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Integration of a Cognitive Annotation into Machine Translation: Theoretical Foundations and Bilingual Corpus Analysis

שילוב של תיוג קוגניטיבי בתרגום אוטומטי: יסודות תיאוריטיים ואנליזה של קורפוס דו-לשוני

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תקציר

למרות התעניינות מחודשת בשימוש בידע לשוני בתרגום אוטומטי שבא לידי ביטוי בשילוב מבנים תחביריים במודלים סטטיסטיים של תרגום אוטומטי [Liu et al., 2006, Mi et al., 2008, Liu et al.2009], השימוש בתחביר בעזרת עצי ניתוח תחבירי נתקל בבעיית ההשפעה של הבדלים מבניים בין השפות.

לאחרונה, [Abend and Rappoport 2013a,b] הציגו סכמת תיוג קוגניטיבית, UCCA, המאפשרת הצגה מפורשת של ההבחנות הסמנטיות בנפרד מהצורות התחביריות הספציפיות.

בזכות כך, סכמת התיוג הזו הינה מעומדת מבטיחה לצורך שילוב ידע לשוני בתרגום אוטומטי.

בעבודה זו, אנוחוקרים את הסוגיה לעיל הן בעזרת אנליזה תיאורטית והן בעזרת אנליזה של קורפוס דו-לשוני.

האנליזה הראשונה בודקת ראשית כל שסכימת התיוג של UCCA, שנוסחה מפורשות לשפה האנגלית, ניתנת לשימוש גם בצרפתית. אנו מראים שהדבר אפשרי גם בהינתן השכבה הראשונית בלבד של סכימת התיוג.

לאחר מכן אנו מנתחים את השינויים בקטגוריות של UCCA באנגלית ובצרפתית במשפטים מתורגמים ומראים שימור יחסי של המבנים העיקריים על ידי התרגום, גם במקרים המסומנים כ"הבדלי תרגום" (Translation Divergences) בספרות [Dorr, 1994, Dorr et al.2002,2004].

אבחנות אלה מקבלות חיזוק על ידי אנליזה מפורטת של קורפוס מגבילי באנגלית ובצרפתית, שם אנו מגדירים סוגים חדשים של "הבדלי תרגום" ומראים שניתן למנוע רבים מהם. כמו כן, אנו מציעים מתודולוגיה חדשה לחקר דו-לשוני של סכימות תיוג סמנטיות ותחביריות לתרגום אוטומטי.

Abstract

In spite of the resurgence of interest in the use of linguistic information in machine translation, with the incorporation of syntactic structures into statistical machine translation models [Liu et al., 2006, Mi et al., 2008, Liu et al., 2009], the use of syntax via parsing trees in translation is faced to the influence of structural divergences between languages. Recently, Abend and Rappoport [2013a,b] presented a cognitive annotation, UCCA, which permits the explicit representation of semantic distinctions, abstracting away from specific syntactic forms. This makes it a promising candidate for the integration of linguistic information into machine translation. In this work, we address this issue using both theoretical and bilingual corpus analyses. The former analysis first involves the check of a possible application to French of the UCCA annotation, originally formulated in the case of English. We show that this application is possible even when using only the foundational layer of the annotation. Then, we analyze the behavior of UCCA categories in English and French, showing the relative conservation of main structures through translation, even in case of commonly studied translation divergences [Dorr et al., 2002]. These observations are strenghtened by the results of a detailed French-English parallel corpus analysis, where we define new types of translation divergences and show that many of them can be avoided, proposing a new methodology for the bilingual analysis of semantic and syntactic annotations for machine translation.

Contents

Chapter 1

Introduction

Machine translation (MT), is a sub-field of *Computational Linguistics (CL)* and *Natural Language Processing (NLP)* that investigates the use of computer software to translate text or speech from one natural language to another. The history of machine translation generally starts in the 1950s, although work can be found from earlier periods. The Georgetown experiment in 1954 involved fully automatic translation of more than sixty Russian sentences into English. The experiment was a great success and the authors claimed that within three to five years, machine translation would be a solved problem. However, the real progress was much slower, and after the automatic language processing advisory committee (ALPAC) report for the U.S. Government concluded that the ten years long research had failed to fulfill the expectations, the funding was dramatically reduced. Starting in the late 1980s, as computational power increased and became less expensive, more interest began to be paid in statistical models for machine translation. This led to the emergence of *Statistical Machine Translation (SMT)* which is a machine translation paradigm where translations are generated on the basis of statistical models whose parameters are derived from the analysis of bilingual text corpora. SMT usually use machine learning algorithms. The statistical approach contrasts with the rule-based approaches to machine translation as well as with example-based machine translation. Generally, rule-based methods parse a text, usually creating an intermediary, symbolic representation, from which the text in the target language is generated. According to the

nature of the intermediary representation, an approach is described as *Interlingual Machine Translation* or *Transfer-Based Machine Translation*. These methods usually require extensive lexicon with morphological, syntactic, and semantic information, and large set of rules. Example-based machine translation is essentially a translation by analogy that also uses a bilingual corpus with parallel texts. Statistical machine translation, which has been claimed to better use the resources than the other approaches and is generally not restricted to any specific pair of languages, has contributed to the significant resurgence in the last few years of the interest in machine translation. Nowadays it is by far the most widely-studied machine translation method.

The first approach in SMT was the word-based translation, proposed by Brown et al. [1993] with their IBM translation models. Word-based translation, where the fundamental unit of translation is a word, is not widely used today. Phrase-based translation [Marcu and Wong, 2002, Koehn et al., 2003, Och and Ney, 2004] improve these models by translating whole sequence of words, reducing the restrictions of word-based translation. In spite of very good performances, phrase-based model often fail to capture reordering at the phrase level and to exploit discontinuous phrases. A possible solution is to integrate linguistic information in these models and in this way, to benefit from the strengths of both rule-based and statistical machine translation. Such a combination has also cognitive motivations, as human translation involves both linguistic and statistical considerations, although the related specific cognitive processes are still unknown. We will focus here on such combinations when the basic model is a statistical one and one wants to integrate linguistic information to this model. One aspect of the use of linguistics in translation is the choice of the kind of linguistic information one wants to integrate in the translation.

In the last few years, the dominance of phrase-based SMT models has been challenged by the development of models that take into account the syntax of the sentences to be translated (see for example Chiang [2005], Liu et al. [2006], Mi et al. [2008]). These syntax-based SMT methods have reached significant achievements and have attracted more and more interest in the SMT research community. However, the integration of syntax in statistical models is difficult. In phrase-based translation, the use of syntactic

components during training does not improve the translation. In syntax-based statistical translation, the use of syntax during decoding via parsing trees in the source or/and the target side is confronted to the influence of structural divergences between languages.

One possible solution is to choose a formalism which is more flexible and which gives more importance to semantic relations like dependency structures (for example Xie et al. [2011]). Another strategy, which has been developed in the last few years, is the use of semantic roles in systems already using syntactic structures (as in Liu and Gildea [2010]). These works are examples of the combination of statistics, syntax and semantics in translation. Following this research direction, further investigations are needed to evaluate the optimal relations between these three components in order to improve translation. In addition to that, within semantic machine translation, some researchers try to rely on cognitive theories about translation and to focus on the mediation between concepts, using intermediary semantic layer as in some rule-based systems and combining them with statistical models [Edelman and Solan, 2009].

Recently, Abend and Rappoport [2013a,b] presented a new semantic annotation: UCCA (Universal Cognitive Conceptual Annotation). This annotation, based on cognitive theories [Langacker, 2008] and composed by multiple layers, permits one to abstract away from specific syntactic forms and to only represent semantic distinctions, treating syntax as a hidden layer when learning the mapping between form and meaning. Furthermore, unlike other semantic annotations like Propbank [Palmer et al., 2005], it is not based on English grammar and not require syntactic preprocessing for learning. Primarily based on Basic Linguistic Theory (BLT) [Dixon, 2005, 2010a,b, 2012], UCCA is supported by typological cross-linguistic evidence. All these properties make UCCA annotation a promising candidate for the integration of linguistic information to SMT.

In this context, the aim of the present work is to compare the behavior of UCCA annotation in two different natural languages using both theoretical and corpus-based analyzes. In Chapter 2, after presenting the main models in statistical machine translation, we focus on the attempt to use syntax and semantics in these models. Then, in Chapter 3, we describe UCCA annotation and its ability to be extended to another lan-

guage. We in particular show how UCCA annotation principles can apply to French and check that all the known grammatical phenomena in French are indeed covered by UCCA annotation. Focusing on English and French, we discuss also the conservation of the main structures which can be a great advantage of the integration of UCCA annotation into SMT. In Chapter 4, we treat the question of structures conservation empirically, presenting a bilingual corpus analysis of UCCA annotation. The last Chapter summarizes our main conclusions and finding, and discusses perspectives for future developments.

Chapter 2

Background: Statistical Machine translation and the Integration of Linguistic Information

2.1 Statistical Machine Translation

Starting in the late 1980s, as computational power increased and became less expensive, more interest began to be paid in statistical models for machine translation. This led to the emergence of statistical machine translation (SMT) which is a machine translation paradigm where translations are generated on the basis of statistical models whose parameters are derived from the analysis of bilingual text corpora. SMT usually uses machine learning algorithms.

2.1.1 Word-based machine translation

The models of word-based translation [Brown et al., 1993] stem from the original work on statistical machine translation by the IBM Candide project in the late 1980s and early 1990s. While the approach does not constitute the state of the art anymore, many of its principles and methods are still common today, especially in phrase-based translation, an extension of the word-based models that we will discuss in Section 2.1.2. The IBM

models break up the translation process into a number of small steps, for which sufficient statistics can be collected, a method called *generative modeling* [Koehn, 2010]. The simpler model is based solely on *lexical translation* i.e. the translation of words in isolation. This requires a dictionary that maps words from one language to another. Word translation is modeled by a *lexical translation distribution* which is expected to tell us what is the most likely target language translation for a source language word. This distribution is trained from data by collecting counts for word translations using the probabilistic method of *maximum likelihood estimation*. In this model, there is a *hidden variable*: the information about *alignment* between input and output words. An *alignment* is a mapping from source language words to target language words. This problem of incomplete data is solved by the machine learning technique of expectation-maximization (EM algorithm).

The IBM models use a modeling technique called the *noisy channel model* which allows them to break up the translation task into a *translation model* and a *language model*, which ensures fluent output. If f is a source-language sentence and e a translation in the target-language, $Pr(e)$ is called the *language model* and $Pr(f|e)$ is the *translation model*.

In statistical machine translation, including word-based translation, the language model is an *n-gram model* that we will define now formally. In a n-gram model, the probability $P(w_1, ..., w_m)$ of observing the sentence $w_1, ..., w_m$ is approximated in the following way:

$$P(w_1, ..., w_m) = \prod_{i=1,m} P(w_i|w_1, ..., w_{i-1}) \quad (2.1)$$

$$= \prod_{i=1,m} (P(w_{i-(n-1)}|w_1, ..., w_{i-1}). \quad (2.2)$$

The first equality is obtained by induction on the definition of conditional probability. The second equality derives from the assumption that observing the i^{th} word in the context of the preceding $i-1$ words can be approximated by the probability of observing it in the shortened context history of the preceding $n-1$ words (n^{th} order Markov property). The words bigram and trigram model denote n-gram language models with $n = 2$ and $n = 3$

respectively.

2.1.2 Phrase-based machine translation

The use of phrases

In phrase-based translation [Marcu and Wong, 2002, Koehn et al., 2003, Och and Ney, 2004], the aim is to reduce the restrictions of word-based translation by translating whole sequences of words whose the lengths may differ. The sequences of words are called blocks or phrases, but typically are not linguistic phrases but phrases found using statistical methods from corpora. Phrases are defined to be contiguous multiword sequences without any linguistic motivation.

Probabilistic model

The overall goal of the statistical translation system is to transform a given source-language sentence f into an appropriate translation e in the set E of all possible target-language sentences. So, the goal is to find:

$$\widehat{e} = \text{argmax}_{e \in \text{E}} Pr(e|f). \tag{2.3}$$

In these probability notations, general probability distributions are denoted with $Pr(.)$ and probabilities assigned by the models are denoted by $p(.)$. According to Bayes' theorem:

$$Pr(e|f) = (Pr(e) \times Pr(f|e))/Pr(f). \tag{2.4}$$

One deduces that equation (2.3) is equivalent to

$$\widehat{e} = \text{argmax}_{e \in \text{E}} (Pr(e) \times Pr(f|e)). \tag{2.5}$$

The use of equation (2.5) is called the *noisy-channel approach*. This is a framework used in many domains in NLP like spell checkers, question answering, speech recognition and, as here, machine translation. The general idea is that, given a state where all attempted

words have been accidentally scrambled, one's wants to find $argmax(word|scramble)$ by modeling the channel $Pr(scramble|word)$. Here the scramble is the translation and sentences are used instead of words. In equation (2.5), appeared both $Pr(e)$ and $Pr(f|e)$, respectively the language model and the translation model, as we saw in Section 2.1.1. The language model is usually denoted p_{LM} so equation (2.5) becomes:

$$\widehat{e} = \text{argmax}_{e \in \text{E}}(p_{LM}(e)) \times Pr(f|e)). \tag{2.6}$$

Learning the phrase translation table

In phrase-based translation, phrases are mapped one-to-one based on a *phrase translation table* [Koehn et al., 2003, Koehn, 2010] The power of phrase-based translation rests on a good phrase translation table. In fact, in a simple phrase-based translation model where reordering probabilities are not learnt from data as we saw in Section 2.1.2, only the phrase translation table is learnt from data.

Phrases from word-based alignments. The phrase translation table may be learnt based on a word alignment. The toolkit GIZA++ [Och and Ney, 2003] which is based on the IBM models is usually used for this purpose. The alignment is then improved by various heuristics. All phrase pairs that are consistent with the word alignment are added to the phrase table. The words in a legal phrase order are only aligned to each other, and not to words outside. This approach was first described by Och et al. [1999] and later explored in detail by Koehn et al. [2003]. It has since been widely adopted. Given the collected phrase pairs, phrase translation probability distribution is estimated by relative frequency:

$$\phi(\bar{f}|\bar{e}) = \frac{\text{count}(\bar{f}, \bar{e})}{\sum_{\bar{f}} \text{count}(\bar{f}, \bar{e})} \tag{2.7}$$

Link between word alignment and translation quality. Phrase-based models require a method for phrase alignment. As we saw in Section 2.1.2, a possible approach is to first generate word alignments as in a word-based systems. Phrase alignments are then inferred heuristically from these alignments. It was often assumed at the beginning of the

research in phrase-based translation that the quality of the word alignment is critical for translation. However, Lopez and Resnik [2006]'s results suggested that the relationship between alignment quality and translation is weaker than previously thought. They investigated the question comparing the impact of high quality alignments with a constructed set of degraded alignments, testing the impact of alignments on different aspects of the system. Their results confirm a weak correlation but also illustrate that more data and better feature engineering may be more beneficial than better alignment.

Phrases from phrase alignments. An alternative method is to learn phrasal alignment directly from a parallel corpus. Indeed, Marcu and Wong [2002] proposed a translation model that assumes that lexical correspondences can be established not only at the word level, but at phrase level at well. To learn such correspondences, they introduced a phrase-based joint probability model that simultaneously generates both the source and target sentences in a parallel corpus. Expectation Maximization learning in their framework yields:

1. a joint probability distribution $\phi(\bar{e}, \bar{f})$, which reflects the probability that phrases $\bar{e}$ and $\bar{f}$ are translation equivalents

2. a joint distribution $d(i, j)$, which reflects the probability that a phrase at position i is translated into a phrase at position j.

Decoding

In statistical machine translation, decoding is the process of machine translation i.e. the process that rewrites the "encrypted messages" (the text in source-side language) in "normal language" (the target-side language). The task of decoding is to generate the most probable translation for a given sentence , usually by scoring among candidates. It is the process of searching $\widehat{e}$ in equation (2.6) in Section 2.1.2.

As decoding is often an NP-hard problem by itself, approximate algorithms are usually adopted so as to implement decoding in polynomial time. As a result, the decoding algorithm (the decoder) may give a suboptimal result, which is called a *search error*

[Koehn, 2010, Xue, 2011]. It is a consequence of the heuristic nature of the decoding method, which is unable to explore the entire *search space* (the set of possible translations).

Given an input sentence, one has to deal with many translation options. Search is formulated as a succession of *hypotheses* (in essence partial translations) starting with an empty hypothesis (nothing is translated) and picking one of the translation options to build a new hypothesis. This process is called *hypothesis expansion*. For a fair comparison of hypotheses that have covered different parts of the input sentence, one has to take into account an estimate of the *future cost* of translating the rest of the input sentence. This estimate is also called *rest cost* or *outside cost* In phrase-based translation, a common search heuristic used is *beam search* (as in Koehn et al. [2003]) Beam search is a heuristic search algorithm that explores a graph by expanding the most promising node in a limited set. Beam search is an optimization of *best-first search*. Indeed, best-first search orders all partial solutions (states) according to some heuristic which attempts to predict how close a partial solution is to a complete solution (goal state). In beam search which reduces memory requirements, only a predetermined number of best partial solutions are kept as candidates. Another heuristic method frequently used in phrase-based translation is *stack-based decoding heuristic* [Koehn, 2010, Xue, 2011] in which the hypothesis are organized in hypothesis stacks, based on the number of foreign words translated. The size of the stacks is then reduced by pruning.

2.2 Integration of Syntax into SMT

2.2.1 Integrating Syntax in Phrase-based Machine Translation

Phrases and syntactic components

By the definition of phrases we saw in Section 2.1.2,current phrase-based models are not rooted in any deep linguistic notion of the phrase concept. Early work in statistical phrase-based translation considered whether restricting translation models to use only syntactically well-formed constituents might improve translation ,quality [Koehn et al.,

2003] but found such restrictions failed to improve translation quality. Furthermore, it has been shown that restricting the phrases to the sole linguistic phrases (i.e. syntactically motivated groups of words) decreases the quality of translation. The results of Koehn et al. [2003] suggest that requiring phrases to be syntactically motivated does not lead to better phrase pairs, but only to fewer phrase pairs, with the loss of a good amount of valuable knowledge. An example given by the authors is the German expression "es gibt", which literally translates as "it gives", but really means "there is". "Es gibt" and "there is" are not syntactic constituents. There are other constructions in English such as "with regard to" and "note that" which have fairly complex syntactic representations, but often simple one word translations. Allowing to learn phrase translations over such sentence fragments appears, according to this work, very useful for achieving high performance.

The problem of global reordering and the attempt to use Syntax

In phrase-based models, each sentence is split into phrases which are translated and then organized in their final order. These models excel at capturing local reordering and translating continuous multiword expressions. A key limitation is however that this approach makes little or no direct use of syntactic information, and thus fails to model reordering at the phrase level. Indeed, most phrase-based decoders control reordering using simple distance-based distortion models, which penalize all reordering equally. Another method is lexicalized reordering model [Tillman, 2004, Axelrod et al., 2005], which probabilistically score various reordering configurations conditioned on specific lexical translations. The integration of such reordering models is useful but these models perform poorly when languages diverge considerably in sentence structure [Mehay and Brew, 2012]. Distance-based distortion models are too coarse-grained to distinguish correct from incorrect reordering, while lexical reordering models suffer from data sparsity and fail to capture more general patterns.

Syntax is certainly a potential solution to global reordering. However, it can be problematic to use syntax in order to guide a phrase-based system [Mehay and Brew, 2012]. Phrase-based systems build the result incrementally from the beginning of the target string

to the end, and the intermediate strings do not need to constitute complete traditional syntactic components. It is difficult to reconcile traditional recursive syntactic processing with this regime, because not all intermediate strings considered by the decoder would even have a syntactic category to assess.

On the other hand, finding a way to label translation phrases with syntactic labels maybe can address the deficiencies of granularity, data sparsity and lack of generality in the translation and particularly in the reordering. Indeed, often the reordering of words necessary during translation can be easily described using syntactic terms. For example, when translating from French to English, adjectives have sometimes to be moved from behind the noun to in front of the verb. Having syntactic concepts available to the model can make the formulation of such reordering much more straightforward.

There are many syntax-driven reordering approaches in phrase-based machine translation. Most research has avoided using recursive target-side syntax during decoding, perhaps due to the incompatibility of phrase table entries and traditional syntactic constituency. Tillman [2008] presents an algorithm that reorders using part-of-speech based permutation patterns during the decoding process. Trying to address the complicate use of recursive syntactic tools in phrase-based decoders, the recent work of Mehay and Brew [2012] uses Combinatory Categorial Grammar (CCG) [Steedman, 2000], which has a much more flexible notion of constituency, thereby providing more labels for putative non-constituent multiword translation phrases. Using CCG parse charts, they train a syntactic analogue of a lexicalized reordering model by labelling phrase entries with multiword labels. In this model target-side reordering models are used.

An alternative method is to restructure the source language before decoding to resemble the target language using syntactic rules as in the work of Xia and McCord [2004] where the rules are automatically extracted or as in Collins et al. [2005] where the rules are manual. Despite the encouraging results reported in these papers ,the two attempts share the same shortcoming that their reordering is deterministic. Al-Onaizan and Papineni [2006] pointed out that these strategies make hard decisions in reordering which cannot be undone during decoding. That is, the choice of reordering is independent from

other translation factors, and once a reordering mistake is made, it cannot be corrected by the subsequent decoding. Li et al. [2007] tried to overcome this problem proposing a model, which generates by tree operations, given a source sentence and its parse tree, an n-best list of reordered inputs, which are then fed to standard phrase-based decoder in order to produce optimal translation. In this way the decoder can consider, to a certain extent, the interaction between reordering and other factors of translation.

Other cases of integration of syntactic information in phrase-based models

In addition to reordering, there are other aspects in phrase-based machine translation for which integration of linguistic information can be useful. For example, linguistic information can give a better explanation for *function words*. Indeed, function words are typically not translated one-to-one from one language to another. Some types of function words may not even exist in some languages as determiners in Chinese [Koehn, 2010]. Function words such as prepositions may be used very differently in different languages. They define how the content words in a sentence relate to each other, and this relation may be expressed in various forms. The deletion, addition, and translation of function words is often better explained by the underlying syntactic relation. An example also related to syntax-based reordering is the French preposition "de" in "entreprises de transports" which causes a word order change in English to "haulage companies".

Another aspect is the conditioning on syntactically related words [Koehn, 2010]. The problem of word choice when multiple translations of a word are possible is addressed in phrase-based systems by allowing words to be translated with their context (by translating phrases) and by the use of a language model. Both these means only use the context of directly neighboring words. However, for instance for the translation of a verb, its subject and object may be very important. This suggests that to condition word translation on syntactically related words can improve the translation quality.

Another way to integrate linguistic information in phrase-based models is the use of *syntactic language models*. Traditional n-gram language models, as we saw in Section 2.1.1 build on the local coherence of words. If neighboring words match up nicely, the

language model probability is better. However, its local scope limits the language model from detecting long-distance grammatical problems. Schwartz et al. [2011] proposed the use of incremental syntactic language models for incorporating syntax into phrase-based translation. They integrated their model in the phrase-based translation system of Moses [Koehn et al., 2007].

To conclude, many methods attempt to improve the quality of statistical machine translation by exploiting syntactic annotation in various ways. Both word-based models (Section 2.1.1) and phrase-based models operate on the surface form of words. The main motivation to integrate linguistic information into phrase-based translation is to solve the problems of overall grammatically that can occur in phrase-based translation even in cases where the sentences seem coherent at a local level.

The argument against syntactic annotation is that this type of markup does not occur in sentences originally, and has to be added using automatic tools. These tools can have a significant error rate. For example, parsing performance is often no better than 90%. Also, adding syntactic annotation makes models more complex (for example, increasing search error). These problems are even more relevant in models that not only integrate linguistic information to phrase-based models but are entirely based on syntactic information as we will see in Section 2.2.2. We will present there the methods used to address these limitations.

2.2.2 Syntax-based statistical machine translation

General approaches

In the last years, the dominance of phrase-based SMT models has been challenged by the development of models that take into account the syntax of the sentences being translated. Recently these syntax-based SMT methods have reached significant achievements and have attracted more and more interest in the SMT research community. Chiang [2005] distinguishes between two approaches in syntax-based SMT, namely *formally syntax-based SMT* that only uses the hierarchical structure of syntax and *linguistically syntax-based SMT* that uses explicitly the syntactic knowledge.

Formally syntax-based models are based on the hierarchical structures of natural language but the synchronous grammars they use are automatically extracted from parallel corpus with no use of linguistic knowledge nor annotations. These models that are string-to-string models, do not use explicit parse of neither the target nor the source sides, as they only retain the fundamental idea that language is hierarchically structured. Main examples of this approach are provided by Wu's *inversion transduction grammars* (ITG) [Wu, 1997] and Chiang's *hierarchical models* [Chiang, 2005, 2007].

Linguistically syntax-based models use structures defined over linguistic theory, thus annotations (e.g. Penn Treebank) and synchronous grammar rules are derived from parallel corpus guided by explicitly parsing on at least one side of it. Yamada and Knight [2001] propose a linguistically string-to-string model: they use SCFG as the underlying model and do parsing and transformation in a joint search but although they use syntactic annotations, their methods are not directed by a syntactic tree. On the other hand, there are linguistically syntax-based models where the translation is directed by parse trees.

In this category, we can distinguish between three different approaches:

- those that use tree-based decoding and rule extraction to model only the source language,
- those that use these algorithms to model the target language only,
- those that use them to model both the language and the target language.

This distinction leads to define the categories of *tree-to-string*, *string-to-tree* and *tree-to-tree* translation.

In the rest of the Section, we will present with more details an example of formally syntax-based translation: hierarchical phrase-based translation and the three models in linguistically syntax-based models where the parse trees direct the translation (namely tree-to-string, string-to-tree and tree-to-tree models).

Hierarchical phrase-based translation. Chiang [2005, 2007] presented a statistical phrase-based translation model that uses hierarchical phrases - phrases that contain sub-

phrases. Classical phrase-based models, where phrases can be any substring (and not necessarily phrases in any syntactic theory), allow to learn local reorderings, translation of short idioms, or insertions and deletions that are sensitive to local context. The idea is to improve the phrase-based translation using phrases not only to learn word reordering but also to learn phrase reorderings at well. In order to do it, Chiang used hierarchical phrases that consist of both words and sub-phrases. The hierarchical phrase pairs are productions of a synchronous context-free grammar (SCFG). The model is formally a synchronous context-free grammar but is learned from a bitext without any syntactic information, so it is not linguistically syntax-based.

Tree-to-string models. In tree-to-string translation [Liu et al., 2006, Huang et al., 2006], the input is a source-language parse-tree instead of a string. The principle is to convert the source-language parse tree recursively to the target language. Indeed, the source-language input has first to be parsed into a 1-best tree T. The decoder then searches for the best derivation (sequences of translation steps) d^* that converts T into a target language string among all possible derivations:

$$d^* = \text{argmax}_{d \in D} P(d|T) \tag{2.8}$$

where T is the 1-best parse tree and D the set of all possible derivations.

An advantage of tree-to-string translation when compared with string-to-string translation is that the decoding is faster and the translation grammar more expressive. Furthermore, the model permits separate grammars for parsing and translation. The parse tree is converted into a target-language string by applying the translation rules which are obtained by tree to string rule extraction. These rules directly encode linguistic knowledge. In *tree-to-string rule extraction* [Galley et al., 2004], the input is again the 1-best parse tree of a source-language string and the basic idea is to decompose the source parse into a series of tree fragments, each of which will form a rule with its corresponding target-language translation. However, not every fragmentation can be used for rule extraction since it may or may not respect the alignment and reordering between the two languages.

Given a source-target sentence pair (σ, τ) with *alignment* (i.e. matching between the words of the two languages) a, the (target) *span* of node v is the set of target words aligned to leaf nodes under node v. A span is said to be *faithful* to node v if every word in it is only aligned to nodes dominated by v. The algorithm of rule extraction can "cut" the tree at all nodes that are *admissible* i.e. nodes with non-empty *contiguous* and faithful spans. Liu et al. [2006] treats all bilingual phrases as lexicalized tree-to-string rules, including those non-syntactic phrases in training corpus. Experiments on Chinese-to-English translation [Liu et al., 2006] show that this model significantly outperforms Pharaoh.

String-to-tree and tree-to-tree models. String-to-tree and tree-to-tree models both use parse trees of the target side, they are called tree-targeted models. These models can use phrase structure trees or dependency trees. Dependency trees, which reveal long-distance relations between words, are simpler than CFG trees since there are not constituent labels and dependency relations directly model semantic structure of a sentence.

String-to-tree models (see e.g. Galley et al. [2006], Marcu et al. [2006], Shen et al. [2008]) explicitly use syntax of the target side only. For example, Shen et al. [2008] propose a model using dependency trees on the target side that outperforms the hierarchical phrase-based Hiero system on the NIST 2004 Chinese-English evaluation set.

Tree-to-tree models (see e.g. Eisner [2003], Ding and Palmer [2005], Cowan et al. [2006], Zhang et al. [2007]) use the syntax of both source and target side. For example, Ding and Palmer [2005] propose a syntax-based translation model based on a probabilistic synchronous dependency insertion grammar, a version of synchronous grammar defined on dependency trees. This model outperforms the baseline system based on the IBM models in both translation speed and quality. By modeling the syntax of both source and target languages, tree-to-tree approaches have the potential benefit of providing linguistically better motivated rules. However, tree-to-tree models are more vulnerable to parsing errors. Furthermore, tree-to-tree rules provide poorer rule coverage because there must be trees on both sides to extract such rules, so tree-to-tree models often lose a larger

amount of linguistically unmotivated mappings that can improve translation.

Problems in syntax-based statistical translation and proposed solutions

Parsing errors and the forest solution. Tree-to-string translation models suffer from a major drawback: they only use the 1-best parse to direct the translation and to extract rules, which potentially introduces translation mistakes due to parsing errors. One obvious solution to this problem is to take as input k-best parses, instead of a single tree. However, a k-best list has too few variations and too many redundancies and many subtrees are repeated across different parses so this proposition is inefficient for both decoding and rule extraction.

Mi et al. [2008] proposed *forest based translation*, or more exactly *forest-based tree-to-string translation* where the decoder translates a packed forest of exponentially many parses, which compactly encodes many more alternatives than k-best parses. A packed parse forest (forest in short), which has a structure of an hypergraph, is a compact representation of all derivations (parse trees) for a given sentence under a context-free grammar [Billot and Lang, 1989]. So, as in tree-to-string translation, the first step, before decoding, is parsing. A modified parser parses the input sentence and outputs a packed forest. Such a forest is usually huge in size, so a forest pruning algorithm is used to reduce it to a reasonable size. The pruned parse forest will then be used to direct the translation. Given a parse forest and a translation rule set R, a translation forest is generated with a similar hypergraph structure via the function $match(r, v)$ which attempts to pattern-match rule r at node v in the parse forest and, in case of success, returns a list a descendant nodes of v that are matched to the variables in r, or returns an empty list if the match fails. Thus a translation hyperedge connects between v and $match(r, v)$ for each node v and rule r. The decoding itself which includes the integration of a language model, given a translation forest, are obtained using approximate dynamical programming algorithms such as cube pruning [Chiang, 2007, Huang and Chiang, 2007].

In forest-based translation, the rules can still be extracted by tree-to-string rule extraction [Mi et al., 2008]. However, Mi and Huang [2008] proposed *forest-based translation*

rule extraction which is an extension of tree-to-string extraction algorithm with a packed forest representing exponentially many parse trees of the source-side string instead of the 1-best tree. As in tree-to-string rule extraction, the two steps of forest-based rule extraction are the definition of an admissible set and the fragmentation. The formalism for admissible set in the tree-based case can be applied to a forest without any change. For the fragmentation, there is now a choice of multiple parse hyperedges at each node so a new algorithm is presented which can be formalized by a breadth-first search(BFS). Mi and Huang [2008] obtained very good results when they combined forest-based translation (decoding) and forest-based rule extraction: the new method achieves a 2.5 BLEU points improvement over the baseline in Chinese-to-English translation and even outperforms the hierarchical system of Hiero [Chiang, 2005], one of the best performing systems to date, by 0.7 points.

BLEU (bilingual evaluation understudy) uses a modified form of precision to compare a candidate translation against multiple reference translations. Computing classical precision requires to count up the number of candidate translation words (unigrams) which occur in any reference translation and then to divide by the total number of words in the candidate translation. However, since MT systems can overgenerate "reasonable" words, one uses a modified (unigram) precision that is obtained by counting the maximum number of times a word occurs in any single reference translation then clipping the total count of each candidate word by its maximum reference count, adding these clipped counts up and finally dividing by the total (unclipped) number of candidate words. In the same way, one can compute modified n-gram precision collecting all candidate n-gram (i.e. a subsequence of n words from a given sentence) counts and their corresponding maximum reference counts. So the BLEU criterion computes the geometric mean of the precision of n-grams of various lengths between a hypothesis and a set of reference translations multiplied by a factor BP that penalizes short sentences:

$$BLEU = BP \times \exp(\sum_{n=1,N} \frac{\log(p_n)}{N}) \tag{2.9}$$

where p_n is the modified precision of n-grams in the hypothesis translation.

However, although it is still widely used in machine translation research, BLEU has been demonstrated to be capable of producing scores that do not correlate with human judgments, with potential variability increasing when translation quality is low [Callison-Burch et al., 2006].

Forest-based translation proposed by Mi et al. [2008] is a compromise between string-to-string and tree-to-string based systems, combining the advantages of both: decoding is still fast but translation quality is improved comparing with the tree-based system.

The forest-based translation work makes good use of source-side syntax but does not use the grammatically of the target side. That can explain grammatical problems in translation outputs such as missing the main verb. One direction of research is to extend the forest model to approaches in syntax-based translation that use parse trees of the target side. Liu et al. [2009] proposed such a model for tree-to-tree translation. Their *forest-based tree-to-tree model* provides a significant absolute improvement of 3.6 BLEU points over using 1-best trees and achieves comparable performance with the state-of-the-art phrase-based model of Moses [Koehn et al., 2007].

Structural divergences and the tree-sequence model Another model proposed to improve linguistically syntax translation is *tree sequence-based translation* [Liu et al., 2007, Zhang et al., 2008]. Tree sequence-based modeling aims to model non-syntactic translations with structured syntactic knowledge. The model allows the violation of syntactic boundaries to capture non-syntactic phrases and thus tries to solve the impacts of cross-lingual structure divergence, combining the strengths of phrase-based and syntax-based translation. In a traditional syntax-based model, many non-constituent (or not syntactic) mappings are not represented by the extracted rules. This decreases significantly the quality of the translation when the problem is the translation of multi-word expressions which are not syntactic components. A tree sequence refers to a sequence of consecutive subtrees that are embedded in a full parse tree. For any given phrase in a sentence, there is at least one tree sequence covering it. Liu et al. [2007] propose the

tree-sequence concept and design a *tree sequence to string* translation model. Zhang et al. [2008] propose a *tree sequence-based tree-to-tree* translation model.

Non-contiguous phrases. Another problem in SMT translation is the multiword expressions that are not adjacent to each other i.e. the non-contiguous phrases. Phrase-based models fail to deal with contiguous phrases so many syntax-based approaches try to address this issue integrating more syntactic information. Nevertheless, the generated rules are strictly required to be derived from the contiguous translational equivalences [Galley et al., 2006, Marcu et al., 2006, Zhang et al., 2007, 2008, Liu et al., 2006, 2007]. Sun et al. [2009] present a translation model based on *non-contiguous tree sequence alignment*, where a non-contiguous tree sequence is a sequence of subtrees and gaps. Compared with the contiguous tree sequence-based model, the proposed approach can well handle non-contiguous phrases with any large gaps by means of non-contiguous tree sequence alignment. It is an extension of tree sequence based tree-to-tree model [Zhang et al., 2008]. Experimental results on the NIST MT-05 Chinese-English translation task show that the proposed model significantly outperforms the baseline systems.

A promising combination of forest and tree sequence. Finally, a work of Zhang et al. [2009] combines forest-based translation [Mi et al., 2008, Mi and Huang, 2008] and tree sequence-based translation [Liu et al., 2007, Zhang et al., 2008] presenting a forest-based tree sequence to string translation model. Their goal is to use the strength of forest-based translation which is robust to parse errors and the strength of tree sequence-based translation which is robust to structure divergence between the languages, in order to improve the performance of syntax-based SMT. Experimental results on the NIST MT-2003 Chinese-to-English translation task shows that this method outperforms significantly four baseline systems that are the state-of-the-art phrase-based model Moses [Koehn et al., 2007], a tree-based tree-to-string model [Liu et al., 2006, Huang et al., 2006], a tree-based tree-sequence to string system [Liu et al., 2007], and a forest-based tree-to-string system [Mi et al., 2008]. For extracting the rules, they used the forest-based algorithm from forest-based tree-to-string translation. [Mi and Huang, 2008].

2.3 Integration of Semantics into SMT

2.3.1 A first step towards Semantics: Dependency structures in SMT

Motivations

In the context of rule-based machine translation and later in statistical models which use linguistic information, many researchers argued that dependency theory is an advantageous representation model for machine translation when compared with the constituent alternative. Dependency structures represent the grammatical relations that hold in and between constituents. Thus, dependency trees reveal *long-distance relations* between words. For a given sentence, each word has a parent word which it depends on, except for the root node. On one hand, they are more abstract than syntactic (phrase structure) trees (word order for example is not expressed) and they are simpler because there are *no constituent labels*: the nodes are words instead of syntactic component. On the other hand, they are explicit about the dependency relations which directly model the *semantic structure* of a sentence. Furthermore, dependency trees of sentences are close to their logical forms and hence closer to their meaning than the constituent trees. Another advantage of dependency trees is their *flexibility*: they provide a representation method which does not rely on constituents but rather exhibits binary head-modifier relations between the words. Finally, as shown by Fox [2002], dependency structures have the best inter-lingual phrasal cohesion properties. Consequently, dependency structures seems to be the best tool in order to alleviate structural divergences between languages which is one of the major challenges in machine translation.

Syntax-based models using dependency structures: mixed results

The first system which tried to use the benefits of dependency structures in translation was the DLT system (for Distributed Language Translation) [Schubert, 1988] which was an attempt to build an interlingua model with Esperanto. With the development of SMT

and later on, of models which tried to combine statistics and syntax, many researchers were led to use dependency structures in these combined models in order to improve the quality of the translation.

Xiong et al. [2007] proposed a translation model using dependency structures on the source side for syntax-based statistical machine translation referred to as Dependency Treelet String Correspondence Model (DSTC). This model maps source dependency structures into target strings. The dependency structures which extracted to form translation rules are *treelets* which are connected subgraphs consistent with word alignments. Treelet is generally more flexible than subtree which is widely used in models based on phrase structures [Liu et al., 2006, Marcu et al., 2006]. In Xiong et al. [2007]'s model, translation pairs of source treelets and target strings with their word alignment are learnt automatically from the parsed and aligned corpus. In this way, dependency treelet string correspondence (treelet-to-string rules) are extracted. On the target side, the aligned target sequences are allowed to be generalized and discontinuous by the introduction of variables and gaps. A limit of this model is that it resorts to insertion operations, which make it difficult to specify ordering information in translation rules. To handle this problem, Xiong et al. [2007] use heuristics, but these are not always reliable.

Recently, Xie et al. [2011] proposed a solution for the specification of ordering information in dependency-to-string translation. Their model directly specifies the ordering information in *head-dependent rules* that represent the source side as *head-dependent* and the target side as string. This method permits one to use only a substitution operation in the translation, without insertions. Thus, this model does not need heuristics [Xiong et al., 2007] or separate ordering model Large scale experiments on Chinese-to-English translation show that this model exhibits good performance in long distance reordering. Furthermore, it outperforms in BLEU score the state-of-the-art constituency-to -string model [Liu et al., 2006] and hierarchical phrase-based translation [Chiang, 2005, 2007] *without resort to phrases.*

However, other works has shown that despite theoretical strengths, dependency translation models do not always outperform their constituency counterparts. For example,

Gildea [2004] presented a comparison of constituent and dependency models for tree-to-tree alignment, and concluded that despite equalizing some mismatches in tree structure, the dependency representation does not perform as well as its constituent because it is less robust to large differences between the tree structures. Some researchers used dependency structure on the target side.Shen et al. [2008] presented a string-to-dependency model, which restricted the target side of each hierarchical rule to be a well-formed dependency tree fragment and employs a dependency language model to make the output more grammatically. This model significantly outperformed the state-of-the-art hierarchical phrase-based model [Chiang, 2005]. However, as a string-to-tree system, it runs slowly in cubic time [Huang et al., 2006].

Mi and Liu [2010] presented can interesting combination between constituency and dependency structures in the context of statistical syntax-based translation. They proposed a model which uses constituency forests on the source side to direct translation and dependency trees on the target side to guarantee grammaticality of the output. In contrast to conventional tree-to-tree approaches (Ding and Palmer [2005], Quirk et al. [2005] for dependency-to-dependency models and Zhang et al. [2007], Liu et al. [2009]) which only make use of a single type of trees,Mi and Liu [2010]'s model is able to combine two types of trees, outperforming both phrase-based and tree-to-string systems. Like other tree-to-tree models, it is also a combination of the strength of tree-to-string models which run faster and of string-to-tree translation which guarantees the grammaticality of the output. As tree-to-tree models seem to be the best linguistically-motivated approach within the syntax-based statistical approaches, this new model surpasses for the first time tree-to-string counterparts according to Mi and Liu [2010]'s experiments. Finally, this model is a combination of forests and trees. An improvement of this system can possibly be obtained by replacing 1-best dependency trees on the target side by a dependency forest (Section 3.3.3) to further increase the rule coverage.

2.3.2 Integrating semantic roles into translation

Motivations

Recently, some researchers tried to extend the linguistic information used in statistical machine translation, moving beyond syntactic information and integrating explicitly semantics in these models. This approach is motivated by the fact semantic roles tend to agree better between two languages than syntactic constituents [Fung et al., 2006, Wu and Fung, 2009b]. For example, Fung et al. [2006] reports that approximately 84% of semantic role mappings remained consistent across translations between English and Chinese. Another advantage of semantic structures over syntactic structures in machine translation is the fact the set of semantic roles of a predicate models the skeleton of a sentence, crucial to the readability of MT output [Liu and Gildea, 2010]. The predicate-argument event layer of Semantic Role Labeling (SRL) captures global dependencies. Furthermore, the semantic role information contained in SRL provides a good clue to the appropriateness of a phrase segment chosen by a translation system. Compared to the syntactic representation in both constituency and dependency formalisms, SRL focuses more on modeling the skeleton of a sentence [Feng et al., 2012, Zhai et al., 2012].

Semantic roles in phrase-based translation

Wu and Fung [2009a] and Wu and Fung [2009b] integrated semantic role labeling (SRL) in phrase-based machine translation. They developed a framework to reorder the output using information from both the source and the target SRL labels. The goal is to maximize the cross-lingual match of the semantic role labels of the translation and source sentences. Another example of the use of semantic roles in phrase-based translation is Xiong et al. [2012]'s work, which integrated two discriminative feature-based models into a phrase-based SMT system, which used the semantic predicate-argument structure of the source language. Their first model defined features based on the context of a verbal predicate, to predict the target translation for that verb. Their second model predicted the reordering direction between a predicate and its arguments from the source to the target sentence.

Feng et al. [2012] propose too two models (used as soft constraints) which are implemented in the decoder of a phrase-based system. The first one restrains the translation process so that it is consistent with the global dependency in the source sentence. The second model inspects the source sentence segmentation so that each source phrase is consistent with the semantic roles.

Semantic roles in formally syntax-based translation

Differently of the works in Section 2.3.2, other researchers integrated explicitly semantics in syntax-based translation and in this way combine semantic and syntactic information in order to improve the translation. Gao and Vogel [2011] used target-side semantic role to assist hierarchical phrase-based translation which is a kind of formally syntax-based translation (see Section 2.2.2), extracting SRL-aware Synchronous Context-Free Grammar (SCFG) rules. In the context of formally syntax-based translation, we can mention also the work of Baker et al. [2010] who used semantically enriched syntactic tags assigned to the target language training texts. Baker et al. [2010] proposed to graft semantic information, namely named entities and modalities, to syntactic tags in a syntax-based model. The vocabulary of non-terminals is specialized using the semantic categories, for instance, a noun phrase (NP) whose head is a geopolitical entity (GPE) will be tagged as NPGPE, making the rule table less ambiguous.

Similar to Baker et al. [2010], the work of Aziz et al. [2011] specialized a vocabulary of syntactic non-terminals with semantic information. However, shallow syntax (base-phrases) and semantic role labels were used instead of constituent parse and named entities. Alternatively, Zhai et al. [2012] proposed Predicate-Argument Structure (PAS) decoding using transformation rules from source-side PASs to target-side PASs. This model is integrated in a BTG system [Wu, 1997], another formally syntax-based system. Another method to integrate semantics in formally syntax-based translation is, as we saw above in the case of phrase-based translation, to add reordering models to the system. Indeed, Li et al. [2013] proposed a predicate-argument structure reordering model for a hierarchical phrase-based system. This model predicts reordering not only between an

argument and its predicate (as in Xiong et al. [2012]), but also between two arguments.

Semantic roles in linguistically syntax-based translation

In linguistically syntax-based translation (see Section 2.2.2), Liu and Gildea [2008] and Liu and Gildea [2010] integrate semantic information in tree-to-string translation. Liu and Gildea [2008] proposed a semantic role based Tree-to-String (TTS) transducer by adding semantic roles to the TTS templates. Their approach did not differentiate the semantic roles of different predicates, and did not always improve the TTSs performance. Liu and Gildea [2010] explored ways of integrating semantic role features (SRF's) into an MT system, rather than using them in post-processing or n-best ranking. In their work, they add features extracted from the source sentences annotated with semantic role labels in a tree-to-string SMT model. They modify a syntax-based SMT system in order to penalize/reward role reordering and role deletion. The input sentence is parsed for semantic roles and the roles are then projected onto the target side using word alignment information at decoding time, when it is assumed that a one-to-one mapping between source and target roles is desirable. This model outperformed the baseline tree-to-string model in Liu and Gildea [2010]'s experiments.

On the other hand, Bazrafshan and Gildea [2013] used semantic role labels to enrich a string-to-tree translation system. extract string-to-tree translation rules [Galley et al., 2004] from training data where the target side has been parsed and labeled with semantic roles. Their general method of adding information to the syntactic tree is similar to the "tree grafting" approach of Baker et al. [2010], where the information here is predicate-argument structure. Their modified string-to-tree rules represent the overall predicate-argument structure of each verb, what permits modeling alternations in the mapping from syntax to semantics of the type described by Levin [1993].

2.3.3 Meaning representation and cognitive models in SMT

Using intermediate meaning representation in SMT

MT systems are frequently unable to preserve basic meaning structures (e.g. "who does what to whom") across languages when confronted with verbs that realize their arguments differently. A system using an intermediate meaning representation need not suffer from this problem. Instead of learning many bilingual translation rules over all possible realizations of this pattern, it can rely on monolingual realizations to preserve meaning in translation.

However, SMT approaches do not use an intermediate semantic representation. A lot of research has been done in the early days of MT on translation systems using such representations in the context of interlingua-based machine translation (for example Nirenburg [1989]). These systems usually required hand-crafted rules and large knowledge bases and do not learn translation models from data automatically.

Recently, Jones et al. [2012] introduced a new model for semantically-driven statistical machine translation using graph-structured meaning representations. Their approach is based on the class of weighted synchronous hyperedge replacement grammars, a rewriting formalism for graph-string pairs that extends context-free grammars. This system used methods for formally and linguistically syntax-based translation. However, as interlingual systems, this model is a two-step process of analysis into meaning in the source language, and decoding from meaning in the target language.

Relying on cognitive models of human translation for SMT

Given the persistent gap between the performance of MT systems and of human translators, it seems natural to turn to studies of human translation in search of guidance. One such study is that of Christoffels and de Groot [2004], who compared subjects' performance in repeating sentences (shadowing), reformulating sentences in the same language (paraphrasing), and translating (interpreting) sentences, all delivered auditorily, in simultaneous and delayed conditions. They found that both "transcoding" (a concept that

corresponds roughly to source to target alignment in MT) and target-language semantic processing were needed to account for the pattern of results. The latter kind of processing plays a particularly important role in the Revised Hierarchical Model (RHM) of bilingual conceptual memory [Kroll and Stewart, 1994]. According to the RHM, true bilinguals (people who are equally fluent in both their languages) maintain two sets of lexical semantic representations of concepts. The corresponding lexical records in the two languages are linked primarily via a common non-linguistic conceptual system, over and above any direct, asymmetrical associations at the lexical level (hence the attribution hierarchical). For example, in a Spanish-English bilingual, "perro" would be associated with "dog", but, more importantly, both these words would be linked to the concept, to the image of a dog , all with different weights. Although RHM is not nearly detailed enough to qualify as a model in computational linguistics, it can help distinguish between engineering approaches that are compatible with the behavioral and neurobiological findings and those that are less so [Edelman and Solan, 2009].

Trying to build a translation model based on the RHM system Edelman and Solan [2009] chose to focus on modeling a main subsystem, the network of constructions that mediates between concepts and the channels of linguistic input (utterance comprehension) and output (utterance production). Their system seeds a source-to-target construction map with simple lexical associations gleaned from a machine-readable dictionary (MRD). It then extends the lexical associations to encompass phrasal constructions and refines the resulting map iteratively, as a way of approximating abstract, conceptual-level associations between the representations of meaning in the two languages, thus completing the training phase. Given an utterance in the source language, the trained system maps its shallow parse to a set of "evoked" constructions which is how meaning is operationalized in the target language, then lets the target-grammar language model generate the output utterance.

Chapter 3

UCCA Annotation in English and French: Theoretical Analysis

3.1 UCCA annotation

UCCA (Universal Conceptual Cognitive Annotation) [Abend and Rappoport, 2013a,b] is an annotation scheme for encoding semantic information. Based on Basic Linguistic Theory (BLT) [Dixon, 2005, 2010a,b, 2012] and on cognitive theories [Langacker, 2008], UCCA has been shown to be relatively insensitive to syntactic variations as long as the meaning is conserved. This scheme is designed as a multi-layer structure that permits an unbounded extension. In our work we use the foundational layer of UCCA as described in Abend and Rappoport [2013a,b] that focuses on grammatically relevant information.

3.1.1 UCCA formalism

The semantic structures of UCCA annotation are represented using directed acyclic graphs (DAGs). The *terminals* correspond to the atomic meaning-bearing units placed at the leaves of the DAG. In the foundational layer of UCCA where morphology is not analyzed, terminals are words and multi-word chunks. The nodes of the graph which are also the basic formal elements of UCCA are called *units* and can be either a terminal or several elements that are jointly viewed as a single entity based on conceptual or cognitive

considerations. Non-terminal nodes in the DAG do not have any features. The categories are annotated over the graph's edges and represent the descendant unit's role in the relation represented by the parent unit. Detailed list of the categories in UCCA annotation will be presented in the following Section (3.1.2). Figure 3.1(a) represent the UCCA annotation graph of the English sentence "John read this book". In this example, the units are the terminals, "John read this book" and "this book". Apart from the terminals, each unit in the example is composed by a relation and its corresponding arguments.

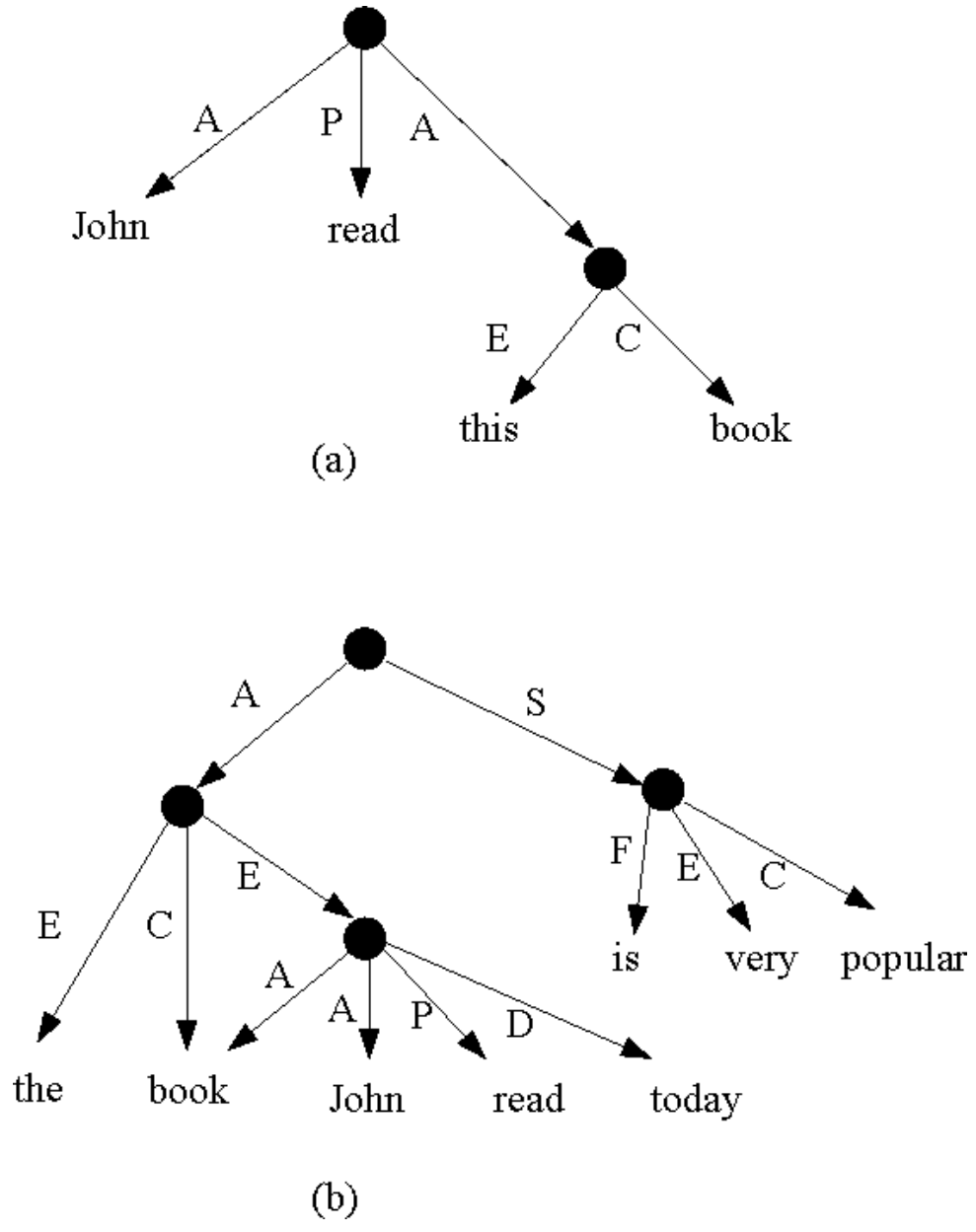

Figure 3.1: Examples of UCCA annotation graph representation

3.1.2 UCCA foundational layer and its categories

The Scene

In the foundational layer of UCCA annotation, the text is viewed as a collection of Scenes. A Scene, which is the most basic notion of this layer, can describe a movement, an action or a state which is persistent in time.

Examples:

(3.1) He is walking in the park (1 Scene).

(3.2) He got home and took a shower (2 Scenes).

Scene elements

Every Scene contains one main relation which can be either static and then labeled as **State** (S) or evolving in time (usually a movement or an action) and then labeled as **Process** (P). The participants in the Scene in a broad sense, including locations, are labeled as **Participants** (A) . Secondary relations in the Scene, including temporal relations and manner information are marked as **Adverbials** (D) .

Examples:

(3.3) $[\text{John}]_{\text{A}}$ $[\text{caught}]_{\text{P}}$ $[\text{the ball}]_{\text{A}}$.

(3.4) $[\text{Mary}]_{\text{A}}$ $[\text{is tall}]_{\text{S}}$.

(3.5) $[\text{He}]_{\text{A}}$ $[\text{arrived}]_{\text{P}}$ $[\text{at 8 o'clock}]_{\text{D}}$.

Elements of non-Scene units

Regards units which are not Scenes, the category **Center** (C) denotes the sub-unit which is necessary for the conceptualization and the determination of the semantic type of the unit. More than one Center are possible in a non-Scene unit. A Sub-unit which applies to a single Center is called **Elaborator** (E) . A sub-unit which relates two or more Centers, highlighting a common feature or role, is marked as a **Connector** (N). This usually concerns coordination. Finally, **Relators** (R) deal with all the type of non-Scene relations which are not covered by Elaborators and Connectors. This category mainly

concern prepositions.

Examples:

(3.6) $[\text{big}]_{\text{E}}$ $[\text{brown}]_{\text{E}}$ $[\text{dogs}]_{\text{C}}$

(3.7) $[\text{John}_{\text{C}}$ and_{N} $\text{Mary}_{\text{C}}]_{\text{A}}$ $[\text{went}]_{\text{P}}$ $[\text{to}_{\text{R}}$ $\text{school}_{\text{C}}]_{\text{A}}$ $[\text{together}]_{\text{D}}$.

(3.8) $[\text{There are}]_{\text{S}}$ $[\text{cookies}]_{\text{A}}$ $[\text{in}_{\text{R}}$ the_{E} $\text{box}_{\text{C}}]_{\text{A}}$.

(3.9) $[\text{the}_{\text{E}}$ bottom_{C} $\text{of}_{\text{R}}]_{\text{E}}$ $[\text{the}_{\text{E}}$ $\text{sea}_{\text{C}}]_{\text{C}}$

(3.10) $[\text{army}]_{\text{C}}$ $[\text{of}]_{\text{R}}$ $[\text{zombies}]_{\text{C}}$

Remote and implicit units

UCCA annotation allows a sub-unit to have multiple parents i.e. to appear in more than one unit and thus to participate in more than one relation. In this case, when in one of the units, the sub-unit does not appear explicitly in the text, it is added in the annotation as a **remote sub-unit**.

Example:

(3.11) $[\text{The}]_{\text{E}}$ $[\text{book}]_{\text{C}}$ $[[\text{John}]_{\text{A}}$ $[\text{read}]_{\text{P}}$ $[\text{today}]_{\text{D}}]_{\text{E,REMOTE-A}(''\text{book}'')}$ $[\text{is very popular}]_{\text{S}}$.

In this case "book" is both the Participant of the Scene "book John read today" and the Center of a Participant in the Scene "The book John read today is very popular ". It is a remote Participant. The graph representation of this example is presented in Figure 3.1(b).

It is also possible that a sub-unit does not appear explicitely at all in the text. It is then marked as an **implicit unit**. It is a terminal in the tree.

Example:

(3.12) $[[\text{To succeed}]_{\text{P}}$ $[\text{in this place}]_{\text{A}}]_{\text{A,IMPLICIT-A}}$ $[\text{is rare}]_{\text{S}}$

Inter-Scene relations

There are three main types of inter-Scene relations (linkage) in UCCA annotation.

- A Scene can be an Elaborator, adding information on a unit previously established.

  Example:

  (3.13) $[[\text{The}]_{\text{E}}$ $[\text{writer}]_{\text{C}}$ $[[\text{who}]_{\text{R}}$ $[\text{wrote}]_{\text{P}}$ $[\text{this book}]_{\text{A}}]_{\text{E,REMOTE-A}(''\text{writer}'')}]_{\text{A}}$ [is

French]$_{\mathrm{S}}$.

- A Scene can be a Participant in another Scene.

  Example:

  (3.14) [He]$_{\mathrm{A}}$ [said]$_{\mathrm{P}}$ [he will be late]$_{\mathrm{A}}$.

- The other cases (for example temporal linkage) are covered by **Parallel Scenes** (H). The relation between two or more Parallel Scenes is called **Linker** (L).

  Example:

  (3.15) [When]$_{\mathrm{L}}$ [he will arrive at home]$_{\mathrm{H}}$, [he will call them]$_{\mathrm{H}}$.

The category **Ground** (G) indicates the relation between the speech event and the uttered sentence.

Example:

(3.16) [In my opinion]$_{\mathrm{G}}$, [[this book]$_{\mathrm{A}}$ [is very interesting]$_{\mathrm{S}}$]$_{\mathrm{H}}$.

the Function category

Functions (F) are units that do not introduce a new participant or relation. They are required by the structural pattern they appear.

Examples:

(3.17) [He]$_{\mathrm{A}}$ [is$_{\mathrm{F}}$ going$_{\mathrm{C}}$]$_{\mathrm{P}}$ [to$_{\mathrm{R}}$ school$_{\mathrm{C}}$]$_{\mathrm{A}}$.

(3.18) [He]$_{\mathrm{A}}$ [wanted]$_{\mathrm{P}}$ [[to$_{\mathrm{F}}$ travel$_{\mathrm{C}}$]$_{\mathrm{P}}$ [over$_{\mathrm{R}}$ the$_{\mathrm{E}}$ world$_{\mathrm{C}}$]$_{\mathrm{A}}$]$_{\mathrm{A,REMOTE-A(''He'')}}$.

3.2 Application of UCCA annotation to French

3.2.1 Procedure

- **Checking that UCCA annotation principles can apply to French**

  Using the annotation guide provided in the web application of UCCA [Abend and Rappoport, 2013a], we show that the annotation principles and examples can be easily extended to French. This is presented in Appendix 1 of the work as a UCCA annotation guide to French. Articles which are specific to French appeared with an

asterik (∗). The other articles appear as in the original guideline with the addition of examples in French (instead of English), showing that such annotation rules are consistent with French and applicable to it.

- **Coverage of grammatical phenomena in French by UCCA annotation**

  For checking the coverage of known grammatical phenomena in French by UCCA annotation, we use a French grammar book : "French Grammar and Usage" [Hawkins and Towell, 2001]. A detailed analysis which follows the book's entries is provided in Appendix 2, focusing on Nouns, Determiners, Pronouns and Adjectives. For each case, we present the description of the grammatical phenomenon (in *italic*) as it appears in the book, the way UCCA annotation treats it and finally, an annotation of the examples in French given in the book. In cases which are similar to English, the annotation in French follows the annotation rules in English. Furthermore, we show that even in cases which are specific to French, UCCA general principles permit the formulation of annotation rules (referring only to the foundational layer) which cover these cases. Examples of the latter cases are provided in Section 3.2.2. Since we focus on the foundational layer of UCCA which does not annotate tense and agreement, these subjects are not treated here. Morphology is not analyzed except of one case presented in the following Section (3.2.2) as an example for UCCA application to French.

3.2.2 Examples of UCCA application to French

Multiple labels

The foudational layer of UCCA does not annotate morphology. However, they are cases in French where two words from different UCCA categories are contracted in a single word. In these cases, UCCA annotation allows the assignment of two categories to a single word. For example, a word can be annotated as both E and R. It happens where there is a contraction due to phonological reasons of the Relator "de" ("of") and the Elaborator "le" ("the"), forming the word "du". In the same way "de" and "les" (plural "the") form

the word "des" (which should not be confounded with the indefinite determinant "des" which is annotated as E). The same phenomenon happens with the Relator "à" ("to") which form the word "au" when it is fused with "le" and the word "aux" when it is fused with "les".

Examples

(3.19) Des_{E} $\text{gateaux}_{\text{C}}$ $[\text{au}_{\text{R+E}}$ $\text{chocolat}_{\text{C}}]_{\text{E}}$ (Chocolate cakes)

(3.20) Le_{E} roi_{C} $[\text{du}_{\text{R+E}}$ $\text{Maroc}_{\text{C}}]_{\text{E}}$ (The king of Marocco)

(3.21) Le_{E} $\text{président}_{\text{C}}$ $[\text{des}_{\text{R+E}}$ $\text{Etats-Unis}_{\text{C}}]_{\text{E}}$ (The president of the United-States)

(3.22) J'_{A} irai_{P} $[\text{aux}_{\text{R+E}}$ $\text{Etats-Unis}_{\text{C}}]_{\text{A}}$. (I will go to the United-States.)

Another case of multiple labels is the Contraction of a State and a Participant. Indeed, the words "voici" and "voilà" in French can be used to indicate in the same time a state (like "there is"/ "il y a") and a location (another location cannot be added). As we saw in case of Elaborators and Relators, UCCA annotation allows multiple categories for a single word in these cases. Therefore, the annotation should be S+A. From an ethymological point of view, "voici" and "voilà" are contractions of "vois" ("see", second person singular imperative) and of "ici" ("here") and "là" ("there").

Examples

(3.23) $[\text{Nous}]_{\text{A}}$ $[\text{voici}]_{\text{S+A}}$. (Here we are.)

(3.24) $[\text{Les}]_{\text{A}}$ $[\text{voilà}]_{\text{S+A}}$. (There they are.)

Reflexive pronouns

In French, in addition to the counterparts of "himself" or "themselves" ("lui-même", "eux-mêmes"), the reflexivity is also represented by the pronouns "se/me/te/nous/vous" which precede reflexive verbs (pronominal verbs). Using UCCA principles, we formulate annotation rules treating this phenomenon in French. A key guideline is that the annotation of a word does not depend on its part of speech but rather on its meaning and role in the context. In the case of reflexive pronouns in French, we distinguish between the following cases:

- Cases where the reflexivity add another argument and states a main relation between

two arguments (which refer to the same individual) . In these cases the pronouns should be annotated as A.

Examples:

(3.25) $[\text{Jean}]_{\text{A}}$ $[\text{s'}]_{\text{A}}$ $[\text{est}_{\text{F}}$ $\text{lavé}_{\text{C}}]_{\text{P}}$. (Jean washed himself.)

(3.26) $[\text{Jean}]_{\text{A}}$ $[\text{s'}]_{\text{A}}$ $[\text{est}_{\text{F}}$ $\text{acheté}_{\text{C}}]_{\text{P}}$ $[\text{une}_{\text{E}}$ $\text{voiture}_{\text{C}}]_{\text{P}}$. (Jean bought a car for himself.)

- Cases where the pronoun changes in an unpredictable way the original of the verb or alternatively, the verb appears only at a pronominal form. Here the reflexivity is implicit or nonexistent. In these cases the pronoun should be part of the P and the whole P should be unanalyzable.

  Examples:

  (3.27) $[\text{Il}]_{\text{A}}$ $[[\text{s'}]_{\text{C}-}$-$[\text{est}]_{\text{F}}$ $[\text{aperu}]_{-\text{C(CONT.)}}]_{\text{P}}$ $[\text{qu'}_{\text{F}}$ il_{F} $[\text{tait}_{\text{F}}$ $\text{tard}_{\text{C}}]_{\text{S}}]_{\text{A}}$. (He realized that it was late.)

  (3.28)$[\text{Je}]_{\text{A}}$ $[\text{me doute}]_{\text{P}}$ $[\text{de}_{\text{R}}$ l'_{E} impact_{C} $[\text{de}_{\text{R}}$ la_{E} $\text{decision}_{\text{C}}]_{\text{E}}]_{\text{A}}$. (I guess the impact of the decision.)

  (3.29) $[\text{Il}]_{\text{A}}$ $[[\text{s'}]_{\text{C}-}$ $[\text{est}]_{\text{F}}$ $[\text{suicidé}]_{-\text{C(CONT.)}}]_{\text{P}}$ (He committed suicide.)

- Cases where the pronoun introduces an individual action in a reflexive form without really adding a new participant. In these cases the pronoun should be part of the P and will be annotated as E.

  Examples:

  (3.30) $[\text{Il}]_{\text{A}}$ $[\text{s'}_{\text{E}}$ est_{F} $\text{réveillé}_{\text{C}}]_{\text{P}}$ $[\text{tôt}]_{\text{D}}$. (He woke up early.)

  (3.31) $[\text{Jean}]_{\text{A}}$ $[\text{s'}_{\text{E}}$ $\text{assit}_{\text{C}}]_{\text{P}}$ $[[\text{près}_{\text{C}}$ $\text{de}_{\text{R}}]_{\text{E}}$ $[\text{la}_{\text{E}}$ $\text{fenêtre}_{\text{C}}]_{\text{C}}$.

  (Jean sat down near the window.)

  (3.32) $[\text{Il}]_{\text{A}}$ $[[\text{s'}_{\text{E}}$ est_{F} $\text{arrêté}_{\text{C}}]_{\text{E}}$ de_{F} $\text{jouer}_{\text{C}}]_{\text{P}}$ $[\text{du}_{\text{R+E}}$ $\text{piano}_{\text{C}}]_{\text{A}}$.

  (He stopped playing piano.)

  (3.33) $[\text{Il}]_{\text{A}}$ $[\text{s'}_{\text{E}}$ est_{F} $\text{noyé}_{\text{C}}]_{\text{P}}$ $[\text{dans}_{\text{R}}$ la_{E} $\text{rivière}_{\text{C}}]_{\text{A}}$. (He drowned in the river.)

- Cases where the pronoun indicates a reciprocal action. In these cases the pronoun should be part of the P and will be annotated as E.

  Examples:

(3.34) [Nous]$_{\mathrm{A}}$ [nous$_{\mathrm{E}}$ sommes$_{\mathrm{F}}$ rencontrés$_{\mathrm{C}}$]$_{\mathrm{P}}$ [hier]$_{\mathrm{D}}$. (We met yesterday.)

(3.35) [Nous]$_{\mathrm{A}}$ [nous$_{\mathrm{E}}$ parlerons$_{\mathrm{C}}$]$_{\mathrm{A}}$ [demain]$_{\mathrm{D}}$. (We shall talk tomorrow.)

- Cases where the pronoun indicates a passive action. In these cases the pronoun should be part of the P and will be annotated as E.

  Example:

  (3.36) [Soudainement]$_{\mathrm{L}}$ [[la$_{\mathrm{E}}$ porte$_{\mathrm{C}}$]$_{\mathrm{A}}$ [s'$_{\mathrm{E}}$ est$_{\mathrm{F}}$ ouverte$_{\mathrm{C}}$]$_{\mathrm{P}}$]$_{\mathrm{H,IMPLICIT-A}}$. (Suddenly the door opened.)

3.3 Structure conservation and cross-linguistic divergences: Comparing UCCA annotation in English and French

3.3.1 UCCA annotation in cases of traditional translation divergences

As we saw in Chapter 2, cross-lingual divergences are one of the main challenges in machine translation. Works in interlingua-based translation like those of Dorr [1994], Dorr et al. [2002] adopting a point of view frequent in theory of translation, trying to formalize and categorize explicitly the differences between languages and then trying to find solutions for these cases. We will give here some examples of translation divergences presented in Dorr et al. [2002, 2004], Dorr [1994]. We add here to the examples in English and Spanish some relevant examples in French. Then, consequently to each example, we present the annotation according to UCCA.

- **Categorical divergence**: The translation of words in one language into words that have different parts of speech in another language. For example, "to be jealous" - "tener celos"(to have jealousy) or in English/French: "to be cold" - "avoir froid"(to have cold). UCCA annotation:

  (3.37) [to$_{\mathrm{F}}$ be$_{\mathrm{F}}$ jealous$_{\mathrm{C}}$]$_{\mathrm{P}}$ - [tener$_{\mathrm{F}}$ celos$_{\mathrm{C}}$]$_{\mathrm{P}}$, [to$_{\mathrm{F}}$ be$_{\mathrm{F}}$ cold$_{\mathrm{C}}$]$_{\mathrm{P}}$ - [avoir$_{\mathrm{F}}$ froid$_{\mathrm{C}}$]$_{\mathrm{P}}$

- **Conflational divergence**: The translation of two or more words in one language into one word in another language. For example: "to kick" - "dar una patada"(give a kick).

  UCCA annotation:

  (3.38) $[\text{to}_{\text{F}}\ \text{kick}_{\text{C}}]_{\text{P}}$ - $[[\text{dar}]_{\text{F}}\ [\text{una}_{\text{E}}\ \text{patada}_{\text{C}}]_{\text{C}}]_{\text{P}}$

- **Structural divergence**: The realization of verb arguments in different syntactic configurations in different languages. For example, "to enter the house" - "entrar en la casa"(enter in the house) or in French: "entrer dans la maison" (enter in the house).

  UCCA annotation:

  (3.39) $[\text{to}_{\text{F}}\ \text{enter}_{\text{C}}]_{\text{P}}\ [\text{the}_{\text{E}}\ \text{house}_{\text{C}}]_{\text{A}}$ - $[\text{entrar}]_{\text{P}}\ [\text{en}_{\text{R}}\ \text{la}_{\text{E}}\ \text{casa}_{\text{C}}]_{\text{A}}$ - $[\text{entrer}]_{\text{P}}\ [\text{dans}_{\text{R}}\ \text{la}_{\text{E}}\ \text{maison}_{\text{C}}]_{\text{A}}$

- **Thematic divergence**: The realization of verb arguments in syntactic configurations that reflect different thematic to syntactic mapping orders. For example, "I like grapes" - "me gustan uvas"(to me please grapes).

  UCCA annotation:

  (3.40) $[\text{I}]_{\text{A}}\ [\text{like}]_{\text{P}}\ [\text{grapes}]_{\text{A}}$ - $[\text{me}]_{\text{A}}\ [\text{gustan}]_{\text{P}}\ [\text{uvas}]_{\text{A}}$

- **Head swapping divergence**: The inversion of a structural dominance relation between two semantically equivalent words when translating from one language to another. For example, "to run in" - "entrar corriendo"(enter running) or in French: "enter en courant"(enter running).

  UCCA annotation:

  (3.41) $[\text{to}_{\text{F}}\ \text{run}_{\text{C}}]_{\text{P}}\ [\text{in}]_{\text{A}}$ - $[\text{entrar}_{\text{C}}\ \text{corriendo}_{\text{E}}]_{\text{P}}$ - $[\text{entrer}_{\text{C}}\ [\text{en}_{\text{F}}\ \text{courant}_{\text{C}}]_{\text{E}}]_{\text{P}}$

- **Promotional divergence**(presented as a subcase of head-swapping divergence): John usually goes home - John suele ir a casa (John tends to go home).

  UCCA annotation:

  (3.42) $[\text{John}]_{\text{A}}\ [\text{usually}]_{\text{D}}\ [\text{goes}]_{\text{P}}\ [\text{home}]_{\text{A}}$ - $[\text{John}]_{\text{A}}\ [\text{suele}_{\text{E}}\ \text{ir}_{\text{C}}]_{\text{P}}\ [\text{a}_{\text{R}}\ \text{casa}_{\text{C}}]_{\text{A}}$

We can see that, beside the two last cases of divergences, UCCA annotation conserves the main structures across languages. UCCA structure, while conserving main structures, permits also one to differentiate later between the nuances that exist between languages. For example, a version of Semantic Role Labeling can differentiate the subject and the object in the case of thematic divergence. Let look now at the cases of divergence presented here where UCCA annotation is different across languages. The first one, exemplifies by the example "to run in" - "entrer en courant". The word "in", as a location, was annotated as A. Alternatively, "in" can be seen as a Relator of an implicit Participant. However, in both cases the annotation describes a change in the main relation. The difference in the example "John usually goes home" - "John suele ir a casa" is the transformation of a D in the Scene to an Elaborator inside the Process. This is a minor difference since both cases are modifications of the main relation (the Process).

3.3.2 Conservation of the number of Participants in the Scene

In order to check if UCCA annotation preserves the main language structures in English and French, one step is to see whether in the two languages the same Participants appear within the Scene. We study this issue with the help of the French English book used in Section 3.2 [Hawkins and Towell, 2001]. Section 3.3.2 summaries cases where there is an addition or an absence of a subject/object pronoun in one of the languages but the number of Participants remains the same. These phenomena are covered by the foundational layer of UCCA, using categories like F and the option of implicit Participant. Section 3.3.2 shows cases where there is an additional Participant in one of the languages. Such phenomenon will be studied to a greater extent in the bilingual corpus analysis in Chapter 4.

Cases covered by the foundational layer of UCCA

Cases where there is an additional pronoun in French.

Questions with subject-verb inversion. One way to ask yes/no questions in French is the inversion between the subject and the verb. However, the inversion can be done only with pronouns so in case the subject is not a pronoun, a corresponding pronoun is added. It is not an addition of a participant neither an elaboration so it is annotated as F. This fact is true also in questions with interrogative pronouns and other stylistic pronoun-verb inversions where the participant already appeared.

(3.43) fr: $[\text{Jean}]_{\text{A}}$ $[\text{est}_{\text{F}}]_{\text{P}-}$-$[\text{il}]_{\text{F}}$ $[\text{parti}_{\text{C}}]_{-\text{P(CONT.)}}$?

eng: $[\text{Did}]_{\text{F}}$ $[\text{Jean}]_{\text{A}}$ $[\text{leave}]_{\text{P}}$?

(3.44) fr: $[\text{Quand}]_{\text{D}}$ $[\text{Jean}]_{\text{A}}$ $[\text{a}_{\text{F}}]_{\text{P}}$-$[\text{t-il}]_{\text{F}}$ $[\text{gagné}_{\text{C}}]_{-\text{P(CONT.)}}$?

eng: $[\text{When}]_{\text{D}}$ $[\text{did}_{\text{F}}]_{\text{P}-}$ $[\text{Jean}]_{\text{A}}$ $[\text{win}]_{-\text{P(CONT.)}}$

Here the inversion in French requires for phonological reasons the addition of "t" which is included in the Function.

(3.45) fr: $[[\text{Les}_{\text{E}}\ \text{francais}_{\text{C}}]_{\text{A}}$ $[\text{choisissent}]_{\text{P}}$ - $[\text{ils}]_{\text{F}}$ $[\text{encore}]_{\text{D}}]_{\text{H}-}$, $[\text{malgré}]_{\text{L}}$ [la concurrence puissante que fait La France$]_{\text{H}}$, $[[\text{la ligne Cunard}]_{\text{A}}$, [de préférence à toute autre$]_{\text{D}}]_{\text{H(CONT.)}}$, [ainsi qu′$]_{\text{L}}$ [il appert d'un relevé fait sur les documents officiels des dernières années$]_{\text{H}}$.

eng: [Accordingly$]_{\text{L}}$, [despite$]_{\text{L}}$ [strong competition from France$]_{\text{H}}$, $[[\text{passengers}]_{\text{A}}$ $[\text{still}]_{\text{D}}$ $[\text{choose}]_{\text{P}}$ [the Cunard line$]_{\text{A}}$ [in preference to all others$]_{\text{D}}]_{\text{H}}$, $[\text{as}]_{\text{L}}$ [can be seen in a recent survey of official documents$]_{\text{H}}$.

(from "20K leagues under the sea", Jules Verne, translator: F.P. Walter

When a pronoun is added for emphasis, it is annotated as F. Sometimes, this phenomenon occurs only in one language. However, it doesn't change the number of Participants in the Scene.

(3.46) fr: $[[\text{L}'_{\text{E}}\ \text{extérieur}_{\text{C}}]_{\text{A}}$, $[\text{ce}]_{\text{F}}$ $[[\text{n}']_{\text{C}}$- $[\text{est}]_{\text{F}}$ $[\text{rien}]_{-\text{C(CONT.)}}]_{\text{S}}]_{\text{H}}$. $[[\text{Il}]_{\text{F}}$ $[\text{faudrait}_{\text{E}}\ \text{voir}_{\text{C}}]_{\text{P}}$ $[\text{l}'_{\text{E}}\ \text{intérieur}_{\text{C}}]_{\text{A}}]_{\text{H,IMPLICIT}-\text{A}}$

eng: $[[\text{The}_{\text{E}}\ \text{outside}_{\text{C}}]_{\text{A}}$ $[\text{is}_{\text{F}}\ \text{nothing}_{\text{C}}]_{\text{S}}]_{\text{H}}$. $[[\text{You}]_{\text{A}}$ $[\text{should}_{\text{E}}\ \text{see}_{\text{C}}]_{\text{P}}$ $[\text{the}_{\text{E}}\ \text{inside}_{\text{C}}]_{\text{A}}]_{\text{H}}$.

(3.47) fr: $[\text{Puisque}]_{\text{L}}$ $[\text{personne d'autre ne le fait}]_{\text{H}}$, $[[\text{Suzanne}]_{\text{A}}$ $[\text{ s}']_{\text{A}}$ $[\text{admire}]_{\text{P}}$ $[\text{elle-même}]_{\text{F}}]_{\text{H}}$!

eng: $[\text{Since}]_{\text{L}}$ $[\text{no-one else does so}]_{\text{H}}$, $[[\text{Suzanne}]_{\text{A}}$ $[\text{admires}]_{\text{P}}$ $[\text{herself}]_{\text{A}}]_{\text{H}}$!

Cases where there is an additional pronoun in English. The English constructions "find it difficult to", "consider it easy to", "reckon it possible that", and similar cases, have French counterparts in which "le" must not appear. The verbs usually involved are "croire", "penser", "trouver", "juger", "estimer", "considérer". However, there is not an additional Participant in English so "it" is marked as F.

(3.48) fr: $[\text{Il}]_{\text{A}}$ $[\text{considère}]_{\text{P}}$ $[[\text{important}]_{\text{S}}$ $[[\text{que}]_{\text{F}}[\text{tous}_{\text{E}}$ ses_{E} $\text{amis}_{\text{C}}]_{\text{A}}$ $[\text{soient}_{\text{F}}$ $\text{prévenus}_{\text{C}}]_{\text{P}}]_{\text{A,IMPLICIT}-\text{A}}]_{\text{A}}$.

eng: $[\text{He}]_{\text{A}}$ $[\text{considers}]_{\text{P}}$ $[\text{it}]_{\text{F}}$ $[[\text{important}]_{\text{S}}$ $[\text{that}]_{\text{F}}$ $[[\text{all}_{\text{E}}$ his_{E} $\text{friends}_{\text{C}}]_{\text{A}}$ $[\text{be}_{\text{F}}$ $\text{notified}_{\text{C}}]_{\text{S}}]_{\text{A,IMPLICIT}-\text{A}}]_{\text{A}}$.

Cases where "on" in French is equivalent to an implicit Participant in English. A construction with "on" can often be used where a passive is used in English. "on" is annotated as A. We can see that in these cases the number of Participants will be equal in French and in English because in the English annotation we add an implicit Participant.

(3.49) fr: $[[\text{On}]_{\text{A}}$ $[\text{croyait}]_{\text{P}}$ $[[[\text{la}]_{\text{E}}$ $[\text{crise}]_{\text{C}}$ $[\text{du}_{\text{R}}$ $\text{logement}_{\text{C}}]_{\text{E}}]_{\text{A}}$ $[\text{réglée}]_{\text{P}}]_{\text{A}}]_{\text{H}}$.

eng: $[[[\text{The}_{\text{E}}$ $\text{housing}_{\text{E}}$ $\text{shortage}_{\text{C}}]_{\text{A}}]_{\text{A}-}$ $[\text{was}_{\text{F}}]_{\text{P}}$ $[\text{thought}_{\text{C}}]_{\text{P}}$ $[[\text{to}_{\text{F}}$ be_{F} $\text{over}_{\text{C}}]_{\text{P}}]_{-\text{A(CONT.)}}]_{\text{H,IMPLICIT}-\text{A}}$

(3.50) fr: $[[\text{On}]_{\text{A}}$ $[\text{sait}]_{\text{P}}$ $[\text{qu}']_{\text{F}}$ $[[\text{il}]_{\text{A}}$ $[[\text{a}]_{\text{F}}$ $[\text{eu}]_{\text{F}}$ $[\text{des}_{\text{E}}$ $\text{démêlés}_{\text{C}}]_{\text{C}}]_{\text{P}}$ $[\text{avec}_{\text{R}}$ la_{E} $\text{police}_{\text{C}}]_{\text{A}}]_{\text{A}}]_{\text{H}}$, $[\text{mais}]_{\text{L}}$ $[[[\text{on}]_{\text{A}}$ $[\text{ne}]_{\text{D}-}$ $[\text{sait}]_{\text{P}}$ $[\text{pas}]_{-\text{D(CONT.)}}$ $[\text{pourquoi}]_{\text{A}}]_{\text{H}}$.

eng: $[[\text{It}]_{\text{F}}$ $[\text{is}_{\text{F}}$ well_{E} $\text{known}_{\text{C}}]_{\text{P}}$ $[\text{that}]_{\text{F}}$ $[[\text{he}]_{\text{A}}$ $[\text{was}_{\text{F}}]_{\text{P}-}$ $[\text{once}]_{\text{D}}$ $[[\text{in}_{\text{R}}$ $\text{trouble}_{\text{C}}]_{\text{C}}]_{-\text{P(CONT.)}}$ $[\text{with}_{\text{R}}$ the_{E} $\text{police}_{\text{C}}]]_{\text{A}}]_{\text{H}-\text{IMPLICIT}-\text{A}}$, $[\text{but}]_{\text{L}}$ $[[\text{it}]_{\text{F}}$ $[\text{is}_{\text{F}}]_{\text{P}-}$ $[\text{not}]_{\text{D}}$ $[\text{known}_{\text{C}}]_{-\text{P(CONT.)}}$
$[\text{why}]_{\text{A}}]_{\text{H}-\text{IMPLICIT}-\text{A}}$.

Cases where a pronoun in English is equivalent to an implicit Participant in French.

(3.51) fr: $[[\text{L}'_{\text{E}}$ extérieur$]_{\text{A}}$, $[\text{ce}]_{\text{F}}$ $[[\text{n}']_{\text{C}-}$ $[\text{est}]_{\text{F}}$ $[\text{rien}]_{-\text{C(CONT.)}}]_{\text{S}}]_{\text{H}}$. $[[\text{Il}]_{\text{F}}$ $[\text{faudrait}_{\text{E}}$ $\text{voir}_{\text{C}}]_{\text{P}}$ $[\text{l}'_{\text{E}}$ $\text{intérieur}_{\text{C}}]_{\text{A}}]_{\text{H,IMPLICIT}-\text{A}}$.

eng: $[[\text{The}_{\text{E}}$ $\text{outside}_{\text{C}}]_{\text{A}}$ $[\text{is}_{\text{F}}$ $\text{nothing}_{\text{C}}]_{\text{S}}]_{\text{H}}$. $[[\text{You}]_{\text{A}}$ $[\text{should}_{\text{E}}$ $\text{see}_{\text{C}}]_{\text{P}}$ $[\text{the}_{\text{E}}$ $\text{inside}_{\text{C}}]_{\text{A}}]_{\text{H}}$.

Cases where the number of Participants is not conserved by the foundational layer of UCCA

Use of possessive determiners instead of object pronouns in one of languages.

A possessive in English and an additional participant in French: Constructions with body parts and similar constructions. When people do things which affect their own bodies, or those of others, the usual construction is a definite article in front of the body part, and a reflexive or indirect object pronoun. The definite article is annotated as E. The indirect object noun add here a new Participant as well as the reflexives in the examples below. In this case there is an additional Participant in the Scene comparing to English. However, the additional Participant can be recovered in English by specifying the referent of the possessive pronoun.

(3.52) fr: $[\text{Je}]_{\text{A}}$ $[\text{me}]_{\text{A}}$ $[\text{suis}_{\text{F}}$ $\text{fracturé}_{\text{C}}]_{\text{P}}$ $[\text{la}_{\text{E}}$ $\text{jambe}_{\text{C}}]_{\text{A}}$

eng: $[\text{I}]_{\text{A}}$ $[\text{broke}]_{\text{P}}$ $[\text{my}_{\text{E}}$ $\text{leg}_{\text{C}}]_{\text{A}}$

(3.53) fr: $[\text{Je}]_{\text{A}}$ $[\text{lui}]_{\text{A}}$ $[\text{serre}]_{\text{P}}$ $[\text{la}_{\text{E}}$ $\text{main}_{\text{C}}]_{\text{A}}$

eng: $[\text{I}]_{\text{A}}$ $[\text{shake}]_{\text{P}}$ $[\text{his}_{\text{E}}$ $\text{hand}_{\text{C}}]_{\text{A}}$

(3.54) fr: $[\text{On}]_{\text{A}}$ $[\text{lui}]_{\text{A}}$ $[\text{a}_{\text{F}}$ $\text{coupé}_{\text{C}}]_{\text{P}}$ $[\text{la}_{\text{E}}$ $\text{tête}_{\text{C}}]_{\text{A}}$

eng: $[\text{They}]_{\text{A}}$ $[\text{cut}]_{\text{P}-}$ [hisE $\text{head}_{\text{C}}]_{\text{A}}$ $[\text{off}]_{-\text{P(CONT.)}}$

(3.55) fr: $[\text{Elle}]_{\text{A}}$ $[\text{lui}]_{\text{A}}$ $[\text{essuie}]_{\text{P}}$ $[\text{les}_{\text{E}}$ $\text{yeux}_{\text{C}}]_{\text{A}}$ $[\text{avec}_{\text{R}}$ un_{E} $\text{mouchoir}_{\text{C}}]_{\text{A}}$

eng: $[\text{She}]_{\text{A}}$ $[\text{wipes}]_{\text{P}}$ $[\text{his}_{\text{E}}$ $\text{eyes}_{\text{C}}]_{\text{A}}$ $[\text{with}_{\text{R}}$ a_{E} $\text{handkerchief}_{\text{C}}]_{\text{A}}$

The indirect object construction in French is not possible with verbs which do not describe actions.

(3.56) fr: $[\text{Elle}]_{\text{A}}$ $[\text{aime}]_{\text{P}}$ $[\text{son}_{\text{E}}$ $\text{visage}_{\text{C}}]_{\text{A}}$.

eng: $[\text{She}]_{\text{A}}$ $[\text{likes}]_{\text{P}}$ $[\text{his}_{\text{E}}$ $\text{face}_{\text{C}}]_{\text{A}}$.

This construction can be found with non-body parts in some regional varieties of French:

(3.57) fr: $[\text{Elle}]_{\text{A}}$ $[\text{lui}]_{\text{A}}$ $[\text{a}_{\text{F}}$ $\text{cassé}_{\text{C}}]_{\text{P}}$ $[\text{le}_{\text{E}}$ $\text{magnétoscope}_{\text{C}}]_{\text{A}}$.

eng: $[\text{She}]_{\text{A}}$ $[\text{broke}]_{\text{P}}$ $[[\text{his}]_{\text{E}}$ $[\text{video recorder}]_{\text{C}}]_{\text{A}}$.

In the following examples there is an additional Participant in the Scene in English comparing to English. Here the expression "faire connaissance de/avec" or "faire la connaissance de" ("make acquaintance", "to meet for the first time") is annotated as P but the Participant "vous" doesn't appear in French. Instead, a possessive determiner is inserted in the expression, preceding the word "connaissance". However, the additional Participant can be recovered in French by specifying the refer of the possessive pronoun.

(3.58) fr: $[\text{Je}]_{\text{A}}$ $[\text{suis}_{\text{F}}$ très_{E} $\text{heureux}_{\text{C}}]_{\text{S}}$ $[[[\text{de}]\text{F}$ $[\text{faire}]_{\text{F}}$ $[\text{votre}]_{\text{E}}$ $[\text{connaissance}]_{\text{C}}]_{\text{P}}]_{\text{A,REMOTE-A}(''\text{je}'')}$.

eng: $[\text{I}]_{\text{A}}$ $[\text{am}_{\text{F}}$ very_{E} $\text{pleased}_{\text{C}}]_{\text{S}}$ $[[\text{to}_{\text{F}}$ $\text{meet}_{\text{C}}]_{\text{P}}$ $[\text{you}]_{\text{A}}]_{\text{A,REMOTE-A}(''\text{I}'')}$.

In this case, maybe, an alternative annotation which conserve the number of Participants is possible, but then the fact than "votre" is an Elaborator of "connaissance" is dismissed by the annotation.

(3.59) fr: $[\text{Je}]_{\text{A}}$ $[\text{suis}_{\text{F}}$ très_{E} $\text{heureux}_{\text{C}}]_{\text{S}}$ $[[\text{de}_{\text{F}}$ $\text{faire}_{\text{F}}]_{\text{P-}}$ $[\text{votre}]_{\text{A}}$ $[\text{connaissance}_{\text{C}}]_{-\text{P(CONT.)}}]_{\text{A,REMOTE-A}(''\text{je}'')}$

eng: $[\text{I}]_{\text{A}}$ $[\text{am}_{\text{F}}$ very_{E} $\text{pleased}_{\text{C}}]_{\text{S}}$ $[[\text{to}_{\text{F}}$ $\text{meet}_{\text{C}}]_{\text{P}}$ $[\text{you}]_{\text{A}}]_{\text{A,REMOTE-A}(''\text{I}'')}$.

This alternative annotation seems more unnatural in the following example. Here the expression which corresponds to the Process in the Scene is "faire la rencontre de" (literally "do the meeting of") where here, the article "la" cannot be omitted in the absence of possessives. The possessive determiner "vous", which appears in French instead of an indirect pronoun in English replaces the definite article "la" in the expression.

(3.60) fr: $[\text{Je}]_{\text{A}}$ $[\text{suis}_{\text{F}}$ très_{E} $\text{heureux}_{\text{C}}]_{\text{S}}$ $[[[\text{de}]_{\text{F}}$ $[\text{faire}]_{\text{F}}$ $[\text{votre}]_{\text{E}}$ $[\text{rencontre}]_{\text{C}}]_{\text{P}}]_{\text{A,REMOTE-A(''je'')}}$

eng: $[\text{I}]_{\text{A}}$ $[\text{am}_{\text{F}}$ very_{E} $\text{pleased}_{\text{C}}]_{\text{S}}$ $[[\text{to}_{\text{F}}$ $\text{meet}_{\text{C}}]_{\text{P}}$ $[\text{you}]_{\text{A}}]_{\text{A,REMOTE-A(''I'')}}$.

Additional Participants in one of languages in some reflexive constructions.

Additional Participant in French in some reflexive benefactive constructions. In some benefactive forms, there is an additional pronoun in French which is annotated as A. Therefore, in French, there is a additional Participant in the Scene. In the English annotation, we don't add an implicit Participant but the benefactive meaning "for himself" appears automatically.

(3.61) fr: $[\text{Je}]_{\text{A}}$ $[\text{trouve}]_{\text{P}}$ $[[\text{difficile}]_{\text{S}}$ $[[\text{de}_{\text{F}}]_{\text{P-}}$ $[\text{me}]_{\text{A}}$ $[\text{faire}_{\text{C}}]_{\text{P(CONT.)}}$ $[\text{des}_{\text{E}}$ $\text{amis}_{\text{C}}]_{\text{A}}]_{\text{A-REMOTE-A(''je'')}}]_{\text{A}}$

eng: $[\text{I}]_{\text{A}}$ $[\text{find}]_{\text{P}}$ $[\text{it}]_{\text{F}}$ $[[\text{difficult}]_{\text{S}}$ $[[\text{to}_{\text{F}}$ $\text{make}_{\text{C}}]_{\text{P}}$ $[\text{friends}]_{\text{A}}]_{\text{A-REMOTE-A(''I'')}}]_{\text{A}}$

(3.62) fr: $[\text{Il}]_{\text{A}}$ $[\text{s}']_{\text{A}}$ $[\text{est}_{\text{F}}$ $\text{fait}_{\text{C}}/\text{trouvé}_{\text{C}}]_{\text{P}}$ $[\text{un}_{\text{E}}$ nouvel_{E} $\text{ami}_{\text{C}}/\text{un}_{\text{E}}$ nouvel_{E} $\text{ennemi}_{\text{C}}]_{\text{A}}$ $[\text{là} - \text{bas}]_{\text{A}}$.

eng: $[\text{He}]_{\text{A}}$ $[\text{made/found}]_{\text{P}}$ $[\text{there}]_{\text{A}}$ $[\text{a}_{\text{E}}$ new_{E} $\text{friend}_{\text{C}}/\text{a}_{\text{E}}$ new_{E} $\text{enemy}_{\text{C}}]_{\text{A}}$

"Self + adjective" English constructions where the reflexivity is indicated in the State itself. There are cases in English, like in the following example, where the reflexivity is indicated by the addition of "self" to the adjective constituting the State in the Scene. In this case, there is an additional Participant in French since the reflexive action is indicated by the addition of a pronoun annotated as A.

(3.63) fr: $[\text{Ces}_{\text{E}}$ jeunes_{E} $\text{femmes}_{\text{C}}]_{\text{A}}$ $[\text{sont}_{\text{F}}$ très_{E} $\text{sûres}_{\text{C}}]_{\text{S}}$ $[\text{d}'_{\text{R}}$ $\text{elles}_{\text{C}}]_{\text{A}}$.

eng: $[\text{These}_{\text{E}}$ young_{E} $\text{women}_{\text{C}}]_{\text{A}}$ $[\text{are}_{\text{F}}$ very_{E} $\text{self-confident}_{\text{C}}]_{\text{S}}$.

Chapter 4

UCCA Annotation in English and French: Bilingual Corpus Analysis

4.1 Annotation of a Parallel Corpus with UCCA annotation

4.1.1 The Parallel Corpus

The French-English corpus used here is an extract of the book *Twenty Thousand Leagues Under the Sea* (in French, *Vingt Mille Lieues Sous les Mers* [Verne, 1870]), the classic science novel written in French by Jules Verne (1828-1905) and published in 1870 . We used an online version of the book, from the site `http://fr.wikisource.org/wiki/Vingt_mille_lieues_sous_les_mers` together with the English translation by J.P. Walter (1991) edited to HTML by Zvi HarEl (`http://jv.gilead.org.il/fpwalter`). The choice of such a corpus, rather than a more technical one, for a bilingual analysis with UCCA annotation permits one to check the similarities and the differences in a context where a literal translation is not necessary. The causes of such differences, including free translation are then evaluated manually. Each one of the two monolingual parts of the Corpus contain approximately 500 sentences and about 15K tokens.

4.1.2 Initial Alignment

Each monolingual corpus (in French and in English) is fragmented into 154 Passages where there is an alignment between English and French Passages. Each Passage is numbered and every Passage in French corresponds to a single Passage in English. We thus have 154 parallel (bilingual) Passages. The Passages correspond to the paragraphs in the original texts except in some cases of dialogues where we split a paragraph in two or more Passages in a way that conserves the alignment between the two monolingual corpora. The bilingual corpus in thus also aligned at the paragraph level. The alignment at the sentence level is not necessary in our analysis since in UCCA annotation, as we saw in Chapter 3, the text is viewed as a collection of Scenes and the sentence boundaries do not play a role in the annotation.

4.1.3 The Manual Annotation

The annotation is done using UCCA's web application presented in Abend and Rappoport [2013a]. We annotated manually both French and English corpora according to UCCA annotation's rules as presented in Chapter 3 and in Appendix 1. Concerning the issue of multiple labels in French discussed there, the information about an additional category for a given unit is also integrated in the web application. The annotation was not done simultaneously in English and French, permitting cases where the same linguistic form in English and French is subject to different interpretations, leading to different annotations. This effect on the differences in UCCA annotation in English and French is evaluated in the following analysis.

4.2 Bilingual Analysis of Scenes

4.2.1 Scene Identification and General Statistics

The statistical data about number of Scenes in French and English is obtained using automatic tools for the identification of UCCA categories on the xml files extracted from

	Scenes in French	Scenes in English	Scenes Divergences
Total	1424	1462	184
Mean	9.25	9.49	1.19

Table 4.1: Scenes and Scene Divergences in the French-English corpus (154 Passages). The Mean of Scenes and Scene Divergences represent respectively the average number of Scenes and Scene Divergences in a Passage.

the web application. We also used the initial alignment between Passages described in Section 4.1.2. Each Scene contains one main relation (Process or State). However, we also took into account in the analysis parallel Scenes marked as unanalyzable (For example: Hello!). We did not take into account Scenes appearing as remote Participants, avoiding redundancy in the bilingual analysis.

As we can see in the first two columns of Table 4.1, there are 1424 Scenes in French and 1462 Scenes in English with an average of 9.25 Scenes per Passage in French and of 9.49 in English. The average difference between English and French number of Scenes in a (parallel) Passage is 0.25. There are 2.67% more Scenes in English than in French. Furthermore, the cosine similarity between the vector of the number of Scenes in French Passages and the vector of the number of Scenes in English Passages is ~ 0.995. The two main consequences of this observation is the relatively high similarity in the number of Scenes in French and in English. The second one is the superiority of the number of Scenes in English. However, the number of Passages, although giving us general indications, reflects only partially the similarity and the differences concerning Scenes in the Bilingual Corpus. We thus tried to analyze individually all the cases where a Scene in one language does not correspond to a Scene in the other language, as we will see in the following Sections (4.2.2 and 4.2.3).

4.2.2 Scene Divergences and Parameters for the Analysis

Scene Divergences

We define the concept of *Scene Divergence* (ScDiv) as following. A Scene Divergence occurs when a Scene in one language does not correspond to a Scene in the other language.

This concept refers to translation divergences [Dorr, 1994] discussed in Chapter 3 and to the Scene category in UCCA annotation. Its goal is to capture the cases where the Scene structure is not conserved in a parallel corpus.

Examples from the bilingual corpus:

(4.1) eng: $[\text{of}]_{\text{R}}$ $[\text{the}]_{\text{E}}$ $[\text{ship}]_{\text{C}}$ $[[\text{victimized}]_{\text{P}}$ $[\text{by this new ramming}]_{\text{A}}]_{\text{E,REMOTE-A(''victimized'')}}$

fr: $[\text{du}]_{\text{R+E}}$ $[\text{navire}]_{\text{C}}$ $[[\text{victime}]_{\text{C}}$ $[\text{de ce nouvel abordage}]_{\text{E}}]_{\text{E}}$

(4.2) eng: in_{R} Cosmos_{C} $[[\text{published}]_{\text{P}}$ $[\text{by Father Moigno}]_{\text{A}}]_{\text{E,REMOTE-A(''Cosmos'')}}$

fr: $\text{du}_{\text{R+E}}$ Cosmos_{C} $[\text{de labbé Moigno}]_{\text{E}}$

In example (4.1) the noun "victime" in French describes a result rather than an action as used in the English verb "victimized". Therefore, there is an additional Scene in English, creating a Scene Divergence. In example (4.2), "Cosmos" is a newspaper. The French formulation relates it to Father Moigno without explaining this relation. This is explained and formulated explicitly in the English translation, which adds another Scene.

Scene Divergences can occur also in parallel Passages where the number of Scenes in French and in English is the same, for example if there is one translation divergence which involves an additional Scene in English and independently, another translation divergence which involves an additional Scene in French in the same Passage.

By manually analyzing all the parallel Passages, we found 184 Scene Divergences with an average of 1.19 in a parallel Passage (see Table 4.1). A full list of Scene Divergences in the bilingual corpus as well as their description are presented in Appendix 3. We want to analyze the Scene Divergences, checking their characteristics, their causes, their effects and the way other UCCA categories are involve. For this purpose, we use the features described in the following Section (4.2.2).

Features for Scene Divergences Analysis

In the following list are presented the name of the features accompanied by their description.

1. #ScDiv − Scene Divergence index
2. #PassageEng − English Passage index
3. #PassageFr − French Passage index
4. SameNumSc (1 or 0) − The number of Scenes in the Passage is the same in the two languages.
5. FrenchAdd (1 or 0) − The additional Scene is in French.
6. EnglishAdd (1 or 0) − The additional Scene is in English.
7. LexicalDiff (1 or 0) − The Scene Divergence results from a lexical difference between the languages.
8. StructuralDiff (1 or 0) − The Scene Divergence results from a structural difference between the languages.
9. Action/Attribute (1 or 0) − The Scene Divergence results from the use of an action in one of the languages and the use of an attribute in the other language.
10. Action/Result (1 or 0) − The Scene Divergence results from the use of an action in one of the languages and the use of the result of this action in the other language.
11. StateDescription/Attribute (1 or 0) − The Scene Divergence results from the distinction between the description of a state (or a situation) and the use of a word as an attribute. This difference is often related to adjective/relative clause difference.
12. Noun/Verb (1 or 0) − The Scene Divergence results from the use of a noun in one of the languages and of a verb in the other language. (Generally this issue concerns Conforming Analysis.)
13. Prep/Verb (1 or 0) − A preposition appears in one of the languages instead of the verb in the other language (particular case: With-Without/Verb). Sometimes the preposition replaces the entire Scene.

14. With-Without/Verb (1 or 0) − "with" or "without" constructions appear in one language instead of an additional verb in the other language.

15. Link/MainRel (1 or 0) − The Scene Divergence results from the use of a Linker in one of the languages and of a main relation (Process or State) in the other language.

16. Ground (1 or 0) − The Scene Divergence concerns the Ground category. One case is that the additional Scene can be annotated as Ground. Alternatively, the additional Scene in one of the languages is replaced by a Ground in the second language.

17. Poss1Lang (1 or 0 or NR) − The construction in one of the languages cannot be replicated to the other language. The label NR (Non Relevant) concern cases where in the two languages the forms used are roughly the same.

18. PossOnlyEnglish (1 or 0 or NR) − The construction is only possible in English.

19. PossOnlyFrench (1 or 0 or NR) − The construction is only possible in French.

20. SimTransPoss (1 or 0 or NR) − An English translation more similar to the French formulation is possible.

21. SimSourcePoss (1 or 0 or NR) − There is a construction in French which is similar to the English formulation.

22. FreeTrans (1 or 0) − Free translation.

23. ConfAnalysis (1 or 0) − Conforming Analysis [Abend and Rappoport, 2013a]. This feature refers here to cases where the same structures are used in both languages but the annotations in the two languages are different due to different conceptualizations.

24. NuanceMeaning (1 or 0) − The same annotation (or at least an annotation which conserves the number of Scenes) is possible but the present annotation (which leads to a Scene Divergence) permits the capture of a certain nuance in the meaning.

25. DiffInterpretation (1 or 0) − The Scene Divergence results from a different interpretation (or a different interpretation from those chosen by the translator is possible

and it justifies the present annotation). We put in this category cases where there is a major difference in the meaning (which can be consequences of free translation).

26. AddInfo (1 or 0) − The additional Scene in one of the languages adds information. It can also be a clarification or an explicit formulation of something which is implicit in the other language.

27. AddEmphasis (1or 0) − The additional Scene in one of the languages adds emphasis.

28. PlayOfWords (1 or 0) − The Scene Divergence results from a play of words in one of the languages and eventually from the attempt to explain it.

29. FocusA (1 or 0) − The addition or the deletion of a Scene in one of the languages permits the focus (and sometimes the addition) of a participant, comparing to the other language.

30. TenseInfo (1 or 0) − The additional Scene in one of the language adds information about Tense, comparing to the other language.

31. PartialMeaning (1 or 0) − The translation does not cover all the meaning of the expression in the source language (for example in the case of phonological play of words).

4.2.3 Results of the Analysis and Main Consequences

Tables 4.2, 4.3, 4.4, 4.5 and 4.6 represent the distribution of the Scene Divergences according to the different features defined in Section 4.2.2 i.e. the number and the proportion of the Scene Divergences which received a label 1 in our manual analysis. Table 4.2 concerns the distinction between Scene Divergences which result from an additional Scene in French and those which are the consequence of an additional Scene in English. In the majority of the Scene Divergences (60.87%), the additional Scene is in English. Another result in Table 4.2 is the proportion of Scene Divergences in Passages where the number of Scenes is the same (10.33%), showing that the notion of Scene Divergence (rather than looking only at the difference between the number of Scenes) is necessary for a complete

study of French-English conservation of Scenes. The features in Table 4.3 explore the causes of the Scene Divergences, as lexical differences (30.98%) or structural differences (26.63%). The differences can concern different Parts of Speech (PoS) as the Noun/Verb distinction (10.87%) and can be sometimes expressed in terms of UCCA categories as the Linker/main relation difference (4.35%).

Table 4.4 presents the features investigating if a given Scene Divergence can be avoided using another formulation closer to that used in the other language or alternatively whether it results from free translation. It turns out that 54.35% of the Scene Divergences are cases which can be seen as free translation, while in 62.50% of the Scene Divergences a translation more similar to the source language formulation is possible. We thus can suppose that in a more technical and less literary corpus, many Scene Divergences can be avoided. We note that all the features in Table 4.4 do not deal with cases where roughly the same form is used in the two languages and the Scene Divergence results from a different judgment or interpretation.

The latter cases are dealt in Table 4.5 where we can see that 23.91% of the Scene Divergences are cases of Conforming Analysis and that in 22.83% of the Scene Divergences, the same annotation is possible in the two languages, despite some nuance. Given that these two features have a null intersection, these data suggest that a parallel annotation or a normalization (after the annotation) can reduce the number of Scene Divergences.

Table 4.6 presents some possible effects of an additional Scene in one of language when the addition of information or clarification (30.44%) and the focus on a Participant (25%) are the most frequent in the corpus. The feature PartialMeaning, presented too in Table 4.6, evaluates the cases where the translation does not cover all the meaning of the source language expression. It can be a consequence of an additional Scene in French (the source language in our study) but it is not always the case since this phenomenon can be independent from the addition or the deletion of a Scene.

Our study also permits one to see the interaction between the different features. We focus here on the two features indicating if the additional Scene, in the case of Scene Divergence is in English or in French. For each of the other features, we check the dis-

	SameNumSc	FrenchAdd	EnglishAdd
Number of ScDiv	19	72	112
Proportion (%)	10.33	39.13	60.87

Table 4.2: Scene Divergences (ScDiv) distribution according to the different features (part1)

	Lexical Diff	Structural Diff	Action/ Attribute	Action /Result	State Description/ Attribute	Noun/ Verb	Prep/ Verb	With-Without /Verb	Link/ Main Rel	Ground
Number of ScDiv	57	49	9	8	11	20	23	5	8	3
Proportion (%)	30.98	26.63	4.89	4.35	5.98	10.87	12.50	2.72	4.35	1.63

Table 4.3: Scene Divergences (ScDiv) distribution according to the different features (part2)

tribution between cases where the additional Scene is in English and cases where the additional Scene is in French. These results are presented on Tables 4.7, 4.8, 4.9 and 4.10. For most of the features, the dominance of English additional Scenes over French additional Scenes, which exists at the global level (Table 4.2), is conserved. The highest scores for English Scene addition are obtained for the features PlayOfWords (100%), Action/Result (87.50%) and Link/MainRel (87.50%). Furthermore, 76.79% of Scene Divergences with the feature AddInfo are cases with an additional English Scene. In this case, the translation tries to explain and clarify the formulation in the source language. However, concerning Conforming Analysis, the majority of Scene Divergences (56.82%) concerns cases where the additional Scene is in French. Finally, we obtain the score of 50% for English and French Scene addition in the case of the feature PartialMeaning which indicates when the English translation does not cover all the meaning of the French formulation. This result exemplifies the fact mentioned above, namely that a less informative translation can occur also in cases where it has an additional Scene comparing to the source text.

	Poss1 Lang	Poss Only English	Poss Only French	Sim Trans Poss	Sim Source Poss	Free Trans
Number of ScDiv	42	17	30	115	128	100
Proportion (%)	22.83	9.24	16.30	62.50	69.57	54.35

Table 4.4: Scene Divergences (ScDiv) distribution according to the different features (part3)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
Number of ScDiv	44	42	13
Proportion (%)	23.91	22.83	7.07

Table 4.5: Scene Divergences (ScDiv) distribution according to the different features (part4)

	AddInfo	Add Emphasis	PlayOf Words	FocusA	TenseInfo	Partial Meaning
Number of ScDiv	55	28	3	46	13	16
Proportion (%)	30.44	15.22	1.63	25.00	7.07	8.70

Table 4.6: Scene Divergences (ScDiv) distribution according to the different features (part5)

	Lexical Diff	Structural Diff	Action/ Attribute	Action/ Result	State Description/ Attribute	Noun/ Verb	Prep/ Verb	With-Without/ Verb	Link/ Main Rel	Ground
The additional Scene is in English (%)	71.93	61.22	77.78	87.50	63.64	80.00	69.57	20	87.50	66.67
The additional Scene is in French (%)	28.07	38.78	22.22	12.50	36.36	20.00	30.43	80	12.50	33.33

Table 4.7: Distribution of English and French Scene additions according to the different features (part1)

	Poss1Lang	PossOnly English	PossOnly French	SimTrans Poss	SimSource Poss	Free Trans
The additional Scene is in English (%)	76.19	82.35	76.67	63.48	64.06	66
The additional Scene is in French (%)	23.81	17.65	23.33	36.52	35.94	34

Table 4.8: Distribution of English and French Scene additions according to the different features (part2)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
The additional Scene is in English (%)	43.18	66.67	92.31
The additional Scene is in French (%)	56.82	33.33	7.69

Table 4.9: Distribution of English and French Scene additions according to the different features (part3)

	AddInfo	Add Emphasis	PlayOf Words	FocusA	TenseInfo	Partial Meaning
The additional Scene is in English (%)	76.79	78.57	100.00	63.04	69.23	50.00
The additional Scene is in French (%)	23.21	21.43	0.00	36.96	30.77	50.00

Table 4.10: Distribution of English and French Scene additions according to the different features (part4)

4.3 Bilingual Analysis of Participants

4.3.1 General Statistics

Statistics on the whole corpus

The statistical data about number of Participants in French and English is obtained using automatic tools for the identification of UCCA categories on the xml files extracted from the web application. We also used the initial alignment between Passages described in Section 4.1.2. In the whole bilingual corpus, the number of Participants in French is 2793 and the number of Participants in English is 2896 (See Table 4.12).The average difference between English and French number of Participants in a parallel Passage is thus 0.67. There are 3.69% more Participants in English than in French. As in the case of Scenes, we obtain an high similarity between the number of Participants in French and in English. Indeed, the cosine similarity between the vector of the number of Participants in French Passages and the vector of the number of Participants in English Passages is ~ 0.994.

Focusing on Passages with no Scene Divergences

We then focus on Passages with no Scene Divergences (see Section 4.2.2) at all which corresponds to 57 passages. In these Passages, there is a *Scene-to-Scene correspondence* and a one-to-one scenes alignment is possible. We will study in details in Sections 4.3.2 and 4.3.3 the conservation of the number of Participants through translation in these

	Participants in French	Participants in English
Total	2793	2896
Mean	18.14	18.81

Table 4.11: Participants and Participant Divergences in the French-English corpus (154 Passages). The Mean of Participants and Participant Divergences represent respectively the average number of Participants and Participant Divergences in a Passage.

	Participants in French	Participants in English	Participant Divergences
Total	728	738	78
Mean	12.77	12.95	1.37

Table 4.12: Participants and Participant Divergences in an extract of the French-English corpus with no Scene Divergences (57 Passages). The Mean of Participants and Participant Divergences represent respectively the average number of Participants and Participant Divergences in a Passage.

Passages. In this reduced bilingual corpus, the number of Participants in French is 727 and the number of Participants in English is 737 (See Table 4.12). The average difference between English and French number of Participants in a parallel Passage is thus 0.18. There are 1.37% more Participants in English than in French. The cosine similarity between the vector of the number of Participants in French Passages and the vector of the number of Participants in English Passages in the reduced bilingual corpus is ~ 0.997.

4.3.2 Participant Divergences and Parameters for the Analysis

Participant Divergences

We define the concept of *Participant Divergences* as following. A Participant Divergence occurs when a Participant in one of the languages does not correspond, even partially, to a Participant in the other language, creating an additional Participant in this language. Examples from the bilingual corpus:

(4.3) eng:[The shores of Japan]$_{\text{A}}$ [were]$_{\text{A}}$ [less than 200 miles to our leeward]$_{\text{A}}$.

fr: [Les terres du Japon]$_{\text{A}}$ [nous]$_{\text{A}}$ [restaient]$_{\text{S}}$ [à moins de deux cents milles sous le

vent]$_{\text{A}}$.

(4.4) eng: [this]$_{\text{A}}$ [is]$_{\text{S}}$ [an excerpt from the well-padded article I published in the issue of April 30]$_{\text{A}}$.

fr: [je]$_{\text{A}}$ [donne]$_{\text{P}}$ [ici]$_{\text{A}}$ [un extrait d'un article très-nourri que je publiai dans le numéro du 30 avril]$_{\text{A}}$).

The example (4.3) show a case of pronoun/possessive determiner difference. The pronoun in English is annotated as a Participant, creating a Participant Divergence. We saw such kind of difference in the theoretical analysis in Chapter 3. In example (4.4), instead of "this is" in English, the expression used in French is "je donne ici" ("I give here"). Thus there is an additional Participant ("je") in French comparing to the English translation where the speaker is not present in the designation of the excerpt of the article.

Identifying Participant Divergences permits one to pursue the study of the conservation of the number of Participants discussed in Chapter 3, using a bilingual corpus. We can note from the definition that differently from Scene Divergences, the absence of Participant Divergences does not imply an exact correspondence between Participants. As explained above, the manual analysis of Participant Divergences presented in the following Sections (4.3.2 and 4.3.3) is based on an extract of the bilingual Corpus, corresponding to the Passages with no Scene Divergences. In the reduced bilingual corpus (57 Passages), we found 78 Participant Divergences which corresponds to an average of 1.37 in a Passage (see Table 4.12). A full list of Participant Divergences in the bilingual corpus as well as their description are presented in Appendix 4.

Features for Participant Divergences Analysis

In the following list are presented the name of the features accompanied by their description as well as the reference of an example from the list of Scene Divergences presented in Appendix 4.

1. #ADiv − Participant Divergence index

2. #PassageEng − English Passage index

3. #PassageFr − French Passage index

4. SameNumA (1 or 0) − The number of Participants in the Passage is the same in the two languages.

5. FrenchAdd (1 or 0) − The additional Participant is in French.

6. EnglishAdd (1 or 0) − The additional Participant is in English.

7. LexicalDiff (1 or 0) − The Participant Divergence results from a lexical difference between the languages.

8. StructuralDiff (1 or 0) − The Participant Divergence results from a structural difference between the languages.

9. Noun/Verb (1 or 0) − The Participant Divergence results from the use of a noun in one of the languages and of a verb in the other language. (Generally this issue concerns Conforming Analysis).

10. Pron/PossDet (1 or 0) − The Participant Divergence results from the use of a pronoun (subject, direct or indirect pronoun) in one of the languages and of a possessive determiner in the other language.

11. Poss1Lang (1 or 0 or NR) − The construction in one of the languages cannot be replicated to the other language (NR not relevant).

12. PossOnlyEnglish (1 or 0 or NR) − The construction is only possible in English.

13. PossOnlyFrench (1 or 0 or NR) − The construction is only possible in French.

14. SimTransPoss (1 or 0 or NR) − An English translation more similar to the French formulation is possible.

15. SimSourcePoss (1 or 0 or NR) − There is a construction in French which is similar to the English formulation.

16. FreeTrans (1 or 0) − Free translation.

17. ConfAnalysis (1 or 0) − Conforming Analysis. We refer here to cases where the same structures are used in both languages but the annotations in the two languages are different due to different conceptualizations.

18. NuanceMeaning (1 or 0) − The same annotation (or at least an annotation which conserves the number of Participants) is possible but the present annotation (which leads to a Participant Divergence) permits the capture of a certain nuance in the meaning.

19. DiffInterpretation (1 or 0) − The Participant Divergence results from a different interpretation (or a different interpretation from those chosen by the translator is possible and it justifies the present annotation). We put in this category cases where there is a major difference in the meaning (which can be consequences of free translation).

20. AddInfo (1 or 0) − The additional Participant in one of the languages adds information. It can also be a clarification or an explicit formulation of something which is implicit in the other language.

21. AddEmphasis (1or 0) − The additional Participant in one of the languages adds emphasis.

22. PartialMeaning (1 or 0) − The translation does not cover all the meaning of the expression in the source language (for example in the case of phonological play of words).

23. A/Elaborator (1 or 0) − A Participant (A) in one of the languages corresponds to an Elaborator of another Participant in the other language.

24. A/MainRel (1 or 0) − A Participant (A) in one of the languages corresponds to the main relation (Process or State) or to a part of the main relation in the other language.

25. A/ParallelSc (1 or 0) − A Participant (A) in one of the languages corresponds to a Parallel Scene (marked as H) in the other language.

26. A/Adverbial (1 or 0) − A Participant (A) in one of the languages corresponds to an Adverbial in the other language.

27. UnionOf2A (1 or 0) − A Participant in one of the languages corresponds to two Participants in the other language.

4.3.3 Results of the Analysis and Main Consequences

Tables 4.13, 4.14, 4.15, 4.16 and 4.17 represent the distribution of the Participant Divergences according to the different features defined in Section 4.3.2 i.e. the number and the proportion of the Participant Divergences which received a label 1 in our manual analysis. They all concern only the extract of the bilingual corpus with no Scene Divergences (57 Passages). Table 4.13 deals with the distinction between Participant Divergences which result from an additional Participant in French and those which are the consequence of an additional Participant in English. As in the case of Scene Divergences (Section 4.2.3), in the majority of the Participant Divergences (56.41%), the additional Participant is in English. The features in Table 4.14 explore the causes of the Participant Divergences, as lexical differences (42.31%) or structural differences (33.33%). The last column of the table concerns the use of a pronoun in one of the language and of a possessive determiner in the other language (2.56%) that we discussed in Chapter 3, showing that kind of difference seems not to be frequent.

Table 4.15 presents the features investigating if a given Participant Divergence can be avoided using another formulation more close to that used in the other language or alternatively it results from free translation. 39.74% of the Participant Divergences are cases which can be seen as free translation and in 43.59% of the Participant Divergences a translation more similar to the source language formulation is possible. As in the case of Scene Divergences where this effect has been seen in the whole corpus to a greater extent (Section 4.2.3), it would be interesting to check if in a more technical and less literary

	SameNumA	FrenchAdd	EnglishAdd
Number of ADiv	4	34	44
Proportion (%)	5.13	43.59	56.41

Table 4.13: Participant Divergences (ADiv) distribution according to the different features (part1)

corpus, this type of Participant Divergences can be avoided.

In Table 4.16 we can see that 38.46% of the Participant Divergences are cases of Conforming Analysis and that in 34.62% of the Participant Divergences, the same annotation is possible in the two languages, despite some nuance. This effect, greater than in the case of Scene Divergences in the whole corpus (Section 4.2.3), suggests that a parallel annotation or a normalization (after the annotation) can reduce the number of Participant Divergences.

Table 4.17 shows the effects of the addition of a Participant, particularly the addition of information and clarifications (23.08%) and of emphasis (29.49%). In Table 4.18, we present cases where the Participant Divergences can be formulated in terms of UCCA categories where the most frequent one is when a Participant in one of the languages corresponds to the main relation or to a part of it in the other language (20.51%).

Finally, tables 4.19, 4.20, 4.21 and 4.22 present the distribution of Participant additions (which create Participant Divergences) in English and in French according to the different features. For most of the features, the dominance of English additional Participants over French additional Participants, which exists at the global level (Table 4.13) is conserved. The features with the highest scores are three features involving UCCA categories, namely A/ParallelSc (85.71%), UnionOf2A (83.33%) and A/Adverbial (75%). We can also note that 61.29% of Participant Divergences with the free translation feature (FreeTrans) concern Participant addition in English. However, for some features like StructuralDiff, Noun/Verb, Pron/PossDet, we found an exact equality in the distribution of English and French Participant additions.

	LexicalDiff	StructuralDiff	Noun/Verb	Pron/PossDet
Number of ADiv	33	26	4	2
Proportion (%)	42.31	33.33	5.13	2.56

Table 4.14: Participant Divergences (ADiv) distribution according to the different features (part2)

	Poss1Lang	Poss Only English	Poss Only French	Sim Trans Poss	Sim Source Poss	Free Trans
Number of ADiv	28	17	23	34	40	31
Proportion (%)	35.90	21.79	29.49	43.59	51.28	39.74

Table 4.15: Participant Divergences (ADiv) distribution according to the different features (part3)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
Number of ADiv	30	27	19
Proportion (%)	38.46	34.62	24.36

Table 4.16: Participant Divergences (ADiv) distribution according to the different features (part4)

	AddInfo	AddEmphasis	PartialMeaning
Number of ADiv	18	23	8
Proportion (%)	23.08	29.49	10.26

Table 4.17: Participant Divergences (ADiv) distribution according to the different features (part5)

	A/Elaborator	A/MainRel	A/ParallelSc	A/Adverbial	UnionOf2A
Number of ADiv	1	16	7	4	6
Proportion (%)	1.28	20.51	8.97	5.13	7.69

Table 4.18: Participant Divergences (ADiv) distribution according to the different features (part6)

	Lexical Diff	Structural Diff	Noun/ Verb	Pron/ PossDet
The additional Participant is in English (%)	54.55	50.00	50.00	50.00
The additional Participant is in French (%)	45.45	50.00	50.00	50.00

Table 4.19: Distribution of English and French Participant additions according to the different features (part1)

	Poss1Lang	PossOnly English	PossOnly French	SimTrans Poss	SimSource Poss	Free Trans
The additional Participant is in English (%)	53.57	58.82	52.17	64.71	60.00	61.29
The additional Participant is in French (%)	46.43	41.18	47.83	35.29	40.00	38.71

Table 4.20: Distribution of English and French Participant additions according to the different features (part2)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
The additional Participant is in English (%)	53.33	59.26	57.89
The additional Participant is in French (%)	46.67	40.74	42.11

Table 4.21: Distribution of English and French Participant additions according to the different features (part3)

	AddInfo	AddEmphasis	PartialMeaning
The additional Participant is in English (%)	61.11	60.87	12.50
The additional Participant is in French (%)	38.89	39.13	87.50

Table 4.22: Distribution of English and French Participant additions according to the different features (part4)

	A/Elaborator	A/MainRel	A/ParallelSc	A/Adverbial	UnionOf2A
The additional Participant is in English (%)	0.00	56.25	85.71	75.00	83.33
The additional Participant is in French (%)	100	43.75	14.29	25.00	16.67

Table 4.23: Distribution of English and French Participant additions according to the different features (part5)

4.4 Bilingual Analysis of Adverbials

4.4.1 General Statistics

Statistics on the whole corpus

The statistical data about number of Adverbials in French and English is obtained using automatic tools for the identification of UCCA categories on the xml files extracted from the web application. We also used the initial alignment between Passages described in Section 4.1.2. In the whole bilingual corpus, the number of Adverbials in French is 517 and the number of Adverbials in English is 480 (See Table 4.25). The average difference between French and English number of Adverbials in a parallel Passage is thus 0.24. There are 7.71% more Adverbials in French than in English. This difference is higher than in the cases of Scenes and Participants (Sections 4.2.1 and 4.3.1). Furthermore, the similarity between the number of Adverbials in French and in English is still high but lower than the two previous cases. The cosine similarity between the vector of the number of Adverbials in French Passages and the vector of the number of Adverbials in English Passages is ~ 0.945

Focusing on Passages with no Scene Divergences

As we did in the case of Participants, we focus now on Passages with no Scene Divergences (see Section 4.2.2) at all, which corresponds to 57 passages. We will study in details in Sections 4.4.2 and 4.4.3 the conservation of the number of Adverbials through translation

	Adverbials in French	Adverbials in English
Total	517	480
Mean	3.36	3.12

Table 4.24: Adverbial and Adverbial Divergences in the French-English corpus (154 Passages). The Mean of Adverbials and Adverbial Divergences represent respectively the average number of Adverbials and Adverbial Divergences in a Passage.

	Adverbials in French	Adverbials in English	Adverbial Divergences
Total	126	124	50
Mean	2.21	2.18	0.88

Table 4.25: Adverbial and Adverbial Divergences in an extract of the French-English corpus with no Scene Divergences (57 Passages). The Mean of Adverbials and Adverbial Divergences represent respectively the average number of Adverbials and Adverbial Divergences in a Passage.

in these Passages. In this reduced bilingual corpus, the number of Adverbials in French is 126 and the number of Adverbials in English is 124 (See Table 4.25). The average difference in a parallel Passage between French and English number of Adverbials is thus 0.04 and there are 1.61% more Adverbials in French than in English. These numbers are much lower than those seen for the whole corpus (Section 4.4.1). However, similarity between French and English number of Adverbials is comparable to the one computed in the case of the whole corpus. The cosine similarity between the vector of the number of Adverbials in French Passages and the vector of the number of Adverbials in English Passages in the reduced bilingual corpus is ~ 0.944.

4.4.2 Adverbial Divergences and Parameters for the Analysis

Adverbial Divergences

We define the concept of *Adverbial Divergences* (DDiv) as following. An Adverbial Divergence occurs when an Adverbial in one of the languages does not correspond, even partially, to an Adverbial in the other language, creating an additional Adverbial in this language.

Examples from the bilingual corpus:

(4.5) eng: [[we]$_{\mathrm{A}}$ [are$_{\mathrm{F}}$ forced$_{\mathrm{E}}$]$_{\mathrm{P-}}$]$_{\mathrm{H-}}$, [every other supposition having been refuted]$_{\mathrm{H}}$, [[to$_{\mathrm{F}}$ accept$_{\mathrm{C}}$]$_{-\mathrm{P(CONT.)}}$ [the existence of an extremely powerful marine animal]$_{\mathrm{A}}$]$_{-\mathrm{H(CONT.)}}$.

fr: [toute autre supposition étant rejetée]$_{\mathrm{H}}$, [[il]$_{\mathrm{F}}$ [faut$_{\mathrm{E}}$]$_{\mathrm{P-}}$ [nécessairement]$_{\mathrm{D}}$ [admettre$_{\mathrm{C}}$]$_{-\mathrm{P(CONT.)}}$ [l'existence dun animal marin d'une puissance excessive]$_{\mathrm{A}}$]$_{\mathrm{H,IMPLICIT-A}}$

(4.6) eng: [But]$_{\mathrm{L}}$ [[now]$_{\mathrm{D}}$ [nothing]$_{\mathrm{A}}$ [could hold]$_{\mathrm{P-}}$ [me]$_{\mathrm{A}}$ [back]$_{-\mathrm{P(CONT.)}}$]$_{\mathrm{H}}$.

fr: [Mais]$_{\mathrm{L}}$ [[rien]$_{\mathrm{A}}$ [ne]$_{\mathrm{D}}$ [put]$_{\mathrm{P-}}$ [me]$_{\mathrm{A}}$ [retenir]$_{-\mathrm{P(CONT.)}}$]$_{\mathrm{H}}$

In example (4.5), The meaning of the Adverbial "nécessairement"("necessarily") in French is included in the word "forced" which is annotated as the Elaboraor of the Process in English. Thus there is an additional Adverbial in French, creating an Adverbial Divergence. In example (4.6), there is an additional temporal indication in English ("now") annotated as D which adds information and emphasis comparing to French.

As in the case of Participants, the manual analysis of Adverbial Divergences presented in the following Sections (4.4.2 and 4.4.3) is based on an extract of the Bilingual Corpus, corresponding to Passages with no Scene Divergences. In the reduced bilingual corpus (57 Passages), we found 50 Adverbial Divergences which corresponds to an average of 1.37 in a Passage (see Table 4.25). A full list of Adverbial Divergences in the bilingual corpus as well as their description are presented in Appendix 5.

Features for Adverbial Divergences Analysis

In the following list are presented the name of the features accompanied by their description as well as the reference of an example from the list of Adverbial Divergences presented in Appendix 5.

1. #DDiv − Adverbial Divergence index
2. #PassageEng English Passage index
3. #PassageFr French Passage index

4. SameNumD (1 or 0) − The number of Adverbials in the Passage is the same in the two languages.

5. FrenchAdd (1 or 0) The additional Adverbial is in French.

6. EnglishAdd (1 or 0) − The additional Adverbial is in English.

7. LexicalDiff(1 or 0) The Adverbial Divergence results from a lexical difference between the languages.

8. StructuralDiff (1 or 0) The Adverbial Divergence results from a structural difference between the languages.

9. Poss1Lang (1 or 0 or NR) The construction in one of the languages cannot be replicated to the other language (NR not relevant).

10. PossOnlyEnglish (1 or 0 or NR) The construction is only possible in English.

11. PossOnlyFrench (1 or 0 or NR) The construction is only possible in French.

12. SimTransPoss (1 or 0 or NR) An English translation more similar to the French formulation is possible.

13. SimSourcePoss (1 or 0 or NR) There is a construction in French which is similar to the English formulation.

14. FreeTrans (1 or 0) − Free translation.

15. ConfAnalysis (1 or 0) Conforming Analysis. We refer here to cases where the same structures are used in both languages but the annotations in the two languages are different due to different conceptualizations.

16. NuanceMeaning (1 or 0) The same annotation (or at least an annotation which conserves the number of Adverbials) is possible but the present annotation (which leads to an Adverbial Divergence) permits the capture of a certain nuance in the meaning.

17. DiffInterpretation (1 or 0) The Adverbial Divergence results from a different interpretation (or a different interpretation from those chosen by the translator is possible and it justifies the present annotation). We put in this category cases where there is a major difference in the meaning (which can be consequences of free translation).

18. AddInfo (1 or 0) The additional Adverbial in one of the languages adds information . It can also be a clarification or an explicit formulation of something which is implicit in the other language.

19. AddEmphasis (1or 0) The additional Adverbial in one of the languages adds emphasis.

20. D/Linker (1 or 0) An Adverbial (D) in one of the languages corresponds to a Linker in the other language.

21. D/Ground (1 or 0) An Adverbial (D) in one of the languages corresponds to a Ground in the other language.

22. D/Participant (1 or 0) An Adverbial (D) in one of the languages corresponds to a Participant in the other language.

23. D/AElaborator (1 or 0) An Adverbial (D) in one of the languages corresponds to an Elaborator of a Participant (A) in the other language.

24. D/MainRelElaborator (1 or 0) An Adverbial (D) in one of the languages corresponds to an Elaborator of the main relation (Process or State) in the other language.

25. DIncMainRel (1 or 0) An Adverbial (D) in one of the languages is included in the meaning of the main relation (Process or State) in the other language.

26. UnionOf2D (1 or 0) An Adverbial in one of the languages corresponds to two Adverbials in the other language.

4.4.3 Results of the Analysis and Main Consequences

Tables 4.26, 4.27, 4.28, 4.29 and 4.30 represent the distribution of the Adverbial Divergences according to the different features defined in Section 4.4.2 i.e. the number and the proportion of the Adverbial Divergences which received a label 1 in our manual analysis. They all concern only the extract of the bilingual corpus with no Scene Divergences (57 Passages). In the reduced corpus, there are only 2 additional Adverbials in French, comparing to English. Analyzing in detail the Adverbial Divergences, we found an exact equality between cases where the additional Adverbial is in English and cases where the additional Adverbial is in French (Table 4.26). The features in Table 4.27 measure the effect of lexical differences (56%) and structural differences (50%) (which can also be combined) on Adverbial Divergences.

Table 4.28 investigates if a given Adverbial Divergence can be avoided using another formulation more close to that used in the other language or alternatively if it results from free translation. 56% of the Adverbial Divergences are cases which can be seen as free translation and in 60% of the Adverbial Divergences a translation more similar to the source language formulation is possible, reinforcing our supposition about conservation of UCCA categories (See Sections 4.2.3 and 4.3.3) in a less literary corpus.

In Table 4.29 we can see that 10% of the Adverbial Divergences are cases of Conforming Analysis and that in 30% of the Adverbial Divergences, the same annotation is possible in the two languages, despite some nuance. These data suggests, although the effect is less considerable than in the case of Participants (Section 4.3.3) that a parallel annotation or a normalization (after the annotation) can reduce the number of Adverbial Divergences.

Table 4.30 shows the addition of information and clarifications (18%) and of emphasis (22%) also plays a role in Adverbial Divergences. We note that all the Adverbial Divergences with additional information or clarifications are cases where the additional Adverbial is in the English translation. Table 4.31 presents a precise description of the Adverbial Divergences in terms of UCCA categories (when it is possible), for example the Adverbial/Linker difference or in the case of the feature DIncMainRel (26%), with the higher score among this kind of features, which concerns Adverbial Divergences where

	SameNumD	FrenchAdd	EnglishAdd
Number of DDiv	8	25	25
Proportion (%)	16	50	50

Table 4.26: Adverbial Divergences (DDiv) distribution according to the different features (part1)

	LexicalDiff	StructuralDiff
Number of DDiv	28	25
Proportion (%)	56	50

Table 4.27: Adverbial Divergences (DDiv) distribution according to the different features (part2)

an Adverbial in one of the languages is included in the meaning of a main relation in the other language. A subcase is the use of an Adverbial in one of the languages and of an Elaborator in the other language (18%). In this situation, the main relation is modified in two different ways in the two languages and thus UCCA main structures are not completely changed by translation.

Finally, tables 4.32, 4.33, 4.34 and 4.35 present the distribution of Adverbial additions (which create Adverbial Divergences) in English and in French according to the different features. As we saw above, the number of Adverbial Divergences with Adverbial addition in English and those with Adverbial addition in French is the same (Table 4.26). However, the internal distribution shows features where the majority of cases concerns English Adverbial addition such as the addition of information (100%) and of emphasis (91.91%) and features where the majority of cases involve an additional Adverbial in French like Adverbial/Participant difference (75%), formulations possible only in one of the two languages (61.11%) or Conforming Analysis (60%).

	Poss1Lang	Poss Only English	Poss Only French	Sim Trans Poss	Sim Source Poss	Free Trans
Number of DDiv	18	15	15	30	30	28
Proportion (%)	36	30	30	60	60	56

Table 4.28: Adverbial Divergences (DDiv) distribution according to the different features (part3)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
Number of DDiv	5	15	4
Proportion (%)	10	30	8

Table 4.29: Adverbial Divergences (DDiv) distribution according to the different features (part4)

	AddInfo	AddEmphasis
Number of DDiv	9	11
Proportion (%)	18	22

Table 4.30: Adverbial Divergences (DDiv) distribution according to the different features (part5)

	D/ Linker	D/ Ground	D / Participant	D/A Elaborator	D/MainRel Elaborator	DInc MainRel	UnionOf 2D
Number of DDiv	4	2	4	6	9	13	1
Proportion (%)	8	4	8	12	18	26	2

Table 4.31: Adverbial Divergences (DDiv) distribution according to the different features (part6)

	LexicalDiff	StructuralDiff
The additional Adverbial is in English (%)	42.86	28.00
The additional Adverbial is in French (%)	57.14	72.00

Table 4.32: Distribution of English and French Adverbial additions according to the different features (part1)

	Poss1Lang	PossOnly English	PossOnly French	SimTrans Poss	SimSource Poss	Free Trans
The additional Adverbial is in English (%)	38.89	26.67	33.33	60.00	63.33	57.14
The additional Adverbial is in French (%)	61.11	73.33	66.67	40.00	36.67	42.86

Table 4.33: Distribution of English and French Adverbial additions according to the different features (part2)

	ConfAnalysis	NuanceMeaning	DiffInterpretation
The additional Adverbial is in English (%)	40.00	33.33	50.00
The additional Adverbial is in French (%)	60.00	66.67	50.00

Table 4.34: Distribution of English and French Adverbial additions according to the different features (part3)

	AddInfo	AddEmphasis
The additional Adverbial is in English (%)	100.00	91.91
The additional Adverbial is in French (%)	0.00	9.09

Table 4.35: Distribution of English and French Adverbial additions according to the different features (part4)

	D/ Linker	D/ Ground	D/ Participant	D/ AElaborator	D/ MainRel Elaborator	DInc MainRel	Union Of2D
The additional Adverbial is in English (%)	50.00	50.00	25.00	16.67	44.44	53.85	100.00
The additional Adverbial is in French (%)	50.00	50.00	75.00	83.33	55.56	46.15	0.00

Table 4.36: Distribution of English and French Adverbial additions according to the different features (part5)

4.5 UCCA annotation and French-English alignment

4.5.1 Procedure

We focus here on a short extract of the bilingual corpus, analyzing the alignment of Passages where there is no Scene Divergences (i.e. with scene-to-scene correspondence), no Participant Divergences and no Adverbial Divergences. This concerns 15 Parallel Passages. Each of the bilingual side of this reduced corpus contains 62 Scenes, 114 Participants and 23 Adverbials. The choice of this extract permits one to look at a French-English alignment with UCCA categories, given that the main structures (Scenes, Participants and Adverbials) are conserved. The alignment is done manually when the goal is to see whever we can align expressions with the same UCCA categories in a hierarchical way from the level of the Passage, passing through the levels of the Scene and its units until the level of UCCA's terminals (which in the foundational layer of UCCA are single words or groups of words as seen in Chapter 3). At this latter level, we indicate an alignment only if the meaning is conserved. The complete alignment in this form is presented in Appendix 6. The next Section (4.5.2) presents an example of alignment. It is a fragment (two parallel Scenes with two Linkers) from one of the 15 Parallel Passages we study here.

4.5.2 Example of alignment

(4.7) eng: [At first]$_{\text{L}}$ [the passengers were quite frightened]$_{\text{H}}$, [but]$_{\text{L}}$ [Captain Anderson hastened to reassure them]$_{\text{H}}$.

fr: [Tout dabord]$_{\text{L}}$, [les passagers furent très-effrayés]$_{\text{H}}$; [mais]$_{\text{L}}$ [le capitaine Anderson se hâta de les rassurer]$_{\text{H}}$.

Linker:

[At$_{\text{R}}$ first$_{\text{C}}$]$_{\text{L}}$ − [Tout dabord]$_{\text{L}}$

Scene 1:

[[the$_{\text{E}}$ passengers$_{\text{C}}$]$_{\text{A}}$ [were$_{\text{F}}$ quite$_{\text{E}}$ frightened$_{\text{C}}$]$_{\text{P}}$]$_{\text{H}}$ − [[les passagers]$_{\text{A}}$ [furent$_{\text{F}}$ très$_{\text{E}}$ - effrayés$_{\text{C}}$]$_{\text{S}}$]$_{\text{H}}$

Participant:

[the$_{\text{E}}$ passengers$_{\text{C}}$]$_{\text{A}}$ − [les$_{\text{E}}$ passagers$_{\text{C}}$]$_{\text{A}}$

the$_{\text{E}}$ − les$_{\text{E}}$

passengers$_{\text{C}}$ − passagers$_{\text{C}}$

Main Relation:

[were$_{\text{F}}$ quite$_{\text{E}}$ frightened$_{\text{C}}$]$_{\text{P}}$ − [furent$_{\text{F}}$ très$_{\text{E}}$ - effrayés$_{\text{C}}$]$_{\text{S}}$

were$_{\text{S}}$ − furent$_{\text{S}}$

quite$_{\text{E}}$ − très$_{\text{E}}$

frightened$_{\text{C}}$ − effrayés$_{\text{C}}$

Linker:

[but]$_{\text{L}}$ − [mais]$_{\text{L}}$

Scene 2:

[Captain Anderson]$_{\text{A}}$ [hastened$_{\text{E}}$ to$_{\text{F}}$ reassure$_{\text{C}}$]$_{\text{P}}$ [them]$_{\text{A}}$. − [[le$_{\text{E}}$ capitaine$_{\text{C}}$]$_{\text{E}}$ [Anderson]$_{\text{C}}$]$_{\text{A}}$ [[se$_{\text{E}}$ hâta$_{\text{C}}$]$_{\text{E}}$ [de]$_{\text{F}}$]$_{\text{P}-}$ [les]$_{\text{A}}$ [[rassurer]$_{\text{C}}$]$_{-\text{P(CONT.)}}$.

Participants:

[Captain$_{\text{E}}$ Anderson$_{\text{C}}$]$_{\text{A}}$ [[le$_{\text{E}}$ capitaine$_{\text{C}}$]$_{\text{E}}$ [Anderson]$_{\text{C}}$]$_{\text{A}}$

$\text{Captain}_{\text{E}}$ – $[\text{le}_{\text{E}}\ \text{capitaine}_{\text{C}}]_{\text{E}}$

them_{A} – les_{A}

Main Relation:

$[\text{hastened}_{\text{E}}\ \text{to}_{\text{F}}\ \text{rassure}_{\text{C}}]_{\text{P}}$ – $[[\text{se}_{\text{E}}\ \text{hâta}_{\text{C}}]_{\text{E}}\ \text{de}_{\text{F}}\ \text{rassurer}_{\text{C}}]_{\text{P}}$

$\text{hastened}_{\text{E}}$ – $[\text{se}_{\text{E}}\ \text{hâta}_{\text{C}}]_{\text{E}}$

to_{F} – de_{F}

$\text{rassure}_{\text{C}}$ – $\text{rassurer}_{\text{C}}$

4.5.3 Main Consequences

We can see that in most of the cases expressions with the same category can be aligned and conserve the meaning. As presented above, the alignment is done in Passages with no Scene Divergences, Participant Divergences or Adverbial Divergences. However, these conditions ensure by definition only a Scene-to-Scene correspondence. In this preliminary qualitative study, we can see that a correspondence between the other cateories (as Participants, Adverbials, main relations, Linkers) is generally obtained in these consitions. Furthermore, we obtain a conservation of the Center of UCCA units in most of the cases. Finally, we frequently obtain a French-English correspondence without conservation of meaning in the case of Relators (R) which is consistent with the relatively functional role of prepositions.

Example:

(4.8) eng: $[[\text{I}]_{\text{A}}\ [\text{called}]_{\text{P}}\ [\text{in}_{\text{R}}\ \text{an}_{\text{E}}\ \text{impatient}_{\text{E}}\ \text{voice}_{\text{C}}]_{\text{D}}]_{\text{H,REMOTE-A}(''\text{Conseil!}'')}$.

fr: $[[\text{criai}]_{\text{P}}$ - $[\text{je}]_{\text{A}}\ [\text{d'}_{\text{R}}\ \text{une}_{\text{E}}\ \text{voix}_{\text{C}}\ \text{impatiente}_{\text{E}}]_{\text{D}}]_{\text{H,REMOTE-A}(''\text{Conseil!}'')}$

In this case, "in" and "d"' (literally: "of","from") are both annotated as R, they correspond to each other since they have the same role in this Scene. However, they do not share the same literal meaning.

Chapter 5

Conclusion

In the framework of the integration of linguistic information into machine translation, we studied in this work the use of UCCA annotation, a new cognitive and semantic annotation developed by Abend and Rappoport [2013a,b], in two different natural languages. The motivation originates from the remark that, in spite of very good performances, the *phrase-based model*, which provides the present-day main statistical machine translation framework, often fails to capture reordering at the phrase level and to exploit discontinuous phrases. In order to address these issues, *syntax-based translation* in SMT has been developed since the end of the 90's, and recent works in linguistically syntax-based SMT suggest that syntax is very useful to SMT. However, a main difficulty is that many important phrasal rules cannot be represented as hierarchical rules i.e. extracted in the syntax-based model. This problem of rule coverage results from structure divergence between the languages. One solution is to change the syntactic formalism used in the models. The use of dependency trees (for example Shen et al. [2008]) is able to reveal long relations between words. In practice, the use of dependency structures in SMT led to mixed results [Gildea, 2003, Xie et al., 2011]. However, the use of dependency structures is considered as a first step towards the integration of semantics in SMT.

Dealing with semantics seems to be indeed a crucial issue for the achievement of progress in machine translation, since the notions of meaning and translation are closely related. For example, claiming that one sentence is the translation of another one is a way

of stating that these two sentences have the same meaning [Edelman and Solan, 2009]. Recently, Abend and Rappoport [2013a,b] presented UCCA, a novel multi-layered framework for semantic representation that aims to accommodate the semantic distinctions expressed through linguistic utterances. By its relative insensitivity to cross-linguistic syntactic variations, UCCA seems to be a promising alternative for the integration of linguistic information to machine translation and a novel combination between syntax and semantics in SMT.

Our goal in the present work was to provide theoretical foundations for the use of UCCA in English-to-French and French-to-English translation. This concerns three main issues. The first one is the fact that UCCA annotation, formulated explicitly in the case of English, can be extended to French. This was shown by checking that UCCA annotation rules can apply to French and then by checking that the linguistic phenomena in French are covered by UCCA annotation. The second subject studied in this context was the behavior of the annotation when other annotations (phrase structures, part of speech, semantic roles) signal a structural difference between languages, usually named translation divergence [Dorr, 1994], whereas the meaning seems to be the same, at least up to a certain level. We saw that in almost all divergence kinds, the foundational layer of UCCA annotation conserves the main structures between languages when the apparent differences can then be signaled using higher layers of the annotation. The third issue was to provide corpus-based evidences for the conservation of the main structures in UCCA annotation. For this aim, we annotated manually a French-English corpus and analyzed the similarities and differences in UCCA categories between the two languages. We proposed a novel methodology for such an analysis which can be applied to other semantic annotations and to syntactic ones. The results of the present analysis confirm the conservation of the main strucutures and explain the differences. We in particular define new types of translation divergences and show that many of them can be avoided. In this way, we present a new and original method to address the structure divergence issue, which is one of the main challenges in machine translation. This analysis also provides useful information for the use of the annotation in machine translation systems.

Further investigations concerning larger corpora and different possible annotations should be pursued for strenghtening our results. Future work should also address the implementation itself of the annotation in various statistical machine translation systems and the evaluation of the influence of UCCA annotation on the translation in each case. A possible application is phrase-based translation where it would be interesting to check the restriction of phrases to UCCA categories. Indeed, the latter capture non-constituents expressions like for example the german expression "es gibt" and its English counterpart "there is" (annotated as States) whose learning was found to be important to translation [Koehn et al., 2003] (see Chapter 2).

Finally, UCCA annotation being based on cognitive theories [Langacker, 2008], the use of this annotation in translation can also contribute, as in the work of Edelman and Solan [2009] described in Chapter 2, to bridge the gap between cognitive characterizations of bilingualism (which share with UCCA the important role given to conceptualization), and their application to machine translation.

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Appendix 1

Guidelines for UCCA annotation in French

Articles which are specific to French appear with an asterik (*).

1. UCCA encodes grammatical structures using conceptual cognitively-motivated terms.
2. UCCA views the text as a sequence of scenes containig relations and participants.
3. UCCA divides the text into units (not necessarily contiguous stretches of text), each referring to a relation, a participant in a relation or a relation along with its participants. The types of relations we annotate are listed below.
4. The units must cover all the text.
5. Units may contain other sub-units, giving rise to a hierarchical structure.
6. Each unit is assigned a category, reflecting its role in a super-ordinate relation in which it participates. The category does not necessarily reflect the internal organization of the unit. For instance, all the units in boldface have the same category, as they all describe "cheval" (horse) in finer detail:
    1. Un **beau** cheval (A beautiful horse)
    2. Un cheval **de police** (A police horse)
    3. Un cheval **sans nom** (A horse with no name)
    4. Le cheval **qui a gagné la course** (The horse that won the race)
    5. Un cheval **gagnant** (A winning horse)
7. A single interpretation is fixed and the annotation proceeds accordingly. UCCA does not annotate ambiguity. Not in the word level, not in the phrase level, nor in the passage level.
8. The text is segmented to a sequence of *scenes.* Each contains a main relation which is either an action/movement or a state and participants in the relation. In concrete cases, a *scene* can be imagined as a single mental image. Each *scene* is considered a unit. There is no category *scene,* rather than the category of the scene unit reflects the role of that unit in super-ordinate relation it participates in. See below for a classification of scenes.
    1. Woody marcha dans le park (Woody walked in the park) – 1 scene
    2. Il rentra à la maison et prit une douche (He got home and took a shower) – 2 scenes
9. Each scene contains (one or more) participants (A). These are the principal participants in the main relation of the scene (including locations). Participants may refer either to physical or abstract entities.
    1. Jean a fait bouillir [un oeuf]$_A$. (Jean boiled an egg)
    2. [Vivre à la campagne]$_A$ est son rêve (To live in the countryside is his dream)
10. Scenes can have as a main relation either describe a State (S) – a relation constant in time or a Process (P) – an action, movement or some other relation that involves in time.
11. In static scenes, the main relation is annotated as a *state* (S). The *state* includes its auxiliaries and modals. See more cases of states in Appendix D.
    1. Jean$_A$ [est grand]$_S$. (Jean is tall)
    2. Jean$_A$ [aurait pu être grand]$_S$. (Jean could have been tall)
    3. [Le pommier]$_A$ [est dans]$_S$ [le jardin]$_A$. (The apple tree is in the garden)
    4. [Une pomme]$_A$ [pèse]$_S$ [200g]$_A$. (An apple weighs 200g)
12. In dynamic scenes, the main relation is marked as a *process* (P). The *process* includes its auxiliaries and modals:
    1. Jean [a attrapé]$_P$ [le ballon]$_A$. (Jean caught the ball)

2. Jean [devrait attraper]$_P$ [le ballon]$_A$.

13. Secondary verbs are verbs that semantically modify an existing verb, and do not refer to any specific activity or state. Secondary verbs should be included in the P or S they modify.
    1. Jean [veut attraper]$_P$ [le ballon]$_A$. (Jean wants to catch the ball)
    2. Jean [a fini d'attraper le ballon]$_P$ [il y a une heure]$_D$. (Jean finished catching the ball an hour ago)
    3. Jean [paraît avoir attrapé]$_P$ [le ballon]$_A$. (Jean seems to have caught the ball)
    4. Jean [paraît être grand]$_S$. (Jean seems to be tall)
14. Secondary relations within the scene, referring to the entire scene (and not to one of the scene elements in particular), should be marked as *adverbials*(D). Units having string temporal aspects should also be marked as Ds. See Appendix C for how distinguish Ds and As in marginal cases.
    1. [Ses employés]$_A$ le$_A$ [traitent]$_P$ [avec irrespect]$_D$. (His workers treat him with disrespect)
    2. Jean$_A$ [a répondu]$_P$ intelligemment$_D$ [à la question du directeur]$_A$. (Jean cleverly answered the manager's question)
15. Complex units are units that have meaningful sub-parts (sub-units), but that do not evoke a scene on their own. Complex units are annotated according to one of these models:
    1. **Elaborators** (E) describe a property or add some information about one specific entity or relation. The elaborated entity is the center C.
        1. De$_E$ grands$_E$ chiens$_E$ bruns$_C$ (Big brown dogs)
        2. Des$_E$ gâteaux$_C$ [à$_R$ la$_E$ crème$_C$]$_E$ (Cream cakes)
    2. **Connectors** (N) relate two or more entities (annotated as Cs) in a way that highlights the fact that they have a similar type or role. They are usually conjuncts such as “et” (and), “ou” (or), “ au lieu de” (instead of), “ à part” (except of).
        1. [Jean$_C$ et$_N$ Marie$_C$]$_A$ [sont$_F$ allés$_C$]$_P$ [à$_R$ l'$_E$ école$_C$]$_A$ ensemble$_D$. (Jean and Marie went to school together)
    3. **Relators** (R) are relations that relate one or more entities without evoking a new scene. Rs in English are usually prepositions (see Appendix A below for a more elaborate discussion). They have two varieties:
        1. Rs can pertain to a specific entity (much like Elaborators) but unlike Es they then relate that entity to other relations/entities in the context.
            1. Il y a des gâteaux [dans$_R$ la$_E$ boîte$_C$]$_A$. (There are cookies in the box)
            2. Ils sont arrivés [après$_R$ dîner$_C$]$_D$. (They arrived after dinner)
        2. Rs relate two or more entities that appear in the text (much like Ns). Unlike Ns, they relate entities that are nor viewed as similar intype or role, but rather describe two different components of meaning of the entity. By convention, we place the R inside the E and not inside the C.
            1. [Un$_E$ groupe$_C$ de$_R$]$_E$ journalistes$_C$ (A group of journalists)
            2. [Le$_E$ fond$_C$ de$_R$]$_E$ [la$_E$ mer$_C$]$_C$ (The bottom of the sea)
    4*. In French, a word can be annotated as both E and R. It happens where there is a contraction due to phonological reasons of the relator “de”(“of”) and the elaborator “le” (“the”), forming the word “du”. In the same way “de” and “les”(“the” plural) form the word “des”(which should not be confounded with the undefinite determinant “des” which is annotated as E).
    The same phenomenon happens with the relator “ à ” (“to”) which form the word “au” when it is fused with “le” and the word “aux” when it is fused with “les”.
        1. Des$_E$ gateaux$_C$ [au$_{R+E}$ chocolat$_C$]$_E$ (Chocolate cakes)
        2. Le$_E$ roi$_C$ [du$_{R+E}$ Maroc$_C$]$_E$ (The king of Marocco)
        3. Le$_E$ president$_C$ [des$_{R+E}$ Etats-Unis$_C$]$_E$ (The president of the United-States)
        4. J'$_A$ irai$_P$ [aux$_{R+E}$ Etats-Unis$_C$]$_A$ (I will go to the United-States)

Note*: The contraction of "de" and "le" exists also when "de" is used as a determinant where it plays the role of a partitive article preceding uncounted entities.
Here it is a contraction of two Elaborators so in this case "du"is annotated as E.

1. [Jean]$_A$ [a$_F$ acheté$_C$]$_P$ [du$_E$ lait$_C$]$_A$ (Jean bought milk)
2. [Il]$_A$ [a$_F$ du$_E$ courage$_C$]$_S$ (He has courage)

5. If it is hard to say which of the sub-units is the relation and which is its argument, both units should be marked as Cs. If there is a relation unit that relates them, it is marked as an R.
    1. Armée$_C$ de$_R$ zombies$_C$ (Army of zombies) : Both "armée" (army) and "zombies"(zombies) seem to be equally prominent in the meaning of this expression.

16. Functions (F) are units that do not introduce a new participant or relation. They can only be interpreted as part of a larger construction in which they are situated. That is, the F is a part of the construction or pattern, and only obtains that meaning in that specific construction. Usually in these cases, they cannot be substituted with any other word.

1. Note that since F does not refer to a participant or relation and since UCCA's hierarchy reflects participation in relations, it is often not clear in what level of the hierarchy the F should be placed. When this occurs, include the F in the deepest unit that stands to reason.

2. Examples:
    1. Il$_A$ [[s'$_E$ est$_F$ arrêté$_C$]$_E$ de$_F$ jouer$_C$]$_P$ [du$_{R+E}$ piano$_C$]$_A$. (He stopped playing piano)
    2. Il$_A$ [a$_F$ finic]$_P$ [son$_E$ exercice$_C$]$_A$ (He has finished his exercice)

17. When some relation (corresponding to a unit X) is clearly described by the text, but either it or one of its arguments is not expressed explicitly in the text, we say the unit X is missing a sub-unit. If the missing entity is overtly referred to in another place in the text by the unit Y, we say that Y is a *remote sub-unit* of X. If the omitted unit does not appear explicitly in any place in the text, we say X has an *implicit unit*. Remote and implicit units have categories just like any other unit.
    1. Add a remote unit whenever you think there is a participant or relation which is strongly present in your conceptualization of the scene, but is not explicitely mentioned.
    2. Examples: (target relations (X) underlined, remote units (Y) boldface)
        1. [**Jean**$_A$ rentra$_P$ [à$_R$ la$_E$ maison$_C$]$_A$]$_H$ et$_L$ [prit$_P$ [une$_E$ douche$_C$]$_A$]$_{H,\text{REMOTE-A(“jean”)}}$ (Jean got home and took a shower)
        2. [Le$_E$ **chien**$_C$ [que j'ai vu hier]$_{E,\text{REMOTE-A(“chien”)}}$]$_A$ [était brun]$_S$. (The dog I saw last night was brown)
        3. [Nous avons juste ouvert]$_{\text{REMOTE-A(IMPLICIT)}}$. (We just opened): what was opened is implicit.

18. Linkage is the term for inter-scene relations in UCCA. There are three major types of relations in which scenes may participate, and therefore three major types of categories scene units may receive. The next three items describe these types.

19. **Elaborator Scenes**: an E-scene adds information to a previously established unit. Usually answers a "which X" or "what kind of X" question. Es should place the C they are elaborating as a remote A.. A way to check where a scene is an E-scene is to ask whether the scene along with the C it relates to are the same type as the C itself.
    1. [Le$_E$ chien$_C$ [qui$_R$ [a$_F$ mangé$_C$]$_P$ [mon$_E$ devoir$_C$]$_A$]$_{E,\text{REMOTE-A(“dog”)}}$]$_A$ est brun. (The dog who ate my homework is brown)
    2. [La]$_E$ [personne]$_C$ [à$_R$ qui$_R$ j'$_A$ [ai$_F$ donné$_C$]$_P$ [le$_E$ cadeau$_C$]$_A$]$_{E,\text{REMOTE A(“personne”)}}$ (The person whom I gave the present to)

20. **Participant Scenes**: an A-scene is a participant in the scene. It does not add information to a previously established unit, and if you remove it, it doesn't retain

the same type. Usually answers a “what” question about the scene.

1. [Parler aux étrangers]$_A$ [est déconseillé]$_S$. (Talking to strangers is ill-advised): answers “Qu'est -ce qui est déconseillé?” (“What is ill-advised?”)
2. Jean$_A$ [a dit]$_P$ [qu' il a faim]$_A$ (Jean said he's hungry) : answers “Quest-ce que Jean a dit?” (“What did Jean say?”)
3. [[La$_E$ frappe$_C$]$_P$ précise$_D$ [de$_R$ Jean$_C$]$_A$]$_A$ [a$_F$ sauvé$_C$]$_P$[le$_E$ jeu$_C$]$_A$ (“John's accurate quick save the game”): answers “Qu'est-ce qui a sauvé le jeu?”(“What did save the game?”)

21. **Parallel Scenes**: any other scene. Receives the category *Parallel Scene* (H). Sometimes there is an accompanying relation word and sometimes not. If so, it is a *Linker* (L). Note that there are no D scenes. If it's not an A or an E, it's an H.

1. [La minute où]$_L$ [je suis arrivé a la maison]$_H$, [j' ai apperçu la nouvelle peinture]$_H$.. (The minute I got home ,I noticed the new painting)
2. Si$_L$ [tu le construis]$_H$, [ils vont venir]$_H$. (If you build it, they will come)
3. [J'ai fait un-peu de recherche]$_H$, [posé deux questions]$_H$ et$_L$ [je me suis trouvé en train de réfléchir]$_H$. (I'd done some research, asked a couple of questions and found myself thinking)

Note: Specific cases of parallel scenes include (examples of relevant linkers in brackets): purposive :(“pour” (“for”)) , logical (“si … alors”(“if … then”), temporal (“quand X, Y” (when X, Y)), “avant que X, Y” (before X, Y), coordination (“et” (and), “mais” (but)), and contrastive linkages (“cependant” (“however”)).

Note: Scenes that are not related to any other units and are therefore in the top level organization in the text are also Hs.

Note: Linkers do not necessarily appear between the scenes they are linking (see example 1 above).

22. A unit is marked as a Ground Relation (G) (or Ground for short), if its primary purpose is to relate some unit to its ground (i.e., the speech event: either the speaker, the hearer or the general context in which the text was uttered/written/conceived).
Gs are used for annotating mentions of the ground scene that are missing almost all their elements save for one word or expression.

1. [Etonnamment]$_G$, [[notre$_E$ vol$_C$]$_A$ [est$_F$ arrivé$_C$]$_P$ [à$_R$ l'$_E$ heure$_C$]$_D$]$_H$. (Surprisingly, our flight arrived on time)
2. [Il est vrai]$_G$ que$_L$ [Jean$_A$ revient$_P$ [à$_R$ la$_E$ maison$_C$]$_A$]$_H$. (It is true that Jean is coming home)

Note that if the ground is referred to using a complete scene (with As and possibly Ds), we analyze it as a scene and not as a G.

1. [J '$_A$ [étais$_F$ surpris$_C$]$_S$]$_H$ quand$_L$ [[notre$_E$ vol$_C$]$_A$ [est$_F$ arrivé]$_P$ [à$_R$ l'$_E$ heure$_C$]$_D$]$_H$ (I was surprised when our flight arrived on time)
2. Je$_A$ t'$_A$ [ai]$_P$-[déjà]$_D$ [dit]-$_{P(CONT.)}$ [que Jean ne peut pas le faire]$_A$ (I told you already that Jean can't make it)

Appendix A: Classification of Prepositions

Prepositions are in frequent use in French. They include words such as “dans”(in), “sur”(on), “apres”(after), “avec”(sur), “sous”(under), “de”(of)

1. **Prepositions as Relators**: As mentioned above, Rs have two varieties. In cases where mostly relate to one unit and relate it to the rest of the scene, we incorporate the R inside that unit.

1. Examples of possessive “de” (“of”):

1. President$_C$ [des$_{R+E}$ Etats-Unis$_C$]$_E$ (President of the United-States)
2. Les$_E$ [plus$_E$ jolis$_C$]$_E$ hotels$_C$ du$_{E+R}$ monde$_C$ (The finest hotels of the world)

2.Examples of Relator prepositions:

1. John$_A$ [a$_F$ mis$_C$]$_P$ [son$_E$ châpeau$_C$]$_A$ [sur$_R$ l'$_E$ étagère$_C$]$_A$ (John put his hat on the shelf)
2. John$_A$ [a$_F$ fait$_F$ confiance$_C$]$_P$ [à$_R$ son$_E$ père$_C$]$_A$. (John relied on his father)
3. John$_A$ [est$_F$ allé$_C$]$_P$ [derrière$_R$ le$_E$ bloc$_C$]$_A$. (John went behind the bloc)
4. [Il y a]$_S$ [des$_E$ gâteaux$_C$]$_A$ [dans$_R$ la$_E$ boîte$_C$]$_A$. (There are cookies in the box)
5. Ils$_A$ [sont$_F$ arrivés$_C$]$_P$ [après$_R$ dinner$_C$]$_A$ (They arrived after dinner)
6. J'$_A$ [ai$_F$ pris$_C$]$_P$ [le$_E$ rôle$_C$]$_A$ [de$_R$ [Billy the Kid]$_C$]$_A$ (I took the role of Billy the Kid)
7. Possessions$_S$ [de$_R$ drogues$_C$ interdites$_E$]$_A$ (Possession of unauthorized drugs)

2*. **Between two entities**: The other variety of R is when it relates two or more entities in the text, and it is not clear whether it belongs to the preceding unit, or to the following unit. In that case, we add the R to the E.

If there are only Cs, we leave it between them. This usually happens with "de" ("of").

1. Examples of part-whole "of":
   1 . [fond$_C$ de$_R$]$_E$ [la$_E$ mer$_C$]$_C$ (bottom of the sea)
   2. [fin$_C$ de$_R$]$_E$ [la$_E$ chanson$_C$]$_C$ (end of the song)
2. Quantification constructions:
   1. [un$_E$ groupe$_C$ de$_R$]$_E$ journalistes$_C$ (a group of journalists)
   2. [des$_E$ millions$_C$ de$_R$]$_E$ dollars$_C$ (millions of dollars)
   3. [plein$_C$ de$_R$]$_E$ poissons$_C$ (plenty of fish)
   4. armée$_C$ de$_R$ zombies$_C$ (army of zombies)
   5. [4$_E$ épisodes$_C$ de$_R$]$_E$ Dallas$_C$ (4 episodes of Dallas)
3. Examples of classifier construction: (see also below)
   1. [l'$_E$ histoire$_C$ d'$_R$]$_E$ [[une$_E$ jeune$_E$ fille$_C$]$_A$ condamnée$_P$ [à$_R$ mort$_C$]$_A$]$_C$(the story of a young s girl sentenced to death)
   2. [la$_E$ rumeur$_C$ de$_R$]$_E$ [sa$_A$ retraite$_P$]$_C$ (the rumor of his retirement)
   3. [l'$_E$ étrange$_E$ croyance$_C$ que$_R$]$_E$ [[les$_E$ poules$_C$]$_A$ [sont$_F$ immortelles$_C$]$_S$]$_C$ (the strange belief that chickens are immortals)

3*. **Remark**: In part-whole cases when dealing with the contractions "du" and "des" which are annotated both as R and E, "de"' is part of the Elaborator
but it is also fused with the definite article "le" or "les"' which belongs to the following Center.
In this case we annotate the fused word "du" or "des"'as R+E and add "du"/"des" as a remote Elaborator of the following Center.

1. [fond$_C$ du$_{R+E}$]$_E$ [lac$_C$]$_{C,\text{REMOTE-E("du")}}$ (bottom of the lake)
2. [fin$_C$ du$_{R+E}$]$_E$ [film$_C$]$_{C,\text{REMOTE-E("du")}}$ (end of the film)

This annotation permits to preserve the analogy between the cases where there isn't contraction ("de la") and the case of "du" and "des".

4. **Main relations**: If the preposition is the main relation in the scene, then it is a P or S.
   1. [Le$_E$ pommier$_C$]$_A$ [est$_F$ dans$_C$]$_S$ [le$_E$ jardin$_C$]$_A$ (The apple tree is in the garden)
   2. [Les$_E$ gâteaux$_C$]$_A$ [sont$_F$ dans$_C$]$_S$ [la$_E$ boîte$_C$]$_A$ (The cookies are in the box)
5. **Function**: Generally, in cases where the preposition has no substantial semantic input, it should be marked as F. The preposition in this case is part of the construction or pattern, and has the meaning that it has only in that specific construction.
   1. [Jean]$_A$ [[s'$_E$est$_F$ souvenu$_C$]$_E$ [de]$_F$ [prendre]$_C$]$_P$ [ses$_E$ clefs$_C$]$_A$ (Jean remembered to take the keys)

2. [Jean]$_A$ [a$_F$ aidé$_E$]$_P$- [Marie]$_A$ [à$_F$ monter$_C$]$_{-P(CONT.)}$ [à$_R$ l'$_E$ échelle$_C$]$_A$ (Jean helped Marie climb the ladder)
3. [Jean]$_A$ [a$_F$ décidé$_C$]$_P$[de$_F$ quitter$_C$]$_A$ [la$_E$ ville$_C$]$_A$ (Jean decided to leave the city)

6*. **Phrasal verbs**: In contrast with English (for example, "to give up"), in French there aren't prepositions changing the meaning of the verb in an unpredictable way.

Appendix B: Participant-Adverbial distinction:

A basic issue inn almost any syntactic theory is to determine when a unit is a participant and when it is a secondary relation. In UCCA, this the distinction between Participants and Adverbials;

1. Any unit that introduces a new participant. Subjects, objects, instruments, locations, destinations are therefore invariably As.
2. Adverbs and any other nit that introduces another relation (and not a participant) into the scene is a D. Manner adverbs (e.g. 'rapidement' (quickly), 'calmement' (calmly) are invariably Ds.
3. By convention, we invariably mark temporal relations as Ds (they will be given a separate category in subsequent layers of UCCA).
4. Prepositional phrases constitute most of the borderline cases.
5. Examples:
    1. [Jean]$_A$ [a$_F$ coupé$_C$]$_P$ [le$_E$ gâteau$_C$]$_A$ [avec$_R$ un$_E$ couteau$_C$]$_A$. (Jean cut the cake with a knife)
    2. [Jean]$_A$ [a$_F$ fait$_F$ de$_R$ la$_E$ marche$_C$]$_P$ [dans$_R$ le$_E$ parc$_C$]$_A$ hier$_D$. (Jean walked in the park yesterday)
    3. [Jean]$_A$ [s'$_E$ est$_F$ conduit$_C$]$_P$ [[de$_R$ manière$_C$]$_E$ irresponsable$_C$]$_D$. (Jean behaved recklessly)
    4. [Jean]$_A$ l'$_A$ [a$_F$ traité$_C$]$_P$ [avec$_E$ irrespect$_C$]$_D$.(Jean treated him with disrespect)
    5. [Texas]$_A$ [a$_F$ gagné$_C$]$_P$ [sur$_R$ son$_E$ propre$_E$ terrain$_C$]$_A$. (Texas won in its home court)
    6. [Jean]$_A$ [a$_F$ acheté$_C$]$_P$ [du$_R$ lait$_C$]$_A$ [à côté]$_A$ [pour$_R$ 2$_E$ euros$_C$]$_A$. (Jean bought milk next door for 2 euros): "à côté" (next door) is a location, alsit an abstract one; 2 euros is a new participant, although it is again abstract

Appendix C: Other Constructions

Scenes.

1. **Dependent scenes**: A scene is not necessarily something that stands on its own. It may necessitate a larger construction to rely on, but it still considered a scene:
    1. [Il est parti à la retraite]$_H$ avec$_L$ [le grade de lieutenant]$_H$. (He retired with a rank of major)
    2. [Autrefois pauvre]$_H$, [il possède aujourd'hui un appartement de 10 pièces]$_H$. (Once poor, he now owns a ten-room apartment)
2. **Linkers with a single argument**: We also allow linkers with a single argument. This usually happens if a linker relates one scene with everything that follows/precedes it, without there being any particular unit that the scene relates to. Another case where we use a single argument linker is when one of its arguments is omitted.
    1. Un example would be a paragraph that starts with "Cependant" (However) that

contrasts with everything that was written in the previous paragraph.

3. **Distinguishing Ground and Participant Scenes**: A *ground* relates the speech event or some aspect of it with a given unit. It does not introduce a new scene above and beyond evoking the speech event.
    1. [La vérité c'est que]$_G$ [Jean$_A$ est$_S$ [un$_E$ conservateur$_C$]$_A$]$_H$.
    2. [A ma surprise]$_G$ [j'$_A$ [ai$_F$ vu$_C$]$_P$ [Jean]$_A$ [dans$_R$ le$_E$ parc$_C$]$_A$]$_H$.

   Contrast with participant scenes. Both "je pense" (I think) and "Marie a vu" (Marie saw) introduce a new scene, with a new P. They are therefore participant scenes.
    1. [Je]$_A$ [pense]$_P$ [que]$_F$ [Jean est un conservateur]$_A$. (I think that Jean is a conservative)
    2. [Marie]$_A$ [a vu]$_P$ [Jean courir dans le parc]$_A$. (Marie saw Jean running in the park)
4. **Static Scenes**: Static scenes are scenes which can be fully described by a single picture, no temporal dimension involved. Following are several examples of static scenes.
    1. **Identity**. Expressing the identity between two entities. Identity is the case where there are two well-defined entities (not a set or a relation) and the "être" verb equates them.
        1. [L'étoile du matin]$_A$ [est]$_S$ [l'étoile du soir]$_A$. (The morning star is the evening star)
        2. [La Chine]$_A$ [est]$_S$ [le plus grand pays du monde]$_A$. (China is the biggest country in the world)
        3. [Jean]$_A$ [est]$_S$ [mon professeur d'histoire]$_A$. (Jean is my history teacher)
        4. But: [Jean]$_A$ [est$_F$ membre$_C$]S [d'$_R$ une$_E$ ONG$_C$]$_A$ (Jean is a member of an Non Governmental Organization (NGO)) since here "membre d'une ONG" (member of an NGO) is not one specific entity but a set.
    2. **Attribution/Benefaction/Location**: Specifying a quality, a benefactor or a location of an argument.
        1. [Cet$_E$ homme$_C$]$_A$ [est$_S$ intelligent$_C$]$_S$. (This man is clever)
        2. [Ce$_E$ cadeau$_C$]$_A$ [est$_F$ pour$_C$]$_S$ [l'$_E$ anniversaire$_C$ [de$_R$ Jean$_C$]$_E$]$_A$. (This present is for Jean's birthday)
        3. [Le$_E$ pommier$_C$]$_A$ [est$_F$ dans$_C$]$_S$ [le$_E$ jardin$_C$]$_A$. (The apple tree is in the garden)
    3. **Possession**:
        1. [Ce$_E$ livre$_C$]$_A$ [est$_S$ le$_E$ mien$_C$]$_S$. (This book is mine)
    4. **Existential "Il y a"**: This is a special type of static scene. Since "il y a" (there is/there are) determines the relation here (namely existence), it is marked as S. Since it is not clear what its internal structure should be, it is considered unanalyzable.
        1. [Il y a]$_S$ [des$_E$ [boucles d'oreilles]$_C$]$_A$ [sur$_R$ la$_E$ table$_C$]$_A$. (There are earrings on the table)
    5. Note that, as always, the category is not defined by the words comprising the unit, but by the function it has in a given scene. Consider these pairs of examples:
        1. [Jean]$_A$ [marche]$_P$ [dans$_R$ le$_E$ jardin$_C$]$_A$ (Jean is walking in the garden) / [Le$_E$ pommier$_C$]$_A$ [est$_F$ dans$_C$]$_S$ [le$_E$ jardin$_C$]$_A$ (The apple tree is in the garden)
        2. [Jean]$_A$ [a$_F$ acheté$_C$]$_P$ [du$_E$ vin$_C$]$_A$ [pour$_R$ l'$_E$ anniversaire$_E$ [de$_R$ Marie$_C$]$_E$]$_A$ (Jean bought wine for Marie's birthday)/ [Ce$_E$ cadeau$_C$]$_A$ [est$_F$ pour$_C$]$_S$ [l'$_E$ anniversaire$_C$ [de$_R$ Jean$_C$]$_E$]$_A$ (This present is for Jean's birthday).
5. **Scene or not a scene**: One of the most important decisions in UCCA is to determine whether a relation is an S or P, and therefore evokes a scene, or not. Processes are usually easier to spot – they describe an event that evolves in time, usually some action or movement. As for States, they differ from non-scenes in being specific in time (i.e., you can add temporal modifiers to it like "aujourd'hui" (today) or "il y a deux ans" (two years ago), and in fact they are asserted rather than simply mentioned.

1. [Le$_{E}$ déclenchement$_{C}$]$_{P}$ [de$_{R}$ la$_{E}$ guerre$_{C}$ [de$_{R}$ Croatie$_{C}$]$_{E}$]$_{A}$ (The outbreak of the Croatian War) - a scene.
2. Oscillant$_{P}$ [entre$_{R}$ [[l'$_{E}$ athéisme$_{C}$]$_{C}$ et$_{N}$ [l'$_{E}$ agnosticisme$_{C}$]$_{C}$]$_{C}$]$_{A}$ (Oscilating between atheism and agnosticism) – a scene.
3. [La$_{E}$ frappe$_{C}$]$_{P}$ précise$_{D}$ [de$_{R}$ Jean$_{C}$]$_{A}$ (Jean's accurate kick) – a scene.
4. [Le$_{E}$ verre$_{C}$ cassé$_{E}$]$_{A}$ [est$_{F}$ dangereux$_{C}$]$_{S}$ (Broken glass is dangerous) - "cassé" (broken) does not evoke a scene, the scene in which the glass was broken is not evoked here, only the end result of it being broken.
5. [Jean]$_{A}$ [a$_{F}$]$_{P}$- [toujours]$_{D}$ [voulu$_{C}$]$_{-P(CONT.)}$ [un$_{E}$ jardin$_{C}$ [avec$_{R}$ des$_{E}$ arbres$_{C}$]$_{E}$]$_{A}$ (John always wanted a garden with trees) - "avec des arbres" (with trees) is not a scene, it is not specific in time, and it is not asserted (that is, it is not claimed to be true).
6. [Les$_{E}$ arbres$_{C}$]$_{A}$ [sont$_{F}$ dans$_{C}$]$_{S}$ [le$_{E}$ jardin$_{C}$]$_{A}$ (the trees are in the garden) – here the fact that the trees are in the garden is asserted.

6. **One scene or two**. Where two potentially scene-evoking relations appear in proximity to one another, the question of whether to consider them one complex P/S or two separate ones rises. It should be one scene if the two relations are conceptually hard to separate and are similar in their participants, time, location and ground. It should be two scenes if this is not the case.
    1. Examples:
        1. [Il rentra à la maison]$_{H}$ et$_{L}$ [prit une douche]$_{H}$ (He got home and took a shower) – 2 scenes
        2. [Il a fallu beaucoup d'effort]$_{H}$ pour$_{L}$ [gagner ce combat]$_{H}$ (It necessitated a lot of effort to win this fight) -2 scenes
        3. [Jean mange et boit avec enthousisasme]h (Jean eats and drinks enthusiastically) – 1 scene
        4. Elle$_{A}$ [est partie en colère]$_{P}$ (She went away angry) – 1 scene, the two original scenes of her going and her being angry are fused into one.
7. **Secondary verbs or Participant Scene**. Distinguishing between secondary verb constructions and participant scene constructions is done by determining whether the sentence in question refers to one or two scenes. Participant scenes correspond to cases where there are two separate scenes, while secondary verbs correspond to the cases where there are two verbs, one dependent (secondary, not describing a scene in its own right, could not by itself be the P/S f a scene) and one independent (the main verb within the same scene).
        1. [Il]$_{A}$ [a demandé]$_{P}$ [à voir le directeur]$_{A,REMOTE\text{-}A("Il")}$ (He demanded to see the manager) – 2 scenes, since the demanding and the seeing are separate scenes which take place in different times and locations
        2. [Il]$_{A}$ [veut attrapper]$_{P}$ [le ballon]$_{A}$ (He wants to catch the ball) - 1 scene, since "veut"(wants) does not describe an action in its own right, but is dependent on the "catching").
8. **Verbs that can be primary or secondary**. These verbs can be used either as secondary verbs (applying to the same scene as the main verb) or as primary verbs (in that case, there are two separate scenes). This decision is context-dependent, and the annotation of these verbs depends on the decision whether to annotate a single scene or two scenes (see criteria above):
        1. [Jean]$_{A}$ [[s'$_{E}$ est$_{F}$ souvenu$_{C}$]$_{E}$ [de]$_{F}$ [prendre]$_{C}$]$_{P}$ [ses$_{E}$ clefs$_{C}$]$_{A}$ (Jean remembered to take the keys): context-dependent, but very likely that "s'est souvenu (remembered) here is mostly for emphasis and therefore secondary)
        2. [Jean]$_{A}$ [s'$_{E}$ est$_{F}$ souvenu$_{C}$]$_{P}$ [de$_{R}$ la$_{E}$ [rendonnée$_{P}$ [avec$_{R}$ tous$_{E}$ ses$_{E}$

amis$_C$]$_A$]$_C$]$_A$ (Jean remembered the hike with all his friends)

9. **Noun Scenes**. The process by which a *scene* is converted into an abstract participant. Nominalizations should be internally analyzed as scenes, with a P/S, As, Ds ans Rs. However, nominalizations may also be modified by nominal elaborators. In that case, hey should be marked as Es.
    1. [[La$_E$ frappe$_C$]$_P$ précise$_D$ [de$_R$ Jean$_C$]$_A$]$_A$ [a$_F$ sauvé$_C$]$_P$ [le$_E$ jeu$_C$]$_A$. (Jean's accurate kick saved the game)
10. **Scenes with neither a P nor an S**. Some scenes have no P or S, since it is omitted or implied. In this case, we should add them as remote units.
    1. [Jean a acheté des oeufs]$_H$ [et]$_L$ [[Marie]$_A$ [un chewing-gum]$_A$]$_{H,REMOTE-P(\text{“acheté”})}$ (Jean bought eggs and Mary chewing gum)
    2. [Jean voulait une vraie vie]$_H$,[[pas]$_D$ [une vie dans une caravane]$_A$]$_{H,REMOTE-A(\text{“Jean”}),REMOTE-P(\text{“voulait”})}$ (John wanted a real life, not a life in a caravan)
11. **Fragments**. Occasionally, a fragment of text does not describe a scene in its own right nor belongs to any other specific scene. The category of such a unit, as always, is determined by its role in a super-ordinate relation it participates in (if any). By default, it's an H.
    1. [Non]$_H$, [ça ne va pas marcher]$_H$ (No, this will not work)

Remotes.

1. **Two types of verbs that take a participant scene**: Note that some verbs with a participant scene have a remote unit taken from the participant scene or vice versa. Other verbs do not exhibit such behavior.
    1. [[Je]$_A$ [m'$_E$ attends$_C$]$_P$ [à$_R$ [[|ce que]$_F$ Jean$_A$ vienne$_P$]$_C$]$_A$]$_H$ (I expected Jean to come)
    2. [[Nous]$_A$ [acceptons]$_P$ [que$_F$ Jean$_A$ [fasse$_F$ l'$_E$ oraison$_C$ funèbre$_E$]$_P$]$_A$]$_H$ (We agreed for Jean to give the funeral oration)
    3. [[J']$_A$ [ai$_F$ convaincu$_C$]$_P$ [Jean$_A$ de$_F$ venir$_P$]$_A$]$_{H,REMOTE-A(\text{“Jean”})}$ (I persuaded John to come)
    4. [Jean$_A$ [a$_F$ promis$_C$]$_P$ [[d'$_F$ être$_F$ meilleur$_C$]$_S$]$_{A,REMOTE-A(\text{“Jean”})}$]$_H$ (Jean promised to be better)

2. **Prominent Cases of Remote Participants**. A remote participant is a unit that is referenced in a scene in which it is not contained **.** By convention, the remote participant should be chosen as the minimal unit that refers to the target entity (for instance “table”(table) and not “la table rouge” (the red table).
    1. Several prominent cases of remote participants: (target scenes underlined; remote participants boldfaced)
        1. **Coordination**. The subject is often omitted.
            1. **Jean** a dîné et <u>allé dormir</u> (Jean had dinner and went to bed)
        2. **Relative scenes**. The head of the elaboration is not contained in the relative scene.
            1. [La **table** <u>que j'utilise</u>]$_A$ [est$_F$ trop$_E$ petite$_C$]$_S$ (The table I'm using is too short)
        3. **Infinitives**. The subject is omitted.
            1. [[Vivre]$_P$ [à la campagne]$_{A]A,\ remote-A(\text{"Jean"})}$ est le rêve de Jean (To live in the countryside is John's dream)

Secondary Relations in Scenes.

1. **Modification by Ds and by Es**. We should distinguish two types of modifying units for an A scene.
    1. Ds refer to the scene itself and express a secondary relation in that scene:
        1. [[La$_E$ frappe$_C$]$_P$ [précise]$_D$ [de$_R$ John$_C$]$_A$]$_A$ [a$_F$ sauvé$_C$]$_P$ [le$_E$ jeu$_C$]$_A$ (John's accurate kick save the game)
    2. Es refer to scene when it is construed as a single entity, and don't provide any information of what is happening in the scene itself:
        1. Le$_E$ [compte à rebours]$_C$ final$_E$ (The final countdown)
        2. Le$_E$ dernier$_E$ [combat$_P$ [d'$_R$ Ali$_C$]$_A$]$_C$ (Ali's last fight) – Here "dernier" (last) is an E since it tells us nothing on the fighting scene, but only specifies which scene it is)
        3. [Les$_E$ [négociations$_P$]$_{C-}$ laborieuses$_E$ [entre$_F$ Jean$_A$ et$_F$ Marie$_A$]$_{-C(CONT.)}$]$_A$ [ont$_F$ duré$_C$]$_P$ [3$_E$ ans$_C$]$_A$ (The tedious negotiations between John and Mary lasted 3 years)
2. **Quantity Adverbs**. Adverbs of quantity such as "just" and "only" should be annotated as Ds whenever possible.
    1. [Il y a]$_S$ [seulement]$_D$ [[une$_E$ part$_C$ de$_R$]$_E$ gâteau$_C$]$_A$ (There is only one piece of cake)
    2. [Le$_E$ supermarché$_C$]$_A$ [est$_F$]$_{S-}$ [juste]$_D$ [autour]$_{-S(CONT.)}$ [du$_R$ coin$_C$]$_A$ (The supermarket is just around the corner)
3*. **Negation**. Negation is considered an adverbial.
    The expression "ne pas" will be unanalyzable. This is because "pas", added initially as an emphasizer, became integral part of the negation. In spoken French, "ne" is often dropped.
        1. [Jean]$_A$ [n']$_{D-}$ [a$_F$]$_{P-}$ [pas]$_{-D(CONT.)}$ [touché$_C$]$_{-P(CONT.)}$ [le$_E$ piano$_C$]$_A$. (Jean didn' touch the piano)
4. **D in coordination**. Occasionally, several entities are connected by an N, where there is a D (usually a frequency, probability or temporal relation) which relates specifically to one of them. In this case, the proper annotation is to annotate it as a D.
    1. [Jean]$_A$ [[a$_F$ l'$_E$ intention$_C$]$_E$ d'$_F$ aller$_C$]$_P$ [à$_R$ [Rome$_C$, Barcelone$_C$ et$_R$ [peut-être$_D$ Londres$_C$]$_C$]$_C$]$_A$ (Jean is intending to go to Rome, Barcelona and perhaps London.

Complex units

1. **Possession**. Possession constructions (by "de" (of)) is used to express several different relations. Typically, determining the head in such cases is straightforward. There are several important cases: "Corresponding Profiles" and "Part-Whole Relations" (see below).
    1. [Ce]$_E$ [siège]$_C$ [de$_R$ la$_E$ Knesset$_C$]$_E$ (This seat of the Knesset)
    2. [La]$_E$ [voiture]$_C$ [de$_R$ Jean$_C$]$_E$ (Jean's car)
2. **Determiners**. Determiners should be annotated as elaborators of the noun.La
    1. [La]$_E$ [Knesset]$_C$ (The Knesset)
    2. [Un]$_E$ [grand]$_E$ [chien]$_C$ [brun]$_E$ (A big brown dog)
3. **Extraposition**. Cases where an *elaborator* does not create a contiguous stretch of

text with its *center*. In this case, they should be marked together as a non-contiguous unit.

1. Il a vu [cette peinture]$_{A-}$ hier, [[cette magnifique peinture]$_{E}$]$_{-A(CONT.)}$ (He saw that painting yesterday, this magnificent painting)

4. **Fused E scenes**. There are many constructions that resemble an E scene construction, but have a somewhat different form. Their internal structure should look like that of a scene:
    1. [[Ce que]$_{A}$ [je]$_{A}$ [voulait$_{E}$ dire$_{C}$]$_{P}$]$_{A}$ [c'est]$_{S}$ [que]$_{F}$ [je$_{A}$ [veux$_{E}$ dîner$_{C}$]$_{P}$]$_{A}$ (What I meant was I want to have dinner)
    2. [Toutes$_{E}$ les$_{E}$ recettes$_{C}$ [[qu']$_{R}$ [elle]$_{A}$ [a$_{F}$ utilisées$_{C}$]$_{P}$]$_{E-REMOTE(\text{“recettes”})}$]$_{A}$ [sont$_{F}$ marquées$_{C}$]$_{P}$ [en$_{R}$ rouge$_{C}$]$_{D}$ (Any recipes she used are marked in red)
    3. [Tu]$_{A}$ [joues]$_{P}$ [[avec]$_{R}$ [[un$_{E}$ tennisman$_{C}$]$_{A}$ [meilleur]$_{S}$ [que]$_{F}$ [toi]$_{A}$]$_{C}$]$_{A}$ (You are playing with a tennis player better than you)
5. **Numbers and Quantifiers**. They are considered Es. The question of their scope is not addressed in the current layer of annotation. Therefore they are considered a part of the unit adjacent to it.
    1. [Tous$_{E}$ les$_{E}$ Grecs$_{C}$]$_{A}$ [sont$_{F}$ mortels$_{C}$]$_{S}$ (All Greeks are mortals)
    2. [Il y a]$_{S}$ [deux$_{E}$ bananes$_{C}$]$_{A}$ [sur$_{R}$ la$_{E}$ table$_{C}$]$_{A}$ (There are two bananas on the table)
    3. [Des$_{E}$ millions$_{C}$ de$_{R}$]$_{E}$ [maisons]$_{C}$ (Millions of homes)
6. **Quantities** are usually comprised of a magnitude and a unit's name (e.g. 100m or 3000 dollars). They should be annotated repectively as E and C.
    1. Je vais lui donner [100$_{E}$ euros$_{C}$]$_{A}$ pour son travail. (I'm going to give him 100 euros for his job)
    2. [Jean]$_{A}$ [a$_{F}$ acheté$_{C}$]$_{P}$ [du$_{R}$ lait$_{C}$]$_{A}$ [à côté]$_{A}$ [pour$_{R}$ 2$_{E}$ euros$_{C}$]$_{A}$. (Jean bought next door for 2 euros)
7. **C within C**. The question of whether to mark all the Es in a flat structure (as in “de$_{E}$ grands$_{E}$ chiens$_{C}$ bruns$_{E}$” (big brown dogs)) or to set some order of precedence between them (as in “une$_{E}$ [housse$_{C}$]$_{C-}$ bleue$_{E}$ [[d'$_{R}$ ordinateur$_{C}$]$_{E}$]$_{-C(CONT.)}$” (a blue computer cover), where it's clear that “bleue” (blue) elaborates “housse d'ordinateur” (computer cover) and not that “d'ordinateur” elaborates “housse bleue” (blue cover). The rule is: “mark a C within a C whenever there is an order of precedence between the Elaborators, otherwise use a flat structure”.
    1. de$_{E}$ grands$_{E}$ chiens$_{C}$ bruns$_{E}$ (Big brown dogs)
    2. une$_{E}$ [housse$_{C}$]$_{C-}$ bleue$_{E}$ [[d'$_{R}$ ordinateur$_{C}$]$_{E}$]$_{-C(CONT.)}$” (a blue computer cover)
    3. production$_{C}$ [d'$_{R}$ eau$_{E}$ lourde$_{C}$]$_{E}$ (heavy water production)
8. **Classifiers**. Units comprised a sub-unit that specifies the whole W, and another which specifies which category it belongs to P (in order to specify what aspect of meaning we would like to refer to). In these cases, UCCA will annotate W as a C and P as an E.
    1. [le$_{E}$ prénom$_{C}$]$_{E}$ [Jean]$_{C}$ (the first name Jean)
    2. [l'$_{E}$ année$_{C}$]$_{E}$ [1996]$_{C}$ (the year 1996)
    3. [la$_{E}$ rumeur$_{C}$ de$_{R}$]$_{E}$ [sa$_{A}$ retraite$_{P}$]$_{C}$ (the rumor of his retirement)
    4. [l'$_{E}$ étrange$_{E}$ croyance$_{C}$ que$_{R}$]$_{E}$ [[les$_{E}$ poules$_{C}$]$_{A}$ [sont$_{F}$ immortelles$_{C}$]$_{S}$]$_{C}$ (the strange belief that chickens are immortals)
9. **Part-Whole relations**. Units comprised of a sub-unit that specifies the whole W, and another that specifies the specific sub-part of it P. In these cases, UCCA will annotate W as a C and P as an E.

1.[fond$_E$ de$_R$]$_E$ la$_E$ mer$_C$]$_C$ (bottom of the sea)
2.[un$_E$ intervalle$_C$ de$_R$]$_E$ temps$_C$ (a period of time)

10. **Directions**. Directions should be considered as As, as they can be said to refer to an abstract location. This applies to both absolute directions (like "nord" (north)) and relative directions (like "loin" (far away))

EXAMPLES

11. **Passive "par"**. The "par" (by) of the passive should be annotated as R.
    1. Il est considéré [par$_R$ beaucoup$_C$]$_A$ comme le meilleur chef de la ville (He is considered by many to be the best chef town)

12*. **Prepositions with an omitted argument**. In contrast with English, in French there are no such cases.

Processes/States

1. **P/S sub-units**. If the P/S is multi-worded, it will usually contain sub-units. The main verb is the C. Other sub-units that have significant semantic input, chiefly secondary verbs, are Es. Modals should invariably be annotated as secondary verbs (and therefore as Es). Auxiliary verbs (être (be), avoir (have)), which do not have semantic input in their own right are considered F.
    1. Jean$_A$ [[va]$_E$ [venir]$_C$]$_P$ (Jean will come)
    2. Marie$_A$ [[devrait]$_E$ [venir]$_C$]$_P$ (Marie should come)
    3. Marie$_A$ [[est]$_F$ [venue]$_C$]$_P$ hier$_D$ (Marie came yesterday)
    4. Jean$_A$ [[doit]$_E$ [partir]$_C$]$_P$ (Jean has to go)
    5. Je$_A$ l'$_A$ [[ai]$_F$ [fait]$_C$]$_P$ (I have done it)
2. **Distinguishing identity and other static scenes**. Occasionally nouns are used as accompanied by some inflection of the verb "être" (be). UCCA distinguishes between cases:
    1. **Identity**: where there are two separate, defined entities.
    2. **Attribution**: where there is one A, and the noun is used to describe some set of elements to which that A belongs to. In this case, we include the set-denoting noun in the P or S.
    3. **Examples**:
        1. [La$_E$ Chine$_C$]$_A$ [est]$_S$ [le$_E$ plus$_E$ grand$_E$ pays$_C$ [du$_{R+E}$monde$_C$]]$_A$ (China is the biggest country in the world)
        2. [Jean]$_A$ [est]$_S$ [mon$_E$ professeur$_C$ [d'$_R$ histoire$_C$]$_E$]$_A$ (Jean is my history teacher)
        3. [Jean]$_A$ [est]$_S$ [mon$_E$ meilleur$_E$ ami$_C$]$_A$ (Jean is my best friend)
        4. [Son$_E$ prompt$_E$ départ$_C$]$_A$ [était$_F$ une$_E$ erreur$_C$]$_S$ (His prompt leaving was a mistake)
        5. [Jean]$_A$ [est$_F$ français$_C$]$_S$ (Jean is french)
3. **Non-contiguous P/S in questions**. The auxiliaries should be annotated as a (non contiguous) part of the process/state.
    1. [Qui]$_A$ [avez$_F$]$_P$-[vous]$_A$ [invité$_C$]$_{-P(CONT.)}$? (Who did you invite?)
4. **Verbal Es and Adverbials**. A common ambiguity is between Es inside a P/S and Ds. In case the unit refers directly to the verb and constitutes an inseparable part of it (as in secondary verbs) ,we mark it as an E inside the P/S. In any other case, we mark it as a D. When in doubt, prefer annotating it as a D.
    1. [Je]$_A$ [ne]$_D$ [l']$_A$ [ai$_F$]$_P$- [pas]$_{-D(CONT.)}$ [toujours]$_D$ [aimé$_C$]$_{-P(CONT.)}$

(I didn't always like him)

5. **Non-contiguous Process/State**. Occasionally, an *adverbial* is placed between the auxiliary and the main verb. In that case, a non-contiguous *process/state* should be marked.
    1. Ils$_{A}$ [ont$_{F}$]$_{P-}$ [encore]$_{D}$ [perdu$_{C}$]$_{-P(CONT.)}$ (They lost again)
6***. Infinitive "de"**. By convention, when "de" (or "d'") is used as an F (it corresponds in this case to "to" English but it is much less frequent) , it should be included within the *process/state*.
    1. Il$_{A}$ [[s'$_{E}$ est$_{F}$ arrêté$_{C}$]$_{E}$ de$_{F}$ jouer$_{C}$]$_{P}$ [du$_{R+E}$ piano$_{C}$]$_{A}$. (He stopped playing piano)
    2. Il$_{A}$ [[a$_{F}$ l'$_{E}$ intention$_{C}$]$_{E}$ d'$_{F}$ aller$_{C}$]$_{P}$ [à$_{E}$ Rome$_{C}$]$_{P}$. (He is intending to go to Rome)
7. **Light Verbs**. Cases where the verb is almost void of meaning, and most of the meaning is determined by the object. The verb is usually "prendre" (take) or "faire" (make). Annotation: the noun denoting the action is considered to be a part of the P/S. The verb is considered an F, while the "object" is considered as C.
    1. [Jean]$_{A}$ [a$_{F}$ pris$_{F}$ [une$_{E}$ douche$_{C}$]$_{C}$]$_{P}$ (Jean took a shower)
    2. [Marie]$_{A}$ [a$_{F}$ fait$_{F}$ [un$_{E}$ sourire$_{C}$]$_{C}$]$_{P}$ [à$_{R}$ Jean$_{C}$]$_{P}$ (Marie gave Jean a smile)
8. **Adjective followed by a scene**: Analyzed as an E and C construction.
    1. [Jean]$_{A}$ [est$_{F}$ facile$_{E}$ à$_{F}$ plaire$_{C}$]$_{P}$ (Jean is easy to please)
    2. [Jean]$_{A}$ [est$_{F}$ prêt$_{E}$ à$_{F}$ partir$_{C}$]$_{P}$ (Jean is ready to leave)
9**. "Rendre" X <State>**. We view this construction as a main scene and a participant scene.
    1. [Jean]$_{A}$ [rend]$_{P}$ [Marie]$_{A}$ [heureuses$_{S}$]$_{A,REMOTE-A("Marie")}$ (Jean makes Marie happy)
10. **Secondary Verbs with another role**. Some secondary verbs introduce another role beside the roles of the main verb. An example is "aider" (help), "forcer" (force) and "permettre" (permit). Like all secondary verbs, such verbs are considered an E inside the process/state. The additional participant is marked as an A in the scene.
    1. [Jean]$_{A}$ [a$_{F}$ aidé$_{E}$]$_{P-}$ [Marie]$_{A}$ [à$_{F}$ monter$_{C}$]$_{-P(CONT.)}$ [à$_{R}$ l'$_{E}$ échelle$_{C}$]$_{A}$ (Jean helped Marie climb the ladder)
    2. [Jean]$_{A}$ [a$_{F}$ forcé$_{E}$]$_{P-}$ [Marie]$_{A}$ [de$_{F}$ monter$_{C}$]$_{A}$ [à$_{R}$ l'$_{E}$ échelle$_{C}$]$_{A}$ (Jean forced Marie to climb the ladder)
    3. [Il]$_{A}$ [est$_{F}$ coupable$_{E}$ de$_{F}$ [ne pas]$_{E}$ avoir$_{F}$ rangé$_{C}$]$_{P}$ [sa$_{E}$ chambre$_{C}$]$_{A}$ (He is guilty of not ordering the room)
11*. **Contraction of a State and a Participant**. "voici"" and ""voilà " can be used to indicate in the same time a state (like "there is"/ "il y a") and a location (another location can't be added). As we saw in case of Elaborators and Relators, UCCA annotation allows multiple categories for a single word in these cases. Therefore, the annotation should be S+A.
(Ethymology: contraction of "vois" ("see", second person singular imperative) and "ici"/"là" ("here"/"there"))
    1. [Nous]$_{A}$ [voici]$_{S+A}$(Here we are)
    2. [Les]$_{A}$ [voilà]$_{S+A}$(There they are)

Other Relations.

1. **Punctuation**. Invariably considered F in the current layer of UCCA (even commas).
2. **Focus Constructions**. Some constructions are used to emphasize one specific entity. These distinctions are generally not treated in this layer of annotation and are therefore Fs.
    1. C' $_{F}$ est$_{F}$ Jean$_{A}$ qui$_{F}$ [a$_{F}$ écrit$_{C}$]$_{P}$ [ce$_{E}$ roman$_{C}$]$_{A}$ (It is Jean who wrote this novel)
3. **Interrogative Pronouns**. Interrogative pronouns should be annotated with the same category as the participant they refer to. In some cases (notably E scenes), the interrogative pronoun does not refer to an entity, and merely relates the E scene with the elaborated entity. It is therefore an R.
    1. Qui$_{A}$ [a$_{F}$ tiré$_{C}$]$_{P}$ [sur$_{R}$ le$_{E}$ shérif$_{C}$]$_{A}$? (Who shot the Sheriff?)
    2. [Quelle$_{E}$ voiture$_{C}$]$_{A}$ [as$_{F}$]$_{P-}$ [tu]$_{A}$ [acheté$_{C}$]$_{-P(CONT.)}$? (Which car did you buy?)
    3. l'$_{E}$ homme$_{C}$ [qui$_{R}$ [n']$_{D-}$ [étaits]$_{P-}$ [pas]$_{-D(CONT.)}$ [[là-bas]$_{C}$]$_{-P(CONT.)}$]$_{E,}$ $_{REMOTE-A(“homme”)}$ (the man who wasn't there)
    le$_{E}$ tigre$_{C}$ [qui$_{R}$ vit$_{P}$ ici$_{A}$]$_{E,REMOTE-A(“tigre”)}$ (the tiger which lives here)

4*. **Interrogative constructions**.
    1. One way to ask yes/no questions in French is to add the expression “est-ce que” in front of the sentence in its affirmative form. “Est-ce que” will be annotated as F since it has only a functional role:
        1. [Est-ce que]$_{F}$ [tu]$_{A}$ [le]$_{A}$ [connais]$_{P}$? (Do you know him?)
        2. [Est-ce-qu']$_{F}$ [il]$_{A}$ [viendra]$_{P}$ [demain]$_{D}$? (Will he come tomorrow?)
    2. Another way to ask yes/no questions is the inversion between the subject and the verb. However, the inversion can be done only with pronouns so in case the subject is not a pronoun, a corresponding pronoun is added. It is not an addition of a participant neither an elaboration so it is annotated as F. This fact is true also in questions with interrogative pronouns.
        1. [Jean]$_{A}$ [est$_{F}$]$_{P-}$-[il]$_{F}$ [parti$_{C}$]$_{-P(CONT.)}$? (Did Jean leave?)
        2. [Quand]$_{D}$ [Jean]$_{A}$ [a$_{F}$]$_{P}$-[t-il]$_{F}$ [gagné$_{C}$]$_{-P(CONT.)}$? (When did Jean win?): Here the inversion requires for phonological reasons the addition of “t” which is included in the Function.
5. **Non-contiguous likers**. In some cases, the linkers do not form one contiguous unit. We mark them by convention as two separate linkers and not as a non-contiguous unit. The units linked by these two linkers are the same.
    1. Soit$_{L}$ [tu l'achètes]$_{H}$ soit$_{L}$ [tu ne l'achètes pas]$_{H}$ (Either you buy it or you don't)
6. **Dates and Names**. Dates and names are treated as unanalyzable. Therefore, no sub-units should be annotated:
    1. Je vis [[à]$_{R}$ [New-York]$_{C}$]$_{A}$ (I live in New-York)
    2. L'évènement eul lieu [[le]$_{E}$[17 Mai 1832]$_{C}$]$_{D}$. (The event took place on May 17th, 1832)
7. **Analyzability**. The rule for when to analyze a unit is as follows:
    1. By default, analyze everything down to the word level.
    2. The only cases which should not be analyzed are:
        1. Where the internal structure cannot be analyzed as neither of the models: a scene, C+Es, N+Cs, linkage.

2. This usually happens where it's not clear what the meaning of the individual words in this context is.
3. Names should not be internally analyzed.

3. Examples:
   1. La$_E$ révolution$_C$ [d'$_R$ Octobre$_C$]$_E$ (The October Revolution) – analyzable although it is not simply a revolution that happened in October, but rather a specific one.
   2. Université$_C$ [du$_{R+E}$ Texas$_C$]$_E$ (University of Texas)
   3. John Smith – unanalyzable since it's a name
   4. Mme Levy (Mrs Levy) – unanalyzable , since it's a name and otherwise it's not clear how to analyze this internally.
   5. J'ai vu Tom Cruise dans Top Gun (I saw Tom Cruise in Top Gun) - "Tom Cruise" and "Top Gun" are unanalyzable (names)

8*. **Reflexives**. Reflexives in French are:

1. The words that (in their primary sense) state that two participants of an event are one and the same ("lui-même" (himself), "eux-mêmes" (themselves), "l'un à l'autre" (to one another) In UCCA , we mark them as Ds. Note, however, that in some cases reflexives are not used in their primary sense. They should be analyzed according to their meaning in the context.
   1. [Jean$_C$ lui-même$_F$]$_A$ [a$_F$ parlé$_C$]$_P$ [au$_{R+E}$ directeur$_C$]$_A$. (Jean himself spoke to the manager): "himself" here does not introduce a participant, but rather emphasizes that it was "Jean" and not someone else.
   2. [Jean]$_A$ [a$_F$ décidé$_C$]$_P$ [de$_R$ lui-même$_C$]$_D$ [de$_F$ quitter$_C$]$_A$. (He decided by himself to leave): it's a D since the expression basically means that he did it with no external influence.
2. The pronouns "se/me/te/nous/vous" which precede reflexive verbs (pronominal verbs). We distinguish between:
   1. Cases where the reflexivity add another argument and states a main relation between two arguments (which refer to the same individual) . In these cases the pronouns should be annotated as A.
      1. [Jean]$_A$ [s']$_A$ [est$_F$ lavé$_C$]$_P$ (Jean washed himself)
      2. [Jean]$_A$ [s']$_A$ [est$_F$ acheté$_C$]$_P$ [une$_E$ voiture$_C$]$_P$. (Jean bought a car for himself)
   2. Cases where the pronoun changes in an unpredictable way the original of the verb or alternatively, the verb appears only at a pronominal form. Here the reflexivity is implicit or nonexistent. In these cases the pronoun should be part of the P and the whole P should be unanalyzable:
      1. [Il]$_A$ [[s']$_C$-[est]$_F$ [aperçu]-$_{C(CONT.)}$]$_P$ [qu'$_F$ il$_F$ [était$_F$ tard$_C$]$_S$]$_A$
         (He realized that it was late)
      2. [Je]$_A$ [me doute]$_P$ [de$_R$ l'$_E$ impact$_C$ [de$_R$ la$_E$ decision$_C$]$_E$]$_A$ (I guess the impact of the decision)
      3. [Il]$_A$ [[s']$_C$- [est]$_F$ [suicidé]-$_{C(CONT.)}$]$_P$ (He committed suicide)
   3. Cases where the pronoun introduces an individual action in a reflexive form without really adding another argument. In these cases the pronoun should be part of the P and will be annotated as E.

1. [Il]$_A$ [s'$_E$ est$_F$ réveillé$_C$]$_P$ [tôt]$_D$. (He woke up early)
2. [Jean]$_A$ [s'$_E$ assit$_C$]$_P$ [[près$_C$ de$_R$]$_E$ [la$_E$ fenêtre$_C$]$_C$ (Jean sat down near the window)
3. [Il]$_A$ [[s'$_E$ est$_F$ arrêté$_C$]$_E$ de$_F$ jouer$_C$]$_P$ [du$_{R+E}$ piano$_C$]$_A$. (He stopped playing piano.
4. [Il]$_A$ [s'$_E$ est$_F$ noyé$_C$]$_P$ [dans$_R$ la$_E$ rivière$_C$]$_A$. (He drawned in the river)

4. Cases where the pronoun indicates a reciprocal action. In these cases the pronoun should be part of the P and will be annotated as E.
   1. [Nous]$_A$ [nous$_E$ sommes$_F$ rencontrés$_C$]$_P$ [hier]$_D$. (We met yesterday)
   2. [Nous]$_A$ [nous$_E$ parlerons$_C$]$_A$ [demain]$_D$ (We shall talk tomorrow)
5. Cases where the pronoun indicates a passive action. In these cases the pronoun should be part of the P and will be annotated as E.
   1. [Soudainement]$_L$ [[la$_E$ porte$_C$]$_A$ [s'$_E$ est$_F$ ouverte$_C$]$_P$]$_{H,IMPLICIT-A}$ (Suddenly the door opened)

9. **Complex prepositions** Some prepositions are multi-worded. They should be annotated as complex units (or unanalyzable if they have no parts with significant semantic input).
   1. [Marie]$_A$ [est$_F$ [en charge de]$_C$]$_S$ [Jean]$_A$ (Marie is in charge of Jean)

Morphology

1. **Inflectional and Derivational Morphology**. UCCA does not annotate them in the current layer. Therefore the word “chiens” (dogs) has no sub-units and neither does the word “parlera” (will talk). This will be added in future layers.

2. **Coersed Word/Phrase**. Several words that were coersed into one and obtained their own idiosyncratic meaning. In this layer of UCCA they should be analyzed as a single unit, without sub-units.
   1. Il y a des [pickpockets]$_A$ dans ce coin de la ville (There are pickpockets in this side of town)

Appendix 2
Annotation in French - Coverage of known grammatical phenomena by UCCA annotation

Reference book for French grammar: "French Grammar and Usage" by R. Hawkins and R. Towell

Contents

1 Nouns

1.1 Types of noun

1.1.1 Abstract versus concrete nouns

- *Concrete nouns refer to entities with physical attributes which can be seen, heard, touched, etc. Abstract nouns refer to entoties without such physical attributes.*
- Abstractness is not annotated in the basic layer of UCCA.
- *Abstract nouns in French are usually accompanied by a definite article whereas English has no article.* The article should be annotated as an Elaborator of the abstract noun.
  - [La$_E$ patience$_C$]$_A$ est une qualité qui se fait rare. (Patience is a quality which is becoming rare)
  - Je cherche [**le**$_E$ bonheur$_C$]$_A$ (I'm looking for happiness)
- *But when abstract nouns refer to a particular example of 'patience', 'happiness', 'knowledge', and so on (for instance, when they are modified by an adjective), they occur with an indefinite article.* In this case also, the article is annotated as an Elaborator of the abstract noun.
  - Il a fait preuve cette fois [d'$_R$ **une**$_E$ patience$_C$ [appréciable$_P$]$_{E,REMOTE-A(''patience'')}$,$_{IMPLICIT-A}$]$_A$. (The patience he showed on this occasion was appreciated)
  - Il s'est alors produit [**un**$_E$ silence$_C$ absolu$_E$]$_A$. (Absolute silence ensued)
  - [**Un**$_E$ bonheur$_C$]$_A$ en vaut un autre (One kind of happiness is the same as any other)

1.1.2 Mass versus count nouns

- *Count nouns identify individual entities, and usually have both singular and plural forms. Mass nouns treat the entity or entities they refer to as a single unit, and typically have only a singular form (although some mass nouns only have a plural form).*
- *Mass nouns in French are usually accompanied by a partitive article - 'du', 'de l' ', 'de la', or 'des' - in those cases where English has 'some' or no article at all.*
- The partitive article should be marked as E. The whole article is not internally analyzed.
  - Je voudrais [**du**$_E$ lait$_C$]$_A$, s'il vous plaît. (I would like some milk, please)
  - Il y a [**du**$_E$ vin$_C$]$_A$ dans le placard. (There's wine in the cupboard)

1.1.3 Collective nouns

- *Collecive nouns refer to collections of people or things.*
- *When a collective noun is the subject of a clause, the verb is usually singular. This contrasts with English, where the verb can be either singular or plural.*
  - [Le$_E$ gouvernement$_C$]$_A$ [a (NOT ont) décidé]$_P$ [d' interdir la publicité pour les cigarettes]$_A$ (The governement has/have decided to ban cigarette advertizing)
  - [L'$_E$ équipe$_C$]$_A$ [s'entraîne (NOT s'entraînent)]$_P$ [le jeudi soir]$_D$.
- Since it envolves tense and subject-verb agreement, this issue is covered by higher layers of UCCA.

1.1.4 Proper nouns

- *Proper nouns are names like 'Marie-Paule', 'Paris', 'Toulouse', 'Le Havre', 'La Seine', 'La France', 'Le Canada'.*
- *With persons there is usually no article*
  - [Marie-Paule]$_A$ [viendra]$_P$ [demain]$_D$. (Marie-Paule will come tomorrow)
- *In some cases an article is inserted in informal speech. This conveys a familiar, affectionate attitude towards the individual concerned.* In this case the article should be marked as F because it is a stylistic addition.
  - Dis donc, elle était pas fière, [la$_F$ Marie-Paule$_C$]$_A$! (So Marie-Paule must have felt ma bit of a fool!)
  - T'aurais vu la tête qu'il faisait, [le$_F$ Jérôme$_C$]$_A$! (You should have seen Jérôme's face!)
- *When reference is made to a family, as in 'the Jones family', a plural article is used but the name itself is not pluralized.* In this case the plural article is marked as an Elaborator of the family name.
  - J'ai invité [les$_E$ Martin$_C$]$_A$ à venir manger dimanche. (I have invited the Martins for Sunday lunch)

- *When a person's title is used, it is normally accompanied by the definite article.* The whole title (including the article) is marked as an Elaborator of the name. The title is internally analyzed as E and C.
  - Je vous présente [[**le**$_E$ Professeur$_C$]$_E$ Bodin]$_A$. (May I introduce Professeur Bodin)
  - chez [[**le**$_E$ docteur$_C$]$_E$ Gleizes$_C$]$_A$ (c/o Dr Gleizes: on an envelope or package)
- *When proper nouns are modified by preceding adjectives, they require a definite article.* The article is annotated as E.
  - [le]$_E$ [petit]$_E$ [Jules]$_C$ (little Jules)
  - [le]$_E$ [gros]$_E$ [Henri]$_C$ (fat Henri)
- *Unlike in English, regions and countries are normally used with a definite article.* The article is annotated as E.
  - J'ai visité [la$_E$ Normandie$_C$]$_A$ (I visited Normandy)
  - [La]$_E$ [France]$_C$ [d'$_R$ aujourd'hui$_C$]$_E$ (today's France)
  - Nous survolons [la$_E$ Belgique$_C$]$_A$. (We're flying over Belgium)

1.1.5 Use of an/année, jour/journée, matin/matinée, soir/soirée

Doesn't change the annotation

1.2 Gender

Gender is annotated at higher layers of UCCA.

1.3 Number

Number is annotated at higher layers of UCCA.

2 Determiners

2.1 Articles

2.1.1 Form of the article with adjectives and nouns beginning with a vowel or an h

Doesn't change the annotation.

2.1.2 Typical use of the definite article

- *One of the uses of definite article in French is parallel to its use in English: to accompany nouns which are already known from the context.* The definite article is annotated as E.
  - Achetez une nouvelle Panthéra GT6. [[La]$_E$ [Panthéra GT6]$_C$]$_A$
  - Tu as laissé dans le jardin [[**le**]$_E$ [livre]$_C$ [[que]$_R$ [tu]$_A$ [as$_F$ acheté$_C$]$_P$ [hier]$_D$]$_{E,REMOTE-A(''livre'')}$]$_A$. (You left the book which you bought yesterday in the garden)

- *A second use of the definite article in French is to refer to a general class of phenomena, a unique phenomenon or an abstract quality.* Here also, the definite article is annotated as E.
  - [Les$_E$ cochons$_C$]$_A$ sont très propres de nature. (Pigs are naturally very clean)
  - [**Les**$_E$ médecins$_c$]$_A$ [pensent]$_P$ que$_F$ [[[**la**]$_E$ [rougeole]$_C$]$_A$ [réapparaît]$_P$]$_A$.
  - [**La**$_A$ [jungle]$_C$]$_A$ est un endroît dangereux. (The jungle is a dangerous place)
  - [**La**]$_E$ [peur]$_C$ [de$_R$ [[prendre$_F$ [l'$_E$ avion$_C$]$_C$]$_P$]$_{C,IMPLICIT-A}$]$_E$]$_A$ le retient en Grande Bretagne. (Fear of flying keeps him in Britain)

2.1.3 Fused forms of the definite article

- *Defnite articles fuse with preceding 'de' or'à'.* In addition to cases where 'du' is a partitive article, it is annotated as E. (See Section 1.1.2), here are cases where it is a contraction of R and E, we annotate it with both labels.
  - [du]$_E$ [pain]$_C$
  - [de l']$_E$ [effort]$_C$
  - [au]$_{R+E}$ [cinéma]$_C$
  - [à]$_R$ [l']$_E$ [école]$_C$
- Such contraction is not possible when 'le', 'la', 'les' are pronouns.
  - J'$_A$ [ai essayé]$_{P-}$ [de]$_{-P(CONT.)-}$ [le]$_A$ [comprendre]$_{-P(CONT.)}$. (I tried to understand it)

2.1.4 Use of the definite article with names of countries, regions, departments

- *In French the definite article is normally used with names of countries, regions and départements, whereas in English it is not.* It is annotated as E.
  - [La$_E$ France$_C$]$_A$ est un très beau pays (France is a very beautiful country)
  - Progressivement, [la$_E$ Champagne$_C$]$_A$ est devenue terre de rencontre et de conflits. (Over time, Champagne became a land of meetings and confrontations)
  - Ramassage de coquillages interdit [dans$_R$ le$_E$ Calvados$_C$]$_A$. (Shellfish fishing banned in Calvados)
- *When 'en' ('to'/'in') or 'de' ('from') are used with feminine countries or regions (or with masculine countries beginning with a vowel: en Irak), the definite article is omitted.* In this case we do not add an implicit Elaborator but annotate the structure as R and C.
  - Nous irons [en$_R$ France$_C$]$_A$ l'année prochaine (We shall go to France next year)
  - [des]$_E$ [pommes]$_C$ [de$_R$ Normandie$_C$]$_E$ (apples from Normandy)
  - [des]$_E$ [vacances]$_C$ [en$_R$ Ille-et-Vilaine$_C$]$_E$ (holidays in Ile-et-Vilaine)
- *But with masculine countries, regions and départements, the definite article is retained with 'à' ('to'/'in') ,'dans' ('in') and 'de' ('from').* In this case the article is annotated as Elaborator even when it is fused with the preposition. (R+E)

- [Les$_E$ hôtels$_C$ [au$_{R+E}$ Mexique$_C$]$_E$]$_A$ sont d'un très bon niveau. (The hotels in Mexico are of a very high standard)
- J'ai acheté [[une]$_E$ [maison]$_C$ [dans$_R$ le$_E$ Finistère$_C$]$_A$. (I have bought a house in Finistère)
- [des]$_E$ [pommes]$_C$ [du$_{R+E}$ Calvados$_C$]$_E$ (apples from Calvados)

2.1.5 Use of the definite article with names of languages

- *The names of languages in English start with a capital letter and have no article. The names of languages in French start with a small letter, normally have a definite article and are masculine in gender.* The article is marked as E.
  - Ici les étudiants étudient [[**le**$_E$ français$_C$]$_C$, [**l'**$_E$ allemand$_C$]$_C$ [et]$_N$ [**l'**$_E$ italien$_C$]$_C$]$_A$. (Here students study French, German and Italian)
  - [**Le**$_E$ grec$_C$]$_A$ possède un alphabet tout à fait différent du nôtre. (Greek has an alphabet which is quite different from our own).
- *In the expressions 'parler français', 'parler allemand', etc., the name of the language functions more like an adverbial than a noun, so no article is used. When adverbs like 'souvent', 'bien' are present, 'français becomes a noun again, requiring the definite article.* In UCCA, the annotation will not depend of the presence of the article. 'français' will be marked as A.
  - [Je]$_A$ [parle]$_P$ [français]$_A$. (I speak French)
  - [Je]$_A$ [parle]$_P$ [souvent]$_D$ [**le**$_E$ français]$_P$. (I often speak French)
  - [Je]$_A$ [parle]$_{P-}$ [bien]$_D$ [**le**$_E$ français$_C$]$_{-P(CONT.)}$. (I speak French well)

2.1.6 Use of the definite article with seasons

- *Seasons in French are usually accompanied by a definite article, except when they are preceded by 'en'.* The definite article (when it appears) is annotated as E.
  - [**L'**$_E$ hiver$_C$]$_A$ est une saison de repos pour nous. (Winter is a restful season for us)
  - [[**L'**$_E$ été$_C$]$_A$ nous réserve parfois des surprises]$_H$ [mais]$_L$ [à **l'** automne le temps est toujours plus prévisible]$_H$. (Summer sometimes has some surprises instore for us, but autumn weather is always more predictable)
  - Tout se réveille [**au**$_{R+E}$ printemps$_C$]$_D$. (Everything awakes in spring)
  - [en]$_R$ [hiver]$_C$ (in winter)
  - [en]$_R$ [été]$_C$ (in summer)
  - [en]$_R$ [automne]$_C$ (in automn)

2.1.7 Use of the definite article with titles

- *Titles in French prefaced by 'Monsieur' or 'Madame' include the definite article.* The article will be marked as E and the whole title (including the article) will be elaborated by 'Monsieur' or 'Madam'.
  - [Monsieur]$_E$ [**le**$_E$ Maire$_C$]$_C$ (Mr Mayor)

- [Madame]$_E$ [**le**$_E$ Maire$_C$]$_C$ (Madam Mayor)
- [Monsieur]$_E$ [**le**$_E$ Président-Directeur-Général$_C$]$_C$ (Mr Chairman)

- *The definite article is similarly present in French in greetings or expressions of encouragement.* The article is annotated as E.
  - [Allez]$_P$ [**les**$_E$ bleus$_C$]$_A$ (Come on, you blues!)

- *With kings and queens, however, French leaves out an article with numbers where English puts one in.* In this case the whole title will not be internally analyzed.
  - François I (pronounced François premier) (François **the** first)
  - Henri III (pronounced Henri trois) (Henri **the** third)
  - Elizabeth I (pronounced Elizabeth première) (Elizabeth **the** first)
  - Elizabeth II (pronounced Elizabeth deux) (Elizabeth **the** second)

2.1.8 Use of the definite article with superlatives

- *In superlatives involving adjectives which follow the noun, it is compulsory to repeat the definite article, which then agrees with the noun.* The article is annotated as E inside the superlative.
  - [Le]$_E$ [moment]$_C$ [**le**$_E$ plus$_E$ intense$_C$ [de$_R$ ma$_E$ vie$_C$]$_E$]$_E$ (The most exciting moment of my life)
  - [Les]$_E$ [virages]$_C$ [**les**$_E$ plus$_E$ dangereux$_C$ [de$_R$ la$_E$ région$_C$]$_E$]$_E$ (The most dangerous bends in the region)

2.1.9 Use of the definite article with quantities

- *Where English uses 'so much* **a** *pound', French refers to 'tant* **la** *livre,* **le** *kilo, etc.* The article is marked as E and the whole quantity ('le kilo') is marked as an Elaborator of the prize:
  - [[Les$_E$ pommes$_C$]$_A$?, [C'est]$_S$ [[4,50$_E$ F$_C$]$_C$ [**le** kilo]$_E$]$_A$]$_H$. (Apples? They are 4,50 francs a kilo)
  - [Les$_E$ bonbons$_C$]$_A$ [sont]$_S$ [[à]$_R$ [[5,40$_E$ F$_C$]$_C$ [[**les**]$_E$ [100$_E$ grammes$_C$]$_E$]$_E$]$_C$]$_A$. (Sweets are 5.40 francs for a 100 grammes)
  - [[Ces$_E$ chaises$_C$]$_A$ [sont$_F$ vendues$_C$]$_P$ [[à]$_R$ [[500F]$_C$ [**la**$_E$ pièce$_C$]$_E$]$_C$]$_A$]$_{H,IMPLICIT-A}$ (or [500$_E$ F$_C$]$_C$ [pièce]$_E$) (These chairs are sold for 500 francs each)

2.1.10 Use of the definite article with parts of the body

- *In simple descriptions of body parts, French uses a definite article where English uses a possessive determiner (e.g. his, my, their)* The article is annotated as E, as the possessive determiner in English. The whole construction is annotated as in the following examples:
  - [Il]$_A$ [a$_F$]$_{S-}$ [**les**$_E$ yeux$_C$]$_A$ [bleus$_C$]$_{-S(CONT.)}$. (His eyes are blue)
  - [Elle]$_A$ [a$_F$]$_{S-}$ [**les**$_E$ cheveux$_C$]$_A$ [[coupés]$_C$ [court]$_C$]$_C$]$_{-S(CONT.)}$. (She has her hair cut short)

- *When people activate parts of their own bodies, French also uses a definite article with the body part.* The definite article is marked as E here too.
  - [Il]$_A$ [a$_F$ plissé$_C$]$_P$ [**les**$_E$ yeux$_C$]$_A$. (He screwed up his eyes)
  - [Elle]$_A$ [a$_F$ agité$_C$]$_P$ [**le**$_E$] bras$_C$]$_A$. (She waved)
  - [Elle]$_A$ [a$_F$ [hoché/secoué]$_C$]$_P$ [**la**$_E$ tête$_C$]$_A$. (She nodded/shook her head)
- *When people do things which affect their own bodies, or those of others , the usual construction is a definite article in front of the body part, and a reflexive or indirect object pronoun.* The definite article is annotated as E. The indirect object noun (Section 3.2) add here a new Participant as well as the reflexives (Section 3.2) in the examples below. In this case there is an additional Participant in the scene comparing, to English. However, the additional Participant can be recovered in English by specifying the referent of the possessive pronoun.
  - [J$_A$ [**me**]$_A$ [suis$_F$ fracturé$_C$]$_P$ [**la**$_E$ jambe$_C$]$_A$. (I broke my leg)
  - [[Elle]$_A$ [**s'**]$_A$ [est$_F$ fait$_E$ couper$_C$]$_P$ [**les**$_E$ cheveux$_C$]$_A$]$_{H,IMPLICIT-A}$. (She had her hair cut)
  - [Je]$_A$ [**lui**]$_A$ [serre]$_A$ [**la**$_E$ main$_C$]. (I shake his hand)
  - [On]$_A$ [**lui**]$_A$ [a$_F$ coupé$_C$]$_P$ [**la**$_E$ tête$_C$]$_A$ (They cut his head off)
  - [Elle]$_A$ [**lui**]$_A$ [essuie]$_P$ [**les**$_E$ yeux$_C$]$_A$ [avec$_R$ un$_E$ mouchoir$_C$]$_A$. (She wipes his eyes with a handkerchief)

  These constructions are also possible with a possessive determiner, as in English, however. The possessive determiner is marked as E.
  - [Je]$_A$ [prends]$_P$ [**sa**$_E$ main$_C$]$_A$. (I take her hand)
  - [Elle]$_A$ [caresse]$_P$ [**mes**$_E$ cheveux$_C$]$_A$ (She strokes my hair)
- *When body parts are the subject of a sentence, they usually have a possessive determiner, as in English, rather than a definite article.* The possessive determiner is annotated as E.
  - [**Mon**$_E$ coeur$_C$]$_A$ [s'$_E$ est$_F$ arrêté$_C$]$_P$ [une fraction de seconde]$_D$. (My heart stopped for an instant)
  - [**Ma**$_E$ tête$_C$] [me]$_A$ [fait$_F$ mal$_C$]$_C$. (My head hurts)
  - [**Ses**$_E$ paupières$_C$]$_A$ [se$_E$ sont$_F$ abaissées$_C$]$_P$. (His eyelids lowered)
  - [**Leurs**$_E$ regards$_C$]$_A$ [se$_E$ sont$_F$ croisés$_C$]$_P$. (Their eyes met)

2.1.11 Singular or plural when a number of individuals have one item each

Since number is not annotated in the basic layer, it does not change the annotation.

2.1.12 Use of the definite article to indicate a habitual action

- *Where English uses 'on + ...day(s)' to indicate a habitual action e.g 'On Monday(s) I go to the market', French uses the definite article: 'Je vais faire mon marché le lundi'.* The definite article will still be annotated as E although the annotation in English will be R and C.

* Nous allons au cinéma [**le**$_E$ [vendredi$_C$ soir$_E$]$_C$]$_D$. (We go to the cinema on Friday evenings)
* Le cours d'histoire a lieu [**le**$_E$ mercredi$_C$]$_D$. (The history lecture is on Wednesdays)
* Ils viennent ramasser les poubelles [[**le**$_E$ lundi$_C$]$_C$ [et]$_N$ [**le**$_E$ jeudi$_C$]$_C$]$_D$. (They come to empty the dustbins on Mondays and Thursdays)

2.1.13 Repetition of the definite article

– *In French the article usually has to be repeated with each noun, wheras in English one use at the beginning of a 'list' is enough.* The article is annotated as E each time instead of the remote Es in English.

* Je dois ramener chez moi [[le$_E$ [fer à repasser]$_C$]$_C$, [[la]$_E$ [planche]$_C$ [à$_R$ repasser$_C$]$_E$]$_C$. [et]$_N$ [[la]$_E$ [corbeille]$_C$ [à$_R$ papiers$_C$]$_E$]$_C$]$_A$. (I must take home with me the iron, ironing board and waste-paper basket)

2.2 Typical use of the indefinite article

– *One use of the definite article is to introduce a new, coutable, concrete noun ('maison', 'tableau', 'livre', 'voiture', etc.) into the discourse.* The indifinite aricle is marked as the Elaborator of the noun.

* Je me suis trouvé [**une**$_E$ belle$_E$ maison$_C$]$_A$ en Ecosse. (I have found myself a lovely house in Scotland)
* Voulez-vous voir [**un**$_E$ Picasso$_C$]$_A$? (Do you want to see a Picasso?)

– *Another is to describe a general class of countable, concrete entities.* In this case too, the undefinite article is annotated as E.

* [Normallement [**une**$_E$ voiture$_C$]$_A$ a quatre roues]$_H$ [et]$_L$ [[**une**$_E$ moto$_C$]$_A$ en a deux]$_H$. (Normally a car has four wheels and a motorbike two)
* Il s'agit là [[d']$_R$ [une]$_E$ [erreur]$_C$ [[caractéristique]$_C$ [[d']$_R$ [**un**]$_E$ [étudiant]$_C$ [de$_R$ première$_E$ année$_C$]$_E$]$_E$]$_E$]$_A$. (That's an example of a typical error made by a first year student)

In this generic use, the indefinite article is usually interchangeable with a plural definite article. It doesn't change the annotation of the article as an E.

– *Abstract nouns ('courage', 'beauté', 'réalisme', 'importance', etc.) are normally accompanied by the definite article. But when they are modified by an adjective they take an indefinite article.*

* [Il]$_A$ [admire]$_P$ [**le**$_E$ courage$_C$]$_A$. (He admires courage)
* [Il]$_A$ [a$_F$ fait$_F$ preuve$_C$]$_P$ [[d']$_R$ [**un**]$_E$ [courage]$_C$ [peu$_E$ ordinaire$_C$]$_E$. (He showed extraordinary courage)
* [[**La**]$_E$ [beauté]$_C$ [du$_{R+E}$ paysage$_C$]$_E$]$_A$ [nous]$_A$ [étonnait]$_P$. (The beauty of the countryside astonished us)
* [Le$_E$ paysage$_C$]$_A$ [[était]$_F$ [d']$_R$ [une]$_E$ [beauté]$_C$ [étonnante]$_C$]$_S$. (The countryside was astonishingly beautiful)

2.2.1 The plural indefinite article 'des'

- *The plural indefinite article 'des' refers to an unspecified quantity of entities described by a plural count noun. In English the article is most frequently omitted.* In French the article is marked as E.
  - Je lui ai offert [**des**$_E$ roses$_C$]$_A$. (I gave her roses)
  - Les places avaient déà réservées [par$_R$ **des**$_E$ Américains$_C$]$_A$. (The seats had already been reserved by Americans)
  - Vous me posez [**des**$_E$ questions$_C$ impossibles$_E$]. (You ask me impossible questions.)

2.2.2 Omission of plural indefinite 'des' after the preposition 'de'

- *When the plural indefinite article is preceded by the preposition 'de', it is omitted in French.* However, we don't add an implicit E but annotate the expression as R and C.
  - Elle a été accusée [[**d'**]$_R$ [**un**]$_E$ [[meurtre]$_P$ [[particulièrement$_E$ horrible$_C$]$_D$]$_{C,REMOTE-A(''Elle''}$ (She was accused of a particularly nasty murder)
  - Elle a été accusée [[**de**]$_R$ [[meurtres]$_P$ [[particulièrement]$_E$ [horribles]$_C$]$_D$]$_{C,REMOTE-A(''Elle''),I}$ (She was accused of particularly nasty murders)
  - [Avec]$_L$ [[l'$_E$ aide$_C$]$_P$ [**d'**$_R$ **une**$_E$ amie$_C$]$_A$]$_{H,REMOTE-A(''elle'')}$, elle a fini son projet. (With the help of a friend, she finished her project)
  - [Avec]$_L$ [[l'$_E$ aide$_C$]$_P$ [**d'**$_R$ amies$_C$]$_A$]$_{H,REMOTE-A(''elle'')}$, elle a fini son projet. (With the help of friends, she finished her project)
- *Omission of plural indefinite article 'des' only occurs after the preposition 'de'. With other prepositions it is not omitted.*
  - Elle est sortie [[avec]$_R$ **des**$_E$ amies$_C$]$_A$. (She went out with friends)
  - Des attaques violentes [contre$_R$ **des**$_E$ policiers$_C$]$_A$ (violent attacks on policemen)
- *Because of plural indefinite article 'des' is omitted after the preposition 'de', this means that it is the complement of a number of verbs which are always followed by the preposition 'de'.* As before, we don't add an implicit E.
  - [Il]$_A$ [a$_F$ déjeuné$_C$]$_P$ [**de**$_R$ fruits$_C$]$_A$. (His lunch consisted of fruits)
  - [Elle]$_A$ [parlait]$_P$ [[**de**]$_R$ [[choses]$_C$ [[oubliées]$_P$ [depuis$_R$ longtemps$_C$]$_D$]$_{E,IMPLICIT-A}$]$_C$]$_A$. (She spoke of things long since forgotten)
- *Plural indefinite 'des' is also omitted after quantifiers or quantifier-like expressions which incoporate the preposition 'de'.* In this case the preposition is part of the whole quantifier which is annotated as E. No implicit E is added.
  - Il y a [[un$_E$ bon$_E$ nombre$_C$ **de**$_R$]$_E$ [participants]$_C$]$_A$ au tournoi. (There are a good many participants at the tournament)
  - [[Un$_E$ kilo$_C$ **de**$_R$]$_E$ [cerises]$_C$]$_A$, s'il vous plaît (A kilo of cerise, please)
  - [[Beaucoup$_C$ **de**$_R$]$_E$ personnes$_C$]$_A$ ont déjà remarqué ton absence. (Many people have already noticed your absence)
  - J'ai déjà entendu [[assez$_C$ **d'**$_R$]$_E$ [excuses]$_C$]$_A$ de ta part; je n'en accepterai plus. (I have heard enough excuses from you; I won't accept any more)

* Où as-tu mis [[la$_E$ boîte$_C$ **de**$_R$]$_E$ [sardines]$_C$]$_A$? (Where did you put the tin of sardines?)

Exceptions: 'bien des' (many), 'encore des' (still more):

* [Bien$_E$ **des**$_E$ personnes$_C$]$_A$ ont déjà remarqué ton absence. (Many people have noticed your absence)
* J'ai [encore$_E$ **des**$_E$ questions$_C$]$_A$ à vous poser. (I still have more questions to ask you)

2.2.3 Comparing the use of plural indefinite article 'des' with preposition 'de' + definite article 'les'

– *We compare here the use of the plural indefinite article and the plural definite article in similar contexts.*

* Elle mangeait [des$_E$ **coquillages**$_C$]$_A$. (She was eating shellfish)
* Elle mangeait [[**les**]$_E$ [**coquillages**]$_C$ [[**qu'**]$_R$ [**elle**]$_A$ [**avait**$_F$ **achetés**$_C$]$_P$ [**au**$_{R+E}$ **marché**$_C$]$_A$]$_{E,REMOTE-A(''coquillages'')}$]$_A$. (She was eating the shellfish she had bought in the market.)

– *When the hilighted expressions follow the preposition 'de', 'des' is deleted (Section 2.3.2), but 'de' + 'les' becomes 'des' (Section 2.2.1).*

* Elle déjeunait [**de**$_R$ coquillages$_C$]$_A$. (She dined on shellfish)
* Elle déjeunait [[**des**]$_{R+E}$ [coquillages]$_C$ [[qu']$_R$ [elle]$_A$ [avait$_F$ achetés$_C$]$_P$ [au$_{R+E}$ marché$_C$]$_A$]$_{E,REMOTE-A(''coquillages'')}$]$_A$. (She dined on the shellfish which she had bought in the market)

– *Thus 'des' can be either a plural indefinite article corresponding to English 'some' or no article, or a plural definite article fused with the preposition 'de'.* As we saw in the examples above, in the first case the annotation will be E and in the second one, the annotation will be R+E. Examples with quantifiers:

* [[Beaucoup$_C$ **de**$_R$]$_E$ [personnes]$_C$]$_A$ (indefinite) trouvent cela difficile. (Many people find that difficult)
* [[Beaucoup$_C$ **des**$_{R+E}$]$_E$ [[personnes]$_C$ (definite) [[à]$_{A,REMOTE-C(''personnes'')}$ [qui]$_R$ [nous]$_A$ [avons parlé]$_P$]$_E$]$_{C,REMOTE-E(''des'')}$]$_A$ trouvent cela difficile. (Many people to whom we spoke find that difficult)
* [[Un$_E$ kilo$_C$ **de**$_R$]$_E$ [cerises]$_C$]$_A$, s'il vous plaît. (A kilo of cherries, please)
* [[Un$_E$ kilo$_C$ **des**$_{R+E}$]$_E$ [cerises$_C$ espagnoles$_E$]$_{C,REMOTE-E(''des'')}$]$_A$, s'il vous plaît. (A kilo of the Spanish cherries, please)

In the second and fourth examples above, 'de' is part of the Elborator (he belongs to a quantifier) but it is also fused with the definite article 'les' which belongs to the following Center. In this case we annotate the fused word 'des' as R+E and add 'des' as a remote argument of the following Center.

2.2.4 'd'autres' and 'des autres'

– *A contrast which English speakers often find difficult is between 'd'autres' and 'des autres'. 'd'autres' ('others') is an indefinite expression which is not accompanied by the plural indefinite article 'des'.* Both 'd" and 'autres' are marked as Elaborators of the noun they introduce, even when it is implicit.

* Dans son article, elle a présenté [**d'**$_E$ **autres**$_E$ id'ees$_C$]$_A$. (In her article, she presented other ideas)
* [**D'**$_E$ **autres**$_E$]$_{A,IMPLICIT-C}$ auraient réagi différemment. (Others would have acted differently)
* J'en ai vu [**d'**$_E$ **autres**$_E$]$_{A,IMPLICIT-C}$ (I saw others)

'des autres' is only used where 'des' is the fused form of preposition 'de' and the definite article 'les' of 'les autres' (the others). In this case the annotation of 'des' is R+E.

* Elle parlait [[**des**]$_{R+E}$ [autres]$_E$ [projets]$_C$ [qu'$_R$ elle$_A$ dirige$_P$]$_{E,REMOTE-A(''projets'')}$]$_A$. (She spoke of the other projects she directs)
* Je ne me rappelle rien [[**des**]$_{R+E}$ [autres]$_E$ [jours]$_C$ [de$_R$ ce$_E$ mois$_C$]$_E$]$_A$. (I remember nothing of the other days of that month)

2.2.5 The use of 'de' when an adjective precedes the noun

– *When an adjective precedes the noun, it is customary, at least in written French, to use 'de' and not 'des'.* Here 'de' is annotated as E.

* Je lui ai offert [de$_E$ jolies$_E$ roses$_C$]$_A$ (I gave her pretty roses)
* [De$_E$ gros$_E$ miroirs$_C$ [comme$_E$ ça$_C$]$_E$]$_A$, on n'en voit pas beaucoup. (You don't see many large mirrors like that any more)

2.3 The partitive article: 'du', 'de l'', 'de la', 'des'

– *The partitive article 'du', 'de l'', 'de la', 'des' is used with mass nouns in French where English uses 'some' or no article at all.* The partitive article is annotated as E. It is not internally analyzable even when it is composed of two words.

* Il charriait [[**du**]$_E$ [bois]$_C$]$_A$ pour son voisin. (He carted wood about for his neighboor)
* Vous auriez dû acheter [[**du**]$_E$ [lait]$_C$]$_A$ en même temps. (You ought to have bought some milk at the same time)
* [[Avec]$_R$ [**de l'**]$_E$ [ail]$_C$]$_A$ ça aurait encore meilleur goût! (It would taste even better with garlic!)
* Il me manque [[**de l'**]$_E$ [argent]$_C$]$_A$. (I'm lacking funds)

– *The partitive article is also used with abstract nouns like 'courage', 'beauté', 'patience', 'silence' when these qualities are attributed to people or things.*

* Il faut avoir [[**de la**]$_E$ [patience]$_C$]$_A$ avec les enfants. (You must be patient with children)
* Elle a [**de l'**]$_E$ [intelligence]$_C$]$_A$ à revendre. (She is really intelligent)
* Vos enfants ont [[**de la**]$_E$ [malice]$_C$]$_A$. (Your children bare mischievous)

– *When a partitive article follows the preposition 'de' it is deleted, just as plural indefinite 'des' is deleted.*

* [beaucoup **de**]$_E$ [bois]$_C$ (a lot of wood)
* [un$_E$ bouteille$_C$ **de**$_R$]$_E$ [lait]$_C$ (a bottle of milk)
* [une$_E$ tête$_C$ **d'**$_R$]$_E$ [ail]$_C$ (a bulb of garlic)
* [J']$_A$ [ai$_F$ besoin$_C$]$_P$ [**d'**$_R$ argent$_C$]$_A$ (I need money)

2.3.1 Use of 'faire' + partitive : 'faire du / de la'

- *Many constructions exist with 'faire' + noun, introduced by the partitive:*
  - [Faire]$_P$ [du$_E$ sport$_C$]$_A$ (To take part in sport)
  - [Faire]$_P$ [du$_E$ basket$_A$]$_A$ (To play basketball)
  - [Faire]$_P$ [du$_E$ piano$_C$]$_A$ (To play the piano)
  - [Faire]$_P$ [[de la]$_E$ [politique]$_C$]$_A$ (To go in for politics)
  - [Faire]$_P$ [du$_E$ bien$_C$]$_A$ (à quelqu'un) (To do good (to somebody)
  - [Faire]$_P$ [du$_E$ mal$_C$]$_A$ (à quelqu'un) (To do harm (to somebody)

2.4 Use of indefinite and partitive articles after the negative forms ne...pas, ne...jamais, ne...plus, ne...guère

- *After ne...pas, ne...jamais, ne...plus, ne guère, any indefinite article ('un', 'une', 'des') or partitive article ('du', 'de l"', 'de la', 'des') accompanytive and a positive direct object:*
  - [[Je]$_A$ [ne]$_{D-}$ [veux]$_P$ [pas]$_{-D,CONT.}$ [**des**$_E$ chaussettes$_C$]$_A$]$_H$ [mais]$_L$ [[**des**$_E$ chaussures$_C$]$_A$]$_{H,REMOTE-A(''je''),REMOTE-P(''veux'')}$. (I don't want socks, but shoes)
  - [[Je]$_A$ [n']$_D$ [ai]$_P$ [pas]$_{-D,CONT.}$ [[**un**]$_E$ [cours]$_C$ [de$_R$ grammaire$_C$]$_E$]$_A$]$_H$ [mais]$_L$ [[[**un**]$_E$ [cours]$_C$ [d'$_R$ histoire$_C$]$_E$]$_A$]$_{H,REMOTE-A(''je''),REMOTE-P(''ai'')}$. (I haven't got a grammar class but a history class)
- *after the verb 'être'.*
  - Ce n' est pas [**un**$_E$ oiseau$_C$]$_A$. (It isn't a bird)
- *when the meaning is 'not a (single) one' rather than 'not a':*
  - On n'entendait pas [**un**$_E$ bruit$_C$]$_A$ dehors. (We couldn't hear a single noise outside)

2.5 Omission of the article

There are a number of cases where no article is used in French. In these cases, we don't add an implicit E.

2.5.1 Omission of the article in compond nound linked by 'à'

- *In compound nouns linked by 'à', there is usually no article in front of the second noun.*
  - [une]$_E$ [[brosse]$_C$ [à$_R$ dents$_C$]$_E$]$_C$ (a toothbrush)
  - [un]$_E$ [couteau]$_C$ [à$_R$ pain$_C$]$_E$ (a bread knife)
  - [une]$_E$ [corbeille]$_C$ [à$_R$ papiers$_C$]$_E$ (a waste-paper basket)

2.5.2 Omission of the article in noun constructions liked by 'de'

- *The article is frequently omitted before the second noun in noun + noun constructions linked by 'de', where the second noun functions like an adjective (and is often translated into English as an adjetive).* 'de' is marked as R and he is part of the Elaborator of the first noun. The Elaborator contains also the second noun.
  - [une]$_E$ [ambassade]$_C$ [de$_R$ France$_C$]$_E$ (a French ambassy)
  - [une]$_E$ [carte]$_C$ [de$_R$ visite$_C$]$_E$ (a visiting card)
  - [une]$_E$ [carte]$_C$ [de$_R$ France$_C$]$_E$ (a map of France)
- *When the second noun is modified (by an adjective or a clause, for example) it becomes, and a definite article appears.* 'de' is still annotated as R and the definite article is marked as E.
  - [une]$_E$ [carte]$_C$ [**de**$_R$ **la**$_E$ France$_C$ métropolitaine$_E$]$_E$. (a map of mainland France)
  - [Il]$_F$ [va$_E$ [être$_F$ question$_C$]$_C$]$_P$ [[**de**]$_R$ [**l'**]$_E$ [argent]$_C$ [que$_R$ je$_A$ t'$_A$ [ai prêté]$_P$]$_{E,REMOTE-A(''argent'')}$]$_A$. (There'll be a discussion about the money I lent you)
  - [un]$_E$ [arrêt]$_C$ [[**du**]$_{R+E}$ [bus]$_E$ [no$_E$ 25$_C$]$_E$]$_E$. (a stop for the number 25 bus)

2.5.3 Omission of the article in participle + noun constructions linked by 'de'

- *The article is omitted after 'de' in participle + noun constructions where the participle functions as an adjective.* 'de' is annotated as R and the participle in this case usuallly describes a state so it is marked as S.
  - Il$_A$ [est$_F$ couvert$_C$]$_S$ [de$_R$ boue$_C$]$_A$ (He is covered with mud)
  - [un]$_E$ [test]$_C$ [[dépourvu]$_S$ [de$_R$ sens$_C$]$_A$]$_{E,REMOTE-A(''test'')}$ (a test lacking any meaning)

2.5.4 Omission of the article after 'sans', 'avec', 'en', 'sur', 'sous', 'par', 'ni...ni'

- *The article is frequently omitted when a noun alone follows 'sans', 'avec', 'en', 'sur', 'sous', 'par', or two nouns alone appear in the expression 'ni...ni'.*
  - [sans]$_R$ [arrêt]$_C$ (continuously)
  - [sans]$_R$ [difficulté]$_C$ (without difficulty)
  - [[deux]$_E$ fois$_C$]$_C$ [par$_R$ semaine$_C$]$_E$ (twice a week)
  - Il ne portait [[ni$_E$ chapeau$_C$]$_C$ [ni$_E$ cravate$_C$]$_C$]$_A$. (He was wearing neither a hat nor a tie)
- *If the noun is modified (for example by an adjective) the article is not omitted.*
  - [sans]$_R$ [[**la**]$_E$ [moindre]$_E$ [difficulté]$_C$]$_C$ (without the least difficulty)
  - [sous]$_R$ [[**la**]$_E$ [pression]$_C$ [du$_{R+E}$ gouvernement$_C$]$_E$]$_C$ (under pressure from the government)
- *'en' cannot normally co-occur with an article. When an article is required, the preposition changes to 'dans'.*

- [en]$_R$ [théorie]$_C$ (in theory)
- [dans]$_R$ [la]$_E$ [théorie]$_C$ [d'$_R$ Einstein$_C$]$_E$ (in Einstein's theory)
- [en]$_R$ [pratique]$_C$ (in practice)
- [dans]$_R$ [la]$_E$ [pratique]$_C$ (in practice)

2.5.5 Omission of the article in set phrases and verbal constructions

In this case the whole expression is a Process, usually in the form of F and C.

- [avoir$_F$ besoin$_C$]$_P$ (de) (to need)
- [avoir$_F$ envie$_C$]$_P$ (de) (to desire)
- [avoir$_F$ peur$_C$]$_P$ (to be afraid)
- [faire$_F$ attention$_C$]$_P$ (to pay attention)
- [rendre$_F$ service$_C$]$_P$ (to help)

2.5.6 Omission of the article in apposition

- *When proper nouns are juxtaposed with common nouns which identify them, the common nouns are said to be in apposition. In such case the article is usually omitted.* In this case the proper nouns are annotated as C and the expression of common nouns in apposition is marked as E.
  - [Versailles]$_C$ [[palais]$_C$ [[de]$_R$ [Louis XIV]$_C$]$_C$ [et]$_N$ [son$_E$ entourage$_C$]$_{C,REMOTE-R(''de'')}$]$_E$]$_E$. (Versailles, the palace of Louis XIV and his court)
  - [[Juliette Lagrange]$_C$, [concièrge]$_E$]$_A$, [cherchait]$_P$ [un$_E$ nouveau$_E$ poste$_C$]$_A$. (Juliette Lagrange, caretaker, was looking for a new job)
- When the commom noun is modified, for example by an adjective, the article is not omitted:
  - [Versailles]$_C$, [[le]$_E$ [célèbre]$_E$ [palais]$_C$ [[de]$_R$ [Louis XIV]$_C$]$_E$]$_E$ (Versailles, the famous palace of Louis XIV)

2.5.7 Omission of the article with nouns following the verbs 'être', 'demeurer', 'devenir', 'élire', 'nommer', 'rester'

- *When a noun alone follows the verbs 'être' (be), 'demeurer' (stay), 'devenir' (become), élire (elect), 'nommer'(appoint), 'rester' ('stay'), the article is omitted.*
  - [Sa mère]$_A$ [est$_F$ ingénieur$_C$]$_S$ (His/Her mother is an engineer)
  - [Il]$_A$ [est$_F$ devenu$_C$]$_P$ [architecte]$_A$ [très$_E$ tôt$_C$]$_D$. (He became an architecte early on)
- *When the noun is modified, for example by an adjective, the article is not omitted.*
  - [Depuis]$_L$, [il]$_A$ [est$_F$ devenu$_C$]$_P$ [un$_E$ architecte$_C$ innovateur$_E$]$_A$. (Since then, he has become an innovatory architect)

2.5.8 Omission of the article in lists

- *In lists of nouns the article is frequently omitted.*
  - [[Hommes]$_C$, [femmes]$_C$ [et]$_N$ [enfants]$_C$]$_A$ sont tous arrivés à la fête. (Men, women and children are all invited to the party)
  - J'ai acheté [[pommes de terre]$_C$, [tomates]$_C$, [courgettes]$_C$, [prunes]$_C$ [et]$_N$ [navets]$_C$]$_A$ chez le même marchand de primeurs. (I bought potatoes, tomatoes, courgettes, plums and turnips at the same greengrocer's)

2.6 Demonstrative determiners

2.6.1 Typical use of demonstrative determiners

- *Demonstrative determiners imply a contrast between the entity referred to by the noun they accompany and other entities of similar type.* The determiner is marked as the Elaborator of the noun it accompanies.
  - [[**Cette**]$_E$ [voiture]$_C$]$_A$ a fait le tour du monde. (This car has been around the world)
  - [[A]$_R$ [**cet**]$_E$ [instant]$_C$]$_D$, la porte s'est brusquement refermée. (At that moment the door suddenly closed behind them)
- *'ce'/'cette' translate both 'this' and 'that', 'ces' translate both 'these' and 'those'. The form '-ci' can be added to the noun accompanied by 'ce' etc., to stress proximity in space or time. Proximity in English is part of the meaning of 'this', but it can also be emphasized by stressing 'this' or sometimes by adding 'here' after the noun.* '-ci' is annotated as an additional Elaborator of the noun.
  - [[**Cette**]$_E$ [voiture]$_C$ [**-ci**]$_E$]$_A$ a fait le tour du monde. (THIS car/this car here has been around the world)
  - [[**Ce**]$_E$ [mois]$_C$ [**-ci**]$_E$]$_D$ je ne peux pas vous payer. (THIS month I can't pay you)
- *The form 'là' can be added to the noun accompanied by 'ce', etc., to stress non-proximity in space or time. Non proximity in English is part of the meaning of 'that', but it can also be emphasized by stressing 'that' or sometimes by adding 'there' after the noun.* '-là' is annotated as additional Elaborator of the noun.
  - [[**Cette**]$_E$ [année]$_C$ [**-là**]$_E$]$_D$, nous ne sommes pas alleés à la mer. (THAT year we did not go to the sea)
  - [[**Ce**]$_E$ [matin]$_C$ [**-là**]$_E$]$_D$, je m'étais réveillé très tard. (THAT morning, I had woken up very late)
- *'-ci' and '-là are necessary if a comparison is made between 'this X' and 'that X'.*
  - [Est-ce que]$_F$ [[vous]$_A$ [préférez]$_P$ [[**cette**]$_E$ [voiture]$_C$ [**-ci**]$_E$]$_A$]$_H$ [ou]$_L$ [[[**cette**]$_E$ [voiture]$_C$ [**-là**]$_E$]$_A$]$_{H,REMOTE-A(''vous'')}$,$_{REMOTE-P(''préférez'')}$?

2.7 Possessive determiners

- *Possessive determiners agree in gender and number with the nouns they precede.* Possessive determiners are marked as E. Gender and number don't appear in the foundational layer of UCCA.
  - Elle a levé [[**son**]$_E$[verre]$_C$]$_A$. (She raised her (or his) glass)
  - Il a rempli [[**sa**]$_E$ [tasse]$_C$]$_A$. (He filled his (or her) cup)
  - Il a cassé [[**ses**]$_E$ [lunettes]$_C$]$_A$. (He broke his (or her) glasses)

3 Personal and impersonal pronouns

3.1 Subject pronouns

3.1.1 Position of subject pronouns

- *In declarative sentences , subsject pronouns normally appear immediately before the verb which carries the tense.* Subject pronouns are usually annotated as A.
  - [**Nous**]$_A$ [voulons$_E$ voir$_C$]$_P$ [le$_E$ directeur$_C$]$_A$. (We want to see the manager)
  - [**Tu**]$_A$ [comprends]$_P$ [vite]$_D$. (You catch quick)
  - [**Elle**]$_A$ [a$_F$ servi$_C$]$_P$ [le$_E$ vin$_C$ cambré$_E$]$_A$. (She served the wine at room temperature)
- *They can only be separated from this verb by the 'ne' of negation, and by other pre-verbal pronouns.*
  - [Elle]$_A$ [**ne**]$_{D-}$ [prend]$_P$ [pas]$_{-D(CONT.)}$ [de$_E$ café$_C$]$_A$. (She's not having any coffee)
  - [Tu]$_A$ [**l'**]$_A$ [as$_F$ mangé$_C$]$_P$. (You ate it)
  - [Vous]$_A$ [**ne**]$_{D-}$ [**le**]$_A$ [ferez]$_P$ [pas]$_{-D(CONT.)}$. (You won't do it)
- *In direct questions involving inversion , subject pronouns appear immediately after the verb which carries the tense. when subject pronouns follow the verb in this way nothing else can intervene.* Concerning UCCA annotation, the pronoun can apppear in these cases between two parts of the non-continuous Process.
  - [Sait$_E$]-[**il**]$_A$ [nager$_C$]$_{-P(CONT.)}$? (Can he swim?)
  - [Est$_F$]$_{P-}$-[**elle**]$_A$ [arrivée$_C$]$_{-P(CONT.)}$? (Has she arrived?)
  - [Ne]$_{D-}$ [le]$_A$ [croyez]$_P$-[**vous**]$_A$ [pas]$_{-D(CONT.)}$? (Don't you believe it?)

3.1.2 The use of 'vous' and 'tu'

Doesn't change the annotation

3.1.3 Marked use of 'tu'

Doesn't change the annotation

3.1.4 Use of il/ils and elle/elles

- *The third person pronouns 'ils'/'ils' and 'elle'/'elles' normally refer to people and things (both concrete and abstract) and the choice of which one to use is usually determined by the grammatical person, gender and number of the noun referred to.* When the pronoun precedes its referent in the same scene, it has a stylistic role and thus is annotated as F and the referent itself is annotated as A.
  - [[Qu'est-ce qu']$_F$ [**il**]$_F$ [fait]$_P$ [le$_E$ facteur$_C$]$_A$?]$_H$ [[**Il**]$_A$ [est$_F$ [en$_R$ retard$_C$]$_C$]$_S$.]$_H$ (What's the postman up to? He's late)
  - [[**Il**]$_F$ [est$_F$ intéressant$_C$]$_S$, [ce$_E$ livre$_C$]$_A$.]$_H$ (That's book interesting)
  - [[Où]$_A$ [est]$_S$ [la$_E$ directrice$_C$]$_A$?]$_H$ [[**Elle**]$_A$ [est$_F$ en$_C$]$_S$ [réunion]$_A$.]$_H$ (Where's the headmistree? She's in a meeting)
  - [[**Elle**]$_F$ [est intéréssante]$_S$, [cette$_E$ émission$_C$]$_A$.]$_H$ (That's program interesting)
  - [[Il]$_{F-}$ [n']$_{D-}$ [y a]$_{-F(CONT.)}$ [plus]$_{-D(CONT.)}$ [d'$_E$ abricots$_C$]$_A$.]$_H$ [[**Ils**]$_A$ [sont$_F$ finis$_C$]$_P$.]$_H$ (They are no more apicots. They're fnished.)
  - [**Elles**]$_F$ [sont$_F$ dangereuses$_C$]$_S$, [ces$_E$ falaises$_C$]$_A$. (These cliffs are dangerous)

3.1.5 Grammatical and real gender

Doesn't change the annotation

3.1.6 Grammatical and real number

Doesn't change the annotation

3.1.7 Pronouns referring to groups of mixed gender

Doesn't change the annotation

3.1.8 'ils' with arbitrary reference

- *Plural 'ils' may be used to refer to an indefinite or arbitrary group of people.* It is annotated in these cases as A.
  - [**Ils**]$_A$ ont encore augmenté le prix de l'essence. (They have put the price of petrol up again)
  - [**Ils**]$_A$ disent qu'il va y avoir de l'orage. (They say that there will be a storm)
  - Comment votent - [**ils**]$_A$ par ici? (How do they vote around here?)

3.1.9 Coordination of subject pronouns

- *When clauses containing unstressed subject pronouns are coordinated by 'et', 'ou' or 'ne ... ni', the second pronoun may be deleted.*
  - [[Elle]$_A$ [se$_E$ réveille$_C$]$_P$]$_H$ [et]$_L$ [[regarde]$_P$ [l'$_E$ horloge$_C$]$_A$]$_{H,REMOTE-A(''elle'')}$. (She wakes up and looks at the clock)

- *When the verb is accompanied by auxiliary 'avoir' or 'être', if the subject pronoun is deleted, the auxiliary must be too.* The auxiliary is annotated once as F and it is not remoted. Furthermore, there are cases like the following example where there is one single scene. In this case there is no remote Participant since the two verbs form one process.
  - [Il]$_A$ [[a]$_F$ [[chanté]$_C$ [et]$_N$ [dansé]$_C$]$_C$]$_P$. (He sang and danced)

3.1.10 Use of 'on'

- *'on' can refer to a person or people whose identity is not really known.* It is annotated as A.
  - [**On**]$_A$ dit que la première année de mariage est la plus difficile. (People say that the first year of marriage is the most difficult)
  - [**On**]$_A$ en fabrique plus. (They don't make them any more)
  - [**On**]$_A$ a volé tout mon argent. (Someone stole all my money)

3.1.11 'on' as an alternative to the English passive

- *A construction with 'on' can often be used where a passive is used in English.* 'on' is annotated as A. We can see that in these cases the number of Participants will be equal in French and in English because in the English annotation we add an implicit Participant.
  - [**On**]$_A$ croyait la crise du logement définitivement réglée. (The housing shortage was definitely thought to be over)
  - [**On**]$_A$ ne soupçonne guère le véritable rôle économique joué par les enfants. (The real economic role that children play is thoroughly underestimated)
  - [[**On**]$_A$ sait qu'il a eu des démêlés avec la police]$_H$, [mais]$_L$ [[**on**]$_A$ ne sait pas pourquoi]$_H$. (It is well known that he was once in trouble with the police, but it is not known why)

3.1.12 'on' as an equivalent for English 'you'

- *'on' can sometimes be used where English uses 'you' and French could use 'vous' or 'tu'.* It is annotated as A.
  - Est-il vrai qu'[**on**]$_A$ distingue un Américain d'un français à cent mètres? (Is it true youcan tell an American from a Frenchman at a hundred meters?)

3.1.13 'on' as equivalent for 'nous'

- *'on' can often be used as a synonym for 'nous'.* It is annotated as A.
  - [**On**]$_A$ avait d'abord tenté l'opération inverse. (We had at first taken the opposite track)
- *The use of 'on' instead of 'nous' is very frequent in informal spoken French.*
  - Pourquoi [**on**]$_A$ rentre pas à la maison? (Why don't we go home?)

3.1.14 Use of 'l'on'

- *'l'on' is sometimes used in French for 'on' when it follows a word ending in a vowel (like 'et', 'ou', 'qui', 'que', 'si', etc.). This is a feature of written, rather than spoken, French. The use of 'l" is not obligatory, however.* 'on' is still annotated as A and 'l" is annotated as F.
  - [Comment savoir]$_H$ [si]$_L$ [[**l'**]$_F$ [**on**]$_A$ [ne]$_{D-}$ [demande]$_P$ [pas]$_{-D(CONT.)}$]$_H$?

3.1.15 Use of 'ce', 'cela', 'ça' as neutral pronouns

- *When 'ce', 'cela' and 'ça' are used as neutral pronouns they normally refer to events, actions, states or general classes of people or things.* In this case they will be analyzed as A, and their referent can be en entire scene. However, when they are used in emphasization, it plays a stylistic role and thus is marked as F.
  - [[Vous]$_A$ [viendrez$_E$ dîner$_C$]$_P$ [ce$_E$ soir$_C$]$_D$]$_H$, [[**c'**]$_A$ [est$_F$ prévu$_C$]$_P$]$_{H,IMPLICIT-A}$. (Come to dinner this evening. It's all taken care of)
  - [[Partez]$_P$ [à$_R$ l'$_E$ étranger$_C$]$_A$]$_H$. [[**Cela**]$_A$ [vous]$_A$ [[fera]$_F$ [du$_E$ bien$_C$]$_C$]$_P$]$_H$.
  - [L'extérieur]$_A$, [**ce**]$_F$ [[n']$_{C-}$ [est]$_F$ [rien]$_{-C(CONT.)}$]$_S$. [[Il]$_F$ [faudrait$_E$ voir$_C$]$_P$ [l'$_E$ intérieur$_C$]$_A$]$_{H,IMPLICIT-A}$. (The outside is nothing. You should see the inside)

3.1.16 Comparing neutral 'ce', 'cela', 'ça' with personal 'il'/'elle', 'ils'/'elles'

Doesn't change the annotation

3.1.17 Use of 'il', 'ce', 'cela' and 'ça' as impersonal pronouns

- *The clearest use of impersonal subject pronouns is with verbs where 'il', 'ce', 'cela' and 'ça' simply mark the subject position without referring to someone or something elsewhere in the conversation or text.* In this case they are annotated as F.
  - [**Il**]$_F$ [pleut]$_S$. (It's raining)
  - [**Il**]$_F$ [neige]$_S$ (It's snowing)
  - [**C'**]$_F$ [est$_F$ difficile$_C$]$_S$ [[de$_F$]$_{P-}$ [le]$_A$ [joindre$_C$]$_{-P(CONT.)}$ [au$_{R+E}$ téléphone$_C$]$_A$]$_{A,IMPLICIT-A}$. (It's difficult to reach him by phone)
  - [**C'**]$_F$ [est$_F$ dommage$_C$]$_S$ [qu'$_F$ [elle]$_A$ [ne]$_{D-}$ [soit$_F$]$_{P-}$ [pas]$_{-D(CONT.)}$ [venue$_C$]$_{-P(CONT.)}$]$_A$. (It's a pity that she didn't come)

3.1.18 Impersonal subject restricted to 'il'

- *Some impersonal verbs and verbal expressions always take impersonal subject 'il' (and NOT 'ce', 'cela' or 'ça')*
  - [**Il**]$_F$ [est$_F$ midi$_C$]$_S$ (It's noon)
  - [**Il**]$_F$ [est$_F$ tard$_C$]$_S$. (It's late)
  - [**Il** y a]$_S$ [deux hommes]$_A$ [à$_R$ la$_E$ porte$_C$]$_A$. (There are two men at the door)
  - **Il** est question de lui interdire l'accès aux enfants. (There's talk of stopping her seeing the children)

- **Il** s'agit de refaire les fondations. (It's a question of rebuilding the foundations)
- [**Il**]$_F$ [faut se lever]$_P$ [tôt le matin]$_A$. (You've got to get up early in the morning)
- [**Il**]$_F$ convient de faire le point. (I is advisable to take stock)
- **Il** vaut mieux rester chez vous. (It's better for you to stay at home)

3.1.19 Direct object and indirect object pronouns: differences between English and French

- *The following commom French verbs take indirect object pronouns. Their English equivalents take direct objects.* Indirect pronouns are analyzed as A. So, in this case, there is no difference with English annotation.
  - [Sa$_E$ soeur$_C$]$_A$ [**lui**]$_A$ [a$_F$ appris$_C$]$_P$ [[à]$_R$ [[parler]$_P$ [espagnol]$_A$]$_{C,REMOTE-A(''lui'')}$]$_A$. (His sister taught him to speak Spanish) - apprendre [**à**$_R$ quelqu'un$_C$]$_P$ à faire quelque chose (teach someone to do something)
  - [Luc]$_A$ [**leur**]$_A$ [a$_F$ conseillé$_C$]$_P$ [[de$_F$ se$_E$ taire$_C$]$_P$]$_{A,REMOTE-A(''leur'')}$. (Luc advised them to be quiet) - conseiller [**à**$_R$ quelqu'un$_C$]$_A$ de faire quelque chose (advise someone to do something)
  - [Sa$_E$ mère$_C$]$_A$ [**lui**]$_A$ [défendait]$_P$ [[de$_F$ fumer$_C$]$_P$ [à$_R$ la$_E$ maison$_C$]$_A$]$_A$. (Her mother used to forbid her to smoke at home) - défendre [**à**$_R$ quelqu'un$_C$]$_A$ de faire quelque chose (to forbid someone to do something)
  - [Le film]$_A$ [**lui**]$_A$ [a$_F$ (dé)plu$_C$]$_P$. (He (dis)liked the film) - déplaire [**à**$_R$ quelqu'un$_C$]$_A$ (displease someone)
  - [Elle]$_A$ [**lui**]$_A$ [manque]$_P$. (He misses her) - manquer [**à**$_R$ quelqu'un$_C$]$_A$
- *There are several verb constructions which tend to give rise to this problem, each slightly different.*
  - Verbs followed by: '... à quelqu'un' ('...to someone')
    - ... [lui]$_A$ [a$_F$ téléphoné$_C$]$_P$ (...phoned him)
  - Verbs followed by: '...quelque chose à quelqu'un' ('... something to someone')
    - ... [lui]$_A$ [a$_F$ passé$_C$]$_P$ [le$_E$ sel$_C$]$_A$ (... passed her the salt)
  - Verbs followed by: '...à quelqu'un de faire quelque chose' ('... to someone to do something')
    - ... [lui]$_A$ [a$_F$ ordonné$_C$]$_P$ [[de$_F$ signer$_C$]$_P$]$_{A,REMOTE-A(''lui'')}$ (... ordered him to sign)
- *The following common French verbs take direct objects; learners often treat them as if they required indirect objects, perhaps because of a confusion over the status of à (or sometimes 'de') which these verbs require when they are followed by an infinitive.* In UCCA annotation, 'à' is not marked as R but it is part of verb and it is annotated as F.
  - [Je]$_A$ [**l'**]$_A$ [ai$_F$ aidé$_C$]$_P$ [[à$_F$ changer$_C$]$_P$ [la$_E$ roue$_C$]$_A$]$_{A,REMOTE-A(''l'')}$. (I helped him to change the wheel)
  - [Le$_E$ professeur$_C$]$_A$ [**l'**]$_A$ [avait$_F$ encouragé$_C$]$_P$ [[à$_F$ participer$_C$]$_P$]$_{A,REMOTE-A(''l'')}$. (The teacher had encouraged him to take part)
  - [Je]$_A$ [**les**]$_A$ [ai$_F$ persuadés$_C$]$_P$ [[de$_F$ venir$_C$]$_P$]$_{A,REMOTE-A(''les'')}$ (I persuaded them to come)

3.1.20 Position of direct and indirect object pronouns

Direct and indirect object pronouns are closely linked with the verb to which they are most closely related in declarative, negative and interrogative sentences.

- *When the verb is a main verb they appear immediately before it.*
  - [L'$_E$ Etat$_C$]$_A$ [**me**]$_A$ [paie]$_P$. (The state pays me)
- *When the verb is accompanied by the auxiliary verbs 'avoir' or 'être', direct and indirect pronouns appear immediately before the auxiliary.*
  - [Il]$_A$ [**m'**]$_A$ [a$_F$ vu$_C$]$_P$. (He saw me)

3.1.21 Position of object pronouns with infinitives

- *When the verb governing a direct or indirect object pronoun is an infinitive (including a compound infinitive made up of an auxiliary verb and a past participle), direct and indirect objects usually come in front of the infinitive.* Usually in these cases the pronoun is situated between the two parts of the discontinuous State/Process.
  - [Il]$_A$ [pourra$_E$]$_{P-}$ [**te**]$_A$ [voir$_C$]$_{-P(CONT.)}$ [demain]$_D$. (He will be able to see you tomorrow)
- *When 'à' or 'de' followed by 'le' or 'les' come before the infinitive, these forms do not combine to form 'au', 'du', 'aux', 'des'.* Here the preposition is part of the State/Process and it is analyzed as F.
  - [Je]$_A$ [[suis$_F$ obligé$_C$]$_E$ [de]$_F$]$_{P-}$ [les]$_A$ [aider]$_{-P(CONT.)}$ (I have to help them) Here there can be one or two Processes (one or two Scenes depending on the context).

3.1.22 Position of object pronouns with 'faire', 'laisser', 'envoyer' or verbs of perception + infinitive

- *Where the infinitive has 'faire', 'laisser', 'envoyer' or perception verbs like 'voir', 'regarder', 'entendre', 'sentir' in front of it, direct and indirect object pronouns appear before the other verb if they are understood as the subject of the infinitive.* We distinguish cases where the pronoun is part of the Participant-Scene (first example below) and cases where the pronoun appear both as a Participant in the main Scene and as a remote Participant at the Participant Scene (second and third examples below).
  - [Je]$_A$ [[**la**]$_A$]$_{A-}$ [voyais]$_P$ [[venir]$_P$]$_{-A(CONT.)}$ (I saw her coming)
  - [Sa$_E$ mère$_C$]$_A$ [**lui**]$_A$ [a$_F$ fait$_C$]$_P$ [[manger]$_P$ [du$_{R+E}$ [potage]$_C$]$_A$]$_{A,REMOTE-A(''lui'')}$ (Her mother made her eat some soup)
  - [Elle]$_A$ [**m'**]$_A$ [a$_F$ laissé$_C$]$_P$ [[pleurer]$_P$]$_{A,REMOTE-A(''m'')}$ (She let me cry)
- *The understood subject of the infinitive is realized as an indirect object if the infinitive has a direct object, but as a direct object if it does not.* We see in the examples bellow that the fact that the pronoun is a direct object or an indirect one doesn't change the annotation except the addition of an implicit Participant when the direct object doesn't appear explicitely.

- [Sa$_E$ mère$_C$]$_A$ [**lui**]$_A$ [a$_F$ fait$_C$]$_P$ [[manger]$_P$ [du$_{R+E}$ potage$_C$]$_A$]$_{A,REMOTE-A(''lui'')}$.
  [Sa$_E$ mère$_C$]$_A$ [[**le**]$_A$]$_{A-}$ [**lui**]$_P$ [a$_F$ fait$_C$]$_P$ [[manger]$_P$]$_{-A(CONT.),REMOTE-A(''lui'')}$.
  (Her mother made her eat some soup/Her mother made her eat it)
- [Sa$_E$ mère$_C$]$_A$ [**l'**]$_A$ [a$_F$ fait$_C$]$_P$ [[manger]$_P$]$_{A,REMOTE-A(''l'''),IMPLPICIT-A}$. (Her mother made her eat)

- *If the direct or indirect object is understood as the object of the infinitive, it normally also comes before the other verb (although some native speakers may allow it to be placed directly in front of the infinitive).* In these cases, an implicit Participant (the subject of the infinitive) appears both in the main scene and in Participant Scene. The object of the infinitive is part of the (discontinuous) Participant Scene.
  - [[Je]$_A$ [[**l'**]$_A$]$_{A-}$ [ai$_F$ envoyé$_C$]$_P$ [[chercher]$_P$]$_{-A(CONT.),IMPLICIT-A}$]$_{H,IMPLICIT-A}$.
    (I sent (someone) to look for him)
  - [[Je]$_A$ [[**l'**]$_A$]$_{A-}$ [ai$_F$ entendu$_C$]$_P$ [[dire]$_P$]$_{-A(CONT.),IMPLICIT-A}$]$_{H,IMPLICIT-A}$. (I have heard it said)
  - [[Elle]$_A$ [[**le**]$_A$]$_{A-}$ [fit]$_P$ [[remplacer]$_P$]$_{-A(CONT.),IMPLICIT-A}$]$_{H,IMPLICIT-A}$. (She had it replaced)

3.1.23 Position of object pronouns with imperatives

- *In affirmative imperatives direct and indirect object pronouns come immediately after the verb which governs them, and the pronouns 'me', 'te' become stressed forms 'moi', 'toi'.* The stressed pronouns are marked here as A. In imperative, an implicit Participant is added for the subject.
  - [[Prends]$_P$-[**les**]$_A$]$_{H,IMPLICIT-A}$! (Take them!)

- *But in negative imperatives direct and indirect object pronouns preced the verb.*
  - [[Ne]$_{D-}$ [**les**]$_A$ [suivez]$_P$ [pas]$_{-D(CONT.)}$]$_{H,IMPLICIT-A}$! (Don't follow them)
  - [[Ne]$_{D-}$ [**me**]$_A$ [fais]$_P$ [pas]$_{-D(CONT.)}$ [[rire]$_P$]$_{A,REMOTE-A(''me'')}$]$_{H,IMPLICIT-A}$! (Don't make me laught)

3.1.24 Position of object pronouns with 'voici' and 'voilà'

- *Direct object pronouns may appear before 'voici' and 'voilà'.* 'voici' and 'voilà' ethymologically came from the contraction of "vois" ("see" , second-person singular imperative) and "ici" ("here") or là (there). Their meaning today indicate both a state and a (referential) location. Therefore there are marked as S+A (double annotation).
  - [**Nous**]$_A$ [voici]$_{S+A}$ (Here we are) (Nous sommes ici)
  - [**Les**]$_A$ [voilà]$_{S+A}$ (There they are) (Ils sont là)

3.1.25 Ambiguity of reference of 'lui' and 'leur'

Doesn't change the annotation

3.1.26 Use of the neutral pronoun "le"

- *'le', in addition to its function as a third person singular pronoun referring to masculine nouns, may also have a 'neutral' function when it refers to states, general ideas or whole propositions. In this case 'le' is marked as A and it can refers to an entire scene.*
  - [Pour que]$_L$ [nous vous remboursions vos frais de déplacement]$_H$, [il faut présenter des justificatifs]$_H$, [si]$_L$ [[vous]$_A$ [**le**]$_A$ [pouvez]$_P$]$_H$. (For us to be able to pay your travelling expenses, you must prove you have spent the money, if you can)

3.1.27 Use of neutral 'le' where no equivalent exists in English

- *Sometimes neutral 'le' is required in French where English normally has no object pronoun at all, typically where the verb 'être' + adjective/identifying expression are involved.* In this case 'le' is annotated as the center of the State and it refers to the center of the State in the previous Scene. In English the corresponding annotation will be a remote Center within the State.
  - [[N']$_{D-}$ [ayez$_F$]$_{S-}$ [pas]$_{-D(CONT.)}$ [peur$_C$]$_{-S(CONT.)}$]$_H$!
    [[J']$_A$ [étais$_F$ [en$_R$ colère$_C$]$_C$]$_S$]$_H$, [mais]$_L$ [[je]$_A$ [ne]$_{D-}$ [[**le**]$_C$ [suis]$_F$]$_S$ [plus]$_{-D(CONT.)}$]$_H$.
    (Don't be frightened! I was angry, but I'm not any more)
  - [[Est-ce]$_F$ [elle]$_A$ [est$_F$ prête$_C$]$_S$]$_H$?
    [[Elle]$_A$ [[**le**]$_C$ [sera]$_F$]$_S$ [dans$_R$ un$_E$ instant$_C$]$_D$]$_H$. (Is she ready? She will be in a moment)
  - [[Moi]$_F$, [je]$_A$ [n']$_{D-}$ [étais$_F$]$_{S-}$ [pas]$_{-D(CONT.)}$ [étonné$_C$]$_{-S(CONT.)}$]$_H$, [mais]$_L$ [[Myriam]$_A$ [[**l'**]$_C$ [a]$_F$ [été]$_F$]$_S$]$_H$. (I wasn't surprised, but Myriam was)

3.1.28 Wrong use of neutral 'le' in phrases where 'it' occurs in English

- *The English constructions 'find it difficult to', 'consider it easy to', 'reckon it possible that', and similar cases, have French counterparts in which 'le' must not appear. The verbs usually involved are 'croire', 'penser', 'trouver', 'juger', 'estimer', 'considérer.* However, there is not an additional Participant in English so 'it' is marked as F.
  - [Je]$_A$ [trouve]$_P$ [[difficile]$_S$ [[de$_F$]$_{P-}$ [me]$_A$ [faire$_C$]$_{-P(CONT.)}$ [des$_E$ amis$_C$]$_A$]$_A$]$_A$. (I find it difficult to make friends)
  - [Il]$_A$ [considère]$_P$ [[important]$_S$ [[que]$_F$ [tous$_E$ ses$_E$ amis$_C$]$_A$ [soient$_F$ prévenus$_C$]$_P$]$_{A,IPLICIT-A}$]$_A$.
    (He considers it important that all his friends be notified)
- *The 'le' is absent in these cases because the construction is impersonal, and, while English requires 'it', French requires an absence of pronoun. Where the construction is personal (that is, where a person or thing is referred to), 'le', 'la', 'les' are required.* In these cases, they are marked as A.
  - [Je]$_A$ [trouve]$_P$ [[[ce$_E$ livre$_C$]$_A$]$_{A-}$ [difficile]$_S$ [[à$_F$ comprendre$_C$]$_P$]$_{-A(CONT.),IMPLICIT-A}$]$_A$.
    [Je]$_A$ [[[le]$_A$]$_{A-}$]$_{A-}$ [trouve]$_P$ [[difficile]$_S$ [[à$_F$ comprendre$_C$]$_P$]$_{A(CONT.),IMPLICIT-A}$]$_{-A(CONT.)}$.
    (I find this book difficult to understand/I find it difficult to understand)
  - [J']$_A$ [ai$_F$ trouvé$_C$]$_P$ [[[le$_E$ soliste$_C$]$_A$]$_{A-}$ [impossible]$_S$ [[à écouter]$_P$]$_{A(CONT.),REMOTE-A(''j''')}$]$_A$. [Je]$_A$ [[[l']$_A$]$_{A-}$]$_{A-}$ [ai$_F$ trouvé$_C$]$_P$ [[impossible]$_S$

[à$_F$ écouter$_C$]$_P$]$_{-A(CONT.),REMOTE-A(''j''')}$]$_{-A(CONT.)}$. (I found I couldn't bear to listen to the soloist/I found I couldn't bear to listen to him)

3.1.29 Optional use of neutral 'le'

Neutral 'le' is optional in the following environments:

- *With the verbs 'croire', 'penser', 'dire', 'vouloir, 'savoir' when these are used as stock conversational responses to questions or statements by other people.* The pronoun is annotated here as A and it refers to an entire scene.
  - [Ils sont heureux]$_H$? [[Oui]$_F$, [je]$_A$ ([**le**]$_A$) [pense]$_P$]$_H$. (Are they happy? Yes, I think so)
  - [Est-ce que vous viendrez ce soir]$_H$? [[Non]$_F$, [je]$_A$ [ne]$_{D-}$ ([**le**]$_A$) [crois]$_P$ [pas]$_{-D(CONT.)}$]$_H$. (Will you come this evening? No, I don't think so)
  - [Elle revient directement de Londres]$_H$. [[Oui]$_F$, [je]$_A$ ([**le**]$_A$) [sais]$_P$]$_H$. (She has come straight back from London. Yes, I know)

3.1.30 Reflexive use of 'me', 'te', 'se', 'nous', 'vous'

- *Where 'me', 'te', 'se', 'nous', 'vous' refer to the subject of the verb to which they are attached, they are being used reflexively. This use can correspond to English 'my-', 'your-', 'him-','it-', 'oneself'; 'our-', 'your-','themselves'.* Here the pronouns are annotated as A.
  - [Michel]$_A$ [adore]$_P$ [[**se**]$_A$ [regarder]$_P$ [dans$_R$ les$_E$ vitrines$_C$]$_A$]$_{A,REMOTE-A(''Michel'')}$. (Michel loves looking at himself in shop windows)
  - [Je]$_A$ [**me**]$_A$ [connais]$_P$. (I know myself)
  - [Vous]$_A$ [**vous**]$_A$ [critiquez]$_P$ [trop]$_D$. (You are too critical of yourselves)

3.1.31 Reciprocal 'se' and cases of potential ambiguity

- *When the subject is third person plural, 'se' may also be interpreted as a 'reciprocal' pronoun, corresponding to English 'each other'. In some cases 'se' is therefore ambiguous, having a 'reflexive' or 'reciprocal' interpretation, and the meaning may depend on the context.* In case of reciprocal form, the pronoun is part of the Process and it is marked as E.
  - reciprocal meaning: [Les$_E$ deux$_E$ écrivains$_C$]$_A$ [[**s'**]$_E$ [admirent]$_C$]$_P$ [[depuis]$_R$ [20$_E$ ans$_C$]$_C$]$_D$. (The two writers have admired each other for 20 years)
  - reflexive meaning: [Les$_E$ deux$_E$ écrivains$_C$]$_A$ [**s'**]$_A$ [admirent]$_P$ [[depuis]$_R$ [20$_E$ ans$_C$]$_C$]$_D$. (The two writers have (each) admired themselves for 20 years)
  - reciprocal meaning: [Les$_E$ deux$_E$ amis$_C$]$_A$ [[**se**]$_E$ [connaissent]$_C$]$_P$ [bien]$_D$. (The two friends know each other well)
  - reflexive meaning: [Les$_E$ deux$_E$ amis$_C$]$_A$ [**se**]$_A$ [connaissent]$_P$ [bien]$_D$. (The two friends know themselves well)

3.1.32 Benefactive 'me', 'te', 'se', 'nous', 'vous'

– *'me', 'te', 'se', 'nous', 'vous' may also be used to indicate that the subject 'benefits' from some action. This use, known as the 'benefactive' can often be paraphrased in English by 'for him-', 'her-', 'it-', 'oneself'/'themselves', etc.* The pronouns here are annotated as A.

  * [Josée]$_A$ [**s'**]$_A$ [est$_F$ acheté$_C$]$_P$ [un$_E$ nouvel$_E$ ordinateur$_C$]$_A$ (Josée bought herself a new computer)
  * [Jacques]$_A$ [**s'**]$_A$ [est$_F$ commandé$_C$]$_P$ [une$_E$ bière$_C$]$_A$. (Jacques ordered himself a beer)

3.1.33 'se' as an alternative to an English passive

– *'se' may be used with a verb as an alternative to an English passive.* Here the pronoun is part of the Process and annotated as E.

  * [Un$_E$ collant$_C$]$_A$ [[**se**]$_E$ [lave]$_C$]$_P$ [en$_R$ deux$_E$ minutes$_C$]$_D$. (A pair of tights can be washed in two minutes)
  * [L'$_E$ uni$_C$]$_A$ [[**se**]$_E$ [vend]$_C$]$_P$ [bien]$_D$ [cet$_E$ hiver$_C$]$_D$. (Plain colours are selling well this winter)

3.1.34 'me', 'te', 'se', 'nous', 'vous' as part of certain verbs but with no specific meaning

– *'me', 'te','se', 'nous', 'vous' also normally accompany some verbs without detectable reflexive, reciprocal or benefactive meaning.* We distinguish between:

  * Cases where the pronoun changes in an unpredictable way the original meaning of the verb or alternatively, the verb appears only at a pronominal form (the latter phenomenon appears in the first and second examples below). In these cases the pronoun should be part of the P and the whole P should be unanalyzable.
  * Cases where the pronoun introduces an individual action in a reflexive form without really adding another participant (third example below). In these cases the pronoun should be part of the P and will be annotated as E.
  * [Robert]$_A$ [[**s'**]$_{C-}$ [est]$_F$ [évanoui]$_{-C(CONT.)}$]$_P$. (Robert fained)
  * [Elle]$_A$ [**se** souvient]$_P$ [de$_R$ son$_E$ arrière-grand-père$_C$]$_A$. (She remembers her great-grandfather)
  * [La$_E$ foule$_C$]$_A$ [[**s'**]$_E$ [est]$_F$ [éloignée]$_C$]$_P$. (The crowd moved away)

3.1.35 Emphasizing 'me', 'te', 'se', 'nous', 'vous' by adding a pronoun + même

– *The reflexive and benefactive interpretations of 'me', 'te', 'se', 'nous', 'vous' can be emphasized by the addition of one of the expressions 'moi-même', 'toi-même', 'lui-même, 'elle-même', 'soi-même', 'eux-mêmes', 'elles-mêmes', etc.* We distinguish between cases where the expression has only emphasization role and then they are analyzed as F (first and third examples below) and cases where add a manner information (for example, equivalent meaning to "alone") and thus are analyzed as D (second and fourth examples below).

* [[Connais]$_P$ - [**toi**]$_A$, [**toi-même**]$_F$]$_{H,IMPLICIT-A}$. (Know thyself)
* [Elle est grande maintenant]$_H$: [[elle]$_A$ [**s'**]$_A$ [habille]$_P$ [**elle-même**]$_D$]$_H$. (She's a big girl now, she dresses herself)
* [Puisque]$_L$ [personne d'autre ne le fait]$_H$, [[Suzanne]$_A$ [**s'**]$_A$ [admire]$_P$ [**elle-même**]$_F$]$_H$! (Since no-one else does so, Suzette admires herself!)
* [De$_R$ nos$_E$ jours$_C$]$_D$, [malheureusement]$_G$, [[il]$_F$ [faut]$_E$]$_{P-}$ [**se**]$_A$ [soigner$_C$]$_{-P(CONT.)}$ [**soi-même**]$_D$. (Nowadays, unfortunately, you have to be your own doctor)

3.1.36 Emphasizing the reciprocal use of 'se' by adding 'l'un l'autre'

The reciprocal interpretation of 'se' can be made explicit by the addition of one of the phrases 'l'un(e) l'autre', 'l'un(e) à l'autre', 'les un(e)s les autres', 'les un(e)s aux autres', all with the meaning 'each other', 'one another'. These expressions are annotated as D.

- *'l'un(e) l'autre' or 'l'un(e) à l'autre' are used when the subject refers to just two people or things.*
  * [Les$_E$ deux$_E$ boxeurs$_C$]$_A$ [se$_E$ regardaient$_C$]$_P$ [fixement]$_D$ [**l'un l'autre**]$_D$. (The two boxers were staring at each other)
- *'les un(e)s les autres', 'les un(e)s aux autres' are used when the subject refers to more than two people or things.*
  * [Les équipiers]$_A$ [se$_E$ connaissent$_C$]$_P$ [depuis$_R$ longtemps$_C$]$_D$ [**les uns les autres**]$_D$. (The team members have known each other for a long time)

3.1.37 Constructions which do not allow indirect object pronouns

- *A small set of verbs and adjectives in French look as if they take indirect objects because they are followed by the preposition 'à', but in fact they do not allow preceding 'me', 'te', 'se', 'nous', 'vous', 'lui', 'leur' and require stressed pronouns to follow 'à'.* We distinguish between cases where 'à' is part of the State/Process (like the fourth example below) and cases where it is part of the following Participant and is annotated as R (the first three examples below).
  * [Il]$_A$ [pense]$_P$ [**à**$_R$ Jean$_C$]$_A$. [Il]$_A$ [pense]$_A$ [**à**$_R$ **lui**$_C$]$_A$. (He is thinking of John. He is thinking of him.)
  * [Il]$_A$ [fait$_F$ allusion$_C$]$_P$ [**à**$_R$ Marie$_C$]$_A$. [Il]$_A$ [fait$_F$ allusion$_C$]$_P$ [**à**$_R$ **elle**$_C$]$_A$. (He is referring to Marie. He is referring to her.)
  * [Elle]$_A$ [aura$_F$ affaire$_C$]$_P$ [**à**$_R$ Henri$_C$]$_A$. [Elle]$_A$ [aura$_F$ affaire$_C$]$_P$ [**à**$_R$ **lui**]$_A$. (She will have to deal with Henri. She will have to deal with him.)
  * [Ce$_E$ sac$_C$]$_A$ [est **à**]$_S$ [Julien]$_A$. [Ce$_E$ sac$_C$]$_A$ [est$_F$ **à**$_C$]$_S$ [**lui**]$_A$. (This bag is Julien's. This bag is his.)

3.1.38 Indirect object pronouns used in possessive constructions with body parts

- *The indirect object pronouns are used in a possessive construction in French with body parts where English would use possessive determiners (like 'my', 'your', 'his', 'her', etc).* The pronoun is annotated as A so there is an additional Participant comparing to English.

* [On]$_A$ [**lui**]$_A$ [a$_F$ cassé$_C$]$_P$ [**le**$_E$ bras$_C$]$_A$. (They broke his arm)
* [Elle]$_A$ [**s'**]$_A$ [était$_F$ coupé$_C$]$_P$ [**le**$_E$ doigt$_C$]$_A$. (She had cut her finger)
* [La$_E$ sueur$_C$]$_A$ [**me**]$_A$ [coulait]$_P$ [dans$_R$ **le**$_E$ dos$_C$]$_A$. (Sweat was running down my back)

– *However, the indirect object construction is not possible with verbs which do not describe actions.*

* [Elle]$_A$ [aime]$_P$ [**son**$_E$ visage$_C$]$_A$. (She likes his face)

– *This construction is also normally impossible with non-body parts. However, it can be found in some regional varieties of French.*

* [Elle]$_A$ [**lui**]$_A$ [a$_F$ cassé$_C$]$_P$ [le$_E$ magnétoscope$_C$]$_A$. (She broke his video recorder)

3.1.39 Use of'y'

– *'y' usually plays the same role in sentences as phrases which follow the verb and are introduced by prepositions like 'à', 'en', 'dans', 'sur', 'sous', etc.* It is annotated in these cases as A.

* [Je]$_A$ [vais]$_P$ [à$_R$ Paris$_C$]$_A$ [demain]$_D$. (I am going to Paris tomorrow)
* [J']$_A$ [**y**]$_A$ [vais]$_P$ [demain]$_D$. (I'm going there tomorrow)
* [Elle]$_A$ [vit]$_P$ [dans$_R$ une$_E$ grande$_E$ maison$_C$]$_A$. (She lives in a large house)
* [Elle]$_A$ [**y**]$_A$ [vit]$_P$. (She lives there)
* [Il]$_A$ [a$_F$ écrit$_C$]$_P$ [son$_E$ nom$_C$]$_A$ [sur$_R$ le$_E$ cahier$_C$]$_A$. (He wrote his name on the book)
* [Il$_A$ [**y**]$_A$ [a$_F$ écrit$_C$]$_P$ [son$_E$ nom$_C$]$_A$. (He wrote his name there)

– *Although 'y' can generally replace any phrase of this type, both concrete and abstract (as in the examples below), it is usually restricted to non-animate entities.*

* [Je]$_A$ [pense]$_P$ [souvent]$_D$ [à$_R$ la$_E$ retraite$_C$]$_A$. (I often think about retirement)
* [J']$_A$ [**y**]$_A$ [pense]$_P$ [souvent]$_D$.
* [Elle]$_A$ [est$_F$ fidèle$_C$]$_S$ [à$_R$ ses$_E$ principes$_C$]$_A$. (She is faithful to her principles)
* [Elle]$_A$ [**y**]$_A$ [est$_F$ fidèle$_C$]$_S$.
* [Nous]$_A$ [sommes$_F$ entrés$_C$]$_P$ [dans$_R$ le$_E$ débat$_C$]$_A$. (We joined in the debate)
* [Nous]$_A$ [**y**]$_A$ [sommes$_F$ entrés$_C$]$_S$.

3.1.40 Non-specific use of 'y'

– *In a number of common constructions, 'y' is used without a very specific meaning being attached to it.* We distinguish between cases where 'y' denotes in these constructions a distinct Participant (like the first three examples below) and cases where it is part of the Process/State (like the fourth example below).

* [Pensez]$_P$ - [**y**]$_A$! (Think about it!)
* [Je]$_A$ [n'$_{C-}$]$_{S-}$ [**y**]$_A$ [suis$_F$ pour$_R$ rien$_{-C(CONT.)}$]$_{S(CONT.)}$. (It's nothing to do with me)
* [[J']$_A$ [**y**]$_A$ [suis]$_S$]$_H$, [[j']$_A$ [**y**]$_A$ [reste]$_S$]$_H$. (Here I am and here I stay)
* [Il **y** a]$_S$ ... (There is ..., There are...)

3.1.41 Use of 'y' in constructions where 'à' does not introduce an indirect object

- *'y' is normally used to refer to non-human objects which occur with verbs like 'penser à' where 'à' does not introduce an indirect object.* 'y' is annotated here as A.
  - ∗ [Je]$_A$ [pense]$_P$ [à$_R$ la$_E$ guerre$_C$]$_A$. (I'm thinking of the war)
  - ∗ [J']$_A$ [**y**]$_A$ [pense]$_P$. (I'm thinking of it)
  - ∗ [Je]$_A$ [tiens]$_P$ [**à**$_R$ mes$_E$ idées$_C$]$_A$. (I'm sticking to my ideas)
  - ∗ [J']$_A$ [**y**]$_A$ [tiens]$_P$. (I'm sticking to them)
  - ∗ [Je]$_A$ [[ferai]$_F$ [très$_E$ attention$_C$]$_C$]$_P$ [à$_R$ vos$_E$ affaires$_C$]$_A$. (I'll look after your belongings very carefully)
  - ∗ [J']$_A$ [**y**]$_A$ [[ferai]$_F$ [très$_E$ attention$_C$]$_C$]$_P$. (I'll look after them carefully)

3.1.42 Use of 'en'

- *'en' is the pronoun used to replace phrases introduced by 'de' which follow the verb. Where these include a noun, 'en' can refer to both human and non-human nouns.* It is usually marked as A but sometimes it replaces the Process (See the third and the fourth examples).
  - ∗ [Il]$_A$ [a$_F$]$_{P-}$ [déjà$_D$] [parlé$_C$]$_{-P(CONT.)}$ [de$_R$ son$_E$ idée$_C$]$_A$. (He has already spoen about his idea)
  - ∗ [Il]$_A$ [**en**]$_A$ [a$_F$]$_{P-}$ [déjà]$_D$ [parlé$_C$]$_{-P(CONT.)}$. (He has already spoken about it)
  - ∗ [Il]$_A$ [a$_F$ empêché$_C$]$_P$ [[Jean-Pierre]$_A$ [de$_F$ travailler$_C$]$_P$]$_A$. (He stopped Jean-Pierre working)
  - ∗ [Il]$_A$ [[l']$_A$ [**en**]$_P$]$_A$ [a$_F$ empêché$_C$]$_P$. (He stopped him doing it)
  - ∗ [Mémère]$_A$ [s'occupe]$_P$ [des$_{R+E}$ enfants$_C$]$_A$. (Grandma is looking after the children)
  - ∗ [Mémère]$_A$ [s'$_{C-}$]$_{P-}$ [**en**]$_A$ [occupe$_{-C(CONT.)}$]$_{-P(CONT.)}$. (Grandma is looking after them)
  - ∗ [Christine]$_A$ [est$_F$ fière$_C$]$_S$ [de$_R$ son$_E$ frère$_C$]$_A$. (Christine is proud of her brother)
  - ∗ [Christine] [**en**]$_A$ [est$_F$ fière$_C$]$_S$. (Christine is proud of him)
- *In spoken French, where people are referred to, it is quite likely that a stressed pronoun 'de' will be used instead.*
  - ∗ [Mémère]$_A$ [s'occupe]$_P$ [d'$_R$ eux$_C$]$_A$. (Grandma is looking after them)
  - ∗ [Chrtistine]$_A$ [est$_F$ fière$_C$]$_S$ [de$_R$ lui$_C$]$_A$. (Christine is proud of him)
- *An exception to the generalization that 'en' can replace phrases introduced by 'de' is those verbs, such as 'permettre', 'défendre' and 'interdire', with a construction using '... à quelqu'un de faire quelque chose' ('... to someone to do something'). The infinitive clause is treated as a direct object.*
  - ∗ [Elle]$_A$ [a$_F$ permis$_C$]$_P$ [à Jean-Marie]$_A$ [[d'$_F$ emprunter$_C$]$_P$ [sa$_E$ voiture$_C$]$_A$]$_{A,REMOTE-A(''Jean-Marie'')}$. (She allowed Jean-Marie to borrow her car)
  - ∗ [Elle]$_A$ [**le**]$_A$ [lui]$_A$ [a$_F$ permis$_C$]$_P$. (She allowed him to do it)
  - ∗ [Il]$_A$ [a$_F$ défendu$_C$]$_P$ [à$_F$ Suzanne$_C$]$_P$ [[de$_F$ sortir$_C$]$_P$ [ce$_E$ soir$_C$]$_A$]$_{A,REMOTE-A(''Suzanne'')}$. (He forbade Suzanne to go out this evening)
  - ∗ [Il]$_A$ [**le**]$_A$ [lui]$_A$ [a$_F$ défendu$_C$]$_P$. (He forbade her to do it)

3.1.43 Use of 'en' with numerals and quantifiers

– *It is important to use 'en' when numerals ('deux', 'trois', 'une dizaine', 'une douzaine' etc.) and quantifiers ('beaucoup', 'trop', 'la plupart', etc.) are on their own after a verb. In English a pronoun is normally absent in these cases, but in French 'en' is obligatory.* In this case, 'en' is annotated as the Center of a discontinuous Participant.

  * [J']$_A$ [ai$_F$ acheté$_C$]$_P$ [[[une$_E$ douzaine$_C$]$_C$ de$_R$]$_E$ [roses]$_C$]$_A$. (I bought a dozen roses)
  * [J']$_A$ [[**en**]$_C$]$_{A-}$ [ai$_F$ acheté$_C$]$_P$ [[une$_E$ douzaine$_C$]$_E$]$_{-A(CONT.)}$. (I bought a dozen)
  * [Elle]$_A$ [a$_F$ cueilli$_C$]$_P$ [plusieurs$_E$ tomates$_C$]$_A$. (She picked several tomatoes)
  * [Elle]$_A$ [[**en**]$_C$]$_{A-}$ [a$_F$ cueilli$_C$]$_P$ [[plusieurs]$_E$]$_{-A(CONT.)}$. (She picked several)

3.1.44 'y' and 'en' as an integral part of the verb structure

  * *There is a small set of verbs in French which involve 'y' or 'en' as an integral part of their structure without any detectable specific meaning.* In these cases, they are part of the State/Process. Sometimes they are annotated as F and sometimes the whole State/Process is not internally analyzed.
    · [il **y** a]$_S$ (There is/are)
    · [s'$_F$ **en**$_F$ aller$_C$]$_P$ (go away)
    · [**en**$_F$ imposer$_C$]$_P$ (impress)

3.1.45 Position of 'y' and 'en' with negative infinitive

Doesn't change the annotation

3.1.46 'y' and 'en' in French where the English translation has no preposition

  * *The use of 'y' and 'en' is determined by the presence of 'à' or 'de' in the French verb phrase, and should not be mislead by an English equivalent which does not have a preposition.*
    · to use something BUT se servir **de** qch: [Je]$_A$ [m']$_{P-}$ [**en**]$_A$ [sers]$_{-P(CONT.)}$ [souvent]$_D$ (I often use it)

3.1.47 Order of unstressed object pronouns when more than one is present

  * *When two (and more rarely three) unstressed object pronouns appear before a verb, their order usually follows this pattern: First: 'me', 'te', 'se', 'nous', 'vous'; Second: 'le', 'la', 'les'; Third: 'lui', 'leur'; Fourth: 'y'; Fith: 'en'.*
    · [Il]$_A$ [**me**]$_A$ [**l'**]$_A$ [a$_F$ dit$_C$.]$_P$ (He told me about it)
    · [Suzanne]$_A$ [**m'**]$_A$ [**en**]$_A$ [a$_F$ parlé$_C$]$_P$. (Suzanne spoke to me about it)
    · [Nous]$_A$ [**y**]$_A$ [[**en**]$_C$]$_{A-}$ [avons trouvé]$_A$ [[plusieurs]$_E$]$_{-A(CONT.)}$ (We found several of them there)

* *More rarely unstressed pronouns may occur in combination where the first is a benefactive (i.e. indicates that the action described by the verb is 'for the benefit' of the person in question), although this benefactive use is regarded as colloquial.*
  · [Tu]$_A$ [vas$_E$]$_{P-}$ [**me**]$_A$ [**le**]$_A$ [**lui**]$_A$ [écrire]$_{-P(CONT.)}$, et plus vite que ça! (You will write it to her for me, and be quick about it!)
* *In formal French the benefactive interpretation would be expressed through other means.*
  · [Tu]$_A$ [[vas$_E$]$_{E-}$]$_{P-}$ [me]$_A$ [[[faire]$_F$ [le$_E$ plaisir$_C$]$_C$]$_C$]$_{-E(CONT.)}$]$_{-P(CONT.)}$ [[[de$_F$]]$_{C-}$]$_{P-}$ [le]$_A$ [lui]$_A$ [[écrire$_C$]$_{-C(CONT.)}$]$_{-P(CONT.)}$.

3.1.48 Restrictions on possible combinations

* *No pronoun from the first group ('me', 'te', 'se', 'nous', 'vous') can normally appear in combination with a pronoun from the third group ('lui', 'leur').*
  · [Je]$_A$ [vous]$_A$ [présenterai]$_P$ [Eve-Marie]$_A$. (I will introduce Eve-Marie to you)
  · [Je]$_A$ [vous]$_A$ [la]$_A$ [présenterai]$_P$. (I will introduce her to you)
  · [Je]$_A$ [vous]$_A$ [présenterai]$_P$ [à Eve-Marie]$_A$. (I will introduce you to Eve-Marie)
  · [Je]$_A$ [vous]$_A$ [présenterai]$_P$ [à$_R$ **elle**$_C$]$_A$. (I will introduce you to her)
* *Nor can any pronouns from within the same group appear together.* It is the case even if one of the pronouns doesn't denote a Participant but it is part of the Process.
  · [Richard]$_A$ [[s']$_{C-}$ [est]$_F$ [joint]$_{-C(CONT.)}$]$_P$ [à$_R$ notre$_E$ petit$_E$ groupe$_C$]$_A$. (Richard joined our little group)
  · [Richard]$_A$ [[s']$_{C-}$ [est]$_F$ [joint]$_{-C(CONT.)}$]$_P$ [à$_R$ **nous**$_C$]$_A$.

3.1.49 Order of multiple pronouns with imperatives

* *When two pronouns follow the verb in affirmative imperatives the ordering of pronouns is slightly different in that pronouns from the first column ('le', 'la', 'les'). The other orders remain the same. Pronouns after imperatives are linked to the verb that governs them by hyphens.*
  · [[Donne]$_P$ - [le]$_A$ - [moi]$_A$]$_{H,IMPLICIT-A}$ (Give it to me)
* *The pronouns 'me', 'te' become 'moi', 'toi' in affirmative imperatives when they are the last pronoun in the sequence, but become 'm", 't", before 'y' or 'en'.*
  · [[Donne]$_P$ - [le]$_A$ - [moi]$_A$]$_{H,IMPLICIT-A}$.(Give it to me)
  · [[Donne]$_P$ - [m']$_A$ [en]$_A$]$_{H,IMPLICIT-A}$. (Give me some)
* *In these cases in informal spoken French it is not unusual to hear 'moi', 'toi' retained with a linking '-z-'.* The 'z' is added for phonological reasons and it is annotated as F.
  · [[Parlez]$_P$ - [moi]$_A$ - [z]$_F$ - [en]$_A$]$_{H,IMPLICIT-A}$ (Talk to me about it)
  · [[Accroche]$_P$ - [toi]$_A$ - [z]$_F$ - [y]$_A$]$_{H,IMPLICIT-A}$ (Hang on to it)
* *In negative imperatives pronouns precede the verb, and the order of multiple pronouns is as indicated above.*
  · [Ne]$_{D-}$ [me]$_A$ [le]$_A$ [donne]$_P$ [pas]$_{-D(CONT.)}$ (Don't give it to me)

· [Ne]$_{D-}$ [me]$_A$ [les]$_A$ [nettoyez]$_P$ [jamais]$_{-D(CONT.)}$! (Don't you ever clean them for me!)

3.1.50 Position of one object pronoun with 'faire' etc. + infinitive

When the verbs 'faire', 'laisser', 'envoyer', and perception verbs like 'voir, 'entendre', 'regarder', 'sentir' are followed by an infinitive , there are different ways of placing two pronouns depending on which verb is being used.

* *If the verb is 'faire', both the pronouns come before 'faire' (or 'avoir' if 'faire' is in a compound tense).* In the examples below, the annotation corresponds to the case where there are two Scenes (two Processes) but the context can also prescribes a single Scene. In that case 'faire' will be annotated as E inside the Process.
  · [Je]$_A$ [[**les**]$_A$]$_{A-}$ [**lui**]$_A$ [ferai]$_P$ [[manger]$_P$]$_{-A(CONT.),REMOTE-A(''lui'')}$. (I shall make him eat them)
  · [Je]$_A$ [[**les**]$_A$]$_{A-}$ [**lui**]$_A$ [ai$_F$ fait$_C$]$_P$ [[manger]$_P$]$_{-A(CONT.),REMOTE-A(''lui'')}$. (I made him eat them)
* *If the verb is 'laisser', 'envoyer' or one of the perception verbs, there are the two possibilities illustrated below.* For the perception verbs (third example below), the construction is different and we don't have a remote-Participant.
  · [Tu]$_A$ [[**les**]$_A$]$_{A-}$ [**lui**]$_A$ [laisses]$_P$ [[lire]$_P$]$_{-A(CONT.),REMOTE-A(''lui'')}$? (Will you let her read them?)
  · [Tu]$_A$ [**la**]$_A$ [laisses]$_P$ [[**les**]$_A$ [lire]$_P$]$_{A,REMORE-A(''la'')}$? (Will you let her read them?)
  · [Je]$_A$ [[**le**]$_A$ [**leur**]$_A$]$_{A-}$ [ai$_F$ entendu$_C$]$_P$ [[dire]$_P$]$_{-A(CONT.)}$. (I heard them say so)
  · [Je]$_A$ [[**les**]$_A$]$_{A-}$ [ai$_F$ entendu$_C$]$_P$ [[**le**]$_A$ [dire]$_P$]$_{A(CONT.)}$. (I heard them say so)
  · [Elle]$_A$ [**me**]$_A$ [[**l'**]$_A$]$_{A-}$ [envoya]$_P$ [[chercher]$_P$]$_{-A(CONT.),REMOTE-A(''m'')}$. (She sent me to fetch it or She had it fetched for me)
  · [Elle]$_A$ [**m'**]$_A$ [envoya]$_P$ [**le**$_A$ chercher$_P$]$_{A,REMOTE-A(''m'')}$. (She sent me to fetch it)

3.1.51 Position of object pronouns with 'devoir', 'pouvoir' + infinitives

* *After 'devoir', 'pouvoir' (modal verbs) followed by an infinitive , object pronouns before the infinitive.*
  · [Je]$_A$ [dois$_E$]$_{P-}$ [**vous**]$_A$ [**l'**]$_A$ [avouer$_C$]$_{-P(CONT.)}$ [tout de suite]$_D$]$_A$. (I must admit it to you immediately)
  · [[Ils]$_A$ [peuvent$_E$]$_{P-}$ [**nous**]$_A$ [**le**]$_A$ [signaler$_C$]$_{-P(CONT.)}$]$_H$ [dès]$_L$ [sont$_A$ arrivé$_P$]$_A$. (They can tell us about it as soon as he arrives)

3.1.52 Object pronouns in coordinated clauses

* *When clauses containing unstressed object pronouns are coordinated by 'et' or 'ou', it is normally necessary to repeat the pronoun in the second clause.* The

two apparitions of the pronoun can appear in two different Scenes (third example below). Sometimes in English the repetition is not always necessary and then a remote Participant is added there. The two apparitions can also appear in the same Scene (first two examples below). In this case the second apparition doesn't add a novel Participant and it is annotated as F.

- [Cela]$_A$ [**m'**]$_A$ [[agace]$_C$ [et]$_N$]$_{P-}$ [**m'**]$_F$ [[ennuie]$_C$]$_{-P(CONT.)}$. (That irritates and bores me)
- [Je]$_A$ [**les**]$_A$ [[ai$_F$ préconisés$_C$]$_C$ [et]$_N$]$_{P-}$ [**les**]$_F$ [[[ai$_F$ proposés$_C$]$_C$]$_{P(CONT.)}$. (I advocated and proposed them)
- [[Elle]$_A$ [**l'**]$_A$ [a$_F$ aidé$_C$]$_P$]$_H$ [et]$_L$ [[**lui**]$_A$ [a$_F$ donné$_C$]$_P$ [[de l']$_E$ [argent]$_C$]$_A$]$_{H,REMOTE-(''elle'')}$. (She helped him and gave him money)

∗ *However ,where the two pronouns are identical in form and attached to an auxiliary ('avoir' or 'être'), the second pronoun and auxillliary may be deleted together.*

- [Je]$_A$ [les]$_A$ [ai$_F$ [[préconisés]$_C$ [et]$_N$ [proposés]$_C$]$_C$]$_P$. (I advocated and proposed them)

3.2 Stressed pronouns

3.2.1 Use of stressed pronouns for emphasis

To highlight or emphasize a pronoun a common strategy is to 'double up' by the addition of a stressed pronoun. This can be done with:

∗ **Subject pronouns** The stressed pronouns added for emphasize are analyzed as F.

- [[**Toi**]$_F$ [**tu**]$_A$ [le]$_A$ [crois]$_P$ [peut-être]$_G$]$_H$ [mais]$_L$ [[**lui**]$_F$, [**il**]$_A$ [ne]$_{D-}$ [le]$_A$ [croit]$_P$ [pas]$_{-D(CONT.)}$]$_H$. (YOU might believe that, but HE doesn't)

The stressed subject pronoun copy may actually appear at the end of the clause with the same effect.

- [[**Tu**]$_A$ [le]$_A$ [crois]$_P$ [peut-être]$_G$, [**toi**]$_F$]$_H$, [mais]$_L$ [[**il**]$_A$ [ne]$_{D-}$ [le]$_A$ [croit]$_P$ [pas]$_{-D(CONT.)}$, [**lui**]$_F$]$_H$. (YOU might believe that, but HE doesn't)

When third person subject pronouns are highlighted or emphasized, the stressed pronoun alone, may, on occasions, be used. In this case it is marked as A since it is not a repetition any more.

- [**Lui**]$_A$ [pourrait$_E$]$_{P-}$ [le]$_A$ [faire$_C$]$_{-P(CONT.)}$. (HE could do it)

Only stressed pronouns and not unstressed subject pronouns can be separated from the tense-marked verbs by adverbs or parenthetical expressions.

- [**Lui**]$_A$, [souvent]$_D$, [critique]$_P$ [son$_E$ professeur$_C$]$_A$. (He often criticizes his profesor)

∗ **Object pronouns** *A common strategy is to add a second, stressed pronoun at either the beginning or the end of the clause.* The stressed pronoun is analyzed as F.

- [**Lui**]$_F$, [on]$_A$ [[**le**]$_A$]$_{A-}$ [sait]$_P$ [[innocent]$_S$]$_{-A(CONT.)}$. (HE is known to be innocent)

· [[**Elle**]$_A$ [[se tient]$_F$ [[[à]$_R$ [l'$_E$ écart$_C$]$_C$]$_C$]$_P$, [**elle**]$_F$]$_{H,IMPLICIT-A}$. (SHE is keeping well out of it)

When the unstressed pronoun is an indirect object, the stressed pronoun being used to highlight it is preceded by 'à' only when it is at the end of the clause. In this case à is part of the Function.

· [**Nous**]$_F$, [elle]$_A$ [**nous**]$_A$ [a$_F$]$_{P-}$ [souvent]$_D$ [écrit$_C$]$_{-P(CONT.)}$. (She has often written to US)

· [Elle]$_A$ [**nous**]$_A$ [a$_F$]$_{P-}$ [souvent]$_D$ [écrit$_C$]$_{-P(CONT.)}$, [**à nous**]$_F$.(She has often written to US)

3.2.2 Stressed pronouns standing alone

∗ *Stressed pronouns are normally used where the pronoun stands alone, or is in a phrase without a verb.* In this case the pronoun is annotated as A and we add the necessary remote categories.

· [[Qui]$_A$ [est]$_S$ [là]$_A$]$_H$? [[**Moi**]$_A$]$_{H,REMOTE-S(''est''),RENOTE-A(''là'')}$.

3.2.3 Sressed pronouns used as the object of a preposition

∗ *Stressed pronouns are the forms to use after all prepositions other than 'à'.* Usually in these constructions the preposition and the stressed pronoun form a Participant which is internally analyzed as R and C.

· [Je]$_A$ [suis$_F$ venu$_C$]$_P$ [malgré$_R$ **lui**$_C$]$_A$. (I came in spite of him)

· [Elle]$_A$ [[s']$_{C-}$ [est]$_F$ [assise]$_{-C(CONT.)}$]$_P$ [[à côté de]$_R$ [**moi**]$_C$]$_A$. She sat down next to me)

∗ *Phrases introduced by 'de' are normally pronominalized using 'en', but, when humans are referred to, 'de' followed by a stressed pronoun is more usual.*

· [Ma$_E$ mère$_C$]$_A$ [avait$_F$ parlé$_C$]$_P$ [de$_R$ lui$_C$]$_A$. (My mother had spoken of him)

3.2.4 Stressed pronouns with 'même', 'aussi', 'seul', 'autres', 'tous' and numerals

∗ *Stressed pronouns are used in conjunction with the forms: 'même, 'aussi', 'seul', 'autres', 'tous' and numerals ('deux, 'trois', etc.)* The annotation here depends on the context as we can see in the following examples.

· [Les$_E$ enfants$_C$]$_A$ [avaient$_F$ préparé$_C$]$_P$ [la$_E$ salade$_C$]$_A$ [**eux-mêmes**]$_D$. (The children had prepared the salad themselves)

· [[**Lui**]$_C$ [**aussi**]$_E$]$_A$ [aura]$_P$ [des$_E$ problèmes$_C$]$_A$. (He too will have problems)

· [[**Eux**]$_C$ [**seuls**]$_E$]$_A$ [pourraient$_E$]$_{P-}$ [la]$_A$ [convaincre$_C$]$_{-P(CONT.)}$. (They alone could persuade her)

· [[**Nous**]$_C$ [**autres**]$_F$ [Européens]$_E$]$_A$, [on]$_F$ [se$_E$ comprend$_C$]$_P$. (We Europeans understand one another)

· [[**Vous**]$_C$ [**tous**]$_E$]$_A$ [irez$_E$ prendre$_C$]$_P$ [une$_E$ douche$_C$]$_A$. (You will all go and have a shower)

∗ *Some adjectives, like 'fier' ('proud'), 'fidèle' ('faithful'), 'sûr' ('sure') are followed by a stressed pronoun alone, and not by 'moi-même', 'lui-même', 'elles-mêmes', etc., when used reflexively.* In this case the stressed pronouns are annotated as A.

- [Elle]$_A$ [est$_F$ [très$_E$ fière$_C$]$_C$]$_S$ [d'$_R$ **elle**$_C$]$_A$. (She is very proud of herself)
- [Je]$_A$ [ne]$_{D-}$ [suis$_F$]$_{S-}$ [plus]$_{-D(CONT.)}$ [sûr$_C$]$_{-S(CONT.)}$ [de$_R$ **moi**$_C$]$_A$. (I am not sure of myself any more)

3.2.5 Coordination of stressed pronouns

* *Only stressed pronouns can be coordinated with each other or with other nouns by 'et', 'ou'.* The stressed pronouns are part of a Participant and the coordination is made by N.
  - [Marianne$_C$ et$_N$ **moi**$_C$]$_A$ [en]$_A$ [avons$_F$ discuté$_C$]$_P$ [à$_R$ fond$_C$]$_D$. (Marianne and I have discussed it in depth)
  - [J']$_A$ [ai$_F$ dit$_C$]$_P$ [la$_E$ même$_E$ chose$_C$]$_A$ [[à$_R$ vous$_C$]$_C$ [et]$_N$ [à$_R$ **lui**$_C$]$_C$]$_A$. (I said the same thing to you and him)
* *A frequent way of expressing the notion 'somebody and I did X' is 'avec quelqu'un nous avons fait X'.* 'avec quelqu'un' ('with somebody') is a kind of explanation, clarification of 'nous' (we). Therefore it is analyzed as E inside of the Participant.
  - [[Avec$_R$ Christine$_C$]$_E$ [nous]$_C$]$_A$ [avons$_F$ ouvert$_C$]$_P$ [les$_E$ colis$_C$]$_A$. (Christine and I opened the parcels)

3.2.6 Stressed pronouns with 'ne ... que' and 'ni ... ni ... ne'

* *Stressed pronouns are used with the expressions 'ni ... que' and 'ni ... ni ... ne'.*
  - [Ce]$_A$ [n']$_{D-}$ [est]$_S$ [que]$_{-D(CONT.)}$ [**lui**]$_A$. (It's only him)
  - [[Ni$_E$ **moi**$_C$]$_C$ [ni$_E$ **lui**$_C$]$_C$]$_A$ [ne]$_D$ [saurons]$_P$ [que$_A$ faire$_P$]$_{A,REMOTE(''ni\ moi\ ni\ lui'')}$. (Neither I nor he will know what to do)

3.2.7 Use of 'soi'

* *'soi' is a non-specific stressed pronoun which is normally used either when it refers to non-specific persons or things, or indefinite phrases like 'on', 'chacun', 'nul', 'aucun', 'personne', 'tout le monde'. It tends to be used after prepositions, with '-même', and after 'ne ... que'.* It can be annotated as A (first example below) or D (second example below) according to the context.
  - [On]$_A$ [pense]$_P$ [à$_R$ toi$_C$]$_A$. (People think of themselves)
  - [On]$_A$ [[doit]$_E$ [[prendre]$_F$ [la$_E$ décision$_C$]$_C$]$_C$]$_P$ [soi-même]$_D$. (One must take the decision oneself)

3.3 Demonstratives pronouns

* *Demonstrative pronouns are used where English uses 'the one'. They agree in gender with the noun they refer to.* The pronoun is marked as F and corresponding remote Participant and Center are added like in the following examples:
  - [[Sur$_R$ ce$_E$ mur$_C$]$_A$ [nous]$_A$ [voyons]$_P$ [deux$_E$ **portraits**v$_C$]$_A$]$_H$. [[[**Celui**]$_F$ [[qui]$_R$ [est$_F$ à$_C$]$_S$ [droite]$_A$]$_{E,REMOTE-A(''portrait'')}$]$_{A,REMOTE-C(''portrait'')}$ [représente]$_P$ [[le]$_E$ [premier]$_E$ [propriétaire]$_C$ [de$_R$ la$_E$ maison$_C$]$_E$]$_A$]$_H$. (On this wall we see two portraits. The one on the right is of the first owner of the house)

· [[Nous]$_A$ [avons$_F$ acheté$_C$]$_P$ [trois$_E$ **propriétés**$_C$]$_A$ [en$_R$ Dordogne$_C$]$_A$]$_H$
[[[**Celle**]$_F$ [[qui]$_R$ [[est]$_F$ [près de]$_C$]$_S$
[Bergerac]$_A$]$_{E,REMOTE-A(''propriétés'')}$]$_{A,REMOTE-C(''propriétés'')}$ [sera$_F$ revendue$_C$]$_P$
[la$_E$ première$_C$]$_D$]$_H$. (We have bought three properties in the Dordogne. The one near Bergerac will be resold first)

∗ *Demonstrative pronouns are used particularly frequently to 'head' relative clauses.* Here the pronoun is still annotated as F and implicit Participant and Center are added.

· [[**Ceux**]$_F$ [[qui]$_R$ [m']$_A$ [écoutent]$_P$ [ce$_E$ soir$_C$]$_D$]$_{E,IMPLICIT-A}$]$_{A,IMPLICIT-C}$
[sauront]$_P$
[que]$_F$ [[je]$_A$ [n']$_{A-}$ [ai]$_{P-}$ [rien]$_{-A(CONT.)}$ [à cacher]$_{-P(CONT.)}$. (Those who are listening to me tonight will know that I have nothing to hide)

3.3.1 Demonstrative pronouns with "-ci" and "-là"

∗ *The forms 'celui-ci'/'celle-ci'/'ceux-ci'/'celles-ci' and 'celui-là'/'celle-là'/'ceux-là'/'celles-là' translate English 'this one'/'these ones' amd 'that one/'those ones' respectively. These distinctions are mainly used in formal French.* In this case the whole form is annotated as A.

· [Des deux tissus qui sont sur le comptoir, là-bas]$_A$, [il]$_F$ [est évident]$_S$ [que]$_F$ [[celui-ci]]$_A$ [est$_F$ plus$_E$ cher$_C$]$_S$ [que]$_F$ [**celui-là**]$_A$]$_A$. (Of the two pieces of material on the counter there, it's obvious that this one is dearer than that one)

· [Pour moi]$_G$ [tous les diamants se ressemblent]$_H$.
[Mais]$_L$ [[**ceux-ci**]$_A$ [coûtent deux fois plus cher]$_P$ [que]$_F$ [**ceux-là**]$_A$]$_H$. (To me diamonds all look the same. But these ones here cost twice as much as those over there)

3.4 Possessive pronouns

∗ *Possessive pronouns agree in gender and number with a noun mentioned or omplied elsewhere in the discourse.* They can be part of a Participant when they indicate an object (first example below) or of a State when they indicate a possession state (second example below). In the first case, full information can be recovered by reference.

· [[Voici]$_{S+A}$ [ta$_E$ clef$_C$]$_A$]$_H$. [[Rends]$_P$ [moi]$_A$ [**la**$_E$ **mienne**$_C$]$_A$]$_{H,IMPLICIT-A}$.
(Here is your key. Give me back mine)

· [Il]$_A$ [portait]$_P$ [[un$_E$ chapeau$_C$] [[qui]$_R$ [n']$_{D-}$ [était$_F$]$_{S-}$ [pas]$_{-D(CONT.)}$
[[**le**$_E$ **sien**$_C$]$_C$]$_{-S(CONT)}$. (He was wearing a hat which wasn't his)

· *'les siens' also has the special meaning of 'one's family' and 'les nôtres' can mean 'with us'.* In these cases also the possessive pronouns can be part of a Participant (first example below) or of a State (second example below).

· [On]$_A$ [travaille]$_P$ [pour$_R$ les$_E$ siens$_C$]. (People work for their families)

· [Elle]$_A$ [n']$_{D-}$ [était$_F$]$_{S-}$ [pas]$_{-D(CONT.)}$ [des$_{R+E}$ nôtres$_C$]$_{-S(CONT.)}$ (She wasn't with us)

4 Adjectives

4.1 Adjectives modifying the noun

Most French adjectives follow the noun. But there is a small set which normally precede, and another set which regularly appear before and after the noun, often with a change of meaning. They are annotated as the Elaborators of the noun.

4.1.1 Adjectives which normally follow the noun

Doesn't change the annotation.

4.1.2 Adjectives which normally occur before the noun

Doesn't change the annotation.

4.1.3 Adjectives which regularly occur before and after the noun, but with a change of meaning

Doesn't change the annotation.

4.1.4 Adjectives which normally follow the noun but can also precede, without significant changes in meaning

Doesn't change the annotation.

4.1.5 Combinations of adjectives

- **Multiple adjectives before the noun.** *Cardinal numbers are usually the first in any combination of adjectives preceding a noun, but after that the order of adjectives is the same as it is in English.* If from a semantic point of view there is no order of preference between the adjectives , they are all analyzed as E in a flat structure.
- [les]$_E$ [**deux**]$_E$ [premières]$_E$ [semaines]$_C$ (the first two weeks)
- [les]$_E$ [**quatre**]$_E$ [dernières]$_E$ [jolies]$_E$ [phrases]$_C$ (the last four pretty sentences)
- [ce]$_E$ [pauvre]$_E$ [cher]$_E$ [homme]$_C$ (that poor dear man)

  To avoid having a long string of adjectives before the noun, one or more may be combined with 'et', and/or moved after the noun. In this case the Elaborator contains a coordination of two Centers.
- [un]$_E$ [[jeune]$_C$ [et]$_N$ [joli]$_C$]$_E$ [petit]$_E$ [chat]$_C$ (a young pretty little cat)
- [un]$_E$ [petit]$_E$ [chat]$_C$ [[jeune]$_C$ [et]$_N$ [joli]$_C$]$_E$ (a young pretty little cat)
- **Multiple adjectives after the noun.** *The order of adjectives after the noun is the mirror image of English.* As before, if from a semantic point of view there is no order of preference between the adjectives, they are all analyzed as E in a flat structure. If not, the Center is internally analyzed as C and E.
- [la]$_E$ [[guerre]$_C$ [civile]$_E$]$_C$ [espagnole]$_E$ (the Spanish Civil War)
- [des]$_E$ [lignes]$_C$ [parallèles]$_E$ [invisibles]$_E$ (invisible parallel lines)

· [des]$_E$ [[milieux]$_C$ [politiques]$_E$]$_C$ [américains]$_E$ (American political

4.1.6 Adjectives modified by adverbs and prepositional phrases

· *When adjectives which normally preceed the noun are modified by adverbs or prepositionsl phrases, they may appear after the noun. The longer the modifying expression, the more likely this is.* In this case the Elaborator has an internal structure with its own Elaborator.
· [un]$_E$ [bel]$_E$ [homme]$_C$ (a handsome man)
· [un]$_E$ [[très]$_E$ [bel]$_C$]$_E$ [homme]$_C$ (a very handsome man)
· [un]$_E$ [homme]$_C$ [[vraiment]$_E$ [beau]$_C$]$_E$ (a really handsome man)
· *This also applies to superlatives.*
· [un]$_E$ [bref]$_E$ [aperçu]$_C$ (a brief outline)
· [le]$_E$ [[plus]$_E$ [bref]$_C$]$_E$ [aperçu]$_C$ (the briefest outline)
· [un]$_E$ [aperçu]$_C$ [[des]$_{R+E}$ [plus]$_E$ [brefs]$_C$]$_E$ (the briefest of outlines)

4.1.7 Adjectives preceded by 'de'

· *When nouns are quantified by numbers, following adjectives may directly follow the noun or they may be preced by 'de'. The use with 'de' is found in informal French. For a number of speakers there is a difference in meaning between the two. When 'de' is present, the implication is that there were more of the things described by the noun than the number indicates. The contrast in English is captured by whether the adjective precedes or follows the noun.* 'de' is analyzed as R inside the Elaborator.
· [Il y avait]$_S$ [[dix]$_E$ [voyageurs]$_C$ [[de]$_R$ [[blessés]$_P$]$_{C,REMOTE-A(''voyageurs'',IMPLICIT-A)}$]$_E$ (There were ten travellers injured: implies that there were more than ten involved, but the rest weren't injured)
· [Il y avait]$_S$ [[dix]$_E$ [voyageurs]$_C$ [[blessés]$_P$]$_{E,REMOTE-A(''voyageurs'',IMPLICIT-A}$]$_A$. (There were ten injured travellers: has no implication about whether there were other, non-injured travellers)
· [J']$_A$ [ai]$_P$ [[une]$_E$ [heure]$_C$ [de$_R$ libre$_C$]$_E$]$_A$ [aujourd'hui]$_D$. (I have an hour free today: implies that all the other hours in my day are busy)
· [J']$_A$ [ai]$_P$ [[une]$_E$ [heure]$_C$ [libre]$_E$]$_A$ [aujourd'hui]$_D$. (I have a free hour today: has no implication about whether my other hours are busy or not)

4.2 Adjectives which follow verbs or verbal expressions

· *Some verbs and verbal expressions can be followed by adjectives. With some verbs/verbal expressions, adjectives bust agree in number and gender with the subject.* In this case the adjective is usually part of the Process/State.
· [Elle]$_A$ [[est]$_F$ [aussi]$_E$ [**belle**]$_C$]$_S$ [que]$_F$ [sa$_E$ soeur$_C$]$_A$. (She is as pretty as her sister)
· [Les$_E$ enfants$_C$]$_A$ [[semblent]$_E$ [**énervés**]$_C$]$_P$ [par$_R$ ce$_E$ temps$_C$]$_A$. (The children seem over-excited by this weather)
· [[[[Tous]$_E$ [les]$_E$ [membres]$_C$ [de]$_R$]$_E$ [[la]$_E$ [famille]$_C$]$_C$]$_A$ [[passent]$_E$ [pour]$_R$ [**pauvres**]$_C$]$_P$]$_{H,IMPLICIT-A}$. (All the members of the family are thought to be poor)

- *With some verbs, mainly those which express an opinion, adjectives must agree in number and gender with the direct object.* Here the adectives can have different role in the Scene, which will lead to a different annotation, as we can see in the following examples.
- [Je]$_A$ [croyais]$_P$ [[la$_E$ bataille$_C$]$_A$ [**perdue**]$_P$ [d'$_R$ avance$_C$]$_D$]$_{A,IMPLICIT-A}$. (I thought the battle was already lost)
- [Je]$_A$ [[les]$_A$]$_{A-}$ [devine]$_P$ [[un peu]$_D$ [**fâchés**]$_P$ [par$_E$ cette$_E$ histoire$_C$]$_A$]$_{-A(CONT.)}$. (I guess they are a little bit annoyed by this affair)
- [[Vous]$_A$ [les]$_A$ [voyez] [[toujours]$_D$ [**petits**]$_S$]$_{A,REMOTE-A(''les'')}$; [mais]$_L$ [ils ont grandi]$_H$. (You see them as if they were still little; but they've grown up)
- [Les$_E$ enfants$_C$]$_A$ [traitaient]$_P$ [les$_A$ petits$_E$ voisins$_C$]$_A$ [de$_R$ **lâches**$_C$]$_A$. (The children were calling the little neighbours cowards)

4.3 Adjectives with complements

- *Some adjectives can be followed by nouns, pronouns or infinitives, with a linking 'de' or 'à'.* The adjectives are usually here part of the State/Process. The annotation of the following expression can change along the cases.
- [Ils]$_A$ [[étaient]$_F$ [**blancs**]$_C$ [**de**$_R$ colère$_C$]$_E$]$_S$. (They were white with anger)
- [[Ces]$_E$ [jeunes]$_E$ [femmes]$_C$]$_A$ [sont$_F$ très$_E$ **sûres**$_C$]$_S$ [**d'**$_R$ elles$_C$]$_A$. (These young women are very self-confident)
- [Je]$_A$ [suis]$_F$ [très$_E$ **heureux**$_C$]$_C$]$_S$ [[**de**]$_F$ [faire]$_F$ [votre$_E$ connaissance$_C$]$_C$]]]$_A$]. (I am very pleased to meet you)
- [Ce$_E$ problème$_C$]$_A$ [[est]$_F$ [**facile**]$_E$ [**à**]$_F$ [résoudre]$_C$]$_{P,IMPLICIT-A}$. (This problem is easy to solve)

4.4 Indefinite and negative noun phrases with adjective complements

- *Indefinite noun phrases like 'quelque chose' ('something'), 'quelqu'un' ('someone'), 'ceci' ('this'), 'cela' ('that'), 'quoi?' ('what?'), and negative expressions like 'rien' ('nothing'), 'personne' ('no-one'), can be followed by adjectives linked by 'de'. The adjective is invariable in this construction.* 'de' is analyzed here as F.
- [quelque chose]$_C$ [de]$_F$ [**bon**]$_E$ (something good)
- [quelqu'un]$_C$ [d']$_F$ [**intéressant**]$_E$ (someone interesting)
- [rien]$_A$ [de$_F$ plus$_E$ **facile**$_C$]$_S$ (nothing easier)
- [Quoi]$_A$ [de$_F$ **neuf**$_C$]$_S$? (What's new?)

4.4.1 Adjectives used as nouns

- *In French it is almost always possible to convert an adjective into a noun simply by placing an article in front of it.* According to the context, the adjectives in this case are annotated as E (first two examples below) or as C (last three examples below). In the former case, an implicit/remote Center is added.

- [Je]$_A$ [ne]$_{D-}$ [veux]$_P$ [que]$_{-D(CONT.)}$ [[**les**]$_E$ [**mûrs**]$_E$]$_{A,IMPLICIT-C}$. (I only want the ripe ones)
- [Nous]$_A$ [prendrons]$_P$ [[**les**]$_E$ [**grands**]$_E$]$_{A,IMPLICIT-A}$. (We'll take the big ones)
- [[**Les**]$_E$ [**gentils**]$_C$]$_A$ [gagnent]$_P$ [à$_R$ la$_E$ fin$_C$]$_D$. (The goodies win in the end)
- [J']$_A$ [adore]$_P$ [**le**$_E$ **rustique**$_C$]$_A$. (I love rural styles)
- [Elle]$_A$ [aurait$_F$ préféré$_C$]$_P$ [[**du**]$_{R+E}$ [**moderne**]$_C$]$_A$. (She would have preferred something up-to-date)
- [[**Le**]$_E$ [**rouge**]$_C$]$_A$ [te]$_A$ [va]$_P$ [bien]$_D$. (Red suits you)

4.4.2 Adjectives used as adverbs

- *A limited number of adjectives can also be used as adverbs . In this case they are invariable.* They are annotated here usually as D.
- [Ils]$_A$ [parlent]$_P$ [bas]$_D$. (They're talking very quietly)
- [Ils]$_A$ [marchent]$_P$ [droit]$_D$. (They are walking straight)
- [Ils]$_A$ [travaillent]$_P$ [dur]$_D$. (They work hard)

4.5 Masculine and feminine forms of adjectives

Doesn't change the annotation.

4.6 Plural forms of adjectives

Doesn't change the annotation

4.7 Adjective agreement with nouns

Doesn't change the annotation

4.8 Invariable adjectives

Doesn't change the annotation

4.9 Compound adjectives

4.9.1 Adjective-adjective compounds

- *Where adjectives are coordinated, both agree with the noun. Exception: when the first adjective ends in '-i', '-o', only the second part agrees.* When it is possible, the compound adjective is internally analyzed.
- [[Les]$_E$ [enfants]$_C$ [[sourds]$_C$ - [muets]$_C$]$_E$]$_A$ [ont$_F$ fait$_C$]$_P$ [des$_E$ progrès$_C$ exceptionnels$_E$]$_A$. (The deaf-mute children have made exceptional progress)
- [[Ils]$_A$ [dorment]$_P$]$_H$ [[la$_E$ bouche$_C$]$_C$]$_{A,remote-E(''ils'')}$ [[grande]$_E$ - [ouverte]$_C$]$_S$]$_H$. (They sleep with their mouths wide open)

4.9.2 Adverb-adjective compounds

- *Where an adverb and an adjective are combined, the adverb (always the first element) remains invariable and the adjective agrees.*
- [Je]$_A$ [connais]$_P$ [[des]$_E$ [fonctionnaires]$_C$ [haut plaçés]$_E$ [[qui]$_E$ [pourraient$_E$]$_{P-}$ [nous]$_A$ [aider$_C$]$_{-P(CONT.)}$]$_E$]$_A$. (I know some highly placed civil servants who could help us)
- [Voilà]$_{S+A}$ [[les$_E$ signes$_C$]$_C$ [avant-coureurs]$_E$ [d'$_R$ une$_E$ maladie$_C$ grave$_E$]$_E$]$_A$. (There are the early-warning signs of a serious illness)

4.9.3 Colour adjective compound

- *Combination of colour adjectives remain invariable.* Here the combination is usually internally analyzable.
- [des]$_E$ [cheveux]$_C$ [[**châtain**]$_C$ [**clair**]$_E$]$_E$ (light-brown hair)
- [une]$_E$ [veste]$_C$ [[**bleu**]$_C$ [**fonçé**]$_E$]$_E$ (a dark-blue jacket)
- [une]$_E$ [mer]$_C$ [[**vert**]$_C$ - [**bouteille**]$_E$]$_E$ (a bottle-green sea)
- [une]$_E$ [couverture]$_C$ [[**gris**]$_C$ - [**rouge**]$_C$]$_E$ (a red-grey cover)

4.9.4 Compounds involving 'demi-', 'nu-' and 'mi-'

∗ *In combinations involving 'demi-', 'nu-' and 'mi-', 'demi-' and 'nu-' are invariable before the noun, but agree when they follow it.* In this case an inversion of roles between the Center and the Elaborator is possible (last four examples below).
- [une]$_E$ [[**demi**]$_E$ - [heure]$_C$]$_C$ (a half-hour)
- [[une]$_E$ [heure]$_C$]$_C$ [et]$_N$ [**demie**$_E$]$_{C,REMOTE-E(''une'')},REMOTE-C(''heure'')$ (an hour and a half)
- [[**nu**]$_C$ - [tête]$_E$]$_S$ (bareheaded)
- [sortir]$_P$ [[tête]$_C$ [**nue**]$_E$]$_D$ (to go without a hat)
- [[**nu**]$_C$ - [pieds]$_E$]$_S$ (barefoot)
- [sortir]$_P$ [[pieds]$_C$ [**nus**]$_E$]$_D$ (to go out bare-footed)

∗ '-mi' can only occur before the noun and is inavariable. It is annotated as E.
- [à]$_R$ [**mi**]$_E$ - [temps]$_C$ (part-time)
- [la]$_E$ [**mi**]$_E$ - [juin]$_C$]$_C$ (halfway through June)
- [la]$_E$ [[**mi**]$_E$ - [saison]$_C$]$_C$ (middle season: Spring, Automn)
- [la]$_E$ [[**mi**]$_E$ - [journée]$_C$]$_C$ (the middle of the day)
- [**mi**]$_E$ - [clos]$_C$ (half open, half closed)

4.10 Comparative and superlative forms of adjectives

4.10.1 Comparatives

∗ *In English, adjectives can be used to compare one entity with another by adding '-er', or putting 'more' or 'less' in front:'bigger', 'lighter', 'more dangerous', 'less interesting'. In French, the comparative forms of adjectives are created by putting 'plus' ('more') or 'moins' ('less') in front of them. The adjective stays*

in the position it would normally occupy, before or after the noun, and agrees with the noun as usual. 'plus' and 'moins' are annotated as the Elaborator of the adjective. The annotation of the whole expression can change along the cases.

- [Il]$_A$ [désire]$_P$ [[avoir]$_P$ [[une]$_E$ [[**plus**]$_E$ [**grande**]$_C$]$_E$ [voiture]$_C$]$_A$]$_{A,REMOTE-A(''il'')}$. (He wants to have a bigger car)
- [Je]$_A$ [n']$_{D-}$ [ai$_F$]$_{P-}$ [jamais]$_{-D(CONT.)}$ [fait$_C$]$_{-P(CONT.)}$ [[de]$_E$ [traversée]$_C$ [**plus**$_E$ **dangereuse**$_C$]$_E$]$_A$. (I have never made a more dangerous crossing)
- [Ce$_E$ film$_C$]$_A$ [est$_F$ **moins**$_E$ **intéressant**$_C$]$_S$ [pour$_R$ les$_E$ enfants$_C$]$_A$. (This film is less interesting for children)
- [Elle]$_A$ [[semble]$_E$ [**moins**$_E$ **malade**$_C$]$_C$]$_P$ [aujourd'hui]$_D$. (She seems less ill today)

∗ *'plus' and 'moins' make unequal comparisons between entities. A related construction is 'aussi' ('as') (which often changes to 'si' after a negation), which makes a comparison of equalities between entities.* 'aussi' and 'si' are annotated as the Elaborator of the adjective.

- [Il]$_A$ [désire]$_P$ [[avoir]$_P$ [une$_E$ [**aussi**$_E$ **grande**$_C$]$_E$ [voiture]$_C$]$_A$]$_{A,REMOTE-A(''il'')}$. (He wants to have as big a car)
- [Le$_E$ courant$_C$]$_A$ [n']$_{D-}$ [est$_F$]$_{P-}$ [pas]$_{-D(CONT.)}$ [**si**$_E$ **dangereux**$_C$]$_{-P(CONT.)}$ [par$_R$ ici$_C$]$_A$. (The current isn't as dangerous here)

∗ *In clauses dependent on nouns modified by comparative adjectives with 'plus' or 'moins', writers often insert 'ne', 'le' or 'ne le' in formal written French.* 'ne' is annotated here as F and 'le' introduces a new Participant, which corresponds to an implicit one in English.

- [[[Ces]$_E$ [virages]$_C$]$_A$ [sont$_F$ plus$_E$ dangereux$_C$]$_P$]$_H$ [qu']$_L$ [[on]$_A$ [**ne**]$_F$ [**le**]$_A$ [pense]$_P$]$_H$. (These bends are more dangerous than one thinks)

∗ *In clauses dependent on nouns modified by comparative adjectives with 'aussi', only 'le' may be inserted in formal written French.* 'le' is annotated as A.

- [[La]$_E$ [charge]$_C$ [de$_R$ travail$_C$]]$_A$ [est$_F$ aussi$_E$ lourde$_C$]$_S$]$_H$ [que]$_L$ [[je]$_A$ [le]$_A$ [croyais]$_P$]$_H$. (The workload is as demanding as I thought)

∗ *There are two irregular comparative forms of adjectives which are used productively in French: 'meilleur/e' ('better') and 'pire'('worse'). 'meilleur' is used everywhere that 'bon' ('good') could be, and agrees with the noun it modifies.* The annotation of the comparatives changes along the cases.

- [Il]$_A$ [désire]$_P$ [[avoir]$_P$ [une$_E$ **meilleure**$_E$ place$_C$]$_A$]$_{A,REMOTE-A(''il'')}$. (He wants to have a better seat)
- [Ces$_E$ marchandises$_C$]$_A$ [sont$_F$ **meilleures**$_C$]$_S$. (Theses goods are better)
- [[[Ce$_E$ texte$_C$]$_A$ [est$_F$ **meilleur**$_C$]$_S$]$_H$ [maintenant]$_L$ [que]$_F$ [[tu]$_A$ [l']$_A$ [as$_F$ raccourci$_C$]$_P$]$_H$. (The text is better now you have shortened it)

∗ *'plus bon' ('more good') is only possible where English can use 'more good', but, again as English, the form is rather unusual.*

- [Il]$_A$ [est$_F$ [[plus]$_E$ [bon]$_C$]$_C$ [qu']$_F$ [intelligent]$_C$]$_S$. (He is more good than intelligent)

$*$ *'pire' et 'plus mauvais' both exist. 'plus mauvais' is the most commonly used form, but 'pire' will be usd where the comparison is between two things which are already both bad.*

Appendix 3

Detailed List and Description of Scene Divergences in the Bilingual Corpus

The appendix includes the full list of Scene Divergences in the French-English corpus with a short description for each case, highlighting the main characteristics of the Scene Divergence.
The bilingual corpus is composed by the first five chapters (marked as Chapter1 to Chapter5) of the book "Twenty Thousand Leagues Under the Sea" ("Vingt Mille Lieues Sous les Mers") by Jules Verne with the English translation of J.P. Walter. The Passages with Scene Divergences are numbered from (1) to (97). We report only the part of these Passages where the Scene Divergences occur.
Scene Divergences are numbered from ScDiv1 to ScDiv184.

Chapter1:

(1) Passage 36(eng) – Passage 77(fr):

eng: it must be said that professional seamen were especially alarmed

fr: les gens de mer furent particulièrement émus.

In the English translation, "it must be said" is added. It could be analyzed as Ground. (ScDiv1)

(2) Passage 37(eng) – Passage 78(fr):

eng: a_E $long_E$ spindle-shaped$_E$ object$_C$, [[sometimes]$_D$ [giving off]$_P$ [a phosphorescent glow]$_A$]$_{E,\ REMOTE\text{-}A(\text{"object"})}$

fr: un_E $objet_C$ $long_E$, $fusiforme_E$, [$parfois_E$ $phosphorescent_C$]$_E$

It is an Action/Attribute difference.In English a formulation similar to French is possible. Furthermore, in French too the Elaborator can be analyzed as a Scene, with a State instead of a Process. (ScDiv2)

(3) Passage 38(eng) – Passage 79(fr):

eng: [No naturalist, neither Cuvier nor Lacépède, neither Professor Dumeril nor Professor de Quatrefages]$_A$, [would have accepted]$_P$ [the existence of such a monster sight unseen—specifically, unseen by their own scientific eyes]$_A$.

fr: [Ni Cuvier, ni Lacépède, ni M. Dumeril, ni M. de Quatrefages]$_A$ [n']$_D$ [eussent admis]$_P$ [l'existence d'un tel monstre]$_A$]$_H$, – [à moins de]$_L$ [l' avoir vu]$_H$, [ce qui s'appelle]$_G$ [vu de leurs propres yeux de savants]$_H$.

The first difference here doesn't concern the number of scenes but the number of parallel scenes because in English "unseen" is used as a relative clause. (ScDiv3)

The different number of scenes here between comes from of the repetition of the verb "unseen" ("vu") which occurs in the two languages but have a more explanatory goal in French (rather than adding a specification). (ScDiv4)

(4) Passage 41(eng) – Passage 82(fr):

eng: [this]$_E$ [[moving]$_P$]$_E$, REMOTE-A("mass") [mass]$_C$

fr: [cette]$_E$ [masse]$_C$ [mouvante]$_E$

In French, "mouvante" has a role of an attribute. However, it also could be analyzed as a Scene. (ScDiv5)

eng: [Captain Baker]$_A$ … [thought]$_P$ [[he]$_A$ [was in the presence]$_P$ [of an unknown reef]$_A$]$_A$.

fr: [Le capitaine Baker]$_A$ [se crut … en présence]$_P$ [d'un écueil inconnu]$_A$

(literally: thought himself in presence)

Here the expression doesn't exist in English so an additional scene was necessary. However, a formulation similar to English is possible in French: (Il crut qu'il était en présence ..) but the expression with the reflexive seems to give more focus to the Participant. (ScDiv6)

(5) Passage 43(eng) – Passage 84(fr):

eng: Fifteen days later and 2,000 leagues farther, the *Helvetia* from the Compagnie Nationale and the *Shannon* from the Royal Mail line, running on opposite tacks in that part of the Atlantic lying between the United States and Europe, respectively signaled each other [that the monster had been sighted in latitude 42° 15′ north and longitude 60° 35′ west of the meridian of Greenwich]$_A$.

fr: Quinze jours plus tard, à deux mille lieues de là, l'Helvetia, de la Compagnie Nationale, et le Shannon, du Royal-Mail, marchant à contrebord dans cette portion de l'Atlantique comprise entre les États-Unis et l'Europe, se signalèrent respectivement [le monstre]$_A$ [par 42°15' de latitude nord, et 60°35' de longitude à l'ouest du méridien de Greenwich]$_A$.

(literally: signaled each other the monster from latitude 42° 15′ north and longitude 60° 35′ west of the meridian of Greenwich)

Here there is a structural difference between the two languages: the requirements for the verb "signal" (signaler) are different in French and in English. (ScDiv7)

eng: [From their simultaneous observations, they were able to estimate the mammal's minimum length at more than 350 English feet]$_H$; [[this]$_A$ [was because]$_S$ [both the *Shannon* and the *Helvetia* were of smaller dimensions]$_A$]$_H$,

fr: [Dans cette observation simultanée, on crut pouvoir évaluer la longueur minimum du mammifère à plus de trois cent cinquante pieds anglais]$_H$, [puisque]$_L$ [le Shannon et l'Helvetia étaient de dimension inférieure à lui]$_H$,

(literally: because the Shannon and the Helvetia were of smaller dimensions)

Here the causality in French is expressed by a Linker and in English by a State. A formulation similar to French is possible in English. (ScDiv8)

(6) Passage 44(eng) – Passage 85(fr):

eng: [the Inman line's *Etna*]$_{A}$ [running afoul]$_{P}$ [of the monster]$_{A}$

fr: un abordage entre l'Etna, de la ligne Inman, et le monstre

Here in French "abordage" could be annotated as P. (ScDiv9)

(7) Passage 47(eng) – Passage 88(fr):

eng: in$_{R}$ *Cosmos*$_{C}$ [[published]$_{P}$ [by Father Moigno]]$_{A}$

fr: du$_{R+E}$ Cosmos$_{C}$ [de l'abbé Moigno]$_{E}$ (literally: the Cosmos of Father Moigno)

Here the English translation add a clarification by the addition of a new Scene with the main relation "published". (ScDiv10)

eng: [When]$_{L}$ [the monster's detractors cited a saying by the botanist Linnaeus that "nature doesn't make leaps,"]$_{H}$ [witty writers in the popular periodicals parodied it]$_{H}$, [maintaining in essence that "nature doesn't make lunatics]$_{H}$,"

fr: [Ses spirituels écrivains]$_{H-}$ [parodiant un mot de Linné, cité par les adversaires du monstre]$_{H}$, [soutinrent]$_{-H(CONT.)-}$ [en effet]$_{L}$ [que « la nature ne faisait pas de sots »]$_{-H(CONT.)}$,

(His witty writers, parodying a saying by Linnaeus, cited by the monster's detractors, maintained in essence that nature doesn't make lunatics)

The main reason of the additional Scenes in English is the explanation of the play on words in French with the homonyms "sauts" (leaps) and "sots" (lunatics). In French, the original quote is not written but indicated indirectly to the reader. (ScDiv11)

Another difference is between "saying" analyzed as a Scene and "mot" which is not focalized on the action and thus not analyzed as a Scene. (ScDiv12)

(8) Passage 49(eng) – Passage 90(fr):

eng: [Without the high quality of its hull, [the *Moravian*]$_{A}$ [would]$_{P-}$ [surely]$_{G}$ [have split open]$_{-P(CONT.)}$ [from this collision]$_{A}$]$_{H}$ [and]$_{L}$ [gone down together with those 237 passengers it was bringing back from Canada]$_{H}$.

fr: [Nul doute que sans la qualité supérieure de sa coque, [[le]$_{E}$ [Moravian]$_{C}$, [ouvert au choc]$_{E}$]$_{A}$, ne

se fût englouti avec les deux cent trente-sept passagers qu'il ramenait du Canada]$_{H}$.

Here, "ouvert au choc" can be analyzed as a Scene (not only as a consequence of an action) so the main difference will be the use of a relative clause in French and a parallel scene in English. (ScDiv13)

(9) Passage 50(eng) – Passage 91(fr):

eng: [[They]$_{A}$ [saw]$_{P}$ [[nothing]$_{C}$ [[except]$_{R}$ [[a strong eddy]$_{C}$ [[breaking]$_{P}$ [three cable lengths out]$_{A}$]$_{E,REMOTE-A("eddy")}$]$_{C}$]$_{E}$]$_{A}$]$_{H}$.

fr: [[Ils]$_{A}$ [ne]$_{D}$ [virent]$_{P}$ [rien]$_{D}$]$_{H}$ [si ce n'est]$_{L}$ [[[un]$_{E}$ [fort]$_{E}$ [remus]$_{C}$ [qui$_{R}$ brisait$_{P}$ [à trois

encablures]$_A$]$_{E,REMOTE-A("remus")}$]$_A$]$_{H,REMOTE-A("ilst"),REMOTE-P("virent")}$

In French, the separation to two parallel Scenes (Conforming Analysis) leads to an additional Process which is a Remote Process (and therefore to an additional Scene). (ScDiv14)

eng: [the$_E$ Moravian$_C$]$_A$ [continued]$_P$ [on course]$_A$ [[apparently]$_D$ [undamaged]$_P$]$_{A,IMPLICIT-A,REMOTE-A("the Moravian")}$

fr: [le$_E$ Moravian$_C$]$_A$ [continua]$_P$ [sa$_E$ route$_C$]$_A$ [sans$_R$ avaries$_C$ apparentes$_E$]$_D$

Here in English (relatively free translation), instead of a noun we have a past participle of a verb which add an implicit Participant. Although in English the word used ("undamaged") in not specific to ships (as it is the case in French with the word "avaries", it covers all the original meaning and even add information (by adding a Participant). (ScDiv15)

(10) Passage 51(eng) – Passage 92(fr):

eng: [of]$_R$ [the]$_E$ [ship]$_C$ [[victimized]$_P$ [by this new ramming]$_A$]$_E$,

fr: [du]$_{R+E}$ [navire]$_C$ [[victime]$_C$ [de ce nouvel abordage]$_E$]$_E$

In English, the use of a verb instead of an adjective adds another Scene. (ScDiv16)

(11) Passage 52(eng) – Passage 93(fr):

eng: [In 1840 this shrewd industrialist founded a postal service between Liverpool and Halifax]$_H$, [featuring three wooden ships with 400-horsepower paddle wheels and a burden of 1,162 metric tons]$_H$.

fr: [Cet intelligent industriel fonda, en 1840, un service postal entre Liverpool et Halifax, [avec trois navires en bois et à roues d'une force de quatre cents chevaux, et d'une jauge de onze cent soixante-deux tonneaux]$_A$]$_H$.

(literally: "with three wooden ships ...")

Here the clarification in English adds another Scene. (ScDiv17)

eng: the *Arabia*, the *Persia*, the *China*, the *Scotia*, the *Java*, and the *Russia*, [all ships of top speed]$_E$

fr: l'Arabia, le Persia, le China, le Scotia, le Java, le Russia, [tous navires de première marche]$_E$,

In English the Elaborator was analyzed in the corpus as a Scene with an implicit State but a similar annotation is also possible in French. (ScDiv18)

(12) Passage 53(eng) – Passage 94(fr):

eng: If I give these highly condensed details, it is so everyone can fully understand the importance of this maritime transportation company, known the world over for its shrewd management.

fr: Si je donne ces détails très-succincts, c'est afin que chacun sache bien quelle est l'importance de cette compagnie de transports maritimes, connue du monde entier pour son intelligente gestion.

(literally: … it is so everyone can fully know what is the importance of the this maritime translation company)

In French the use of “est” (“is”) leads to annotation of the “importance” as a State. No such a formulation is possible in English. However, in French a formulation similar to the English translation is possible. (ScDiv19)

eng: [as]$_{L}$ [[can be seen]$_{P}$ [in$_{R}$ a$_{E}$ recent$_{E}$ survey$_{C}$ [of official documents]$_{E}$]$_{A}$]$_{H,IMPLICIT-A}$

fr: [ainsi qu’]$_{L}$ [[il]$_{F}$ [appert]$_{P}$ [d’$_{R}$ un$_{E}$ relevé$_{C}$ [fait$_{P}$ [sur$_{R}$ les$_{E}$ documents$_{C}$ officiels$_{E}$ [des dernières années]$_{E}$]$_{A}$]$_{E}$, REMOTE-A(“relevé”), IMPLICIT-A]$_{A}$]$_{H}$

(literally: ...in a survey made on the official documents of the last few years)

Here the verb “made” is not used in English and thus the expression is not annotated as a Scene. A translation more similar to the French construction is possible in this case. (ScDiv20)

(13) Passage 54(eng) – Passage 95(fr):

eng: [On April 13, 1867, with a smooth sea and a moderate breeze, the *Scotia* lay in longitude 15° 12′ and latitude 45° 37′]$_{H}$.

fr: [Le 13 avril 1867]$_{H-}$, [la mer étant belle]$_{H}$, [la brise maniable]$_{H}$, [le Scotia se trouvait par 15°12’ de longitude et 45°37’ de latitude]$_{-H(CONT.)}$.

The English translation doesn't use the verb “be” but the expression “with...” which is not annotated as a Scene. A translation similar to the French construction is possible. (ScDiv21)

(14) Passage 55(eng) – Passage 96(fr):

eng: [[At 4:17 in the afternoon, during a high tea for passengers gathered in the main lounge, a collision occurred]$_{H}$, [scarcely noticeable on the whole]$_{H}$, [affecting the *Scotia*’s hull in that quarter a little astern of its port paddle wheel]$_{H}$.

fr: [[À quatre heures dix-sept minutes du soir]$_{D}$, [pendant le lunch des passagers réunis dans le grand salon]$_{D}$, [un choc, peu sensible, en somme]$_{A}$, [se produisit]$_{P}$ [sur la coque du Scotia, par sa hanche et un peu en arrière de la roue de bâbord]$_{A}$]$_{H}$

First difference: “peu sensible” is translated by “scarcely noticeable” which is analyzed as a Scene. Howether, the French expression can be interpreted as “rude” and thus doesn't require an annotation as a Scene. (ScDiv22)

Second difference: In the English translation the verb “affecting” is added whereas in French it is not necessary and the only main relation is “se produisit” (occurred). (ScDiv23)

(15) Passage 56(eng) – Passage 97(fr):

eng: [had]$_{S-}$ [it]$_{F}$ [not]$_{D}$ [been]$_{-S(CONT.)}$ [[for]$_{R}$ [the]$_{E}$ [shouts]$_{C}$ [[of]$_{R}$ [crewmen]$_{C}$ [in the hold]$_{E}$, [[who]$_{R}$ [climbed]$_{P}$ [on deck]$_{A}$]$_{E,REMOTE-A(“crewmen”)}$]$_{E}$]$_{A}$

fr: [sans]$_{L}$ [[le$_{E}$ cri$_{C}$]$_{P}$ [[des]$_{R+E}$ [caliers]$_{C}$ [[qui]$_{R}$ [remontèrent]$_{P}$ [sur$_{R}$ le$_{E}$ pont$_{C}$]$_{A}$]$_{E,REMOTE-A("caliers")}$]$_{A}$]$_{H}$

First difference: “had it not been”/”sans”: Linker/Main relation difference. (ScDiv24)

Second difference: “shouts”/”cri”: Conforming Analysis. (ScDiv25)

(16) Passage 59(eng) – Passage 100(fr):

eng: [[with]$_{R}$ [its]$_{E}$ [paddle wheels]$_{C}$ [half$_{D}$ swamped$_{P}$]$_{E,REMOTE-A("paddle\ wheels"),IMPLICIT-A}$]$_{A}$, [the Scotia]$_{A}$ [had no choice but to continue]$_{P}$ [its voyage]$_{A}$

fr: [le Scotia]$_{A}$, [[ses]$_{E}$ [roues]$_{C}$ [à demi noyées]$_{E}$]$_{A}$, [dut continuer]$_{P}$ [ainsi]$_{D}$ [son voyage]$_{A}$

The expression "à demi noyées" is not annotated as a Scene. It describes more a result (maybe also a state) than an action. A similar annotation to English is possible but there is a nuance in the meaning. (ScDiv26)

(17) Passage 60(eng) – Passage 101(fr):

eng: [This$_{E}$ breach$_{C}$ [in the sheet]$_{E]A}$ iron was so perfectly formed

fr: [[La cassure]$_{P}$ [de la tôle]$_{A}$]$_{A}$ était d'une netteté parfaite

Here "breach" could also be annotated as a Process. (ScDiv27)

(18) Passage 61(eng) – Passage 102(fr):

eng: it [resulted in arousing]$_{P}$ [public passions]$_{A}$ all over again

fr: qui [eut pour résultat]$_{P}$ [[de passionner]$_{P}$ à nouveau l'opinion publique]$_{A}$.

Here, giving the same interpretation, we can have the same annotation in the two languages. (ScDiv28)

eng: any$_{E}$ maritime$_{E}$ casualty$_{C}$ [without$_{R}$ an$_{E}$ [established]$_{E,REMOTE-A("cause"),IMPLICIT-A}$ cause$_{C}$]$_{E}$

fr: les$_{E}$ sinistres$_{C}$ maritimes$_{E}$ [qui$_{R}$ [n']$_{D-}$ [avaient]$_{P}$ [pas]$_{-D(CONT.)}$ [de$_{R}$ cause$_{C}$ [déterminée]$_{E}$]$_{A}$]$_{E,REMOTE-A("SINISTRES")}$

First difference: The use of "without" instead of the verb "have" + negation results in a Scene less in English. (ScDiv29)

Second difference: "established" is analyzed as a Scene. A similar annotation in French is possible. (ScDiv30)

(19) Passage 62(eng) – Passage 103(fr):

eng: [[travel]$_{P}$ [between the various continents]$_{A}$]$_{A,IMPLICIT-A}$ had become more and more dangerous

fr: [les$_{E}$ communications$_{C}$ [entre les divers continents]$_{E}$]$_{A}$ devenant de plus en plus dangereuses

Here, an annotation of "communications" as a Scene in French is also possible. (ScDiv31)

Chapter 2:

(20) Passage 286(eng) – Passage 416(fr):

eng: [I]$_{A}$ [had returned]$_{P}$ [from$_{R}$ a$_{E}$ scientific$_{E}$ undertaking$_{C}$ [organized$_{P}$ [[to explore]$_{P}$[the Nebraska badlands in the United States]$_{A}$]$_{A,IMPLICIT-A}$]$_{E,IMPLICIT-A}$]$_{A}$.

fr: [je]$_{A}$ [revenais]$_{P}$[d'$_{R}$ une$_{E}$ exploration$_{C}$ scientifique$_{E}$ [[entreprise]$_{P}$ [dans les mauvaises terres du Nebraska, aux États-Unis]$_{A}$]$_{E,IMOLICIT-A}$]$_{A}$.

Here the main difference is the fact that the term “organization” is not present in French so the English translation introduces an additional information. (ScDiv32)

eng: [My]$_{A}$ [departure]$_{P}$ [for$_{R}$ France$_{C}$]$_{A}$

fr: Mon$_{E}$ départ$_{C}$ [pour$_{R}$ la$_{E}$ France$_{C}$]$_{E}$

The French expression can also be analyzed as a Scene. (ScDiv33)

(21) Passage 287(eng) – Passage 417(fr):

eng: I was perfectly abreast of [this question, [which$_{R}$ was$_{S}$ [the big news of the day]$_{A}$]$_{E,REMOTE-A(“question”)}$]$_{A}$

fr: J’étais parfaitement au courant de [la question [à l’ordre du jour]$_{E}$]$_{A}$

A formulation like in French is not possible in the English translation and the addition of the verb “be” seems necessary. However a similar formulation to the English one was possible in French although in this it had to introduce tense. (ScDiv34)

(22) Passage 288(eng) – Passage 418(fr):

eng: [The$_{E}$ hypothesis$_{C}$ [[of$_{R}$ a$_{E}$ drifting$_{E}$ islet$_{C}$]$_{C}$ [or]$_{N}$ [an$_{E}$ elusive$_{E}$ reef$_{C}$]$_{C,REMOTE-R(“of”)}$]$_{E}$, [[put forward]$_{P}$ [by$_{R}$ people$_{C}$ [[not quite]$_{D}$ [in their right minds]$_{S}$]$_{E,REMOTE-A(“people”)}$]$_{A}$]$_{E,REMOTE-A(“hypothesis”)}$]$_{A}$, was completely eliminate.

fr: [L’$_{E}$ hypothèse$_{C}$ [[de$_{R}$ l’$_{E}$ îlot$_{C}$ [flottant]$_{E,REMOTE-A(“îlot”)}$]$_{C}$, [de$_{R}$ l’$_{E}$ écueil$_{C}$ [insaisissable]$_{E,REMOTE-A(“écueil”),IMPLICIT-A}$]$_{C}$]$_{E}$, [[soutenue]$_{P}$ [par quelques esprits peu compéten1

ts]$_{A}$]$_{E}$]$_{A}$, était absolument abandonnée.

First difference: “drifting “ could also be analyzed as a Scene. (conforming analysis) (ScDiv35)

Second difference: “elusive” is more an attribute whether “insaisissable” involves an action. (ScDiv36)

Third difference: “peu compétents” is more an attribute than a description of a state. However, there is a semantic difference in the two languages (free translation). (ScDiv37)

(23) Passage 292(eng) – Passage 422(fr):

eng: [The Chassepot rifle led to the torpedo]$_{H}$, [and]$_{L}$ [the torpedo has led to this underwater battering ram, which in turn will lead to the world putting its foot down]$_{H}$.[At least]$_{L}$ [I$_{A}$ hope$_{P}$ [it$_{A}$ [will$_{E}$]$_{P,REMOTE-C(\text{“putting”})}$]$_{A}$]$_{H}$.

fr: [Après les chassepots, les torpilles]$_{H}$, [après les torpilles, les béliers sous-marins]$_{H}$, [puis]$_{L}$ – [la réaction]$_{H}$. [Du moins]$_{L}$, [je$_{A}$ l'$_{A}$ espère$_{P}$]$_{A}$

First difference: The expression “putting its foot down” in the English translation add a Scene which is not obligatory in French. (ScDiv38)

Second difference: The ellipsis of the verb in English is replaced in French by the pronoun “l’” which can be translated by “that”. This difference is also related to the translation used in the previous sentence. (ScDiv39)

(24) Passage 293(eng) – Passage 423(fr):

eng: But this hypothesis of a war machine collapsed in the face of formal denials from the various governments.

fr: Mais l’hypothèse d’une machine de guerre tomba encore devant la déclaration des gouvernements.

"Denials" is analyzed as a Scene whereas "declaration" is not. It is a case of conforming analysis although there is a semantic difference (not related to the annotation). (ScDiv40)

eng: Besides, how could the assembly of this underwater boat have escaped public notice?

fr: D’ailleurs, comment admettre que la construction de ce bateau sous-marin eût échappé aux yeux du public ?

(literally: ...how admit that the construction of this underwater boat have escaped pblic notice?)

First difference: In the English translation the idea of the difficulty of admitting the fact is implicit(via “how”, “could”) whereas in French it is explicit. (ScDiv41)

Second difference: The word “assembly” seems more focalized on the result of the action but also could be analyzed as a Scene. (ScDiv42

(25) Passage 303(eng) – Passage 433(fr):

eng: we *do* know [every$_{E}$ [living$_{P}$]$_{E,IMPLICIT-A(\text{“species”})}$ species]$_{A}$

fr: nous connaissons [toutes$_{E}$ les$_{E}$ espèces$_{C}$ vivantes$_{E}$]$_{A}$

In French, “vivantes” has a role of an attribute. However, it also could be analyzed as a Scene. (ScDiv43)

(26) Passage 304(eng) – Passage 434(fr):

eng: $[a]_E$ $[strength]_C$ $[[in_R$ $proportion_C$ $to_R]_E$ $[its_E$ $size_C]_C]_E$

fr: $[une]_E$ $[force]_C$ $[[proportionnelle]_S$ $[à_R$ sa_E $taille_C]_A]_{E,REMOTE-A("force")}$

It is a lexical difference (noun/adjective). Despite the nuance, the same annotation is possible. (ScDiv44)

eng: $[the]_E$ $[instrument]_C$ $[[needed]_S$ $[[to_F$ $perforate_C]_P$ $[the_E$ $Scotia_C]_A]_{A,IMPLICIT-A]E,REMOTE-A("instrument")}$

fr: $[l']_E$ $[instrument]_C$ $[[exigé]_P$ $[[par]_R$ $[la]_E$ $[perforation]_C$ $[du_{R+E}$ $Scotia_C]_E]_A]_{E,REMOTE-A("instrument")}$

Here the divergence results from the difference noun/verb. A similar annotation is possible. (ScDiv45)

(27) Passage 305(eng) – Passage 435(fr):

eng: In essence, the narwhale is armed [with a sort of ivory sword, or $[lance_C$, $[as_R$ $[certain\ naturalists]_A$ $[have\ expressed]_P$ $[it]_A]_E]_C]_A$.

fr: En effet, le narwal est armé [d'une sorte d'épée d'ivoire, $[d'_R$ une_E $hallebarde_C$, $[suivant_R$ l'_E $expression_C$ [de certains naturalistes]$_E]_E]_C]_A$.

Beyond the fact that in French, a name is used instead of the verb, it is more related to the result of the action than to the action itself. (ScDiv46)

(28) Passage 306(eng) – Passage 436(fr):

eng: $[you]_A$ $[get]_P$ $[just]_D$ $[the_E$ $collision_C$ $[[we]_A$ $[need]_P$ $[[to_F$ $cause_C]_P$ [the specified catastrophe]$_A]_A]_{E,REMOTE-A(\text{“collision”})}]_A$

fr: $[vous]_A$ $[obtenez]_P$ $[un_E$ $choc_C$ $[[capable_E$ de_F $produire_C]_P$ [la catastrophe demandée]$_A]_E]_A$

In English the addition of a new Participant leads to the addition of another Scene. A more similar version to French is possible. (ScDiv47)

(29) Passage 307(eng) – Passage 437(fr):

eng: $those_E$ $warships_C$ $[called_P$ 'rams'$_A]_{E,REMOTE-A(\text{“waterships”}),IMPLICIT-A}$

fr: les_E « rams »$_C$ $[de_R$ $guerre_C]_E$

Here the additional Scene in English permits to explain what are the rams (a kind of waterships) and involve implicit Participants. Here the punctuation has also a role in the lack of Scenes in French. (ScDiv48)

(30) Passage 309(eng) – Passage 439(fr):

eng: $[as\ far\ as]_L$ $[I\ could]_H$, $[[I]_A$ [wanted to protect]$_P$ [my professorial dignity]$_A]_H$ $[and]_L$ [not lay myself open to laughter from the Americans...]$_H$

fr: $[[je]_A$ $[voulais]_P$ [jusqu'à un certain point]$_D$ [couvrir ma dignité de professeur]$_A]_H$, $[et]_L$ [ne pas trop

prêter à rire aux Américains...]$_H$

First difference: “as far as I could” translates here “jusqu’à un certain point” (literally: up to a certain point) analyzed as D. The relatively free translation add information, saying explicitly what is “up to a certain point:” and seems to strengthen the affirmation. (ScDiv49)

Second difference: The use of “want” as a secondary verb in English and as a main relation in French (twice): conforming analysis. (ScDiv50 and ScDiv51)

(31) Passage 310(eng) – Passage 440(fr):

eng: [Moreover]$_L$, [[the solution it proposed]$_A$ [allowed]$_P$ [[for]$_R$ [free]$_D$ [play]$_P$ [of the imagination]$_A$]$_A$]$_H$.

fr: [[La solution qu’il proposait]]$_{H-}$, [d’ailleurs]$_L$, [laissait libre carrière]$_P$ [à l’imagination]$_{A\text{-}H(CONT.)}$.

Conforming analysis. (ScDiv52)

eng: [Now then]$_L$, [[the sea]$_A$ [is]$_S$ [precisely]$_D$ [their best medium]$_A$]$_H$, [[[the]$_E$ [only]$_E$ [setting]$_C$ [[suitable]$_S$ [[for]$_R$ [the breeding and growing]$_P$ [of such giants—next to which such land animals as elephants or rhinoceroses are mere dwarves]$_A$]$_A$]$_{E,REMOTE\text{-}A(\text{“setting”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“sea”}),REMOTE\text{-}P(\text{“is”})}$

fr: [Or]$_L$ [[la mer]$_A$ [est]$_S$ [précisément]$_D$ [[leur meilleur véhicule]$_C$, [[le]$_E$ [seul]$_E$ [milieu]$_C$ [[où]$_R$ [ces géants près desquels les animaux terrestres, éléphants ou rhinocéros, ne sont que des nains]$_A$, – [[puissent]$_E$ [se produire et se développer]$_C$]$_P$]$_E$]$_E$]$_A$]$_H$.

First difference: In English there is a division in two parallel Scenes, which adds another Scene: Conforming Analysis. (ScDiv53)

Second difference: The use of “suitable” in English leads to an additional Scene. There is an inversion of subject and the object. Nevertheless, a similar annotation as in French is possible in English. (ScDiv54)

eng: [crustaceans]$_C$ [[too$_E$ frightful$_C$]$_S$ [[to$_F$ contemplate$_C$]$_P$]$_{A,REMOTE\text{-}A(\text{“crustaceans”}),IMPLICIT\text{-}A}$]$_{E,REMOTE\text{-}A(\text{“crustaceans”})}$

fr: [des]$_E$ [crustacés]$_C$ [[effrayants$_E$ à$_F$ contempler$_C$]$_P$]$_{E,REMOTE\text{-}A(\text{“crustacés”}),IMPLICIT\text{-}A}$

Conforming Analysis. (ScDiv55)

eng: [such as]$_R$ [100-meter lobsters or crabs weighing 200 metric tons]$_C$

fr: [tels que]$_R$ [[seraient]$_F$]$_{P,REMOTE\text{-}E(\text{“effrayants”}),REMOTE\text{-}C(\text{“contempler”})}$ [des homards de cent mètres ou des crabes pesant deux cents tonnes]$_A$!…

In English, the example is reported without reminding the precedent main relation. The additional Scene in French give more emphasis (due to the repetition of the main relation). (ScDiv56)

eng: [Formerly]$_D$, [in prehistoric days]$_D$, [land animals (quadrupeds, apes, reptiles, birds)]$_A$ [were built]$_P$ [on a gigantic scale]$_A$.

fr: [Autrefois]$_D$, [[les animaux terrestres]$_C$, [[contemporains]$_S$ [des époques géologiques]$_A$]$_{E,REMOTE\text{-}A(\text{“animaux”})}$, [les quadrupèdes, les quadrumanes, les reptiles, les oiseaux]$_E$]$_A$ [étaient construits]$_S$ [sur des

gabarits gigantesques]$_A$.

In English the State “contemporains” (contempory) is replaced by the preposition “in”. The additional Scene in French adds explicit information. (ScDiv57)

eng: [[Our Creator]$_A$ [cast]$_P$ [them]$_A$]$_H$ [[using]$_P$ [a colossal mold that time has gradually made smaller]$_A$]$_{H,REMOTE\text{-}A(\text{“Our Creator”})}$

fr: [Le Créateur]$_A$ [les]$_A$ [avait jetés]$_P$ [dans un moule colossal que le temps a réduit peu à peu]$_A$.

The additional Scene in English replaces the preposition “dans” in French, conserving more or less the same information (maybe being less precise than the French formulation). (ScDiv58)

eng: [Could]$_{P\text{-}}$ [n’t]$_D$ [the heart of the ocean]$_A$ [hide]$_{\text{-P(CONT.)}}$ [[the]$_E$ [last$_D$ – remaining$_P$]$_{E,REMOTE\text{-}A(\text{“varieties”})}$ [varieties]$_C$ [of these titanic species for whom years are centuries and centuries millennia]$_E$]$_A$?

fr: [Pourquoi]$_A$ [ne]$_{D\text{-}}$ [cacherait]$_P$ - [elle]$_A$ [pas]$_{\text{-D(CONT.)}}$ [dans son sein]$_A$ [[les]$_E$ [dernières]$_E$ [variétés]$_C$ [de ces espèces titanesques, dont les années sont des siècles, et les siècles des millénaires]$_E$]$_A$?

The additional Scene in English adds more information. (ScDiv59)

(32) Passage 311(eng) – Passage 441(fr):

eng: [But]$_L$ [[I]$_A$ [must]$_{P\text{-}}$ [n’t]$_D$ [let]$_{\text{-P(CONT.)-}}$ [these fantasies]$_A$ [run away]$_{\text{-P(CONT.)}}$ [with me]$_A$]$_H$!

fr: [Mais]$_L$ [[je]$_A$ [me laisse entraîner]$_P$ [[à]$_R$ [des]$_E$ [rêveries]$_C$ [[qu’]$_R$ [il]$_F$ [ne]$_{D\text{-}}$ [m’appartient]$_{P\text{-}}$ [plus]$_{\text{-D(CONT.)}}$ [d’entretenir]$_{\text{-P(CONT.)}}$]$_E$]$_A$]$_H$!

(literally: But I let myself be dragged by fantasies I musn't maintain anymore)

Here the first Scene is French is only presupposed by the English translation which contracts the two Scenes. In addition, the English translation misses the idea of “relatively long time” expressed by “maintenir” (maintain) and “ne … plus” (not ...anymore). (ScDic60)

(33) Passage 312(eng) – Passage 442(fr):

eng: more practical people, especially in America and England, [were determined to purge]$_P$ the ocean of this daunting monster,

fr: les autres, plus positifs, surtout en Amérique et en Angleterre,[furent d’avis]$_P$ [de purger l’Océan de ce redoutable monstre]$_{A,REMOTE\text{-}A(\text{“autres”})}$,

“were determined” is not an exact translation of “furent d’avis” but giving the same interpretation, the same annotation is obtained. (ScDiv61)

eng: to insurance companies—[who$_R$ [threatened to raise]$_P$ [their premium rates]$_A$]$_{E,REMOTE\text{-}A(\text{“companies”})}$

fr: aux Compagnies d’assurances [qui$_R$ [menaçaient]$_P$[[d’élever]$_P$ [le taux de leurs primes]$_A$]$_{A,REMOTE\text{-}A(\text{“assurances”})}$]$_{E,REMOTE\text{-}A(\text{“assurances”})}$

Here also, the same interpretation can give the same annotation in the two languages. (ScDiv62)

(34) Passage 313(eng) – Passage 443(fr):

eng: [the arming]$_P$ [of his frigate]$_A$.

fr: l'$_E$ armement$_C$ [de sa frégate]$_E$.

Conforming analysis. (ScDiv63)

(35) Passage 314(eng) – Passage 444(fr):

eng: [For two months]$_D$ [nobody]$_A$ [heard a word]$_P$ [about it]$_A$

fr: [Pendant deux mois]$_D$, [personne] [n']$_D$ [en]$_A$ [entendit]$_P$ [[parler]$_P$]$_{A,REMOTE\text{-}A(\text{“en”}),IMPLICIT\text{-}A.}$

Here a similar construction to that used in French is possible in English . The main difference is that the action of talking is explicit in French. (ScDiv64)

(36) Passage 315(eng) – Passage 445(fr):

eng: a$_E$ steamer$_C$ [on$_R$ the$_E$ [San Francisco]$_E$ line$_C$]$_E$ [sailing$_P$ [from California]$_A$ [to Shanghai]$_A$]$_{E,REMOTE\text{-}A(\text{“steamer”})}$

fr: [un]$_E$ [steamer]$_C$ [de$_R$ la$_E$ ligne$_C$ [de$_R$ [San Francisco de Californie]$_C$ à$_R$ [Shangaï]$_C$]$_E$]$_E$

First of all, there are two different readings in French: the line from San Francisco in California to Shangaï (the annotation in French follows this reading) and the reading followed by the English translation. Given the second interpretation, the verb "sailing" makes explicit something which is implicit in the French formulation. (ScDiv65)

(37) Passage 316(eng) – Passage 446(fr):

eng: [This$_E$ news$_C$]$_A$ [caused]$_P$ [intense$_E$ excitement$_C$]$_A$.

fr: [L'$_E$ émotion$_C$ [causée$_P$ [par$_R$ cette$_E$ nouvelle$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“émotion”})}$]$_A$ [fut$_F$ extrême$_C$]$_S$.

The English translation chose a different form which is also possible in French but changes the main relation. Furthermore, it is example of a State, that being used as an Elaborator, is not annotated as a Scene anymore. (ScDiv66)

(38) Passage 318(eng) – Passage 448(fr):

eng: [*If*]$_L$ [[*you*]$_A$ [*would like to join*]$_P$ [*the expedition on the* Abraham Lincoln]$_A$]$_H$

fr: [Si]$_L$ [[vous]$_A$ [voulez]$_P$ [[vous$_E$ joindre$_C$]$_P$ [à l'expédition de l'Abraham-Lincoln]$_A$]$_{A,REMOTE\text{-}A(\text{“vous”})}$]$_H$

Given the same interpretation, same annotation (conforming analysis). (ScDiv67)

eng: [*the government of the Union*]$_A$ [[*will*$_E$ *be*$_F$ *pleased*$_C$]$_E$ *to*$_F$ *regard*$_C$]$_A$ [*you*]$_A$ [*as France's representative*]$_A$ [*in this undertaking*]$_A$.

fr: [le gouvernement de l'Union]$_A$ [verra$_F$ avec$_R$ plaisir$_C$]$_P$ [que$_R$ [la France]$_A$ [soit représentée]$_P$ [par vous]$_A$ [dans cette entreprise]$_A$]$_A$.

(literally: the government will see with pleasure that (will be glad if) France will be represented by you in this expedition.

In addition to the swap of centers in the main relation (due to the different use of verra/regard), the difference in the number of Scenes comes from the fact that the action of "represent" is included in the role/profession of "representative" in the English translation. A translation more similar to the French formulation is possible. (ScDiv68)

Chapter3:

(39) Passage 814(eng) – Passage 764(fr):

eng: [I no more dreamed of chasing the unicorn]$_{H}$ [than]$_{L}$ [[of trying]$_{P}$ [for the Northwest Passage]$_{A}$]$_{H,REMOTE\text{-}A(\text{“I”})}$

fr: [[je]$_{A}$ [ne]$_{D\text{-}}$ [songeais]$_{P}$ [pas]$_{\text{-}D(CONT.)}$ [plus]$_{D}$ [à poursuivre la Licorne]$_{A}$]$_{H}$ [qu']$_{L}$ [[[à tenter]$_{P}$ [le passage du Nord-Ouest]$_{A}$]$_{A}$]$_{H,REMOTE\text{-}A(\text{“je”}),REMOTE\text{-}P(\text{“songeais”})}$

Conforming Analysis. (ScDiv69)

(40) Passage 816(eng) – Passage 766(fr):

eng: [I]$_{A}$ ['ll bring back]$_{P}$ [to the Museum of Natural History]$_{A}$ [at least half a meter of its ivory lance]$_{A}$!

fr: [je]$_{A}$ [ne]$_{D\text{-}}$ [veux]$_{P}$ [pas]$_{\text{-}D(CONT.)}$ [[rapporter]$_{P}$ moins d'un demi mètre de sa hallebarde d'ivoire au Muséum d'histoire naturelle]$_{A,REMOTE\text{-}A(\text{“je”})}$

The addition of a Scene results here from free translation. (ScDiv70)

(41) Passage 817(eng) – Passage 767(fr):

eng: [I]$_{A}$ [would have to look for]$_{P}$ [this narwhale]$_{A}$ [in the northern Pacific Ocean]$_{A}$

fr:[il]$_{F}$ [me]$_{A}$ [fallait]$_{P}$ [[chercher]$_{P}$ [ce narwal]$_{A}$ [dans le nord de l'océan Pacifique]$_{A}$]$_{A,REMOTE\text{-}A(\text{“me”})}$

A similar annotation is possible but there is a nuance in the meaning. (ScDiv71)

eng: [which meant]$_{L}$ [[returning]$_{P}$ [to France]$_{A}$ [by way of the Antipodes]$_{D}$]$_{H,REMOTE\text{-}A(\text{“I”}).}$

fr: [ce]$_{F}$ [qui]$_{F}$, [pour]$_{L}$ [revenir en France]$_{H}$, [[était]$_{S}$ [[prendre]$_{P}$ [le chemin des antipodes]$_{A}$]$_{A,REMOTE\text{-}A(\text{"me"})}$]$_{H,REMOTE\text{-}A(\text{“chercher ce narwal dans le nord de l'océan Pacifique”})}$

First difference: Use of a verb in French ("était") which is covered by the Linker in English. (ScDiv72)

Second difference: Use of a verb in French ("prendre") instead of a preposition ("by") in English. (ScDiv73)

(42) Passage 819(eng) – Passage 769(fr):

eng: [[habitually]$_{D}$ [hardworking]$_{P}$]$_{C,REMOTE\text{-}A(\text{“Conseil”})}$

fr: [zélé]$_{C}$ [par$_{R}$ habitude$_{C}$]$_{E}$

There is a noun/verb difference as well as an action/attribute difference. (ScDiv74)

eng: [despite]$_{R}$ [his]$_{A}$ [having]$_{P}$ [a$_{E}$ name$_{C}$ [that$_{R}$ means$_{P}$ “counsel”A]$_{E,REMOTE\text{-}A(\text{“name”})}$]$_{A}$

fr: [en dépit de]$_{R}$ [son$_{E}$ nom$_{C}$]$_{C}$

First difference: The use of the verb “having” in English says add a clarification, an explicit information. However, this translation choice is also related to the second difference. (ScDiv75)

Second difference: In English, the verb “means” is added in order to explain the phonological play of words in French. The English translation explains the meaning of the name “Conseil”. This is related to the fact that the French names of the characters are conserved in the English translation (and not translated). (ScDiv76)

(43) Pasage 820(eng) – Passage 770(fr):

eng: [I]$_{A}$ [doubt]$_{P}$ [that he could tell a sperm whale from a baleen whale]$_{A}$!

fr: [il n’eût pas distingué]$_{H\text{-}}$, [je crois]$_{G}$, [un cachalot d’une baleine]$_{H(CONT.)}$!

The French formulation permits to annotate the expression as a Ground and not as a Scene. (ScDiv77)

(44) Passage 821(eng) – Passage 771(fr):

eng: [He]$_{A}$ [went]$_{P}$ [here, there, and everywhere]$_{A}$ [in perfect contentment]$_{D}$.

fr: [[Il]$_{A}$ [allait]$_{P}$ [là comme ici]$_{A}$]$_{H}$, [sans]$_{L}$ [[en demander]$_{P}$ [davantage]$_{D}$]$_{H,REMOTE\text{-}A(\text{“il”})}$

Here a Scene in French is translated to an Adverbial in English. It is related to the distinction Verb/Noun where here the noun describes a situation. An annotation which conserves the number of Scenes is possible but there is a nuance between the two formulations. (ScDiv78)

(45) Passage 825(eng) – Passage 775(fr):

eng: [a]$_{E}$ [hazardous]$_{E}$ [undertaking]$_{C}$ [[whose]$_{R}$ [[purpose]$_{C}$]$_{A,REMOTE\text{-}E(\text{“undertaking”})}$ [was]$_{S}$ [[to hunt]$_{P}$ [an animal that could sink a frigate as easily as a walnut shell]$_{A}$]$_{A,IMPLICIT\text{-}A}$]$_{E}$!

fr: [une]$_{E}$ [entreprise]$_{C}$ [hasardeuse]$_{E}$, [[à]$_{R}$ [la poursuite]$_{P}$ [d’un animal capable de couler une frégate comme une coque de noix]$_{A}$]$_{E,IMPLICIT\text{-}A}$!

The additional scene in English replaces the preposition "à" in French and add explicit information. (ScDiv79)

(46) Passage 826(eng) – Passage 776(fr):

eng: [We]$_{A}$ [have]$_{P}$ [n’t]$_{D}$ [[a]$_{E}$ [moment]$_{C}$ [[to$_{F}$ lose$_{C}$]$_{P}$]$_{E,REMOTE\text{-}A(\text{“We”}),REMOTE\text{-}A(\text{“moment”})}$]$_{A}$

fr: [[Pas$_{E}$ un$_{E}$ instant$_{C}$]$_{A}$ [à$_{F}$ perdre$_{C}$]$_{P}$]$_{H,REMOTE\text{-}A(\text{“Nous”})}$.

The verb “have” makes the English expression more explicit. However, the same annotation is possible in this case. (ScDiv80)

eng: [[Pack]$_{P}$ [as much]$_{D}$ [into my trunk]$_{A}$]$_{H}$ [as]$_{L}$ [[you]$_{A}$ [can$_{E}$]$_{P,REMOTE-C(“Pack”)}$]$_{H,REMOTE-A(“you”),IMPLICIT-A}$ [[my traveling kit, my suits, shirts, and socks]$_{A}$]$_{-H(CONT.),REMOTE-A(“you”)}$

fr: [[Serre]$_{P}$ [dans ma malle]$_{A}$ [tous mes ustensiles de voyage, des habits, des chemises, des chaussettes]$_{A}$]$_{H,IMPLICIT-A}$

The additional Scene in English says something which only implicit in French. (ScDiv81)

eng: [[What]$_{F}$! The archaeotherium, hyracotherium, oreodonts, cheiropotamus, and master’s other fossil skeletons]$_{H}$?

fr: [Quoi]$_{H}$! [les archiotherium, les hyracotherium, les oréodons, les chéropotamus et autres carcasses de monsieur]$_{H}$?

Conforming Analysis. (ScDiv82)

eng: [Anyhow]$_{L}$, [[we]$_{A}$ [’ll leave]$_{P}$ [[instructions]$_{P}$ [[to ship]$_{P}$ [the whole menagerie]$_{A}$ [to France]$_{A}$]$_{A,IMPLICIT-A}$]$_{A,REMOTE-A(“we”),IMPLICIT-A}$]$_{H}$.

fr: [D’ailleurs]$_{L}$, [[je]$_{A}$ [donnerai l’ordre]$_{P}$ [[de]$_{P-}$ [nous]$_{A}$ [expédier]$_{-P(CONT.)}$ [en France]$_{A}$ [notre ménagerie]$_{A}$]$_{A,IMPLICIT-A}$]$_{H,IMPLICIT-A}$.

In English an interpretation which split “'ll leave instructions” to two Process and thus to two Scenes is possible which is not the case in French with the expression “donnerai l'ordre” (literally “will give order”). (ScDiv83)

eng: [[Oh]$_{F}$, it’s nothing really]$_{H}$!

fr: [Oh]$_{H}$! [ce sera peu de chose]$_{H}$!

Conforming Analysis. (ScDiv84)

eng: [As]$_{F}$ [master]$_{A}$ [thinks]$_{P}$ [[best]$_{S}$]$_{A,IMPLICIT-A}$

fr: [Comme]$_{D}$ [il]$_{F}$ [conviendra]$_{P}$ [à monsieur]$_{A}$

Here the free translation leads to a structural difference. (ScDiv85)

(47) Passage 827(eng) – Passage 777(fr):

eng:[The author of a two-volume work, in quarto, on *The Mysteries of the Great Ocean Depths*]$_{A}$ [has no excuse]$_{P}$ [[for]$_{R}$ [not]$_{D}$ [setting sail]$_{P}$ [with Commander Farragut]$_{A}$]$_{A,REMOTE-A(“author”)}$

fr: [L’auteur d’un ouvrage in-quarto en deux volumes sur les Mystères des grands fonds sous-marins]$_{A}$ [ne]$_{D}$ [peut se dispenser de s’embarquer]$_{P}$ [avec le commandant Farragut]$_{A}$

The double negation in English leads to the separation in two Scenes, although a similar annotation to French can also be accepted. (ScDiv86)

(48) Passage 831(eng) – Passage 781(fr):

eng: [[For]$_{R}$ [a]$_{E}$ [fare]$_{C}$ [of twenty francs]$_{E}$]$_{A}$, [[the]$_{E}$ [vehicle]$_{C}$]$_{A}$ went down Broadway to Union Square, took Fourth Ave. to its junction with Bowery St., turned into Katrin St. and halted at Pier 34.

fr: [[Le]$_{E}$ [véhicule]$_{C}$ [[à]$_{R}$ [vingt francs]$_{A}$ [la course]$_{A}$]$_{E,IMPLICIT-S}$]$_{A}$ descendit Broadway jusqu'à Union-square, suivit Fourth-Avenue jusqu'à sa jonction avec Bowery-street, prit Katrin-street et s'arrêta à la trente-quatrième pier .

(literally: the vehicle at 20 francs the fare)

The formulation is possible only in French, what leads to a structural difference. (ScDiv87)

(49) Passage 834(eng) – Passage 784(fr):

eng: [letting]$_{P}$ [the commander]$_{A}$ [[[attend]$_{E}$ [to]$_{F}$ [getting under way]$_{C}$]$_{P}$]$_{A,REMOTE-A(\text{“commander”})}$

fr: [laissant]$_{P}$ [le commandant]$_{A}$ [[aux]$_{R+E}$ [soins]$_{C}$ [de son appareillage]$_{E}$]$_{A}$

This Scene Divergence is due to the use of a verb in English instead of a noun in French (both for the secondary verb and the main relation). A different interpretation of "appareillage" in French ("equipment" instead of "setting sail") leads also to such a difference. (ScDiv88)

(50) Passage 825(eng) – Passage 785(fr):

eng: [with]$_{R}$ [superheating]$_{E}$ [equipment]$_{C}$ [[that]$_{R}$ [allowed]$_{P}$ [the tension of its steam]$_{A}$ [[to build]$_{P}$ [to seven atmospheres]$_{A}$]$_{A,REMOTE-A(\text{“tension”})}$]$_{E,REMOTE-A(\text{“equipment”})}$

fr: [d']$_{R}$ [appareils]$_{C}$ [surchauffeurs]$_{E}$, [[qui]$_{R}$ [permettaient de porter]$_{P}$ [à sept atmosphères]$_{A}$ [la tension de sa vapeur]$_{A}$]$_{E,REMOTE-A(\text{“appareils”})}$

It is a structural difference but the same annotation is also possible. (ScDiv89)

(51) Passage 838(eng) – Passage 788(fr):

eng: [[to watch]$_{P}$ [[the]$_{E}$ [preparations]$_{C}$ [[for]$_{R}$ [[getting under way]$_{P}$]$_{C,IMPLICIT-A}$]$_{E}$]$_{A}$]$_{H,REMOTE-A(\text{“I”})}$

fr: [afin]$_{L}$ [[de suivre]$_{P}$ [[les]$_{E}$ [préparatifs]$_{C}$ [de$_{R}$ l'$_{E}$ appareillage$_{C}$]$_{E}$]$_{A}$]$_{H,REMOTE-A(\text{“je”})}$

Same difference as in Passage 834(eng) – Passage 784(fr) but concerning only the main relation. (ScDiv90)

(52) Passage 839(eng) – Passage 789(fr):

eng: [Just then]$_{L}$ [[Commander Farragut]$_{A}$ [was giving orders]$_{P}$ [[to cast off]$_{P}$ [the last moorings holding the *Abraham Lincoln* to its Brooklyn pier]$_{A}$]$_{A,IMPLICIT-A}$]$_{H,IMPLICIT-A}$

fr: [[À ce moment]$_{D}$, [le commandant Farragut]$_{A}$ [faisait larguer]$_{P}$ [les dernières amarres qui retenaient l'Abraham-Lincoln à la pier de Brooklyn]$_{A}$]$_{H}$.

Here the free translation add information and make the addition of a new Participant obligatory. (ScDiv91)

(53) Passage 842(eng) – Passage 792(fr):

eng: [with]$_{R}$ [increasing]$_{E,REMOTE-A(“speed”)}$ [speed]$_{C}$

fr: [avec]$_{R}$ [une]$_{E}$ [rapidité]$_{C}$ [croissante]$_{E}$

Conforming analysis. (ScDiv92)

eng: [the *Abraham Lincoln*]$_{A}$ [moved out]$_{P}$ [majestically]$_{D}$ [[amid]$_{R}$ [a]$_{E}$ [spectator-laden]$_{E}$ [escort]$_{C}$ [of some 100 ferries and tenders]$_{E}$]$_{A}$.

fr: [l’Abraham-Lincoln]$_{A}$ [s’avança]$_{P}$ [majestueusement]$_{D}$ [[au milieu d’]$_{R}$ [[une centaine]$_{E}$ [de ferry-boats et de tenders]$_{C}$ [[chargés]$_{P}$ [de spectateurs]$_{A}$]$_{E,REMOTE-A(“de ferry-boats et de tenders”)}$, [[qui]$_{R}$ [lui]$_{A}$ [faisaient$_{F}$ cortège$_{C}$]$_{P}$]$_{E,REMOTE-A(“de ferry-boats et de tenders”)}$]$_{C}$]$_{A}$.

First difference: “spectator-laden” vs “chargé de spectateurs”. It's a difference between an attribute and the description of a state but the same annotation is also possible. (ScDiv93)

Second difference: The word "escort" is used in English as a noun instead of a verb in French but also as a Participant instead of a Process. (ScDiv94)

(54) Passage 844(eng) – Passage 794(fr):

eng: [[changing]$_{P}$ [speed]$_{A}$]$_{H,REMOTE-A(“it”)}$

fr: [[modifiant]$_{P}$ [[sa]$_{A}$ [marche]$_{P}$]$_{A}$]$_{H,REMOTE-A(L'Abraham Lincoln)}$

The English translation doesn't use a Scene (free translation). However, it adds information comparing to the French source. (ScDiv95)

(55) Passage 845(eng) – Passage 795(fr):

eng: [The escort of boats and tenders still followed the frigate]$_{H}$ [and]$_{L}$ [[only]$_{D}$ [left]$_{P}$ [us]$_{A}$]$_{H,REMOTE-A(“escort”)}$ [when]$_{L}$ [[we]$_{A}$ [came]$_{P}$ [abreast of the lightship, whose two signal lights mark the entrance of the narrows to Upper New York Bay]$_{A}$]$_{H}$.

fr: [Le cortège des boats et des tenders suivait toujours la frégate]$_{H}$, [et]$_{L}$ [[il]$_{A}$ [ne]$_{D-}$ [la]$_{A}$ [quitta]$_{P}$ [qu’]$_{D(CONT.)}$ [à la hauteur du light-boat dont les deux feux marquent l’entrée des passes de New York]$_{A}$]$_{H}$.

Here the verb "came" is implicit in French where only the preposition “à” is used. (ScDiv96)

Chapter 4:

(56) Passage 881(eng) – Passage 849(fr):

eng: [[Voluntary]$_{E}$ [[watches]$_{P}$]$_{C,IMPLICIT-A}$ [from the crosstrees of the topgallant sail]$_{E}$]$_{A}$ [were self-imposed]$_{P}$ [by more than one]$_{A}$

fr: [Plus d’un]$_{A}$ [s’imposait]$_{P}$ [un quart volontaire]$_{A}$ [dans les barres de perroquet]$_{A}$

The additional Scene in English add information and clarify the French expression. (ScDiv97)

(57) Passage 882(eng) – Passage 850(fr):

eng: [Besides]$_{L}$, [[Commander Farragut]$_{A}$ [had mentioned]$_{P}$ [that]$_{F}$ [[a certain sum of $2,000.00]$_{A}$ [was waiting]$_{P}$ [[for]$_{R}$ [the]$_{E}$ [man]$_{C}$ [[who]$_{R}$ [first]$_{D}$ [sighted]$_{P}$ [the animal]$_{A}$]$_{E}$]$_{A}$]$_{A}$]$_{H}$, [[be]$_{S}$ [he]$_{A}$ [cabin boy or sailor, mate or officer]$_{A}$]$_{H}$.

fr: [D'ailleurs]$_{L}$, [[le commandant Farragut]$_{A}$ [parlait]$_{P}$ [[d'une certaine somme de deux mille dollars]$_{C}$, [[réservée]$_{P}$ [[à]$_{R}$ [quiconque]$_{R}$, [mousse ou matelot, maître ou officier]$_{E}$, [[signalerait]$_{P}$ [l'animal]$_{A}$]$_{E,IMPLICIT-A}$]$_{A,IMPLICIT-C}$]$_{E,REMOTE-A("deux-mille dollars")}$]$_{A}$]$_{H}$.

It is a structural difference which is related to the distinction State description/Attribute. (ScDiv98)

(58) Passage 883(eng) – Passage 851(fr):

eng: [[The lone rebel among us]$_{A}$ [was]$_{S}$ [Conseil]$_{A}$]$_{H}$, [who]$_{L}$ [[seemed]$_{P-}$ [utterly]$_{D}$ [uninterested]$_{-P(CONT.)}$ [in the question exciting us]$_{A}$]$_{H}$

fr: [Seul entre tous]$_{D}$, [Conseil]$_{A}$ [protestait]$_{P}$ [par son indifférence touchant la question qui nous passionnait]$_{A}$

It is a structural difference. There is an additional State ("was") in English. Furthermore, the unformation is distributed differently in the two languages. (ScDiv99)

(59) Passage 884(eng) – Passage 852(fr):

eng: [Commander Farragut]$_{A}$ [had]$_{P-}$ [carefully]$_{D}$ [equipped]$_{-P(CONT.)}$ [his ship]$_{A}$ [[with]$_{R}$ [all]$_{E}$ [the]$_{E}$ [gear]$_{C}$ [[needed$_{E}$ to$_{F}$ fish$_{C}$]$_{P}$ [for a gigantic cetacean]$_{A}$]$_{E,REMOTE-A("gear"),IMPLICIT-A}$]$_{A}$.

fr: [le commandant Farragut]$_{A}$ [avait]$_{P-}$ [soigneusement]$_{D}$ [pourvu]$_{-P(CONT.)}$ [son navire]$_{A}$ [[d']$_{R}$ [appareils]$_{C}$ [[propres]$_{S}$ [[à pêcher]$_{P}$ [le gigantesque cétacé]$_{A}$]$_{A,IMPLICIT-A}$]$_{E,REMOTE-A("appareils")}$]$_{A}$.

It is a lexical difference but the same annotation is possible. (ScDiv100)

eng: [blunderbuss]$_{C}$ [[firing]$_{P}$ [barbed$_{E}$ arrows$_{C}$]$_{A}$]$_{E,REMOTE-A("blunderbuss")}$

fr: [flèches]$_{C}$ [barbelées]$_{E}$ [des$_{R+E}$ espingoles$_{C}$]$_{E}$

There is an inversion of the Centers. The additional Scene in English add information. (ScDiv101)

eng: [[very]$_{D}$ [heavy]$_{S}$ [of$_{R}$ barrel$_{C}$]$_{A}$]$_{C}$ [and]$_{N}$ [[narrow]$_{S}$ [of$_{R}$ bore$_{C}$]$_{A}$]$_{C,REMOTE-D("very")}$

fr: [[[très]$_{E}$ - [épais]$_{C}$ [de]$_{R}$]$_{E}$ [parois]$_{C}$]$_{C}$, [[[très]$_{E}$ - [étroit]$_{C}$ [d']$_{R}$]$_{E}$ [âme]$_{C}$]$_{C}$

Conforming analysis (twice). (ScDiv102 and ScDiv103)

eng: [[Made]$_{P}$ [in$_{R}$ America$_{C}$]$_{A}$]$_{E,REMOTE-A("instrument"),IMPLICIT-A}$

fr: [[d']$_{R}$ [origine]$_{C}$ [américaine]$_{E}$]$_{E}$

The additional Scene in English add information. (ScDiv104)

(60) Passage 886(eng) – Passage 854(fr):

eng: [[Gifted with uncommon manual ability]$_S$]$_{H,REMOTE\text{-}A(\text{“Ned Land”})}$, [[Ned Land]$_A$ [was]$_S$ [a Canadian who had no equal in his dangerous trade]$_A$]$_H$.

fr: [[Ned Land]$_A$ [était]$_S$ [[un]$_E$ [Canadien]$_C$, [[d']$_R$ [une]$_E$ [habileté de main]$_C$ [[peu commune]$_C$ [et]$_N$ [qui ne connaissait pas d'égal dans son périlleux métier]$_{C,REMOTE\text{-}A(\text{“habileté”})}$]$_E$]$_E$]$_A$]$_H$.

There are two possible interpretations in French. Choosing the closest to the English translation, the main difference is a verb/preposition difference. Here the additional Scene in English is more stylistic than informative. (ScDiv105)

eng: [Dexterity, coolness, bravery, and cunning]$_A$ [were]$_S$ [[virtues]$_C$ [[he]$_A$ [possessed]$_P$ [to a high degree]$_D$]$_E$]$_A$

fr: [Adresse et sang-froid, audace et ruse]$_A$, [il]$_A$ [possédait]$_P$ [ces qualités]$_A$ [à un degré supérieur]$_D$

It is a structural difference due to a free translation which avoid the repetition present in French..However, it is a stylistic difference. It doesn't affect meaning. (ScDiv106)

(61) Passage 887(eng) – Passage 855(fr):

eng: [he]$_A$ [[was]$_F$ [[powerfully]$_E$ [built]$_C$]$_C$]$_S$

fr: [vigoureusement]$_E$ [bâti]$_C$

It is a State description/ Attribute difference. However, the same annotation is possible. (ScDiv107)

eng: [serious]$_S$ [[in]$_R$ [manner]$_C$]$_{A,REMOTE\text{-}E(\text{“he”})}$

fr: [l']$_E$ [air]$_C$ [grave]$_E$

Here also, it is a State description/Attribute difference. The same formulation is not possible in English. (ScDiv108)

(62) Passage 888(eng) – Passage 856(fr):

eng: [Commander Farragut]$_{H\text{-}}$, [to my thinking]$_G$, [has made a wise move]$_{\text{-}H(\text{CONT.})}$ [in hiring on this man]$_H$.

fr: [[Je]$_A$ [crois]$_P$ [que]$_F$ [le commandant Farragut avait sagement fait]$_H$ [d']$_L$ [engager cet homme à son bord]$_H$.

The English formulation permits an annotation as a Ground and not as a Scene. (ScDiv109)

eng: [[[With]$_R$ [his]$_E$ [eye]$_C$]$_C$ [and]$_N$ [[his]$_E$ [throwing$_P$]$_{E,REMOTE\text{-}A(\text{“arm”}),REMOTE\text{-}A(\text{“he”})}$[arm]$_C$]$_{C,REMOTE\text{-}R(\text{“with”})}$]$_A$, [he]$_A$ [was worth]$_P$ [the whole crew]$_A$ [all by himself]$_D$.

fr: [Il]$_A$ [valait]$_P$ [tout l'équipage]$_A$, [à lui seul]$_D$, [pour l'oeil et le bras]$_A$.

The English translation adds another Scene providing more information and clarification. (ScDiv110)

(63) Passage 889(eng) – Passage 857(fr):

eng: [[To$_F$ say$_C$]$_P$ [Canadian]$_A$]$_{A,IMPLICIT-A}$ [is]$_S$ [[to$_F$ say$_C$]$_P$ [French]$_A$]$_{A,IMPLICIT-A}$

fr: [[Qui]$_F$ [dit]$_P$ [Canadien]$_A$]$_{H,IMPLICIT-A}$, [[dit]$_P$ [Français]$_A$]$_{H,IMPLICIT-A}$

In French ,the relation between the two Scenes is implicit. They are two parallel Scenes. In English the verb "is" is used, combining them to a single parallel Scene. (ScDiv111)

(64) Passage 890(eng) – Passage 858(fr):

eng: [I]$_A$ [felt]$_P$ [[I]$_A$ [[was]$_F$ [hearing]$_C$]$_P$ [some Canadian Homer reciting his *Iliad* of the High Arctic regions]$_A$]$_A$.

fr: [[je]$_A$ [[croyais]$_E$ [écouter]$_C$]$_P$ [quelque Homère canadien]$_A$]$_H$, [chantant l'Iliade des régions hyperboréennes]$_{H,REMOTE-A("Homère")}$

It is a structural differnce where a main relation in English corresponds to a secondary verb in French. (ScDiv112)

(65) Passage 891(eng) – Passage 859(fr):

eng: [I]$_A$ [ask]$_{P-}$ [only]$_D$ [to live]$_{-P(CONT.)}$ [100 years more]$_A$

fr: [je]$_A$ [ne]$_{D-}$ [demande]$_P$ [qu']$_{-D(CONT.)}$ [[à vivre]$_P$ [cent ans encore]$_D$]$_{A,REMOTE-A("je")}$

Conforming analysis. (ScDiv113)

(66) Passage 892(eng) – Passage 860(fr):

eng: [what]$_A$ [were]$_S$ [[Ned Land's]$_E$ [views]$_C$ [on this question of a marine monster]$_E$]$_A$?

fr: [quelle]$_A$ [était]$_S$ [[l'opinion]$_P$ [de Ned Land]$_A$ [sur la question du monstre marin]$_A$]$_A$?

Conforming analysis. (ScDiv114)

eng: [He]$_A$ [avoided]$_{P-}$ [even]$_D$ [dealing]$_{-P(CONT.)}$ [with the subject]$_A$

fr: [Il]$_A$ [évitait]$_P$ [même]$_D$ [[de traiter]$_P$ [ce sujet]$_A$]$_{A,REMOTE-A("Il")}$

Conforming analysis. (ScDiv115)

(67) Passage 893(eng) – Passage 861(fr):

eng: [Before]$_L$ [[eight days]$_A$ [were out]$_P$]$_H$, [the *Abraham Lincoln* would plow the waves of the Pacific]$_H$.

fr: [[Avant huit jours]$_D$, [l'*Abraham-Lincoln*]$_A$ [sillonnerait]$_P$ [les flots du Pacifique]$_A$]$_H$.

Here the information provided in the State in English is implicit in French where the expression is analyzed as an Adverbial. A similar formulation to French is not possible in English. Furthermore, a similar formulation to the English translation is not possible in French. (ScDiv116)

(68) Passage 894(eng) – Passage 862(fr):

eng: [I]$_{A}$ [weighed]$_{P}$ [[our$_{E}$ expedition$_{C}$'s$_{R}$]$_{E}$ [various]$_{E}$ [[chances]$_{C}$ [[for$_{R}$ success$_{C}$]$_{C}$ [or]$_{N}$ [failure$_{C}$]$_{C,REMOTE\text{-}R(\text{“for”})}$]$_{E}$]$_{C}$]$_{A}$.

fr: [j']$_{A}$ [examinai]$_{P}$ [[les]$_{E}$ [diverses]$_{E}$ [chances]$_{C}$ [[[de$_{R}$ succès$_{C}$]$_{C}$ [ou]$_{N}$ [d'$_{R}$ insuccès$_{C}$]$_{C}$]$_{P}$ [de$_{R}$ notre$_{E}$ expédition$_{C}$]$_{A}$]$_{E}$]$_{A}$.

Conforming analysis. (ScDiv117)

(69) Passage 896(eng) – Passage 864(fr):

eng: [slapped]$_{P}$ [his broad]$_{A}$ [forehead]$_{A}$ [[[in]$_{R}$ [one]$_{C}$ [of]$_{R}$]$_{E}$ [[his]$_{E}$ [standard]$_{E}$ [gestures]$_{C}$]$_{C}$]$_{D}$

fr: [frappa]$_{P}$ [de sa main]$_{A}$ [son large front]$_{A}$ [[par]$_{R}$ [un]$_{E}$ [geste]$_{C}$ [[qui]$_{R}$ [lui]$_{A}$ [était habituel]$_{S}$]$_{E,REMOTE\text{-}A(\text{“geste”})}$]$_{D}$

State description / Attribute. Here the same annotation in the two languages is not possible. (ScDiv118)

(70) Passage 897(eng) – Passage 865(fr):

eng: [But]$_{L}$ [[Ned]$_{A}$, [you]$_{F}$ ['re]$_{S}$ [[a professional whaler]$_{C}$, [[a]$_{E}$ [man]$_{C}$ [[familiar]$_{S}$ [with all the great marine mammals]$_{A}$]$_{E,REMOTE\text{-}A(\text{“man”})}$]$_{C}$]$_{A}$]$_{H}$ — [[your mind]$_{A}$ [should]$_{P\text{-}}$ [easily]$_{D}$ [accept]$_{\text{-}P(CONT.)}$ [this hypothesis of an enormous cetacean]$_{A}$]$_{H}$, [and]$_{L}$ [[you]$_{A}$ [ought to be the last one to doubt]$_{P}$ [it]$_{A}$ [under these circumstances]$_{A}$]$_{H}$!

fr: [Cependant]$_{L}$, [[[Ned]$_{C}$, [vous]$_{F}$, [un baleinier de profession]$_{E}$, [vous]$_{F}$ [[qui]$_{R}$ [êtes familiarisé]$_{S}$ [avec les grands mammifères marins]$_{A}$]$_{E,REMOTE\text{-}A(\text{“Ned”})}$,[vous]$_{F}$ [[dont]$_{R}$ [[l']$_{E}$ [imagination]$_{C}$]$_{A,REMOTE\text{-}E(\text{“Ned”})}$ [doit]$_{P\text{-}}$ [aisément]$_{D}$ [accepter]$_{\text{-}P(CONT.)}$ [l'hypothèse de cétacés énormes]$_{A}$]$_{E}$, [vous]$_{F}$]$_{A}$ [devriez être le dernier à douter]$_{P}$ [en de pareilles circonstances]$_{A}$]$_{H}$!

The English translation use the expressions which are part of the Subject in French as Objects. This adds a Scene in the case of "you're a professional whaler". This translation decreases the insistence present in French but doesn't change the meaning. (ScDiv119)

(71) Passage 898(eng) – Passage 866(fr):

eng: [[The common man]$_{A}$ [may]$_{P\text{-}}$ [still]$_{D}$ [believe]$_{\text{-}P(CONT.)}$ [in comets crossing outer space, or in prehistoric monsters living at the earth's core]$_{A}$]$_{H}$.

fr: [Que]$_{L}$ [[[le vulgaire]$_{A}$ [croie]$_{P}$ [à des comètes extraordinaires qui traversent l'espace, ou à l'existence de monstres antédiluviens qui peuplent l'intérieur du globe]$_{A}$]$_{A}$, [passe]$_{P}$ [encore]$_{D}$]$_{H}$

The additional main relation "passe" in French is partially covered by the secondary verb "may" in English. (ScDiv120)

eng: [no]$_{D}$ [matter]$_{P}$ [[how]$_{D}$ [[[powerful]$_{C}$ [and]$_{N}$ [well$_{E}$ armed$_{C}$]$_{C}$]$_{C}$]$_{P\text{-}}$ [they]$_{A}$ [[were]$_{S}$]$_{\text{-}P(CONT.)}$]$_{A}$

fr: [[[si$_{E}$ puissants$_{C}$]$_{C}$ [et]$_{N}$ [si$_{E}$ bien$_{E}$ armés$_{C}$]$_{C}$]$_{C}$]$_{S\text{-}}$ [qu']$_{F}$ [ils]$_{A}$ [fussent]$_{\text{-}S(CONT.)}$

Here the main relation, this time in English, says explicitly the information provided by the Elaborator "si" (which takes part in another main relation) in French. (ScDiv121)

(72) Passage 899(eng) – Passage 867(fr):

eng: [[Wooden ships]$_{A}$ [maybe]$_{D}$]$_{H,REMOTE\text{-}A(\text{“tusks”}),REMOTE\text{-}P(\text{“run through”})}$

fr: [[[Des navires en bois]$_{A}$]$_{A,REMOTE\text{-}P(\text{“dent”}),REMOTE\text{-}P(\text{“traversés”}),REMOTE\text{-}D(\text{“de part rn part”})}$]$_{A}$, [c']$_{F}$ [est possible]$_{S}$]$_{H}$

Here the main relation in French is replaced by an Adverbial in English. (ScDiv122)

eng: [The devilfish is merely a mollusk]$_{H}$, [and]$_{L}$ [even this name hints at its semiliquid flesh]$_{H}$, [because]$_{L}$ [it's Latin meaning soft one]$_{H}$.

fr: [La poulpe n'est qu'un mollusque]$_{H}$, [et]$_{L}$ [ce nom même indique le peu de consistance de ses chairs]$_{H}$.

The English translation adds a third parallel Scene for explanation and clarification. This addition can be explaned by the fact French is closer to Latin than English. (ScDiv123)

(73) Passage 900(eng) – Passage 868(fr):

eng: “[So]$_{L}$, [Mr. Naturalist]$_{H}$,” [Ned Land continued in a bantering tone]$_{H}$, “[[you]$_{A}$ [’ll]$_{P\text{-}}$ [just]$_{D}$ [keep on believing]$_{\text{-}P(CONT.)}$ [in the existence of some enormous cetacean]$_{A}$]$_{H}$...?”

fr: [Alors]$_{L}$, [[monsieur le naturaliste]$_{A}$]$_{H\text{-}}$, [reprit Ned Land d’un ton assez narquois]$_{H}$, [[vous]$_{F}$ [persistez à admettre]$_{P}$ [l’existence d’un énorme cétacé]$_{A}$]$_{\text{-}H(CONT.)}$…?

“Mr. Naturalist” is annotated in English as a parallel Scene unanalyzable: Conforming Analysis. (ScDiv124)

eng: [the]$_{E}$ [existence]$_{C}$

fr: [[l’]$_{E}$ [existence]$_{C}$]$_{S}$

Conforming Analysis. (ScDiv125)

eng: [with]$_{R}$ [a]$_{E}$ [powerful]$_{E}$ [constitution]$_{C}$

fr: [[[puissamment]$_{E}$ [organisé]$_{C}$]$_{S}$]$_{C,REMOTE\text{-}A(\text{“mammifère”})}$

Here, the free translation use a paraphrase creating both structural and lexical differences. (ScDiv126)

eng: [d']$_{R}$ [une]$_{E}$ [défense]$_{C}$ [cornée]$_{E}$ [[dont]$_{R}$ [la force de pénétration]$_{A}$ [est extrême]$_{S}$]$_{E}$.

fr: [with]$_{R}$ [a]$_{E}$ [tusk]$_{C}$ [[made]$_{P}$ [of horn]$_{A}$]$_{E,IMPLICIT\text{-}A}$ [[that]$_{R}$ [has]$_{P}$ [[tremendous]$_{S}$ [penetrating power]$_{A}$]$_{A}$]$_{E,REMOTE\text{-}A(\text{“tusk”})}$

First difference: The expression “made of horn” in the English translation add information. It is also an Action/Attribute difference. (ScDiv127)

Second difference: The preposition “dont” in French replaces the verb “has” in English. (ScDiv128)

(74) Passage 903(eng) - Passage 871(fr):

eng: [“Oh really?”]$_{H}$ [Ned said]$_{H}$, [[[tipping]$_{E}$]$_{P}$- [me]$_{A}$ [[a$_{E}$ wink$_{C}$]$_{C}$]$_{\text{-P(CONT.)}}$]$_{\text{H,REMOTE-A(“Ned”).}}$

fr: [Vraiment?]$_{H}$ [dit Ned]$_{H}$ [qui]$_{L}$ [[me]$_{A}$ [regardait]$_{P}$]$_{\text{H,REMOTE-A(“Ned”)}}$ [[en$_{F}$ clignant$_{C}$]$_{P}$ [de$_{R}$ l’$_{E}$ œil$_{C}$]$_{A}$]$_{\text{H,REMOTE-A(“Ned”)}}$

(literally: “... who was looking at me tipping a wink”)

Here the English translation skips on one of the actions described in French (“to look at”). (ScDiv129)

(75) Passage 904(eng) – Passage 872(fr):

eng: “[You]$_{A}$ [can$_{E}$ make$_{C}$]$_{P}$ [figures]$_{A}$ [[do]$_{P}$ [[anything]$_{A}$ [you]$_{A}$ [want]$_{P}$]$_{A}$]$_{\text{A,REMOTE-A(“figures”)}}$!”

fr: [On]$_{A}$ [fait]$_{P}$ [[ce]$_{F}$ [qu’]$_{F}$ [on]$_{A}$ [veut$_{E}$]$_{\text{P,IMPLICIT-C(“fait”)}}$]$_{\text{A,IMPLICIT-A}}$ [avec$_{R}$ les$_{E}$ chiffres$_{C}$]$_{A}$!

It is a structural difference. The English translation transforms the object into a subject. (ScDiv130)

eng: [Well then]$_{L}$

fr: [Eh bien]$_{H}$

Conforming analysis. (ScDiv131)

eng: [the$_{E}$ pressure$_{C}$ of$_{R}$]$_{E}$ [one$_{E}$ more$_{E}$ atmosphere$_{C}$]$_{C}$

fr: [une]$_{E}$ [pression]$_{C}$ [[égale]$_{S}$ [[à]$_{R}$ [celle]$_{F}$ [de$_{R}$ l’$_{E}$ atmosphère$_{C}$]$_{E}$]$_{\text{A,REMOTE-C(“pression”)}}$]$_{\text{E,REMOTE-A(“pression”)}}$

Here the main relation “égale” (“equal”) in French is replaced by a preposition in English. (ScDiv132)

eng: [[is]$_{F}$ [tantamount]$_{E}$ [to]$_{F}$ [saying]$_{C}$]$_{S}$

fr: [équivaut]$_{P}$ [[à$_{F}$ dire$_{C}$]$_{P}$]$_{\text{A,IMPLICIT-A}}$

It is a lexical difference (adjective vs verb) that leads a different annotation: secondary verb vs main relation. (ScDiv133)

(76) Passage 905(eng) – Passage 873(fr):

eng: - [Et]$_{L}$ [comme]$_{L}$ [en réalité la pression atmosphérique est un peu supérieure au poids d’un kilogramme par centimètre carré]$_{H}$, [vos dix-sept mille centimètres carrés supportent en ce moment une pression de dix-sept mille cinq cent soixante-huit kilogrammes]$_{H}$.

fr: “[Yes]$_{H}$, [and]$_{L}$ [since]$_{L}$ [the atmosphere’s pressure actually weighs slightly more than one kilogram per square centimeter]$_{H}$, [your 17,000 square centimeters are tolerating 17,568 kilograms at this very moment]$_{H}$.”

In French the affirmative response (yes) is implicit. It also could be analyzed in English as F. (ScDiv134)

(77) Passage 907(eng) – Passage 875(fr):

eng: [[unconsciously]$_{D}$ [echoing]$_{P}$ [a famous catchphrase of the scientist Arago]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Canadian”})}$

fr: [en reproduisant]$_{H\text{-}}$ [sans]$_{L}$ [le$_{A}$ savoir$_{P}$]$_{H,REMOTE\text{-}A(\text{“Canadien”})}$ [une célèbre réponse d'Arago]$_{\text{-}H(CONT.),REMOTE\text{-}A(\text{“Canadien”})}$

Here a parallel Scene and a Linker are replaced in the English translation by an Adverbial. (ScDiv135)

(78) Passage 908(eng) – Passage 876(fr):

eng: [But]$_{L}$ [[this reply]$_{A}$ [proved]$_{P}$ [[nothing]$_{C}$, [[other]$_{R}$ [than]$_{F}$ [how]$_{D}$ [bullheaded]$_{S\text{-}}$ [the harpooner]$_{A}$ [could be]$_{\text{-}S(CONT.)}$]$_{E}$]$_{A}$]$_{H}$.

fr: [Mais]$_{L}$ [[cette réponse]$_{A}$ [prouvait]$_{P}$ [l'obstination du harponneur]$_{A}$]$_{H}$ [et]$_{L}$ [[pas]$_{D}$ [autre chose]$_{A}$]$_{H,REMOTE\text{-}A(\text{“ réponse”}),REMOTE\text{-}P(\text{“ prouvait”})}$

First difference: The English translation use a Scene to paraphrase the word “obstination”(“obstinacy”) in French. (ScDiv136)

Second difference: The different construction add a Scene in French : “et pas autre chose” instead of “nothing other than...”. However, the same annotation is possible. (ScDiv137)

eng: [[a]$_{E}$ [hole]$_{C}$['s]$_{R}$]$_{E}$ [existence]$_{C}$

fr: [l'$_{E}$ existence$_{C}$]$_{S}$ [du$_{R+E}$ trou$_{C}$]$_{A}$

Conforming analysis. (ScDiv138)

eng: [by]$_{R}$ [the]$_{E}$ [perforating]$_{E}$ [tool]$_{C}$ [of some animal]$_{E}$

fr: [à]$_{R}$ [l']$_{E}$ [outil]$_{C}$ [[perforant]$_{P}$]$_{E,REMOTE\text{-}A(\text{“outil”})}$ [d'un animal]$_{E}$

Conforming analysis. (ScDiv139)

(79) Passage 909(eng) – Passage 877(fr):

eng: [Now]$_{L}$, [[for all the reasons put forward to this point]$_{A}$, [I]$_{A}$ [believed]$_{P}$ [that]$_{F}$ [[this animal]$_{A}$ [was a member]$_{S}$ [of the branch Vertebrata, class Mammalia, group Pisciforma, and finally, order Cetacea]$_{A}$]$_{A}$]$_{H}$.

fr: [Or]$_{L}$, [[suivant moi, et toutes les raisons précédemment déduites]$_{A}$, [cet animal]$_{A}$ [appartenait]$_{P}$ [à l'embranchement des vertébrés, à la classe des mammifères, au groupe des pisciformes, et finalement à l'ordre des cétacés]$_{A}$]$_{H}$.

In the English translation the additional Scene (“I believed...”) replaces the expression “selon moi” (“according to me”) in French. (ScDiv140)

eng: [[As for the family in which it would be placed (baleen whale, sperm whale, or dolphin), the genus to which it belonged, and the species in which it would find its proper home, these questions]$_{A}$ [had to be left]$_{P}$ [for later]$_{D}$]$_{H,IMPLICIT-A.}$

fr: [[Quant à la famille dans laquelle il prenait rang, baleine, cachalot ou dauphin, quant au genre dont il faisait partie, quant à l'espèce dans laquelle il convenait de le ranger]$_{A}$, [c']$_{F}$ [était]$_{S}$ [[une]$_{E}$ [question]$_{C}$ [[à élucider]$_{P}$ [ultérieurement]$_{D}$]$_{E,REMOTE-A("question"),IMPLICIT-A}$]$_{A}$]$_{H}$.

This a Subject/Object difference. The additional main relation in French is "était" ("was"). (ScDiv141)

eng: [[[To answer]$_{P}$ [them]$_{A}$]$_{A,IMPLICIT-A}$, [called for]$_{P}$ [[dissecting]$_{P}$ [this unknown monster]$_{A}$]$_{A,IMPLICIT-A}$]$_{H}$

fr: [Pour]$_{L}$ [[la]$_{A}$ [résoudre]$_{P}$]$_{H,IMPLICIT-A}$, [[il]$_{F}$ [fallait disséquer]$_{P}$ [ce monstre inconnu]$_{A}$]$_{H,IMPLICIT-A}$

eng: [[[to dissect]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$ [called for]$_{P}$ [[catching]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$]$_{H}$

fr: [pour]$_{L}$ [[le]$_{A}$ [disséquer]$_{P}$]$_{H,IMPLICIT-A}$ [[le]$_{A}$ [prendre]$_{P}$]$_{H,IMPLICIT-A}$,

eng: [[[to catch]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$ [called for]$_{P}$ [[harpooning]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$]$_{H}$

fr: [pour]$_{L}$ [[le]$_{A}$ [prendre]$_{P}$]$_{H,IMPLICIT-A}$ [[le]$_{A}$ [harponner]$_{P}$]$_{H,IMPLICIT-A}$

eng: [[[to harpoon]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$ [called for]$_{P}$ [[sighting]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$]$_{H}$

fr: [pour]$_{L}$ [[le]$_{A}$ [harponner]$_{P}$]$_{H,IMPLICIT-A}$ [[le]$_{A}$ [voir]$_{P}$]$_{H,IMPLICIT-A}$

eng: [[[to sight]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$ [called for]$_{P}$ [[encountering]$_{P}$ [it]$_{A}$]$_{A,IMPLICIT-A}$]$_{H}$

fr: [pour]$_{L}$ [[le]$_{A}$ [voir]$_{P}$]$_{H,IMPLICIT-A}$ [[le]$_{A}$ [rencontrer]$_{P}$]$_{H}$

In the five cases above, a verb ("called for") is used in English whereas a Linker ("pour") as well a secondary verb ("fallait") are used in French. Indeed, in the last four examples, "fallait" can be added as a Remote-Elaborator inside the Process. (ScDiv142, ScDiv143, ScDiv144, ScDiv145 and ScDiv146)

Chapter 5:

(80) Passage 969(eng) – Passage 912(fr):

eng: [[Off]$_{S}$ [the Falkland Islands]$_{A}$ [on June 30]$_{D}$]$_{H,REMOTE-A("frigate")}$, [[the frigate]$_{A}$ [came in contact]$_{P}$ [with a fleet of American whalers]$_{A}$]$_{H}$

fr: [[Au large des Malouines]$_{A}$, [le 30 juin]$_{D}$, [la frégate]$_{A}$ [communiqua]$_{P}$ [avec des baleiniers américains]$_{A}$]$_{H}$

The lexical difference permits to annotate the English expression as two Scenes and the French expression as a single Scene. However, the same annotation is possible. (ScDiv147)

(81) Passage 972(eng) – Passage 915(fr):

eng: [Indeed]$_{L}$, [[were$_{F}$]$_{P-}$ [we]$_{A}$ [likely$_{E}$ to$_{F}$ encounter$_{C}$]$_{-P(CONT.)}$ [the narwhale]$_{A}$ [in such a cramped strait]$_{A}$]$_{H}$?

fr: [Et]$_{L}$ [en effet]$_{L}$, [[était]$_{S-}$ - [il]$_{F}$ [probable]$_{-S(CONT.)}$ [que]$_{F}$ [[l']$_{F}$ [on]$_{A}$ [pût rencontrer]$_{P}$ [le narwal]$_{A}$ [dans ce détroit resserré]$_{A}$]$_{A}$]$_{H}$?

The lexical and structural difference permits a different annotation but the same annotation is as also possible. (ScDiv148)

(82) Passage 976(eng) – Passage 919(fr):

eng: [[Snatching]$_{P}$ [only]$_{D}$ [a few minutes]$_{A}$ [[for]$_{R}$ [meals$_{P}$]$_{C,REMOTE-A("I")}$]$_{A}$]$_{H,REMOTE-A("I")}$

fr: [[Ne]$_{D-}$ [donnant]$_{P}$ [que]$_{-D(CONT.)}$ [quelques minutes]$_{A}$ [au repas]$_{A}$]$_{H,REMOTE-A("je")}$

Conforming Analysis. (ScDiv149)

eng: [[a few hours]$_{A}$ [[for]$_{R}$ [sleep$_{P}$]$_{C,REMOTE-A("I")}$]$_{A}$]$_{H,REMOTE-A("I"),REMOTE-P("snatching"),REMOTE-D("only")}$

fr: [[quelques heures]$_{A}$ [au sommeil]$_{A}$]$_{H,REMOTE-A("je"),REMOTE-P("donnant"),REMOTE-D("ne que")}$

Conforming Analysis. The fact that the same word can be a noun or a verb in English, differently from French can influence here the annotation. (ScDiv150)

eng: [[come rain]$_{S}$]$_{H}$ [or]$_{L}$ [[come shine]$_{S}$]$_{H}$

fr: [[indifférent]$_{S}$ [[au soleil]$_{C}$ [ou]$_{N}$ [à la pluie]$_{C}$]$_{A}$]$_{H,REMOTE-A("je")}$

The free translation in English adds a Scene but cancels the Participant "je" ("I") and makes the expression less explicit. (ScDiv151)

(83) Passage 977(eng) – Passage 920(fr):

eng: [[race]$_{P}$ [after the animal sighted]$_{A}$]$_{H,REMOTE-A("Abraham Lincoln")}$, [[only]$_{D}$ [to find]$_{P}$ [[an ordinary baleen whale or a common sperm whale]$_{C}$ [[that]$_{R}$ [soon]$_{D}$ [disappeared]$_{P}$ [amid a chorus of curses]$_{A}$]$_{E,REMOTE-A("an ordinary baleen whale or a common sperm whale")}$]$_{A}$]$_{H,REMOTE-A("Abraham Lincoln")}$

fr: [[courait]$_{P}$ [sur l'animal signalé, simple baleine ou cachalot vulgaire]$_{A}$]$_{H,REMOTE-A("Abraham Lincoln")}$, [qui]$_{L}$ [[disparaissait]$_{P}$ [bientôt]$_{D}$ [au milieu d'un concert d'imprécations]$_{A}$]$_{H,REMOTE-A("animal")}$

The additional Scene in English adds information (free translation). (ScDiv152)

(84) Passage 978(eng) – Passage 921(fr):

eng: [Our]$_{E}$ [voyage]$_{C}$

fr: [Le]$_{E}$ [[voyage]$_{P}$]$_{C,IMPLICIT-A}$

Conforming Analysis. (ScDiv153)

eng: [[the sea]$_{A}$ [[remained]$_{E}$ [[smooth]$_{C}$ [and]$_{N}$ [easily$_{E}$ visible$_{C}$]$_{C}$]$_{C}$]$_{S}$ [over a vast perimeter]$_{A}$]$_{H}$

fr: [[la mer]$_{A}$ [[se maintenait]$_{E}$ [belle]$_{C}$]$_{S}$]$_{H}$, [et]$_{L}$ [[[se laissait]$_{E}$]$_{P-}$ [facilement]$_{D}$ [[observer]$_{C}$]$_{-P(CONT.)}$ [dans un vaste périmètre]D]H,IMPLICIT-A

In English the two Scenes are contracted, changing a little the original meaning. In French the additional Scene involves an implicit Participant. (ScDiv154)

(85) Passage 980(eng) – Passage 923(fr):

eng: [Can]$_{P-}$ [’t]$_{D}$ [you]$_{A}$ [see]$_{-P(CONT.)}$ [[we]$_{A}$ [’re]$_{P-}$ [just]$_{D}$ [wandering around]$_{-P(CONT.)}$ [at random]$_{D}$]$_{A}$?

fr: [Est-ce que]$_{F}$ [nous]$_{A}$ [ne]$_{D-}$ [courons]$_{P-}$ [pas]$_{-D(CONT.)}$ [à l’aventure]$_{-P(CONT.)}$?

The additional Scene in English adds information and emphasis. It permits the presence of the interlocutor. (ScDiv155)

eng: [[two months]$_{A}$ [have]$_{P-}$ [already]$_{D}$ [gone by]$_{-P(CONT.)}$ [since then]$_{D}$]$_{H}$

fr: [[deux mois]$_{A}$ [déjà]$_{D}$ [se sont écoulés]$_{P}$]$_{H}$ [depuis]$_{L}$ [[cette rencontre]$_{P}$]$_{H,REMOTE-A(“On”),REMOTE-A(“bête”)}$

The additional Scene in French adds information. (ScDiv156)

eng: [[it]$_{A}$ [hates growing moldy]$_{P}$]$_{H}$ [from]$_{L}$ [[hanging out]$_{P}$[too long]$_{D}$ [in the same waterways]$_{A}$]$_{H,REMOTE-A(“it”)}$

fr: [[il]$_{A}$ [n’]$_{D-}$ [aime]$_{P-}$ [point]$_{-D(CONT.)}$ [à moisir]$_{-P(CONT.)}$ [longtemps]$_{D}$ [dans les mêmes parages]$_{A}$]$_{H}$

The additional Scene in English has an explanatory role. (ScDiv157)

eng: [some]$_{E}$ [[naturally]$_{D}$ [slow]$_{S}$]$_{E,REMOTE-A(“animal”)}$ [animal]$_{C}$

fr: [à]$_{R}$ [un]$_{E}$ [animal]$_{C}$ [[lent]$_{C}$ [de$_{R}$ sa$_{E}$ nature$_{C}$]$_{E}$]$_{E}$

The use of an adverb in English, differently from French, leads to the annotation as a Scene. However, the same annotation in the two languages is possible. (ScDiv158)

(86) Passage 981(eng) – Passage 924(fr):

eng: [I]$_{A}$ [had]$_{P-}$ [no]$_{D}$ [reply]$_{-P(CONT.)}$ [to this]$_{A.}$

fr: [À cela]$_{A}$, [je]$_{A}$ [ne]$_{D}$ [savais]$_{P}$ [[que]$_{A}$ [répondre]$_{P}$]$_{A,REMOTE-A(“je”)}$

Its is a structural difference which is due to a free translation. (ScDiv159)

eng: [But]$_{L}$ [[how$_{C}$ else$_{E}$]$_{D}$ [[could]$_{E}$]$_{P-}$ [we]$_{A}$ [[go about]$_{C}$]$_{-P(CONT.)}$ [it]$_{A}$]$_{H}$?

fr: [Mais]$_{L}$ [[[le]$_{E}$ [moyen]$_{C}$ [[de$_{F}$ procéder$_{C}$]$_{P}$ [autrement]$_{D}$]$_{E,REMOTE-A(“nous”)}$]$_{A}$]$_{H,IMPLICIT-A,IMPLICIT-S}$?

Its is a structural difference which is due to a free translation. (ScDiv160)

eng: [not a sailor on board]$_{A}$ [would have bet]$_{P}$ [[against]$_{R}$ [[the narwhale]$_{A}$ [appearing]$_{P}$, [and]$_{F}$ [soon]$_{D}$]$_{C}$]$_{A}$

fr: [pas un matelot du bord]$_{A}$ [n']$_{D}$ [eût parié]$_{P}$ [[contre$_{R}$ le$_{E}$ narwal$_{C}$]$_{C}$ [et]$_{N}$ [contre$_{R}$ sa$_{E}$ prochaine$_{E}$ apparition$_{C}$]$_{C}$]$_{A}$

Noun/Verb difference. (ScDiv161)

(87) Passage 982(eng) – Passage 925(fr):

eng: "[No doubt]$_{H}$," [our bosun said]$_{H}$, "[because]$_{L}$ [there isn't enough water for him!]$_{H}$"

fr: «[sans doute parce qu']$_{L}$ [il n'y avait pas assez d'eau pour lui]$_{H}$!» [disait le maître d'équipage]$_{H}$.

The different annotation is due to different interpretations, influenced by a different order. Conforming Analysis. (ScDiv162)

eng: [So]$_{L}$ [the frigate kept well out]$_{H}$ [when]$_{L}$ [passing the Tuamotu, Marquesas, and Hawaiian Islands]$_{H}$

fr: [La frégate passa]$_{H\text{-}}$ [donc]$_{L}$ [au large des Pomotou, des Marquises, des Sandwich]$_{\text{-H(CONT.)}}$

The English translation provides information which doesn't appear in French. (ScDiv163)

(88) Passage 983(eng) – Passage 926(fr):

eng: [in$_{R}$ the$_{E}$ area$_{C}$ of$_{R}$]$_{E}$ [[the$_{E}$ monster$_{C}$'s$_{R}$]$_{E}$ [latest$_{E}$ antics$_{C}$]$_{C}$]$_{C}$

fr: [sur]$_{R}$ [le]$_{E}$ [théâtre]$_{C}$ [[des]$_{R+E}$ [[derniers]$_{D}$ [ébats]$_{P}$ [du$_{R+E}$ monstre$_{C}$]$_{A}$]$_{C}$]$_{E}$!

Conforming Analysis. (ScDiv164)

eng: [[[incurable]$_{P}$]$_{E,\text{REMOTE-A("aneurysms"),IMPLICIT-A}}$ [aneurysms]$_{C}$]$_{A}$

fr: [[d']$_{R}$ [incurables]$_{E}$ [anévrismes]$_{C}$]$_{A}$

Conforming Analysis. (ScDiv165)

(89) Passage 985(eng) – Passage 928(fr):

eng: [[each$_{E}$ man$_{C}$]$_{A}$ [now]$_{D}$ [[wanted]$_{E}$]$_{P\text{-}}$ [only]$_{D}$ [[to]$_{F}$ [catch up]$_{C}$]$_{\text{-P(CONT.)}}$ [[on]$_{R}$ [[his]$_{A}$ [[eating]$_{C}$ [and]$_{N}$ [sleeping]$_{C}$]$_{P}$]$_{C}$]$_{A}$]$_{H}$, [[[to]$_{F}$ [make up]$_{C}$]$_{P}$ [[for]$_{R}$ [the]$_{E}$ [time]$_{C}$ [[he]$_{A}$ [had$_{F}$]$_{P\text{-}}$ [so$_{E}$ stupidly$_{C}$]$_{D}$ [sacrificed$_{C}$]$_{\text{-P(CONT.)}}$]$_{E,\text{REMOTE-A("time")}}$]$_{A}$]$_{H,\text{REMOTE-A("man")}}$

fr: [[chacun]$_{A}$ [ne]$_{D\text{-}}$ [songea]$_{P}$ [plus qu']$_{\text{-D(CONT)}}$ [[à$_{F}$ se$_{E}$ rattraper$_{C}$]$_{P}$ [[aux]$_{R+E}$ [heures]$_{C}$ [[de$_{R}$ repas$_{C}$]$_{C}$ [ou]$_{N}$ [de$_{R}$ sommeil$_{C}$]$_{C}$]$_{E}$]$_{A}$ [[du]$_{R+E}$ [temps]$_{C}$ [[qu']$_{R}$ [il]$_{A}$ [avait$_{F}$]$_{P\text{-}}$ [si$_{E}$ sottement$_{C}$]$_{D}$ [sacrifié$_{C}$]$_{\text{-P(CONT.)}}$]$_{E,\text{REMOTE-A("temps")}}$]$_{A}$]$_{A,\text{REMOTE-A("chacun")}}$]$_{H\text{-}}$

First difference: "wanted to catch up"/"songea à se rattraper": Conforming Analysis. There is a semantic difference which is not related to the Scene Divergence. (ScDiv166)

Second difference: "on his eating and sleeping"/ "aux heures de repas ou de sommeil": Noun/Verb difference. The same annotation is possible. (ScDiv167)

Third difference: The addition of “to make up” in English makes the sentence more explicit. (ScDiv168)

(90) Passage 986(eng) – Passage 929(fr):

eng: [With]$_{R}$ [typical]$_{E}$ [human]$_{E}$ [fickleness]$_{C}$

fr: [Avec]$_{R}$ [la]$_{E}$ [mobilité]$_{C}$ [[naturelle]$_{S}$ [à$_{R}$ l'$_{E}$ esprit$_{C}$ humain$_{E}$]$_{A}$]$_{E,REMOTE-A(“mobilité”)}$

State description/Attribute difference. (ScDiv169)

eng: [of]$_{R}$ [the]$_{E}$ [[undertaking]$_{P}$]$_{C,IMPLICIT-A}$

fr: [de]$_{R}$ [l']$_{E}$ [entreprise]$_{C}$

Conforming Analysis. (ScDiv170)

(91) Passage 987(eng) – Passage 930(fr):

eng: [[[The]$_{E}$ [*Abraham Lincoln*]$_{C}$]$_{A}$ [had$_{F}$ done$_{C}$]$_{P}$ [[everything]$_{C}$ [[it]$_{A}$ [could$_{E}$]$_{P,REMOTE-C(“done”)}$]$_{E,REMOTE-A(“everything”)}$]$_{A}$]$_{H}$ [[to$_{F}$ succeed$_{C}$]$_{P}$]$_{H,REMOTE-A(“Abraham Lincoln”)}$

fr: [[ayant$_{F}$]$_{P-}$ [tout$_{E}$]$_{A,IMPLICIT-C}$ [fait$_{C}$]$_{-P(CONT.)}$]$_{H,REMOTE-A(“Abraham Lincoln”)}$ [pour]$_{L}$ [[réussir]$_{P}$]$_{H,REMOTE-A(“Abraham Lincoln”)}$

The additional Scene in English adds information and clarification. (ScDiv171)

(92) Passage 989(eng) – Passage 932(fr):

eng: [[It]$_{A}$ [[had]$_{F}$ [the$_{E}$ immediate$_{E}$ effect$_{C}$]$_{E}$ [of$_{R}$ reviving$_{C}$]$_{C}$]$_{P}$ [[the$_{E}$ crew$_{C}$ ’s$_{R}$]$_{E}$ [[failing$_{P}$]$_{E,REMOTE-A(“spirits”)}$ [spirits]$_{C}$]$_{C}$]$_{A}$]$_{H}$

fr: [[Elle]$_{A}$ [eut$_{F}$]$_{P-}$]$_{H-}$ [tout d’abord]$_{L}$ [[pour$_{R}$ résultat$_{C}$]$_{-P(CONT.)}$ [[de$_{F}$ ranimer$_{C}$]$_{P}$ [[les$_{E}$ défaillances$_{C}$]$_{P}$ [de$_{R}$ l’$_{E}$ équipage$_{C}$]$_{A}$]$_{A}$]$_{A,REMOTE-A(“Elle”)}$]$_{-H(CONT.)}$.

Conforming Analysis. (ScDiv172)

eng: [[The ocean]$_{A}$ [was observed]$_{P}$ [[with]$_{R}$ [renewed$_{P}$]$_{E,REMOTE-A(“care”),IMPLICIT-A}$ [care]$_{C}$]$_{D}$]$_{H,IMPLICIT-A}$

fr: [[L’Océan]$_{A}$ [fut observé]$_{P}$ [[avec]$_{R}$ [une]$_{E}$ [nouvelle]$_{E}$ [attention]$_{C}$]$_{D}$]$_{H,IMPLICIT-A}$

Action/Attribute difference. (ScDiv173)

eng: [[A supreme challenge]$_{A}$ [had been issued]$_{P}$ [to the giant narwhale]$_{A}$]$_{H,IMPLICIT-A}$

fr: [[C’]$_{A}$ [était]$_{S}$ [[un]$_{E}$ [suprême]$_{E}$ [défi]$_{C}$ [[porté]$_{P}$ [au narwal géant]$_{A}$]$_{E,REMOTE-A(“défi”),IMPLICIT-A}$A]H

Structural difference. The additional Scene in French adds emphasis. (ScDiv174)

(93) Passage 990(eng) – Passage 933(fr):

eng: [[rouse]$_P$ [it]$_A$ [[from]$_R$ [[its]$_A$ [apathy]$_S$]$_C$]$_A$]$_{H,IMPLICIT-A}$

fr: [[stimuler]$_P$ [[l']$_E$ [apathie]$_C$ [de l'animal]$_E$]$_A$]$_{H,REMOTE-A(\text{“On”})}$

The use of "rouse from" in English (lexical difference) permits to consider "apathy" as a State. However the same annotation is possible. (ScDiv175)

(94) Passage 991(eng) – Passage 934(fr):

eng: [the]$_E$ [[agreed-upon]$_P$]$_{E,IMPLICIT-A}$ [delay]$_C$

fr: [le]$_E$ [délai]$_C$ [de$_R$ rigueur$_C$]$_E$

Lexical difference. The additional Scene in English adds a Participant. (ScDiv176)

eng: [[true]$_S$ [to$_R$ his$_E$ promise$_C$]$_A$]$_{H,REMOTE-A(\text{“Farragut”})}$

fr: [[fidèle]$_S$ [[à]$_R$ [sa$_A$ promesse$_P$]$_{C,IMPLICIT-A}$]$_A$]$_{H,REMOTE-A(\text{“Farragut”})}$

Conforming Analysis. (ScDiv177)

(95) Passage 993(eng) – Passage 936(fr):

eng: [[I]$_A$ [was]$_S$ [in the bow]$_A$]$_H$, [[leaning]$_S$ [over the starboard rail]$_A$]$_{H,REMOTE-A(\text{“I”})}$

fr: [j']$_A$ [étais appuyé]$_S$ [à l'avant]$_A$, [sur le bastingage de tribord]$_A$

The additional Scene in English adds emphasis. (ScDiv178)

eng: [Officers]$_A$ [were probing]$_P$ [[the]$_E$ [increasing$_P$]$_{E,REMOTE-A(\text{“gloom”})}$ [gloom]$_C$]$_A$ [with their night glasses]$_A$.

fr: [[Les]$_E$ [officiers]$_C$, [[armés]$_S$ [de leur lorgnette de nuit]$_A$]$_{E,REMOTE-A(\text{“officiers”})}$]$_A$, [fouillaient]$_P$ [l'obscurité croissante]$_A$.

First difference: Preposition/Verb difference. The additional Scene in French adds information. (ScDiv179)

Second difference: "increasing"/ "croissante": Conforming Analysis. (ScDiv180)

(96) Passage 997(eng) – Passage 940(fr):

eng: [[What]$_F$ [[a]$_E$ [[waste]$_P$ [of$_R$ time$_C$]$_A$]$_{C,IMPLICIT-A}$]$_A$]$_{H,REMOTE-A(\text{“business”}),REMOTE-S(\text{“be”})}$

fr: [[[Que$_C$ de$_R$]$_E$ [temps]$_C$]$_A$ [perdu]$_P$]$_{H,IMPLICIT-A}$

In French "que de" has not only an exclamatory role but also refers to a quantity, which is not the case in English. (ScDiv181)

eng: [[what]$_{F}$ [[a]$_{E}$ [futile]$_{E}$ [[expense]$_{P}$ [of$_{R}$ emotion$_{C}$]$_{A}$]$_{C}$]$_{A}$]$_{H,REMOTE\text{-}A(\text{“business”}),REMOTE\text{-}S(\text{“be”})}$!

fr: [[[que$_{C}$ d'$_{R}$]$_{E}$ [émotions]$_{C}$]$_{A}$ [inutiles]$_{S}$]$_{H}$!

In French “que de” has not only an exclamatory role but also refers to a quantity, which is not the case in English. (ScDiv182)

eng: [monsieur]$_{A}$ [n']$_{D\text{-}}$ [aura]$_{P}$ [que]$_{\text{-}D(\text{CONT.})}$ [[ce]$_{F}$ [qu'$_{R}$ il$_{A}$ mérite$_{P}$]$_{E,\text{IMPLICIT-A}}$]$_{A,\text{IMPLICIT-C}}$!

fr: [it]$_{A}$ [will$_{E}$ serve$_{C}$]$_{P}$ [master]$_{A}$ [right]$_{D}$!

Structural difference (free translation). (ScDiv183)

(97) Passage 998(eng) – Passage 941(fr):

eng: [Conseil]$_{A}$ [did]$_{P\text{-}}$ [n't]$_{D}$ [have time to complete]$_{\text{-}P(\text{CONT.})}$ [[the]$_{E}$ [compliment]$_{C}$]$_{A.}$

fr: [Conseil]$_{A}$ [ne]$_{D}$ [put achever]$_{D}$ [[son]$_{A}$ [compliment]$_{P}$]$_{A,\text{IMPLICIT-A}}$

The use of a possessive in French leads to the annotation as a Scene but the same annotation is possible in the two languages. (ScDiv184)

Differences concerning unanalyzed Scenes:

These differences don't change the number of Scenes and thus are not considered as Scene Divergences.

(98) Passage 308 (eng) – Passage 438 (fr): (Chapter 2)

eng: [it]$_{F}$ ['s]$_{S}$ [something else entirely]$_{A}$

fr: [il n'y ait rien]$_{H}$

The difference is here is due to the use of an expression in French that cannot be literally translated and to the resolution of the annotation. It is not a Scene Divergence.

(99) Passage 907 -Passage 875(fr): (Chapter 4)

eng: “[[Go on]$_{P}$]$_{H,\text{REMOTE-A}(\text{“Ned”})}$!”

fr: [Allez donc]$_{H}$

Here the difference in the annotation comes from the fact that “go on” can be interpreted here both literally and as an interjection (which corresponds to the interjection in French).

Appendix 4

Detailed List and Description of Participant Divergences in the Bilingual Corpus

This appendix includes the full list of Participant Divergences in an extract of the French-English corpus with a short description for each case, highlighting the main characteristics of the Participant Divergence. The whole bilingual corpus is composed by the first five chapters (marked as Chapter1 to Chapter5) of the book "Twenty Thousand Leagues Under the Sea" ("Vingt Mille Lieues Sous les Mers") by Jules Verne with the English translation of J.P. Walter. The Participant Divergences studied here concern only the Passages of the bilingual corpus with no Scene Divergences (57 Parallel Passages). The Passages (in the reduced corpus) with Participant Divergences are numbered from (1) to (32). We report only the part of these Passages where the Participant Divergences occur. Participant Divergences are numbered from ADiv1 to ADiv78.

Chapter1:

(1) Passage 39(eng) – Passage 80(fr):

eng: $[\text{observations}]_{C}$ $[[\text{taken}]_{P}$ $[\text{at different times}]_{A}]_{E,\text{REMOTE-A(“observations”)}}$

fr: $[\text{observations}]_{C}$ $[[\text{faites}]_{P}$ $[\text{à diverses reprises}]_{A}]_{E,\text{REMOTE-A(“observations”),IMPLICIT-A}}$

Conforming Analysis. (ADiv1)

(2) Passage 40(eng) – Passage 81(fr):

eng: $[[\text{this}]_{A}$ $[\text{was}]_{S}$ $[\text{an}_{E}$ undeniable_{E} $\text{fact}_{C}]_{A}]_{H}$

fr: $[[\text{le fait en lui-même}]_{A}$ $[\text{n'}]_{D\text{-}}$ $[\text{était}]_{P\text{-}}$ $[\text{plus}]_{\text{-D(CONT.)}}$ $[\text{niable}]_{\text{-P(CONT.)}}]_{H,\text{IMPLICIT-A}}$

First difference: Structural difference. In English a designation form is used, adding the Participant "this". (ADiv2)

Second difference: The expression "an undeniable fact" is not analyzed as a Scene and therefore an Implicit A doesn't appear. The same annotation is possible. (ADiv3)

eng: $[\text{since}]_{L}$ $[[\text{the human mind}]_{A}$ $[\text{dotes}]_{P}$ $[\text{on objects of wonder}]_{A}]_{H}$

fr: $[\text{avec}]_{L}$ $[[\text{ce penchant}]_{A}$ $[\text{qui}]_{F}$ $[\text{pousse}]_{P}$ $[\text{au merveilleux}]_{A}$ $[\text{la cervelle humaine}]_{A}]_{H}$

The additional Participant in French gives more information. The change of the verb in English permits to reformulate the sentence with only two Participants. (ADiv4)

eng: $[[\text{the}]_{E}$ $[\text{worldwide}]_{E}$ $[\text{excitement}]_{C}$ $[[\text{caused}]_{P}$ $[\text{by this unearthly apparition}]_{A}]_{E,\text{REMOTE-A(“excitement”)}}]_{A}$

fr: $[[\text{l'}]_{E}$ $[\text{émotion}]_{C}$ $[[\text{produite}]_{P}$ $[\text{dans le monde entier}]_{A}$ $[\text{par cette surnaturelle apparition}]_{A}]_{E,\text{REMOTE-A(“émotion”)}}]_{A}$

The Participant “dans le monde entier” in French is used as an Elaborator of another Participant in the English translation. (ADiv5)

eng: [that charge]$_{A}$ [had to be dropped]$_{P}$

fr: [[il]$_{F}$ [fallait]$_{P-}$ [y]$_{A}$ [renoncer]$_{-P(CONT.)}$]$_{H,IMPLICIT-A}$

In English an implicit A can be added: Conforming Analysis. (ADiv6)

(3) Passage 42(eng) – Passage 83(fr):

eng: [[this extraordinary cetacean]$_{A}$ [could transfer]$_{P}$ [itself]$_{A}$ [from one locality to another]$_{A}$ [with startling swiftness]$_{D}$]$_{H}$

fr: [[ce cétacé extraordinaire]$_{A}$ [pouvait se transporter]$_{P}$ [d’un endroit à un autre]$_{A}$ [avec une vélocité surprenante]$_{A}$]$_{H}$

First difference: The additional Participant “itself” in English results from a lexical difference concerning the verb. However, the same annotation is possible. (ADiv7)

Second difference: Participant/Adverbial difference. Conforming Analysis. (ADiv8)

(4) Passage 46(eng) – Passage 87(fr):

eng: [[An interminable debate]$_{A}$]$_{H-}$ [then]$_{L}$ [[broke out]$_{P}$ [between believers and skeptics]$_{A}$ [in the scholarly societies and scientific journals]$_{A}$]$_{-H(CONT.)}$.

fr: [Alors]$_{L}$ [[éclata]$_{P}$ [l’interminable polémique des crédules et des incrédules]$_{A}$ [dans les sociétés savantes et les journaux scientifiques]$_{A}$]$_{H}$.

In English, as opposed to French, the expression “An interminable debate between believers and skeptics” is splitted into two Participants because of the use of the preposition “between” instead of “du” (“of”) in French. This difference is influenced by use of “polémique”(versus “débat” in French). (ADiv9)

eng: [they]$_{A}$ [went]$_{P}$ [from sea serpents]$_{A}$ [to the most offensive personal remarks]$_{A}$

fr: [du serpent de mer]$_{A}$, [ils]$_{A}$ [en]$_{A}$ [vinrent]$_{P}$ [aux personnalités les plus offensantes]$_{A}$

“en” in French adds emphasis can be annotated as F. Conforming Analysis. (ADiv10)

(5) Passage 48(eng) – Passage 89(fr):

eng: [it]$_{A}$ [did]$_{P-}$ [n’t]$_{D}$ [seem due]$_{-P(CONT.)}$ [for resurrection]$_{A}$

fr: [elle]$_{A}$ [ne]$_{D-}$ [semblait]$_{P-}$ [pas]$_{-D(CONT.)}$ [devoir renaître]$_{-P(CONT.)}$

Noun/Verb and Participant/Main relation difference. However, the same annotation is possible. (ADiv11)

eng: [it]$_{A}$ [was]$_{S}$ [no longer]$_{D}$ [[an issue of a scientific problem]$_{A}$ [to be solved]$_{P}$]$_{A,IMPLICIT-A}$

fr: [Il]$_{F}$ [ne]$_{D-}$ [s']$_{F}$ [agit]$_{P}$ [plus]$_{-D(CONT.)}$ [alors]$_{D}$ [[d']$_{R}$ [un]$_{E}$ [problème]$_{C}$ [scientifique]$_{E}$ [à résoudre]$_{E,REMOTE-A("problème"),IMPLICIT-A}$]$_{A}$

In the English annotation, a different interpretation is used. The same annotation is possible. (Conforming Analysis). (ADiv12)

eng: [but]$_{L}$ [[[a quite real and serious danger]$_{A}$ [to be avoided]$_{P}$]$_{A,IMPLICIT-A}$]$_{H,REMOTE-A("it"),\ REMOTE-S("was")}$

fr: [mais bien]$_{L}$ [[[d']$_{R}$ [un]$_{E}$ [danger]$_{C}$ [réel]$_{E}$, [sérieux]$_{E}$ [à$_{R}$ éviter$_{P}$]$_{E,REMOTE-A("danger"),IMPLICIT-A}$]$_{A}$]$_{H,REMOTE-P("agit")}$

Conforming Analysis. (ADiv13)

eng: [The question]$_{A}$ [took an entirely new turn]$_{P}$.

fr: [La question]$_{A}$ [prit]$_{P}$ [une tout autre face]$_{A}$.

Lexical difference. The same annotation is possible although there is a nuance in the meaning. (ADiv14)

Chapter2:

(6) Passage 291(eng) – Passage 421(fr):

eng: [Now then]$_{L}$, [although]$_{L}$ [[the latter hypothesis]$_{A}$ [was]$_{P-}$ [completely]$_{D}$ [admissible]$_{-P(CONT.)}$]$_{H,IMPLICIT-A}$, [[it]$_{A}$ [could]$_{P-}$ [n't]$_{D}$ [stand up]$_{-P(CONT.)}$ [[to]$_{R}$ [inquiries]$_{C}$ [[conducted]$_{P}$ [in both the New World and the Old]$_{A}$]$_{E,REMOTE-A("inquiries"),IMPLICIT-A}$]$_{A}$]$_{H}$.

fr: [Or]$_{L}$, [[[cette]$_{E}$ [dernière]$_{E}$ [hypothèse]$_{C}$, [[admissible]$_{P}$ [après tout]$_{D}$]$_{E,REMOTE-A("hypothèse"),IMPLICIT-A}$]$_{A}$, [ne]$_{D}$ [put résister]$_{P}$ [[aux]$_{R+E}$ [enquêtes]$_{C}$ [[qui]$_{R}$ [furent poursuivies]$_{P}$ [dans les deux mondes]$_{A}$]$_{E,REMOTE-A("enquêtes")}$]$_{A}$]$_{H}$.

In English, there is an additional Implicit-A. Conforming Analysis. (ADiv15)

eng: [[That]$_{R}$ [a private individual]$_{A}$ [had]$_{S}$ [such a mechanism]$_{A}$ [at his disposal]$_{A}$]$_{A}$ [was less than probable]$_{S}$

fr: [[Qu']$_{R}$ [un simple particulier]$_{A}$ [eût à sa disposition]$_{S}$ [un tel engin mécanique]$_{A}$]$_{A}$, [c']$_{F}$ [était peu probable]$_{S}$

Participant/Main Relation annotation. Conforming Analysis. (ADiv16)

eng: [how]$_{A}$ [could]$_{P-}$ [he]$_{A}$ [have built]$_{-P(CONT.)}$ [it]$_{A}$ [in secret]$_{A}$?

fr: [comment]$_{A}$ [aurait]$_{P-}$ - [il]$_{A}$ [tenu]$_{-P(CONT.)}$ [cette construction]$_{A}$ [secrète]$_{-P(CONT.)}$?

Participant/Main Relation annotation due to a lexical differences that permit a different interpretation. (ADiv17)

(7) Passage 295(eng) – Passage 425(fr):

eng: [And]$_{L}$ [so]$_{L}$ [[the monster]$_{A}$ [surfaced]$_{P}$ [again]$_{D}$]$_{H}$

fr: [[Le monstre]$_{A}$ [revint]$_{P}$]$_{H-}$ [donc]$_{L}$ [[à flots]$_{A}$]$_{-H(CONT.)}$

The annotation in French allows more possible interpretations, still conserving the figurative meaning. This annotation is permitted by the use of a verb and a noun, differently from English where only a verb is used (lexical difference). However, the same annotation is possible. (ADiv18)

(8) Passage 296(eng) – Passage 426(fr):

eng: [[Well]$_{D}$ [received]$_{P}$ [in scholarly circles]$_{A}$]$_{H,REMOTE-A(\text{“book”}),IMPLICIT-A}$ [[this book]$_{A}$ [has established]$_{P}$ [me]$_{A}$ [as a specialist in this pretty obscure field of natural history]$_{A}$]$_{H}$.

fr: [[Ce]$_{E}$ [livre]$_{C}$, [[particulièrement]$_{D}$ [goûté]$_{P}$ [du monde savant]$_{A}$]$_{E,REMOTE-A(\text{“livre”})}$]$_{A}$, [faisait]$_{P}$ [de moi]$_{A}$ [un spécialiste dans cette partie asssez obscure de l'histoire naturelle]$_{A}$.

The lexical differences (verb, preposition) create a Participant Divergence. The Participant in French (“du monde savant”) can be viewed as a union of two Participants. (ADiv19)

eng: [[My views]$_{A}$ [were in demand]$_{P}$]$_{H,IMPLICIT-A}$.

fr: [[Mon avis]$_{A}$ [me]$_{A}$ [fut demandé]$_{P}$]$_{H,IMPLICIT-A}$.

Free translation. The additional Participant in French adds emphasis. (ADiv20)

eng: [I]$_{A}$ [confined]$_{P}$ [myself]$_{A}$ [to a flat “no comment”]$_{A}$.

fr: [Je]$_{A}$ [me refermai]$_{P}$ [dans une absolue négation]$_{A}$.

Lexical difference. The same annotation is possible. (ADiv21)

eng: [[pinned to the wall]$_{P}$]$_{H,REMOTE-A(\text{“I”}),IMPLICIT-A}$

fr: [[collé]$_{P}$ [au mur]$_{A}$]$_{H,REMOTE-A(\text{“je”}),IMPLICIT-A}$

Participant/Main Relation annotation. Conforming Analysis. (ADiv22)

eng: [And]$_{L}$ [[in this vein]$_{A}$, “[the honorable Pierre Aronnax, Professor at the Paris Museum]$_{A}$,” [was summoned]$_{P}$ [by The New York Herald]$_{A}$ [to formulate his views no matter what]$_{A}$]$_{H}$.

fr: [Et]$_{L}$ [même]$_{L}$, [“[l'honorable Pierre Aronnax, professeur au Muséum de Paris]$_{A}$”, [fut mis en

demeure]$_{P}$ [par le New York-Herald]$_{A}$ [de fomuler une opinion quelconque]$_{A}$]$_{H}$.

The additional Participant ("in this vein") in English adds information. (ADiv23)

(9) Passage 297(eng) – Passage 427(fr):

eng: [this]$_{A}$ [is]$_{S}$ [an excerpt from the well-padded article I published in the issue of April 30]$_{A}$.

fr: [je]$_{A}$ [donne]$_{P}$ [ici]$_{A}$ [un extrait d'un article très-nourri que je publiai dans le numéro du 30 avril]$_{A}$.

Structural difference. In the English translation there is no presence of the speaker. (ADiv24)

(10) Passage 299(eng) – Passage 429(fr):

eng: [It]$_{A}$ ['s]$_{S-}$ [almost]$_{D}$ [beyond conjecture]$_{-S(CONT.)}$.

fr: [On]$_{A}$ [saurait]$_{P-}$ [à peine]$_{D}$ [le]$_{A}$ [conjecturer]$_{-P(CONT.)}$.

The additional Participant in French adds emphasis. This Participant can also be annotated in English, where it will be Implicit. (ADiv25)

(11) Passage 308(eng) – Passage 438(fr):

eng: [[This inexplicable phenomenon]$_{A}$ [is]$_{P-}$]$_{H-}$ [thus]$_{L}$ [explained away]$_{-P(CONT.)}$]$_{-H(CONT.),IMPLICIT-A}$

fr: [Ainsi]$_{L}$ [[s'expliquerait]$_{P}$ [ce phénomène inexplicable]$_{A}$]$_{H}$

Conforming Analysis. (ADiv26)

eng: [enless]$_{L}$ [[it]$_{A}$ ['s]$_{S}$ [something else entirely]$_{A}$]$_{H}$

fr: [à moins qu']$_{L}$ [il n'y ait rien]$_{H}$

(2 Participant Divergences)

Free translation and difference in the resolution of the annotation. (ADiv27 and ADiv28)

(12) Passage 317(eng) - Passage 447(fr):

eng: [[I]$_{A}$ [received]$_{P}$ [a letter]$_{A}$]$_{H}$ [three hours before]$_{L}$ [the *Abraham Lincoln* left its Brooklyn pier]$_{H}$; [[the letter]$_{A}$ [read]$_{P}$ [as follows]$_{A}$]$_{H,IMPLICIT-A}$:

fr: [Trois heures avant que]$_{L}$ [l'Abraham-Lincoln ne quittât la pier de Brooklyn]$_{H}$, [[je]$_{A}$ [reçus]$_{P}$ [[une]$_{E}$ [lettre]$_{C}$ [[libellée]$_{P}$ [en ces termes]$_{A}$]$_{E,REMOTE-A("lettre")}$]$_{A}$]$_{H}$:

In English the translation doesn't involve the reader (free translation, lexical difference). However, the the writer can be indicated with an Implicit-A in English. (ADiv29)

Chapter 3:

(13) Passage 815(eng) – Passage 765(fr):

eng: [[I]$_{A}$ [forgot]$_{P}$ [everything else]$_{A}$]$_{H}$, [and]$_{L}$ [without]$_{L}$ [[another]$_{D}$ [thought]$_{P}$ [of exhaustion, friends, or collections]$_{A}$]$_{H,REMOTE\text{-}A(\text{“I”})}$, [I accepted the American government's offer]$_{H}$.

fr: [[J']$_{A}$ [oubliai]$_{P}$ [[tout]$_{C}$, [fatigues, amis, collections]$_{E}$]$_{A}$]$_{H}$, [et]$_{L}$ [j'acceptai]$_{H\text{-}}$ [sans]$_{L}$ [[plus]$_{D}$ [de réflexions]$_{P}$]$_{H,REMOTE\text{-}A(\text{“j”})}$ [l'offre du gouvernement américain]$_{\text{-}H(CONT.)}$.

The free translation permits the splitting of one Participant in French to two Participants in English. (ADiv30)

(14) Passage 822(eng) – Passage 772(fr):

eng: [[his age]$_{A}$ [to]$_{S\text{-}}$ [that of his employer]$_{A}$ [was]$_{\text{-}S(CONT.)}$ [[as]$_{R}$ [fifteen]$_{A}$ [is to]$_{S}$ [twenty]$_{A}$]$_{A}$]$_{H}$

fr: [[son âge]$_{A}$ [était à]$_{S}$ [celui de son maître]$_{A}$]$_{H}$ [comme]$_{L}$ [[quinze]$_{A}$ [est à]$_{S}$ [vingt]$_{A}$]$_{H}$

Although a quite different formulation specific to each language, the Participant Divergence results from Conforming Analysis: Participant/Parallel Scene. (ADiv31)

eng: [[Please]$_{F}$ [forgive]$_{P}$ [me]$_{A}$ [[for]$_{R}$ [this]$_{E}$ [underhanded]$_{E}$ [way]$_{C}$ [[of]$_{R}$ [admitting]$_{P}$ [I had turned forty]$_{A}$]$_{E,REMOTE\text{-}A(\text{“me”})}$]$_{A}$]$_{H,IMPLICIT\text{-}A}$.

fr: [Qu']$_{L}$ [[on]$_{A}$ [m']$_{A}$ [excuse]$_{P}$ [[de dire]$_{P}$ [ainsi]$_{D}$]$_{A,REMOTE\text{-}A(\text{“m”})}$]$_{H}$ [que]$_{L}$ [j'avais quarante ans]$_{H}$.

Although a different formulation in to each language (free translation), the Participant Divergence results from Conforming Analysis: Participant/Parallel Scene. (ADiv32)

(15) Passage 828(eng) – Passage 778(fr):

eng: [I]$_{A}$ [do]$_{P\text{-}}$ [n't]$_{D}$ [want to hide]$_{\text{-}P(CONT.)}$ [anything]$_{A}$ [from you]$_{A}$

fr: [je]$_{A}$ [ne]$_{D\text{-}}$ [veux]$_{P\text{-}}$ [rien]$_{\text{-}D(CONT.)}$ [te]$_{A}$ [cacher]$_{\text{-}P(CONT.)}$

Conforming Analysis. (ADiv33)

eng: [[As]$_{F}$ [master]$_{A}$ [wishes]$_{P}$]$_{H,IMPLICIT\text{-}A}$

fr: [Comme]$_{D}$ [il]$_{F}$ [plaira]$_{P}$ [à monsieur]$_{A}$

Lexical difference. (Implicit) Participant/ Adverbial difference. (ADiv34)

(16) Passage 829(eng) – Passage 779(fr):

eng: [I]$_{A}$ [was sure]$_{S}$ [[the lad]$_{A}$ [had]$_{P-}$ [n't]$_{D}$ [missed]$_{-P(CONT.)}$ [a thing]$_{A}$]$_{A}$

fr: [j']$_{A}$ [étais sûr]$_{S}$ [[que]$_{R}$ [rien]$_{A}$ [ne]$_{D}$ [manquait]$_{P}$]$_{A}$

The additional Participant adds information. (ADiv35)

(17) Passage 830(eng) – Passage 780(fr):

eng: [[I]$_{A}$ [left]$_{P}$ [instructions for shipping my containers of stuffed animals and dried plants to Paris, France]$_{A}$]$_{H}$.

fr: [[Je]$_{A}$ [donnai l'ordre]$_{P}$ [d'expédier pour Paris (France) mes ballots d'animaux empaillés et de plantes desséchées]$_{A}$]$_{H,IMPPLICIT-A}$.

Lexical difference (free translation). Participant/Main Relation difference. The same annotation is possible. (ADiv36)

eng: [[I]$_{A}$ [opened]$_{P}$ [a line of credit sufficient to cover the babirusa]$_{A}$]$_{H}$

fr: [[Je]$_{A}$ [fis ouvrir]$_{P}$ [un crédit suffisant au babiroussa]$_{A}$]$_{H,IMPLICIT-A}$

The French expression adds information and says that the "opening" was an indirect operation that involved another Participant. (ADiv37)

(18) Passage 832(eng) – Passage 782(fr):

eng: [[Our baggage]$_{A}$ [was]$_{P-}$ [immediately]$_{D}$ [carried]$_{-P(CONT.)}$ [to the deck of the frigate]$_{A}$]$_{H}$.

fr: [[Nos bagages]$_{A}$ [furent]$_{P-}$ [immédiatement]$_{D}$ [transbordés]$_{-P(CONT.)}$ [sur le pont de la frégate]$_{A}$]$_{H,IMPLICIT-A}$.

Conforming Analysis. (ADiv38)

(19) Passage 833(eng) – Passage 783(fr):

eng: [[I]$_{A}$ [replied]$_{P}$]$_{H,REMOTE-A("he"),REMOTE-A("The same")}$

fr: [[répondis]$_{P}$-[je]$_{A}$]$_{H,REMOTE-A("Lui-même")}$

Conforming Analysis concerning the presence of the interlocutor in the Scene. (ADiv39)

eng: [[Welcome]$_{S}$ [aboard]$_{A}$, [professor]$_{A}$]$_{H}$.

fr: [[Soyez le bienvenu]$_{S}$, [monsieur le professeur]$_{A}$]$_{H}$.

The additional Participant in English adds information. (ADiv40)

(20) Passage 846(eng) – Passage 796(fr):

eng: $[\text{after}]_{L}$ $[[\text{the lights of Fire Island}]_{A}[\text{had vanished}]_{P}$ $[\text{into the northwest}]_{A}]_{H}$

fr: $[[\text{après}]_{L}$ $[[\text{avoir perdu}]_{P}$ $[\text{dans le nord-ouest}]_{A}[\text{les feux de Fire-Island}]_{A}]_{H,\text{REMOTE-A(“elle”)}}$

The difference in the verb (lexical difference) permits the addition of another Participant. (ADiv41)

Chapter 4:

(21) Passage 880(eng) – Passage 848(fr):

eng: $[\text{he}]_{A}$ $[\text{did}]_{P\text{-}}$ $[\text{n't}]_{D}$ $[\text{allow}]_{\text{-P(CONT.)}}$ $[[\text{the animal's existence}]_{A}$ $[\text{to be disputed}]_{P}[\text{aboard his vessel}]_{A}]_{A,\text{IMPLICIT-A}}$.

fr: $[\text{il}]_{A}$ $[\text{ne}]_{D\text{-}}$ $[\text{permettait}]_{P}$ $[\text{pas}]_{\text{-D(CONT.)}}$ $[[\text{que}]_{R}[\text{l'existence de l'animal}]_{A}$ $[\text{fût discutée}]_{P}$ $[\text{à son bord}]_{A}]_{A}$.

Conforming Analysis. (ADiv42)

eng: $[[\text{No}]_{D}$ $[\text{middle of the road}]_{A}$ $[\text{for these two}]_{A}]_{H,\text{IMPLICIT-S}}$.

fr: $[[\text{Pas}]_{D}$ $[\text{de milieu}]_{A}]_{H,\text{IMPLICIT-S}}$.

The additional Scene in English provides clarifications. (ADiv43)

(22) Passage 902(eng) – Passage 870(fr):

eng: $[[\text{it}]_{A}$ $[\text{needs to have}]_{P}[\text{a constitution so solid}]_{A}]_{H}$, $[[\text{it}]_{A}$ $[\text{defies}]_{P}$ $[\text{all comparison}]_{A}]_{H}$.

fr: $[[\text{il}]_{A}$ $[\text{possède}]_{P}$ $[\text{nécessairement}]_{D}$ $[[\text{un}]_{E}$ $[\text{organisme}]_{C}$ $[[\text{dont}]_{R}$ $[\text{la}_{E}$ $\text{solidité}_{C}]_{A,\text{REMOTE-E(“organisme”)}}$ $[\text{défie toute comparaison}]_{P}]_{E}]_{A}]_{H}$.

Although a different formulation in to each language (free translation), the Participant Divergence results from Conforming Analysis: Participant/Main Relation. (ADiv44)

eng: $[\text{And}]_{L}$ $[\text{why}]_{H}$ $[[\text{this powerful constitution}]_{A}]_{H,\text{REMOTE-A(“it”),REMOTE-A(“have”)}}$?

fr: $[\text{Et}]_{L}$ $[\text{pourquoi}]_{H}$ $[[\text{cet organisme}]_{A}$ $[\text{si puissant}]_{S}]_{H}$?

The addition of "si" and the different word order permits one to annotate "si puissant" as a Main Relation. However, the same annotation is possible in the two languages. (ADiv45)

eng: $[[\text{Ned}]_{A}$ $[\text{asked}]_{P}]_{H}$.

fr: $[[\text{demanda}]_{P}$ $[\text{Ned}]_{A}]_{H,\text{IMPLICIT-A}}$

Conforming Analysis. (ADiv46)

eng: [Because]$_{L}$ [[it]$_{F}$ [takes]$_{P}$ [incalculable strength]$_{A}$ [[[just]$_{D}$ [to live]$_{P}$ [in those deep strata]$_{A}$]$_{H,IMPLICIT-A}$ [and]$_{L}$ [[withstand]$_{P}$ [their pressure]$_{A}$]$_{H,REMOTE-D(\text{“just”}),IMPLICIT-A}$]$_{A}$]$_{H}$.

fr: [Parce qu']$_{L}$ [[il]$_{F}$ [faut une force incalculable]$_{S}$]$_{H,IMPLICIT-A}$ [pour]$_{L}$ [[se maintenir]$_{P}$ [dans les couches profondes]$_{A}$]$_{H,IMPLICIT-A}$ [et]$_{L}$ [[résister]$_{P}$ [à leur pression]$_{A}$]$_{H,IMPLICIT-A}$.

First difference: Additional Participant in English. Lexical difference. Participant/Main Relation . The same annotation is possible. (ADiv47)

Second difference: Additional implicit Participant in French. Conforming Analysis. (ADiv48)

Third difference: Additional Participant in English. Lexical difference. Participant/Parallel Scene. The same annotation is possible. (ADiv49)

(23) Passage 906(eng) – Passage 874(fr):

eng: [[Calculate]$_{P}$]$_{H-}$, [then]$_{L}$, [[[how much resistance of bone structure and strength of constitution]$_{A}$ [they]$_{A}$ ['d need]$_{P}$]$_{A}$]$_{-H(CONT.)}$ [in order to]$_{L}$ [withstand such pressures]$_{H}$!

fr: [[Calculez]$_{P}$]$_{H-}$ [alors]$_{L}$ [[[quelle]$_{A}$ [doit être]$_{S}$ [la résistance de leur charpente osseuse et la puissance de leur organisme pour résister à de telles pressions]$_{A}$]$_{A}$]$_{-H(CONT.),IMPLICIT-A}$!

First difference: The lexical differences (“quelle”/“how much”, “doit être”/“'d need”) permits the separation of the expression in French in two Participants: “quelle” and “la résistance...pressions”. (ADiv50)

Second difference: Imperative forms can imply an implicit Participant, the interlocutor, annotated as A in French: Conforming Analysis. (ADiv51)

Third difference: The lexical difference concerning the verb (free translation) leads to the introduction of a novel Participant in English: “they”. Instead of the subject pronoun in English, possessive determiners are used in French. (ADiv52)

Chapter 5:

(24) Passage 968(eng) – Passage 911(fr):

eng: [how much confidence]$_{A}$ [we]$_{A}$ [could place]$_{P}$ [in him]$_{A}$.

fr: [quelle]$_{D}$ [confiance]$_{S-}$ [on]$_{A}$ [devait avoir]$_{-S(CONT.)}$ [en lui]$_{A}$.

Participant/Main Relation due to a lexical difference. “quelle” (a opposed to “how much”) in French doesn't involve the idea of quantity. (ADiv53)

(25) Passage 973(eng) – Passage 916(fr):

eng: [[that]$_{E}$ [solitary]$_{E}$ [islet]$_{C}$ [at the tip of the South American continent]$_{E}$]$_{C}$, [[that]$_{E}$ [stray]$_{E}$ [rock]$_{C}$ [[Dutch seamen]$_{A}$ [had named]$_{P}$ [Cape Horn]$_{A}$ [after their hometown of Hoorn]$_{A}$]$_{E,REMOTE-A(\text{“rock”})}$]$_{C}$

fr: [[cet]$_{E}$ [îlot]$_{C}$ [solitaire]$_{E}$]$_{C}$,[[ce]$_{E}$ [roc]$_{C}$ [perdu]$_{E}$ [à l'extrémité du continent américain]$_{E}$, [[auquel]$_{R}$ [des marins hollandais]$_{A}$ [imposèrent]$_{P}$ [le nom de leur villa natale, le cap Horn]$_{A}$]$_{E,REMOTE-A(\text{“roc”})}$]$_{C}$

In French, there is union of two Participants. (ADiv54)

(26) Passage 974(eng) – Passage 917(fr):

eng: [[repeated]$_{P}$ [the sailors of the *Abraham Lincoln*]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Open your eyes!”})}$.

fr: [[répétaient]$_{P}$ [les matelots de l'*Abraham Lincoln*]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Ouvre l'oeil!”}),IMPLICIT\text{-}A}$.

Conforming Analysis. (ADiv55)

(27) Passage 979(eng) – Passage 922(fr):

eng: [[his vision]$_{A}$ [could have performed]$_{P}$ [yeoman service]$_{A}$]$_{H}$.

fr: [[sa merveilleuse puissance de vision]$_{A}$ [aurait rendu de]$_{P\text{-}}$ [grands]$_{D}$ [services]$_{\text{-}P(CONT.)}$]$_{H,IMPLICIT\text{-}A}$.

First difference: Participant/Main Relation difference. Conforming Analysis. (ADiv56)

Second difference: Implicit Participant. Conforming Analysis. (ADiv57)

eng: [[A hundred times]$_{D}$ [I]$_{A}$ [chided]$_{P}$ [him]$_{A}$]$_{H}$ [for]$_{L}$ [[his]$_{A}$ [unconcern]$_{S}$]$_{H}$.

fr: [[Cent fois]$_{D}$, [je]$_{A}$ [lui]$_{A}$ [reprochai]$_{P}$ [[son]$_{A}$ [indifférence]$_{S}$]$_{A,IMPLICIT\text{-}A}$]$_{H}$.

First difference: Participant/Parallel Scene due to lexical differences. (ADiv58)

Second difference: Implicit Participant in French: Conforming Analysis. (ADiv59)

(28) Passage 984(eng) – Passage 927(fr):

eng: [[abruptly]$_{D}$ [veering off course]$_{P}$]$_{H,REMOTE\text{-}A(\text{“Abraham Lincoln”})}$

fr: [[faisant de]$_{P\text{-}}$ [brusques]$_{D}$ [écarts]$_{\text{-}P(CONT.)}$ [de route]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Abraham Lincoln”})}$

Lexical difference. The same annotation is possible. (ADiv60)

eng: [[putting on steam and reversing engines]$_{P}$ [in quick succession]$_{D}$]$_{H,REMOTE\text{-}A(\text{“Abraham Lincoln”})}$

fr: [[forçant ou renversant]$_{P}$ [sa vapeur]$_{A}$, [coup sur coup]$_{D}$]$_{H,REMOTE\text{-}A(\text{“Abraham Lincoln”})}$

Lexical difference. Participant/Main Relation difference. The same annotation is possible. (ADiv61)

eng: [[it]$_{A}$ [did]$_{P\text{-}}$ [n't]$_{D}$ [leave]$_{\text{-}P(CONT.)}$ [a single point]$_{A}$ [unexplored]$_{\text{-}P(CONT.)}$ [from the beaches of Japan to the coasts of America]$_{A}$]$_{H}$

fr: [[il]$_{A}$ [ne]$_{D\text{-}}$ [laissa]$_{P\text{-}}$ [pas]$_{\text{-}D(CONT.)}$ [un point]$_{A\text{-}}$ [inexploré]$_{\text{-}P(CONT.)}$ [des rivages du Japon à la côte américaine]$_{\text{-}A(CONT.)}$]$_{H}$

In the annotation there is union of two Participants. Conforming Analysis. (ADiv62)

eng: [And]$_{L}$ [[we]$_{A}$ [found]$_{P}$ [nothing]$_{A}$]$_{H}$!

fr: [Et]$_{L}$ [rien]$_{H}$!

(2 Participant Divergences).

Structural differences. The same annotation is possible (resolution of the annotation). (ADiv63 and ADiv64)

eng: [[Nothing except]$_{D}$ [an immenseness of deserted waves]$_{A}$]$_{H,REMOTE\text{-}A(\text{“we”}),REMOTE\text{-}P(\text{“found”})}$!

fr: [[rien que]$_{D}$ [l'immensité des flots déserts]$_{A}$]$_{H,IMPLICIT\text{-}S}$!

This is a consequence of the previous Participant Divergence. Conforming Analysis. (ADiv65)

eng: [[Nothing]$_{D}$ [remotely resembling a gigantic narwhale, or an underwater islet, or a derelict shipwreck, or a runaway reef, or anything the least bit unearthly]$_{A}$]$_{H,REMOTE\text{-}A(\text{“we”}),REMOTE\text{-}P(\text{“found”})}$!

fr: [[rien]$_{D}$ [qui ressemblât à un narwal gigantesque, ni à un îlot sous-marin, ni à une épave de naufrage, ni à un écueil fuyant, ni à quoi que ce fût de surnaturel]$_{A}$]$_{H,IMPLICIT\text{-}A,IMPLICIT\text{-}S}$!

First difference: The use of the remote-A "we" comes from the previous divergences. The same annotation is possible. (ADiv66)

Second difference: The use of the implicit-A designating a place in the French annotation comes from the previous divergences. The same annotation is possible. (Out of context, the expressions in the two languages have the same form). (ADiv67)

(29) Passage 988(eng) – Passage 931(fr):

eng: [[Commander Farragut]$_{A}$]$_{H\text{-}}$, [like]$_{L}$ [[Christopher Columbus]$_{A}$ [before him]$_{A}$]$_{H,REMOTE\text{-}P(\text{“asked”}),REMOTE\text{-}A(\text{“for a grace period of just three days more”})}$, [[asked]$_{P}$ [[for]$_{R}$ [a]$_{E}$ [[[grace]$_{P}$]$_{E,REMOTE\text{-}A(\text{“Farragut”}),IMPLICIT\text{-}A}$ [period]$_{C}$]$_{C}$ [of just three days more]$_{E}$]$_{A}$]$_{\text{-}H(\text{CONT.})}$

fr: [[le commandant Farragut]$_{A}$]$_{H\text{-}}$ [comme]$_{L}$ [[autrefois]$_{D}$ [Colomb]$_{A}$]$_{H,REMOTE\text{-}P(\text{“demanda”}),REMOTE\text{-}A(\text{“trois jours de patience”})}$, [[demanda]$_{P}$ [[trois jours]$_{D}$ [de patience]$_{P}$]$_{A,IMPLICIT\text{-}A}$]$_{\text{-}H(\text{CONT.}),IMPLICIT\text{-}A}$

First difference: The sailors appear in the French annotation as an Implicit-A. Conforming Analysis. (ADiv68)

Second difference: The use of "grace" in English instead of "patience" involves an additional Participant, Farragut (lexical difference). (ADiv69)

Third difference: The Participant "before him" in English replaces the adverbial "autrefois" in French (ADiv70)

(30) Passage 992(eng) – Passage 935(fr):

eng:[The shores of Japan]$_{A}$ [were]$_{A}$ [less than 200 miles to our leeward]$_{A}$.

fr: [Les terres du Japon]$_{A}$ [nous]$_{A}$ [restaient]$_{S}$ [à moins de deux cents milles sous le vent]$_{A}$.

Indirect pronoun/ Possessive determiner difference. (ADiv71)

eng: [Eight o'clock]$_{A}$ [had]$_{P-}$ [just]$_{D}$ [struck]$_{-P(CONT.)}$.

fr: [On]$_{A}$ [venait de piquer]$_{P}$ [huit heures]$_{D}$

First difference: In English, "eight o'clock" appears as a subject and is analyzed as a Participant (and not as an Adverbial as in French). (ADiv72)

Second difference: The participant "On" doesn't appear in the English translation. It adds information. However, it is not crucial for understanding the main idea of the Scene. (ADiv73)

(31) Passage 995(eng) – Passage 938(fr):

eng: [[Come on]$_{P}$, [Conseil]$_{A}$]$_{H}$!

fr: [Allons, Conseil]$_{H}$

Conforming Analysis. Different resolution of the annotation. (ADiv74)

(32) Passage 996(eng) – Passage 939(fr):

eng: [If]$_{L}$ [[master]$_{A}$ [will permit]$_{P}$ [my]$_{A}$ [[saying]$_{P}$ [so]$_{A}$]$_{A,REMOTE-A("my")}$]$_{H}$

fr: [[Que]$_{F}$ [monsieur]$_{A}$ [me]$_{A}$ [permette]$_{P}$ [[de]$_{P-}$ [le]$_{A}$ [lui]$_{A}$ [dire]$_{-P(CONT.)}$]$_{A,REMOTE-A("me")}$]$_{H}$

In French, the interlocutor appeared one more time in the sentence, adding emphasis. (ADiv75)

eng: [[Conseil]$_{A}$ [replied]$_{P}$]$_{H,REMOTE-A("master will permit my saying so")}$

fr: [[répondit]$_{P}$ [Conseil]$_{A}$]$_{H,REMOTE-A("Que monsieur me permette de le lui dire"),IMPLICIT-A}$

Conforming Analysis. (ADiv76)

eng: [[been]$_{S}$ [none]$_{D}$ [the poorer]$_{A}$]$_{H,REMOTE-A("government")}$

fr: [[il]$_{A}$ [n']$_{D-}$ [en]$_{A}$ [aurait]$_{S-}$ [pas]$_{-D(CONT.)}$ [été plus pauvre]$_{-S(CONT.)}$]$_{H}$

First difference: Participant/Main Relation. Lexical difference. The same annotation is possible. (ADiv77)

Second difference: The Participant "en" ("by this") in French adds information. (ADiv78)

Appendix 5

Detailed List and Description of Adverbial Divergences in the Bilingual Corpus

The appendix includes the full list of Adverbial Divergences in an extract of the French-English corpus with a short description for each case, highlighting main characteristics of the Adverbial Divergence. The whole bilingual corpus is composed by the first five chapters (marked as Chapter1 to Chapter5) of the book "Twenty Thousand Leagues Under the Sea" ("Vingt Mille Lieues Sous les Mers") by Jules Verne with the English translation of J.P. Walter. The Adverbial Divergences studied here concern only the Passages of the bilingual corpus with no Scene Divergences (57 Parallel Passages). The Passages (in the reduced corpus) with Adverbial Divergences are numbered from (1) to (28). We report only the part of these Passages where the Adverbial Divergences occur. Adverbial Divergences are numbered from DDiv1 to DDiv50.

Chapter1:

(1) Passage 39(eng) – Passage 80(fr):

eng: [you]$_{A}$ [could]$_{P-}$ [still]$_{D}$ [assert]$_{-P(CONT.)}$ [that this phenomenal creature greatly exceeded the dimensions of anything then known to ichthyologists]$_{A}$

fr: [[on]$_{A}$ [pouvait affirmer]$_{P}$]$_{H-}$, [cependant]$_{L}$, [[que cet être phénoménal dépassait de beaucoup toutes les dimensions admises jusqu'à ce jour par les ichtyologistes]$_{A}$]$_{-H(CONT.)}$

Adverbial./Linker. Lexical difference. (DDiv1)

eng: [if]$_{L}$ [[it]$_{A}$ [existed]$_{P}$ [at all]$_{G}$]$_{H.}$

fr: [s']$_{L}$ [[il]$_{A}$ [existait]$_{P}$ [toutefois]$_{D}$]$_{H}$.

Adverbial/Ground. Lexical difference. The same annotation is possible. (DDiv2)

(2) Passage 40(eng) – Passage 81(fr):

eng: [[le fait en lui-même]$_{A}$ [n']$_{D-}$ [était]$_{S-}$ [plus]$_{-D(CONT.)}$ [niable]$_{-S(CONT.)}$]$_{H}$

fr: [[this]$_{A}$ [was]$_{S}$ [[an]$_{E}$ [undeniable]$_{E}$ [fact]$_{C}$]$_{A}$]$_{H}$

Adverbial/Elaborator of Participant. Lexical and structural differences. (DDiv3)

(3) Passage 42(eng) – Passage 83(fr):

eng: [this extraordinary cetacean]$_{A}$ [could transfer]$_{P}$ [itself]$_{A}$ [from one locality to another]$_{A}$ [with startling swiftness]$_{D}$

fr: [ce cétacé extraordinaire]$_{A}$ [pouvait se transporter]$_{P}$ [d'un endroit à un autre]$_{A}$ [avec une vélocité

surprenante]$_{A}$

Adverbial/Participant difference. Conforming Analysis. (DDiv4)

(4) Passage 45(eng) – Passage 86(fr):

eng: [Captain Harrington]$_{C}$ — [[whose]$_{R}$ [[good faith]$_{C}$]$_{A,REMOTE-E(\text{“Captain Harrington”})}$ [is$_{F}$ above$_{E}$ suspicion$_{C}$]$_{S}$]$_{E}$

fr: [M. Harrington]$_{C}$, [[dont]$_{R}$ [[la]$_{E}$ [bonne foi]$_{C}$]$_{A,REMOTE-E(\text{“M. Harrington”})}$ [ne]$_{D}$ [peut$_{E}$ être$_{F}$ soupçonnée$_{C}$]$_{P}$]$_{E}$

The negation is French appears in English as part of the Main Relation. (DDiv5)

eng: [[that]$_{R}$, [until then]$_{D}$, [had frequented]$_{P}$ [only the seas of France’s old extremist newspaper, *The Constitutionalist*]$_{A}$]$_{E,REMOTE-A(\text{“serpents”})}$.

fr: [[qui]$_{R}$ [n’]$_{D-}$ [avait]$_{P-}$ [jamais]$_{-D(CONT.)}$ [fréquenté]$_{-P(CONT.)}$ [jusqu’alors]$_{D}$ [que les mers de l’ancien Constitutionnel]$_{A}$]$_{E,REMOTE-A(\text{“serpent”})}$.

Structural difference. Here the formulation in English is not possible in French and the formulation in French is not possible in English. (DDiv6)

(5) Passage 48(eng) – Passage 89(fr):

eng: [But now]$_{L}$ [[it]$_{A}$ [was]$_{S}$ [no longer]$_{D}$ [an issue of a scientific problem to be solved]$_{A}$]$_{H}$

fr: [[Il]$_{F}$ [ne]$_{D-}$ [s’]$_{F}$ [agit]$_{P}$ [plus]$_{-D(CONT.)}$ [alors]$_{D}$ [d’un problème scientifique à résoudre]$_{A}$]$_{H}$

Linker/Adverbial. The same annotation is possible. (DDiv7)

eng: [The monster]$_{A}$ [again]$_{D}$ [became]$_{P}$ [an islet, rock, or reef, but a runaway reef, unfixed and elusive]$_{A}$.

fr: [Le monstre]$_{A}$ [redevint]$_{P}$ [îlot, rocher, écueil, mais écueil fuyant, indéterminable, insaisissable]$_{A}$.

The Adverbial in English is included in the Process in French. If morphology was analyzed, the Adverbial would correspond to the Elaborator of the Process. (DDiv8)

(6) Passage 58(eng) – Passage 99(fr):

eng: [[Fortunately]$_{D}$ [this compartment]$_{A}$ [did]$_{P-}$ [n’t]$_{D}$ [contain]$_{-P(CONT.)}$ [the boilers]$_{A}$]$_{H}$

fr: [Fort heureusement]$_{G}$, [[ce compartiment]$_{A}$ [ne]$_{D-}$ [renfermait]$_{P}$ [pas]$_{-D(CONT.)}$ [les chaudières]$_{A}$]$_{H}$

Adverbial/Ground. Conforming Analysis. (DDiv9)

Chapter 2:

(7) Passage 289(eng) – Passage 419(fr):

eng: [[Also]$_{D}$ [discredited was]$_{P}$ [the idea of a floating hull or some other enormous wreckage]$_{A}$, [and]F [again because of this speed of movement]$_{A}$]$_{H}$.

fr: [De même]$_{L}$ [[fut repoussée]$_{P}$ [l'existence d'une coque flottante, d'une énorme épave]$_{A}$, [et]$_{F}$ [toujours à cause de la rapidité du déplacement]$_{A}$]$_{H}$.

Adverbial/Linker (DDiv10)

(8) Passage 295(eng) – Passage 425(fr):

eng: [And so]$_{L}$ [[the monster]$_{A}$ [surfaced]$_{P}$ [again]$_{D}$]$_{H}$

fr: [[Le monstre]$_{A}$ [revint]$_{P}$]$_{H\text{-}}$ [donc]$_{L}$ [[à flots]$_{A}$]$_{\text{-H(CONT.)}}$

The Adverbial in English is included in the Process in French (Morphology). (DDiv11)

(9) Passage 296(eng) – Passage 426(fr):

eng: [[to formulate]$_{P}$ [his views]$_{A}$ [no matter what]$_{D}$]$_{\text{A,REMOTE-A("Pierrre Aronnax")}}$

fr: [[de formuler]$_{P}$ [une$_{E}$ opinion$_{C}$ quelconque$_{E}$]$_{A}$]$_{\text{A,REMOTE-A("Pierrre Aronnax")}}$.

Adverbial/Elaborator of Participant. Lexical and structural differences. (DDiv12)

(10) Passage 297(eng) – Passage 427(fr):

eng: [Since]$_{L}$ [[I]$_{A}$ [could]$_{P\text{-}}$ [no]$_{D}$ [longer]$_{D}$ [hold my tongue]$_{\text{-P(CONT.)}}$]$_{H}$, [[I]$_{A}$ [let it wag]$_{P}$]$_{H}$.

fr: [[Je]$_{A}$ [parlai]$_{P}$]$_{H}$ [faute de]$_{L}$ [[pouvoir me taire]$_{P}$]$_{\text{H,REMOTE-A("je ")}}$

2 Adverbial Divergences. Lexical and structural differences. Free Translation. (DDiv13 and DDiv14)

(11) Passage 298(eng) – Passage 428(fr):

eng: [[we]$_{A}$ [are$_{F}$ forced$_{E}$]$_{P\text{-}}$]$_{H\text{-}}$, [every other supposition having been refuted]$_{H}$, [[to$_{F}$ accept$_{C}$]$_{\text{-P(CONT.)}}$ [the existence of an extremely powerful marine animal]$_{A}$]$_{\text{-H(CONT.)}}$.

fr: [toute autre supposition étant rejetée]$_{H}$, [[il]$_{F}$ [faut$_{E}$]$_{P\text{-}}$ [nécessairement]$_{D}$ [admettre$_{C}$]$_{\text{-P(CONT.)}}$ [l'existence d'un animal marin d'une puissance excessive]$_{A}$]$_{\text{H,IMPLICIT-A}}$.

The meaning of the Adverbial "nécessairement" in French is included in the word "forced" (Elaborator of the Process) in English. (DDiv15)

(12) Passage 299(eng) – Passage 429(fr):

eng: [[No soundings]$_A$ [have been able to reach]$_P$ [them]$_A$]$_H$.

fr: [[La sonde]$_A$ [n']$_D$ [a su]$_{P-}$ [les]$_A$ [atteindre]$_{-P(CONT.)}$]$_H$.

The negation in English is part of a Participant, due to the use of only the foundational layer of UCCA. (DDiv16)

(13) Passage 317(eng) – Passage 447(fr):

eng: [three hours before]$_L$ [[the *Abraham Lincoln*]$_A$ [left]$_P$ [its Brooklyn pier]$_A$]$_H$

fr: [Trois heures avant que]$_L$ [[l'Abraham-Lincoln]$_A$ [ne]$_D$ [quittât]$_P$ [la pier de Brooklyn]$_A$]$_H$

Structural annotation. An annotation of "ne" in French as F is possible here. (DDiv17)

Chapter 3:

(14) Passage 815(eng) – Passage 765(fr):

eng: [[I]$_A$ [had]$_{P-}$ [just]$_D$ [returned]$_{-P(CONT.)}$ [from an arduous journey]$_A$]$_H$

fr: [[je]$_A$ [revenais]$_P$ [d'un pénible voyage]$_A$]$_H$

The adverbial in English adds information and clarifications. (DDiv18)

eng: [[I]$_A$ [wanted]$_P$ [nothing more]$_D$ [than]$_F$ [[to$_F$ see$_C$]$_P$ [my country]$_{A-}$ [again]$_D$, [my friends, my modest quarters by the Botanical Garden, my dearly beloved collections]$_{-A(CONT.)}$]$_{A,REMOTE-A("I")}$]$_H$!

fr: [[Je]$_A$ [n']$_{D-}$ [aspirais]$_P$ [plus qu']$_D$ [[à$_F$ revoir$_C$]$_P$ [mon pays, mes amis, mon petit logement du Jardin des Plantes, mes chères et précieuses collections]$_A$]$_{A,REMOTE-A("Je")}$]$_H$!

The Adverbial "again" in English is included in the Process "revoir" in French (Morphology). (DDiv19)

eng: [But]$_L$ [[now]$_D$ [nothing]$_A$ [could hold]$_{P-}$ [me]$_A$ [back]$_{-P(CONT.)}$]$_H$.

fr: [Mais]$_L$ [[rien]$_A$ [ne]$_D$ [put]$_{P-}$ [me]$_A$ [retenir]$_{-P(CONT.)}$]$_H$.

First difference: "now" in English adds information. (DDiv20)

Second difference: Structural difference. The negation in English is expressed only by "nothing" ("rien") annotated as A. (DDiv21)

(15) Passage 822(eng) – Passage 772(fr):

eng: [[Please]$_{F}$ [forgive]$_{P}$ [me]$_{A}$ [[for]$_{R}$ [this]$_{E}$ [underhanded]$_{E}$ [way]$_{C}$ [[of]$_{R}$ [admitting]$_{P}$ [I had turned forty]$_{A}$]$_{E,REMOTE\text{-}A(\text{“me”})}$]$_{A}$]$_{H}$.

fr: [Qu']$_{L}$ [[on]$_{A}$ [m']$_{A}$[excuse]$_{P}$ [[de dire]$_{P}$ [ainsi]$_{D}$]$_{A,REMOTE\text{-}A(\text{“m' ”})}$]$_{H}$ [que]$_{L}$ [j'avais quarante ans]$_{H}$

Lexical and structural differences. Free Translation. (DDiv22)

(4.147) Passage 828(eng) – Passage 778(fr):

eng: [[As]$_{F}$ [master]$_{A}$ [wishes]$_{P}$]$_{H,IMPLICIT\text{-}A}$.

fr: [[Comme]$_{D}$ [il]$_{F}$ [plaira]$_{P}$ [à monsieur]$_{A}$]$_{H}$.

Lexical and structural differences. The same annotation is possible. (DDiv23)

(16) Passage 836(eng) – Passage 786(fr):

eng: [[I]$_{A}$ [was$_{F}$]$_{S\text{-}}$ [well]$_{D}$ [satisfied$_{C}$]$_{\text{-}S(CONT.)}$ [with my cabin, which was located in the stern and opened into the officers' mess]$_{A}$]$_{H}$.

fr: [[Je]$_{A}$ [[fus]$_{F}$ [très$_{E}$-satisfait$_{C}$]$_{C}$]$_{S}$ [de ma cabine, située à l'arrière, qui s'ouvrait sur le carré des officiers]$_{A}$]$_{H}$..

Adverbial/Elaborator of Main Relation. The same annotation is possible. (DDiv24)

(17) Passage 837(eng) – Passage 787(fr):

eng: [We]$_{A}$ [']ll$_{E}$ be$_{F}$]$_{S\text{-}}$ [quite$_{C}$]$_{D}$ [comfortable$_{C}$]$_{\text{-}S(CONT.)}$ [here]$_{A}$

fr: [Nous]$_{A}$ [serons$_{F}$ bien$_{C}$]$_{S}$ [ici]$_{A}$

The additional Adverbial in English adds emphasis. (DDiv25)

(18) Passage 840(eng) – Passage 790(fr):

eng: [[in making]$_{P}$ [[for]$_{R}$ [those]$_{E}$ [seas]$_{C}$ [[where]$_{R}$ [the animal]$_{A}$ [had$_{F}$]$_{P\text{-}}$ [just]$_{D}$ [been$_{F}$ sighted$_{C}$]$_{\text{-}P(CONT.)}$]$_{E,REMOTE\text{-}A(\text{“seas”})}$]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Farragut”})}$

fr: [pour]$_{L}$ [[rallier]$_{P}$ [[les]$_{E}$ [mers]$_{C}$ [[dans$_{R}$]$_{A,REMOTE\text{-}C(\text{“mers”})}$ [lesquelles]$_{R}$ [l'animal]$_{A}$ [venait$_{E}$ d'$_{F}$ être$_{F}$ signalé$_{C}$]$_{P}$]$_{E}$]$_{A}$]$_{H,REMOTE\text{-}A(\text{“Farragut”})}$

The Adverbial "just" in English replaces the verb "venait" in French which is annotated as the Elaborator of the Process. (DDiv26)

Chapter 4:

(19) Passage 880(eng) – Passage 848(fr):

eng: [[His ship and he]$_{A}$ [were]$_{S}$ [one]$_{A}$]$_{H}$.

fr: [[Son navire et lui]$_{A}$ [ne]$_{D-}$ [faisaient]$_{P}$ [qu']$_{-D(CONT.)}$ [un]$_{A}$]$_{H}$.

Lexical and structural differences. In each of the languages, a similar formulation to the other language is not possible. (DDiv27)

eng: [[On the cetacean question]$_{A}$ [no$_{E}$ doubts$_{C}$]$_{A}$ [arose]$_{P}$ [in his mind]$_{A}$]$_{H}$

fr: [[Sur la question du cétacé]$_{A}$, [aucun$_{E}$ doute$_{C}$]$_{A}$ [ne]$_{D}$ [s'élevait]$_{P}$ [dans son esprit]$_{A}$]$_{H}$

In English the negation is included only in the Participant and an Adverbial is not necessary. (DDiv28)

(20) Passage 895(eng) – Passage 863(fr):

eng: "[[Ned]$_{A}$]$_{H-}$," [I asked him]$_{H}$, [[how]$_{F}$ [can]$_{P-}$ [you]$_{F}$ [still]$_{D}$ [doubt]$_{-P(CONT.)}$ [the reality of this cetacean we're after]$_{A}$]$_{-H(CONT.)}$?

fr: [[Comment]$_{F}$, [Ned]$_{A}$]$_{H-}$, [lui demandai-je]$_{H}$, [[comment]$_{F}$ [pouvez]$_{P-}$ - [vous]$_{F}$ [ne pas]$_{D}$ [être convaincu]$_{-P(CONT.)}$ [de l'existence du cétacé que nous poursuivons]$_{A}$]$_{-H(CONT.)}$?

First difference: The Adverbial "still" in English adds information and emphasis. (DDiv29)

Second difference: Lexical difference. The Process in English is replaced by a Process with a an opposite meaning and a negation (annotated as D). (DDiv30)

(21) Passage 902(eng) – Passage 870(fr):

eng: [[it]$_{A}$ [needs$_{E}$ to$_{F}$ have$_{C}$]$_{P}$ [a constitution so solid]$_{A}$]$_{H}$, [it defies all comparison]$_{H}$

fr: [[il]$_{A}$ [possède]$_{P}$ [nécessairement]$_{D}$ [un organisme dont la solidité défie toute comparaison]$_{A}$]$_{H}$

Adverbial/Elaborator of Main Relation. (DDiv31)

eng: [Because]$_{L}$ [[it]$_{F}$ [takes]$_{P}$ [incalculable strength]$_{A}$ [[[just]$_{D}$ [to live]$_{P}$ [in those deep strata]$_{A}$]$_{H,IMPLICIT-A}$ [and]$_{L}$ [[withstand]$_{P}$ [their pressure]$_{A}$]$_{H,REMOTE-D("just")IMPLICIT-A}$]$_{A}$]$_{H}$.

fr: [Parce qu']$_{L}$ [[il]$_{F}$ [faut une force incalculable]$_{S}$]$_{H,IMPLICIT-A}$ [pour]$_{L}$ [[se maintenir]$_{P}$ [dans les couches profondes]$_{A}$]$_{H,IMPLICIT-A}$ [et]$_{L}$ [[résister]$_{P}$ [à leur pression]$_{A}$]$_{H,IMPLICIT-A}$.

2 Adverbial Divergences. The Adverbial "still" (twice) in English adds information and emphasis. (DDiv32 and DDiv33)

Chapter 5:

(22) Passage 968(eng) – Passage 911(fr):

eng: [[For some while]$_D$ [the voyage of the *Abraham Lincoln*]A [was marked]$_P$ [by$_R$ no$_E$ incident$_C$]$_A$]$_H$.

fr: [[Le voyage de l'*Abraham-Lincoln*]$_A$, [pendant quelque temps]$_D$, [ne]$_D$ [fut marqué]$_P$ [par$_R$ aucun$_E$ incident$_C$]$_A$]$_H$.

In English the negation is included only in the Participant and an Adverbial is not necessary. (DDiv34)

eng: [[showed]$_P$ [just]$_D$ [[[how much]$_E$ [confidence]$_C$]$_A$ [we]$_A$ [could place]$_P$ [in him]$_A$]$_A$]$_{H,REMOTE-A(\text{“circumstance”})}$.

fr: [[montra]$_P$ [[quelle]$_D$ [confiance]$_{S-}$ [on]$_A$ [devait avoir]$_{-S(CONT.)}$ [en lui]$_A$]$_A$]$_{H,REMOTE-A(\text{“circumstance”})}$

First difference: The Adverbial “just” in English adds information and emphasis. (DDiv35)

Second difference: Adverbial/Elaborator of Participant. Lexical difference. (DDiv36)

(23) Passage 971(eng) – Passage 914(fr):

eng: [But]$_L$ [[Commander Farragut]$_A$ [was$_F$ unwilling$_E$ to$_F$ attempt$_C$]$_P$ [this tortuous passageway]$_A$]$_H$

fr: [Mais]$_L$ [[le commandant Farragut]$_A$ [ne]$_{D-}$ [voulut$_E$]$_{P-}$ [pas]$_{-D(CONT.)}$ [prendre$_C$]$_{-P(CONT.)}$ [ce sinueux passage]$_A$]$_H$

Adverbial/Elaborator of Main Relation (Morphology). (DDiv37)

eng: [[maneuvered]$_P$ [instead]$_D$]$_{H,REMOTE-A(\text{“Farragut”})}$ [[to double]$_P$ [Cape Horn]$_A$]$_{H,REMOTE-A(\text{“Farragut”})}$.

fr: [[manoeuvra]$_P$]$_{H,REMOTE-A(\text{“Farragut”})}$ [de manière]$_L$ [[à doubler]$_P$ [le cap Horn]$_A$]$_{H,REMOTE-A(\text{“Farragut”})}$.

The Adverbial “instead” in English adds information and emphasis. (DDiv38)

(24) Passage 979(eng) – Passage 922(fr):

eng: [Ned Land]$_A$ [still]$_D$ [[kept us]$_E$ [the$_E$ most$_E$ tenacious$_E$ skepticism$_C$]$_C$]$_S$

fr: [[Ned Land]$_A$ [montrait$_E$]$_{S-}$ [toujours]$_D$ [la plus tenace]$_D$ [incrédulité$_C$]$_{-S(CONT.)}$]$_H$

Conforming Analysis. Adverbial/Elaborator of Main Relation. (DDiv39)

eng: [at least while]$_L$ [[no$_E$ whales$_C$]$_A$ [were in sight]$_P$]$_{H,IMPLICIT-A}$

fr: [du moins quand]$_L$ [[aucune$_E$ baleine$_C$]$_A$ [n']$_D$ [était en vue]$_P$]$_{H,IMPLICIT-A}$

In English the negation is included only in the Participant and an Adverbial is not necessary. (DDiv40)

eng: [[the marvelous power of his vision]$_A$ [could have performed]$_P$ [yeoman$_E$ service$_C$]$_A$]$_H$

fr: [[sa merveilleuse puissance de vision]$_A$ [aurait rendu de]$_{P-}$ [grands]$_D$ [services$_{]-P(CONT.)]H,IMPLICIT-A}$

Conforming Analysis. Adverbial/Elaborator of Participant. (DDiv41)

(25) Passage 984(eng) Passage 927(fr):

eng: [[this$_E$ reaction$_C$]$_A$ [was$_F$]$_{P-}$ [n't]$_D$ [long$_E$ in$_R$ coming$_C$]$_{-P(CONT.)}$]$_H$

fr: [[la$_E$ réaction$_C$]$_A$ [[[ne]$_{E-}$ [tarda]$_C$ [pas]$_{-E(CONT.)}$]$_E$ [à]$_F$ [se produire]$_C$]$_P$]$_H$

Adverbial/Elaborator of Main Relation. The same annotation is possible. (DDiv42)

eng: [[Nothing]$_D$ [[[remotely]$_D$ [resembling]$_S$ [a gigantic narwhale, or an underwater islet, or a derelict shipwreck, or a runaway reef, or anything the least bit unearthly]$_A$]$_{E,IMPLICIT-A}$]$_{A,IMPLICIT-C}$]$_{H,REMOTE-A(“we”),REMOTE-P(“found”)}$!

fr: [[rien]$_D$ [[[qui]$_R$ [ressemblât]$_P$ [à un narwal gigantesque, ni à un flôt sous-marin, ni à un épave de naufrage, ni à écueil fuyant, ni à quoi que ce fût de surnaturel]$_A$]$_{E,IMPLICIT-A}$]$_{A,IMPLICIT-C}$]$_{H,IMPLICIT-A,IMPLICIT-S}$!

The Adverbial “remotely” in English adds information and emphasis. (DDiv43)

(26) Passage 988(eng) – Passage 931(fr):

eng: [[I]$_A$ ['m$_F$ unwilling$_E$ to$_F$ say$_C$]$_P$ [that]$_F$ [there was mutiny on board]$_A$]$_H$

fr: [[Je]$_A$ [ne]$_{D-}$ [veux$_E$]$_{P-}$ [pas]$_{-D(CONT.)}$ [dire$_C$]$_{-P(CONT.)}$ [qu']$_F$ [il y eut révolte à bord]$_A$]$_H$

Adverbial/Elaborator of Main Relation (Morphology). (DDiv44)

eng: [a]$_E$ [[grace$_P$]$_{E,REMOTE-A(“Farragut”),IMPLICIT-A}$ [period]$_C$]$_C$ [[of]$_R$ [just]$_E$ [three$_E$ days$_C$]$_C$ more$_E$]$_E$

fr: [[trois$_E$ jours$_C$]$_D$ [de$_F$ patience$_C$]$_P$]$_{A,IMPLICIT-A}$

Lexical and structural differences. Free Translation. (DDiv45)

eng: [like]$_L$ [[Christopher Columbus]$_A$ [before$_R$ him$_C$]$_A$]$_{H,REMOTE-P(“asked”),REMOTE-A(“for agrace period of just three days more”)}$

fr: [comme]$_L$ [[autrefois]$_D$ [Colomb]$_A$]$_{H,REMOTE-P(“demanda”),REMOTE-A(“trois jours de patience”)}$

Adverbial/Participant. Free Translation. (DDiv46)

(27) Passage 992(eng) – Passage 935(fr):

eng: [By then]$_L$ [[the frigate]$_A$ [lay]$_S$ [in latitude 31°15' north and longitude 136°42' east]$_A$]$_H$.

fr: [[La frégate]$_A$ [se trouvait]$_S$ [alors]$_D$ [par 31°15' de latitude nord et par 136°42' de longitude est]$_A$]$_H$.

Adverbial/Linker. Conforming Analysis. (DDiv47)

eng: [[Eight o'clock]$_{A}$ [had$_{F}$]$_{P}$- [just]$_{D}$ [struck$_{C}$]$_{-P(CONT.)}$]$_{H}$.

fr: [[On]$_{A}$ [venait$_{E}$ de$_{F}$ piquer$_{C}$]$_{P}$ [huit heures]$_{D}$]$_{H}$.

First difference: The Adverbial “just” in English adds information and emphasis. (DDiv48)

Second difference: Adverbial/Participant. Structural difference. The same annotation is possible. (DDiv49)

(28) Passage 994(eng) – Passage 937(fr):

eng: [[Perhaps]$_{D}$ [his nerves]$_{A}$ [were twitching]$_{P}$ [with curiosity]$_{A}$ [for the first time in history]$_{D}$]$_{H}$.

fr: [[[Peut-être]$_{C}$, [et]$_{N}$ [pour la première fois]$_{C}$]$_{D}$, [ses nerfs]$_{A}$ [vibraient]$_{P}$ - [ils]$_{F}$ [sous l'action d'un sentiment de curiosité]$_{A}$]$_{H}$.

The Adverbial in French corresponds to two Adverbials in English. However, the same annotation is possible, annotating “et” as F. (DDiv50)

Appendix 6

Alignment with UCCA annotation in a French-English parallel corpus

The appendix includes a full alignment of an extract of the French-English corpus.
The whole bilingual corpus is composed by the first five chapters (marked as Chapter1 to Chapter5) of the book "Twenty Thousand Leagues Under the Sea" ("Vingt Mille Lieues Sous les Mers") by Jules Verne with the English translation of J.P. Walter. The alignment studied here concern only the Passages of the bilingual corpus with no Scene Divergences, Participant Divergences or Adverbial Divergences (15 Parallel Passages).

1) Passage 57(eng) – Passage 98(eng):

eng: $[\text{At first}]_{L}$ $[\text{the passengers were quite frightened}]_{H}$, $[\text{but}]_{L}$ [Captain Anderson hastened to reassure them]$_{H}$. $[\text{In fact}]_{L}$, [there could be no immediate danger]$_{H}$. [Divided into seven compartments by watertight bulkheads]$_{H}$, [the *Scotia* could brave any leak with impunity]$_{H}$.

fr: $[\text{Tout d'abord}]_{L}$, [les passagers furent très-effrayés]$_{H}$; $[\text{mais}]_{L}$ [le capitaine Anderson se hâta de les rassurer]$_{H}$. [En effet]$_{L}$, [le danger ne pouvait être imminent]$_{H}$. [Le Scotia, divisé en sept compartiments par des cloisons étanches, devait braver impunément une voie d'eau]$_{H}$.

Linker:
$[\text{At}_{R}\ \text{first}_{C}]_{L}$ – $[\text{Tout d'abord}]_{L}$

Scene 1:

$[[\text{the}_{E}\ \text{passengers}_{C}]_{A}\ [\text{were}_{F}\ \text{quite}_{E}\ \text{frightened}_{C}]_{P}]_{H}$ – $[[\text{les passagers}]_{A}\ [\text{furent}_{F}\ \text{très}_{E}\ \text{-effrayés}_{C}]_{S}]_{H}$

Participant:
$[\text{the}_{E}\ \text{passengers}_{C}]_{A}$ – $[\text{les}_{E}\ \text{passagers}_{C}]_{A}$
the_{E} – les_{E}
passengers_{C} – passagers_{C}

Main Relation:
$[\text{were}_{F}\ \text{quite}_{E}\ \text{frightened}_{C}]_{P}$ – $[\text{furent}_{F}\ \text{très}_{E}\ \text{- effrayés}_{C}]_{S}$
were_{S} – furent_{S}
quite_{E} – très_{E}
frightened_{C} – effrayés_{C}

Linker:
$[\text{but}]_{L}$ – $[\text{mais}]_{L}$

Scene 2:

$[\text{Captain Anderson}]_{A}$ $[\text{hastened}_{E}\ \text{to}_{F}\ \text{reassure}_{C}]_{P}$ $[\text{them}]_{A}$. - $[[\text{le}_{E}\ \text{capitaine}_{C}]_{E}\ [\text{Anderson}]_{C}]_{A}$ $[[\text{se}_{E}\ \text{hâta}_{C}]_{E}$ $[\text{de}]_{F}]_{P}$- $[\text{les}]_{A}$ $[[\text{rassurer}]_{C}]_{\text{-P(CONT.)}}$.

Participants:
[Captain$_E$ Anderson$_C$]$_A$ – [[le$_E$ capitaine$_C$]$_E$ [Anderson]$_C$]$_A$
Captain$_E$ – [le$_E$ capitaine$_C$]$_E$

them$_A$ – les$_A$

Main Relation:
[hastened$_E$ to$_F$ rassure$_C$]$_P$ – [[se$_E$ hâta$_C$]$_E$ de$_F$ rassurer$_C$]$_P$
hastened$_E$ – [se$_E$ hâta$_C$]$_E$
to$_F$ – de$_F$
rassure$_C$ – rassurer$_C$

Linker:
[In$_R$ fact$_C$]$_L$ – [En$_R$ effet$_C$]$_L$

Scene 3:

[[[there]$_{C-}$ [could]$_E$ [be]$_{-C(CONT.)}$]$_S$ [no]$_D$ [immediate$_E$ danger$_C$]$_A$]$_H$ – [[le$_E$ danger$_C$]$_A$ [ne]$_D$ [pouvait$_E$ être$_F$ imminent$_C$]$_S$]$_H$.

The Centers of the Participant in the two languages correspond as well as the Elaborators of the Main Relation.
However, there is no correspondence between Participants and Main Relations.
The Elaborator “immediate” of the Participant in English corresponds to the Center of the Main Relation in French.
The Center of the Main Relation in English corresponds to a Function in the Main Relation in French.
It is a structural difference due to free translation.

Adverbial:
[no]$_D$ – [ne]$_D$
Negation in both cases.

Scene 4:

[[Divided]$_P$ [into$_R$ seven$_E$ compartments$_C$]$_A$ [by$_R$ watertight$_E$ bulkheads$_C$]$_A$]$_{H,REMOTE-A(\text{“the Scotia”})}$ – [[divisé]$_P$ [en$_R$ sept$_E$ compartiments$_C$]$_P$ [par$_R$ des$_E$ cloisons$_C$ étanches$_E$]$_A$]$_{E,REMOTE-A(\text{“Scotia”})}$

Participants:
REMOTE-A(“the Scotia”) – REMOTE-A(“Scotia”)
Conforming Analysis

[into$_R$ seven$_E$ compartments$_C$]$_A$ - [en$_R$ sept$_E$ compartiments$_C$]$_A$
into$_R$ – en$_R$
seven$_E$ – sept$_E$
compartments$_C$ – compartiments$_C$

[by$_{R}$ watertight$_{E}$ bulkheads$_{C}$]$_{A}$ – [par$_{R}$ des$_{E}$ cloisons$_{C}$ étanches$_{E}$]$_{A}$
by$_{E}$ – par$_{E}$
watertight$_{E}$ – étanches$_{E}$
bulkeads$_{C}$ – cloisons$_{C}$

Main Relation:
[Divided]$_{P}$ – [divisé]$_{P}$

Scene 5:

[[the$_{E}$ *Scotia*$_{C}$]$_{A}$ [could$_{E}$ brave$_{C}$]$_{P}$ [any$_{E}$ leak$_{C}$]$_{A}$ [with$_{R}$ impunity$_{C}$]$_{D}$]$_{H}$. – [[[Le]$_{E}$ [Scotia]$_{C}$, [divisé en sept compartiments par des cloisons étanches]$_{E,REMOTE\text{-}A(\text{“Scotia”})}$]$_{A}$, [devait$_{E}$ braver$_{C}$]$_{P}$ [impunément]$_{D}$ [[une]$_{E}$ [voie]$_{C}$ [d'$_{R}$ eau$_{C}$]$_{E}$]$_{A}$]$_{H}$.

Participants:
[the$_{E}$ *Scotia*$_{C}$]$_{A}$ - [[Le]$_{E}$ [Scotia]$_{C}$, [divisé en sept compartiments par des cloisons étanches]$_{E,REMOTE\text{-}A(\text{“Scotia”})}$]
the$_{E}$ – Le$_{E}$
Scotia$_{C}$ – Scotia$_{C}$
The second Elaborator in English is a Scene which corresponds to a Parallel Scene in French (Scene 4).

[any$_{E}$ leak$_{C}$]$_{A}$ – [[une]$_{E}$ [voie]$_{C}$ [d'$_{R}$ eau$_{C}$]$_{E}$]$_{A}$ (free translation)

Main Relation:
[could$_{E}$ brave$_{C}$]$_{P}$ - [devait$_{E}$ braver$_{C}$]$_{P}$

Adverbial:
[with$_{R}$ impunity$_{C}$]$_{D}$ – [impunément]$_{D}$

2) Passage 290(eng) – Passage 420(fr):

eng: [Restaient]$_{H\text{-}}$ [donc]$_{L}$ [deux solutions possibles de la question]$_{\text{-H(CONT.)}}$, [qui]$_{F}$ [créaient deux clans très-distincts de partisans : d'un côté, ceux qui tenaient pour un monstre d'une force colossale ; de l'autre, ceux qui tenaient pour un bateau « sous-marin » d'une extrême puissance motrice]$_{H}$.

fr: [So]$_{L}$ [only two possible solutions to the question were left]$_{H}$, [creating two very distinct groups of supporters: on one side, those favoring a monster of colossal strength; on the other, those favoring an "underwater boat" of tremendous motor power]$_{H}$.

Linker:
[So]$_{L}$ – [donc]$_{L}$

Scene 6:

[[[only]$_{R}$ [two]$_{E}$ [possible]$_{E}$ [solutions]$_{C}$ [to$_{R}$ the$_{E}$ question$_{C}$]$_{E}$]$_{A}$ [were$_{F}$ left$_{C}$]$_{S}$]$_{H}$ – [[Restaient]$_{S}$]$_{H\text{-}}$
[[[deux]$_{E}$ [solutions]$_{C}$ [possibles]$_{E}$ [de$_{R}$ la$_{E}$ question$_{C}$]$_{E}$]$_{A}$]$_{\text{-H(CONT.)}}$

Participant:
[[only]$_R$ [two]$_E$ [possible]$_E$ [solutions]$_C$ [to$_R$ the$_E$ question$_C$]$_E$]$_A$ – [[deux]$_E$ [solutions]$_C$ [possibles]$_E$ [de$_R$ la$_E$ question$_C$]$_E$]$_A$
two$_E$ – deux$_E$
possible$_E$ – possibles$_E$
[to$_R$ the$_E$ question$_C$]$_E$ – [de$_R$ la$_E$ question$_C$]$_E$
the$_E$ – la$_E$
question$_C$ - question$_C$
solutions$_C$ - solutions$_C$

Main Relation:
[were$_F$ left$_C$]$_S$ - [Restaient]$_S$

<u>Scene 7:</u>

[[creating]$_P$ [[[two]$_E$ [very]$_E$ [distinct]$_E$ [groups]$_C$ [of$_R$ supporters$_C$]$_E$]$_C$: [[[on$_R$ one$_E$ side$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$; [[on$_R$ the$_E$ other$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$]$_E$]$_A$]$_{H,REMOTE-A(\text{“solutions”})}$. – [[créaient]$_P$ [[[deux]$_E$ [clans]$_C$ [très$_E$-distincts$_C$]$_E$ [de$_R$ partisans$_C$]$_E$]$_C$: [[[d’$_R$ un$_E$ côté$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE-A(\text{“partisans”})}$]$_C$; [[de$_R$ l’$_E$ autre$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“partisans”})}$]$_E$]$_A$]$_{H,REMOTE-A(\text{“solutions”})}$.

Participant:
REMOTE-A(“supporters”) - REMOTE-A(“partisans”)

[[[two]$_E$ [very]$_E$ [distinct]$_E$ [groups]$_C$ [of$_R$ supporters$_C$]$_E$]$_C$: [[[on$_R$ one$_E$ side$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$; [[on$_R$ the$_E$ other$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$]$_E$]$_A$ – [[[deux]$_E$ [clans]$_C$ [très$_E$-distincts$_C$]$_E$ [de$_R$ partisans$_C$]$_E$]$_C$: [[[d’$_R$ un$_E$ côté$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE-A(\text{“partisans”})}$]$_C$; [[de$_R$ l’$_E$ autre$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“partisans”})}$]$_E$]$_A$

[[two]$_E$ [very]$_E$ [distinct]$_E$ [groups]$_C$ [of$_R$ supporters$_C$]$_E$]$_C$ – [[deux]$_E$ [clans]$_C$ [très$_E$-distincts$_C$]$_E$ [de$_R$ partisans$_C$]$_E$]$_C$
[two]$_E$ – [deux]$_E$
[very]$_E$ [distinct]$_E$ – [très$_E$-distincts$_C$]$_E$
[of$_R$ supporters$_C$]$_E$ - [de$_R$ partisans$_C$]$_E$]$_C$
of$_R$ – de$_R$
supporters$_C$ – partisans$_C$
groups$_C$ – clans$_C$

[[[on$_R$ one$_E$ side$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$; [[on$_R$ the$_E$ other$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE-A(\text{“supporters”})}$]$_C$]$_E$ – [[[d’$_R$ un$_E$ côté$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE-A(\text{“partisans”})}$]$_C$; [[de$_R$ l’$_E$ autre$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$

motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$]$_C$]$_E$

[[on$_R$ one$_E$ side$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“supporters”})}$]$_C$ – [[d’$_R$ un$_E$ côté$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$]$_C$

[on$_R$ one$_E$ side$_C$]$_E$ – [d’$_R$ un$_E$ côté$_C$]$_E$
one$_E$ – un$_E$
side$_C$ – côté$_C$

[[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“supporters”})}$ – [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$

[on$_R$ the$_E$ other$_C$]$_E$, [[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“supporters”})}$]$_C$ - [[de$_R$ l’$_E$ autre$_C$]$_E$, [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$]$_C$

[on$_R$ the$_E$ other$_C$]$_E$ – [de$_R$ l’$_E$ autre$_C$]$_E$,
l'$_E$ – the$_E$
other$_C$ - autre$_C$
(Here another annotation is possible in both languages)

[[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“supporters”})}$ – [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$

Main Relation:
[creating]$_P$ – [créaient]$_P$

<u>Scene 8:</u>

[[those]$_F$ [favoring]$_P$ [[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“supporters”})}$ – [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$]$_{C,REMOTE\text{-}A(\text{“partisans”})}$

Function:
those$_F$ - ceux$_F$

Participants:
REMOTE-A(“supporters”) – REMOTE-A(“partisans”)

[[a]$_E$ [monster]$_C$ [of$_R$ colossal$_E$ strength$_C$]$_E$]$_A$ – [[pour]$_R$ [un]$_E$ [monstre]$_C$ [d’$_R$ une$_E$ force$_C$ colossale$_E$]$_E$]$_A$
[a]$_E$ – [un]$_E$
[of$_R$ colossal$_E$ strength$_C$]$_E$ - [d’$_R$ une$_E$ force$_C$ colossale$_E$]
of$_R$ - d’$_R$
colossal$_E$ – colossale$_E$
strength$_C$ – force$_C$
[monster]$_C$ – [monstre]$_C$

Main Relation:
[favoring]$_P$ – [tenaient]$_P$ (free translation)

Scene 9:

[[those]$_F$ [favoring]$_P$ [[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$]$_{C,REMOTE-A(“supporters”)}$ – [[ceux]$_F$ [qui]$_R$ [tenaient]$_P$ [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$]$_{C,REMOTE-A(“partisans”)}$

Participants:
REMOTE-A(“supporters”) – REMOTE-A(“partisans”)

[[an]$_E$ [“underwater$_E$ boat$_C$”]$_C$ [of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$]$_A$ – [[pour]$_R$ [un]$_E$ [bateau]$_C$ [« sous-marin »]$_E$ [[d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$]$_A$
[an]$_E$ - [un]$_E$
[“underwater$_E$ boat$_C$”]$_C$ - [bateau]$_C$ [« sous-marin »]$_E$
underwater$_E$ - [« sous-marin »]$_E$
[of$_R$ tremendous$_E$ motor$_E$ power$_C$]$_E$ - [d’]$_R$ [une]$_E$ [extrême]$_E$ [puissance$_C$ motrice$_E$]$_C$]$_E$
of$_R$ – d’$_R$
tremendous$_E$ – extrême$_E$
motor$_E$ power$_C$ – [puissance$_C$ motrice$_E$]$_C$
motor$_E$ - motrice$_E$
power$_C$ - puissance$_C$
boat$_C$ - bateau$_C$

Main Relation:
[favoring]$_P$ – [tenaient]$_P$ (free translation)

3) Passage 294 (eng) – Passage 424 (fr):

eng: [So]$_L$, [after]$_L$ [inquiries conducted in England, France, Russia, Prussia, Spain, Italy, America, and even Turkey]$_H$, [the hypothesis of an underwater *Monitor* was ultimately rejected]$_H$.
fr: [Donc]$_L$, [après]$_L$ [enquêtes faites en Angleterre, en France, en Russie, en Prusse, en Espagne, en Italie, en Amérique, voire même en Turquie]$_H$, [l’hypothèse d’un Monitor sous-marin fut définitivement rejetée]$_H$.

Linkers:
[So]$_L$ – [Donc]$_L$
[after]$_L$ – [après]$_L$

Scene 10:

[[inquiries]$_A$ [conducted]$_P$ [[in$_R$ England$_C$]$_C$, [France$_C$]$_{C,REMOTE-R(“in”)}$, [Russia$_C$]$_{C,REMOTE-R(“in”)}$, [Prussia$_C$]$_{C,REMOTE-R(“in”)}$, [Spain$_C$]$_{C,REMOTE-R(“in”)}$, [Italy$_C$]$_{C,REMOTE-R(“in”)}$, [America$_C$]$_{C,REMOTE-R(“in”)}$, [and]$_N$ [even$_E$ Turkey$_C$]$_{C,REMOTE-R(“in”)}$]$_A$]$_{H,IMPLICIT-A}$ – [[enquêtes]$_A$ [faites]$_P$ [[en$_R$ Angleterre$_C$]$_C$, [en$_R$ France$_C$]$_C$, [en$_R$ Russie$_C$]$_C$, [en$_R$ Prusse$_C$]$_C$, [en$_R$ Espagne$_C$]$_C$, [en$_R$ Italie$_C$]$_C$, [en$_R$ Amérique$_C$]$_C$, [[voire même]$_E$ [en]$_R$ [Turquie]$_C$]$_C$]$_A$]$_H$,

Participants:
IMPLICIT-A – IMPLICIT-A

$[\text{inquiries}]_{A}$ – $[\text{enquêtes}]_{A}$

$[[\text{in}_{R}\ \text{England}_{C}]_{C}$, $[\text{France}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{Russia}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{Prussia}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{Spain}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{Italy}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{America}_{C}]_{C,\text{REMOTE-R(“in”)}}$, $[\text{and}]_{N}$ $[\text{even}_{E}\ \text{Turkey}_{C}]_{C,\text{REMOTE-R(“in”)}}]_{A}$ - $[[\text{en}_{R}$ $\text{Angleterre}_{C}]_{C}$, $[\text{en}_{R}\ \text{France}_{C}]_{C}$, $[\text{en}_{R}\ \text{Russie}_{C}]_{C}$, $[\text{en}_{R}\ \text{Prusse}_{C}]_{C}$, $[\text{en}_{R}\ \text{Espagne}_{C}]_{C}$, $[\text{en}_{R}\ \text{Italie}_{C}]_{C}$, $[\text{en}_{R}$ $\text{Amérique}_{C}]_{C}$, $[[\text{voire même}]_{E}\ [\text{en}]_{R}\ [\text{Turquie}]_{C}]_{C}]_{A}$
$[\text{in}_{R}\ \text{England}_{C}]_{C}$ – $[\text{en}_{R}\ \text{Angleterre}_{C}]_{C}$
in_{R} – en_{R}
England_{C} – Angleterre_{C}
$[\text{France}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{France}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
France_{C} – France_{C}
$[\text{Russia}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{Russie}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
Russia_{C} – Russie_{C}
$[\text{Prussia}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{Prusse}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
Prussia_{C} – Prusse_{C}
$[\text{Spain}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{Espagne}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
Spain_{C} – Espagne_{C}
$[\text{Italy}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{Italie}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
Italy_{C} – Italie_{C}
$[\text{America}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[\text{en}_{R}\ \text{Amérique}_{C}]_{C}$
REMOTE-R(“in”) – en_{R}
America_{C} – Amérique_{C}
$[\text{even}_{E}\ \text{Turkey}_{C}]_{C,\text{REMOTE-R(“in”)}}$ – $[[\text{voire même}]_{E}\ [\text{en}]_{R}\ [\text{Turquie}]_{C}]_{C}$
even_{E} – $[\text{voire même}]_{E}$
REMOTE-R(“in”) – en_{R}
Turkey_{C} – Turquie_{C}

Main Relation:
$[\text{conducted}]_{P}$ – $[\text{faites}]_{P}$

<u>Scene 11:</u>

$[[[\text{the}_{E}\ \text{hypothesis}_{C}\ \text{of}_{R}]_{E}\ [\text{an}_{E}\ \text{underwater}_{E}\ \textit{Monitor}_{C}]_{C}]_{A}\ [\text{was}_{F}]_{P\text{-}}\ [\text{ultimately}]_{D}\ [\text{rejected}_{C}]_{\text{-P(CONT.)}}]_{\text{H,IMPLICIT-A}}$ – $[[[\text{l'}_{E}\ \text{hypothèse}_{C}\ \text{d'}_{R}]_{E}\ [[\text{un}]_{E}\ [\text{Monitor}]_{C}\ [\text{sous}_{R}\text{-marin}_{C}]_{E}]_{C}]_{A}\ [\text{fut}_{F}]_{P\text{-}}\ [\text{définitivement}]_{D}\ [\text{rejetée}_{C}]_{\text{-P(CONT.)}}]_{\text{H,IMPLICIT-A}}$

Participants:
IMPLICIT-A - IMPLICIT-A

$[[\text{the}_{E}\ \text{hypothesis}_{C}\ \text{of}_{R}]_{E}\ [\text{an}_{E}\ \text{underwater}_{E}\ \textit{Monitor}_{C}]_{C}]_{A}$ – $[[\text{l'}_{E}\ \text{hypothèse}_{C}\ \text{d'}_{R}]_{E}\ [[\text{un}]_{E}\ [\text{Monitor}]_{C}$

[sous$_R$-marin$_C$]$_E$]$_C$]$_A$
[the$_E$ hypothesis$_C$ of$_R$]$_E$ – [l'$_E$ hypothèse$_C$ d'$_R$]$_E$
the$_E$ - l'$_E$
hypothesis$_C$ – hypothèse$_C$
of$_R$ – d'$_R$
[an$_E$ underwater$_E$ *Monitor*$_C$]$_C$ – [[un]$_E$ [Monitor]$_C$ [sous$_R$-marin$_C$]$_E$]$_C$
an$_E$ – un$_E$
underwater$_E$ – [sous$_R$-marin$_C$]$_E$
Monitor$_C$ – Monitor$_C$

Main Relation:
[was$_F$]$_P$- [rejected$_C$]$_{-P(CONT.)}$ – [fut$_F$]$_P$- [rejetée$_C$]$_{-P(CONT.)}$
was$_F$ – fut$_F$
rejected$_C$ – rejetée$_C$

Adverbial:
[ultimately]$_D$ - [définitivement]$_D$

4) Passage 300(eng) - Passage 430(fr):

<u>eng:</u> [However]$_L$, [the solution to this problem submitted to me can take the form of a choice between two alternatives]$_H$.

<u>fr</u>: [Cependant]$_L$, [la solution du problème qui m'est soumis peut affecter la forme du dilemme]$_H$.

<u>Linker</u>:
[However]$_L$ – [Cependant]$_L$

<u>Scene 12:</u>

[[[the]$_E$ [solution]$_C$ [[to]$_R$ [this]$_E$ [problem]$_C$ [[submitted]$_P$ [to$_R$ me$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“problem”}),IMPLICIT\text{-}A}$]$_E$]$_A$ [[can]$_E$ [[take]$_E$ [the$_E$ form$_C$]$_C$]$_C$ [of]$_R$]$_S$ [[a]$_E$ [choice]$_C$ [between$_R$ two$_E$ alternatives$_C$]$_E$]$_A$]$_H$. – [[[la]$_E$ [solution]$_C$ [[du]$_{R+E}$ [problème]$_C$ [[qui]$_R$ [m']$_A$ [est$_F$ soumis$_C$]$_P$]$_{E,REMOTE\text{-}A(\text{“problème”}),IMPLICIT\text{-}A}$]$_E$]$_A$ [peut$_E$ affecter$_C$]$_P$ [[la]$_E$ [forme]$_C$ [[du]$_{R+E}$ [dilemme]$_C$]$_E$]$_A$]$_H$.

Participants:
[[[the]$_E$ [solution]$_C$ [[to]$_R$ [this]$_E$ [problem]$_C$ [[submitted]$_P$ [to$_R$ me$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“problem”}),IMPLICIT\text{-}A}$]$_E$]$_A$ –
[[[la]$_E$ [solution]$_C$ [[du]$_{R+E}$ [problème]$_C$ [[qui]$_R$ [m']$_A$ [est$_F$ soumis$_C$]$_P$]$_{E,REMOTE\text{-}A(\text{“problème”}),IMPLICIT\text{-}A}$]$_E$]$_A$
[the]$_E$ – [la]$_E$
[[to]$_R$ [this]$_E$ [problem]$_C$ [[submitted]$_P$ [to$_R$ me$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“problem”}),IMPLICIT\text{-}A}$]$_E$ – [[du]$_{R+E}$ [problème]$_C$ [[qui]$_R$ [m']$_A$ [est$_F$ soumis$_C$]$_P$]$_{E,REMOTE\text{-}A(\text{“problème”}),IMPLICIT\text{-}A}$]$_E$]$_A$
[to]$_R$ [this]$_E$ – [du]$_{R+E}$
[[submitted]$_P$ [to$_R$ me$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“problem”}),IMPLICIT\text{-}A}$]$_E$ - [[qui]$_R$ [m']$_A$ [est$_F$ soumis$_C$]$_P$]$_{E,REMOTE\text{-}A(\text{“problème”}),IMPLICIT\text{-}A}$]$_E$
[problem]$_C$ – [problème]$_C$
[solution]$_C$ – [solution]$_C$

Participant + Main Relation:
$[[can]_E\ [[take]_E\ [the_E\ form_C]_C]_C\ [of]_R]_S\ [[a]_E\ [choice]_C\ [between_R\ two_E\ alternatives_C]_E]_A$ – $[peut_E\ affecter_C]_P\ [[la]_E\ [forme]_C\ [[du]_{R+E}\ [dilemme]_C]_E]_A$
(Conforming analysis and free translation).

Scene 13:

$[[submitted]_P\ [to_R\ me_C]_A]_{E,REMOTE\text{-}A(\text{“problem”}),IMPLICIT\text{-}A}$ – $[[qui]_R\ [m']_A\ [est_F\ soumis_C]_P]_{E,REMOTE\text{-}A(\text{“problème”}),IMPLICIT\text{-}A}$

Participants:
IMPLICIT-A – IMPLICIT-A
REMOTE-A(“problem”) - REMOTE-A(“problème”)
$[to_R\ me_C]_A$ – $[m']_A$

Main Relation:
$[submitted]_P$ – $[est_F\ soumis_C]_P$

5) Passage 301(eng) – Passage 431(fr):

eng: $[Either]_L$ [we know every variety of creature populating our planet]$_H$, $[or]_L$ [we do not]$_H$.

fr: $[Ou]_L$ [nous connaissons toutes les variétés d'êtres qui peuplent notre planète]$_H$, $[ou]_L$ [nous ne les connaissons pas]$_H$.

Linker:
$[Either]_L$ – $[ou]_L$

Scene 14:

$[[we]_A\ [know]_P\ [[every]_E\ [variety]_C\ [[of]_R\ [creature]_C\ [[populating]_P\ [our_E\ planet_C]_A]_{E,REMOTE\text{-}A(\text{“CREATURE”})}]_E]_A]_H$ – $[[nous]_A\ [connaissons]_P\ [[toutes]_E\ [les]_E\ [variétés]_C\ [[d']_R\ [êtres]_C\ [[qui]_R\ [peuplent]_P\ [notre_E\ planète_C]_A]_{E,REMOTE\text{-}A(\text{“êtres”})}]_E]_A]_H$

Participants:
$[we]_A$ – $[nous]_A$

$[[every]_E\ [variety]_C\ [[of]_R\ [creature]_C\ [[populating]_P\ [our_E\ planet_C]_A]_{E,REMOTE\text{-}A(\text{“CREATURE”})}]_E]_A$ – $[[toutes]_E\ [les]_E\ [variétés]_C\ [[d']_R\ [êtres]_C\ [[qui]_R\ [peuplent]_P\ [notre_E\ planète_C]_A]_{E,REMOTE\text{-}A(\text{“êtres”})}]_E]_A$
$[every]_E$ – $[toutes]_E$
$[variety]_C$ – $[variétés]_C$
$[of]_R\ [creature]_C\ [[populating]_P\ [our_E\ planet_C]_A]_{E,REMOTE\text{-}A(\text{“CREATURE”})}]_E$ – $[[d']_R\ [êtres]_C\ [[qui]_R\ [peuplent]_P\ [notre_E\ planète_C]_A]_{E,REMOTE\text{-}A(\text{“êtres”})}]_E$
$[of]_R$ – $[d']_R$
$[[populating]_P\ [our_E\ planet_C]_A]_{E,REMOTE\text{-}A(\text{“CREATURE”})}$ – $[qui]_R\ [peuplent]_P\ [notre_E\ planète_C]_A]_{E,REMOTE\text{-}A(\text{“êtres”})}$
$[creature]_C$ – $[êtres]_C$

Main Relation:
$[know]_{P}$ – $[connaissons]_{P}$

Scene 15:

$[[populating]_{P}\ [our_{E}\ planet_{C}]_{A}]_{E,REMOTE\text{-}A(\text{“CREATURE”})}$ – $[qui]_{R}\ [peuplent]_{P}\ [notre_{E}\ planète_{C}]_{A}]_{E,REMOTE\text{-}A(\text{“êtres”})}$

Participants:
REMOTE-A(“CREATURE”) - REMOTE-A(“êtres”)

$[our_{E}\ planet_{C}]_{A}$ – $[notre_{E}\ planète_{C}]_{A}$
our_{E} – $notre_{E}$
$planet_{C}$ - $planète_{C}$

Main Relation:
$[populating]_{P}$ – $[peuplent]_{P}$

Linker:
$[or]_{L}$ – $[ou]_{L}$

Scene 16:

$[[we]_{A}\ [do_{F}]_{P,REMOTE\text{-}C(\text{“know”})}\ [not]_{D}]_{H,REMOTE\text{-}A(\text{“every variety of creature populating our planet”})}$ – $[[nous]_{A}\ [ne]_{D\text{-}}\ [les]_{A}\ [connaissons]_{P}\ [pas]_{\text{-}D(CONT.)}]_{H}$.

Participants:
$[we]_{A}$ – $[nous]_{A}$
$_{REMOTE\text{-}A(\text{“every variety of creature populating our planet”})}$ - $[les]_{A}$
(For a full alignment here, conserving all the information, we need an indication of reference in English which involves an higher layer of UCCA).

Main Relation:
$[do_{F}]_{P,REMOTE\text{-}C(\text{“know”})}$ – $[connaissons]_{P}$

Adverbial:
$[not]_{D}$ – $[ne]_{D\text{-}}\ [pas]_{\text{-}D(CONT.)}$

6) Passage 302(eng) – Passage 432(fr):

eng: $[If]_{L}$ [we do *not* know every one of them]$_{H}$, $[if]_{L}$ [nature still keeps ichthyological secrets from us]$_{H}$, [nothing is more admissible than to accept the existence of fish or cetaceans of new species or even new genera, animals with a basically ‘cast-iron’ constitution that inhabit strata beyond the reach of our soundings, and which some development or other, an urge or a whim if you prefer, can bring to the upper level of the ocean for long intervals]$_{H}$.

fr: $[Si]_{L}$ [nous ne les connaissons pas toutes]$_{H}$, $[si]_{L}$ [la nature a encore des secrets pour nous en ichtyologie]$_{H}$, [rien de plus acceptable que d’admettre l’existence de poissons ou de cétacés, d’espèces ou même de genres nouveaux, d’une organisation essentiellement « fondrière », qui habitent les

couches inaccessibles à la sonde, et qu'un événement quelconque, une fantaisie, un caprice, si l'on veut, ramène à de longs intervalles vers le niveau supérieur de l'Océan]$_{H}$.

Linker:
[If]$_{L}$ – [Si]$_{L}$

Scene 17:
[[we]$_{A}$ [do$_{F}$]$_{P\text{-}}$ [*not*]$_{D}$ [know$_{C}$]$_{\text{-P(CONT.)}}$ [[every$_{E}$ one$_{C}$]$_{E}$ [of$_{R}$ them$_{C}$]$_{C}$]$_{A}$]$_{H}$ – [[nous]$_{A}$ [ne]$_{D\text{-}}$ [les$_{C}$]$_{A\text{-}}$ [connaissons]$_{P}$ [pas]$_{\text{-D(CONT.)}}$ [toutes$_{E}$]$_{\text{-A(CONT.)}}$]$_{H}$,

Participants:
[we]$_{A}$ – [nous]$_{A}$

[[every$_{E}$ one$_{C}$]$_{E}$ [of$_{R}$ them$_{C}$]$_{C}$]$_{A}$ – [les$_{C}$]$_{A\text{-}}$ [toutes$_{E}$]$_{\text{-A(CONT.)}}$ (literally: them ... all)
The Elaborator and the Center approximately correspond to their counterpart in the other language.

Main Relation:
[do$_{F}$]$_{P\text{-}}$ [know$_{C}$]$_{\text{-P(CONT.)}}$ – [connaissons]$_{P}$

Adverbial
[*not*]$_{D}$ – [ne]$_{D\text{-}}$ [pas]$_{\text{-D(CONT.)}}$

Linker:
[if]$_{L}$ – [si]$_{L}$

Scene 18:

[[nature]$_{A}$ [still]$_{D}$ [keeps]$_{P}$ [ichthyological$_{E}$ secrets$_{C}$]$_{A}$ [from$_{R}$ us$_{C}$]$_{A}$]$_{H}$ – [[la$_{E}$ nature$_{C}$]$_{A}$ [a]$_{S}$ [encore]$_{D}$ [des$_{E}$ secrets$_{C}$]$_{A\text{-}}$ [pour$_{R}$ nous$_{C}$]$_{A}$ [[en$_{R}$ ichtyologie$_{C}$]$_{E}$]$_{\text{-A(CONT.)}}$]$_{H}$

Participants:
[nature]$_{A}$ – [la$_{E}$ nature$_{C}$]$_{A}$

[ichthyological$_{E}$ secrets$_{C}$]$_{A}$ - – [des$_{E}$ secrets$_{C}$]$_{A\text{-}}$ [[en$_{R}$ ichtyologie$_{C}$]$_{E}$]$_{\text{-A(CONT.)}}$
ichthyological$_{E}$ – [en$_{R}$ ichtyologie$_{C}$]$_{E}$
secrets$_{C}$ – des$_{E}$ secrets$_{C}$

[from$_{R}$ us$_{C}$]$_{A}$ - [pour$_{R}$ nous$_{C}$]$_{A}$ (literally: for us)

Main Relation:
[keeps]$_{P}$ – [a]$_{S}$ (literally: has)
(free translation)

Adverbial:
[still]$_{D}$ – [encore]$_{D}$

Scene 19:

[[[[nothing]$_{C}$ [is$_{F}$ more$_{E}$ admissible$_{C}$]$_{E}$]$_{E}$ [than]$_{F}$ [to]$_{F}$ [accept]$_{C}$]$_{P}$ [[the]$_{E}$ [existence]$_{C}$ [[[of$_{R}$ fish$_{C}$]$_{C}$ [or]$_{N}$

[cetaceans]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_C$ [[of$_R$ new$_E$ species$_C$]$_C$ [or]$_N$ [even$_E$ new$_E$ genera$_C$]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_E$, [[animals]$_C$ [[with]$_R$ [a]$_E$ [basically]$_E$ [‘cast-iron’]$_E$ [constitution]$_C$]$_E$ [[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$, [and]$_N$ [[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$]$_E$]$_A$]$_{H,IMPPLICIT\text{-}A}$. –

[[[[rien]$_C$ [de$_R$ plus$_E$ acceptable$_C$]$_E$]$_E$ [que]$_F$ [d’]$_R$ [admettre]$_C$]$_P$ [[l’]$_E$ [existence]$_C$ [[[de$_R$ poissons$_C$]$_C$ [ou]$_N$ [de$_R$ cétacés$_C$]$_C$]$_E$, [[[d’$_R$ espèces$_C$]$_C$ [ou]$_N$ [même$_E$ de$_R$ genres$_C$]$_C$]$_C$ [nouveaux]$_E$]$_E$, [[d’]$_R$ [une]$_E$ [organisation]$_C$ [essentiellement$_E$ « fondrière$_C$ »]$_E$]$_E$, [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$, [et]$_L$ [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”),}}$]$_E$]$_A$]$_{H,IMPLICIT\text{-}A}$

Participants:
IMPLICIT-A – IMPLICIT-A

[the]$_E$ [existence]$_C$ [[[of$_R$ fish$_C$]$_C$ [or]$_N$ [cetaceans]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_C$ [[of$_R$ new$_E$ species$_C$]$_C$ [or]$_N$ [even$_E$ new$_E$ genera$_C$]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_E$, [[animals]$_C$ [[with]$_R$ [a]$_E$ [basically]$_E$ [‘cast-iron’]$_E$ [constitution]$_C$]$_E$ [[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$, [and]$_N$ [[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$]$_E$]$_A$ –
[[l’]$_E$ [existence]$_C$ [[[de$_R$ poissons$_C$]$_C$ [ou]$_N$ [de$_R$ cétacés$_C$]$_C$]$_C$, [[[d’$_R$ espèces$_C$]$_C$ [ou]$_N$ [même$_E$ de$_R$ genres$_C$]$_C$]$_C$ [nouveaux]$_E$]$_E$, [[d’]$_R$ [une]$_E$ [organisation]$_C$ [essentiellement$_E$ « fondrière$_C$ »]$_E$]$_E$, [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$, [et]$_L$ [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_A$ $_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$]$_E$]$_A$

[the]$_E$ – [l’]$_E$

[[[of$_R$ fish$_C$]$_C$ [or]$_N$ [cetaceans]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_C$ [[of$_R$ new$_E$ species$_C$]$_C$ [or]$_N$ [even$_E$ new$_E$ genera$_C$]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_E$, [[animals]$_C$ [[with]$_R$ [a]$_E$ [basically]$_E$ [‘cast-iron’]$_E$ [constitution]$_C$]$_E$ [[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$, [and]$_N$ [[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$]$_E$ –
[[l’]$_E$ [existence]$_C$ [[[de$_R$ poissons$_C$]$_C$ [ou]$_N$ [de$_R$ cétacés$_C$]$_C$]$_E$, [[[d’$_R$ espèces$_C$]$_C$ [ou]$_N$ [même$_E$ de$_R$ genres$_C$]$_C$]$_C$ [nouveaux]$_E$]$_E$, [[d’]$_R$ [une]$_E$ [organisation]$_C$ [essentiellement$_E$ « fondrière$_C$ »]$_E$]$_E$, [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$, [et]$_L$ [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_A$ $_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$]$_E$]$_E$

[[of$_R$ new$_E$ species$_C$]$_C$ [or]$_N$ [even$_E$ new$_E$ genera$_C$]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_E$ – [[d’$_R$ espèces$_C$]$_C$ [ou]$_N$ [même$_E$ de$_R$ genres$_C$]$_C$]$_C$ [nouveaux]$_E$]$_E$
(In French too, “nouveaux” (“new”) can appear twice using REMOTE-E and then we would have full correspondence between the Centers in the two languages. This point concerns conforming analysis.)

[[animals]$_C$ [[with]$_R$ [a]$_E$ [basically]$_E$ [‘cast-iron’]$_E$ [constitution]$_C$]$_E$ [[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_P$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$, [and]$_N$ [[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$]$_E$
– [[d’]$_R$ [une]$_E$ [organisation]$_C$ [essentiellement$_E$ « fondrière$_C$ »]$_E$]$_E$, [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$, [et]$_L$ [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_{A\ H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$]$_E$

[[with]$_R$ [a]$_E$ [basically]$_E$ [‘cast-iron’]$_E$ [constitution]$_C$]$_E$ - [[d’]$_R$ [une]$_E$ [organisation]$_C$ [essentiellement$_E$ « fondrière$_C$ »]$_E$]$_E$
[a]$_E$ – [une]$_E$
[basically]$_E$ [‘cast-iron’]$_E$ – [essentiellement$_E$ « fondrière$_C$ »]$_E$
[constitution]$_C$ – [organisation]$_C$
(Because of the the additional word “animals” the above Elaborator in English is contained in another Elaborator, differently from French)

[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_P$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$, [and]$_N$ [[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$]$_E$
– [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$, [et]$_L$ [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_{A\ H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$]$_E$
(Because of the the additional word “animals” the above Elaborator in English is contained in another Elaborator, differently from French)

[[of$_R$ fish$_C$]$_C$ [or]$_N$ [cetaceans]$_{C,REMOTE\text{-}R(\text{“of”})}$]$_C$ – [[de$_R$ poissons$_C$]$_C$ [ou]$_N$ [de$_R$ cétacés$_C$]$_C$]$_C$
[of$_R$ fish$_C$]$_C$ – [de$_R$ poissons$_C$]$_C$
of$_R$ – de$_R$
fish$_C$ – poissons$_C$
[or]$_N$ – [ou]$_N$
[cetaceans]$_{C,REMOTE\text{-}R(\text{“of”})}$ – [de$_R$ cétacés$_C$]$_C$
REMOTE-R(“of”) – de$_R$
cetaceans$_C$ - cétacés$_C$

Main Relation:
[[[nothing]$_C$ [is$_F$ more$_E$ admissible$_C$]$_E$]$_E$ [than]$_F$ [to]$_F$ [accept]$_C$]$_P$ – [[[rien]$_C$ [de$_R$ plus$_E$ acceptable$_C$]$_E$]$_E$ [que]$_F$ [d’]$_R$ [admettre]$_C$]$_P$
[[nothing]$_C$[is$_F$ more$_E$ admissible$_C$]$_E$]$_E$ – [[rien]$_C$ [de$_R$ plus$_E$ acceptable$_C$]$_E$]$_E$
[is$_F$ more$_E$ admissible$_C$]$_E$ – [de$_R$ plus$_E$ acceptable$_C$]$_E$]
more$_E$ – plus$_E$
admissible$_C$ – acceptable$_C$
[nothing]$_C$ [rien]$_C$
[than]$_F$ – [que]$_F$
[d’]$_R$ – [to]$_F$ (Conforming Analysis)

[accept]$_C$ – [admettre]$_C$

Scene 20:

[[that]$_R$ [inhabit]$_P$ [[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$]$_{C,REMOTE\text{-}A(\text{“animals”})}$
– [[[qui]$_R$ [habitent]$_P$ [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$]$_{H,REMOTE\text{-}A(\text{“de poissons ou de cétacés”})}$

[that]$_R$ – [qui]$_R$

Participants:
REMOTE-A(“animals”) - REMOTE-A(“de poissons ou de cétacés”)
(The semantic difference comes from the additional word “animals” in English we saw in Scene 19).

[[strata]$_C$ [[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$]$_A$ – [[les]$_E$ [couches]$_C$ [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$]$_A$

[[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$ – [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$
[strata]$_C$ – [couches]$_C$

Main Relation:
[inhabit]$_P$ – [habitent]$_P$

Scene 21:

[[beyond]$_R$ [the$_E$ reach$_C$]$_p$ [of$_R$ our$_E$ soundings$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“strata”})}$ – [[inaccessibles]$_P$ [à$_R$ la$_E$ sonde$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“couches”})}$

Participants:
REMOTE-A(“strata”) – REMOTE-A(“couches”)

[of$_R$ our$_E$ soundings$_C$]$_A$ – [à$_R$ la$_E$ sonde$_C$]$_A$
soundings$_C$ – sonde$_C$

Main Relation:
[beyond]$_R$ [the$_E$ reach$_C$]$_p$ - [inaccessibles]$_P$

Linker:
[and]$_N$ – [et]$_L$ (Conforming Analysis)

Scene 22:

[[which]$_R$ [[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$, [can$_E$ bring$_C$]$_P$ [[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ [for$_R$ long$_E$ intervals$_C$]$_D$]$_{C,REMOTE\text{-}A(\text{“animals”})}$
– [[qu’]$_R$ [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l’on veut]$_E$]$_C$]$_A$, [ramène]$_P$ [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$ [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l’$_E$ Océan$_C$]$_C$]$_A$ $_{H,REMOTE\text{-}A(\text{“de}}$

poissons ou de cétacés")

[which]$_R$ – [qu']$_R$

Participants:
[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$, [an$_E$ urge$_C$]$_C$ [or]$_N$ [[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$]$_A$ – [[un$_E$ événement$_C$ quelconque$_E$]$_C$, [une$_E$ fantaisie$_C$]$_C$, [[un]$_E$ [caprice]$_C$, [si l'on veut]$_E$]$_C$]$_A$
[[some]$_E$ [development]$_C$ [or$_R$ other$_C$]$_E$]$_C$ – [un$_E$ événement$_C$ quelconque$_E$]$_C$
[an$_E$ urge$_C$]$_C$ – [une$_E$ fantaisie$_C$]$_C$
an$_E$ – une$_E$
urge$_C$ – fantaisie$_C$
[[a$_E$ whim$_C$]$_C$ [if you prefer]$_E$]$_C$ – [[un]$_E$ [caprice]$_C$, [si l'on veut]$_E$]$_C$
[a$_E$ whim$_C$]$_C$ – [un]$_E$ [caprice]$_C$,
a$_E$ – un$_E$
whim$_C$ – caprice$_C$
[[to]$_R$ [the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ [the$_E$ ocean$_C$]$_C$]$_A$ – [[vers]$_R$ [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$ [l'$_E$ Océan$_C$]$_C$]$_A$
[to]$_R$ – [vers]$_R$
[the$_E$ upper$_E$ level$_C$ of$_R$]$_E$ – [le$_E$ niveau$_C$ supérieur$_E$ de$_R$]$_E$
the$_E$ – le$_E$
upper$_E$ – supérieur$_E$
of$_R$ – de$_R$
level$_C$ – niveau$_C$
[the$_E$ ocean$_C$]$_C$ – [l'$_E$ Océan$_C$]$_C$
the$_E$ – l'$_E$
ocean$_C$ – Océan$_C$

Main Relation:
[can$_E$ bring$_C$]$_P$ – [ramène]$_P$ (Additional Elaborator in English)

Adverbial:
[for$_R$ long$_E$ intervals$_C$]$_D$ – [à$_R$ de$_E$ longs$_E$ intervalles$_C$]$_D$
long$_E$ – longs$_E$
intervals$_C$ – intervalles$_C$

7) Passage 818(eng) – Passage 768(fr):

<u>eng:</u> ["Conseil!"]$_H$ [I called in an impatient voice]$_H$.

<u>fr:</u> [« Conseil ! »]$_H$ [criai-je d'une voix impatiente]$_H$.

<u>Scene 23:</u>

["Conseil!"]$_H$ – [« Conseil ! »]$_H$

Unanalyzable Scenes in both languages.

<u>Scene 24:</u>

[[I]$_A$ [called]$_P$ [in$_R$ an$_E$ impatient$_E$ voice$_C$]$_D$]$_{H,REMOTE-A(“Conseil!”)}$. – [[criai]$_P$ - [je]$_A$ [d’$_R$ une$_E$ voix$_C$ impatiente$_E$]$_D$]$_{H,REMOTE-A(“Conseil\ !\ “)}$

Participants:
REMOTE-A(“Conseil!”) – REMOTE-A(“Conseil ! “)

[I]$_A$ – [je]$_A$

Main Relation:
[called]$_P$ – [criai]$_P$ (Free translation)

[in$_R$ an$_E$ impatient$_E$ voice$_C$]$_D$ – [d’$_R$ une$_E$ voix$_C$ impatiente$_E$]$_D$
an$_E$ – une$_E$
impatient$_E$ – impatiente$_E$
voice$_C$ – voix$_C$

8) Passage 823(eng) - Passage 773(fr):

<u>eng:</u> [But]$_L$ [Conseil had one flaw]$_H$. [He was a fanatic on formality]$_H$, [and]$_L$ [he only addressed me in the third person]$_H$ — [to the point where]$_L$ [it got tiresome]$_H$.

<u>fr:</u> [Seulement]$_L$, [Conseil avait un défaut]$_H$. [Formaliste enragé]$_H$ [il ne me parlait jamais qu’à la troisième personne]$_H$, – [au point d’]$_L$ [en être agaçant]$_H$.

<u>Linker:</u>
[But]$_L$ – [Seulement]$_L$

<u>Scene 25:</u>

[[Conseil]$_A$ [had]$_P$ [one$_E$ flaw$_C$]$_A$]$_H$ – [[Conseil]$_A$ [avait]$_S$ [un$_E$ défaut$_C$]$_A$]$_H$

Participants:
[Conseil]$_A$ – [Conseil]$_A$

[one$_E$ flaw$_C$]$_A$ – [un$_E$ défaut$_C$]$_A$
one$_E$ – un$_E$
flaw$_C$ – défaut$_C$

Main Relation:
[had]$_P$ – [avait]$_S$ (Conforming Analysis)

<u>Scene 26:</u>

[[He]$_A$ [was]$_S$ [[a]$_E$ [fanatic]$_C$ [on$_R$ formality$_C$]$_E$]$_A$]$_H$ – [[Formaliste$_C$ enragé$_E$]$_A$]$_{H,REMOTE-A(“il”),IMPLICIT-S}$

Participants:
[He]$_A$ – REMOTE-A(“il”)

[[a]$_E$ [fanatic]$_C$ [on$_R$ formality$_C$]$_E$]$_A$ – [Formaliste$_C$ enragé$_E$]$_A$
(Swapping of Centers and Elaborators)

Main Relation:
[was]$_S$ – IMPLICIT-S

Linker: Additional Linker, “and”, in English.

Scene 27:

[[he]$_A$ [only]$_D$ [addressed]$_P$ [me]$_A$ [in$_R$ the$_E$ third$_E$ person$_C$]$_D$]$_H$ – [[il]$_A$ [ne]$_{D-}$ [me]$_A$ [parlait]$_P$ [jamais qu’]$_{-D(CONT.)}$ [à$_R$ la$_E$ troisième$_E$ personne$_C$]$_D$]$_H$

Participants:
[he]$_A$ – [il]$_A$

[me]$_A$ – [me]$_A$

Main Relation:
[addressed]$_P$ – [parlait]$_P$ (Free translation)

Adverbials:
[only]$_D$ – [ne]$_{D-}$ [jamais qu’]$_{-D(CONT.)}$

[in$_R$ the$_E$ third$_E$ person$_C$]$_D$ – [à$_R$ la$_E$ troisième$_E$ personne$_C$]$_D$
the$_E$ – la$_E$
third$_E$ – troisième$_E$
person$_C$ – personne$_C$

Linker:
[to$_R$ the$_E$ point$_C$ where$_R$]$_L$ – [au point d’]$_L$

Scene 28:

[[it]$_A$ [got$_E$ tiresome$_C$]$_P$]$_H$ – [[en$_F$ être$_F$ agaçant$_C$]$_P$]$_{H,REMOTE-A(“il”)}$

Participant:
The Remote-A in French (which referred to Conseil) does not correspond to the Participant in English (which referred to the flaw).

Main Relation:
[got$_E$ tiresome$_C$]$_P$ – [en$_F$ être$_F$ agaçant$_C$]$_P$
tiresome$_C$ – agaçant$_C$

9) Passage 824(eng) – Passage 774(fr):

eng: [“Conseil!”]$_H$ [I repeated]$_H$, [while]$_L$ [feverishly beginning my preparations for departure]$_H$.

fr: [« Conseil ! »]$_H$ [répétai-je]$_H$, [tout]$_L$ [en commençant d' une main fébrile mes préparatifs de départ]$_H$.

Scene 29:

["Conseil!"]$_H$ – [« Conseil ! »]$_H$

Unanalyzable Scenes in both languages.

Scene 30:

[[I]$_A$ [repeated]$_{P]H,REMOTE\text{-}A(\text{"Conseil!"})}$) – [[répétai]$_P$ – [je]$_A$]$_{H,REMOTE\text{-}A(\text{"Conseil!"})}$

Participants:
REMOTE-A("Conseil!") – REMOTE-A("Conseil!")

[I]$_A$ – [je]$_A$

Main Relation:
[repeated]$_P$ – [répétai]$_P$

Linker:
[while]$_L$ – [tout]$_L$ (in context the two linkers have the same meaning)

Scene 31:

[[feverishly]$_D$ [beginning]$_P$ [[my]$_E$ [preparations]$_C$ [for$_R$ departure$_C$]$_E$]$_A$]$_{H,REMOTE\text{-}A(\text{"I"})}$ – [[en$_F$ commençant$_C$]$_P$ [d'$_R$ une$_E$ main$_C$ fébrile$_E$]$_D$ [[mes]$_E$ [préparatifs]$_C$ [de$_R$ départ$_C$]$_E$]$_A$]$_{H,REMOTE\text{-}A(\text{"je"})}$

Participants:
REMOTE-A("I") – REMOTE-A("je")

[[my]$_E$ [preparations]$_C$ [for$_R$ departure$_C$]$_E$]$_A$ – [[mes]$_E$ [préparatifs]$_C$ [de$_R$ départ$_C$]$_E$]$_A$
[my]$_E$ – [mes]$_E$
[for$_R$ departure$_C$]$_E$ – [de$_R$ départ$_C$]$_E$
departure$_C$ – départ$_C$
[preparations]$_C$ – [préparatifs]$_C$

Main Relation:
[beginning]$_P$ – [[en$_F$ commençant$_C$]$_P$

Adverbial:
[feverishly]$_D$ – [d'$_R$ une$_E$ main$_C$ fébrile$_E$]$_D$

10) Passage 841(eng) – Passage 791(fr):

eng: [“Are we up to pressure?”]$_H$ [he asked the man]$_H$. [“Aye, sir,”]$_H$ [the engineer replied]$_H$. “[Go ahead]$_H$, [then]$_L$!” [Commander Farragut called]$_H$.

fr: « [Sommes-nous en pression?]$_H$ [lui demanda-t-il]$_H$. – [Oui, monsieur]$_H$, [répondit l’ingénieur]$_H$. – [Go head]$_H$, » [cria le commandant Farragut]$_H$.

Scene 32:

[“[[Are]$_F$]$_{S-}$ [we]$_A$ [[up to]$_R$ [pressure]$_C$]$_{-S(CONT.)}$?”]$_H$ – [[Sommes$_F$]$_{S-}$ - [nous]$_A$ [en$_R$ pression$_C$]$_{-S(CONT.)}$?]$_H$

Participant:
[we]$_A$ – [nous]$_A$

Main Relation:
[[Are]$_F$]$_{S-}$ [[up to]$_R$ [pressure]$_C$]$_{-S(CONT.)}$ – [[Sommes$_F$]$_{S-}$ [en$_R$ pression$_C$]$_{-S(CONT.)}$
Are$_F$ – Sommes$_F$
pressure$_C$ – pression$_C$

Scene 33:

[[he]$_A$ [asked]$_P$ [the$_E$ man$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{“Are we up to pressure?”})}$ – [[lui]$_A$ [demanda]$_P$-[t]$_F$-[il]$_A$]$_{H,REMOTE\text{-}A(\text{“Sommes-nous en pression?”})}$

Participants:
REMOTE-A(“Are we up to pressure?”) – REMOTE-A(“Sommes-nous en pression?”)

[he]$_A$ – [il]$_A$

[the$_E$ man$_C$]$_A$ – [lui]$_A$ (Same reference but different paraphrase)

Main Relation:
[asked]$_P$ – [demanda]$_P$

Scene 34:

[“Aye, sir,”]$_H$ – [Oui, monsieur]$_H$

Unanalyzable Scenes in both languages.

Scene 35:

[[the$_E$ engineer$_C$]$_A$ [replied]$_P$]$_{H,REMOTE\text{-}A(\text{“he”}),REMOTE\text{-}A(\text{“Aye, sir”})}$ – [[répondit]$_P$ [l’$_E$ ingénieur$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{“il”}),REMOTE\text{-}A(\text{“Oui, monsieur”})}$

Participants:
REMOTE-A(“he”) – REMOTE-A(“il”)

REMOTE-A(“Aye, sir”) – REMOTE-A(“Oui, monsieur”)

[the$_E$ engineer$_C$]$_A$ – [l'$_E$ ingénieur$_C$]$_A$
the$_E$ – l'$_E$

Main Relation:
[replied]$_P$ – [répondit]$_P$

Scene 36:

[[Go ahead]$_P$]$_{H,REMOTE\text{-}A(\text{“engineer”})}$ – [[Go head]$_P$]$_{H,REMOTE\text{-}A(\text{“ingénieur”})}$

Participant:
REMOTE-A(“engineer”) – REMOTE-A(“ingénieur”)

Main Relation:
[Go ahead]$_P$ – [Go ahead]$_P$
(The English verb also appears in the French version)

Linker: There is an additional linker,“then”, in English

Scene 37:

[[Commander$_E$ Farragut$_C$]$_A$ [called]$_P$]$_{H,REMOTE\text{-}A(\text{“Go ahead”})}$ – [[cria]$_P$ [[le$_E$ commandant$_C$]$_E$ [Farragut]$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{“Go ahead”})}$

Participants:
REMOTE-A(“Go ahead”) – REMOTE-A(“Go ahead”)

[Commander$_E$ Farragut$_C$]$_A$ – [le$_E$ commandant$_C$]$_E$ [Farragut]$_C$]$_A$
Commander$_E$ – [le$_E$ commandant$_C$]$_E$
Farragut$_C$ – Farragut$_C$

Main Relation:
[called]$_P$ – [cria]$_P$ (Free translation)

11) Passage 843(eng) – Passage 793(fr):

eng: [The wharves of Brooklyn, and every part of New York bordering the East River, were crowded with curiosity seekers]$_H$. [Departing from 500,000 throats]$_H$, [three cheers burst forth in succession]H. [Thousands of handkerchiefs were waving above these tightly packed masses]$_H$, [hailing the *Abraham Lincoln*]$_H$ [until]$_L$ [it reached the waters of the Hudson River, at the tip of the long peninsula that forms New York City]$_H$.

fr: [Les quais de Brooklyn et toute la partie de New York qui borde la rivière de l'Est étaient couverts de curieux]$_H$. [Trois hurrahs, partis de cinq cent mille poitrines, éclatèrent successivement]$_H$. [Des milliers de mouchoirs s'agitèrent au-dessus de la masse compacte]$_H$ [et]$_L$ [saluèrent l'Abraham-Lincoln]$_H$ [jusqu'à]$_L$ [son arrivée dans les eaux de l'Hudson, à la pointe de cette presqu'île allongée qui forme la ville de New York]$_H$.

Scene 38:

[[[[The]$_E$ [wharves]$_C$ [of$_R$ Brooklyn$_C$]$_E$]$_C$, [and]$_N$ [[every]$_E$ [[part]$_C$ [[of]$_R$ [New York]$_C$]$_E$]$_C$ [[bordering]$_P$ [[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“part”})}$]$_C$]$_A$, [were$_F$ crowded$_C$]$_P$ [with$_R$ curiosity$_E$ seekers$_C$]$_A$]$_H$ – [[[[Les]$_E$ [quais]$_C$ [de$_R$ Brooklyn$_C$]$_E$]$_C$ [et]$_N$ [[toute]$_E$ [la]$_E$ [[partie]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_C$ [[qui]$_R$ [borde]$_P$ [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“partie”})}$]$_C$]$_A$ [étaient$_F$ couverts$_C$]$_S$ [de$_R$ curieux$_C$]$_A$]$_H$

Participants:
[[[The]$_E$ [wharves]$_C$ [of$_R$ Brooklyn$_C$]$_E$]$_C$, [and]$_N$ [[every]$_E$ [[part]$_C$ [[of]$_R$ [New York]$_C$]$_E$]$_C$ [[bordering]$_P$ [[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“part”})}$]$_C$]$_A$ – [[[Les]$_E$ [quais]$_C$ [de$_R$ Brooklyn$_C$]$_E$]$_C$ [et]$_N$ [[toute]$_E$ [la]$_E$ [[partie]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_C$ [[qui]$_R$ [borde]$_P$ [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“partie”})}$]$_C$]$_A$
[[The]$_E$ [wharves]$_C$ [of$_R$ Brooklyn$_C$]$_E$]$_C$ – [[Les]$_E$ [quais]$_C$ [de$_R$ Brooklyn$_C$]$_E$]$_C$
[The]$_E$ – [Les]$_E$
[wharves]$_C$ – [quais]$_C$
[of$_R$ Brooklyn$_C$]$_E$ – [de$_R$ Brooklyn$_C$]$_E$
of$_R$ – de$_R$
Brooklyn$_C$ – Brooklyn$_C$
[and]$_N$ – [et]$_N$
[[every]$_E$ [[part]$_C$ [[of]$_R$ [New York]$_C$]$_E$]$_C$ [[bordering]$_P$ [[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“part”})}$]$_C$ – [[toute]$_E$ [la]$_E$ [[partie]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_C$ [[qui]$_R$ [borde]$_P$ [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“partie”})}$]$_C$
[every]$_E$ [[part]$_C$ [[of]$_R$ [New York]$_C$]$_E$]$_C$ – [toute]$_E$ [la]$_E$ [[partie]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_C$
(literally: all the part of New York)
[part]$_C$ – [partie]$_C$
[[of]$_R$ [New York]$_C$]$_E$ – [[de]$_R$ [New York]$_C$]$_E$
[of]$_R$ – [de]$_R$
[New York]$_C$ – [New York]$_C$
[[bordering]$_P$ [[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“part”})}$ – [[qui]$_R$ [borde]$_P$ [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“partie”})}$

[with$_R$ curiosity$_E$ seekers$_C$]$_A$ – [de$_R$ curieux$_C$]$_A$
curiosity$_E$ seekers$_C$ – curieux$_C$

Main Relation:
[were$_F$ crowdedC]$_P$ – [étaient$_F$ couverts$_C$]$_S$

Scene 39:

[[bordering]$_P$ [[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“part”})}$ – [[qui]$_R$ [borde]$_P$ [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“partie”})}$

Participants:
REMOTE-A(“part”) – REMOTE-A(“partie”)

[[the]$_E$ [East$_E$ River$_C$]$_C$]$_A$ – [[la]$_E$ [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$
[the]$_E$ – [la]$_E$
[East$_E$ River$_C$]$_C$ – [rivière]$_C$ [de$_R$ l'$_E$ Est$_C$]$_E$ (Conforming Analysis)

East$_E$ – [de$_R$ l'$_E$ Est$_C$]$_E$
River$_C$ – [rivière]$_C$

Main Relation:
[bordering]$_P$ – [borde]$_P$
("ing" in the English verb corresponds here to "qui"in French, annotated as R)

Scene 40:

[[three$_E$ cheers$_C$]$_A$ [burst forth]$_P$ [in$_R$ succession$_C$]$_D$]$_H$ – [[[Trois]$_E$ [hurrahs]$_C$, [partis de cinq cent mille poitrines]$_E$]$_A$, [éclatèrent]$_P$ [successivement]$_D$]$_H$

Participants:
[three$_E$ cheers$_C$]$_A$ – [[[Trois]$_E$ [hurrahs]$_C$, [partis de cinq cent mille poitrine]$_E$]$_A$,
three$_E$ – Trois$_E$
cheers$_C$ – hurrahs$_C$
The second Elaborator in English is a Scene which corresponds to a Parallel Scene in French (Scene 41).

Main Relation:
[burst forth]$_P$ – [éclatèrent]$_P$

Adverbial:
[in$_R$ succession$_C$]$_D$ – [successivement]$_D$

Scene 41:

[[Departing]$_P$ [from$_R$ 500,000$_E$ throats$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{"cheers"})}$ – [[partis]$_P$ [[de]$_R$ [[cinq cent]$_E$ [mille]$_C$]$_E$ [poitrines]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{"hurrahs"})}$

Participants:
REMOTE-A("cheers") – REMOTE-A("hurrahs")

[from$_R$ 500,000$_E$ throats$_C$]$_A$ – [[de]$_R$ [[cinq cent]$_E$ [mille]$_C$]$_E$ [poitrines]$_C$]$_A$
from$_R$ – de$_R$
500,000$_E$ – [[cinq cent]$_E$ [mille]$_C$]$_E$
throats$_C$ – poitrines$_C$

Main Relation:
[Departing]$_P$ – [partis]$_P$

Scene 42:

[[[Thousands$_C$ of$_R$]$_E$ [handkerchiefs]$_C$]$_A$ [were$_F$ waving$_C$]$_P$ [[above]$_R$ [these]$_E$ [tightly$_E$ packed$_C$]$_E$ [masses]$_C$]$_A$]$_H$ – [[[Des$_E$ milliers$_C$ de$_R$]$_E$ [mouchoirs]$_C$]$_A$ [s'$_E$ agitèrent$_C$]$_P$ [[au$_R$ - dessus$_C$ de$_R$]$_R$ [la$_E$ masse$_C$

compacte$_{E}$]$_{C}$]$_{A}$]$_{H}$

Participants:
[[Thousands$_{C}$ of$_{R}$]$_{E}$ [handkerchiefs]$_{C}$]$_{A}$ – [[Des$_{E}$ milliers$_{C}$ de$_{R}$]$_{E}$ [mouchoirs]$_{C}$]$_{A}$
[Thousands$_{C}$ of$_{R}$]$_{E}$ – [Des$_{E}$ milliers$_{C}$ de$_{R}$]$_{E}$
Thousands$_{C}$ – Des$_{E}$ milliers$_{C}$
of$_{R}$ – de$_{R}$
[handkerchiefs]$_{C}$ – [mouchoirs]$_{C}$
[[above]$_{R}$ [these]$_{E}$ [tightly$_{E}$ packed$_{C}$]$_{E}$ [masses]$_{C}$]$_{A}$]$_{H}$ – [[au$_{R}$ - dessus$_{C}$ de$_{R}$]$_{R}$ [la$_{E}$ masse$_{C}$ compacte$_{E}$]$_{C}$]$_{A}$
[above]$_{R}$ – [au$_{R}$ - dessus$_{C}$ de$_{R}$]R
[these]$_{E}$ [tightly$_{E}$ packed$_{C}$]$_{E}$ [masses]$_{C}$ – [la$_{E}$ masse$_{C}$ compacte$_{E}$]$_{C}$]$_{A}$ (The flat structure in English concerns Conforming Analysis)
[tightly$_{E}$ packed$_{C}$]$_{E}$ – compacte$_{E}$ (additional Elaborator in English)
masses$_{C}$ – masse$_{C}$

Main Relation:
[were$_{F}$ waving$_{C}$]$_{P}$ – [s'$_{E}$ agitèrent$_{C}$]$_{P}$

Linker: There is an additional linker,"et", in French.

Scene 43:

[[hailing]$_{P}$ [[the]$_{E}$ [*Abraham Lincoln*]$_{C}$]$_{A}$]$_{H,REMOTE-A("handkerchiefs")}$ – [[saluèrent]$_{P}$ [[l']$_{E}$ [Abraham-Lincoln]$_{C}$]$_{A}$]$_{H,REMOTE-A("mouchoirs")}$

Participants:
REMOTE-A("handkerchiefs") – REMOTE-A("mouchoirs")

[[the]$_{E}$ [*Abraham Lincoln*]$_{C}$]$_{A}$ – [[l']$_{E}$ [Abraham-Lincoln]$_{C}$]$_{A}$
[the]$_{E}$ – [l']$_{E}$
[*Abraham Lincoln*]$_{C}$ – [Abraham-Lincoln]$_{C}$

Main Relation:
[hailing]$_{P}$ – [saluèrent]$_{P}$

Linker:
[until]$_{L}$ – [jusqu'à]$_{L}$

Scene 44:

[[it]$_{A}$ [reached]$_{P}$ [[the]$_{E}$ [[waters]$_{C}$ [[of]$_{R}$ [the]$_{E}$ [Hudson$_{E}$ River$_{C}$]$_{C}$]$_{E}$]$_{C}$, [[[at$_{R}$ the$_{E}$ tip$_{C}$ of$_{R}$]$_{E}$ [the$_{E}$ longE peninsula$_{C}$]$_{C}$ [[that]$_{R}$ [forms]$_{P}$ [[New York]$_{E}$ [City]$_{C}$]$_{A}$]$_{E,REMOTE-A("peninsula")}$]$_{E}$]$_{A}$]$_{H}$ – [[son]$_{A}$ [arrivée]$_{P}$ [[dans]$_{R}$ [[les]$_{E}$ [eaux]$_{C}$ [de$_{R}$ l'$_{E}$ Hudson$_{C}$]$_{E}$]$_{C}$, [[à$_{R}$ la$_{E}$ pointe$_{C}$ de$_{R}$]$_{E}$ [[cette]$_{E}$ [presqu'$_{E}$ île$_{C}$]$_{C}$ [allongée]$_{E}$ [[qui]$_{R}$ [forme]$_{P}$ [[la]$_{E}$ [ville]$_{C}$ [[de]$_{R}$ [New York]$_{C}$]$_{E}$]$_{A}$]$_{E,REMOTE-A("presqu'île")}$]$_{C}$]$_{E}$]$_{A}$]$_{H}$

Participants:
[it]$_{A}$ – [son]$_{A}$ (subject pronoun vs possessive determiner)

[[the]$_E$ [[waters]$_C$ [[of]$_R$ [the]$_E$ [Hudson$_E$ River$_C$]$_C$]$_{E]C}$, [[[at$_R$ the$_E$ tip$_C$ of$_R$]$_E$ [the$_E$ long$_E$ peninsula$_C$]$_C$ [[that]$_R$ [forms]$_P$ [[New York]$_E$ [City]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“peninsula”})}$]$_E$]$_A$ – [[dans]$_R$ [[les]$_E$ [eaux]$_C$ [de$_R$ l'$_E$ Hudson$_C$]$_E$]$_C$, [[à$_R$ la$_E$ pointe$_C$ de$_R$]$_E$ [[cette]$_E$ [presqu'$_E$ île$_C$]$_C$ [allongée]$_E$ [[qui]$_R$ [forme]$_P$ [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“presqu'île”})}$]$_C$]$_E$]$_A$

[the]$_E$ [[waters]$_C$ [[of]$_R$ [the]$_E$ [Hudson$_E$ River$_C$]$_C$]$_E$]$_C$ – [[les]$_E$ [eaux]$_C$ [de$_R$ l'$_E$ Hudson$_C$]$_E$]$_C$
(Conforming Analysis)
Additional R (“dans”) in French, lexical difference at the Main Relation.
[the]$_E$ – [les]$_E$
[[of]$_R$ [the]$_E$ [Hudson$_E$ River$_C$]$_C$]$_E$ – [de$_R$ l'$_E$ Hudson$_C$]$_E$
of$_R$ – de$_R$
the$_E$ – l'$_E$
[Hudson$_E$ River$_C$]$_C$ – Hudson$_C$ (There is more information in English)
[waters]$_C$ – [eaux]$_C$

[[[at$_R$ the$_E$ tip$_C$ of$_R$]$_E$ [the$_E$ long$_E$ peninsula$_C$]$_C$ [[that]$_R$ [forms]$_P$ [[New York]$_E$ [City]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“peninsula”})}$]$_E$ – [[à$_R$ la$_E$ pointe$_C$ de$_R$]$_E$ [[cette]$_E$ [presqu'$_E$ île$_C$]$_C$ [allongée]$_E$ [[qui]$_R$ [forme]$_P$ [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“presqu'île”})}$]$_C$]$_E$
[[at$_R$ the$_E$ tip$_C$ of$_R$]$_E$ – [à$_R$ la$_E$ pointe$_C$ de$_R$]$_E$
at$_R$ – à$_R$
the$_E$ – la$_E$
of$_R$ – de$_R$
tip$_C$ – pointe$_C$
[the$_E$ long$_E$ peninsula$_C$]$_C$ [[that]$_R$ [forms]$_P$ [[New York]$_E$ [City]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“peninsula”})}$]$_E$ – [[cette]$_E$ [presqu'$_E$ île$_C$]$_C$ [allongée]$_E$ [[qui]$_R$ [forme]$_P$ [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“presqu'île”})}$]$_C$
(Conforming Analysis)
[the$_E$ long$_E$ peninsula$_C$]$_C$ – [cette]$_E$ [presqu'$_E$ île$_C$]$_C$ [allongée]$_E$
long$_E$ – allongée$_E$
peninsula$_C$ – [presqu'$_E$ île$_C$]$_C$
[[that]$_R$ [forms]$_P$ [[New York]$_E$ [City]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“peninsula”})}$]$_E$ – [[qui]$_R$ [forme]$_P$ [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“presqu'île”})}$

Main Relation:
[reached]$_P$ – [arrivée]$_P$ (verb vs noun)

<u>Scene 45:</u>

[[that]$_R$ [forms]$_P$ [[New York]$_E$ [City]$_C$]$_A$]$_{E,REMOTE\text{-}A(\text{“peninsula”})}$]$_E$ – [[qui]$_R$ [forme]$_P$ [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$]$_{E,REMOTE\text{-}A(\text{“presqu'île”})}$

[that]$_R$ – [qui]$_R$

Participants:
REMOTE-A(“peninsula”) – REMOTE-A(“presqu'île”)

[[New York]$_E$ [City]$_C$]$_A$ – [[la]$_E$ [ville]$_C$ [[de]$_R$ [New York]$_C$]$_E$]$_A$
[New York]$_E$ – [[de]$_R$ [New York]$_C$]$_E$
[City]$_C$ – [ville]$_C$

Main Relation:
[forms]$_{P}$ – [forme]$_{P}$

12) Passage 885(eng) – Passage 853(fr):

eng: [So]$_{L}$ [the *Abraham Lincoln* wasn't lacking in means of destruction]$_{H}$. [But]$_{L}$ [it had better still]$_{H}$. [It had Ned Land, the King of Harpooners]$_{H}$.

fr: [Donc]$_{L}$, [l'*Abraham-Lincoln* ne manquait d'aucun moyen de destruction]$_{H}$. [Mais]$_{L}$ [il avait mieux encore]$_{H}$. [Il avait Ned Land, le roi des harponneurs]$_{H}$.

Linker:
[So]$_{L}$ – [Donc]$_{L}$

Scene 46:

[[[the]$_{E}$ [*Abraham Lincoln*]$_{C}$]$_{A}$ [was$_{F}$]$_{P\text{-}}$ [n't]$_{D}$ [lacking$_{C}$]$_{\text{-P(CONT.)}}$ [[in$_{R}$ means$_{C}$ of$_{R}$]$_{E}$ [destruction]$_{C}$]$_{A}$]$_{H}$ – [[l']$_{E}$ [*Abraham-Lincoln*]$_{C}$]$_{A}$ [ne]$_{D\text{-}}$ [manquait]$_{P}$ [[d']$_{R}$]$_{A\text{-}}$ [aucun]$_{\text{-D(CONT.)}}$ [[moyen]$_{C}$ [de$_{R}$ destruction$_{C}$]$_{E}$]$_{\text{-A(CONT.)}}$]$_{H}$.

Participants:
[[the]$_{E}$ [*Abraham Lincoln*]$_{C}$]$_{A}$ – [[l']$_{E}$ [*Abraham-Lincoln*]$_{C}$]$_{A}$

[[in$_{R}$ means$_{C}$ of$_{R}$]$_{E}$ [destruction]$_{C}$]$_{A}$ – [[d']$_{R}$]$_{A\text{-}}$ [[moyen]$_{C}$ [de$_{R}$ destruction$_{C}$]$_{E}$]$_{\text{-A(CONT.)}}$
(Swapping of the Center and the Elaborator, Conforming Analysis)

Main Relation:
[was$_{F}$]$_{P\text{-}}$ [lacking$_{C}$]$_{\text{-P(CONT.)}}$ – [manquait]$_{P}$

Adverbials:
[n't]$_{D}$ – [ne]$_{D\text{-}}$ [aucun]$_{\text{-D(CONT.)}}$ (More emphasis in French)

Linker:
[But]$_{L}$ – [Mais]$_{L}$

Scene 47:

[[it]$_{A}$ [had]$_{P}$ [[better]$_{C}$ [still]$_{E}$]$_{A}$]$_{H}$ – [[il]$_{A}$ [avait]$_{P}$ [[[mieux]$_{C}$ [encore]$_{E}$]$_{E}$]$_{\text{A,IMPLICIT-C}}$]$_{H}$

Participants:
[it]$_{A}$ – [il]$_{A}$

[[better]$_C$ [still]$_E$]$_A$ – [[[mieux]$_C$ [encore]$_E$]$_E$]$_{A,IMPLICIT\text{-}C}$ (Conforming Analysis)
[better]$_C$ – [mieux]$_C$
[still]$_E$ – [encore]$_E$

Main Relation:
[had]$_P$ – [avait]$_P$

Scene 48:

[[It]$_A$ [had]$_P$ [[Ned Land]$_C$, [[the]$_E$ [King]$_C$ [of$_R$ Harpooners$_C$]$_E$]$_E$]$_A$]$_H$ – [[Il]$_A$ [avait]$_P$ [[Ned Land]$_C$, [[le]$_E$ [roi]$_C$ [des$_{R+E}$ harponneurs$_C$]$_E$]$_E$]$_A$]$_H$

Participants:
[It]$_A$ – [Il]$_A$

[[Ned Land]$_C$, [[the]$_E$ [King]$_C$ [of$_R$ Harpooners$_C$]$_E$]$_E$]$_A$ – [[Ned Land]$_C$, [[le]$_E$ [roi]$_C$ [des$_{R+E}$ harponneurs$_C$]$_E$]$_E$]$_A$
[Ned Land]$_C$ – [Ned Land]$_C$
[[the]$_E$ [King]$_C$ [of$_R$ Harpooners$_C$]$_E$ – [[le]$_E$ [roi]$_C$ [des$_{R+E}$ harponneurs$_C$]$_E$]$_E$
[the]$_E$ – [le]$_E$
[of$_R$ Harpooners$_C$]$_E$ – [des$_{R+E}$ harponneurs$_C$]$_E$
Harpooners$_C$ – harponneurs$_C$
[King]$_C$ – [roi]$_C$

Main Relation:
[had]$_P$ – [avait]$_P$

13) Passage 901(eng) – Passage 869(fr):

eng: [“Humph!”]$_H$ [the harpooner put in]$_H$, [shaking his head with the attitude of a man who doesn’t want to be convinced]$_H$.
fr: [Hum!]$_H$ [fit le harponneur]$_H$, [en secouant la tête de l’air d’un homme qui ne veut pas se laisser convaincre]$_H$.

Scene 49:

[“Humph!”]$_H$ – [Hum!]$_H$

Unanalyzable Scenes in both languages.

Scene 50:

[[the$_E$ harpooner$_C$]$_A$ [put in]$_P$]$_{H,REMOTE\text{-}A(\text{“Humph!”})}$ – [[fit]$_P$ [le$_E$ harponneur$_C$]$_A$]$_{H,REMOTE\text{-}A(\text{Hum!})}$

Participants:

REMOTE-A(“Humph!”) – REMOTE-A(Hum!)

[the$_E$ harpooner$_C$]$_A$ – [le$_E$ harponneur$_C$]$_A$
the$_E$ – le$_E$
harpooner$_C$ – harponneur$_C$

Main Relation:
[put in]$_P$ – [fit]$_P$ (Free translation)

Scene 51:

[[shaking]$_P$ [his$_E$ head$_C$]$_A$ [[with]$_R$ [the]$_E$ [attitude]$_C$ [[of]$_R$ [a]$_E$ [man]$_C$ [[who]$_R$ [does$_F$]$_{P\text{-}}$ [n’t]$_D$ [want$_E$ to$_F$ be$_F$ convinced$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“man”),IMPLICIT-A}}$]$_E$]$_D$]$_{\text{H,REMOTE-A(“harpooner”)}}$ – [[en$_F$ secouant$_C$]$_P$ [la$_E$ tête$_C$]$_A$ [[de$_R$ l’$_E$ air$_C$ d’$_R$]$_E$ [[un]$_E$ [homme]$_C$ [[qui]$_R$ [ne]$_{D\text{-}}$ [[veut]$_E$]$_{P\text{-}}$ [pas]$_{\text{-D(CONT.)}}$ [[[se$_E$ laisser$_C$]$_E$ [convaincre]$_C$]$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“homme”),IMPLICIT-A}}$]$_C$]$_D$]$_{\text{H,REMOTE-A(“harponneur”)}}$

Participants:
REMOTE-A(“harpooner”) – REMOTE-A(“harponneur”)

[his$_E$ head$_C$]$_A$ – [la$_E$ tête$_C$]$_A$
(Possessive vs definite determiners)
head$_C$ – tête$_C$

Main Relation:
[shaking]$_P$ – [en$_F$ secouant$_C$]$_P$

Adverbial:
[[with]$_R$ [the]$_E$ [attitude]$_C$ [[of]$_R$ [a]$_E$ [man]$_C$ [[who]$_R$ [does$_F$]$_{P\text{-}}$ [n’t]$_D$ [want$_E$ to$_F$ be$_F$ convinced$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“man”),IMPLICIT-A}}$]$_E$]$_D$ – [[de$_R$ l’$_E$ air$_C$ d’$_R$]$_E$ [[un]$_E$ [homme]$_C$ [[qui]$_R$ [ne]$_{D\text{-}}$ [[veut]$_E$]$_{P\text{-}}$ [pas]$_{\text{-D(CONT.)}}$ [[[se$_E$ laisser$_C$]$_E$ [convaincre]$_C$]$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“homme”),IMPLICIT-A}}$]$_C$]$_D$
(Swapping of the Center and the Elaborator, Conforming Analysis)

Scene 52:

[[who]$_R$ [does$_F$]$_{P\text{-}}$ [n’t]$_D$ [want$_E$ to$_F$ be$_F$ convinced$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“man”),IMPLICIT-A}}$]$_E$ – [[qui]$_R$ [ne]$_{D\text{-}}$ [[veut]$_E$]$_{P\text{-}}$ [pas]$_{\text{-D(CONT.)}}$ [[[se$_E$ laisser$_C$]$_E$ [convaincre]$_C$]$_C$]$_{\text{-P(CONT.)}}$]$_{\text{E,REMOTE-A(“homme”),IMPLICIT-A}}$]$_C$

[who]$_R$ – [qui]$_R$

Participants:
REMOTE-A(“man”) – REMOTE-A(“homme”)

IMPLICIT-A – IMPLICIT-A

Main relation:
[does$_F$]$_{P\text{-}}$ [want$_E$ to$_F$ be$_F$ convinced$_C$]$_{\text{-P(CONT.)}}$ – [[veut]$_E$]$_{P\text{-}}$[[[se$_E$ laisser$_C$]$_E$ [convaincre]$_C$]$_C$]$_{\text{-P(CONT.)}}$
want$_E$ – veut$_E$
to$_F$ be$_F$ convinced$_C$ – [[se$_E$ laisser$_C$]$_E$ [convaincre]$_C$]$_C$ (Free translation)
convinced$_C$ – convaincre$_C$

Adverbial:
$[n't]_{D}$ – $[ne]_{D\text{-}}$ $[pas]_{\text{-D(CONT.)}}$

14) Passage 970(eng) – Passage 913(fr):

eng: $[\text{Assuredly}]_{G}$, $[\text{if}]_{L}$ [the monster ever had to deal with Ned Land's harpoon]$_{H}$, [I wouldn't bet on the monster].

fr: $[\text{Décidément}]_{L}$, $[\text{si}]_{L}$ [le monstre a jamais affaire au harpon de Ned Land]$_{H}$, [je ne parierai pas pour le monstre]$_{H}$.

Linkers/Grounds:

$[\text{Assuredly}]_{G}$ – $[\text{Décidément}]_{L}$ (Conforming Analysis)

$[\text{if}]_{L}$ – $[\text{si}]_{L}$

Scene 53:

$[[\text{the}_{E}\ \text{monster}_{C}]_{A}\ [\text{ever}]_{D}\ [[\text{had to}]_{E}\ [\text{deal}]_{C}]_{P}\ [[\text{with}]_{R}\ [[\text{Ned Land}]_{C}[\text{'s}]_{R}]_{E}\ [\text{harpoon}]_{C}]_{A}]_{H}$ – $[[\text{le}_{E}\ \text{monstre}_{C}]_{A}\ [\text{a}_{F}]_{P\text{-}}\ [\text{jamais}]_{D}\ [\text{affaire}_{C}]_{\text{-P(CONT.)}}\ [[\text{au}]_{R+E}\ [\text{harpon}]_{C}\ [[\text{de}]_{R}\ [\text{Ned Land}]_{C}]_{E}]_{A}]_{H}$

Participants:
$[\text{the}_{E}\ \text{monster}_{C}]_{A}$ – $[[\text{le}_{E}\ \text{monstre}_{C}]_{A}$
the_{E} – le_{E}
monster_{C} – monstre_{C}

$[[\text{with}]_{R}\ [[\text{Ned Land}]_{C}[\text{'s}]_{R}]_{E}\ [\text{harpoon}]_{C}]_{A}$ – $[[\text{au}]_{R+E}\ [\text{harpon}]_{C}\ [[\text{de}]_{R}\ [\text{Ned Land}]_{C}]_{E}]_{A}$
$[[\text{Ned Land}]_{C}[\text{'s}]_{R}]_{E}$ – $[[\text{de}]_{R}\ [\text{Ned Land}]_{C}]_{E}$
$[\text{'s}]_{R}$ – $[\text{de}]_{R}$
$[\text{Ned Land}]_{C}$ – $[\text{Ned Land}]_{C}$
$[\text{harpoon}]_{C}$ – $[\text{harpon}]_{C}$

Main Relation:
$[[\text{had to}]_{E}\ [\text{deal}]_{C}]_{P}$ – $[\text{a}_{F}]_{P\text{-}}\ [\text{affaire}_{C}]_{\text{-P(CONT.)}}$

Adverbial:
$[\text{ever}]_{D}$ – $[\text{jamais}]_{D}$

Scene 54:

$[[\text{I}]_{A}\ [\text{would}_{E}]_{P\text{-}}\ [\text{n't}]_{D}\ [\text{bet}_{C}]_{\text{-P(CONT.)}}\ [\text{on}_{R}\ \text{the}_{E}\ \text{monster}_{C}]_{A}]_{H}$ – $[[\text{je}]_{A}\ [\text{ne}]_{D\text{-}}\ [\text{parierai}]_{P}\ [\text{pas}]_{\text{-D(CONT.)}}\ [\text{pour}_{R}$

le_E $monstre_C]_A]_H$

Participants:
$[I]_A$ – $[je]_A$
$[on_R$ the_E $monster_C]_A$ – $[pour_R$ le_E $monstre_C]_A$
the_E – le_E
$monster_C$ – $monstre_C$

Main Relation:
$[would_E]_{P\text{-}}$ $[bet_C]_{\text{-}P(CONT.)}$ – $[parierai]_P$

Adverbial:
$[n't]_D$ – $[ne]_{D\text{-}}$ $[pas]_{\text{-}D(CONT.)}$

15) Passage 975 (eng) – Passage 918(fr):

eng: $[And]_L$ $[they\ opened\ amazingly\ wide]_H$. $[Eyes\ and\ spyglasses]_{H\text{-}}$ ($[a\ bit\ dazzled]_{H\text{-}}$, $[it\ is\ true]_G$, $[by\ the\ vista\ of\ \$2,000.00]_{\text{-}H(CONT.)}$) $[didn't\ remain\ at\ rest\ for\ an\ instant]_{\text{-}H(CONT.)}$. $[Day\ and\ night\ we\ observed\ the\ surface\ of\ the\ ocean]_H$, $[and]_L$ [those with nyctalopic eyes, whose ability to see in the dark increased their chances by fifty percent, had an excellent shot at winning the prize]$_H$.

fr: $[Et]_L$ [ils l'ouvraient démesurément]$_H$. [Les yeux et les lunettes]$_{H\text{-}}$, [un peu éblouis]$_{H\text{-}}$, [il est vrai]$_G$, [par la perspective de deux mille dollars]$_{\text{-}H(CONT.)}$, [ne restèrent pas un instant au repos]$_{\text{-}H(CONT.)}$. [Jour et nuit, on observait la surface de l'Océan]$_H$, $[et]_L$ [les nyctalopes, dont la faculté de voir dans l'obscurité accroissait les chances de cinquante pour cent, avaient beau jeu pour gagner la prime]$_H$.

Linker:

$[And]_L$ – $[Et]_L$

Scene 55:

$[[they]_A$ $[opened]_P$ $[amazingly_E$ $wide_C]_D]_{H,IMPLICIT\text{-}A}$ – $[[ils]_A$ $[l']_A$ $[ouvraient]_P$ $[démesurément]_D]_H$

Participants:
IMPLICIT-A – $[l']_A$ (The referent ("eyes"/"oeil")) appears in the previous Passage)

$[they]_A$ – $[ils]_A$

Main Relation:
$[opened]_P$ – $[ouvraient]_P$

Adverbial:
$[amazingly_E$ $wide_C]_D$ – $[démesurément]_D$

Scene 56:

$[[Eyes_C\ and_N\ spyglasses_C]_A]_{H\text{-}}[[[did]_F]_{P\text{-}}\ [n't]_D\ [[remain]_E\ [at_R\ rest_C]_C]_{\text{-P(CONT.)}}\ [for_R\ an_E\ instant_C]_D]_{\text{-H(CONT.)}}$ – $[[[Les_E\ yeux_C]_C\ [et]_N\ [les_E\ lunettes_C]_C]_A]_{H\text{-}}[[ne]_{D\text{-}}\ [[restèrent]_E]_{P\text{-}}\ [pas]_{\text{-D(CONT.)}}\ [un_E\ instant_C]_D\ [[au_{R+E}\ repos_C]_C]_{\text{-P(CONT.)}}]_{\text{-H(CONT.)}}$

Participant:
$[Eyes_C\ and_N\ spyglasses_C]_A$ – $[[Les_E\ yeux_C]_C\ [et]_N\ [les_E\ lunettes_C]_C]_A$
$Eyes_C$ – $[Les_E\ yeux_C]_C$
and_N – et_N
$spyglasses_C$ – $[les_E\ lunettes_C]_C$

Main Relation:
$[[[did]_F]_{P\text{-}}\ [[remain]_E\ [at_R\ rest_C]_C]_{\text{-P(CONT.)}}$ – $[[restèrent]_E]_{P\text{-}}\ [[au_{R+E}\ repos_C]_C]_{\text{-P(CONT.)}}$
$[remain]_E$ – $[restèrent]_E$
$[at_R\ rest_C]_C$ – $[au_{R+E}\ repos_C]_C$
$rest_C$ – $repos_C$

Adverbials:
$[n't]_D$ – $[ne]_{D\text{-}}\ [pas]_{\text{-D(CONT.)}}$

$[for_R\ an_E\ instant_C]_D$ – $[un_E\ instant_C]_D$
an_E – un_E
$instant_C$ – $instant_C$

<u>Scene 57:</u>

$[[a\ bit]_D\ [dazzled]_P]_{H\text{-}}\ [[[by_R\ the_E\ vista_C\ of_R]_E\ [[\$]_C\ [2,000.00]E]C]A]_{\text{-H(CONT.),REMOTE-A(“Eyes and spyglasses”)}}$ – $[[un\ peu]_D\ [éblouis]_P]_{H\text{-}}\ [[[par_R\ la_E\ perspective_C\ de_R]_E\ [[deux\ mille]_E\ [dollars]_C]_C]_A]_{\text{-H(CONT.),REMOTE-A(“ yeux”)}}$

Participants:
REMOTE-A(“Eyes and spyglasses”) – REMOTE-A(“yeux”) (Different notations)

$[[by_R\ the_E\ vis_ta_C\ of_R]_E\ [[\$]_C\ [2,000.00]_E]_C]_A$ – $[[[par_R\ la_E\ perspective_C\ de_R]_E\ [[deux\ mille]_E\ [dollars]_C]_C]_A$
$[by_R\ the_E\ vista_C\ of_R]_E$ – $[par_R\ la_E\ perspective_C\ de_R]_E$
by_R – par_R
the_E – la_E
of_R – de_R
$vista_C$ – $perspective_C$
$[[\$]_C\ [2,000.00]_E]_C$ – $[[deux\ mille]_E\ [dollars]_C]_C$
$[2,000.00]_E$ – $[deux\ mille]_E$
$[\$]_C$ – $[dollars]_C$

Main Relation:
$[dazzled]_P$ – $[éblouis]_P$

Adverbial:
$[a\ bit]_D$ – $[un\ peu]_D$

<u>Ground:</u>

[it is true]$_G$ – [il est vrai]$_G$

Scene 58:

[[Day$_C$ and$_N$ night$_C$]$_D$ [we]$_A$ [observed]$_P$ [[the]$_E$ [surface]$_C$ [of$_R$ the$_E$ ocean$_C$]$_E$]$_A$]$_H$ – [[Jour$_C$ et$_N$ nuit$_C$]$_D$, [on]$_A$ [observait]$_P$ [[la]$_E$ [surface]$_C$ [de$_R$ l'$_E$ Océan$_C$]$_E$]$_A$]$_H$

Participants:
[we]$_A$ – [on]$_A$
[[the]$_E$ [surface]$_C$ [of$_R$ the$_E$ ocean$_C$]$_E$]$_A$ – [[la]$_E$ [surface]$_C$ [de$_R$ l'$_E$ Océan$_C$]$_E$]$_A$
[the]$_E$ – [la]$_E$
[of$_R$ the$_E$ ocean$_C$]$_E$ – [de$_R$ l'$_E$ Océan$_C$]$_E$
of$_R$ – de$_R$
the$_E$ – l'$_E$
ocean$_C$ – Océan$_C$
[surface]$_C$ – [surface]$_C$

Main Relation:
[observed]$_P$ – [observait]$_P$

Adverbial:
[Day$_C$ and$_N$ night$_C$]$_D$ – [Jour$_C$ et$_N$ nuit$_C$]$_D$
Day$_C$ – Jour$_C$
and$_N$ – et$_N$
night$_C$ – nuit$_C$

Linker:

[and]$_L$ – [et]$_L$

Scene 59:

[[[[those]$_F$ [with$_R$ nyctalopic$_E$ eyes$_C$]$_E$]$_{C,IMPLICIT-C}$, [[whose]$_R$ [[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE-A("those with nyctalopic eyes")}$]$_{A,REMOTE-A("those with nyctalopic eyes")}$ [increased]$_P$ [their$_E$ chances$_C$]$_A$ [by$_R$ fifty$_E$ percent$_C$]$_D$]$_E$]$_A$, [[had$_F$ an$_E$ excellent$_E$ shot$_C$]$_E$ [at$_R$ winning$_C$]$_C$]$_P$ [the$_E$ prize$_C$]$_A$]$_H$ – [[[les]$_E$ [nyctalopes]$_C$, [[dont]$_R$ [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE-A("nyctalopes")}$]$_{A,REMOTE-A("nyctalopes")}$ [accroissait]$_P$ [les$_E$ chances$_C$]$_A$ [[de]$_R$ [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$]$_D$]$_E$]$_A$, [[avaient$_F$ beau$_E$ jeu$_C$]$_E$ [pour]$_F$ [gagner]$_C$]$_P$ [la$_E$ prime$_C$]$_A$]$_H$

Participants:
[[[those]$_F$ [with$_R$ nyctalopic$_E$ eyes$_C$]$_E$]$_{C,IMPLICIT-C}$, [[whose]$_R$ [[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE-A("those with nyctalopic eyes")}$]$_{A,REMOTE-A("those with nyctalopic eyes")}$[increased]$_P$ [their$_E$ chances$_C$]$_A$ [by$_R$ fifty$_E$ percent$_C$]$_D$]$_E$]$_A$ –
[[[les]$_E$ [nyctalopes]$_C$, [[dont]$_R$ [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE-A("nyctalopes")}$]$_{A,REMOTE-A("nyctalopes")}$ [accroissait]$_P$ [les$_E$ chances$_C$]$_A$ [[de]$_R$ [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$]$_D$]$_E$]$_A$
[[those]$_F$ [with$_R$ nyctalopic$_E$ eyes$_C$]$_E$]$_{C,IMPLICIT-C}$ – [les]$_E$ [nyctalopes]$_C$

[[whose]$_R$ [[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$ [increased]$_P$ [their$_E$ chances$_C$]$_A$ [by$_R$ fifty$_E$ percent$_C$]$_D$]$_E$ – [[dont]$_R$ [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$ [accroissait]$_P$ [les$_E$ chances$_C$]$_A$ [[de]$_R$ [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$]$_D$]$_E$

[the$_E$ prize$_C$]$_A$ – [la$_E$ prime$_C$]$_A$
the$_E$ – la$_E$
prize$_C$ – prime$_C$

Main Relation:
[[had$_F$ an$_E$ excellent$_E$ shot$_C$]$_E$ [at$_R$ winning$_C$]$_C$]$_P$ – [[avaient$_F$ beau$_E$ jeu$_C$]$_E$ [pour]$_F$ [gagner]$_C$]$_P$ [[had$_F$ an$_E$ excellent$_E$ shot$_C$]$_E$ – [avaient$_F$ beau$_E$ jeu$_C$]$_E$
[at$_R$ winning$_C$]$_C$ – [pour]$_F$ [gagner]$_C$
winning$_C$ – gagner$_C$

<u>Scene 60:</u>

[[whose]$_R$ [[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$ [increased]$_P$ [their$_E$ chances$_C$]$_A$ [by$_R$ fifty$_E$ percent$_C$]$_D$]$_E$ – [[dont]$_R$ [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$ [accroissait]$_P$ [les$_E$ chances$_C$]$_A$ [[de]$_R$ [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$]$_D$]$_E$

[whose]$_R$ – [dont]$_R$

Participants:
[[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$ – [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$

[their$_E$ chances$_C$]$_A$ – [les$_E$ chances$_C$]$_A$
their$_E$ – les$_E$
chances$_C$ – chances$_C$

Main Relation:
[increased]$_P$ – [accroissait]$_P$

Adverbial:
[by$_R$ fifty$_E$ percent$_C$]$_D$ – [[de]$_R$ [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$]$_D$
by$_R$ – [de]$_R$
fifty$_E$ percent$_C$ – [[cinquante]$_C$ [pour$_R$ cent$_C$]$_E$]$_C$
fifty$_E$ – cinquante$_C$
percent$_C$ – [pour$_R$ cent$_C$]$_E$
(Swapping of the Center and the Elaborator, Conforming Analysis)

<u>Scene 61:</u>

[[ability]$_S$ [[to$_F$ see$_C$]$_P$ [in$_R$ the$_E$ dark$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$]$_{A,REMOTE\text{-}A(\text{“those with nyctalopic eyes”})}$ – [[la$_E$ faculté$_C$]$_S$ [[de$_F$ voir$_C$]$_P$ [dans$_R$ l'$_E$ obscurité$_C$]$_A$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$]$_{A,REMOTE\text{-}A(\text{“nyctalopes”})}$

Participants:
REMOTE-A(“those with nyctalopic eyes”) – REMOTE-A(“nyctalopes”)

$[[to_F\ see_C]_P\ [in_R\ the_E\ dark_C]_A]_{A,\text{REMOTE-A(“those with nyctalopic eyes”)}}$ – $[[de_F\ voir_C]_P\ [dans_R\ l'_E\ obscurité_C]_A]_{A,\text{REMOTE-A(“nyctalopes”)}}$

Main Relation:
$[ability]_S$ – $[la_E\ faculté_C]_S$

<u>Scene 62:</u>

$[[to_F\ see_C]_P\ [in_R\ the_E\ dark_C]_A]_{A,\text{REMOTE-A(“those with nyctalopic eyes”)}}$ – $[[de_F\ voir_C]_P\ [dans_R\ l'_E\ obscurité_C]_A]_{A,\text{REMOTE-A(“nyctalopes”)}}$

Participants:
REMOTE-A(“those with nyctalopic eyes”) – REMOTE-A(“nyctalopes”)

$[in_R\ the_E\ dark_C]_A$ – $[dans_R\ l'_E\ obscurité_C]_A$
in_R – $dans_R$
the_E – l'_E
$dark_C$ – $obscurité_C$

Main Relation:
$[to_F\ see_C]_P$ – $[de_F\ voir_C]_P$
see_C – $voir_C$