where it means something other than, or in addition to, the time of one (or more) of the eventualities, it is used non-descriptively. The actual informative intention of presenting utterances for use in argumentation or for (discursively) signaling the speaker's attitude, belief-state or perspective is situated at a level that precedes the actual information conveyed by the words that compose the utterance. Therefore, a given language's 'argumentative usage' is only one way of communicating, and by doing so, it does not imply that the informative aspect of language is absent. Likewise with 'discursive usages', 'interactional usages' and other uses of a language to convey information characterized by something other than truth, factor a straightforward description. Naturally, I foresee that such usages will be applicable to both oral (e.g. classes, political speeches) and written linguistic productions (e.g. scholarly writings, newspaper articles).

Finally, I posit a more radical hypothesis: linguistic expressions deemed as being procedural (such as a temporal expression which can be used non-descriptively) may encode instructions with no given hierarchy – that is, in the case of temporal expressions, the temporal instruction is not necessarily the default procedure. We shall see if this hypothesis is too extreme for all temporal expressions, and if it is perhaps only applicable to linguistic units that pertain to more than one grammatical category. (For instance, this may be the case for *yet* which is both an adverb and a conjunction.) If this hypothesis holds, we could say that the procedures encoded within certain expressions are purely determined by context, in other words, they would be strongly pragmatic discourse markers. In addition, this may have consequences for the point of view or perspective of a given linguistic production.

3.2.3. Methodology

“One of the most basic things that we do when we communicate through language is to [1] pick out entities in the world and ascribe properties to them, or [2] indicate relations between them.” Cruse, A. (2000: 303)

[1] is something we could say of conceptual expressions and [2] corresponds to our procedural expressions; if so, then why not take the stance that whatever the level or amount of actual procedurality of certain expressions, we can clearly put the temporal expressions examined here – along with Discourse Markers more generally – as fulfilling the second function described by Cruse. It is tempting to just rename this disparate class of words entirely, such as Cruse’s “grammatical words” which are words that have (almost) no lexical roots i.e. ‘non-lexical’ words such as *the*, *and*, *of*. (Cruse 2000: 88).

On a very general level, I planned this research according to the principles of a naturalist and mechanist methodology; the hope is that such an approach will reduce unwarranted speculation. By a naturalist and mechanist methodology, I mean a methodology that concerns itself with language as being part of the natural world, and which follows laws and principles that are grounded in reality. In this sense, though objective reality may in some cases not be readily accessible, it can be known through inference and experience. The idea is to eschew a relativistic perspective of language, and specifically of temporal expressions used non-temporally. For this, a controlled reductionism shall be applied to our framework, through the use of a rules-driven inference model which in principle should help avoid occurrences of unfalsifiability and unfounded deductions. I adopt a weak version of compositionality aka “the semantic skeleton model” (Cruse, 2000: 79), where the meanings of expressions are underdetermined (much like in Relevance Theory) and need context, encyclopedic knowledge, etc. to be fully fleshed out. This scientific perspective will limit this framework to a reasonable methodology, thereby ensuring epistemological soundness from the formulation of the aforementioned hypotheses up to the end-results. In so doing, we shall keep clear of holistic perspectives both for the phenomena treated and the overall research process. The chosen approach can thus permit us a certain level of transdisciplinarity, with each perspective contributing some elements to this research, functioning as an efficient heuristics, while shunning a naïve and inoperable mixing and matching of diverse disciplines.

To do this we will proceed as follows: first, I will start by listing natural language occurrences in ordinary conversation (principally in English and French, though Italian and Spanish data may also be mentioned here and there) wherein temporal expressions do not function as we would normally expect them to – e.g. by denoting the time of events or actions in the world. We will list, describe and focus on analyzing whether these non-descriptive usages are of a conceptual or procedural type and proceed to classify them accordingly. The second stage will consist in the actual pragma-semantic analyses, which will include a description of the natural inferences which can be derived in the case of the conceptual expressions; a modelization of the expressions considered as procedural will be undertaken on the basis of Saussure’s algorithmic procedural model as applied to non-descriptive uses of French *passé simple*, *imparfait* and *plus-que-parfait*. The final stage of our research will include our review of the problematic cases – borderline or undecided cases – and an examination of the semantics-pragmatics interface (and possibly tweaking the procedural model)⁸⁶.

As has been noted above repeatedly, we will distinguish between two types of meaning determination of linguistic expressions in context: conceptual and procedural expressions. Recall that an expression is considered conceptual if the totality of its possible meanings can be determined on the basis of the underlying encoded concept. On the other hand, an expression is considered procedural if all its potential meanings cannot be foreseen by conceptual material and normal enrichment mechanisms e.g. the derivation of implicatures (cf. Saussure & Sthioul 2002). In other words, expressions deemed procedural are not to be seen as devoid of any concept, just that this concept is accompanied by, or dependent upon, the computational instructions encoded within. When a given expression is conceptual then all possible uses of this expression can be determined either by *narrowing* or *modulation* (in Récanati’s terms, cf. Récanati: 2004), that is, by designating a referent which satisfies its semantic properties, or by *loosening* or *sense extension* (in Récanati’s terms, *ibid.*), which enlarges the range of possible referents the expression can have (Sperber & Wilson, 1995).

86 Though I anticipate no problems with it, Saussure’s model has been specifically tested on non-descriptive temporal expressions in French (specifically verb tenses) and thus may not function exactly the same for temporal adverbs and connectives used non-descriptively (in French or English). This however changes nothing as to the soundness of his model’s plausibility and should in principle function equally well on temporal adverbs and connectives, with little modification.

A classic example of the first occurrence is the verb *open* which can be coupled with *door* or *bottle*, but whose properties must be narrowed down to accommodate two different actions; hence, some of the properties of *open* could be “remove”, “push”, “pull” or “lift” – the property of “push” or “pull” will more readily be associated with a door than with a bottle or a tube of toothpaste. With loosening, an expression will not use its regular properties – indeed some may even be cancelled out – but rather an appropriate meaning will be assigned with regards to context; for example *flat* in the phrase “Holland is flat”, which it is not, strictly speaking, but in comparison to Switzerland or Tibet (part of the context or the interlocutors’ cognitive environment) it would be appropriate to qualify Holland in this way.

When, on the other hand, an expression is procedural, in principle⁸⁷ neither *narrowing* nor *loosening* are applicable to achieve a relevant meaning. This is purported to be the case of common conjunctions such as *and* or *but*, or of several temporal expressions such as *since* or *then*. Note that *but* is not restricted to a purely contrastive usage, as in “nobody here but me” (*but* = *except*); something similar can be said of *since*’s usual temporal usage, for example in “since you’re here, stay for lunch” (*since* ± *because*). What if, however, *narrowing* and *loosening* do apply to procedural expressions? What does this imply? Well, in the case of *now*, which, I claim has some conceptual content, when it is used temporally, it can be loosened from the sense of “present time of utterance” to a much larger timescale, like “the present epoch” (which of course includes the present time of the utterance, but extends much further in both directions). When *now* is used non-temporally, what is to say that, on the interpretive side, there is no narrowing or loosening occurring? Perhaps it is terminologically inappropriate to say this, but ultimately, mental language processing may indeed make use of something quite similar (if not identical) to the narrowing/loosening mechanism. For *now*, this may be situated at the level of selection between an argumentative, attitudinal or expressive interpretation of a discursive usage (we shall return to *now* and its outline procedure in section 4.2.1).

⁸⁷ This was briefly discussed in section 3.2.1 above; recall that I am not convinced that one cannot, ‘in principle’, apply *narrowing* or *loosening* to procedural expressions on the grounds that there may be no clear-cut distinction between conceptual and procedural expressions. Perhaps another term, such as Récanati’s “modulation”, would make this notion more accessible regarding procedural expressions.

The potential inferences procedural expressions can activate, whether it be on the level of explicatures or that of implicatures, are instructed by a specific inferential schema. We have seen several perspectives of this type of expression, and several approaches of how to predict their in-context usages. There are currently three principal procedural models (more or less) within Relevance Theory: Blakemore's inference chains, Luscher & Moeschler's inference trees and Saussure's procedural algorithms (2000, 2003), a modified version of which will be used here. The algorithmic inference schema presents the double advantage of being more flexible than the chain model and more precise than the tree model with respect to the interpretative conditions.

Our descriptions and analyses must necessarily make use of several interfaces in order to provide a complete account of how the interpretation of non-descriptively used temporal expressions actually functions. By thoroughly analyzing temporality, argumentation and subjectivity in utterances and sentences, the aim is to:

1. *help expand the knowledge of how time functions whether used descriptively or non-descriptively;*
2. *shed light on derived discursive (including: argumentative, attitudinal, expressive) uses, through the use of expressions not seemingly designed for that purpose;*

Our results may point to the need for a selective re-categorization of grammars' traditional classification of parts of speech according to their functions and perhaps re-consider tenses as being *more* than just a means of explaining time in language and thought.⁸⁸

Our end goal is to achieve a better understanding of our linguistic comprehension processes which, in turn, will enable a more thorough investigation of human communication and cognition. Ultimately, our research should help in classifying temporal expressions in such a way as to render them more readily accessible for use in general research in theoretical linguistics, second language teaching, translation, computational linguistics and psycholinguistic experimentation.

88 By this we do not mean "discourse type" markers that lead to modifications of grammatical expressions according to their text or discourse type.

4. Non-descriptive Usages of Temporal Expressions

We have already outlined what we mean by “non-descriptive usages”, using Relevance Theory’s definition as the foundation (see section 2.4). Here we will briefly recall the basic idea behind this type of usage and discuss it a little further. As previously stated, the distinction between descriptive and non-descriptive (or interpretive) usages hinges on whether a given utterance is used to represent a (real or imagined) state of affairs or not⁸⁹. When an utterance does this, it is used descriptively, giving a representation of a person or thing, an action or an event⁹⁰. This is so whether the utterance is made by a real person, say someone we are conversing with, or who wrote us a letter or email, or by a fictional character in a novel, or the novel’s narrator. On the descriptive side, it matters not that the eventuality or thing described actually exist in the real world, or in a fictional one; what matters is that the eventuality represented by the utterance or sentence be understood as being a factual one. Thus, even a lie is a descriptive usage since the liar wishes their audience to believe what it is they are saying.

When an utterance (or part of an utterance) is not used to factually represent an eventuality or an object in the world, it is still used to communicate; what it communicates however is less straightforward. This is so whether the utterance is made by a real person or a fictional character. So for instance, an ironic utterance such as “great day for a picnic” said during a thunderstorm, is a non-descriptive usage, for what it communicates is not that it is, factually, a great day for picnicking, but rather that the speaker is mocking someone (even themselves), or is trying for some comic effect, and this utterance does so by representing another (in this case, absurd) representation. Another instance of non-descriptive speech is when someone reports on another person’s sayings, doings or beliefs, as in “John believes the Earth is flat”, where the speaker is communicating (and representing) a third party’s beliefs and not their own (regardless of whether or not the reporter also believes what they are reporting).

89 See Sperber & Wilson (1995: 224-243) for a detailed discussion of descriptive and non-descriptive use of language.

90 Recall the brief discussion on metarepresentation in section 1.2.3., where a representation is the norm for descriptive usages and metarepresentation is used with non-descriptive usages, since such utterances require an added level of representation to be properly understood.

The way ‘non-descriptive usage’ is understood in the present research is an outgrowth from the above observations. In the case of procedural expressions, such as the temporal terms analyzed hereafter, descriptive usages are when the expressions express their core, or default meaning – such as *now* meaning ‘the present’. When these expressions are uttered with another intention, that is when the speaker intends to communicate something other than time – such as *now* being used to console a child, as in ‘*now now*’ – the expression (and utterance) is used non-literally. We will see that with the expressions examined here, the non-literal (or non-descriptive) usages have little to do with irony, metaphor or reported speech or thought.

Instead, the non-descriptive usages of such expressions point to a use which serves to communicate argumentative or discursive relations to be derived in the given utterances. Said somewhat differently, these temporal expressions are pragmatically enriched to yield a specific type of utterance interpretation, an interpretation which is possible because of certain characteristics inherent in the expressions themselves. These procedural expressions have the capacity for such enrichment because they encode something other than (or perhaps in addition to) a simple straightforward concept. Thus procedural expressions serve a quite different function from conceptual expressions. And it is because procedural expressions encode relational functions that they may be enriched to express one or more additional functions, according to the context in which they are uttered. When a conceptual expression is enriched, like *flat* or *tree*, its concept is not fundamentally changed, but is loosened to include other degrees of what it means to be *flat* or a *tree*. When a procedural expression is enriched, like *and* or *now*, its procedure is not changed, but instead is refocused to trigger the interpretation of different relations.

The latter are restricted to representing the encoded concept, even when enriched to an extreme degree, and thus their function is the straightforward one of representing a semantic content. Procedural expressions, on the other hand, are able to represent more than one function, functions which sometimes no longer have all that much to do with the basic default one. Different functions can be categorized according to a specific aspect of language which they represent. There exist many aspects to language, but here we will focus on a few, namely, temporality, spatiality, subjectivity, argumentation and discursiveness. Quite naturally the primary function of temporal expressions is to represent temporality in some form. For instance, an

expression like *today* represents time as being the day upon which the utterance is uttered. More specifically, such an expression points to a temporal relation to be established between the act of speech, and that which is spoken about.

Yet, if temporality⁹¹ is but one of several possible relations that can be expressed in a given language, it stands to reason that there be either specific lexical items that express this type of relation, or else that there exist lexical items which *can* express temporality, among other types of relations; this is the case of the auxiliary *will*, which can express a notion or a function, one of which is the temporal relation of futurity. It would seem that procedural expressions, such as temporal or spatial adverbs, connectives and indexicals, are precisely the latter type of lexical item. These types of expression allow for pragmatic (contextual) enrichment, while conceptual expressions are more restricted in their meanings. Likewise, while both conceptual and procedural expressions may be used non-descriptively, the former do so in different ways – notably they are used ironically, metaphorically or metalinguistically – while the latter, are used in ways where the actual function of the term is modified, or even completely changed⁹².

91 Recall that for the present work, aspectuality is included in temporality; I take it as self-evident that tense, aspectuality and mood are three crucial elements in language whose primary purpose is the establishment and/or modification of relations between objects in the world – temporal relations, referential relations, discursive (argumentative, attitudinal or expressive) relations principle among them.

92 For Saussure (2011: 64) there are “indefinitely many possible meanings in context” for a conceptual expression, due to the fact that they may be loosened or narrowed, while for procedural expressions there are not so many possibilities. Our focus here is not on all the possible meanings of expressions, but on the possible functions they may have.

4.1. General observations and typology of temporal adverbs, connectives and indexicals

First, recall that the expressions that are analyzed here do not always belong to the same grammatical category: sometimes they are classified as temporal adverbs (i.e. when used descriptively), sometimes they are called Discourse Markers (i.e. when used interpretively) – in addition some are also connectives (whether used descriptively or not) and some are indexicals (ditto). Second, there is a difference in function for these expressions: there is a grammatical function and there is a discursive and/or argumentative function. It appears that grammatical function – whether the expression used is an adverb, conjunction or preposition – plays a role in their ability to be used non-descriptively. The difference in grammatical category of these expressions, and whether the expressions can belong to more than one such category, may have some influence on whether some may be more readily used non-descriptively or not, we will return to this where relevant, and in Chapter 5.

So, what we have here is a disparate group of expressions whose single overarching commonality is that they are generally used to express time. But individually a few of these expressions belong to just one category, like *soon* or *again* – adverbs, while the others belong to two or more – they can often be adverbs, adjectives and conjunctions, sometimes even adjectives. It would seem that this belonging to different grammatical categories is at least partially responsible for these particular expressions' flexibility; belonging to more than one category is not a necessary condition for them to be used non-descriptively, otherwise both *soon* and *again* would not be included on our list. Rather the fact that these two items present less derivative, non-temporal usages leads us to consider that while belonging to several grammatical categories may not in fact be what enables non-descriptive usages, it at least seems to provide for a wider variety of such usages.

Perhaps this is part of the reason why some approaches choose a polysemic view of language; and it is a reasonable assumption. Here however we favor a monosemic view, in following with Guillaume's *potential signified* and in following with the Geneva School. The reasoning is that a monosemic stance is more plausible: first, because the view we take of how the human mind works is one where the general language processing system is much more efficient seen this way: if but a single

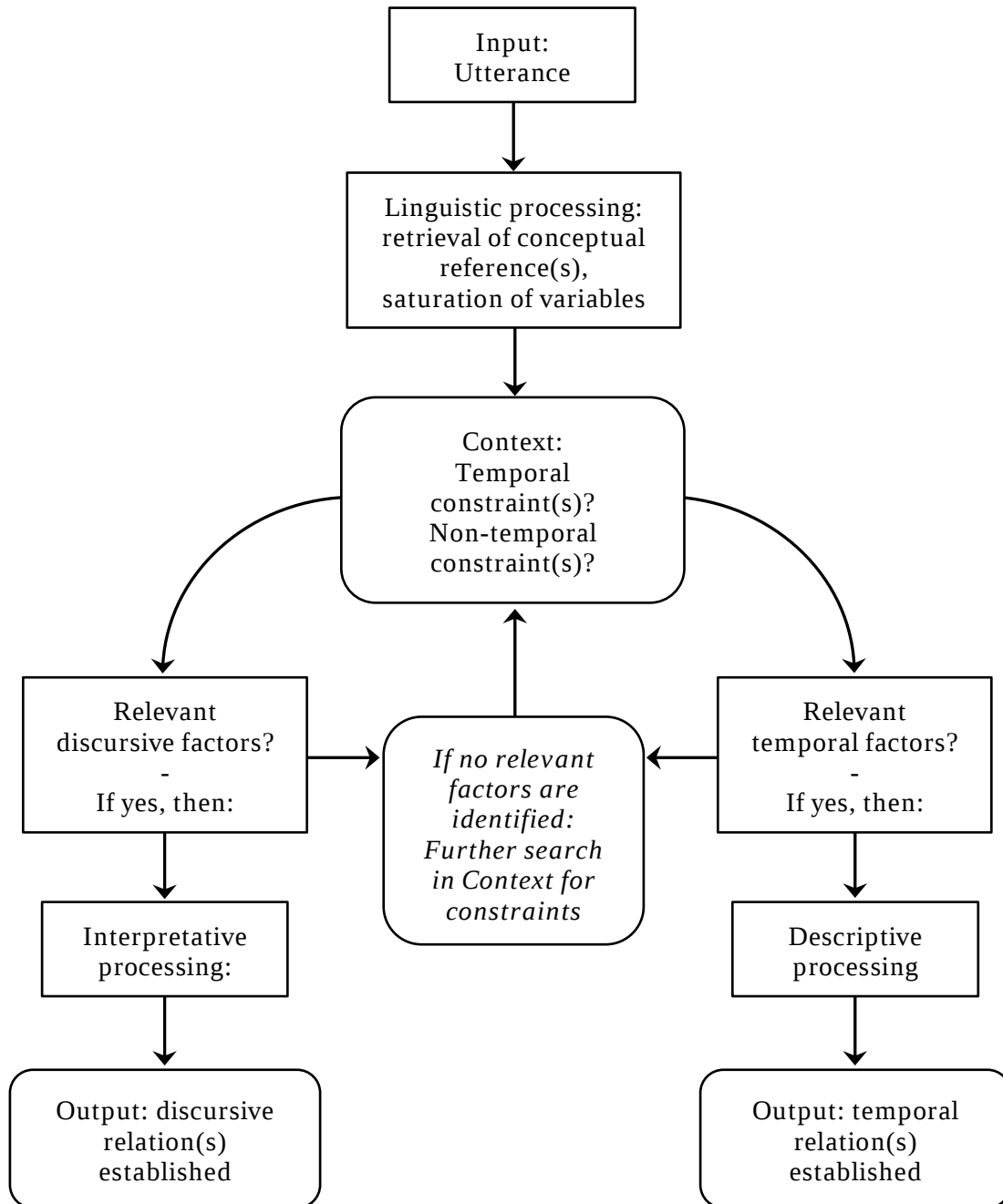
concept or procedure is indexed to each item, which can then be enriched contextually, there is much less need for an endless storage capacity than would be the case for the mind stocking each item with every possible contextual meaning it could have attached to it. Just as the human hand can be used to do a wide variety of things – push, pull, point, grasp, flick, snap, punch, slap etc. – so too can the mind, and this is also the case when it manipulates symbols and representations of symbols. Secondly, a monosemic take also appears more compatible with our procedural approach, that is, the associated algorithms for processing each expression can be much simpler and more straightforward in a monosemic view⁹³.

The algorithm we need must possess a straightforward structure, “mapping” the signification from the expression’s (basic, underdetermined) semantic meaning to its (actual, contextualized) pragmatic meaning. With, for instance *now*, given the right circumstances, the hearer will not infer the temporal sense but a discursive or argumentative one instead – the *contrastive* sense of *now* will be made salient (and thus more likely to be relevant) and the context will supply the remaining variables for a specific instance of usage. Said roughly, what needs to be kept in mind when working with such expressions, while searching for an adequate algorithm for each, are the following three points: 1. Most (ideally all) possible meanings for X should be generateable by the algorithm; 2. The most irreducible core meaning/lowest common denominator needs to be present in the algorithm; and 3. The quality or function that sets X apart from other, similar, expressions – what is the particularity of each expression, and of each usage it may allow?

A schematic general procedure for treating temporal expressions could resemble the one outlined below. I am basing my representation of this procedure on Saussure’s (2003: 282) “Temporal Interpretation Procedure”, with some modification to suit the non-temporal meanings of these expressions when used non-descriptively. As such, it is simpler, and less precise, than the algorithm Saussure proposes for processing French verb tenses. In addition, there are further return steps possible which are not shown here, if for instance further processing is required due to specific obstacles

93 That being said, I would not completely reject a reasonable polysemic appreciation of certain lexical items – indeed, a polysemic approach can be quite functional for many nouns, verbs or adjectives, as stated previously – my present stance is that a polysemic view of discourse markers (e.g. temporal adverbs and connectives) is not the most plausible or functional one. Perhaps with appropriate modification, a polysemous account would work.

along the inference path. Finally, this outline procedure will be different if these expressions do not have a temporal default (as in my second sub-hypothesis), the procedure modeled below is built on the assumption that there is a temporal default.



MODEL OF A GENERAL PROCEDURE FOR PROCESSING TEMPORAL EXPRESSIONS

4.1.1. English Temporal Expressions

When will then be now? – Soon. [Spaceballs, Mel Brooks, 1987]

In English, we will be looking in detail at the following expressions – *already, still, yet, soon, before/after, since, next, now, then* – which are all usually considered as temporal expressions (with perhaps the exception of *next*), though they are not necessarily placed within the same grammatical categories, as mentioned above: some are considered adverbs, while others are branded connectives; some are held to be deictic, and others not. We will focus on these expressions in particular because they are both the ones used most frequently in speech and writings of various forms, and, especially, because they are the ones most often used to fulfill multiple functions, both semantically and grammatically. In our procedural pragmatic view, as described above (sections 3.1 – 3.3), we will focus on the core meaning of these terms, which, we postulate, either is an instruction for the expressions' interpretation or else contains one. Thus, the actual category they belong to – i.e. adverb or connective or whatever – is only of secondary importance, though if this actually plays a role, this angle will also be considered.

We will examine each expression in turn, in a mostly descriptive perspective – looking at and discussing several typical examples – alternating with a more analytic perspective where we confront standard utterances with examples containing instances of non-descriptive usages. The goal is to obtain a description of the expressions' meanings and usages, and ultimately, to give an adequate definition of their procedures, and perhaps provide an appropriate illustration of these instructions in the form of a likely interpretation algorithm. Many (if not most) of the expressions we'll be looking at here take *now* (i.e. which most adequately references T_0 , along with *presently, this very instant/second/minute* etc.) as their cue, in their temporal forms at least. This may have consequences for the non-temporal usages of these expressions; part of our endeavor is precisely to find out if this is the case, and this in turn may prove important, if not essential, to discovering an algorithm (or meta-algorithm) to adequately describe each non-temporal interpretation.

We started out with an impression that many usages such as these were mostly oral, or else were common in fiction and perhaps academic texts – it appears this hunch is partly correct: these usages do in fact come up frequently in real everyday

conversation and in fiction, and are common in academic texts as well (see the online COCA and BNC corpuses). Exposure and observation point to the fact that these expressions' non-standard usages are actually not all that rare; indeed, the only reason to call them "non-standard" is in the sense that their most commonly used, or their most conventional meaning, is trumped by a contextually salient cue that guides one to reach a more relevant meaning (it remains to be seen whether this alternative meaning is secondary or tertiary to the core semantics of these expressions).

The thing about these non-standard usages is that we need not spend too much time arguing their existence; even though we have chosen not to rely extensively on corpus examples, dictionary definitions for most, if not all, of these words have at least one non-descriptive definition listed and sometimes more than a few. These definitions – like the Oxford Concise Dictionary's (1996) seventh definition of *now*: "(esp. in a narrative or discourse) then, next" or Merriam-Webster's online dictionary's third definition: "used with the sense of present time weakened or lost to introduce an important point or indicate a transition (as of ideas) <now, this may seem reasonable at first>" or still Wiktionary's second definition: "(sentence) Used to introduce a point, a remonstrance or a rebuke" – all give specific examples of usages that every English speaker will find immediately interpretable.

Even if some non-temporal usages of *now* or *yet* etc. are listed as dictionary definitions, for the majority of English speakers these terms have temporal meaning first and foremost (and possibly that is the only sense some are consciously aware of); and at most the fact that what we will continue to claim are non-descriptive usages are listed in dictionary entries means that these "enriched" or "implicated" meanings are rather commonplace – we could say they are "conventional implicatures" à la Grice (1975). Instead, we take it as uncontroversial that such meanings and usages exist. The correlation between non-descriptive usages and dictionary lists does not in fact apply to all the expressions we'll be looking at here, e.g. *already*, *next*. But in the end it may just be that some expressions are on a later path to grammaticalization and therefore are not yet as widely used or attested. This may partially explain the shorter definition entries, which are often without mention of a non-temporal usage. At any rate, that which makes it possible to use *now*, *yet*, or *then* non-temporally, is also what makes it possible to use *already*, *next* or *again* in this manner.

4.1.2. French Temporal Expressions

As with the English terms, the French expressions also hail from different grammatical categories (adverb, conjunction), and some are considered deictic while others are not. We have kept the same order as far as meaning-equivalence, though of course there are, here and there, some variations in meaning and usage as is wont in different languages. We will go into this with a sub-section following the analysis of each English-French pair/grouping; but first we will undertake a similar description and analysis of each term (or group of terms) as was done for the English language equivalents. The French temporal expressions we will be interested in are: *déjà*, *encore*, *bientôt*, *avant/après*, *depuis*, *d'abord*, *ensuite & enfin*, *maintenant* and *alors*.

Temporal connectives and adverbs can easily – just as easily as in English – be used non-descriptively in French, and their usage is well documented⁹⁴. The traditional explanation, though often augmented by argumentatively-oriented parameters, is an explanation for which the elements under the scope of the adverb are not the elements described by the eventualities denoted by the verbs' semantics but rather the event which constitutes the utterance itself (or alternatively, the illocutionary act, cf. Rossari 1997 & 2000). This interpretation, for temporal expressions, allegedly stems from the conceptual proximity between time and the sequencing of events or reasoning. In contrast however, it should be noted that some temporal expressions cannot be interpreted non-descriptively, though the metaphor would hold. Thus, though it may be easy to understand why, for referential reasons, *demain* ('tomorrow') or *aujourd'hui* ('today') would not make sense in an argumentative context, one can ask why it is that the temporal value of adverbs like *auparavant* ('before'), *bientôt* ('soon') or *peu après* ('soon after') cannot authorize a non-descriptive derivation in the sense we mean here.

With regards to adverbs that allow a metalinguistic interpretation, one immediately supposes a dichotomy between those whose non-temporal part seems to belong to the encoded material (*enfin*, *déjà*) and those for which the non-descriptive interpretation stems from a pragmatic derivation (*d'abord*, *ensuite*). This would not be the whole story however. As argued in chapter 3, the view of conceptual/procedural

⁹⁴ See Muller (1975), Nef (1978), Martin (1982), Zénone (1982), Jayez (1988), Franckel (1989), Victorri & Fuchs (1996), and more recently Mosegaard-Hansen (1997, 2000, 2003, 2004), Rossari (2000, 2002) and Buchi (2007).

expressions taken here is that of a continuum. Therefore, expressions like *enfin* or *déjà*, may well be halfway between conceptuality and procedurality; nevertheless, it is their procedural quality that allows for non-descriptive usages.

Overall though, the general observations made in the preceding section about English temporal expressions also apply to French temporal expressions. In other words, that which makes it possible to use *now* or *already* argumentatively or discursively is the same mechanism that allows one to use *maintenant* or *déjà* in these ways. Like with English temporal expressions, French temporal expressions also have two or more dictionary entries, and it is equally likely for a native French speaker to identify, understand and use such expressions as it is for their native English counterparts. Stemming from this, then, the procedural information should, for all practical purposes, be quite similar, if not identical. Any difference in the procedural information (or even the algorithms) between such closely-related expressions is most likely due to superficial differences of each language, such as slightly different focus of reference, or a difference in the degree of saliency of a temporal and/or discursive relation. We will address this issue in the comparative sub-sections for each English/French pair/group of expressions.

4.2. Description and analysis of non-descriptive usages

For this section, we will take a close look at the selection of English and French temporal expressions that are most representative of the type of non-descriptive usage being investigated here. The selection is non-exhaustive, and perhaps a few other terms could have been added to the list, while a few others could have been left out⁹⁵. The logic behind this specific list has more to do with the fact that we will be looking at both English and French expressions – and if and how they may correspond to one another – than the grammatical category each expression belongs to, or the frequency with which these expressions occur in either language. Additionally, it became apparent while going over these expressions that though there is not always a corresponding⁹⁶ term in both languages, there is always a corresponding function – that is, a specific linguistic purpose, such as contrast, or topic-switching. Throughout section 4.2 we will peruse the selected temporal expressions, treating the English term(s) first, followed by the corresponding French term(s), always with an eye on the roles each term may play in its language, and the respective non-descriptive usages each may allow.

95 Naturally, there are several other expressions left out of the present analysis, though no less deserving, mostly because of a presumption on my part that they are less exemplary than those given here. Offhand, I will mention *when* or *while*, which could both have been analyzed here, notably alongside *since* (section 4.2.11). These, and others, in French as well e.g. *quand*), would be worthy candidates of future research within a procedural pragmatic account.

96 By “corresponding” I mean the most appropriate term, i.e. the one most commonly used to translate one word for another, absent any particular context. So, for instance, *now* is followed by *maintenant*, *already* by *déjà* and so forth. The last few subsections will be somewhat different, as will become obvious when dealing with the expressions given there.

4.2.1. *Now*

Now. You're looking at now, sir. Everything that happens now, is happening now.
– Colonel Sandurz – *Spaceballs* (1987)⁹⁷

It is pretty straightforward to define *now* as meaning ‘the present time (of the utterance)’, with more or less extension in time, and *yet* as meaning ‘up until *now*’ or ‘from *now* onward’, and both expressions are commonly understood this way. It is also uncontroversial, and unsurprising, that *now* and *yet* may be used non-descriptively, for instance in metalinguistic contexts or in indirect speech, where they may retain their temporal senses. But what about non-temporal usages? We will see below that when these terms are not used to denote the present (*now*), or a soon-expected but unrealized future moment (*yet*), *now* and *yet* can be used in place of other connectives such as *but*, *even*, *however*, or *although*. It appears that there is a more widespread use of *yet* in such roles, though whether the reason for this is because *now* is an indexical and/or is perhaps more strongly anchored in time or because *yet* historically meant “in addition, further, moreover, still” as well as “till now” is not completely clear at this point (cf. *Oxford Dictionary of English Etymology*, 1978: 616 & 1019-1020)⁹⁸.

As will soon be illustrated, *now* can trigger a few other interpretations⁹⁹, such as topic-switching or establishing a contrast of some sort, both of which are usages that could be called argumentative or discursive usages. So, even though at least one of the basic properties of *now* is to mark the time of utterance, it would appear that it is capable of handling non-temporal relations; conversely, it does not necessarily follow that *now* in its non-temporal usages is totally devoid of that basic, perhaps default, property. Indeed, it is an open question of whether or not *now* in such usages still contains a temporal element, and if so, how this residual temporal element contributes to the meaning of the utterance. With *yet* the situation is slightly different, its default reading may somewhat resemble that of *now*, but it cannot replace *now* in

⁹⁷ The above quote is not an example of non-temporal usages of *now*, it is nonetheless an example of non-descriptive usages; in this case, the three final instances of *now* are used metalinguistically, to comment on the degree of ‘presentness’ of the situation, or rather whether the moment being talked about is in fact the present – and the first instance of *now* is temporal (descriptive) and is said in response to the question “when does this happen in the movie?”

⁹⁸ We will return to *yet* in more detail in the following subsection.

⁹⁹ Many of which are commonly listed as subsequent definitions in several dictionaries – Oxford, Merriam-Webster, Longman, to name just three.

utterances such as (26) below; this is because both terms can refer to the present time (of the utterance) but do not imply the same type of relation between the Event-time and the Speech-time. In temporal uses, *now* implies that the Event described is (or will immediately be) happening, while *yet* suggests an element of expectation, and an interval of time (it is in fact more aspectual than temporal).

For instance, (26) and (27) clearly express temporality, but (28) and (29) express something besides, or instead of, temporality; in this case, they are used discursively and argumentatively (respectively).

(26) I'm going out *now*.

(27) Her most recent novel is her best one *yet*.

(28) John doesn't know much about hydraulics. *Now* Mary is a much better choice for the task.

(29) Those paintings are expensive and distasteful, *yet* people buy them.

If we were to use Reichenbach's coordinates, one could describe the default reading of *now* roughly as follows: situate the time of the event E at the point of speech S, (with the reference point R coinciding with both in many cases). We will not dwell on this modelization of *now* here since most of the usages we will be looking at gain next to nothing from being placed into this coordinate system (example 28), if they may be rendered at all. With (27 & 29) using Reichenbach's coordinate system proves difficult, since with (27) E, S and R are irrelevant for interpreting the utterance – the focus is on [her novel, best] is true according to the speaker; and furthermore that the author is expected to write another novel, possibly an even better one (again, in the speaker's opinion). With (29) the coordinate system is moot since what *yet* does here is establish a contrastive relation between two clauses, and has nothing to do with temporality.

Though the default procedure of *now* may very well be "the time of utterance", *now* can also introduce or make salient other relations, such as topic-switching or contrast, both non-temporal usages. Putting aside considerations of intonation and prosody (which of course have a variable degree of influence on utterance interpretation), let us accept the premise that the basic property of *now* is indeed to mark the time of utterance. But in an example like (28), is *now* in this and other such usages utterly devoid of the basic temporal property? And it is not at all extreme to hypothesize that when *now* is used as a topic-switcher or a contrastive connector these

two usages are still somehow anchored in the time of utterance – but then, so are utterances where *now*, or another extra-propositional temporal expression, is absent. The view adopted here is that *now* implicates a contrast in all of its usages, that is, when one utters *now* in its “standard” temporal sense, there is the idea that the present utterance which contains it is making a *clear-cut distinction* with past or future states of affairs, in other words the utterance “P *now*” (26) or “*now* P” contrasts with other propositions, as if to say “the current proposition I am expressing is to be considered in itself, separate from other previous utterances...”. Similarly, when used as a topic-switcher (28), *now* also establishes a type of contrast. This, however, does not prove that *now* is always thus implicitly contrastive, indeed an utterance “*now* P” can also be a continuation of a previous utterance; building upon the aforementioned proposition to add new information, as in a clarification of what was stated previously (like with example 28 above). But do we need to say *now* to understand an utterance as being about an actual, current state of affairs? Not necessarily, take for example:

(30) I'm going to the grocery store.

(30') I'm going to the grocery store *now*.

In the same exact context, say a husband or wife who is putting on their coat and opening the front door, both these utterances can be interpreted as expressing the same proposition, namely “the speaker is going (or is in the process of getting ready to go) to the grocery store at the present time (which coincides with the time of utterance)”. In the given context, example (30) is sufficiently relevant as is, so why say *now* in (30'), if it is not necessary for the hearer to understand that the speaker intends for her to understand that he is presently in (or just beginning) the process of going to the store? While it is true that, in relevance theoretic terms, (30') is slightly more relevant because of reduced processing costs for the hearer, this cannot be the whole picture – there is something more going on here. A plausible hypothesis is that the *now* in (30') is used as a *focalizer*, that is, the speaker is deliberately drawing attention to the proposition expressed, which will thus yield specific contextual effects. Some of these effects could be the speaker implicating that: a) “before I couldn't/didn't want to go to the store, but at present that is exactly what I'm doing” or b) “before I went out to see visit our neighbor, currently I'm going to the store” or even c) “as you can see, I'm leaving, so if you want to come along, be quick, because I won't wait” etc. In all these interpretations, *now* is a ‘focalizer’, and in interpretations

a) and b) *now* is contrastive. Example (30) does not yield such interpretations as strongly (or even at all, depending on the cognitive environments of both parties); what can be derived from (30) with the least effort and greatest effect is “I am informing you of what I am doing and that is P”.

In light of this, another important point that needs to be made here constitutes a slight revision of what is generally taken as a default reading of *now* (and the same for *yet* a little further). Rather than *now* meaning “the time of utterance”, a more accurate definition would be “the time the utterance is heard and interpreted”; though it may seem banal to say this, it is of critical import¹⁰⁰. Indeed, though the problem is much more far-reaching than we can go into here, the assignment of reference to *now* is a long-standing issue¹⁰¹. But as we saw just before (example 30), we do not in fact need *now* to make it evident that an utterance is being heard and interpreted when it is heard and interpreted. So the core meaning of *now* must be something more than just “the time the utterance is heard and interpreted” or “the present”. Being an indexical, part of its fundamental meaning includes, by necessity, a reference to the speaker uttering the term; but given that it appears to be superfluous in some (perhaps many) instances, the reference to the speaker of *now* must have another component. This component is that of focus – *now* focuses an utterance on something specific, relative to the speaker, and thus includes a form of subjectivity; put another way, the speaker is the agent of an utterance, and an expression – especially an indexical – like *now* will focus the eventuality onto the way the eventuality relates to the speaker, and how the speaker represents that eventuality. Just what the object of that focus is will of course depend on the context in which *now* appears.

Thus *now* can adopt several different functions depending on the context of occurrence; *now* can be a temporal deictic, a discursive marker (or a connective) serving an argumentative function or a Discourse Marker serving a subjective (i.e. ego-centered or “perspectival”, in Récanati’s (2000) terms) function. More specifically, the basic semantic sense of *now* is a property common to the various uses in context of *now*. We suggest that this common meaning is that of “egocentrism at the moment of speech” (or “I-here-now”), that is, focusing on the speaker and/or the

100 Smith (1989: 173-174) inspired this specification in his discussion of *now* on answering machines or radio broadcast recordings.

101 See Kaplan (1989), Smith (1989), Perry (1993), Predelli, (1998) and Corazza (2002) for a much more detailed discussion of indexicality and temporal deixis.

topic at hand, and the accompanying, derived, notion of *contrast*. When a speaker says *now*, no matter the usage, they are basically calling attention to their own perspective with regards to the utterance it occurs in. And, in so doing, they necessarily set up a contrast between the present on one hand and both the past and the future on the other hand (when temporal), or, they are setting up a contrast between two clauses (when argumentative) or, still, they are calling attention to a contrast between the speaker and a/several hearer/s (when discursive). Thus, in the following examples, *now* fulfills three different functions:

(31) There's a limo coming to pick you up *now*.

(32) The president, *now* an old man in his seventies, had engineered much-needed reform in previous decades¹⁰².

(33) "William Gibson, *now* the author of *Pattern Recognition*, has certainly more often illustrated that other coinage..."¹⁰³

(34) Open the door *now!* / *right now!*

In (31) *now* focuses on the present temporality of the event, thus making the proposition unambiguously focus on the eventuality as being actual, or imminent, which triggers an implicature of the type "get ready to go". The following example, (32), is temporal, but focuses on a past and current state of affairs, here the president's age. The result is one of (implicit) contrast between the president at an earlier time interval and the current time interval. In example (33) *now* does something quite interesting: Jameson is writing about Gibson who was the author at the time the novel in question was being written – previous to Jameson's review – so to say that Gibson is *now* the author of the book named is, from a temporal standpoint, a little strange. This *now* is instead interpreted as "most recently", which albeit temporal, is not really about the present (i.e. is not descriptive), and so is yet another interpretive usage of *now*. For (34) one comes away with the understanding that the speaker wishes the door to be opened immediately, thus there remains an element of temporality, but it is not (yet) currently the case (due in part to the use of the imperative).

The above examples illustrate four different usages of *now* used descriptively to describe some form of temporal relation. As can be seen from a more thorough look at *now* in these instances, there is not a single unifying temporal relation that *now*

102 Inspired by an example taken from Récanati (2000).

103 Taken from Frederic Jameson, Sept-Oct. 2003, *New Left Review online*; our emphasis.

describes, but several closely-related ones. The following examples, in contrast, help illustrate how *now* can be used to describe relations that are not primarily temporal:

(35) We have seen that traditional eye surgery can, if done at the outset of a visual problem, greatly improve visual acuity. *Now* laser techniques, on the other hand, need not be undertaken so soon, though of course...

(36) *Now now*.

(37) Those paintings are expensive and unappealing. *Now*, people actually buy them!

Example (35) does not focus on the actuality of an eventuality; instead it refocuses the topic being discussed – traditional eye surgery – onto surgery done with the aid of a laser. Example (36) is a typical utterance used to calm or reassure a child (or conversely, to scold a child, another possible use). So, with *now*, a speaker can call attention to the present time (31), a change of topic or sub-topic (35) or simply repeat the word to offer reassurance (36). Finally, example (37) which can be somewhat ambiguous: with the comma, signaling a slight pause, a hearer can easily reach the conclusion that the speaker is establishing a contrast between the high cost and low aesthetic value of a series of paintings and the fact that people buy them. The implicature here wholly depends on the hearer recovering the premise that, for the speaker, no one would normally buy a painting that is both expensive and ugly. The hearer could also recover the implicature that the speaker is surprised by this turn of events. Interestingly, the same utterance, without the comma/slight pause could be taken to mean that at a previous time people did not buy them but that at present they do. But even in this interpretation, where there is still an element of temporality, one cannot miss the contrast set up between two intervals of time.

With examples (31) to (35), another expression could have been used, with little to no change in meaning: for instance, “in one minute” for (31), “presently” for (32), “most recently” for (33), “right away” for (34), or no expression at all for (35). For example (36) either a whole phrase would be used, such as “no need to cry dear”, or else it could be substituted by another commonly heard expression with the same meaning – “there, there”. Finally with example (37), several other contrast markers like “yet”, “though” or “however” could be used. So why choose to use *now*, what does this expression add to meaning, or to the interpretation process? It is plausible that what *now* brings to these utterances – indeed all utterances in which it appears – is its indexical quality, namely its focus on the person saying *now*. It is thus, along with *I*

and *here*, an expression which brings a great deal of subjectivity to the interpretation of utterances where it appears; said somewhat differently, *now* forces hearers to factor in the speaker in utterances containing the term.

Generally, one takes utterances spoken by speakers to be their own perspective by default, but with *now* this perspective is highlighted or accentuated, thus guiding hearers to a specific interpretation (one which is more specific than in an utterance without *now* being used). Examples (30) and (30') above demonstrate that even in a "standard", or "default", reading of *now* there is an added element to an utterance which, without the term, would also express the present time. The difference between the two is a) (30') is more precise in terms of temporality – thus the hearer can be sure that in using *now* the speaker is not going to the store in an hour, but most likely within the next few seconds or minutes; and b) there is the implicature that the speaker is not going to the store at a time other than the present, that is, the possibility of going out at a later time is excluded from the set of possible interpretations. Here already we can see that the notion of contrast mentioned above is indeed a basic component of *now*, even in its temporal sense. Thus it would seem that *time-contrast* trumps *time-presentness* with regards to *now*'s core meaning. If the core meaning of *now* is comprised of *time-contrast* and *speaker-focus* notions, then it is not difficult to understand why and how such non-descriptive (non-temporal) usages can function¹⁰⁴.

To sum up, *now* can be used to express time *and* a change of relevant state of affairs, a change of a state of affairs (minus the temporal component) or act as a discourse marker introducing an implicit contrast; we consider this contrast implicit in that the hearer retrieves, through inference, the speaker's subjective appreciation of a contrast, i.e. it is their (marked) belief that a contrast is to be established between clauses or between situations. When *now* is used temporally it may be replaced (or used to replace) terms or locutions such as *at present*, *this instant*. When it is used non-temporally it may mean *we have seen X and X is P, before we said X which we compare to Y*¹⁰⁵.

104 Of course, *now* and a few other expressions we'll be looking at are indexicals and thus function slightly differently than non-indexical temporal adverbs or connectives. Yet this difference does not overly affect our description of these expressions.

105 The difficulty of giving an adequate synonym or paraphrase for *now* is due to the complexity of rendering complex nuances of meaning that stem from the difficulty of dealing with an internal/subjective appreciation of a given proposition.

At this point we can sketch out an outline procedure for *now*, without forgetting that the procedure endorsed here will not resemble Grice's working out schema (2008[1975]: 176), nor will it suggest that there is a hierarchy between the different usages beyond the fact that the default (core) meaning would be first, with regards to processing time (and if temporal relations indeed are the default). First of all, a hearer, upon processing the speaker's utterance containing *now*, will attribute a temporal reference to the proposition accompanying *now* and if this is the most relevant interpretation they will stop. However, when *now* was intended in another sense of the word, the temporal sense will be insufficiently relevant (or completely irrelevant) and thus the hearer immediately goes to the next step in the procedure, and at this point accesses the non-temporal meanings, one of which, in accordance with the context, will be the most relevant, and here they stop. Schematically the procedure would look like this:

Now	
<i>Default reading: temporal egocentric indexicality:</i>	<i>Relevant example(s):</i>
<i>If now is used descriptively, it expresses one of several following temporal relations:</i>	
<i>a. temporal specification: the eventuality is anchored in the present, or the focus on the present is highly relevant</i>	<i>(26), (30') and (31)</i>
<i>b. a new relevant description of a state of affairs (change as perceived or inferred by the speaker)</i>	<i>(32) and (33)</i>
<i>c. with a strong intonation, or with 'right' added to it, now expresses immediacy</i>	<i>(34)</i>
<i>If not relevant, e.g. contextual factors make it clear that now governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages (change of relevant topic or new saliency) – P now Q structure</i>	
<i>a. discursive usage: focus on a specific topic (or agent)</i>	<i>(35)</i>
<i>b. discursive usage: the utterance fulfills a purely expressive role (no P now Q structure)</i>	<i>(36)</i>
<i>c. argumentative usage: now leads to infer a contrast with what precedes it</i>	<i>(37)</i>

4.2.1.1. *Yet*, another *now*?

We now turn to *yet*, the second member of the *now/yes* pair. Historically, these two forms date at least as far back as the 12th century; though they do not appear to be etymologically linked, they can be taken as a pair due in part to the similar German *nun/jetzt* pair. Interestingly, the meaning of both the latter terms relate to “now”, though *jetzt* handles the meaning of temporal *now* while *nun* covers the meaning of non-temporal *now* (particularly the discursive usages). In the view taken here, *yet* takes its cue from *now*. This is a straightforward observation for its temporal usages, which can be paraphrased as “till now/up to now” (*bis jetzt* in German)¹⁰⁶. First, let us look at a series of examples that will serve to distinguish temporal from non-temporal usages of *yet*:

(38) Are we there *yet*?

(39) She has *yet* to write her best novel. (in ref to ex. 27 above)

(40) I love swimming *yet* I can’t stand swimming pools.

(41) He was rich *yet* honest.

The first two examples are temporal, the last two are not. But beyond merely this difference in temporality, there are also a few other things to be said. With both (38) and (39) there is an element of expectation. In (38) the speaker expects to arrive at their destination and is inquiring whether or not that arrival has in fact come to be, thereby also suggesting that the arrival at destination should already have occurred (according to the speaker at least). This expectation can easily be interpreted as impatience. Example (39) does not really communicate impatience (though it is a possible implicature) as strongly as (38), in this case the speaker is saying that the author has not written her best novel, but may perhaps do so in some indeterminate future, at least, that is the speaker’s expectation – driven perhaps by hope, or simple deduction. With examples (40 & 41), *yet* is non-descriptive, its meaning in these cases has nothing to do with time. In (40) *yet* is a conjunction expressing a contrast between two explicit clauses [love swimming] and [like pools]. In example (41), *yet* is not used so straightforwardly as a conjunction, but it also expresses a contrast, this time between implicit elements, namely a belief that rich people cannot be (all that) honest by default. Both examples could be replaced with *but* with both clauses from each

¹⁰⁶ It is plausible that *yet* also – at least historically – takes its cue from *now* for its present-day commonplace non-temporal usages.

example in the same order; however it is interesting to note that where (40) could swap *yet* with *even though/so* or *despite the fact (that)* with no real change in meaning¹⁰⁷, in (41) one would have to invert [rich] and [honest] to retain the same sense with *even though*. What *yet* adds to (40 & 41) in comparison with *but* is, again, an element of expectation. In (40), it is commonly expected that someone who likes to swim also likes, or at least tolerates, swimming pools; and in (41) it is expected that rich people are dishonest. Indeed, there is no contradiction with people who like to swim disliking pools, after all, many people love to swim in the sea rather than the pool (and conversely others love to swim in pools but not the sea). Likewise with (41), the implicature depends on the speaker's worldview; in the absolute, nothing logically precludes the wealthy from being honest, or the poor from being honest, or dishonest. These implicatures largely depend on the speakers' and hearers' cognitive environment(s), especially with regards to their personal (subjective) beliefs about the world. The following examples are all instances of a contrastive usage of *yet*:

- (42) It is raining, *yet* I plan on going out for a walk.
- (43) John and Mary see each other often, *yet* I can't say for sure if they're dating.
- (44) Those paintings are ugly and expensive, *yet* people buy them.
- (45) He is intelligent *yet* short-sighted.
- (46) The sun was bright, *yet* cold.
- (47) The rocket shot into the sky at *yet* higher speed.
- (48) Mary gave John *yet* another reason for breaking off their relationship.

In all of these examples *yet* establishes a contrast between implicit beliefs that can be canceled without contradiction (they are implicatures). The first two largely depend on the belief that rain precludes going for a walk, or at any rate that walking in such conditions is not desirable (42), or that two people who often see each other are likely to be romantically involved (43). The contrast in example (44) depends almost exclusively on the speaker's subjective appreciation of artwork, and the corollary belief that people would not normally buy things that are ugly and/or expensive. Example (45) relies on the belief that in principle people of intelligence are able to think and look clearly at a variety of subjects, but there is no logical contradiction between being

¹⁰⁷ Perhaps there is no real change in meaning, but the salience of the arguments does change: with "I love swimming" presented first the Speaker is highlighting their strong appreciation for swimming despite their aversion for swimming pools; with "I can't stand swimming" presented initially the Speaker focuses on their aversion of swimming pools.

‘intelligent’ and being ‘short-sighted’ (in the figurative sense here, but also in the literal one). Finally, example (46) should be a logical contradiction since the sun, at a temperature of 5’505°C, is not even remotely close to ever being ‘cold’ – of course, here the temperature is that of the speaker’s appreciation of the ambient air rather than the sun’s – but then things that are bright – such as a neon light – are not necessarily inherently hot. Finally, examples (47) and (48) demonstrate an “intensifying” or “additive” usage: in (47) *yet* could be replaced by *even*, with the effect that the hearer interprets that the rocket’s speed is increasing (perhaps with an implicature that this is somehow surprising), and in (48) *yet* reinforces the expression *another* in such a way that the hearer interprets that a) there were other reasons and b) this additional reason given by Mary belies her impatience or exasperation (at having to give one more reason). Thus the last two examples, instead of introducing a notion of contrast *P* but *Q*, add scalar information to the utterances *P* even *Q*¹⁰⁸.

To sum up, *yet* can serve as a contrastive marker when used between two clauses or two lexical items – both with the form *P yet Q* – or as an intensifier, or temporally to signify a past or future eventuality often coextensive with the present. In both contrastive cases, *yet* may set up a contrast either directly – between the semantics of each term or clause, or indirectly – between implicated meanings, or between a semantic meaning and an implicated meaning. In its discursive usages, where *yet* serves to intensify the strength of a proposition, it does so with an implicit sense of impatience or exasperation. And finally, in its temporal usages, *yet* describes a temporal relation that is very often accompanied by an implicit sense of expectation. It seems plausible that this expectation is what allows one to interpret impatience in the discursive usages, and, furthermore, this expectation is frequently a component of its argumentative usages of contrast. We have seen that *yet* is an interesting expression in that its usages seem to be rather evenly distributed between temporal ones and non-temporal ones – it could, from a historical perspective, be considered an expression more than halfway through the process of grammaticalization. This is perhaps due to it being part of the *now/yet* pair which in English evolved differently than the German *nun/jetzt* pair. Given its close (etymological) ties with *now*, perhaps *yet* could be regarded as an indexical as well, at least for its temporal usages (this does not really affect its non-descriptive usages either way). The procedure behind *yet* is rather

108 We will return to the notion of scalarity in section 4.4. when dealing with *already* and *déjà*, and again in sections 4.5. and 4.8.

similar to that of *now*: a hearer interpreting *yet* will follow essentially the same type of processing. Roughly, its outline procedure would resemble this:

Yet <i>Default reading: aspectual-temporal usages</i>	<i>Relevant example(s)</i>
<i>a. E occurred/was true before S and up to and including S</i>	(27)
<i>b. E was expected to occur before S</i>	(38-39)
<i>If not relevant, e.g. contextual factors make it clear that yet governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative: yet establishes a contrast with the preceding clause</i> <i>P yet Q, where P and Q are propositions</i>	(42-44)
<i>b. argumentative: yet establishes a contrast with the item</i> <i>P yet Q, where P and Q are clauses, or expressions</i>	(45-46)
<i>c. discursive: yet is used as an intensifier, accompanied by a comparative expression</i>	(47)
<i>d. discursive: yet adds an element (e.g. an argument) to P</i>	(48)

4.2.1.2. Contrasting *now* and *yet*

Historically, *now* (the ‘present’) and *yet* (‘up to now/the present’) seem like two sides of the same coin, as the Germanic *jetzt* – *nun* pair suggests. It is therefore no real surprise that both the descriptive and non-descriptive usages remain somewhat similar in meaning and function. In the above sub-sections we saw that though both may be used temporally and non-temporally, the non-descriptive usages for *now* have meanings that are less clearly defined, where *now* seems quite apt at handling discursive situations, but is much less clear-cut in argumentative instances (such as contrast). *Yet*, on the other hand, is more readily usable in argumentative usages, where relations of contrast are precise, but seems unable to handle discursive relations (like topic switching). This may be because *now* (like *there*, also used discursively) is a strong indexical, whereas *yet* is more of a connective, in its current state of evolution – though arguably it could also be considered an indexical (if an indirect or derived one) since its meaning when used temporally is largely dependent upon *now*. More specifically, if *now* is situated at the Speech-point, then *yet* can describe an eventuality that is expected or potential – an utterance like “Bob hasn’t shown up *yet*” expresses that a man named Bob is expected by the speaker to be present and that this eventuality does not obtain at present. Can *now* and *yet* be considered opposites, regarding their ability to express expectation? Let us take a closer look at this pair by contrasting a few examples:

(49) Bob is here *now*.

(50) Bob is not here *now*.

(51) Bob is here *yet*.

(52) Bob is not here *yet*.

With the first two examples, the speaker is only describing that [Bob, here, now] is true (49) or false (50). Example (51) is interesting in that it takes on the meaning of *still*, describing that [Bob, here, now] is true at S and was so beforehand (for an indeterminate lapse of time), while (52) makes the claim that [Bob, here, now] is untrue at S, but implicates that this situation will be true afterwards (in an indeterminate lapse of time). In both cases, there is an implicated sense of expectation – in (52) the speaker expects Bob to arrive, while in (51), the speaker is implicating that Bob is expected to be leaving; or, put another way, the speaker is implicating that Bob’s continued presence is unexpected. When contrasting examples (49-50) with (51-

52) it is clear that the latter two have this sense of expectation, while the former do not. Is this to say that *now* cannot implicate expectation? Let us compare the following two utterances, in reply to a question about Bob's presence at the interlocutors' location.

(53) Bob isn't here *now*. But I didn't know he was expected.

(54) Bob isn't here *yet*. ?But I didn't know he was expected.

Example (53) is a bit strange, it would appear that the person saying (54) is expressing somewhat contradictory information. With (53) there is no such oddity. But in the following two interrogative utterances, an element of expectation does seem to be present in both cases:

(55a) Is Bob here *now*?

(55b) Is Bob here *yet*?

We observe in the above two examples that, with *yet*, the implicature that Bob is expected is stronger than in the utterance containing *now*. But, when going back to examples (50) and (52) above it seems that the element responsible for this expectation is the interrogative form. That is, *now* is unmarked for expectation, but can accommodate this sense in the interrogative; meanwhile *yet* possesses this meaning of expectation regardless of whether we are dealing with an assertion or a question. This is no doubt due to the core meanings of each term – *now* (when temporal) refers to the present, while *yet* refers to a period preceding (leading up to *now*) or succeeding (continuing on after *now*) the present.

(56a) They've got a ways to go *yet*.

(56b) They've got a ways to go *now*.

What is interesting here is the orientation of the time of the eventuality; in (56a) the journey undertaken by the subject 'they' began before the moment of speech – and the sense is that there is still quite a bit of distance to cover. In (56b) 'they', may or may not have begun their journey before the moment of speech, but what is highlighted here is that there is a current, present (i.e. at S) eventuality which complicates their journey. This is the crux of the difference between the two terms in their temporal usages – *yet* describes a time previous to, and going up to S (and possibly continuing after S), while *now* really focuses on S and all that occurs at S and after S – sometimes there may be an implicit reference to a time before S, and this can be seen when *now*

is used to contrast the present with the past. Let us now have a look at a few non-temporal instances of *now* and *yet*, where a difference other than the notions of time or of expectation appears.

(57) Al's an outspoken green activist, *yet* he owns an SUV.

(58) ?Al's an outspoken green activist, *now* he owns an SUV.

In example (57), the contrast between P and Q highlighted by *yet* is straightforward. In (58), this idea of contrast is much harder to elicit; though not impossible, the hearer must put in more effort to arrive at this interpretation. They could just as easily interpret (58) simply as a temporal statement, though the idea that a green activist who owns a large gas-guzzling vehicle is hypocritical, or at least weird, comes across.

(58') Al's an outspoken green activist, *now* I know for a fact that he owns an SUV.

When the phrase "I know for a fact" is added, (58') becomes acceptable, and is easily interpreted as introducing a contrast (while adding the phrase to (57) yields no palpable change). Interestingly, with *yet* the contrast also carries an overtone of criticism – by the speaker's exposing Al's contradictory behavior. But with (58'), the critique seems less accessible, almost as if the speaker is merely pointing out two facts about Al – a juxtaposition of two co-existing facts. In this case the speaker does not make explicit the critique, they merely suggest it. A similar interpretation can be obtained using *meanwhile*:

(58'') Al's an outspoken green activist, *meanwhile* he owns an SUV.

No doubt both *now* and *meanwhile* shift the focus onto two temporally simultaneous eventualities, and let the hearer interpret the contradiction, without the speaker overtly endorsing it. Example (58'') would be quite strange with the phrase "I know for a fact" – perhaps due to its temporal component. On another note, we have also seen that *now* can be used in some cases as a topic-switcher, and it appears that, in identical utterance contexts, *yet* is less capable of doing so:

(59) We have seen that traditional eye surgery can, if done at the outset of a visual problem, greatly improve visual acuity. *Now* laser techniques, on the other hand, need not be undertaken so soon, though of course...

(60) (...) ?*Yet* laser techniques, on the other hand, need not be undertaken so soon, though of course...

In (59), any residual temporality of *now* is perceived as a time during the utterance (a speech at an ophthalmologists' conference), but what is more interesting is the use of

now here to change the topic (or sub-topic) from traditional surgery to laser surgery. With (60) though the utterance is not incorrect *per se*, it does come across as subpar, probably because, again, with *yet* there is a notion of expectation not present in *now* – for instance, that laser techniques are the expected means of performing this surgery – which would make such a presentation irrelevant; in addition, the phrase “on the other hand” carries a sense of contrast, and this, added to the notion of contrast inherent in *yet*, makes the utterance redundant (lowering the overall relevance even more). With (59) there is no such problem since “contrast” is not so explicit in *now*. Furthermore, were (60) not redundant, the understanding of *yet* in this case would not be a change of topic, but rather an outright opposition or contrast. Therefore, *yet*, in this case would keep the hearers’ attention on the previous utterance (on traditional surgery) for a certain continuity leading the hearers to consider the second utterance, in direct relation (i.e. in contrast) to the preceding one. This is not to say that *now* in (59) eliminates continuity completely, but it is not the same type of continuity: *now* marks a switch in gears, indicating a change between the preceding state and the succeeding state, while *yet* holds the preceding utterance in the hearers’ minds.

Overall, these two expressions are not polar opposites, nor are they synonymous. Though they may have descriptive and interpretive usages that seem quite close in meaning, there is always a nuance which makes their usages distinct, and disallows any straightforward substitution without some loss of meaning. Temporally they are more distinct, but with the contrastive usages they differ significantly with regards to relevance: unlike with *now*, interpreting a contrast which *yet* introduces requires little inference to retrieve the relation between clauses or lexical items. This is not to say that there is no inference at all in this case, just that for *now* more effort is required to process the contrast, counterbalanced by the greater payoff. When *yet* is used temporally it may be used in place of *again*, *still*. When it is used non-temporally it may introduce contrast close to the contrast we that can be found in *but*, *even*, *however*, *nevertheless*, *still*, *though*¹⁰⁹.

109 These multiple uses of *yet* can be intuitively explained by the fact most (if not all) of these terms encode the idea of ‘contrast’ albeit with varying nuances.

4.2.2. *Maintenant*

Much has been said about the French present-time indexical *maintenant*, proposing a variety of ways to look at this term¹¹⁰. We will of course look at *maintenant* in the same light as we did *now* in section 4.2.1., and propose a relatively similar analysis. The temporal and non-temporal usages of *maintenant* are not too dissimilar from those of *now* (and, to a lesser extent, *yet*) – one difference being that *maintenant* covers usages that are distributed over the two English expressions. In French, some scholars have proposed that *maintenant*, when used in such ways, can be considered distinct lexical items – *maintenant*₁ and *maintenant*₂, for instance (Nef 1973; Zénone 1981) – each with their own usage. As has been stated previously, this is not the approach adopted here, and we will not retain this distinction, preferring instead to view the different usages of *maintenant* as contextually motivated pragmatic enrichment of some sort. Let us have a look at two classic examples taken from the literature (for instance, Nef 1973), such as the following:

(61) Ils se voient souvent. *Maintenant*, on ne sait pas s'ils sont amants.

(62) Bien sûr, t'es majeur. *Maintenant*, moi, je t'interdis de le faire.

These two examples are clearly non-descriptive and demonstrate an argumentative and a discursive usage of *maintenant* (respectively). There is no real justification for deciding that these instances of *maintenant* be labeled '2' or '3' (as opposed to *maintenant*₁, the normal, or default, temporal usage); it is equally, if not more, plausible that these non-descriptive usages are just contextually dependent variations of meaning of one and the same expression. More importantly, much like English *now* (or *yet*), these two types of non-temporal usage also seem to function the way they do because of an underlying notion of contrast.

(61') Ils se voient souvent. *Mais* on ne sait pas s'ils sont amants.

(62') Bien sûr, t'es majeur. *Mais* moi, je t'interdis de le faire.

As is apparent above, *maintenant* is easily commutable with *mais* ('but'), though of course there is a loss of some of the meaning carried by non-descriptive *maintenant* (as was the case with *now* or *yet*). Interestingly, one could also substitute *maintenant* with *à présent* ('presently') a decidedly temporal expression, also with some loss of

110 Notably Nef (1973), Zénone (1981), Frankel (1989), and more recently Saussure (2011).

meaning¹¹¹. This temporal reading of *maintenant* inherently contains an element of contrast, simply by the fact that what is (temporally) present, cannot also be the past or the future simultaneously (akin to was said of *now* in the previous subsection). A few other temporal usages include:

(63) Je sors faire des courses *maintenant*.

(64) Le président, *maintenant* septuagénaire, était l'instigateur de nombreuses réformes nécessaires dans les décennies précédentes.

(65) Ferme la porte *maintenant*!

Whereas each of these usages is temporal, each one carries a particular additional sense or nuance. Example (63) denotes that the action described is taking place in the present moment of speech¹¹². Meanwhile (64) refers to the current state of affairs, i.e. the president's age, and highlights the lapse of time when the actions (reforms) undertaken occurred, that is, decades earlier, when the president was not yet in his seventies. As for (65), this utterance describes, thanks in part to the imperative tense and accentuation (exclamation mark in its written form), that the action should occur immediately. So, as with *now*, *maintenant* can describe several temporal relations, depending upon the context.

In contexts where it is salient for the hearer that referring to time is not what the speaker means, *maintenant* can take on argumentative or discursive usages such as (61) and (62) above.

(66) C'est ce que je pense, *maintenant* tu fais comme tu veux.

(67) Il est sorti il y a une heure, *maintenant* peut-être qu'il s'est perdu en chemin.

(68) C'est vrai que Jean est bon en maths, *maintenant* Marie, non seulement elle bonne en maths, mais en plus elle explique très clairement les choses.

(69) Al est un fervent écologiste, *maintenant* il conduit une voiture de sport.

Example (66) expresses a novel consideration of a state of affairs (after an assertion), where *maintenant* is easily commutable with *mais* or, even better, *mais bon*. The utterance in (67) is quite similar to (66) but is less of a discursive usage – *mais bon* does not fit this utterance as easily – and instead seems more of an argumentative usage. Example (68) does not function as a topic-switching marker, but rather as a focalizer, retaining the same topic (choosing a suitable tutor to teach math), but

111 With *en ce moment* ('at this time') however, the substitution does not work this way, probably because the locution is more strongly temporal.

112 This example follows the same logic as example (30), with *now*, in section 4.2.1.1.

drawing all the attention on a specific agent, here Marie, who (in the speaker's opinion) is better qualified. Given below is the outline procedure for *maintenant*, altogether not that far from what was proposed for *now* (and *yet*) above:

Maintenant	
<i>Default reading: temporal egocentric indexicality:</i>	<i>Relevant example(s)</i>
<i>If maintenant is used descriptively, it can be used to express one of several following temporal relations:</i>	
<i>a. temporal specification: the eventuality is anchored in the present, or the focus on the present is highly relevant</i>	(63)
<i>b. a new relevant description of a state of affairs (change as perceived or inferred by the speaker)</i>	(64)
<i>c. with a strong intonation, maintenant can express immediacy</i>	(65)
<i>If not relevant, e.g. contextual factors make it clear that maintenant governs relations between clauses or propositions rather than events</i>	
<i>Maintenant allows non-temporal usages (change of relevant topic) – P maintenant Q structure</i>	
<i>a. argumentative usage: maintenant leads to infer a contrast with what precedes it</i>	(61-62)
<i>b. argumentative/discursive usage: maintenant expresses a new consideration of a state of affairs</i>	(66-67)
<i>c. discursive usage: focus on a specific topic (or agent), often sentence-initial</i>	(68-69)

Similarities/Differences

It seems that the argumentative usages of French *maintenant* are principally found in English *yet*, rather than in *now*; but by no means does this exclude the possibility of using *now* in this manner. Discursive usages of *maintenant*, on the other hand, are more easily rendered by *now*. Interestingly, there is another expression – *cependant* – which is often a close approximation of non-temporal *yet*, particularly to express the contrastive sense. While the temporal usage of *cependant* is closer to temporal *now* or *maintenant*, with the meaning of *meanwhile*, originally the term was used to express simultaneity but evolved over the years to arrive at the now commonly used and understood non-temporal contrastive usage¹¹³. It would appear that *cependant* and *yet* share a similar evolution from strongly (even exclusive) temporal meanings to their current non-temporal meanings. In addition, when *cependant* and *yet* are used temporally, they tend to be in formal or antiquated utterances, suggesting that their default meaning has shifted from temporal to argumentative/discursive. Furthermore, *yet* is a very versatile expression: it can be translated by either *déjà* – Est-ce qu'on est déjà arrivé? (ex. 38) – or *encore* – Bob est encore là. (ex. 51) – when used temporally; often *cependant* will be a good choice for argumentative (contrastive) usages (ex. 44); finally, it can be translated by *encore* again, but this time for discursive usages (ex. 48). Correspondingly, *now* and *maintenant* share many if not most temporal usages and a non-descriptive one or two; those non-descriptive usages covered by *maintenant* but not by *now* are handled by *yet*. We will draw upon the assumption that a procedure for *now* and *maintenant* (and even *ahora* in Spanish or *jetzt/nun* in German) would be quite similar. Any differences between them would quite likely amount to an unrealized (but potential) usage. When looking over the examples from the two preceding subsections, it should be clear that *now* and *maintenant* do indeed share many features; there is no doubt of the equivalence of their temporal readings, and even the non-temporal ones find echo in each other (with the nuances mentioned previously).

113 Source for the etymology of *cependant*: <http://www.cnrtl.fr/etymologie/cependant>

4.2.3. *Then*

Randy: What a jerk! You should report that guy to the manager.

Earl: He is the manager.

Randy: Oh, then he already knows... - from Earl "O Karma, where art thou?" episode, 12.01.06

In section 4.2.1, we looked at *now* and *yet* as a pair, but *now* could also be paired up with *then*; this pairing is just as viable: together *now* and *then* form the principal temporal proximal/distal pair of expressions (in French, *maintenant* could be paired up with *alors*). As the primary deictic counterpart to *now*, *then* picks out a time other than the present, either previous or subsequent to the time referred to – unlike *yet* however, *then* cannot be coextensive with the present, it lacks the aspectual element *yet* possesses. From this perspective, *then* is measured in relation to an explicit or implicit *now* – where there's a *now*, there was or will be a *then*.

Roughly, *then* can be understood as meaning “a time other than the present” or, more simply, “not-*now*”. Additionally, it is less controversial to talk of *then* used non-temporally than it is for *now*, perhaps because the most well-known non-temporal usages of the expression are well-documented – and are arguably just as “standard” as the temporal readings. This is probably due to the long-standing use of *then* in logic and mathematic formulae. When used in this way, *then* signals a consequence, as in a deduction, i.e. P *then* Q. But we will see that *then* in fact has several temporal and non-temporal usages, as the examples below illustrate:

(70) Life was much easier *then*. / Life will be much easier *then*¹¹⁴.

(71) Turn the dial, *then* push the button.

(72) First comes the president, *then* the vice-president, *then*...

(73) A: Mary says the movie starts at eight. B: *Then* we should get going.

(74) If you're feeling sick *then* you shouldn't ride the rollercoaster.

The first example demonstrates the use of *then* to situate a state of affairs in the past or future, and so remains clearly temporal; we notice the utterance with future reference seems to be somewhat dependent upon some unspecified condition, but this may be more because of the future aspect rather than being due to *then* itself.

¹¹⁴ There is also the case where *then* is used as an adjective, roughly meaning *past*, which is simply an outgrowth of the standard temporal adverbial usage (e.g. The *then* President of the USA).

(70') Life was much easier *in the past*. / Life will be much easier *in the future*.

Example (70') confirms the temporal quality of *then* in such cases; it would be difficult to substitute *then* with a different term – besides *yesterday* or *tomorrow* with an enlarged scope where each term encompasses (much) more than a single day. Example (71) is a clear instance of temporal ordering – one action must occur before the other – but begins drifting towards something else, namely, causal ordering.

(71) Turn the dial, *then* push the button.

(71') Turn the dial, *after* (you've done) *that* push the button.

As (71') illustrates *then* still retains an element of temporality, but it also contains an element of what we can call *seriality*. The order here is temporal, in that one must (according to the instructions) first turn the dial, before pushing the button. *Then* thus introduces a subsequence, that is, Q must be done after P.

(71'') ??Turn the dial, but *before* (doing) *that* push the button.

An utterance like (71'') would not capture the same meaning as *then* (and would be far from optimally relevant in itself, especially in a set of instructions), not because the element of seriality disappears, but rather because of an additional component carried by *then*: a focus on the subsequent clause. Indeed, in usages of this type – P *then* Q – it is Q which is deemed more relevant to the information conveyed in such utterances. This focus also appears in another type of non-temporal usage, such as 'deductive' *then*. But with example (72) *then* seems to do the opposite:

(72) First comes the president, *then* the vice-president, *then*...

In this utterance, *then* does not put the focus on Q, nor does it focus on P; in this case, *then* is used simply to indicate succession in a series or list of objects. Example (73) below is non-temporal, with *then* marking a deduction or an inference on behalf of speaker B; though it could be argued that a small element of temporality remains in this instance, it is only of secondary importance, and due more to other contextual elements.

(73) A: Mary says the movie starts at eight. B: *Then* we should get going.

(73') A: Mary says the movie starts at eight. B: *In that case* we should get going.

In both (73) and (73'), speaker B with *then* or *in that case* highlights, or focuses on the action of going to the movie. It is an example of inference or deduction, though perhaps less strongly so than (74):

(74) If you're feeling sick *then* you shouldn't ride the roller coaster.

This example is a more formulaic version of the previous one, with *if* and *then* clearly marking the deduction of a practical consequence, which is derived from the first clause (the antecedent, introduced in this case by *if*), and here temporality is completely absent, as far as the utterance's primary (i.e. optimally relevant) meaning goes. It becomes apparent that there are, with argumentative usages of *then*, two types of consecution: 1. simple succession, of a sequential type (example 72) and 2. consecution as a logical relation, of the type P connective Q where P is the antecedent or the premise and Q the consequent or result (73-74). It seems that even in its discursive usages *then* conveys this notion, though to a lesser degree:

(75) *Then* it hit me.

(76) *Then* come on over, neighbor!

(77) Fine. *Then* it's settled.

(78) Whip for about a minute, *then* gradually stir in the eggs and milk.

(79) Well okay *then*.

All of the above examples display some type of consecution, with the exception of (79), where *then* seems purely discursive (note however that this utterance still displays that the speaker has made an inference of some type). Examples (75-76) contain type 1 consecution, and (77-78) type 2. In all but the temporal usages, *then* clearly shows its consecutive nature. Recall that in these cases, the (semantic) relation of $P \rightarrow Q$ is the most relevant one, since the non-descriptive – argumentative or discursive, and not principally temporal – usages of *then* are, in these contexts, the most salient ones. A tentative procedure for *then* would look somewhat like this:

Then <i>Default reading: temporal indexicality of non-present time:</i>	<i>Relevant example(s)</i>
<i>a. reference to a time situated in the past or the future</i>	<i>(70)</i>
<i>b. temporal succession – P then Q, or (P) then Q</i>	<i>(71, 75, 78)</i>
<i>If not relevant, e.g. contextual factors make it clear that then governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages: non-temporal succession (a, b)</i>	
<i>a. serial usage: P then Q (then R etc.) where P and Q can be expressions, clauses or propositions</i>	<i>(72) [(71)]</i>
<i>b. argumentative usage: causal order, then causally links the antecedent to the main clause</i>	<i>(73-74)</i>
<i>c. discursive usage: “in that case”, “according to X”, can be used as a hedge</i>	<i>(76, 77, 79)</i>

4.2.4. *Alors*

It is common knowledge that in French *alors* can serve several functions. These functions or usages have been amply discussed by semanticists and pragmatists, though without reaching a consensus. Indeed, several researchers have proposed explanations for the usages of *alors*, often complex and sophisticated, and end up multiplying the rules and exceptions that seem to govern this expression. Their observations and intuitions remain valid, however a precise element is missing, and it is that *alors* is a procedural expression. Thus we propose that what can best explain the function of *alors*, is a slightly modified semantic base for this expression. Argumentative usages include expressing a consequence or highlighting an alternative perspective. Discursive usages include linking narrative elements in a conversation, starting a conversation or feelings of surprise or impatience.

A number of authors (e.g. Ducrot (1972), Zénone (1982), Frankel (1986), Jayez (1988), Rossari & Jayez (1997), Rossari (2002), Mosegaard-Hansen (1997, 2002)) have proposed detailed analyses of *alors*, and propose between 2 and 4 different usages. For our purposes here, we will count three (given in a non-hierarchical order): 1. a temporal usage (referring to a time other than the present), 2. an argumentative usage (consecutive relation between P and Q), and 3. a discursive usage (all other usages)^{115 116}. The following examples are representative of these usages:

(80) Je sortais de chez moi l'autre soir, j'ai vu *alors* une étoile filante.

(81) Sa voiture n'est pas là, *alors* il doit être parti...

(82) *Alors*, tu viens?

(83) Et *alors*?!

Example (80) straightforwardly refers back to a past event “the other night”. Here *alors* the hearer will most likely not interpret a relation of consecution – though the speaker did in fact go out before seeing the meteorite, they could have seen it from a window, or he could have gone out and not seen it – in other words, the fact that the

115 Mosegaard-Hansen (1997: 172-184) counts four usages, the temporal one (although very rare in her corpora) and three others: *alors* as marking 1. Reorientation of topic, 2. foregrounding particle and 3. a result/consequence usage. We think the discursive usage neatly regroups both topic-switching and foregrounding, and the resultative usage is our argumentative usage.

116 Italian *allora* also has several non-temporal usages as in “hypothetical *if-then* constructions (...) an inferential marker (...) an interaction structuring marker” (Bazzanella & Miecznikowski 2009: 111-112).

speaker went outside does not imply that he saw the shooting star, and his going out is not a necessary condition for the meteorological phenomenon. Example (81) expresses the deduction that since someone's car is not in the parking lot, that person is (most likely) not in the vicinity. Example (82) is a common conversational expression of impatience, the speaker here is waiting on the addressee to go somewhere. And (83) is best rendered as 'so what?' in English, and expresses defiance or at the least disagreement with something said previously (by another speaker, or the same speaker in a previous instance).

We shall now turn to other approaches to salvage relevant observations useful for our analyses, modifying them where necessary and rejecting that which we consider inadequate for a procedural understanding of *alors*. We have seen that, for several authors, *alors* has several usages; the number varies according to the study or approach but we will retain/conservate three usages here (in no particular order): 1. a temporal usage (not necessarily the default usage), 2. an argumentative usage (a relation of cause and consequence between P and Q) and 3. a discursive usage (we regroup herein a few similar usages, functions which are neither principally temporal or principally argumentative).

Some authors associate *alors* with a temporal element in all its uses (for instance Jayez 1988), but we argue that if there is a temporal element in argumentative and discursive usages this is not because of *alors*'s inherent meaning. We propose rather that the notion of consecution is specific to the argumentative usage but not to the other two. When *alors* is temporal as in the example below:

(84) C'est *alors* que je l'ai vu.

where *alors* is equivalent to 'at that time', there is no causal consecution, since the function here (and in other similar contexts) is to focus the hearer's attention on a precise/particular moment; such a moment is thus made (more) salient. Of course, there are two types of consecution at work here: 1. consecution as simple succession, of a sequential type and 2. consecution as a logical relation, of the type P connective Q where P is the antecedent or the premise and Q the consequent or result. Perhaps the problem resides in the fact that consecution is a relation of logical implication and that *alors* in certain cases introduces a relation of implicature. Since temporal expressions share with other pragmatic markers the capacity to relate discursive elements to each

other, sometimes by directly guiding, sometimes merely suggesting to the hearer which course to take, it should come as no surprise that *alors* (and the other expressions treated here) function this way. It is however interesting to note that it can handle both temporal and logical consecution, whereas other terms cannot (*donc*).

In the following examples, where does the consecution (in the second sense) originate? It comes from *alors*, there where the hearer cannot interpret a consecution without this connective:

(85) La voiture de Jean n'est pas là. *Alors* il n'est pas chez lui.

The above utterance can be interpreted as “I am hereby presenting you with the result of my reasoning”.

(85') La voiture de Jean n'est pas là. Il n'est pas chez lui.

In this utterance we could interpret the speaker as meaning “I am presenting you with the fact that Jean isn't home” which allows one the possibility of inferring the speaker's reasoning. We can see with these examples that the antecedent serves as the premise for the proposition “he isn't home”, in other words, there is consecution (Q is the consequence of P) in utterances both with and without *alors*. Can we conclude then that consequential relations can occur without *alors* (or *donc* or other like terms)? If we say yes, this leads us to the idea that *alors* is not in fact necessary in these cases. So, which is it? Compare still two more example pairs below:

(86) Jean sortit un pistolet, *alors* il tira sur Paul.

(86') Jean sortit un pistolet, il tira sur Paul.

(87) Peter est anglais, *alors* il est courageux. [example taken from Moeschler 2002]

(87') Peter est anglais. Il est courageux.

The second example of this last pair is somewhat problematic: here consecution is not so easily inferable without *alors*, therefore *alors* is required in this case for the speaker to communicate the link they wish to establish between [being English] and [being brave] in the most cost effective way. Furthermore, in (87') one just as easily interprets the consecution either way: $P \rightarrow Q$ or $Q \rightarrow P$. Thus, *alors* is a necessary connective in some cases – and in these cases the role of *alors* is to directly guide the hearer to the correct path of inference. In the other cases, where *alors* is not absolutely necessary, it serves to minimize processing effort when processing the direction of cause-consequence is too costly (thereby making the utterance more relevant).

In the French literature¹¹⁷ on *alors* there is frequent comparison to *donc*, which is a former temporal expression, now restricted to a marker of explicit consecution. We will not make an attempt at an exhaustive comparison here, and instead focus on the implicit vs explicit marking of consecution. The below examples highlight the more restricted contexts imposed on *donc* compared to *alors*:

(86'') ?Jean sortit un pistolet, *et donc* il tira sur Paul.

(87'') Peter est anglais, *donc* il est courageux.

In the first example (86'') “et” was needed to make the utterance more easily interpretable, without the “et”, (86'') would have been a costly utterance to interpret. Moreover, *donc*, an otherwise non-temporal expression (in contemporary French), yields a temporal reading in this case, akin to *et après* or *ensuite*, with but a minimal element of consecution. In (87'') *donc* conveys an interpretation similar to (87), with one notable difference – the inference that Peter is brave because he is English is presented more objectively than with *alors*. Zénone for instance gives two criteria for subjective interpretations (possible with *alors*, but not with *donc*), paraphrased here: 1. there must be an enunciator (not necessarily the speaker) who endorses the consequence and 2. *alors* does not attest the veracity of its antecedent(s); it does not take this into account since the enunciator endorses the consecution and thus it is true for the enunciator (1982: 134-135, my translation). Presumably, for *donc*, there need be no enunciator, and the veracity of the antecedents must be known. Rossari & Jayez (1997: 254-259) discuss the level of (epistemic) commitment *alors* and *donc* (and other causal connectives) may have in various contexts; briefly resumed the idea is that *alors* marks a greater degree of epistemicity than *donc*, i.e. it is more subjective as a marker of consecution. Still other researchers (most notably Mosegaard-Hansen 1997, 1998a) highlight this subjective/objective distinction between the two terms; our own observations of the non-temporal usages possible with *alors* also point in this direction.

Within the framework of procedural pragmatics “le rôle du connecteur, par l’intermédiaire des instructions qui lui sont rattachées, est d’amener l’interprète à opérer un lien entre les deux propositions et à constituer ainsi un contexte dans lequel l’énoncé complet sera pertinent” (Luscher, 1994: 191). We suggest that it is not always

117 See for instance Zénone (1982), Franckel (1986/1987), Gerech (1987), Jayez (1988), Rossari & Jayez (1997), Mosegaard-Hansen (1997), Moeschler (2002).

necessary for the hearer to have *alors* be present for them to infer a relation of consecution, since their mind can, with some effort, infer such a relation on its own. However, we propose that *alors* facilitates this type of inference, and, in so doing, makes the utterance more relevant, since the hearer need supply less effort to obtain a similar result. In this case, there is no need for the hearer to guess whether the speaker's intention was to communicate that Q is a consequence of P, the speaker points this out clearly, by using a connective that contains the appropriate instruction.

Above we evoked the idea that *alors* could make a context more salient and relevant, and the “subjectivization” effect is an example of this phenomenon. Thus *alors*'s explanatory value takes on both an internal and an external dimension with regards to the relations between P and Q that it allows the hearer to interpret. The value is ‘external’ in the sense that *alors* sets up a relation between states of affairs; it is internal in that the speaker's subjective reasoning and perspective is responsible for the establishment of these relations. To sum up, there is but one *alors*, a procedural one, which is interpreted with different values according to the interpretive path selected by its procedure in context.

Alors <i>Default reading: temporal indexicality of a non-present time:</i>	<i>Relevant example(s)</i>
<i>a. a new relevant description of a state of affairs (change as perceived or inferred by the speaker)</i>	(86)
<i>b. a new relevant interpretation of a state of affairs</i>	(84)
<i>If not relevant, e.g. contextual factors make it clear that alors governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative usage: alors causally links the antecedent to the main clause, via subjectively-motivated inference</i>	(81), (85), (87)
<i>b. discursive/expressive usage: marking the speaker's attitude – expressing impatience, defiance</i>	(82-83)

Similarities/Differences

It would appear that the differences between *then* and *alors* are superficial. The French equivalent of English *then*, *alors*, appears to function in a way quite similar to its English counterpart both descriptively and non-descriptively; though the temporal references may diverge slightly, both terms pick out a time before or after the present. Both *then* and *alors* can be construed as expressing, in their temporal forms, “a time or moment other than the present, in the past or the future” or, to put it very briefly, ‘not-now’. Non-temporal usages of *alors* also closely resemble English *then* – both argumentative and discursive usages can be found with *alors*. A notable difference in the argumentative usage that marks a logical deduction can be seen below:

(88) Peter est anglais, *alors* il est courageux.

(89) ?Peter is English, *then* he is brave.

(90) Peter is English, *therefore* he is brave.

Where (89) is strange, suggesting that *then* is somewhat more restricted than *alors* in such contexts. Interestingly, if the utterance in (89) above were tweaked so as to be an “if...then” clause, the oddness disappears:

(89') If Peter is English, *then* he is brave.

Additionally, if the utterance were split into two, spoken by two different interlocutors, the deductive relation is also possible:

(89'') A: Peter is English.

B: *Then* he is brave.

Why exactly this is the case for *then* and not so for *alors* is something of a curiosity (with *alors* the utterances are just as interpretable if used in an “if-then” clause, or split into two statements by two speakers). A plausible explanation is that *alors* is farther along the grammaticalization path than *then*, where more specific contexts are required to obtain the relevant interpretations (in this case, *then* resembles *donc* with regards to restricted contexts of appearance).

4.2.5. *Already*

“Where are the bagels? Did the skinheads eat all the bagels already?”
- *Celebrity* (1998, Woody Allen)

The expression *already* is a temporal and aspectual adverb used to express a variety of meanings, from temporal precedence to attitudinal exasperation. The above quote contains a standard temporal usage of *already*, namely one that questions whether a state of affairs was the case previous to the speaker's utterance. But this same utterance also carries another, implicit, sense, partly responsible for the humorous effect. This other usage, that of “surprising” *already*, is what creates the irony of the situation given the elements. The following examples broadly illustrate the possible interpretations *already* can have:

(91) I've *already* seen this movie.

(92) It's *already* four o'clock.

(93) No need to add sugar to strawberries, they're *already* sweet. [example taken from Michaelis 1996]

(94) Eight dollars is *already* a lot of money for a movie ticket.

(95) Alright *already*! / Enough *already*! / Tell us *already*!

In (91) we can see that what is being communicated is simply that the eventuality referred to [I, see, movie] was the case at a time previous to T_0 , with no other easily interpretable sense. With example (92) *already* expresses that the state of affairs – the actual time – is currently the case, and furthermore (92) also clearly carries an added attitudinal element: surprise, or even exasperation, with the proper intonation. The surprise stems from the fact that the speaker of (92) did not expect for the time to be four o'clock so soon. In example (93) the element of precedence is of a different nature, namely that the sweetness of strawberries is an inherent quality of the fruit, it is used argumentatively to persuade the hearer that more sugar is needless. Temporality still appears to function in (93), though on a very different level; clearly the fact that strawberries are naturally sweet holds at a time previous to the utterance, but this previous state of affairs is of a different scale than the one in (91). Example (94) is yet another type of usage where temporality is not the primary concern, it is even less present than in the previous example.

What is occurring here is that *already* is used to describe a state of affairs against the backdrop of a scale of values – in this particular case the price of movie tickets is placed along a scale going from ‘inexpensive’ to ‘expensive’ (arguably from ‘free’ to ‘way too much’). The utterances in (95) are all discursive usages, which clearly mark that the speaker is agitated in some way – for instance, impatience or exasperation. Again, the three short utterances in (95) still retain a tenuous temporality, in that the exasperation felt and communicated by the speaker was prompted by an eventuality that preceded the communicated emotion. However, this clearly is not what is most strongly communicated with such utterances.

To sum up, example (91) corresponds to the basic temporal usage; in such utterances the primary informative intention is aspectual (temporal), that is, the speaker aims to communicate the eventuality described by the proposition P has a specific aspectual value that it is relevant to communicate. This usage could be called the “chronological” usage, simply because it signals the focus of P according to a temporal logic. Utterances like (92) are instances of “precocious” *already* which remain a usage where the aspect or the time is still quite present; the only criteria that distinguishes this use from the preceding one is precisely the idea of precocity that a hearer may interpret from such an utterance. An utterance like (93) can be considered an argumentative usage of *already*, where the focus is on an (often inherent) aspect or quality that pre-exists the current state of affairs. The speaker appeals to reason by pointing out such qualities, and this helps in arguing for a specific point (often to persuade the hearer of something). The type of proposition expressed by utterances like (94) carries an element of “scalarity”. What is meant by the “scalar” usage is the idea that *already* is used in some cases to express that an eventuality is to be evaluated along a scale. It should be noted that in fact *already* is inherently scalar in its temporal usages as well – so that even in the chronological or precocity usages, *already* carries a scalar element. This is visible in its temporal usages (91-92) where the speaker is saying that the eventuality described occurred earlier than the moment of speech, and also earlier than expected by some relevant interlocutor. The timescale can be schematized as *earlier than – present / relevant point in time – later than*, where both *earlier* and *later* can both be further broken down into smaller degrees¹¹⁸. Finally example (95) is illustrative of the “purely” discursive usage of *already*; such

118 This harks back to McTaggart’s B-series of time.

usages are relatively fixed, and mainly serve the purpose of expressing the speaker's attitude or emotion about an eventuality. Below is an approximate procedure for *already*:

Already <i>Default reading: temporal (aspectual) usages:</i>	<i>Relevant example(s)</i>
<i>a. reference to an eventuality previous to the time of utterance</i>	(91)
<i>b. reference to an eventuality previous to the time of utterance, with focus on the precocity of its occurrence</i>	(92)
<i>If not relevant (enough) →</i>	
<i>If not relevant, e.g. contextual factors make it clear that already governs relations between clauses or propositions rather than events</i>	
<i>a. argumentative usage: already focuses on a preexistent quality of an object (thing, person, activity etc.)</i>	(93)
<i>b. scalar usage: already functions so as to expand a scale or degree to include an element no initially considered a part of the scale</i>	(94)
<i>c. discursive (expressive) usage: marks the speaker's attitude – expresses impatience, exasperation</i>	(95)

4.2.6. *Déjà*

The French equivalent of *already*, *déjà*, functions quite similarly, though *déjà* has two particular usages not found with English *already* (which we will describe in more detail in subsection 4.4.3). As the French counterpart to the English aspectual adverb, *déjà* naturally is at work in similar contexts and can be used to signal a temporal relation, like in (96) and (97) below:

- (96) a. Paul vit *déjà* en Espagne.
b. Paul a *déjà* vécu en Espagne.
- (97) a. Paul part *déjà*.
b. Paul est *déjà* parti.

In both (96) and (97) *déjà* unambiguously refers to a temporal relation, whether it refers to the present (96a & 97a) or the past (96b & 97b). For the utterances in (97), an element of surprise is also present, and this is especially obvious with an additional contextual indication, such as an interrogative intonation. Like its English counterpart *already*, *déjà* is often used to signify something else, something non-temporal, as in the following examples (98)-(101). We will analyze each of these examples one by one and bring out their similarities and differences:

- (98) Mes parents aiment la Floride : *déjà*, c'est au bord de la mer et la vie n'est pas chère...
- (99) A : M'man, m'man, j'peux aller faire du vélo ? B : Mange *déjà* ta soupe.
- (100) a. Un Kub Or c'est *déjà* de la cuisine.
b. C'est *déjà* pas mal.
- (101) a. C'est quoi son nom *déjà* ?
b. C'est *déjà* quoi son nom ?

In a decreasingly temporal order, the usages these utterances exemplify are: the chronological usage (96), the precocity usage (97), the argumentative usage (98-99), the scalar usage (100) and what could be called the reminder usage (101).

The chronological usage corresponds to the most “pure” temporal usage; in such utterances the primary informative intention is aspect-temporal, that is, the speaker aims to communicate that the process (event) described by the proposition P has a specific aspect-temporal value that is relevant to communicate. We called it “chronological” simply because it signals the focus of P in a temporal logic. We can thus rewrite it this way: *P is true / has occurred at least once before the moment of*

speech. Example (96) above is quite typical of this: “I *already* live in Spain.” Is equivalent to saying [live, Spain] is true of the speaker before the moment of speech. Without *already/déjà*, the utterance “I live in Spain” would simply be understood as stating that [Paul, live, Spain] is true in the present and gives no indication as to when this eventuality actually commenced. With *already/déjà* one understands that [Paul, live, Spain] is an established fact (for the speaker at least).

The precocity usage of *déjà* remains one where the aspect or the time are still quite present; the only criteria that distinguishes this use from the preceding one is precisely the idea of precocity that a hearer may interpret from such an utterance. We define this usage as follows: *P is true / occurred before or at the moment of speech and sooner than expected (by either party, or both)*. Example (97) “Paul is *already* leaving. [Paul is leaving *already*]” means that [Paul, leave] is true at S or [Paul, be gone] is true before S, which would also be the case for the utterances that do not contain *already*. However, the very presence of *already* activates an implicature, that of the precocity of proposition P. And when these utterances do not contain *déjà* the implicature is absent (or at least much costlier to process), and this usage remains an aspectual-temporal one given that the implicature that P is precocious is measured temporally.

The argumentative usages (98) and (99) both make use of *déjà*’s aspectual-temporal component of previousness to introduce propositions that have a distinctly argumentative purpose. In (98) *déjà* could be replaced with *premièrement* (‘first of all’) with almost no change in meaning. While in (99), *déjà* would more aptly be substituted by *pour commencer* (‘to start’).

(98) Mes parents aiment la Floride : *déjà*, c’est au bord de la mer et la vie n’est pas chère...

(99) A : M’man, m’man, j’peux aller faire du vélo ? B : Mange *déjà* ta soupe.

Both these examples (and similar utterances) basically add strength to the speaker’s arguments, either by establishing that the proposition *déjà* has scope over is an important point (98), or else a required (without being a necessary entailment) precondition (99) for subsequent action.

The scalar usage of these terms was our starting point for their study, and the idea that *already* is inherently scalar (in all its usages) stems from our observations of

this non-temporal usage. This particular usage has been described as the “comparative use” Mosegaard-Hansen (2000: 165-66) or of “relative degree” (Tahara, 2004: 310). The term *scalar* is more adequate since the idea that this usage “compares” objects or classes of objects is insufficiently descriptive of what is actually going on. And, though there is of course a notion of degree in scalarity, Tahara’s “relative degree” stops short of actually describing a scale on which eventualities may be measured (temporally or no). We define this scalar usage as follows: *P is reevaluated upward, by lowering the lower/inferior limit of a set to include P*. The utterances in (100) perfectly illustrates this principle:

- (100) a. Un Kub Or c’est *déjà* de la cuisine.
b. C’est *déjà* pas mal.

the value of *déjà* here is completely non-temporal and gives the speaker’s assessment of what can be considered true cuisine (100a) and, more vaguely, that an eventuality is better (or worse, in other circumstances) than initially thought by the speaker, the hearer, or both (100b). But this reevaluation is constrained by that which constitutes the norm, according to the interlocutors, for the given state of affairs (encyclopedic & contextual knowledge); this is why we claim that what *déjà* does is in fact expand the lower limit of a set, until the object in question is included in it.

Mosegaard-Hansen’s explanation that the hearer achieves the value intended by the speaker by mentally browsing a value scale of (the relevant) objects (2000: 166) is quite compatible with our perspective. Tahara’s definition, on the other hand, that this usage expresses a “relative degree of meaning according to which only a partial result is obtained at S...”¹¹⁹ only partially describes *déjà*’s function. Thus, when a speaker says “Four kilos is *already* big for a newborn” (example taken from Tahara, 2004), they express that at the moment of speech [4kg, newborn] is true and that this would be a partial result. This cannot reasonably be called a “result” (partial or otherwise), and though the idea of a “relative degree” is more adequate, it remains insufficient. Indeed, saying “[4kg, newborn] is true” can be considered in relation to (i.e. relative to) the “normal” or “expected” weight of newborns. But this would be the case even if the utterance did not contain *déjà* – “4kg is big for a newborn”. The claim that *déjà* performs the function of simply putting two objects or states of affairs in relation

119 “...degré relatif [signifiant] qu’un résultat partiel est acquis dès le moment considéré” (Tahara 2004: 310)

misses the mark. Instead, what this type of expression does here is act upon the scale of possible (conventional) weight for newborns, in this case by displacing the lower boundary so as to include a value normally considered out of bounds.

The final usage *déjà* can convey, the ‘reminder’ usage, is exemplified by the utterances in (101). This type of usage is somewhat more formulaic, since it is always expressed in the interrogative and is always a request for information.

- (101) a. C’est quoi son nom *déjà* ?
b. C’est *déjà* quoi son nom ?

This type of utterance is an instance of a discursive usage, where the speaker signifies that they knew, or should know, the addressee’s name (or age, or whatever). There is a face-saving aspect at work here, with the speaker claiming or pretending that they know the information. This usage is thus a re-request for information, meaning the information was requested at least once before.

That which is most basic and most common among these different usages will constitute the semantic nucleus of the procedure – the starting point for the interpretive procedure. The semantic nucleus of *déjà* possesses three characteristics: 1. an utterance with *déjà* is anchored and centered on the speaker (thus sharing a characteristic common to indexicals); 2. the expression itself is non-truth-conditional, given this, and given that the information brought by *déjà* is extra-propositional, it is the reflection of the speaker’s perspective; 3. it is inherently scalar (like many other temporal expressions, as we shall see later on), situating an event or state of affairs along a scale, whether temporal or not. With these three traits in mind (cognitive environment), the term is interpreted in context; this is where the first calculation is made, the variable(s) is/are saturated according to all the relevant input and the output gives the hearer the “correct” interpretation of *déjà*. Schematically:

Déjà <i>Default reading: temporal usages:</i>	<i>Relevant example(s)</i>
<i>a. chronological usage, when déjà simply describes an aspectual relation with a previous eventuality</i>	<i>(96)</i>
<i>b. precocity usage, when déjà describes an aspectual relation, and additionally that the eventuality in question occurred sooner than expected</i>	<i>(97)</i>
<i>If not relevant, e.g. contextual factors make it clear that déjà governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative usage: where déjà is used to signify an important element in an argument, or a pre-condition for an argument</i>	<i>(98-99)</i>
<i>b. scalar usage: when déjà serves to expand the scale of objects or eventualities the proposition qualifies</i>	<i>(100)</i>
<i>c. discursive usage: a formulaic usage used to re-request information</i>	<i>(101)</i>

Similarities/Differences

Already and *déjà* are both considered aspectual-temporal expressions¹²⁰. Over the course of our analyses, it has become clear that some of the non-descriptive usages described for these and other expressions (see also *still*, *encore* and *toujours* in following sections) can be derived at least partly because of this aspectual component. Furthermore, such expressions can represent the speaker's subjectivity on some level, thanks to the same focalization mechanism that the (descriptive) aspectual-temporal usages possess. From that perspective, *already* and *déjà* are both – much like *now/maintenant* – fundamentally subjective, since they are strongly dependent upon the utterance and, of course, the speaker (somewhat like indexicals in this respect).

These two expressions function very similarly – with only one notable exception: the use of *déjà* to mean *again* in the context of a speaker reiterating a request for information, as in (101). It also appears that the extent of scalarity these two expressions can convey are not the same – *déjà*'s scalar usages are much more versatile than those possible with *already*. It seems that their equivalents function this way in other languages as well¹²¹. The typical scalar usage of *déjà* from (100) crosses over to English with no difficulty, and no significant change in meaning:

(100) Un Kub Or c'est *déjà* de la cuisine.

(100') A Kub Or is *already* fine cuisine.

Here the upper limit of what constitutes fine cuisine is lowered so as to encompass something that would not normally be considered such; of course we tweaked the translation, since with a straightforward “cooking” for French *cuisine*, the scalar usage seems a bit forced:

(100'') ?A Kub Or is *already* cooking.

This is no doubt due to potential confusion prompted by the progressive verb form, or that the scale is more difficult to recover – cooking is just cooking, but fine cuisine is something more. However, given the right circumstances, the scalar usages of *already* easily cross over to *déjà* and vice versa. As already mentioned above, the discursive

120 See Traugott & Waterhouse (1969) and Auwera (1993) for *already*, and Martin (1980) and Mosegaard-Hansen (2003) for *déjà*.

121 For Spanish *ya* see Koike, D.A., (1996). “Functions of the adverbial *ya* in Spanish Narrative Discourse”, *Journal of Pragmatics* Vol. 25, No 2: 267-279. Italian *già* also boasts equivalent non-descriptive usages (see Baranzini & Manzotti 2008).

usage in (101) re-requesting information (or feigning to), does not carry over into English with *already*:

- (101) C'est quoi son nom *déjà* ?
- (101') ?What's his name *already*?
- (101'') What's his name *again*?

Instead, it is *again* that conveys this precise sense, which could also work in French for a similar result using *à nouveau* – in this case, however, the syntax and perhaps the wording would be different – an utterance like “c'est quoi son nom *à nouveau*?” would be considered rather unusual by most native French speakers¹²².

At any rate, *already* and *déjà* are expressions that are both temporal and aspectual; we know of various non-descriptive usages where the same focalization mechanism that the aspectual-temporal usages possess are used to represent the speaker's subjectivity. Let us add that, for us, *already* and *déjà*, are fundamentally subjective, since they are strongly dependent upon the utterance and, of course, of the speaker himself (somewhat like indexicals in this respect). That being said, the subjectivity (subjective marker or reference point) that contributes to the aspectual-temporal focalization is quite minimal with regards to *already* and *déjà*'s non-descriptive usages; in the appropriate contexts, aspect and temporality trump the other interpretations. Conversely, when we are dealing with usages where aspectuality and temporality do not play a decisive role – perhaps none at all – the speaker's subjectivity will be more manifest – this is, for us/me, one of the functions of *already* and *déjà* in such cases: to signal to the hearer that there is an additional element to take into account, one that is extra-propositional and non-truth-conditional.

122 “Rappelle-moi son nom, à nouveau” would be a preferable formulation, though still somewhat rare.

4.2.7. *Still*

A Chihuahua is still a dog, and Pluto is still a planet. [Alan Stern in Earthsky Interview, Space Feb. 18th 2010].

In its aspectual-temporal sense, this expression usually means that an eventuality is continuous – either ongoing (action) or unchanging (state) – at the moment of speech. When it is used non-temporally – often sentence-initially – *still* indicates an opposition or contrast between what precedes *still* in the discourse and what is presented in the utterance where it appears. It may also be used in an additive manner, where *still* adds emphasis to a comparison. There is also an element of expectation in *still*, similar to that present in *already*, whether temporal or not, though in this case the polarity seems to be reversed. That is, rather than the expectation being one of the eventuality occurring sooner, the expectation is instead that the eventuality is/was occurring later than expected, or, put it another way, that it was expected that the eventuality have run its course before the moment of Speech. Let us illustrate with a few examples:

(102) Their car was *still* in the driveway.

(103) Their car was in the driveway *still*.

(104) *Still*, their car was in the driveway.

(105) Their car is in the driveway, *still*, they could have left on foot.

The first three examples have a structure of this type: *still* [car, be, in driveway], but the first two are temporal, with example (102) not containing the element of expectation, whereas (103) does have the element of expectation (or surprise). Example (104) is straightforwardly non-temporal, and simply means “in addition” (to a previous argument, not visible in the example). And example (105) is a non-temporal usage that conveys a contrast between the implicatures of the antecedent and the implicatures of the consequent. In the first three utterances, [car, be, in driveway] is the proposition that is expressed, with *still* modifying the proposition – again, extra-propositionally – in such a way that the proposition takes on a different value (or relevant interpretation) each time. In (105) the structure remains similar though *still* in this particular case modifies [car’s owners, leave home, on foot], while [car, be, in driveway] is taken as the relevant background information for the argumentative inference the utterance prompts for – in the *P connective Q* format.

From another angle, we observe that *still* and *yet* have a similar component – that of a state of affairs that is current at the time of speech and which has been actualized in a time previous to the time of utterance:

(106a) He is there *still*.

(106b) He is there *yet*.

The two utterances are very similar with regards to the temporal reference described, with only a slight difference due to (106b) being slightly more formal or passé. In certain contexts, both *still* and *yet* seem equivalent in their contrastive usage, as shown below in (107a-b):

(107a) She knew it was hopeless, *still* she trudged on.

(107b) She knew it was hopeless, *yet* she trudged on.

In (107a) the utterance retains a temporal shading while focusing on the contrast between P and Q, while in (107b) the temporal relation is almost invisible – it is indirect and derived from other contextual elements if at all relevant. That *still* bears a stronger temporal element in (107a) is more evident with the addition of *and* to each expression, as shown below:

(107c) She knew it was hopeless, *and still* she trudged on.

(107d) She knew it was hopeless, *and yet* she trudged on.

Where here interpreting *still* as having a contrastive usage over a temporal one – “she continued to trudge on” – is more costly, while with *yet* the cost remains constant. The final non-temporal usages we will examine for *still* are given in the two examples below:

(108) The Geiger counter registered *still* greater amounts of radiation.

(109) A dwarf planet is *still* a planet.

In (108) *still* has the sense of *even*, but this usage is constrained by its context, since it does not appear without a scalar term such as “more” or “greater”. Thus the “additive” sense may come from the comparatives “more” and “greater”, rather than *still* itself (likewise with *yet*) – here *still* acts as an intensifier for this additive sense. Moreover, *still* conveys an implicature that the amount(s) referred to go beyond what was expected¹²³. And (109) is a scalar usage, with the inverse polarity of *already*, raising

¹²³ Interestingly, a near-perfect synonym for *still* in these two utterances would be *yet*, conveying the same sense of increase (108), or a similar scalar effect (though the syntax would be different,

the upper bound of what is considered a planet, i.e. dwarf planets, despite not having cleared the neighborhood around their orbits, remain planets. Put another way, the criterion for being a planet which dwarf planets do not possess – the ability to clear the neighboring orbital space – is waived so as to continue considering them “real” planets, like for instance this section’s opening quote concerning Pluto. So, all told, *still* (besides its motion adverb usage) can be used to temporally focus on an unchanging state of affairs, with or without an added sense of surprise/impatience/annoyance; or *still* can be used non-temporally to establish a contrast between two clauses or two utterances, or, still, to mean “additionally”, “even”, or finally, to include an object within a scale by modifying the scale’s limit upwardly.

The procedure for *still* first branches off into temporal (aspectual) and discursive meanings, with a further branch splitting off (i.e. further constraining the sense so as to obtain a much more specific meaning) at subsequent points. One such branch is where *still* is in the utterance or sentence – its syntactic location. If *still* is sentence- or utterance-initial then it is extremely unlikely to be a temporal reading. In actuality, the first switch/nexus is one step up, being perhaps an altogether different algorithm, or perhaps a more general cognitive process, which chooses from prosodic and syntactical cues whether *still* is to be understood as being in the noun and adverb category, and then whether it should be construed in its temporal and motion sense. The outline procedure for *still* is given on the next page.

with *yet* occurring sentence-finally – “A dwarf planet is a planet *yet*”. It is difficult to pinpoint what the difference in meaning between these two terms actually is, since both implicate an element of expectation in addition to acting as intensifiers.

Still	
<i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. the utterance describes/focuses on an aspectual relation which continues</i>	<i>(102), (106)</i>
<i>b. the utterance describes/focuses on an aspectual relation which continues, and highlights an aspect of subjective surprise, impatience or annoyance</i>	<i>(103)</i>
<i>If not relevant, e.g. contextual factors make it clear that still governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. discursive usage: still is used to add emphasis with meaning close to that of even</i>	<i>(104), (108-109)</i>
<i>b. argumentative usage: still is used to set up or highlight a contrast between two clauses or utterances</i>	<i>(105), (107)</i>
<i>c. scalar usage: still displaces upper bound of a scale</i>	<i>(109)</i>

4.2.8. *Encore & toujours*

These two aspectual-temporal expressions have received some attention in the French literature¹²⁴, within a variety of approaches – some semantic, some pragmatic, some polysemic approaches, others monosemous accounts – and can be considered counterparts to the English expression *still* (and *always*, albeit only in its aspectual/temporal uses). The descriptions and analyses given below are far from exhaustive, hereafter is an outline of some of these expressions' usages.

4.2.8.1. *Encore*

This expression is closely related to *déjà* (supra 4.3.3.), and is almost a mirror-image in certain instances. Just as the expressions *already* and *déjà* function in similar ways, so too do *still* and *encore*. *Encore* (like *still* and *yet*) contains an element of expectation much like *already*, except that the polarity is inverse; where *déjà* can signal that the speaker is surprised that X occurred sooner, *encore* can signal that the speaker is surprised that X is still occurring at S or that X is occurring later than expected. An additional usage where the polarity is reversed is with *pas encore* ('not yet'), which simply refers to an eventuality that is not the case at the moment of Speech, but is expected to be at some point in the future¹²⁵.

(110) a. Elle dort *encore*.

b. Elle dort *encore*?

(111) Tu t'es *encore* trompé de chemin.

(112) a. Quoi, *encore*?

b. Quoi *encore*?

In (110) we are dealing with a straightforward temporal usage, where *encore* indicates that an eventuality, here [dormir], persists at the moment of speech. The difference between (110a) and (110b) is simply that in the latter there is an implication of surprise at the eventuality being referred to. Example (111) is also temporal, though here the sense is that of repetition (rendered as *again* in English¹²⁶), the speaker is

124 For instance Martin (1980), Victorri & Fuchs (1996), Mosegaard-Hansen (2003, 2004), Buchi (2007) to name just a few. For a more detailed account of *encore* and *toujours* I refer the reader to these works whose analyses are more detailed than those given here.

125 Here, we will leave aside cases of negation, but see Martin (1980) and Franckel (1989) for a more detailed analysis.

126 The English expression *encore* used as a request for a musician or orchestra to 'play some more' music is an outgrowth of this sense of French *encore*.

telling the addressee that they have taken the wrong path once more. This utterance is better defined as being aspectual rather than temporal, given that repetition is commonly construed as being aspectual; like *déjà*, *encore* can easily be placed in a category of aspectual markers rather than temporal markers. The pair of examples in (112) are interesting because they have the exact same wording, with only a comma to distinguish them, and yet have different meanings. The utterance in (112a) conveys that the speaker is amazed, annoyed or impatient that an eventuality is occurring again. While (112b) roughly means “what now?”. In (112a) the meaning of *again* is explicit, with the sense of surprise or annoyance being implicated, while in (112b) the foremost meaning is annoyance, with the sense of *again* being implicated. Both these usages are emphatic and most often accompanied by strong intonation or are found in the interrogative. *Encore* has still other usages:

(113) a. *Encore* un flic! [example taken from Victorri & Fuchs 1996]

b. Il manque *encore* un peu de sel.

(114) C’est bien d’avoir une voiture, *encore* faut-il savoir conduire.

The above utterances both convey a sense of ‘addition’, which can be either discrete, as in (113a), or continuous, as in (113b)¹²⁷. In (113a), the speaker is expressing surprise at the presence of yet another policeman, implicitly judging the number of policemen present to be too much as it is. In (113b) the speaker is informing the hearer that some dish lacks salt, and can thus be interpreted as an implicit request or command to add yet more salt. With (114), the sense of addition is closer in meaning to [c’est bien X, *encore* faut-il Y], a lexicalized expression¹²⁸. For Victorri & Fuchs, example (114) is a ‘restrictive’ usage, rather than an ‘additive’ one; it seems more relevant to claim that the clause after *encore* [savoir conduire] is expanding upon the fact that the hearer possesses a car, something which does not guarantee the vehicle’s actual use. So the speaker is saying something like “there is one more thing you need before driving your car”, either a license (if the hearer has none), or skill (if the hearer has a license

127 Called a “quantifying use” for Mosegaard-Hansen (2002: 33-34), or a “quantitative supplement value” in Victorri & Fuchs’ terms – the observation that additive *encore* can be discrete or continuous is from them as well (1996: 65). Victorri & Fuchs also list another quantifying value – called the “reinforcement of a progression” value – which occurs in the very specific context of a comparative or a verb that marks increase (ibid). In my view, its function being so similar to the “quantitative supplement” value, does not justify a separate category.

128 For Victorri & Fuchs (1996), and Mosegaard-Hansen (2002), this and other lexicalized expressions like *encore que/si* are considered “modal” uses of *encore*, expressing concession or restriction.

already). This utterance is only restrictive in the sense that the speaker is pointing out a missing element for the hearer's (assumed) future action. The next set of utterances departs from the notion of addition or expansion only slightly:

(115) Vingt francs c'est *encore* trop cher pour toi.

(116) C'est *encore* plus loin que ce que je pensais.

We can see from the above two examples that *encore*, like *déjà*, is also a scalar term¹²⁹; the polarity is inverse, but the basic scalar function is the same. The *encore* in (115) would most likely be rendered by *still* in English and the one in (116) by *even*, but more importantly, the scalarity of each is one where the scale is extended beyond the initial limit. In (116) the destination referred to is further than was thought/perceived initially, so as to prompt the speaker and hearer to redouble their efforts until they have reached their final stopping point. In (115), what is being referred to is the hearer's stinginess with money, so that the modest sum of twenty Francs is, by enlarging the scale of what is considered expensive, now included in the set of "expensive amounts of Francs".

129 Called the "notional" value in Victorri & Fuchs (1996: 65) who describe such cases being at the limit of categorical inclusion. The term is different but the general idea is the same, something not normally included in a given category is shoehorned in, thanks to such terms.

4.2.8.2. *Toujours*

Perhaps these observations on *toujours* could have been placed alongside *encore* above, given their proximity in meaning; at any rate *toujours* does not always mean *always* – it is frequently used in the sense of *encore* (‘still’)¹³⁰, both temporally (aspectually, to be precise), indicating the continuation of an eventuality, and non-temporally, for instance, indicating a contrast with what precedes it. The following two examples illustrate how *toujours* is used to mean *encore*:

(117) Marie l’aime *toujours*.

(118) “les pères sont *toujours* des hommes” [a French car commercial]

In (117), the literal meaning ‘she loves him always’ does not make complete sense in French, due to the use of the present tense with simple past or future tenses, *toujours* would mean *always* (although with the *imparfait* the sense is also similar to *encore*). The most adequate translation into English is ‘she *still* loves him’, and it is precisely this sense a native French speaker would interpret. What is interesting is that there can be some temporal overlap between *encore* and *toujours*; clearly, here, the speaker is describing a person who loved another from a previous point in time up until the present, and in this sense, both terms overlap, if we consider that Marie loved her husband continuously. But *encore* and *toujours* do not mean exactly the same thing. A notable difference between the two terms is the sense of expectation that is stronger in *encore* than in *toujours*. With (110) above *encore* carried that sense of expectation, while in (110’) it is harder, but not impossible, to infer:

(110’) a. Elle dort *toujours*.

b. Elle dort *toujours*?!

It appears that the main difference is not in the element of expectation *per se* but rather in the expectation that the contrary is expected – possible with *encore*, not so with *toujours*. To make the element of expectation, accompanied with an expressive sense of exasperation, something must be added, as in (110’’) below:

(110’’) Elle est *toujours* en train de dormir!

Making the durative sense explicit with the periphrase “en train de” (coupled with an

¹³⁰ And interestingly *encore* can be used to mean *always* or *repeatedly*, as in “Quoi? Sa voiture est *encore* là?”, clearly expressing exasperation in this case. We have seen that sometimes *encore* mirrors *déjà*, and so does *toujours* in cases where its interpretation is close to *encore*.

exclamation point), helps make the speaker's exasperation more tangible; this is no doubt due to the fact that "en train de" removes most of the remaining durativity usually conveyed by *toujours*.

Example (118), is taken from a French car commercial, and the literal sense of 'fathers are always men' is insufficiently relevant in itself – instead (118) is interpreted as "...fathers are *still* men". But even this interpretation is insufficiently relevant without inferring something about the desires of men, and men who are fathers, regarding cars. In the commercial, fathers are shown to appreciate cars which look sporty and/or classy – the usual stereotype about men and cars in general – but which have the added bonus of having lots of space to drive their children around – something which men who are not fathers could take or leave. *Toujours* functioning like *encore/still*, challenges the notion that fathers want or need cars that are exclusively functional and family-oriented, because fathers retain the (stereotypical) desires they have as men. The following example has a somewhat different function:

(119) *Toujours* est-il que...

where it signals an objection or contrast with something said previously, much like utterance-initial *still*. This usage with *toujours* is always in the form of 'toujours est-il que', and so remains somewhat limited. But the possibility of an argumentative usage is there, due to the commonly understood secondary meaning of the term *encore*. Another instance of discursive or argumentative *toujours* is one that stays close to *encore* (or even *déjà*) in its scalar function, as exemplified below:

(120) a. Un pingouin c'est *toujours* un oiseau. [taken from Mosegaard-Hansen 2004]

b. C'est *toujours* ça.¹³¹

This can be seen as a counterpart of sorts to (100a & 100b) "Un Kub Or c'est *déjà* de la cuisine", "C'est *déjà* pas mal", where the scalarity is inversed: instead of lowering the quality of what is deemed sufficient or good (as in 100) for inclusion in a specific class of objects, *toujours* extends the value in (120) to include something that would not normally have been considered sufficient or acceptable for inclusion. A further usage of note is one where the expressive force is at its strongest:

131 This is an example taken from Buchi (2007: 110), "Ça fait pas une fortune, mais c'est *toujours* ça". I modified it to evacuate the *mais* ('but') so as to really focus on *toujours*. Buchi also calls this a scalar term due to its "relative degree" (see also Tahara 2004), and also sees the parallel between *déjà* and *toujours*; also of interest, she notes that this is quite an old usage, dating back to the 13th century (Buchi 2007: 115).

(121) Tu peux *toujours* essayer!¹³²

Where the speaker is practically defying the hearer to do X, especially in the context of a heated dispute. As Buchi (2007: 117-118) rightly points out, this particular usage is always in the imperative and/or accompanied by modal *pouvoir* – the English translation of (121) would run along the same lines: “You can *always* try!”. For Buchi these examples would be glossed as “on the off chance” (‘à tout hasard’), also an acceptable reading of the English version. A final non-temporal reading is one named a “thematic” (Buchi 2007: 119-120) or “connective” (Mosegaard-Hansen 2004: 39; 50-51) usage, by which is meant that a given topic or referent within an enumerative discourse unit is reprised further along in a subsequent clause or utterance, as in (122) below:

(122) Dans un autre ordre d’idées, pour lutter contre l’usure des pistons et des cylindres (...) Delahaye réalise un dispositif spécial assurant un graissage supplémentaire au début de la mise en marche de la machine. *Toujours* pour réduire l’usure, l’emploi de... [example taken from Buchi 2007: 119]

Here the topic “l’usure” (‘wear and tear’) is reprised, or rather, the discourse continues with the same general subject – an explanation of automotive mechanics – and *toujours* serves to refocus the reader’s attention onto wear and tear, a relevant sub-topic within the discourse. Overall, it seems that *toujours*, in most of its non-descriptive usages, functions according to a basic core sense of continuity, imposing a sense of ‘retention’. When aspectual, as in (117), *toujours* retains and makes manifest a temporal reference for the hearer; when scalar (120), *toujours* is used to keep an object within a class of objects not normally deemed to belong there; when it is ‘thematic’ as in (122), *toujours* retains a topic (i.e. maintains its relevance) in the hearer’s short-term memory (i.e. the immediate context). For its expressive usage, (121), it is unclear what exactly *toujours* retains, unless it is the idea of keeping the hearer from doing something by making it manifest that despite an infinite number of tries, nothing useful will come of their action. The outline procedures are given for both *encore* and *toujours* on the next page.

132 This example was also addressed by Buchi (2007: 117), which she calls an “assertive” usage; this utterance is actually quite common, often said by a scolding elder to a misbehaving child, or between angry peers.

Encore <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. aspectual usage indicating that an eventuality is still true at the time of reference, sometimes with an element of surprise</i>	<i>(110a), (110b)</i>
<i>b. aspectual usage indicating the repetition of an eventuality, sometimes with an added element of surprise</i>	<i>(111), (112a)</i>
<i>If not relevant, e.g. contextual factors make it clear that encore governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. discursive usage: encore marks the speaker's irritation/annoyance</i>	<i>(112b)</i>
<i>b. argumentative usage: encore is used to mean 'additionally', or bring additional information by introducing a new clause</i>	<i>(113a - 113b), (114)</i>
<i>c. scalar usage: encore displaces upper bound of a scale</i>	<i>(115-116)</i>

Toujours <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. aspectual usage indicating the continuation of a state of affairs or an eventuality</i>	<i>(117)</i>
<i>If not relevant (enough) →</i>	
<i>If not relevant, e.g. contextual factors make it clear that toujours governs relations between clauses or propositions rather than events</i>	
<i>a. discursive usage: toujours is used to indicate that an eventuality remains true despite apparently contradictory information</i>	<i>(118)</i>
<i>b. discursive usage: refocuses attention to specific topic mentioned previously, marks continuation of topic</i>	<i>(122)</i>
<i>c. argumentative usage: always used with que, toujours is used to indicate an contrast</i>	<i>(119)</i>
<i>d. scalar usage: toujours displaces upper bound of a scale</i>	<i>(120)</i>
<i>e. expressive usage: marking speaker's attitude toward hearer or proposition</i>	<i>(121)</i>

Similarities/Differences

*Still*¹³³ and *encore*, and *toujours*, do not always match up in meaning or usage, but there is of course some overlap between at least one sense – the primary temporal (aspectual) usage of all three functions similarly (based on ex. 102 above):

(102a) Their car is *still* in the driveway.

(102b) Leur voiture est *encore* dans l'allée.

(102c) Leur voiture est *toujours* dans l'allée.

All three utterances describe the state of affairs [car, be at place X] as having been true in the past and continuing through the present (moment of speech). Note that (102c) can also mean that [car, be at place X] is *always* true – the literal meaning of *toujours* – if the context corroborates the utterance; in this case the car in question will have been at place X as far back as memory serves and will continue on into the foreseeable future. Regarding the non-temporal usages of these expressions, we can say that they do sometimes match up, given the appropriate context, but most of the time a translator would have to treat them on a case by case basis and greatly rely on the context. For instance the *encore* in (112a) “Quoi, *encore*?” is best translated by *again* (“What, *again*?”) while the one in (112b) “Quoi *encore*?” would most likely be translated as “What *now*?”. Incidentally, if a discursive reading is given to (102b), *encore* would best be translated by *again*. But even between *encore* and *toujours* there are instances where swapping one for the other would not convey the same implicated meaning, among scalar usages for instance. A variant utterance with *encore* in place of *toujours* would also have a scalar reading in (120'a), but in (120'b) something is lost:

(120') a. Un pingouin c'est *encore* un oiseau.

b. ?C'est *encore* ça. [in a scalar reading]

As with *already/déjà* and *still*, the fact that *encore* and *toujours* are aspectual markers is undoubtedly the source of some of their non-descriptive usages – e.g. continuity and scalarity. This variability in meaning, and the translation of this meaning, is greatest with these expressions' discursive usages. We shall return to this consideration in the conclusion.

¹³³ It may be the case that the type of pairing possible for *encore* and *toujours* is better reflected by *still* and *yet* rather than *still* and *always*.

4.2.9. *After/Before*

We will not address the obvious ambiguity between space and time for these expressions, as in ‘The dog lay *before* his feet’ or ‘The cat ran *after* the mouse’. Here the etymology of these two terms is spatial beyond a doubt, however, there is no ambiguity for them, when used it is contextually salient which usage is being conveyed. A case could be made for their actually being two distinct versions of each, a spatial one and a temporal one – and perhaps this is the case – but given the stance taken here, of monosemy and contextual enrichment, there is no reason that either term could not be the same lexical item with distinct contextually-motivated usages. Perhaps in this case, the grammaticalization of *after* and *before* has simply run its course.

4.2.9.1. *After*

After means the period of time following the moment of reference, but can equally mean spatially following or behind something, or even establish an order, as in Q *after* P, or that what follows P is of lesser importance (as in a hierarchy of government officials – see sct. 4.2.4. on *then*, above). Example (123) is a straightforward descriptive usage of *after*, where [He, see, speaker] is temporally located later than [speaker, see, him]; the focus is on the clause the speaker places *after after*.

(123) He saw me *after* I saw him.

(124) a. Sheila takes *after* her mother.

b. They named Sheila *after* her grandmother.

(124a) illustrates a solid non-temporal usage that is quite common, where “take *after*” is interpreted as “resembles”. Of course, here we encounter a difficulty not seen with most other expressions, since in this case “take+*after*” is a standard phrasal verb with a specific meaning. The same can be said of (124b) where “name+*after*” is also a phrasal verb: it is deemed a fixed expression with a very specific, performative, meaning. The form “call+*after*” could also have a similar meaning – where “call someone” is understood as referring to someone with a name, but as distinct from *naming* which is more formal or official. (His name’s Robert but we call him Bob). This distinction can be seen below:

(124’) ??They called Sheila *after* her grandmother.

In such utterances *after* is not optimally relevant if understood temporally, since in our world grandmothers are named long before their grandchildren, except perhaps in a very tortuous reading where “named” is understood as “called out her name”, and in this far-from-relevant case, one could understand *after* chronologically. The spatial sense of *after* is also irrelevant, even nonsensical; there is no logic to this reading. Therefore, the hearer of this utterance must search for another, non-temporal, meaning for *after* to completely make sense, i.e. be relevant. In this particular case, as this is a common expression, the hearer understands that Sheila the younger was given the same name – Sheila – as her grandmother. Here *after* is used to mean “in imitation of” or “in allusion to” X. Though I do not have the intention of thoroughly discussing phrasal verbs and the implications for this thesis, an additional point against considering “name+*after*” as a completely fixed form is an example such as:

(125) A painting *after* impressionist art.

(126) Sheila is a woman *after* my own heart.

Where there is no act of naming or calling, but one of considering that, in (125), a painting was done in imitation of impressionistic art, or in accordance with impressionist principles. Example (126) will be understood as the speaker saying that Sheila is a person whose moral, esthetic or/and intellectual principles coincide with the speaker’s, and thus here, *after* has the sense of “in accordance with, in proportion to X”. Examples (123-126) above all have a component of meaning which includes some degree of *imitation* or *resemblance*. Thus, *after* carries the same core meaning whether it is found in a fixed form (“name after”) or not. But there are also two other ways *after* may be used non-temporally:

(127) Sheila asked *after* her grandmother.

(128) Sheila asked *after* her dollhouse.

Again, a temporal or spatial reading would be irrelevant, and the meaning is not the same as our preceding examples, there is no sense of imitation or resemblance. In this case, *after* signifies “about”, with Sheila inquiring for instance into the well-being or whereabouts of her grandmother in example (127), or into the condition or location of her dollhouse. Typically this type of usage indicates a degree of concern for a person or thing, and seems to be restricted to the “ask+*after*” verb phrase. The final examples depart from any sense of resemblance or concern:

(129) *After* all their problems, they managed to remain happily married.

(130) You dare go to the pool, *after* what the coach said to you?

Naturally, a temporal interpretation is recovered in these two cases, there's no disputing that; however, the function of *after* here is to point out that the clause following *after* is a precondition or cause for the principal clause. In such cases, *after* has the sense of something akin to “despite” (129) – *after* Q, P – or “given Q” (127) – P, *after* Q. So, like with other expressions, though an amount of temporality may remain perceptible in a given usage, the focus of the relation described has little to nothing to do with time, and is therefore considered non-temporal, as is the case with *after* in (129-130). For the final usage – the serial usage of *after* – we return to example (2), and a variant (2'):

(2) ?First comes the president, *afterwards* the vice-president, *afterwards* the secretary of state...

(2') First comes the president, *after that* the vice-president, *after that* the secretary of state...

In an enumeration similar to the type possible with *then*, in (2') *after that* (or *after him/her/them*), introduces the following member on a list of people, functions or objects much better than in (2). This is likely due 1. to *afterwards* being a much less versatile expression, whose temporal reference is much too strong to allow for a straightforward list, and 2. the addition of *that* or a pronoun facilitating a non-temporal reading. The usages common to *after* are given after the discussion of *before*:

4.2.9.2. *Before*

One could suppose that *before* is simply the mirror image of *after*, but that would only be partially correct. Insofar as the interpretation is either the standard spatial or temporal one, then *before* is indeed the primary antonym of *after*.

(131) They stood *before* the altar. (spatial)

(132) I saw him *before* he saw me. (temporal)

These two examples can be considered typical and standard descriptive usages of *before* (of spatial and temporal *before* respectively). There is also one instance (or set of instances) of a non-descriptive usage where *before* mirrors the meaning of *after*:

(133) 'I' *before* 'E', except *after* 'C'.

(133') 'E' *after* 'I', except *before* 'C'.

(134) We value freedom *before* happiness.

Where the meaning is that of *precedence*, for instance when ranking two or more things. In these cases as well, *before* is the natural counterpart to *after*. When looking at other non-descriptive usages, this may not a priori be the case, though with the four succeeding examples, we would be hard put to claim unequivocally that *before* and *after* do not in fact have opposite and connected meanings:

(135) Death *before* dishonor!

(136) I would go to jail *before* going to church.

These two examples signal a *preference* for a certain idea or state of affairs. Where the first clause or item in a list is shown to be preferred to the second, or subsequent clauses/items. So with (135), an old warrior's code, the hearer interprets that the speaker values honor more highly than their life, or that an honorable life is the only one worth living. In (136), the speaker signals their preference, all things considered, for jail over church, in the sense of *rather*, much like the non-descriptive usage of *sooner* seen above, and also conveying the implicatures that the speaker is anti-clerical, distrustful of religion etc.

Interestingly, we can invert the order in the clauses of the above two examples, and replace *before* with *after*, and still have a very similar, if not completely identical meaning:

(135') Dishonor *after* death!

(136') I would go to church *after* going to jail. [in a non-temporal sense]

Though these usages are not attested, they would be perfectly interpretable, given the right context. It seems that the only instances where *before* is not an adequate opposite of *after* is in the case of examples (124, 126-127, 129) which rendered as below, would be practically meaningless:

(124'') ?Her grandmother was named *before* her.

(126') ?I am a man *before* Sheila's heart.

(127') ??She asked *before* her grandmother.

(129') ?*Before* all their problems, they managed to remain happily married.

Therefore, it is safe to conclude that these very specific usages of *after* do not stem from the *before/after* spatio-temporal dichotomy of *precedence/preference* vs. *subsequence/resemblance*. Likewise, there are a few usages for *before*, which have no direct link to spatial or temporal *precedence* or *preference*, such as the following:

(137) She was guilty of a most heinous crime *before* her country.

(138) *Before* such considerations, the committee had no strong counter-arguments.

(138') The committee had no strong counter-arguments *before* such considerations.

Examples (137) and especially (138) are both instances of an argumentative usage; in (137) the sense of *before* is close in meaning to 'with regards to her country's mores/laws' rather than any spatial or temporal sense; (137) may seem to be a discursive usage, but is categorized as an argumentative one since the phrase 'before her country' is used as a specification of the main clause (though perhaps it is both). As can be seen from (138) and (138') the position of *before* changes nothing as to its argumentative usage; in both cases, *before* is understood as meaning 'taking into account X'. A final non-temporal example is one where *before* is not used to signal preference, or highlight an argument:

(139) Like a tree bending *before* the storm.

where *before* is used as a manner adverb, expressing that [the storm] is the cause for the tree's bending – but recall our brief discussion of Saussure's non-necessary causal relations etc.; here, clearly, what makes the tree bend is the wind, but the wind (and its strength) depend on the storm. At any rate, here *before* can be understood as 'under the influence of X'.

After	
<i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. after indicates that the eventuality referred to occurred at a time later than either the moment of Speech or else a relevant perspective point.</i>	(123)
<i>If not relevant, e.g. contextual factors make it clear that after governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. discursive usage: after indicates a relation of similarity</i>	(124-126)
<i>b. discursive usage: after is used to mean 'about', where the speaker expresses concern or curiosity for an object or eventuality</i>	(127-128)
<i>c. argumentative usage: after introduces a (often contrastive) precondition for the principal clause</i>	(129-130)
<i>d. serial usage: after expresses subsequence in a list of items, most often accompanied by 'that' or a pronoun</i>	(2')

Before	
<i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. before indicates that the eventuality referred to occurred at a time previous to either the moment of Speech or else a relevant perspective point</i>	(132)
<i>If not relevant, e.g. contextual factors make it clear that before governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. serial usage : before indicates precedence in a list of items</i>	(133-134)
<i>b. discursive usage: before indicates preference</i>	(135-136)
<i>c. discursive usage: before expresses a form of causality – influence of an eventuality over another</i>	(139)
<i>d. argumentative usage: before introduces a (often contrastive) precondition for the principal clause</i>	(137-138)

4.2.10. *Après/Avant*

The French equivalents of *before* and *after* – *avant* and *après* – do not cover quite the same range of non-descriptive usages their English counterparts do. At first sight, *avant* has but one non-descriptive usage, while *après* has a few. We will see that upon closer inspection both yield a few interesting non-descriptive usages.

4.2.10.1. *Après*

This expression, in addition to signifying a temporal relation of subsequence, may also be used argumentatively in certain contexts. The first example (140) is an ordinary temporal usage of *après*, the second (141), is a temporal-serial usage:

(140) J'irai le voir *après* avoir mangé.

(141) Branchez l'ordinateur, *après* allumez-le.

Where nothing other than an expression of an eventuality or a place/object being situated further in time (140). The usage in (141) is typical of instructions, and retains an amount of temporality, but as a byproduct; in such cases, *après* simply indicates that one action succeeds another by causal necessity. Like with *avant* above, *après* can be used to describe an order such as one of military rank, as in (142):

(142) a. Le lieutenant vient *après* le capitaine dans la hiérarchie.

b. Le capitaine vient *après* le lieutenant dans la hiérarchie.

(143) Le chiffre 2 vient *après* le chiffre 1.

Interestingly, the polarity of *après* (or *avant* in a similar utterance) depends entirely on whether the speaker means the rank of lieutenant is inferior to that of captain (142a), or whether they mean the rank of captain follows that of lieutenant in superiority (142b). Thus (142a) means 'the lieutenant comes after the captain in importance' while (142b) signifies 'the rank of captain follows the rank of lieutenant, and is thus more important'. Likewise, (143) points out that the numeric value of 2 is greater than that of 1. In an utterance similar to (143') below but with a slightly modified context, such 'double-polarity' is also possible:

(143') Le chiffre 1 vient *après* le chiffre 2 dans le compte à rebours.

In the specific context of a countdown, 1 can come after 2, so there is no incongruence in the utterance – like with the utterances on military ranks, the context and speaker's intended meaning will accommodate *après* both ways. The example below is also non-

temporal though in this case it expresses something other than an order:

(144) C'est ce qu'elle m'a dit, *après*, je ne peux pas savoir si c'est vrai.

The utterance in (144) is an argumentative usage which crops up frequently in conversations or debates. Its meaning is close to *but* or *however* and is used to introduce a contrast with the preceding clause. As such, this non-descriptive usage of *après* is almost identical to the non-descriptive usage expressed by *maintenant*. Finally, there are still two other non-descriptive usages of *après*, as illustrated below:

(145) Jean est toujours *après* ses enfants.

(146) Et *après*?

Examples (145) and (146) are both familiar discursive usages. The former is understood as meaning that Jean either is always actively taking care of his children (to the point of exaggeration), or else that he is always harassing them (i.e. punishing them for the slightest reason). The latter example is a common phrase used to mark exasperation or even anger and roughly translates as “what’s it to you?” or “so what?”. Both utterances have in common a sense of excess; most likely the meaning of (145) is possible, and accessible, through a spatial sense of *après*, while the *après* in (146) takes its cue from the temporal sense. These two usages are somewhat formulaic, and as such appear in restricted contexts, such as a criticism (145) or a disagreement (146). In a different context, say husband and wife building a bookshelf, with one reading the instructions, the other asking “et *après*?” cannot mean “so what” or “what’s it to you?”, at least not unless they are somehow angry with each other. For (145), the context (besides being used to criticize) is that *après* must co-occur with *être* or else *crier* for the harassment sense. With *manger* or *courir* the temporal or spatial reading would prevail. Further research would no doubt uncover other constraints with regards to these and other usages of *après*, but we shall leave them aside for the present.

4.2.10.2. *Avant*

Like its English counterpart *before*, *avant* is used to convey a relation of anteriority with relation to the moment of speech, and often simply mean *earlier* as in examples (146-149). It is also used to express the spatial relation of one object being to the front of another, or else the front part of something. Its unique non-temporal usage can be seen in the following examples:

(146) Je l'ai vu *avant* qu'il me voie.

(147) Le lieutenant vient *avant* le capitaine.

(148) Le lieutenant vient *avant* le capitaine.

(149) Le chiffre 1 vient *avant* le chiffre 2.

The utterance in (146) simply conveys a temporal relation, namely that the speaker saw someone before that person saw them. In this case all that is said and meant is that one action occurred at a times previous to the second action described in the utterance. Example (147) is temporal if it refers to the lieutenant physically coming to a place before the captain. Interestingly example (148), ostensibly the same wording, does not carry this sense, in a context where one describes not the physical action but is instead listing ranks. The two latter utterances illustrate that what *avant* signifies here is a relation in a hierarchical order, or of value. So for (148) the rank of lieutenant precedes the rank of captain, but is not superior in rank (in fact the reverse is true). Similarly, in (149) the number 1 precedes number two, that is its numerical value comes first, but again, without expressing superiority, as 1 is not greater than 2. Like with *après* in (143'), numeric polarity can also be reversed, given the appropriate context:

(149') Le chiffre 2 vient *avant* le chiffre 1 dans le compte à rebours.

Thus temporal anteriority passes straightforwardly to a serial description, often denoting hierarchical precedence. Unlike its counterpart *après*, *avant* does not have a discursive (contrastive) usage, with the form Q *avant* P, no doubt because it is easier to implicate deduction with a term that signals succession than it is with an expression signaling precedence. In order to obtain an argumentative interpretation for *avant*, one needs the adjunct *que*, otherwise the processing effort is too costly, and the effects too weak. The outline procedures for *après* and *avant* are given on the following page:

Après <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. temporal usage: après signifies that an eventually was posterior to another</i>	<i>(140-141)</i>
<i>If not relevant, e.g. contextual factors make it clear that après governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. serial usage: après indicates the next step in a series of actions</i>	<i>(142-143)</i>
<i>b. argumentative usage: used to introduce a contrast between P and Q in a way quite similar to maintenant</i>	<i>(144)</i>
<i>c. discursive usage: après is used to express a form of excess, or else anger/exasperation</i>	<i>(145-146)</i>

Avant <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. temporal usage: avant signifies that an eventually was anterior to another</i>	<i>(146-147)</i>
<i>If not relevant, e.g. contextual factors make it clear that avant governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. serial usage: avant signifies that a person or object precedes another in an order</i>	<i>(148-149), (149')</i>

Similarities/Differences

There is some strong correlation between the English and French versions of these expressions in their temporal and serial usages. However the discursive usages of *before* signaling preference or influence or *after*'s discursive usage pointing out resemblance, are absent from French. Interestingly, the argumentative usage of the English *after* does have a French equivalent, but the argumentative usage brought about by *before*, signaling contrast, would use the French spatial term *devant* or *face à* instead.

(129') *Après* tous leurs problèmes, ils ont pu rester heureux en mariage.

(138'') *Devant / Face à* de telles considérations, le comité n'avait pas de contre-arguments forts.

Why this is the case is not readily apparent, since in both languages other expressions exist in each instance; therefore it cannot be that in English there is no other term for a specific relation while in French there is. For the English utterance in (129) *despite* could be used, and the French *malgré* would work perfectly for (129'). For the use of *before* in (138) rendered as *devant* in (138''), it becomes obvious that the spatial meaning seems to be behind the contrastive usage in French, as opposed to English temporal *before*. Another discursive usage with *after*, expressing resemblance with *after* (125-126), can be given an equivalent sense in French, but only if one adds *d'* to *après*:

(125) A painting *after* impressionist art.

(125') Un tableau *d'après* l'art impressioniste.

Without the *d'*, *après* cannot focus the interpretation onto one of resemblance, needing the *d'* seemingly to indicate the provenance of the thing the object takes after. Then again, in English, the phrasal verb *to take after* may have facilitated this derivation for *after* for English speakers. Finally, there is a usage in English – the discursive usage expressing preference for *before* (135-136), which finds no direct counterpart in *avant*.

(135) Death *before* dishonor!

(135') *Plutôt* la mort *que* le déshonneur!

In this case a translation of *plutôt que* is more felicitous to maintain the same meaning, or else a periphrase.

4.2.11. *Since*

Since thou are not sure of a minute, throw not away an hour. – Benjamin Franklin

In its temporal form *since* is usually understood to mean “after”, “ago” or “at a later time”; thus it is clearly temporal when it establishes a time interval for an eventuality beginning in the past and leading up to or continuing throughout the present, this is most obvious when it precedes dates as in “*since 2001/May/Wednesday*”. Otherwise, in sentence-final position, it picks out an interval subsequent to the eventuality, such as “she (has) reconsidered *since*”. When *since* occurs sentence-initially, without a specified date, it may express a causal relation, albeit sometimes ambiguously as in “*Since* you asked, the weather is nice”, otherwise it unambiguously expresses some form of causality or consequence with structures of the type *P since Q* or *Since Q, P*. The following examples illustrate this:

(150) Sheila has been acting strangely *since* you arrived.

(150') Sheila has been acting strangely (ever) *since*.

(151) *Since* you're up, can you get me a beer?

In example (150) both P [Sheila, act, strange] and Q [you, arrive] are explicit. In example (150'), either P or Q is unmentioned in the utterance itself, though they will have been mentioned in a preceding utterance of the same piece of discourse, such as “The second you arrived, Sheila's behavior changed.” Utterances like (151) have the form *since P, Q*, where the antecedent and resultant clauses are given together after the expression – so it is not necessary for *since* to formally appear between two clauses to point out a relation between them though the effect is precisely that. Temporal *since* can appear in several positions in an utterance, sentence-initially, sentence-internally or sentence-finally, as the following examples below illustrate:

(152) *Since* 1999 Paul has been doing research.

(152') Paul has been doing research *since* 1999.

(152'') It all started in 1999. Paul has been a researcher *since*.

Therefore, the position of *since* in a given utterance will not be a reliable indicator for whether it is used temporally or not. What matters is the clauses actual content – in all cases the scope *since* has is similar. Though *since* is used temporally in all three utterances, there is a slight difference in meaning each time. This is mainly a question of focus where the speaker stresses one aspect over another. More interesting are

ambiguous utterances like the following one:

(153) *Since* you asked, the weather is nice.

Where *since* can be understood either temporally or non-temporally; in one case, the speaker is informing the hearer that the [weather is nice] is true now, whereas it was not when the hearer first asked about the weather – thus in its temporal reading here *since* highlights a change in a state of affairs. While in its non-temporal interpretation, *since* is used to mean “given that” and [the weather is nice] is true now (and may have been so before), and the speaker is in a position to inform the hearer of this state of affairs – the hearer may be absent from the speaker’s locus (i.e. a telephone conversation) or else may be visually impaired or hindered in some other way. The non-temporal reading could also be understood as sarcasm or mockery on the speaker’s part if, for instance, both interlocutors are in the same place and the weather is manifest to both. Remark that in (153’) the ambiguity is absent, due to the use of the present tense:

(153’) *Since* you’re asking, the weather is nice.

With the past tense removed, the potential reference to a point in time when the eventuality began has been eliminated, thereby blocking a temporal reading, given that (153’) would be odd if interpreted as being temporal (due to the present continuous tense).

(154) The glass broke *since* it fell off the table. → temporal/causal ambiguity

(154’) The glass broke *because* it fell off the table.

(155) ??The smoke alarm went off *since* there’s smoke.

(155’) The smoke alarm went off *because of* the smoke.

(156) *Since* there’s smoke the alarm will ring.

(156’) *Because* there’s smoke the alarm will ring.

The causality in *since* found with utterances where the term is best approximated by ‘given that’ points to a deep link between causality and temporality; *since* simply exploits this link with its non-temporal usages. Indeed, there is no mystery surrounding the notion that for eventuality A to cause eventuality B, A must precede B in time, though time is not the focus of utterances of this type. As Comrie (1976) puts it: “1. The caused event must happen at a time after the causing event. 2. The caused event must be wholly dependent on the causing event, to the point that one could infer

a counterfactual – that the caused event would not have taken place had the causing event not taken place first.” This element is what is behind the non-temporal usage of *since*, where temporality itself is but a ‘side effect’ of the relation of cause and consequence¹³⁴. The causal relations possible with non-temporal/argumentative *since* highlighted in utterances directly stem from the temporal relation (the second temporal usage) of subsequence; the shift from temporal to non-temporal subsequence takes little processing effort. An additional plausible explanation for *since*’s causal function may be found in its similar structure to *if P then Q... since P, (then) Q...* with *if P then Q* an utterance proposes a potential causal relation, while with *since P, (then) Q* the causal relation is actual.

Since <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. Since marks a starting point in the past (< time of speech) for a durative eventuality</i>	(152)
<i>b. Since is used to mark a relation of subsequence between two clauses</i>	(150), (153)
<i>If not relevant, e.g. contextual factors make it clear that since governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative usage: since functions as a causal operator with a meaning resembling ‘given that’ or ‘because’</i>	(151), (153-154), (156)

134 Leech & Svartnik (2002: 107-110) put *since* (as well as *because* and *as*) in a class of “Reason and consequence” (rather than “Cause and Result” which also includes *because* (of), *on account of*, *out of*) saying that “Cause and reason are overlapping notions (both answering the question Why?), but the difference between them is that cause concerns the events themselves, while reason concerns the way a person interprets the events, and acts upon this interpretation”. I agree with the basic idea here; though in the case of *since* as opposed to causal *because*, *since* deals with what can be reasonably assumed to be a cause of something. Leech & Svartnik (2002) make no mention of ‘inference’, but this is clearly what is going on in such cases.

4.2.12. French equivalents of *since*: *depuis* & *puisque*

In French, there is no direct equivalent for *since* that covers both the aspectual-temporal and argumentative/discursive usages we saw previously. For temporal usages of *since* (i.e. example 150) French will use *depuis*, as in (157) below; for argumentative or discursive relations *since* (i.e. examples (151 and 153')) is best translated by French *puisque* as can be seen in (158) and (159).

(150) Sheila has been acting strangely *since* you arrived.

(157) Sheila se comporte étrangement *depuis* que t'es arrivé.

(151) *Since* you're up, can you get me a beer?

(158) *Puisque* t'es debout, peux-tu me prendre une bière?

(153') *Since* you're asking, the weather is nice.

(159) *Puisque* tu le demandes, le temps est clément.

(159') *Depuis* que tu le demandes, le temps est clément.

Note that these two expressions both derive from the same root expression *puis* – *de+puis* and *puis+que* – whose original meaning is that of temporal posteriority. The explanation for this shift in meaning lies in the specialized usage each term developed over time. Substituting one term for the other is sometimes possible, as in (157'); at other times, the switch yields a very strange utterance (158'):

(157') Sheila se comporte étrangement *puisque* t'es arrivé.

(158') ??*Depuis* (que) t'es debout, peux-tu me prendre une bière?

Remark that (157') has shifted from an aspectual-temporal to a causal reading – in English the same utterance would most likely use *because*. For example (158') however, the shift to a temporal interpretation seems nonsensical. This is due to the second clause being dependent on a circumstantial condition rather than on an aspectual one; that is, it is because the speaker's addressee is already standing up, and therefore, it is less costly for that person to walk over to the cooler and get a beer, as opposed to the speaker who is seated. The duration of time the addressee has actually been standing does not factor into the speaker's request, it is the fact that the addressee is standing which is most salient. The utterance in (153') however retains an aspectual condition, thanks to the progressive “are asking” and so can take either a causal *puisque* (159) or a temporal *depuis que* (159') in its French translation, depending on what was meant.

At any rate, since French has two specialized terms for describing temporal and causal relations, the most relevant of the two will be selected according to the speaker's intention, thereby avoiding any cases of ambiguity that could arise with *since*. We will not give a sketch for a procedure for either of these terms, given their straightforward orientation as either temporal (*depuis*) or causal (*puisque*), and as such, they go beyond the scope of the present research. That said, *depuis* and *puisque* can, in principle, be pragmatically enriched, but in such cases they will not shift from a temporal usage to a causal one, or vice versa.

4.2.13. *Next*

The expression *next* is one which can easily be construed as either a spatial term or a temporal one. Its etymology points to its origin as being originally a spatial term, whose meaning was later expanded into the temporal domain and by analogy can also be used to express something that is neither temporal nor spatial. Arguably, it is difficult to include *next* in a list of “temporal expressions”, given that it, compared to the other expressions in our list, does not appear to be fixed in spatiality, temporality or an ordinal relation. It may be that this expression is at a particular point in its evolution where it can indiscriminately be used to describe several types of relation. When underspecified, that is, without taking the context into account, *next* can easily be used to point to spatial, temporal, or ordinal relations:

(160) The person standing *next* to you.

(161) I'll see you *next* week.

(162) The *next* item on the shopping list.

The first example, (160), is clearly one describing a spatial relation, where *next* could easily be replaced with *besides*. Example (161) signals temporality, quite obviously because of the expression “week” which gives a more or less specific time interval – here “week” could be replaced with “month”, “year”, “decade” etc. Interestingly, utterances like “see you *next* minute/hour/day/night” do not seem to work. We will come back to this further along. Finally, example (162) is an instance where *next*'s function is to indicate an ordinal or serial relation – one could see this as an $n+1$ relation where n is the “point of origin”; of course this point of origin is displaced in each successive use of the very same utterance (until reaching the final item on the list). *Next* can thus be ordinal, if used in a context where a speaker enumerates a list using *first*, *next*, *finally*... but is quintessentially serial in that its use is, in every context, one where the following item is being indicated by it. This is valid even if the listed item is the final one, though of course, one will tend to use a term such as *finally* or *last* the longer the list is.

The meaning of *next*, then, is mainly concerned with immediate adjacency, and the context will specify the type of immediate adjacency – whether it is of the spatial, temporal or serial sort. The two most important notions for the possible interpretations of *next* are the concepts of ‘adjacency’ and ‘succession’ which appear to

be present in just about every reading of the expression, in almost every context. For the spatial interpretations of *next* ‘adjacency’ is understood as physical proximity or ‘nearness’. For temporal interpretations, it is the idea of ‘succession’ as temporal proximity. For serial interpretations, it would appear both ‘adjacency’ and ‘succession’ play a role, the idea being that of a word just under another (adjacency) and at the same time, following a word in order and importance (succession).

(163) One moment I was in free-fall; the *next*, I found myself stuck in a tree.

(163') One moment I was in free-fall; the *next* thing I knew I was in a hospital bed.

(164) First students paired up according to their English proficiency. *Next*, they took turns asking questions about their holidays and hobbies.

(165) The *next* step in the process is...

(166) *Next*. [said by a clerk in just about any situation where people are waiting]

The above examples all convey a sense of succession, retaining a temporal aspect that is either explicit (163 & 163') or else derived as a secondary consequence of one eventuality taking place after another (164 & 165). In (163) *next* is anaphoric reprising ‘moment’ directly; in (163') *next* is also used anaphorically, though indirectly. Then in (164-166), *next* slides away from a straightforward temporal usage, instead focusing on the eventuality that follows. Naturally, there is some temporality in these utterances, more so in (164) than in (165) or (166), but it is the sense of ‘second’ or ‘following’ which carries the most weight. Example (166) especially highlights this – the focus here is exclusively on the person awaiting their turn to undertake some transaction with the clerk – the clerk is simply signaling to the person whose turn it is that their wait is over. Again, any temporal properties are secondary to what the clerk means by their utterance of *next*.

(167) *Next* to impossible.

(168) Miami, my *next* favorite city to New York.

With (167) the shift away from temporality is completed, with *next* meaning ‘almost’; this sense of almost is derived from a spatial reading of proximity. The last example (168) is another excellent instance of *next* being used non-temporally, with the meaning of ‘my *second* favorite city’, that is New York is #1 and Miami #2; this is a hierarchical interpretation.

Next is a versatile expression, whose meaning can be spatial, temporal or serial, depending on the context. Previously, we saw that *then*, *after/après* and *before/avant* could have interpretations of seriality, and this is even more the case with *next* (and *d'abord*, *ensuite* and *enfin* below). One could argue that for *next* seriality is the true default meaning. *Seriality* is best defined as the establishment of a series of things (akin to placing objects within a set) without an inherent hierarchy or causality in the way the objects of the series are presented – though of course any hierarchy or causality inherent in the relations between the series' objects themselves will be manifest. Demonstrating that seriality is the default sense of *next* may be quite difficult; instead, it may prove more useful to imagine the default sense of *next* as essentially pertaining to a notion of immediate adjacency. Its procedure could resemble this:

Next	<i>Relevant example(s)</i>
<i>Default meaning: immediate adjacency of x:</i>	
ς = spatial context, that is the elements under next's scope deal with space	
τ = temporal context, that is the elements under next's scope relate to time in some way	
φ = serial context, that is the elements under next's scope simply relate objects in a series with no causal, temporal or spatial orientation	
<i>If x: ς Then next is spatial</i>	(160), (167)
<i>If x: φ Then next is serial</i>	(162-166), (168)
<i>(If x: τ Then next is temporal)</i>	(161)?

4.2.14. *D'abord, ensuite & enfin*

In this section we will mostly focus on *enfin* which boasts the greatest range of non-temporal usages, while *d'abord* and *ensuite* are much more restricted. The three are assembled here together because the trio functions severally as markers of *seriality* – such as an enumeration or list – where the order most often depends on the speaker's own value judgment for the items (objects, eventualities) referred to. We will thus discuss the three together to start, before moving on to briefly focus on *ensuite* – as the most literal and direct translation for *next* – and finally focusing on *enfin*¹³⁵. The following example is an utterance-type that a speaker may produce to justify a reason for taking a specific action or not:

- (169) Je ne sortirai pas. *D'abord* je suis fatigué, *ensuite* aller au restaurant est la dernière chose qui me ferait plaisir. *Enfin*, il y a un match à la télé ce soir.

This is a clear example of an argumentative usage – here each adverb introduces an argument whose conclusion is given from the start “Je ne sortirai pas”. With the following examples, the argumentative aspect is largely absent:

- (170) *Tout d'abord*, j'aimerais remercier les organisateurs pour leur efficacité et leur sympathie. *Ensuite*, je voudrais dire merci à toutes les personnes qui ont préparé le gala. *Enfin*, je vous remercie tous d'être venus aussi nombreux.

- (170') *Premièrement*, j'aimerais remercier les organisateurs pour leur efficacité et leur sympathie. *Deuxièmement*, je voudrais dire merci à toutes les personnes qui ont préparé le gala. *Finalement*, je vous remercie tous d'être venus aussi nombreux.

- (170'') *Tout d'abord*, je vous remercie tous d'être venus aussi nombreux. *Ensuite*, j'aimerais remercier les organisateurs pour leur efficacité et leur sympathie. *Enfin*, je voudrais dire merci à toutes les personnes qui ont préparé le gala.

As the above utterances illustrate the trio functions more as a set of serial connectives rather than temporal ones, there is no real difference between (170) and (170') as far as any temporal relations are concerned. Indeed the two types of serial markers can be mixed and matched with no change in meaning. When contrasting the utterance in (170) with that in (170''), it becomes obvious that the speaker could choose any order they wish, according to their personal inclinations, the way they may have written this down, or even the way the ideas occur to them as they come.

¹³⁵ For a much more thorough discussion of *d'abord*, *ensuite* and *enfin* see Saussure & Morency (2013). Other research includes Gerecht (1987), Turco & Coltier (1988), Nøjgaard (1992), Reyle (1998) and Rossari (2000).

(171) *D'abord*, mets la clef dans la serrure. *Ensuite*, tourne la clef vers la droite pour débloquer le verrou. *Enfin*, retire la clef et ouvre la porte.

In order for there to be a temporal order with these expressions, the contextual constraints must be of a causal type, as with (171) above. The temporal meaning is derived because the causally-linked steps in the above instructions take time. In this, and similar cases, temporality is implicit and must be inferred. This is yet another indicator that seriality is more fundamental than temporality to these expressions' core meaning. Serial expressions like these are the linguistic equivalent of the more fundamental category of order – ranging from a group of eventualities listed straightforwardly to a hierarchy of a particular order. Thus these expressions indifferently allow for the actualization of one or the other of these possibilities according to the context and the need to saturate the variables for relevance. The working hypothesis is that the primary semantic content for these expressions concerns pure enumeration, since it is the least semantically determined content. Taken individually, each of these terms can be used descriptively to express seriality, but not necessarily temporality. *D'abord*, by itself would seem incomplete, as if someone began enumerating a list but was unable to continue (for whatever reason). With *ensuite* and *enfin* however the picture is different; each can appear in isolation and be perfectly relevant, whether they are being used descriptively or not. Besides the serial usage mentioned above, *ensuite* is most often used to express a temporal (172) or spatial (173) successive relation:

(172) *Ensuite*?

(173) On entre par le grand portail, *ensuite* c'est la cour fleurie.

Though *ensuite* may be used non-descriptively, there are no argumentative or discursive usages to speak of, other than those that accompany its serial usages. With *enfin* however we have an expression which, besides the (default) serial usage described above, also has a few other discursive and argumentative usages:

(174) Il est malade, *enfin* c'est ce qu'il prétend.

(174') Il est malade. C'est ce qu'il prétend.

The *enfin* in (174) is used to signal a reformulation, where the speaker adds that the source of the information given in the first clause [il est malade] needs to be considered against a backdrop of other information [c'est ce qu'il prétend] – in this particular case to stress that the truth of the principle clause does not depend on the

speaker. The function here is to mark an opposition between what is claimed in the first clause, and what the speaker believes about the truth of that clause. Without *enfin*, as in (174'), the utterance would also work but in this case the argumentative pretense is absent (and though correct it come across as somewhat odd). The utterance in (174) could also be said with *maintenant* marking the contrast between the two clauses. Another type of reformulation, resembling self-correction is shown below:

(175) Il est con, *enfin*, il n'est pas très futé.

(175') ?Il est con. Il n'est pas très futé.

With (175) *enfin* is also used to reformulate something said in the first clause, but here the sense betrays hesitation on the speaker's behalf, as if they had said something they wish they had not, or used the wrong words. The function of the *enfin* in (175) is to correct what was said previously, and can thus also implicate a notion of regret on the speaker's behalf as well (regret that they were so outspoken, in this instance). We can see with (175') that the absence of *enfin* removes this notion of self-correction, and is even redundant – the second clause merely being a euphemism for what was said in the first. The above two usages can be considered argumentative, though the second is already shifting towards a discursive one. The three final examples illustrate purely discursive usages, where anyone hearing them would not respond to them in any argumentative way, as they indicate the speaker's attitude towards a state of affairs more than anything else.

(176a) T'es *enfin* prêt à y aller!

(176b) Ah, *enfin*!

(177) Mais *enfin*!

The utterance in (176a) indicates that an event is occurring, for instance after waiting a certain amount of time (often understood as a long and impatient wait). The discursive usage in (176b) is a condensed version of (176a), where the focus is mainly put on the speaker's impatience, or rather the explicit mark of their past impatience (since the wait is now over). Finally (177), slides away from impatience to exasperation to resignation – it is a discursive usage that almost exclusively marks the speaker's attitude, having nothing to do with a contrast (*mais*) or finality (*enfin*).

Enfin <i>Default reading: serial usages</i>	<i>Relevant example(s)</i>
<i>a. indicates that what follows enfin in a serial order is either the most important or least important item in the list, according to the speaker's intentions</i>	(170), (170'')
<i>b. serial order listed according to temporal logic, indicating that what follows enfin is the last eventuality to occur</i>	(171)
<i>c. serial order listed according to spatial logic</i>	(173)
<i>If not relevant, e.g. contextual factors make it clear that enfin governs relations between clauses or propositions rather than events</i>	
<i>non-serial usages:</i>	
<i>a. argumentative usage: lists arguments for a conclusion, expresses an opposition, or a reformulation</i>	(169), (174-175)
<i>b. discursive usage: expresses impatience or annoyance</i>	(176-177)

Discussion: seriality

The notion of *seriality*, which I propose as the most plausible explanation for why *next*, (and *then* in some of its usages) and *d'abord – ensuite – enfin* function as they do, bears a little elaboration. The objective in section 4.2.14 was precisely to suggest that either there is no temporal basis for the semantics of these expressions, or else that this basis is functionally inactive – in both cases *seriality* is the semantic nucleus proposed, and the term “temporal” for these expressions is confusing. The notion that these expressions have a temporal semantics is grounded on the fact that that which comes first is temporally anterior to what follows, either regarding eventualities or else to discourse. However, the adverbs *first/premièrement* and *secondly/deuxièmement* are not considered temporal despite the fact that there is nothing more natural than presenting that which comes first before that which comes second.

In French, we can clearly distinguish between two types of serial adverbs: simple order – including *d'abord*, *ensuite* and *enfin* – and ordinal adverbs of manner – *premièrement*, *deuxièmement* etc. – and it is possible to mix the two types easily. In English on the other hand, it is more difficult to so clearly present two distinct lists of serial adverbs; there is no unequivocal counterpart to *d'abord*. Thus *to begin with* does not seem significantly preferred over *first* in an enumerative series containing *then* or *next* (counterparts to *ensuite*); *to begin with* is preferred to introduce an argumentative proposition. Additionally, if there is no straightforward correspondence for *d'abord*, *ensuite*¹³⁶ and *enfin* in English (as there was for *now/maintenant*, *already/déjà* etc.) it is probably because of this lack of distinction; finally, and more importantly, this distinction between serial adverbs and temporal ones is clearer in English. Recall our example from chapter 1, reproduced here:

- (1) *First* comes the president, *then/next* the vice-president, *then/next* the secretary of state...
- (2) ?*First* comes the president, *afterwards* the vice-president, *afterwards* the secretary of state...

where (1) is perfectly natural for a non-temporal list, while (2) is somewhat odd in this

¹³⁶ *Next* is the best candidate as an equivalent for *ensuite*, both having a meaning that can be derived into seriality (succession) or adjacency. Consequently, *ensuite*'s procedure would be similar to that of *next*.

capacity. Such serial expressions, in English and French, correspond to a fundamental category of order, which covers a range of eventualities going from pure listing to hierarchical ordering. These expressions allow one to realize either one of these possibilities depending on the context and relevance. Of course, a temporal enumeration is but one actualization of this. To conclude, *seriality* is a plausible explanation for many of the usages presented in this thesis, regardless of whether the expressions can be considered serial adverbs/connectives or not (see sections 4.2.3, 4.2.9, 4.2.10 and 4.2.13 above).

4.2.15. *Soon*

Soon is a temporal expression whose different interpretations may all stem from a conception of a small interval or short lapse of time; it denotes a time period close to *now*, just subsequent to or just preceding *now*, or else an interval just following or preceding an event situated in the past or future. *Soon* may also be used non-descriptively, and in these cases it can be used to mean ‘quickly’ or ‘willingly’, but only in very specific contexts. Examples:

(178) John will *soon* be here.

(178') John will be here *sooner* than you think.

(179) *Soon* the thunderstorm will pass and you may go outside again.

(180) He had *soon* seen what he needed to know.

These first three examples illustrate standard temporal usages of *soon*, with (178) and (179) expressing that the eventuality described is to occur in a short, future lapse of time – anticipating the *now* when the eventuality is occurring. With (180) the utterance describes a past situation where the eventuality is qualified as having taken little time to occur – here we are moving away from a straightforward temporal sense, and *soon* could easily be replaced with ‘quickly’. In other words, in (180) *soon* is used as an adverb of manner rather than one of time, though of course this sense is derived from the sense describing a short lapse in time. The following utterances move still further from a ‘pure’ temporal sense.

(181) Not a minute too *soon*!

(182) I would as *soon* walk than run.

In (181), a common English expression, *soon* again carries a meaning closer to ‘quickly’ or ‘fast’ with the overall sense of the utterance being “just in the nick of time”. *Soon* can function as a counterpart to *later* with a sense synonymous to *earlier*. The example in (182) is a type of utterance sometimes heard when the speaker wants to show a slight preference for one thing over another – given the current options. There are not all that many non-temporal usages for this term. In fact, *soon* becomes more versatile when taken in its comparative form, *sooner*, which can be used non-temporally to mean “rather” (it will mean “before” when used temporally) or mark preference:

(183) I'd *sooner* die than betray my family.

(183') May I die *sooner* than betray my family.

One could argue that the temporal sense is still existent here, but the overall meaning of the utterance would not be captured merely by saying that the speaker of (183) said that they will be dead before betraying their family. In this type of example, *soon* or *sooner* are used to indicate the speaker's preference, or desire. Of course, for *soon/sooner* to have this meaning, they must be accompanied with a conditional marker (and comparative expressions *as* or *than*):

(183'') ?I am dying *sooner* than betraying my family.

(182') ?I walk *as soon* as run.

Without a conditional marker, these two examples may not completely lack the notion of preference, but the hearer would be hard-pressed to interpret them this way – at any rate, if these examples could be considered acceptable productions, they are much less relevant without *would* or *may*. The usages of *soon* and *sooner* can be sketched out as follows:

Soon/sooner <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. soon is used to express a short interval between the moment of Speech and a future eventuality's occurrence</i>	(178- 179)
<i>b. sooner is used to express that the (short) interval between the moment of Speech and a future eventuality will occur in less time than expected</i>	(178')
<i>If not relevant, e.g. contextual factors make it clear that soon/sooner governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative usage: both soon and sooner are used to express the speaker's preference for a certain state of affairs (over another)</i>	(182-183)
<i>b. discursive usage: used to express immediacy</i>	(180-181)

4.2.16. A brief word on *bientôt*

The French counterpart to English *soon*, *bientôt*, more or less covers the same temporal relations, pertaining to times when the eventuality described will occur in the near future. However, in comparison to *soon*, *bientôt* appears to have only one non-descriptive usage, and it is always the product of a contrast between the future-time orientation of the term and the past-tense form of the utterance's action verb. We could add that there is of course some variation in its usages, even when temporal, but we will not concern ourselves with that here. But *bientôt* appears to be descriptive when used with the anterior future or present perfect tenses:

(184) J'ai *bientôt* fini de manger. [I will *soon* be finished eating.]

(184') J'aurai *bientôt* fini de manger.

(184'') Je vais *bientôt* finir/avoir fini de manger.

These utterances basically move the reference time, or interval, forward, that is, to a time frame where the act will have been completed. However, this claim is somewhat tenuous, given that what *bientôt* does is modify the scope of the past tense, retaining its future time reference. Hence, *bientôt* is not, in fact, all that non-descriptive; rather, in (184) and similar utterances, it modifies the past tense *passé composé* in such a way that *it* becomes non-descriptive¹³⁷.

¹³⁷ See Saussure (2003: 200-203) for a discussion of the (processing) strength (or force) of temporal adverbials compared to verb tenses; the former being stronger, it is they who impose the relevant constraint in utterances.

Similarities/Differences

After comparing the English and French terms *soon* and *bientôt* it is apparent that there are not any real similarities, beyond their straightforward temporal usages. For the English version of “j’ai *bientôt* fini” one would need to resort to using futurate *will*, as *soon* does not have the same effect on the past tense that *bientôt* has in French. And contrarily, *bientôt* cannot be used to indicate the speaker’s preference towards a particular state of affairs; a native French speaker would simply use a verb indicating this. Nevertheless:

(185) I finish work *soon*.

(186) *Plutôt* mourir que trahir ma famille.

These two examples do however indicate that, in English *soon* can be and is used with the present tense with a similar effect as using *bientôt* + passé composé, as in (181). Likewise, a usage showing preference exists in French, but with *plutôt* instead of *bientôt*; we surmise that *plutôt*, from *plus+tôt*, ‘earlier/sooner’, became a term used to indicate preference specifically akin to English *rather*, leaving *bientôt* with the temporal usages. Despite the difference in evolution of these lexical items, it is interesting that in both languages the notion of ‘earlier’ – no doubt because of the element of precedence contained in its semantics – led to expressions indicating preference. In English, this occurred via a non-descriptive usage of a temporal expression; and in French this is possible via an expression especially tailored to this sense, itself a once-temporal expression that has now evolved and become fixed in its current meaning.

4.2.17. *Again*

Thank you, come again!

It is straightforward to see that *again*, a bit like *yet*, is a temporal item that can easily be taken for a non-temporal expression. Many examples of *again* – even the temporal usages – focus on the notion of repetition, and the non-descriptive usages where *again* means “in addition” or “besides” directly stem from this iterative sense. Historically¹³⁸ the word stems from a spatial term whose meaning is akin to “against” or “opposite”, but its standard temporal meaning comes from *eftsoons* meaning “soon afterward, a second time, repeatedly”. Interestingly, none of *again*’s non-descriptive or descriptive usages come from the spatial terms it is composed of. The “come *again*” taken from the above quote can simply mean “return to this place once more” or – without the “thank you” and in the interrogative – it can signify that the speaker has not understood something previously stated: “What? (Could you repeat that?)”.

As we will soon see *again* is a very versatile expression with seven different usages, most of which are non-temporal; *again* is another good candidate for being an expression whose temporal sense may not, in fact, be the default one.

(187) It was nice seeing you *again*.

(188) Not *again*!

(189) *Again* and *again*¹³⁹.

These utterances exemplify (more or less) temporal interpretations of *again* – in (187) and (188) the sense of ‘another time’ is the most prevalent one, with an added sense of exasperation or dismay in the latter (implicated contextually). Understanding the temporal quality as ‘another time’ or ‘repetition’ carries with it the presupposition that the eventuality referred to occurred at least once before (otherwise *again* would not be used). The potential dismay of (188) is derived from the repetition of an eventuality – the more the eventuality occurred in the past, the more likely it is that the utterance convey dismay (usually aided by the speaker’s intonation). The utterance in (189), by repeating an expression that means ‘repetition’ is used to mean ‘often’, with no redundancy whatsoever.

138 Etymology of *again* (cf. etymonline.com): *again* (adv.): late O.E. *agan*, from earlier *ongean* “toward, opposite, against, in exchange for,” from *on* + *-gegn* “against, toward,” compounded for a sense of “lined up facing, opposite,” and “in the opposite direction, returning.”

139 *Again* can sometimes be translated by *encore* in French, such as in this example (see also section 4.2.8 above).

(190) What's his name *again*?

(190') Come *again*?

In (190) a common expression, the notion of 'repetition' is present as well, though rather than the idea of 'another time' it seems more appropriate to interpret this utterance as a request for information 'once more', as if the speaker knew the information previously but for some reason cannot recall it at present¹⁴⁰. The (also common) expression in (190') can also be considered a request for information, but this time the utterance shifts away from a purely temporal reading to a discursive one – “come *again*” is often used to simply mean “what?!”, where the request for information is trumped by the attitudinal expression of “surprise” or “annoyance”.

The next set of examples move away from straightforward temporality; indeed, here *again* does not describe temporal relations at all:

(191) *Again* it could just be me.

(192) She might like you, (and) *again* she might not.

(193) It costs nearly half as much *again*.

In the first two utterances *again* moves away from describing temporal relations yet maintains the idea of 'repetition' albeit in a different form. With (191) this is more obvious, where the sense of *again* is close to 'besides' or 'in addition' – it is not too difficult to see how one can get at these meanings from the notion of repetition – but with the added sense that the speaker is taking full responsibility for the utterance. But in (192) *again* is used to mean 'on the other hand', where there is not a real sense of repetition – however the two clauses that make up the utterance are themselves a repetition [she might like you] and [she might not (like you)]. So the meaning seems to be derived from a contrast set up from repeating a clause almost identically. This sense of contrast most likely stems from the historical sense of 'opposite' present in *again* in the past. Finally in example (193) *again* is not temporal, and any sense of repetition is contained in the notion of addition; here the meaning is quite complex, as *again* is used to mean 'half the same price, added to the original price' or said another way '50% more'. Thus, the sense of repetition can be understood as a sort of mathematical operation: there is a base price for object x, one must repeat half its value, and add that to the base price to obtain the actual price of x.

140 This correlates to the 'repeated request' discursive usage of French *déjà* (see sct. 4.2.6).

The core meaning of *again*: another/additional x, (where x is often time) when *again* is used temporally, it means that the eventuality currently being described or mentioned existed/occurred at least once before (close to *already* in a way) “Nice to see you *again*”. When *again* is not used temporally, it can mean that the object(s) currently being described or mentioned is/are the template for further computation (?), it often refers to quantities of things as in “Take 200g of sugar for the batter, half *again* that amount for the icing”, or it can mean the event/thing described is one of two (or more) options as in P *again* Q “She might like you, and *again* she might not”. The outline procedure for *again* may look something like this:

Again <i>Default reading: temporal usages</i>	<i>Relevant example(s)</i>
<i>a. temporal usage: again is used to signal that an eventuality occurs more than once, also conveying the notion of repetition, or when again is repeated it means ‘repeatedly’</i>	(187-189)
<i>b. temporal-discursive usage where again is principally used to signal a request for information previously known (or claimed to be previously known)</i>	(190)
<i>If not relevant, e.g. contextual factors make it clear that again governs relations between clauses or propositions rather than events</i>	
<i>non-temporal usages:</i>	
<i>a. argumentative/discursive usage: again is used stress the speaker’s commitment to the proposition under its scope</i>	(191)
<i>b. argumentative usage: again is used to indicate that a contrast exists between two clauses, with the sense of ‘on the other hand’</i>	(192)
<i>c. discursive/expressive usage: again is used to convey an emotional outburst of the speaker</i>	(190)
<i>d. discursive usage: again is used mathematically, having the sense of addition in fixed utterances with quantities</i>	(193)

4.2.18. A brief word on compound expressions

Fixed compound expressions – like *then again* or *so then* – function according to the same principles as the individual expressions we have looked at so far; the difference is simply that each individual item of such fixed expressions influences or modifies the sense of the other expression(s) to obtain a new (compositional) meaning. For instance, a compound expression like *then again* can be used to mean several things:

(194) I might go for a swim, *then again*, it might be too soon after lunch.

(195) Go see if John gets here at noon, *then, again*, at two p.m. and *yet again* at four.

(196) Yeah I saw him, *yet, again*, we never spoke.

Where *then again* can easily mean ‘on second thought’, ‘on the other hand’ or ‘upon (further) consideration’ via the sense of each of its components. The input from *then* is the sense of “that time/case” added to the input from *again*, meaning “once/that many more”, which yields the final fixed sense of the expression (note that *again* can have this sense on its own in certain contexts). Notice that *again* following *then* is not necessarily the compound expression, as (195) shows; here, each expression is used in its temporal sense. Notice also how *yet again* as a fixed compound expression is a temporal usage – with no known argumentative or discursive usages, except when considered two separate expressions, as in (196).

(197) Aren’t they back *by now*?

*Aren’t they back *by yet*?

Aren’t they back *yet*?

The main effect of adding *by* to *now* is to add an element of expectation not so easily accessible to *now* on its own. As the utterances in (197) illustrate, adding *by* to *yet* yields nothing useful, and is even odd, since *yet* already has this component of meaning. Another common adjunct to some of these expressions is *and*, a procedural expression in its own right, though how it modifies them is not so easily detectable. Let us look over the following examples:

(198) a. *And now*, for something completely different.

b. ?*And yet*, for something completely different.

c. ?*And then*, for something completely different.

The first example, the standard segue between sketches in Monty Python’s Flying Circus, clearly indicates a shift in attention or focus from one subject to another, the

way *now* would indicate the same thing without the “*and*” component – and at the same time it is also clearly temporal. The only difference is that *and* maintains some continuity with what precedes; with *now* alone. The next two utterances are bizarre, and their meaning is not easily apparent, it is as if their individual temporal orientations – subsequence for *then*, prospectiveness for *yet* – clash with that of *and*. But if we add something to the utterance with *yet*, for instance:

(198') *And yet*, for something completely different, call us toll free to order...

The oddness disappears, and one can easily grasp the notion of continuity with what preceded – via *and* – and the contrast to be considered with that – via *yet*. For the utterance containing *and then* one must add a verb to the utterance for it to be an acceptable one:

(198'') *And then* came something completely different.

If we look at these same three compound expressions in a different context, as in:

(199) *And yet*, I'm not sure that X.

(199') *And now*, I'm not sure that X.

(199'') ?*And then*, I'm not sure that X.

We notice that once again the utterance with *and then* also produces an oddity, unless we add *again* i.e. ‘then again’, in which case example (199'') works just fine. What can be seen from the utterances in (198) and (198') is that *and* does not really affect the sense of the expression to which it is added, unlike with *again* or *by* above. After going over these combinations in different contexts, it becomes clear that *and then* seems hard-pressed to mean anything other than temporal subsequence situated in the past (i.e. before the Speech-point). *And now* is a little more flexible: in each case a distinct cut-off point is made salient – the Speech-point, whether past or present. Finally, *and yet*, of the three combinations, is the one that most clearly expresses non-temporal relations, though what was said previously and what is to follow are both part of its meaning: it expresses a clearly argumentative slant to the clauses it introduces. It only appears odd in the second example of the first set, until we add a little more information. In the other examples we can easily change the tense from a past to present or future orientation, the argumentative connotation/meaning remains. The sense of *now*, *yet* or *then* is not modified from a temporal one to a non-temporal one, or vice versa. This is no doubt due to the meaning of *and* which does not carry

overtones like *by* or *again*. The next adjunct term we will quickly address is *just*, again applied to *now*, *yet* and *then*.

- (200) a. I saw him *just now* [recent past]
b. ??I saw him *just yet*
c. I saw him *just then* [recent past]
- (201) a. I won't shake your hand *just yet* [immediate/foreseeable future]
b. I won't shake your hand *just now* [immediate future]
c. ?I won't shake your hand *just then*

As we can see from the above examples, in the past tense set of utterances (200) *just yet* yields an impossible utterance, but poses no problems for a past temporal usage with *now* and *then*; while with the future tense set (201) it is *just then* which is strange (but not impossible). One of the more salient meanings of *just*, that of immediacy, adds this sense to *now* and *then* for the past tense and to *now* and *yet* for the future tense. The former are interpreted as referring to the immediate past (i.e. *recently*), while the latter are understood as referring to an immediate future (i.e. *soon*). As we noticed in the respective sections on *now*, *yet* and *then* above (4.2.1 and 4.2.3), there is a sense of futurity in temporal *yet* and a sense of the past in temporal *then*. These meanings are only adapted as to their immediacy with *just*; but with *now*, whose temporal reference is the present when used descriptively, *just* adds a sense of immediacy like with the other two terms, but also one of past or future. Of course, this is due to the influence of the tense of the utterance where it appears – nevertheless, *just now* does not, cannot, refer to the present, but to a time close to it – before or after. Incidentally, *just* is also used with *after* and *before* with the same sense of immediacy added to them.

The same basic principles quite naturally also apply to French compound expressions. Here we will only look at three; but of course there are several others. *Maintenant que* (*now that*), *alors que*¹⁴¹ (*so that*) and others which take on the added *que* are (almost) always transformed into fixed non-temporal – often quite argumentative – expressions. The following utterances do not have the *que* adjunct, but *de* and *tout* instead:

141 There are other possible English counterparts for this term, such as *whereas* or *while*, that instead convey a contrastive meaning; and there is at least one temporal sense, where *alors que* means something akin to *while* or *when* (used as expressions of simultaneity).

(202) *D'après* lui, on aurait mieux fait de tourner à gauche.

(203) Elle s'appelle Juliette, *d'après* sa grand-mère.

When *de* is added to *après*, a non-temporal usage results, an argumentative one, as in (202), with the sense of “according to X”, or a discursive one, like (203) where *d'après* corresponds to the discursive usage *after* may have indicating a relation of similarity or identity (‘named *after* her grandmother’). The term *de* can also be added to *avant* – *d'avant* – but here it merely has the temporal usage meaning ‘from before’ and is less versatile than *d'après*. With *tout* both *avant* and *après* end up with a non-temporal usage:

(204) *Avant tout*, j'aimerais remercier le maire pour son accueil...

(204') *Après tout*, le maire nous a bien accueilli.

In (204) *avant tout* means ‘to begin with’ or ‘first of all’ and is a serial usage on a par with *d'abord*, with the notable difference that *avant tout* implicates that the clause or utterance which follows, being under its scope, is the most important in the series/enumeration. The utterance in (204'), can be seen, and is sometimes used, as a synonym of *enfin*, and has the sense of ‘all things considered’ or ‘after all’; as such it is an argumentative usage commonly used to conclude a series of arguments. In both cases *tout* makes the temporal usages both *avant* and *après* much less accessible.

This section was useful in demonstrating the added versatility of compound expressions – already quite versatile expressions can take on ever more meanings/usages, and complicate the procedural picture somewhat. The procedures for these compound expressions are naturally influenced by the adjunct expression, but in principle will have less versatility in their usages since the adjunct functions as a constraint – i.e. its procedure constrains the other expression's procedure. We will leave these compound expressions at this stage, and turn to our final section. Nonetheless, compound expressions undoubtedly merit a much more thorough investigation into how they function, both separately and conjointly, and a procedural approach would seem more than adequate way of doing so.

4.3. Non-descriptive usage of a modal operator, and a verb tense

This final section is reflection on the same type of process that has been described so far, only this time pertaining to tenses used non-descriptively rather than temporal adverbs or connectives. As stated earlier, much work has been done in Romance languages, and in French in particular – for instance studies of the *imparfait*, *passé composé*, the *plus-que-parfait* (Sthioul 1998b, 2000a, 2000b, Saussure & Sthioul 1999, 2005 and Saussure 1998b, 2003) which we will not go into here. More recent work has been done on non-descriptive phenomena at the tense, aspect and modal interface, notably the *futur épistémique* or *putatif* (Morency & Saussure 2006; Morency 2010; Saussure & Morency 2011); we will come back to the French *futur épistémique* in the next sub-section. First, we will briefly focus on the case of the *assumptive* usages of will, or *epistemic will*, where ‘will’ is used to describe something other than a future state of affairs.

4.3.1. Epistemic or assumptive will

Accepting that *will* can be epistemic is much less an object of debate than the use of the simple future in French for the same purpose; indeed, traditional grammars (Thomson & Martinet, 1996, Declerck, 1991, 2006) and linguists (for instance Palmer, 2001) alike admit the relatively common use of *will* in an assumptive¹⁴² sense – where the speaker presents the proposition as a likely assumption, for present, past actions and of course future actions. For instance:

- (205) [person cannot be reached on the phone] She'll be in the shower.
- (206) [keys and Bob cannot be found] He'll have forgotten to leave the keys.
- (207) They'll have enough time to catch their train.

Thus, we will focus only upon the way this usage functions. Naturally, we will also briefly look into the possibility of using *be going to* epistemically. A few opening remarks: first of all, what follows here is but the beginning of an inquiry into the function of epistemic *will*, thus the results presented here should not be considered totally conclusive. Second, the observations made on assumptive *will* hold regardless of whether the term *will* is spelled out completely or is used in its contracted form *I/you/we/they* + 'll – the choice of one over the other is mostly a prosodic consideration.

142 “Assumptive will” is Palmer’s (2001) name for the epistemic usage of *will*.

4.3.2. *Will*, modal and temporal auxiliary

It is a well-known fact that the use of the auxiliary *will* is one of the ways of expressing futurity in English, and is the closest thing to a “proper” future tense in English¹⁴³. Although it is not the only way of expressing future time in English utterances, it is the one with the least constraints. But this should not lead us to consider English *will* as a purely futurate expression, any more than the fact that its epistemic, volitional or habitual uses should lead us to consider it a purely modal expression. For our purposes here we need not get into the debate about whether the future tense exists or is, in fact, “merely” a type of modality; nor even whether *will* is temporal first and modal second, or the opposite. Rather, I take it as uncontroversial that this is indeed the case – akin to Declerck's (2006) view that the future tense exists, even though “there is always an element of epistemic modality in the meaning of the future tense: no use of *will* is purely temporal” (2006:103)¹⁴⁴. Thus, I consider *will* as an auxiliary expressing both temporality and modality, similarly to Declerck; furthermore, I propose that it is the procedural nature of this auxiliary verb that enables the hearer to interpret one usage or the other.

4.3.3. Prediction and predictability

A common view among researchers and grammarians (Coates, 1983; Declerck, 1991, 2006; Leech & Svartvik 2002; Nuyts, 2001) – no matter what their position on *will*'s status as being modal, temporal or both – is that there exist at least two epistemic modal uses of *will*, that of prediction and that of predictability. In Declerck's words, “Prediction concerns an assumption about the actualization of a situation in the future” whereas “Predictability is a more strongly epistemic notion that concerns the speaker's assumption of the strong plausibility of a conclusion. This conclusion usually concerns the past or present, seldom the future ” (104). In both cases, *will* is used in an assumptive sense, and the focus on a past, present or future situation is what separates the former from the latter. In Morency (2010), I argued that it is this focus on a past or present state of affairs which makes the epistemic usage of the French *futur simple* possible, and here, I note that the phenomenon is decidedly

143 See Declerck 2006 for a thorough discussion of this notion.

144 Such a view fits a conceptual/procedural continuum better than the strict dichotomy view; see Nicolle (1998, 2007) for a discussion of *will* and grammaticalization.

similar for the predictability usage¹⁴⁵. Accordingly, assumptive *will* is when the utterance expresses the speaker's attitude and degree of belief (x is probable, likely) toward a proposition describing a contemporary (*will* + infinitive) or past state of affairs (*will* + have + past participle). As stated earlier, it is the verifiability and explanatory value of such an utterance which makes it relevant for the hearer's interpretation of *will* in its assumptive sense. Thus,

(208) She'll (already) be at the party.

is, like examples (205-207) above, an assumptive use of *will*, where the speaker expresses their confidence in the probability that the proposition [she, be at the party] are the case and verifiable. In addition, the explanatory value of (208) could be "let's go to location x, rather than waiting for her here". What is needed to distinguish between "pure" future and prediction is quite straightforward; consider the following examples:

(209) According to the radio, the highway *will* be closed tomorrow.

(210) The highway *will* be backed up tomorrow, because of the holiday.

In (209) the radio reports a scheduled state of affairs for the following day, whereas (210) is a speaker's prediction based on encyclopedic knowledge (of the world of traffic). To distinguish between prediction and assumptive *will*, it needs only be manifest that the state of affairs denoted is *not* situated in the future. In example (210'), the absence of temporal *tomorrow* does just that:

(210') The highway *will* be backed up because of the holiday.

But the same operation in (209) yields an odd utterance:

(209') ?According to the radio, the highway *will* be closed (now).

where, if one wishes to refer to the present they would say "according to the radio, the highway is closed". Given the sense of *will* with respect to futurity and epistemicity it is unsurprising to find that these usages are very close; once again we claim that the idea of a continuum is the most satisfying explanation for these different interpretations. To further stress the point that *will* need not be associated with the future tense *per se*, but often for prediction, let us turn to a few utterances where a progressive form is used, such as the following:

145 I also proposed the Future Epistemic Future for French, but will not dwell on either the English or French prediction usage. Instead, we will focus on predictability, and this is what is meant when speaking of *assumptive will*.

(211) You know Bob, he'll be standing around, doing nothing (as usual)

Here, the progressive [be standing] highlights that this state of affairs is a habitual one (reinforced by the 'as usual' in the sentence-final position). If it is well known that Bob is in the habit of standing around, it is not too implausible to make a prediction of this eventuality. Even absent a phrase like 'as usual', the progressive tense carries this idea of habit, stemming from its durative aspect. For instance, compare the following two utterances, one with a progressive tense, one without:

(212) a. The sun *will* rise in the east

b. Paul *will* sing.

c. I *will* / *I'll* sing.

(213) a. The sun *will* be rising in the east

b. Paul *will* be singing.

c. *I'll be singing*.

The utterance in (212a) is the closest one can get to an "absolute" future time reference, with the least amount of prediction – this is possible since sunrises are always true, and are cyclical, recurring events. In (212b) the speaker predicts that Paul will sing sometime in the future, or else they are "volunteering" Paul for it (i.e. in response to the question "who would like to sing?"). In (213b) it is possible that the speaker is either making a prediction (if Paul is not, in fact, singing at present) or expressing their belief that such is the case (that Paul is already singing). Note however that the *present progressive* tense makes the prediction less uncertain, i.e., it is expected that Paul will sing, because it is a planned event. In contrast, with (213a), it is absurd to assume that the sunrise was a planned event, so in this case, the utterance conveys that the speaker is expressing their belief that there is a sunrise currently occurring, but which they cannot directly witness (e.g. they can only see the shadows on the cave wall). Finally, with (212c) and (213c), we have a volitional usage for *will*, where the speaker's communicative intention is to convey that they are either volunteering to/promising that they will sing, or else, that they have a (sufficiently strong) desire to do so in (212c). With (213c) the expression of desire or the act of volunteering/promising is implicit, since, again, with the progressive form, hearers interpret that the act of singing is a planned event, and so is much closer to being certain. Let us return to *assumptive will* with some more examples.

(214) He *will* realize his error on his own. [non durative sense]

(215) He *will* be realizing his error on his own. [durative sense]

In (214), again, the speaker is most likely predicting, due to the non-durative aspect of the utterance. But (215) is clearly a prediction about the present, due to the progressive tense, and due to the impossibility for the speaker to actually know what the subject of their utterance is thinking, and hence, whether they are or are not in fact conscious of their error. Said differently, we are dealing with a subjective element as well as the “presentness” of the state of affairs, modified by the epistemic stance. But the present continuous tense is not alone in facilitating an epistemic reading, other factors can also play a role:

(216) A: My sink is stopped up.

B: Call Bob, he'll know a plumber.

(217) A: I can't reach John on his cell phone.

B: *His train *will* go through a tunnel. [in the epistemic reading]

(218) ?His train *will* be in a tunnel.

(219) ?He'll be in the shower.

(219') He'll be in the shower again.

(217) seems more acceptable if we replace “a” with “some”, which of course helps to mark the indeterminate aspect of the state of affairs, as seen in (220) below. This does not seem necessary for (216), although it may reinforce the effect (see 221). Adding *again* in (219') also makes for a more easily accessible epistemic interpretation.

(220) His train *will* be in some tunnel.

(221) Call Bob, he'll know some plumber (or other).

This effect appears to focus on the fact that the speaker is guessing rather than deducing the eventuality described, unlike the same utterances containing *must* in place of *will*:

(219'') He *must* be in the shower.

(220') His train *must* be in a tunnel.

We will not go into a comparison of *must* and *will* here, but both belong to a set of modal operators used for presenting utterances as guesses, deductions and predictions¹⁴⁶.

¹⁴⁶ See Klinge (1993) for a thorough comparative analysis.

4.3.4. Epistemic *be going to*

We will now briefly sketch out our appreciation of *be going to* as permitting or inhibiting an epistemic usage. Some researchers claim that an epistemic usage of *be going to* is simply not possible (Celle, 2004), while others admit this usage, provided the utterance “is based on present evidence or knowledge” (Declerck, 2006: 350). So far we are undecided on this, as we further exploration of these types of utterance are required; but, in principle, there is no reason that an assumptive usage could not be possible with *be going to*. Consider the following:

(222) [the doorbell rang/is ringing] ?That's *going to* be the mailman.

(223) [person cannot be reached on the phone] ?She's *going to* be in the shower.

Both these examples seem bizarre, particularly (222) and the explanation may be provided by Declerck whose examples ((224-226) below) appear to work quite well:

(224) There's *going to* be a row in a minute.

(225) We're *going to* bump into that van.

(226) You're not *going to* like this review of your book.

The reason seems to be that, as Declerck points out, these utterances occur in situations where “there are signs in the present of what is going to happen” (350), in other words, the oddness of examples (222) and (223), is due to the fact that the speaker has no perceivable evidence or knowledge on which to base their judgment.

Now this is interesting, because it does not seem necessary for assumptive *will* to function in similar situations. So far, there is no conclusive explanation for this phenomenon, but a plausible supposition is that this is so because *be going to* necessarily must have evidence of a more concrete source than *will*. Declerck claims that for (226) and other utterances with stative verbs that refer to non-intentional situations, “*be going to* is automatically interpreted as expressing this sense of predictability.” (351). A further point of interest is the fact that in occurrences where assumptive *be going to* seems to not function so well, like in example (222) above, phonologically reduced *gonna*¹⁴⁷ works just fine:

(227) [the doorbell rang/is ringing] That's *gonna* be the mailman.

The claim made here is that this is due to a current shift in oral American English

147 See Nicolle's research (1997, 1998a, 1998b, 2007, 2008) on *be going to* for more on this expression's usages and constraints.

towards replacing *will* with *gonna*. In conversation, *gonna* is used more frequently than in British English, while with *will* it is the opposite, though corpus studies do not specify the type of usage (future or assumptive usage). There are as yet (and as far as we know) no clearly-given reasons for this possibility; we hypothesize that it may be because the expression *gonna* simply takes up the epistemic and futurate roles of *will*, but there is another explanation that seems equally plausible based on the intuition that *gonna* is taking its cue from *gotta*. *Gotta* itself, the slang contraction of *has/have got to*, can easily replace deductive *must*, as we can see below:

(228) [The lights are on] She *must* be home.

(229) [The lights are on] She's *gotta* be home.

(230) [the doorbell rang/is ringing] That's *gotta* be the mailman.

More research on *gonna*, *gotta* and other contracted slang forms (i.e. *hafta*, *oughta*) needs to be done to have a better grasp on their functions and limitations. The above examples represent a good starting point. We will conclude this section with the approximate procedure for *will* given below:

Will	
<i>Default meaning: qualifies a state of affairs that is not true at S, but is predicted to be so at T_{+n}</i>	Relevant example(s)
<i>ε = modal context, that is the elements under will's scope deal with mood</i>	
<i>If x: ε Then will is modal – low to high degrees of certainty, with the higher end of the scale occupied by volitional uses</i>	(208-211), (212b), (213-216), (220-221)
<i>Modal usage: when will is used to express a subjective prediction based on the speaker's knowledge will is used epistemically (this is the 'assumptive' usage)</i>	
<i>Volitional usage: will is used to express a desire or promise</i>	(212c), (213c)
<i>τ = temporal context, that is the elements under will's scope relate to time in some way</i>	
<i>If x: τ Then will is temporal – very high degree of certainty</i>	(212a)
<i>Temporal usage: will is used to express that a non-actual eventuality obtains in the future</i>	

4.3.5. French epistemic future tense

In French using the future tenses (both the simple future and anterior future) to mark an epistemic modality about the proposition expressed has been the object of several studies¹⁴⁸; such a usage is known under a variety of names – “conjectural future”, “hypothetical future”, “putative future” or “epistemic future”. All of these focus on a common fact: the use of the future tenses to express the speaker’s judgment, thus a subjective one, about an eventuality whose certainty is not proven at the time of speech. What Declerck stated about the English future tense is equally applicable to French: “there is always an element of epistemic modality in the meaning of the future tense” (Declerck, 2006:103).

(231) [the doorbell rang/is ringing] *Ce sera* le facteur.

It is clear that here (just as with similar examples in English) that the proposition is not about an eventuality happening (soon to be happening) in the future, but instead it is about one that has just happened. In this context, it is mutually manifest to both speaker and hearer that the phenomenon referred to concerns the present/immediate past. Like with English *assumptive will*, the simple future tense in French can be (and is in this case) used to express a modal stance – the speaker considers the eventuality [be the mailman] as (very) likely.

In principle, if and when a speaker makes use of an epistemic marker in their utterance, there is some additional information that needs to be interpreted; this additional information – the speaker’s attitude towards the proposition expressed – has a slightly higher cost, especially if it is implicitly marked, as in (231) above. When made explicit, such as in example (232) below, the hearer also recuperates the idea that the speaker thinks it likely that the mailman is behind the door, albeit with more distance:

(232) [the doorbell rang/is ringing] *C’est probablement* le facteur.

And in (233), the speaker is claiming outright that the mailman is indeed behind the door:

(233) [the doorbell rang/is ringing] *C’est* le facteur.

The usual hypothesis is that the speaker, when using a modalized utterance, either

148 For instance: Damourette & Pichon (1911-36), Nef (1984), Martin (1987), Rocci (2000), Dendale (2001), Celle (2004), Borillo (2005) and Morency (2010).

explicitly (232) or implicitly (231), they do not, or cannot, fully endorse the proposition [mailman, be here] as true. In Saussure & Morency (2006) we proposed that the speaker in fact projects themselves into the future, a time when their proposition could be verified¹⁴⁹. Thus the *futur épistémique* implies understanding the utterance as expressing the projection of the speaker's future self – thus prompting a recalculation of S as S' representing the potentially verifiable moment when the proposition is confirmed or dismissed¹⁵⁰. With the future anterior epistemic usage the idea is the same; here, the past participle constitutes the resultant state, which serves as the supposed conclusion to an indirect (inferred) perception of the eventuality's cause. We will skip the anterior future usage here and instead focus on prediction and predictability.

The idea that prediction is an integral part of future tenses almost goes without saying, but how does this interface with epistemic usages? In other words, how does one differentiate between a future tense prediction and an epistemic one? Just like with *will*, the notions of *prediction* and *predictability* enter the equation. Recall what was said in the previous subsection: "Prediction concerns an assumption about the actualization of a situation in the future" whereas "Predictability is a more strongly epistemic notion that concerns the speaker's assumption of the strong plausibility of a conclusion. This conclusion usually concerns the past or present, seldom the future" (Declerck, 2006: 104). Again, it is the focus on a future (prediction) or a past or present eventuality (predictability) which constitutes the defining distinction. Take for instance the following examples, at first sight, all temporal usages:

- (234) Le soleil *se lèvera* à l'est.
- (235) Ce verre *se cassera* au contact du sol.
- (236) Le soleil *asséchera* les rivières et les lacs.
- (237) Le toast *tombera* du côté beurré.
- (238) L'autoroute *sera* fermée.
- (239) Je *partirai* en voyage cet été.

Example (234) is trivial, and thus expresses an eventuality deemed certain. For (235), common knowledge of the laws of physics also make the utterance perfectly predictable, so long as the glass is made of glass and not some other material capable

149 See Morency & Saussure (2006: 58-62) for a more detailed discussion of *verifiability* with these usages.

150 See also Rocci (2000: 269-270).

of resisting shattering upon impact, or that the carpet is not particularly thick etc. However, the eventuality described in (235) depends more on contextual cues and so the prediction's reliability is more variable. Example (236) seems to present a riskier prediction – when uttered by a climatologist warning of global warming, one understands that the statement is plausible, without being completely certain (perhaps the calculations are erroneous, or that the future described can be avoided somehow). The utterance in (237) describes an equally probable eventuality – except for the slim chance that the buttered side of the toast is slightly heavier and thus more likely to fall face down – and the prediction is therefore riskier, and is closer to expressing an opinion, and so, a modality. At last, example (238) is a prediction similar to that in (237), except that (238) is potentially more subjective – particularly if manifest that it is the speaker's speculation, thus marking the utterance as (more) dependent on the speaker's appraisal. Given this, we propose a scale of predictions going from the most objective to the most subjective – at each stage the body of background knowledge is lesser. For the hearer of these utterances, in (234) the realization of the prediction does not depend on the speaker at all; while in (238), it does, since the speaker is the principal source of the information. Likewise, in (239), the utterance is highly subjective, and can also be considered a prediction, but given the speaker “je”, we easily interpret such utterances as more than just predictions, they are expressions of a desire. Volitional usages have the strongest degree of subjectivity, and not only is the speaker the principal (perhaps only) source of the information, the speaker is making manifest that this is a desired action to be undertaken.

Similarities/Differences

Throughout section 4.12 we have seen how *will* and the French *simple future* tense can both be used to express an epistemic stance through *predictability*. The way the future can be expressed in each language is somewhat different, even given that both languages can use other means to do this (i.e. *present continuous* in English, or present tense with future time adverbs in both). Nevertheless, it is clear that in both cases the very nature of the future, and how it is expressed, is already astraddle temporality and modality, and it is this fact, we surmise, that allows for its usage with the French future tenses. In English, the fact that *will* is a modal marker in its own right probably explains why it is used for expressing epistemic stances. Both *will* – *assumptive will* – and the French *simple future* – the *futur épistémique* – rely on prediction and especially predictability to make capable the type of usages we have just seen.

With the most objective predictions, both languages function very similarly, if not identically:

(234) Le soleil *se lèvera* à l'est.

(234') The sun *will* rise in the east.

Here, no meaning other than one of an objective, almost certain, prediction with these two examples. Likewise with the following pair:

(236) Le soleil *asséchera* les rivières et les lacs.

(236') The sun *will* dry up the rivers and lakes.

In the context of a discussion or debate about global warming, both utterances function the same, though the prediction is less close to certain than in (231-231'). In fact, for most of our examples here, there is no real difficulty for the English *assumptive will* utterances to be directly translated into the French *futur épistémique*. Only a few utterances meet any resistance, with *be going to* in English, which works fine in the French *futur périphrastique*:

(222) [the doorbell rang/is ringing] ?That's *going to* be the mailman.

(222') [the doorbell rang/is ringing] Ça va être le facteur.

We saw that with other contexts however *be going to* worked – namely where evidence for what was about to transpire was visible, as in (226), which also works

with the French periphrastic *aller* + verb:

(226) You're not *going to* like this review of your book.

(226') Tu ne *vas pas aimer* la critique de ton livre.

The fact that it is acceptable in French is significant, since in past research (Morency & Saussure 2006: 64) we thought the *futur périphrastique épistémique* to be mostly restricted to *être* and *avoir*. Then, we noted that there was a need of a progressive aspect (which English *be going to* has by definition) and that one had to use *être en train de* + verb for this to work (ibid). In fact, it seems that with *aimer* ('like') and a few other verbs, there is no need for the *être en train de* phrase. As with English *be going to*, if there is visible evidence in the present for the immediate future eventuality, the epistemic usage works with the *futur périphrastique*. For instance, (237') and (237''):

(237') Le toast *va tomber* du côté beurré.

(237'') The toast *is going/gonna fall* on the buttered side.

Both work so long as the speaker has direct evidence for the eventuality, and is not merely making a prediction based on what they believe happens to buttered toast. We will stop here, but it is clear that there may be much more to epistemic usages using progressive markers. To sum up, the epistemic usages of *assumptive will* and *be going to* and French *futur simple* and *futur périphrastique* correspond quite nicely for the most part. Of course here we are dealing with tense and modal markers rather than adverbs and connectives, but still it is interesting to note. Further research on this phenomenon is required to get a more complete picture of these usages.

5. Conclusion

5.1. Discussion

That temporal expressions – adverbs, connectives, tenses or auxiliary verbs – can be used to express something other than temporal relations or to refer to things having little to nothing to do with time is a fact. This dissertation was not needed to prove that, nor was this its intent. Why temporal expressions can be used in this way however was the initial question, and throughout this dissertation several expressions have been looked at a little more closely and many such “non-standard” usages have been described. The basic hypothesis was that temporal expressions (like other pragmatic markers) are procedural, and as such, serve the specific purpose of guiding interlocutors in utterance production and interpretation. This, it was claimed, is achieved through inferences prompted by the expressions themselves, and possible because of the mind’s general cognitive ability to perform inferences.

In the introduction I asked three questions, which we can now answer here. Recall:

1. *why and how is it that temporal expressions do not necessarily yield a temporal interpretation?*
2. *how do hearers arrive at an understanding of this sort, and be reasonably confident that this interpretation is what was actually intended by the speaker?*
3. *what specific conditions must exist, or, in what context(s) do these temporal expressions function in this way?*

The answer to the first question is twofold: first of all temporal expressions may yield interpretations other than temporal ones because, whatever concepts of time and temporal relations are contained within them, they are procedural expressions, and are thus, I claim, actually quite versatile despite their encoding rules of use; these rules in fact only marginally apply to them, they are rather for establishing relations for the other expressions in the utterance, the conceptual ones. In addition, if their core sense is simple and ‘primitive’ enough, they can more easily be enriched to propose instructions for relations that are close in meaning but with the element of temporality or aspectuality being absent – for instance the scalar usages obtained with *already* or *déjà*. Secondly, how it is that these expressions are used this way, depends upon the previously stated pragmatic ability of interlocutors to adapt language

according to their intentions and conventions. Furthermore, and this is also part of the answer to the second question, speakers and hearers' general language processing – in particular inferential – abilities are responsible for producing and interpreting utterances and discourse; from there, it is natural for interlocutors to use temporal expressions in any way they allow – if an expression can mean several things according to context of use, then the interlocutors know these uses or else understand them instantly upon processing them. Finally, the specific conditions for temporal expressions to function in this way are contexts where a temporal interpretation is irrelevant, not at all salient, or even logically odd. These conditions range from specific syntactical features (e.g. expression X is always sentence-initial with a temporal sense, but when it appears elsewhere it has other meanings), unusual semantic associations which prompt for further processing, to intonation (e.g. putting more stress on the expression, or an accompanying expression). When interlocutors (with all their lexical and encyclopedic knowledge) encounter such contexts, they immediately process the expressions in such a way that the final output of the utterance makes some kind of sense. That, in brief, is the why and how of temporal expressions used non-temporally. And the basic hypothesis proposed in the introduction – that temporal expressions are procedural and encode both temporal and non-temporal instructions – seems to be correct. As we have seen throughout chapter 4, these expressions all contain instructions for processing utterances where they appear; in the appropriate contexts, the instructions activated are temporal, in other contexts, the instructions activated are argumentative or discursive.

With regards to the more developed hypotheses and their corollaries, the picture is a little more complex, but not unduly so. These hypotheses (from chapter 3) are rewritten below, with a brief discussion for each:

Hypothesis 1. temporal expressions, when used descriptively, are used to establish temporal relations between eventualities or situate an eventuality temporally.

Nothing in particular needs to be said here, the hypothesis is correct concerning temporal expressions used descriptively. Thus 'standard' or 'default' usages do indeed pertain to time and temporality.

Hypothesis 2. temporal expressions, when used non-descriptively, are used to establish relations other than temporal relations, for instance argumentative or discursive ones.

As we have seen, and given that, as many examples attest, temporal expressions do actually mean something when not used to describe time or temporal relations, then they can and are used to express relations of a different sort. This hypothesis pans out as well.

Hypothesis 3. temporal expressions – adverbs, connectives, indexicals and verb tenses – are procedural expressions, as such they encode procedures for their usage.

Finally, this hypothesis is much more difficult to prove, since it depends mainly on the basic premise that such a thing as procedural expressions exist. For pragmatic theories like Relevance Theory, this is not a problem, and seeing temporal adverbs, connectives and indexicals as procedural items is even considered standard. But what advantage does considering temporal expressions as procedural grant us? For a start, this conception of temporal expressions allows a more straightforward treatment of the many potential interpretations these expressions help the hearer to choose from. Instead of multiplying the (already enormous) amount of lexical entries that can be called upon in language users' minds, procedural expressions encode a core meaning of a type that is easy to restrict or expand to generate potentially many outcomes with lower mental processing cost. This is possible because procedural expressions make use of general mental inferential processes that can be used for a multitude of very different purposes – language processing being only one among many (and one among those we can be consciously aware of). This seems much more plausible than the notion that expressions all encode representations, with the theoretically infinite entries all indexed in the mind and being accessed by a series of purely linguistic decoding and selection processes. To consider temporal expressions as being procedural is to avoid unnecessary complication in an already complex mind. But more to the point, the claim that temporal expressions are procedural is a sound way to modelize how language processing works. Another interesting point is the question posed by the two sub-hypotheses:

Sub-hypothesis 1. temporal expressions encode both temporal procedures and non-temporal (i.e. argumentative or discursive) procedures – and thus, temporal expressions, though they may be used non-temporally, are, by default, temporal.

Sub-hypothesis 2. temporal expressions encode instructions that are interpretable in context as temporal, argumentative or discursive – and thus such expressions are not temporal by default (time is not inherent to their core sense).

On the surface these two sub-hypotheses are almost identical – both argue for temporal expressions encoding procedures – but differ as to what the default sense of these expressions is. In fact, it may be incorrect to call all of the expressions looked at here ‘temporal’. Instead, we can easily expand the third hypothesis to:

Hypothesis 4. Certain types of expressions – call them pragmatic markers – are procedural expressions which encode instructions that are interpretable in context as temporal, argumentative, discursive, serial or spatial – the core sense of each being only a strong indication of the specific expression's actualized in-context meaning.

This hypothesis expands to include all procedural expressions, and thus is plausible insofar as one accept the conceptual/procedural distinction – whether it be a dichotomy or a continuum, though the latter offers more malleability. Given some of the expressions examined here, it is safe to say that not all are in fact inherently temporal expressions – despite how they may commonly be perceived (or how they are defined in dictionaries). Wilson & Sperber (1993) make the case that “not everything that is linguistically communicated is linguistically encoded” (98), and this insight proves useful in relation to Hypothesis 4. Indeed, the instructions alluded to above could in fact be quite bare, needing salient and relevant contextual elements to fully develop utterances they appear in. If we recall the proposal of core meaning for *now* (section 4.2.1), the only information encoded in the expression may well be indexical information and the notion of contrast. The understanding that *now* is temporal, argumentative or discursive could in fact just be a result derived from contextual cues that develop the encoded meaning into the full-fledged interpretation. Further research on all types of pragmatic markers would help to further refine this hypothesis, and better explain some of the many functions these types of versatile expressions may have.

This brings us back to our discussion on Kaplan’s *meaning* and *rules of use*, which initially were used to describe demonstratives. As stated previously, these two notions function well within the procedural pragmatic framework. After all, one could easily equate *meaning* with the semantic sense of expressions, and *rules of use* with their pragmatic sense, or even to say that conceptual expressions encode *meaning* while procedural expressions encode *rules of use*. The picture is somewhat more complex than this. In section 3.1.4. we touched upon these two terms and how they were understood here. I stated that *rules of use* did not mean that linguistic

expressions described by this term were devoid of meaning; instead, *rules of use* do have some basic level of meaning, otherwise they could not of course be rules for anything. Seen this way, *rules of use* or *procedural expressions* are extra-propositional operators that have scope over the conceptual parts of the utterances where they appear. Thus in a given utterance those parts that are conceptual refer to real or abstract things, actions or events while the procedural parts of the utterance – rules of use – either hint at or tell the hearer outright what types of relations must be established between the concepts represented in the proposition.

If we look at this in terms of indexes, such that a conceptual expression like “tree” indexes a representation (in the mind) of /tree/, and such that a procedural expression like “now” indexes a relation to be established between the eventuality described and the moment of speech, then we can easily construe both types of expression as encoding instructions of some kind. Now, these instructions are aimed at the cognitive ability of general utterance processing, and thus semantic instructions could well be: when you hear or see the word “tree” look for a salient representation of /tree/ or else create one. This, if true, happens at a level of which we are unaware, and when brought to the fore, seems evident and not very interesting; if pressed for a definition, we might say something like “a tree is a plant with a trunk, branches and leaves” or “a tree is a type of diagram with a central part and lines branching off” or else just end up pointing at an example if there is one to be seen. For procedural expressions, we cannot so easily point out or define what the term means, and paradoxically, we are more aware that we are processing the instructions they encode than with conceptual expressions. This I would argue, is because procedural expressions appeal to or sometimes even force the mind to undertake cognitive operations which require some level of effort, like making an inference. In a sense, these expressions grab our attention and say “set up a contrast between these two clauses” – for *but* or *yet* – or else “the correct temporal relation is a time previous to the present” – for *before* or *yesterday*. Of course, we are not greatly aware of all this, or rather, the mind makes these calculations so quickly that we need not necessarily even realize that we are establishing these relations; but when called upon to explain our understanding of an utterance these procedural expressions and the rules of use they encode jump to the fore – even despite the difficulty we may have to actually define them.

This type of mental indexing, for both types of expressions, can exist because of the cognitive architecture we have. To hazard a guess, such expressions arose because the mind could use them (not the other way around), that is, our cognitive abilities for drawing inferences and setting up specific types of relations between representations pre-existed language and when language came to be, it was only natural for a specialized class of expressions to arise that would make use of these capabilities. The expressions described herein are of this type; they exist to make descriptions of the world more precise, more salient, more relevant. They may have appeared with a conceptual representation attached, or may have arisen directly as procedural expressions.

A few interesting observations arose from the research and writing of this dissertation. The first is the notion of scalarity, namely that some of the expressions described herein function along a scale of some sort. Thus, those expressions which are scalar have a meaning which is relatively mobile, moving up or down a continuum of values – temporal, spatial or argumentative for the most part. This first became clear when looking at French *déjà* and *encore* followed by English *already* and *still* (and from what I know of Spanish *ya* and Italian *già* this also applies to them). What came as a surprise was that this notion of scalarity also cropped up in a few other expressions – and arguably, could even be part of the meaning of many if not most of the expressions described (though this may be somewhat forced for a few). Of course the notion of ‘scale’ is nothing new to linguistics, and especially semantics and pragmatics, one need only think of expressions like *some*, *many*, *most* and *all*, and all the literature devoted to their function. Yet, that they would prove essential components of meaning for some of the temporal adverbs and connectives is a novel way of looking at these expressions.

The second realization that came about when writing this dissertation was the notion of polarity; this idea may seem an outgrowth from scalarity, and in a way it is, but it became obvious that it was an important factor especially when looking at *after/before* and *après/avant*. As seen in a few examples one could easily use either *before* or *after* when listing military ranks in an ascending order – depending on the polarity. This kind of orientation depends almost exclusively on pragmatic factors, e.g., on speaker’s intentions, and on context.

5.2. General comparative review

In this section, we will broadly review our analyses of English and French temporal expressions and discuss them cross-linguistically. There are both differences and similarities for all of the expressions we have looked at, and this section shall provide a preliminary explanation of why this is the case and what it may mean for a theory of language universals, for translation studies and for second language acquisition.

Cross-linguistically – between English and French – some of these expressions adopt roles that are different, though sometimes still indirectly related, as we shall see. For instance *now* can be used to express *maintenant* of course, both temporally and in what we have called the ‘contrastive’ usage, but *now* can also mean *puisque* – a meaning also covered by the non-temporal ‘argumentative’ usage of *since* in English or analog usages of *puis*, *après*, or *d’abord* in French. It is interesting to note that a very small subset of these expressions correspond quite closely, only differing in the odd non-descriptive usage or two – such as *then* and *alors*, whose only real difference is *alors*’s argumentative usage that presents a logical, and subjective, deduction while *then* requires the addition of a sentence-initial *if*-clause to do the same (see p126 above). Or else the expressions *after/before* and *après/avant* who match up quite well except for a discursive usage absent in each French expression – resemblance for *après*, and preference for *avant* (see p160). Likewise the French *futur simple* and English *will* function almost identically – the main difference being the ease with which *will* can be used epistemically is greater than for the *futur simple*; although the two languages’ tense systems will have greater variations in meaning than temporal adverbs or connectives. Finally, there are a few cases where there are no direct equivalents across both English and French. On one end of the scale there is *again*, for which one must use several different expressions to convey a similar sense – *à nouveau* or *encore* for temporal readings, *encore* for the attitudinal discursive meaning, or non-temporal *de plus* for additive usages (see p181); there is *since*, for which one must use *puisque* or *depuis que* to access the same type of non-temporal usages possible with *since* (see pp163-164); and on the other end of the scale there is also *soon/sooner*, whose counterpart *bientôt* does not have any non-temporal usages of note (see pp176-177).

From the observations made in the preceding chapters we can see that some expressions are almost completely equivalent, others only approximately so, and a few “pairs” not at all alike. But meanings or functions such as expectation, scalarity, contrast, or seriality are found in both English and French, and coincide for the most part with the expressions in each language. That all these functions are present in both languages (and I speculate in all natural languages) points again at language universals, and to Hypothesis 4. One thing all these expressions have in common (besides our regrouping them as procedural expressions) is that they all affect the focus of utterances’ perspectives – the speaker’s actual perspective, their projected or remembered perspective, the perspective of a third party and so on. The importance of this observation is crucial: temporal expressions used non-descriptively often affect the attitudes conveyed in the utterances where they appear.

As we have seen previously, *already* and *déjà* function quite similarly except in one instance: the “reminder” usage uses *again* in English, and *déjà* in French (see p 135). On a different note however, we can see that those expressions which allow for scalar usages are the same type in both languages – aspectual adverbs (*already-still-yet* and *déjà-encore*). As mentioned above, this aspectual element (e.g. duration, progression) is very likely the reason the scalar usages can be derived. There are many (mostly small) differences among the English and French versions of these expressions. Undoubtedly, this is also the case between any two languages; and in all likelihood languages from different families will prove to have greater differences in non-standard usages for temporal (or spatial) expressions; this does not however mean that the meanings and contexts for argumentative, discursive or other usages are absent... To us these variations are merely a further indication that such usages – on an abstract or metalinguistic level at least – are all-pervasive in natural languages. The table on the next page recapitulates the English and French expressions treated in Chapter 4; in it we can see that all the expressions have a counterpart (for *encore* there are three) in their temporal/aspectual usages, but for the various non-descriptive usages the picture is quite different – sometimes the same expression that was used for the temporal usage is the same for other usages, but frequently one or more of the non-descriptive usages either require a different temporal expression, or else have no direct analog. There are some instances where there are no possibilities for a specific usage, and some others where this is still an open question.

SUMMARY OF CROSS-LANGUAGE USAGES –
COMPARATIVE REVIEW OF ENGLISH AND FRENCH TEMPORAL EXPRESSIONS

<u>Usage</u> English term	Temporal/ Aspectual	Discursive	Argumentative	Expressive	Scalar	Serial
<i>Now</i>	Maintenant	Maintenant	Maintenant	Encore	N/A	N/A
<i>Yet</i>	Déjà/Encore	Encore	Cependant	N/A	Encore, Toujours	N/A
<i>Then</i>	Alors	Alors?	Alors	N/A	N/A	Ensuite, Après
<i>Already</i>	Déjà	N/A	Déjà	Déjà?	Déjà	N/A
<i>Still</i>	Encore	Encore	Encore	Encore?	Encore, Toujours	N/A
<i>Always</i>	Toujours	N/A	N/A	Toujours??	N/A	N/A
<i>After</i>	Après	D'après	?Après	?Après	N/A	Après
<i>Before</i>	Avant	N/A	Devant	N/A	N/A	Avant
<i>Since</i>	Depuis	N/A	Puisque	N/A	N/A	N/A
<i>Next</i>	Ensuite	N/A	N/A	N/A	N/A	Ensuite
<i>Soon</i>	Bientôt	Bientôt?	Plutôt	N/A	N/A	N/A
<i>Again</i>	Encore	(de) plus	D'autre part	Encore?	N/A	N/A
<u>Usage</u> French term	Temporal/ Aspectual	Discursive	Argumentative	Expressive	Scalar	Serial
<i>Maintenant</i>	Now	Now	Now	?	N/A	N/A
<i>Alors</i>	Alors	?	Then	?	N/A	N/A
<i>Déjà</i>	Already	Again	Already	Already?	Already	N/A
<i>Encore</i>	Still, Yet, Again	Still, Yet	Still, Yet	Now	Still, Yet	N/A
<i>Toujours</i>	Always	Always	Still, Yet	Always??	Still, Yet	N/A
<i>Après</i>	After	?	Now	?	N/A	After, Next
<i>Avant</i>	Before	N/A	N/A	N/A	N/A	Before
<i>Depuis (que)</i>	Since	(since)?	Since?	N/A	N/A	N/A
<i>Puisque</i>	Since	N/A	Since	N/A	N/A	N/A
<i>Ensuite</i>	Next	N/A	Then, Next	N/A	N/A	Next
<i>Enfin</i>	Finally	?	Finally	Finally?	N/A	Finally
<i>Bientôt</i>	Soon	N/A	N/A	N/A	N/A	N/A

5.3. Prospective research

This study is situated more on the theoretical and descriptive side of linguistic inquiry, as such actual empirical trials and experiments represent further work to be carried out in this field. Further research would serve two purposes. First, a more thorough and formal approach would ideally flesh out the outline procedures into full-fledged algorithms. Then, a more computational linguistic orientation could serve the twofold purpose of testing the outline procedures – developed into full algorithms – proposed here, and further improving them should they prove usable; or else point out where they do not work and why. Second, research in a similarly theoretical general linguistic vein could expand the procedural pragmatic take to other expressions of similar categories – for instance adverbs and conjunctions – but which are considered as fulfilling other roles, such as spatial expressions, or hearsay markers.

I had hoped to show that an integrated pragma-semantic model coupled with tools from various approaches or theories would bring out a new and enlightening understanding of these phenomena. For much of the time spent researching this subject, I hesitated between considering that there was indeed a default temporal reading for these expressions and considering that there was no such default meaning. It turns out that for a few of the expressions – *next* and *d'abord, ensuite & enfin* – the default reading is indeed something other than time. For the majority of these expressions however the temporal readings do seem to be the default. The temptation would perhaps be to separate them into distinct classes, as well they could be. Then again, most of these expressions have very specific and rich variations in meaning which could lead one to put each expression into a class of its own. Conversely, one could lump them all together into one great category of pragmatic markers, which is in itself correct, though not very helpful. Perhaps a better way to split these expressions up into different categories would be to do so according to their functions – something that came to mind late in the research, and bears some thought for further work on such expressions. In such future research, adverbials and connectives other than temporal ones would also have to be included.

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