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**NON-TRUTH-CONDITIONAL ASPECTS OF MEANING AND
THE LEVEL OF LF**

LISA A. REED

**Thesis submitted to
the School of Graduate Studies and Research
in partial fulfillment of the requirements for the Ph.D.
degree in Linguistics**

Université d'Ottawa/University of Ottawa

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ABSTRACT

In contrast to the majority of research previously done on Logical Form (LF), this thesis places equal emphasis on its syntactic and semantic properties. Adopting a literal view of May's (1985) characterization of LF as "the level of representation which interfaces the theories of linguistic form and interpretation", this thesis uses syntactic information available at this level to construct a version of model-theoretic interpretation which can capture certain semantic phenomena. In particular, this thesis develops the hypothesis, inspired by Turkish specificity facts noted in Enç (1987, 1991), that a dissociation of Case and Theta-role assignments, signalled at LF, is one means by which a grammar may encode conventional implicatures. The French causative and Raising constructions, two examples of which follow, are offered as evidence for this contention.

(1) Je l'ai fait manger sa soupe.

I him-ACC have made to-eat his soup

'I made him eat his soup.'

(2) Jean, c'est cet homme là-bas.

Jean, he is that man there-low

'Jean, he's that man over there.'

The constructions in (1) and (2) are argued to have an LF configuration in which the underlined argument receives its Theta-role from a predicate which does not assign it Case, thus meeting the structural description noted above. This thesis shows that these dissociations encode conventional implicatures: in (1), there is an implicature regarding the degree autonomy possessed by the embedded subject; in (2), there is an implicature regarding the aspectual nature of the interval of time at which the predicative sentence is true. These implicatures are captured by a model-theoretic semantic component which reads off the syntactic tree available at LF.

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There are a number of individuals who have contributed in various ways and degrees to the development of this thesis that I wish to recognize. First, I wish to acknowledge each of the members of my thesis committee for the many hours spent reading and commenting on this work. These are: Keith Arnold, Marc Dominicy, Brendan Gillon, Paul Hirschbühler, and María-Luisa Rivero. A special word of thanks should also go to those members who were able to attend my oral defence for their insightful and thought-provoking discussion regarding the broad implications of this dissertation for future research in the syntax/semantics interface. (This dialogue led directly to the development of the Preface of the dissertation.)

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PREFACE

This thesis is devoted to an in-depth investigation of the syntax and semantics of two constructions in the grammar of the French language and the import of these analyses for the theory of grammar at large. The two constructions under investigation are the French causative construction, an example of which is given in (1), and French predicative sentences, an example of which is provided in (2).

- (1) Je l'ai fait manger sa soupe.
I him-ACC have made to-eat his soup
'I made him eat his soup.'
- (2) Jean, c'est cet homme là-bas.
Jean, he is that man over there
'Jean, he's that man over there.'

One of the goals of my investigation is to develop a syntactic and semantic analysis for each of the constructions in (1) and (2), employing a line of argumentation standard for the frameworks adopted. Perhaps more importantly, however, is the fact that these analyses are offered as evidence for the major thesis of the work, which is summarized in (3). In particular, it is argued that the syntactic and semantic analyses for both of these constructions support the novel hypothesis that a dissociation of Case and Theta-role assignments is one means by which the grammar of a given language may encode a conventional implicature - a so-called "non-truth-conditional aspect of meaning."

- (3) If a DP does not receive its Case feature from the element that assigns it a Theta-role, it may display a (marked) phonetic or morphological variant which introduces a conventional implicature.

To briefly summarize and clarify the import of (3), I first argue that both of the constructions in (1) and (2) fit the structural description in (3); that is, both causative constructions and predicate nominal sentences are shown to be environments in which an argument receives its Case feature from an element other than the one which assigns it a thematic role.

Specifically, in the case of the causative construction, the clitic in bold receives its external theta-role from the embedded predicate meaning to eat his soup and its Case from a different verb, in particular, faire ‘to make’. In the case of predicate nominal sentences like (2), the clitic in bold receives its Case from the tensed Agr-S associated with the Raising verb meaning to be, and its external theta-role from the embedded predicate nominal cet homme là-bas ‘that man over there’.

Given that the structural description in (3) is met, I go on to show that these configurations do indeed give rise to non-truth-conditional aspects of meaning. In particular, in causative sentences like (1), one finds a conventional implicature to the effect that the embedded subject has had very little autonomy in his decision to act; in the case of predicative structures like (2), one finds an aspectual implicature to the effect that the event does hold at the interval and world picked out by the tense, but not at an endpoint of that interval in that world.

The chapters making up this thesis are devoted to developing detailed arguments in support of the analyses so briefly summarized in the preceding paragraphs and I will leave it to the reader to examine and evaluate the relative merits and flaws of each of them at his or her own leisure. However, on the suggestion of two of members of my thesis committee (Keith Arnold and Brendan Gillon), I would like to take a moment to examine the questions provided in (4) and (5) below. That is, I would like to explore the implications that the hypothesis in (3) holds for syntactic and semantic theory.

- (4) What implications does the acceptance of the hypothesis in (3) have for future research in syntactic theory?
- (5) What significance does this hypothesis hold for future research in semantic theory?

I would like to begin by addressing the question in (4) and my answer will consist of two parts: first, I will consider the implications of my hypothesis for rival syntactic theories;

and secondly, I will consider the implications of my hypothesis in (3) for syntacticians working within the Government-Binding framework itself.

To begin, it is important to acknowledge that the hypothesis in (3) does have broad implications for the direction of future research in syntactic theory. In particular, this hypothesis cannot even be formulated if one does not first adopt an autonomous theory of syntax with distinct levels of syntactic representation - two characteristics which typify the Government-Binding framework. Therefore, if one wishes to maintain the empirical generalization that (3) captures, then one must adopt some notational variant of syntactic theory which has these features.

I should explain why I just said that the hypothesis in (3) requires an autonomous syntax with independent levels of representation. The hypothesis in (3) requires an autonomous syntactic theory because it makes crucial reference to two semantically independent syntactic modules, specifically, the two modules referred to as Case Theory and Theta Theory. That is, underlying (3) is the claim that principles of these two syntactic modules independently conspire to produce a licensing environment for conventional implicatures. Importantly, the hypothesis in (3) prohibits the use of a syntactic framework that assumes the reverse, i.e., that purely semantic considerations play the key role in determining the syntactic structure of a given construction, in this case, causatives and predicate nominal sentences. The hypothesis bars the use of this type of theory because the two constructions, causatives and predicate nominals, that is, would receive unrelated syntactic structures which are determined by the semantic properties particular to the construction in question. Thus, in order to capture the generalization in (3), one must know what property is common to both constructions and this property is a purely syntactic one.

The hypothesis in (3) also requires reference to two distinct levels of representation since it requires that the grammar of a given language exhibit a specific difference between the syntactic configuration available at D-Structure and the one available at S-Structure and

LF before it can encode this type of meaning. Specifically, principles of Theta Theory will generate one syntactic configuration at D-Structure and principles of Case Theory will later force some kind of movement, that is, a change in that word order, at subsequent levels.

Now, given that the hypothesis in (3) does indeed require an autonomous syntax which recognizes distinct levels of representation, it follows that any syntactic framework which does not adhere to these principles will lose the generalization that (3) embodies and thus will have a less extensive empirical range. Such rival theories would include Gazdar, Klein, Pullum, and Sag's (1985) Generalized Phrase Structure Grammar (GPSG) and Bresnan's (1982) Lexical Functional Grammar (LFG). For concreteness' sake, let's consider the case of GPSG. In this framework, the word order of constructions like the causatives in (1) and the predicate nominals in (2) would be determined by a pair of highly sophisticated, construction-specific, phrase structure and semantic rules. The two types of rules would conspire to produce a single level of syntactic representation for each construction and, given the construction-specific nature of this approach, the connection between the two constructions which the hypothesis in (3) captures would now be lost. Thus, at least as these frameworks are presently formulated, only the GB approach is capable of unifying what would otherwise be treated as unrelated phenomena. Of course, nothing can rule out some reformulation of these frameworks, however, this would be a move toward a notational variant of the principles and parameters approach and would therefore entail an implicit recognition of the power of such a syntactic system.

Thus, one important implication that my work does hold for the various syntactic theories is that it reveals that only one type of theory can capture a generalization like the one in (3).

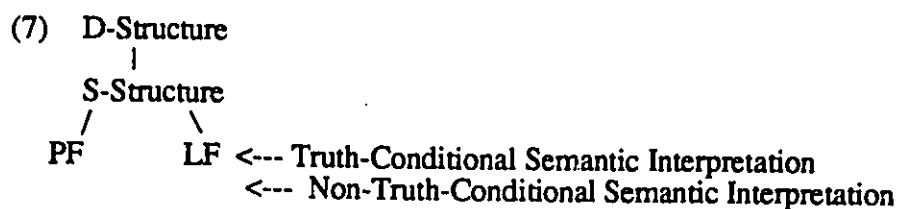
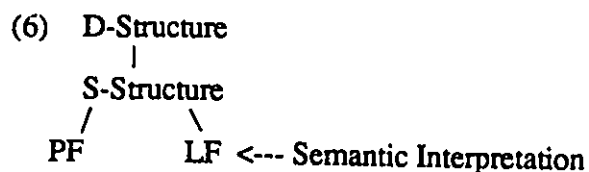
Another major goal of my dissertation is to push for a re-examination of the relevance of Montague Semantics for modern Government-Binding syntax (and vice versa). In doing so, I have gone against a long-standing tradition that the two groups have shared, namely, that Government-Binding syntax is not semantically relevant or,

alternatively, that Montague Semantics is not syntactically relevant. I think it is unfortunately still accurate to say that most syntacticians working in the GB framework implicitly hold one of two views with respect to semantic theory: either they believe it is impossible to construct a formal theory of semantics at all (this view seems to be quite explicit in the work of Hornstein (1984)) or, if they do believe that formal semantics exists, then they assume that the proper framework for conducting this line of inquiry is not that of Montague and his followers. Of course, the parallel view has been expressed by many of the semanticists who adopt Montague's framework, although it strikes me as being less widespread, as evidenced, for example, by the explicit use of an earlier version of Government-Binding syntax for semantic interpretation in the Dowty, Wall and Peters (1981) textbook. While I am uncertain as to how or why this tension has developed between GB syntax and Montague Semantics, and while I have also been quite unable to uncover any objective reason for its acceptance, it seems likely that it may originate with very founders of these frameworks, namely, Chomsky and Montague. Thus, Chomsky has stated numerous times, and in print, that descriptive linguistics has no need of logical methods and notions. Chomsky (1971: 183), for example, expresses the view that "...there is no reasonably concrete or well-defined theory of semantic representation." In the same paper on page 191, he goes on to describe semantics as being the area of linguistic theory which is "most veiled in obscurity and confusion." Of course, Montague (1970a: 188) was no less harsh when he declared that the developments in syntax at MIT "...offer little promise."

Given this historical context, then, it is one of the underlying goals of this thesis to dispel the belief that there is a basic theoretical incompatibility between GB syntax and Montague Semantics. That is, this work does seek to reconcile these two solitudes of formal sentence grammar. I believe my work achieves this aim, at least to some degree, since it proves a relatively simple matter to combine both approaches and arrive at an explicit, formal account of both the syntactic and the semantic mechanisms at work in the

two constructions investigated. Of course, only time will tell if this work actually spurs future research along these lines.

But this issue aside, the dissertation, and in particular the hypothesis in (3), also provides evidence for a subtle re-organization of the model of grammar as it is presently conceived of in GB circles. Currently, it is widely, if not universally, assumed that there is a single level of semantic representation which either coincides with LF or which corresponds to the interpretation that the semantic component, whatever it may be, assigns to the syntactic configuration available at LF. Thus, most syntacticians in the GB framework assume a model like the one in (6). This dissertation offers support for a slightly refined model, inspired, of course, by the work of Karttunen and Peters (1979). According to this view, which is expressed graphically in (7), there are actually two distinct semantic representations which are independently built off of the syntactic tree at LF: the first corresponds to semantic assertion, the second, to nonconversational implicatures. Thus, this is the second implication that my dissertation holds for syntacticians working in the GB framework.



Having provided a brief overview of my response to the question in (4), I will turn next to the question of the significance that my hypothesis holds for semantic theory. Once again, my response will break down into two subjects: first, the significance of (3) for rival

semantic theories and, secondly, its import for a proper characterization of the nature of conventional implicatures within the framework adopted.

Regarding the former, the hypothesis in (3) clearly puts yet another nail into the coffin of a Russellian approach to semantic meaning. That is, Russell (1905) held that those aspects of the meaning of (1) and (2) which I refer to as conventional implicatures are, in fact, “disguised semantic assertions.” That is, Russell felt that all aspects of nonconversational meaning should receive a truth-conditional treatment, putting all such aspects of meaning on a par. Besides the familiar problems that Frege (1892) and Strawson (1950) had already pointed out for this type of analysis (that is, the familiar problems regarding negation, questions, and conditionals), my thesis demonstrates that, at least given what we know so far, only those types of meaning which resist internal negation can also be syntactically signalled in the manner indicated in (3). Russell’s approach treats all aspects of nonconversational meaning as being of the same type - all such meaning is truth-conditional. What I uncover in this dissertation proves quite problematic for this view: Why couldn’t aspects of meaning that do not resist internal negation also be signalled in the manner indicated in (3)? Of course, if one recognizes that two types of meaning exist: truth-conditional and non-truth-conditional, then the fact that the two are treated differently by the grammatical system is not an unexpected result.

The hypothesis in (3), which, of course, requires a sentence-based approach to semantics, also argues against the extreme interpretation of discourse-based semantic theories, such as the ones proposed in Heim (1982, 1983) and Kamp (1981a). That is, one of the original motivations for the development Discourse Semantics was the complete rejection of certain core assumptions held by Montague, in particular, his insistence that the sentence be the primary unit of semantic analysis and his adherence to Frege’s Principle of Compositionality, which, to be implemented, requires that semantic interpretation be guided by syntactic structure. Many discourse semanticists see their theory as a rival of, and not as a complement to, a Montague-type approach. That is, it is one of their stated

goals is to provide an account for every aspect of meaning covered by a sentence-based approach and more. Now, while it has clearly been established that a Montague-style approach cannot provide an exhaustive analysis of meaning, witness the intractable problems this framework faces with respect to so-called “donkey sentences”, this dissertation nonetheless demonstrates that there is a continuing need for sentence-based semantic analysis as well. Only this type of approach can capture the generalization in (3) since that generalization makes crucial reference to the syntactic configuration associated with the sentence in isolation. That is, the conventional implicatures noted will only be present if the structural description is first met and the semantically ill-formed sentences will only be ruled out in that same environment. It is not at all clear to me how a semantic theory which is not based on syntactic structure would accommodate such facts in a non-stipulatory manner. Thus, this work can also be seen as evidence in favor of the continued recognition of sentence-based approaches to meaning, and, hopefully, the eventual integration of sentence-based meaning with the distinct level of semantic interpretation captured by Discourse Representation Structure.

Having addressed the issue of what significance my thesis holds for rival semantic theories, I will conclude with a discussion of what light my work sheds on the nature of conventional implicatures themselves. Earlier, I mentioned that my approach further supports the Fregean/Strawsonian view that there are two types of meaning: truth-conditional and non-truth-conditional, contra work by Russell. I concluded that my work lends support to this view of the nature of conventional implicatures. However, it is important to note that while I do share with Strawson (1950) and his followers the view that there are two distinct types of meaning, I do not share with him the opinion that “ordinary language has no exact logic.” Instead, I offer clear evidence in favor of the Karttunen and Peters’ (1979) position that even these aspects of non-truth-conditional meaning can receive a formal, explicit analysis. This evidence is in the form of the logical analyses I provide for the aspectual conventional implicature and the implicatures regarding

direct and indirect causation. Thus, an additional contribution has been made with respect to the issue of which aspects of natural language meaning one can treat in a rigorous manner.

Finally, and I believe most importantly, the hypothesis in (3) recognizes an entirely novel means by which the grammatical system may encode this type of meaning. That is, previous work on conventional implicatures has always assumed that their distribution is purely idiosyncratic in nature. In particular, it has traditionally been taken for granted that conventional implicatures are of two types: either they are associated with a particular item's lexical entry or they are arbitrarily associated with a given syntactic construction, for example, cleft sentences. While I agree that there is a class of lexically-specified conventional implicatures, those associated with words like even and only would fall into this group, my work suggests that the assumption that the second group of conventional implicatures are also so idiosyncratically determined is a mistaken one. In fact, this dissertation takes the first step towards answering the question of why this second group of implicatures can only arise in a particular syntactic construction and not in another. That is, the hypothesis in (3) embodies the claim that at least a subclass of the so-called construction-specific conventional implicatures have a distribution which is not random: it is said to be conditioned by a specific structural configuration, namely, one of Case and Theta-role assignment dissociation. This hypothesis suggests that there is a potential for the other "construction-specific" conventional implicatures to also be so licensed. That is, if it is true that one group of construction-specific conventional implicatures requires a specific syntactic configuration, why couldn't it also be the case that the other "construction-specific" implicatures noted in the literature are also licensed in a parallel manner, albeit by different syntactic modules such as Binding Theory, principles of Government Theory and so on? What may perhaps be the most significant contribution that the hypothesis in (3) makes then is in the direction that it points for future research. It seems clear that we must now take a second look at other syntactic configurations known to

encode conventional implicatures, for example, non-restrictive relative clauses, counterfactual conditionals, wh- and yes/no questions etc. Perhaps once we are capable of characterizing the structural environments which are licensing these implicatures, then we will also be in a much better position to determine the exact nature of conventional implicatures, and in addition, we will be able to characterize in a rigorous manner the nature of the interface between the syntactic and semantic components of the grammar.

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To Marc

"Liebe, die darin besteht, daß zwei Einsamkeiten einander schützen, grenzen und grüßen"

--Rilke Letters to a Young Poet

Chapter 1

INTRODUCTION

1.1 Goals of the Thesis

This thesis is devoted to an in-depth investigation of some of the properties of Logical Form (LF). In particular, the primary aim of the discussion found in the following chapters is to work towards a deeper understanding of what types of semantic phenomena are represented at this level, as well as to how these phenomena can be captured in formal model-theoretic terms. A necessary preliminary to this discussion is a determination of what exactly is meant by the term LF, what phenomena have already been argued to be part of this level of representation, as well as what role is assumed to be played by LF in semantic interpretation. This task will be undertaken in the present section. In the section following this one, I will provide an outline of exactly which phenomena found in the grammar of French I would like to argue are also represented at LF, as well as an overview of how I propose to capture them formally.

Logical Form is a notion that refers to distinct, although historically related, concepts in the philosophical and linguistic fields of inquiry. From a philosophical perspective, the term LF was originally used to refer to the hypothesis that the logical representation of a natural language sentence can differ markedly from its surface grammatical form. Specifically, the characteristics of vagueness, ambiguity, and contextually-determined meaning attested in natural language were viewed as undesirable and, to use Russell's (1905) term, "misleading". Under this view, it was the task of the logician to uncover and eliminate such "unsystematic" features of natural language in light of the goal of capturing logically valid arguments. The classic example of the philosopher's attempt to uncover the true logical form of a natural language sentence from its misleading surface form is exemplified by Russell's sentence The present king of France is bald. According to Russell, the definite description the present king of France appears to

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refer to some entity (the king), but, in fact, this is a logically complex expression which, among other things, makes the assertion that such an individual exists. With the subsequent development of logical systems richer than the standard predicate logic employed by Russell, this dichotomy drawn between natural language and formal systems, and in particular, the resulting perception that natural language is inferior and unsystematic has been largely rejected.

Given that this view of LF has been largely abandoned, what does the notion of LF refer to in linguistic circles today? That is, what are the properties of the level of representation called LF in the Government-Binding (GB) framework and is this level equivalent to or at least comparable with the LF employed by model-theoretic semanticists? A common misconception is that linguists working in the GB framework view LF as “the” level of semantic interpretation, i.e., the semantic module of the grammar. However, as May (1985) puts it and as Chomsky (1986b: 157) emphasizes, LF must be understood as “the level of representation which interfaces the theories of linguistic form and interpretation.” In other words, LF representations are derived from S-Structure representations and these representations encode those syntactic properties which are relevant to interpretation.

Interestingly, as it stands, this definition of LF is totally in line with that of model-theoretic semantics in that both generative syntacticians and model-theoretic semanticists seem to agree on the existence of a semantically significant level of syntactic representation, i.e., on a level of syntactic representation which influences the interpretation eventually assigned to a given linguistic expression by the semantic component. Where the views of GB syntacticians and the model-theoretic semanticists would superficially appear to diverge is in how the meaning of the complex expression can be derived in a step-by-step compositional treatment of its parts. That is, in the past, syntacticians have primarily concerned themselves with what movements have occurred between D-Structure, S-Structure, and LF and how these movements are regulated by syntactic principles. The

Chapter 1

issue which has not been explored is exactly how the resulting syntactic configurations guide the interpretation process in a compositional fashion, a question which is of primordial importance to model-theoretic semantics. Thus, it appears that while LF is a plausible candidate for the level of semantically-relevant syntactic representation, at this point it remains quite unclear how exactly this level can form the basis for a compositional semantic interpretation. This is the first question that will be addressed in detail in the chapters to follow.

The second overriding goal of this thesis is to expand upon the range of semantic phenomena that are represented at LF. That is, I would like to add to the range of aspects of meaning that are explicitly signalled at this level of syntactic representation. As a point of departure, I would like to very briefly review what is already commonly assumed to be part of LF so that it will be clear how my proposals will expand upon what has already been established. Additionally, I will point out how previous investigations of LF have led to a second popular misconception of this level of representation, namely, that it is nothing more than another syntactic level derived from S-Structure by “move α ”. This view, in effect, places the semantic relevance of LF on a par with the other syntactic levels, a position which contrasts sharply with the view that I would like to further defend in this thesis, namely that LF contrasts with other levels of syntactic representation in that it forms the interface between the syntactic and semantic modules.

To begin, at least two distinct types of rules have been assumed to apply at LF: movement rules and rules of construal. The first type is by far the best documented and is perhaps the best known. An example of this type of LF rule is discussed in May (1977, 1985) in which evidence is presented to the effect that quantified NPs undergo move α in LF to adjoin to a maximal projection from which they bind a trace in argument position. This phenomenon, known as Quantifier Raising (QR), provides an operator-variable structure from which the quantifier variable notation of intensional logic would become directly available. In other words, QR, like Montague’s (1973) syntactic rule of

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quantification, is intended to create a structural configuration which directly feeds the logical representation (i.e., the semantic interpretation) of the sentence.¹

That movement in LF provides a syntactic way of representing natural language quantification has also been argued by Huang (1982) who demonstrates that LF raising of wh-elements can account for the scopal properties of wh-quantifiers in languages with no S-Structure wh-movement such as Chinese. English also has instances of LF movement of wh-elements in multiple interrogation structures as argued by Chomsky (1986b: 76) and Pesetsky (1982), among others. Additionally, LF movement has been invoked to explain the weak crossover violation found in sentences like (1a) below since the LF representation created by May's QR, illustrated in (1b), provides the structural configuration known to trigger weak crossover effects in the syntax.

- (1) a. ?*His_i mother loves everyone_j
b. [everyone_j [his_i mother loves t_j]]

Finally Chomsky (1986b: 175) has argued that in English, anaphors undergo LF raising to INFL position, leaving a trace in a manner parallel to Romance reflexive clitics, which he assumes bind a trace in argument position at S-Structure.

This is by no means an exhaustive list of the environments in which move α applies at LF, but it will suffice here to demonstrate the import of this type of LF rule. In a moment, I will show how the existence of this type of movement at LF has contributed to the view that LF is simply another level of syntactic representation, i.e., another level at which purely syntactic principles apply; first, though, I would like to briefly summarize the second type of rules which have been argued to apply at LF, namely construal rules.

This type of rule generally constrains various types of relations between "anaphoric elements" (overt or empty) and their antecedents. For instance, both Sag (1976) and Williams (1977) argue that constraints on VP-deletion are to be stated over logical representations. May (1985) further elaborates on their findings by showing that one of the well-known constraints on VP-deletion, namely the requirement that neither the empty VP

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nor its antecedent c-command the other, is sensitive to QR. He concludes that the level of LF is indeed relevant to the observed properties of VP-deletion. The LF component has also been argued by Lasnik and Saito (1984) to be the sole level at which ECP is checked (see in particular ft. 63, p.285). ECP is a condition on the well-formedness of chains created by movement and thus can be viewed as a rule of construal. Specifically, Lasnik and Saito propose that traces are marked [+ γ] when lexically governed or antecedent-governed and [- γ] otherwise. Based on the fact that nonargument wh-traces are a target of γ -assignment only at LF, they formulate the ECP as a filter which rules out traces marked [- γ] at the level of LF. Thus γ -checking is an LF operation which utilizes information tied to the output of move α at both S-Structure and LF.

Another case in which the licitness of an element is checked at LF is that of negative polarity item (NPI) licensing. Linebarger (1987) provides evidence that the licitness of NPIs which appear in the scope of negation is sensitive to the scopal properties of other logical elements in the sentence. In particular she shows that the interaction between quantifier scope and NPIs must be stated at LF. Consider in this respect the following sentence:

- (2) She didn't wear any earrings to every party. (Linebarger's (93))

Linebarger notes that among the logically expected readings of (2) in which negation has the widest scope, (3a) but not (3b) is in fact a possible interpretation for (2).

- (3) a. $\neg \exists x \forall y$ (she wore x to y)
'There are no earrings that she wore to every party.'
b. $\neg \forall y \exists x$ (she wore x to y)
'*It wasn't to every party that she wore any earrings.'

Linebarger argues that the unavailability of (3b) as a reading for (2) stems from the Immediate Scope Constraint, a constraint which regulates the distribution and interpretation of NPIs and is only storable at LF since it reflects the scopal properties of logical elements.

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- (4) The Immediate Scope Constraint (ISC): (Linebarger, 1987: 338)

An NPI is acceptable in a sentence if in the LF of that sentence the subformula representing the NPI is in the immediate scope of the negation operator. An element is in the immediate scope of NOT only if (i) it occurs in a proposition that is the entire scope of NOT and (ii) within this proposition there are no logical elements intervening between it and NOT.

The ISC successfully rules out (3b) since the universal quantifier prevents the NPI from being in the immediate scope of NOT at LF. Thus the ISC can be seen as a rule of construal in that it defines a locality constraint between triggered NPIs and negation. Yet another example of LF construal is provided in Authier (1989) where it is argued that arbitrary null objects in French and Italian acquire their quantificational interpretation by virtue of being unselectively bound at LF by an overt or non-overt adverb of quantification.

Again, this is not an exhaustive list of the LF rules of construal which have been argued for in the literature, but this sample should be sufficient to illustrate the existence of such rules at that level. From this discussion, it becomes obvious how these two types of LF rules have reinforced the view that LF is a purely syntactic level of representation since, as is obvious, both types of rules have counterparts at the level of S-Structure. To illustrate, LF wh-raising can be thought of as syntactic wh-movement applying in LF. Even QR can be argued to have an S-Structure counterpart in languages like French as suggested by Sportiche (1988: 434). Sportiche proposes that constructions like (5a), which involve Leftward Q-Movement (also called L-Tous by Kayne (1975)), be analyzed as instances of S-Structure movement of a quantifier to a left VP-boundary as in (5b). This makes Leftward Q-movement a syntactic instance of QR, particularly if one assumes, following May (1985), that object quantifiers may adjoin to VP.

- (5) a. Jean les a tous rencontrés.

Jean them-ACC has all met

'Jean met all of them.'

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(5) b. Jean les_j a [_{VP} tous_j [_{VP} rencontrés [_{QP} t_j [_{NP} e_i]]]]

Rules of construal are also assumed to apply at S-Structure, not just LF. For instance, the standard Binding Principles of Chomsky (1981) are operative at S-Structure. Another rule of construal assumed to apply at S-Structure is that of inalienable construal in French as argued in Authier (1992a).

In sum, it is quite easy to see how many have come to view LF as a purely syntactic level of representation on a par with D-Structure and S-Structure. The inaccuracy of this view is made evident first by the fact that it is obvious that the intended effect of the preceding LF rules is to provide a structural configuration which limits the available interpretations eventually assigned to them by the semantic component (although, admittedly, the issue of exactly how these LF configurations work to guide semantic interpretation has seldom been addressed). Additional evidence that LF is indeed the level at which the syntactic and semantic components interface, i.e., that is not simply another purely syntactic level, has been uncovered in recent years. In particular, a number of phenomena which can be characterized as “conventional implicatures” in the sense of Grice (1975, 1989) and Karttunen and Peters (1975, 1979), also commonly referred to as semantic presuppositions, seem to arise in contexts which make crucial reference to syntactic properties represented at LF and it is novel phenomena of this type which will be explored in some detail in the present thesis.

Evidence that these non-truth-conditional aspects of meaning are also signaled by LF configurations comes from a wide range of linguistic phenomena, in particular polarity sensitivity (Linebarger, 1987), weak crossover (Authier, 1992b) and specificity (Enç, 1987, 1991). Before discussing the above, however, it will be useful to briefly introduce the notions of semantic assertion, conventional implicature, and conversational implicature as they are defined in Grice (1975, 1989) and Karttunen and Peters (1979).²

It is now widely recognized, following the seminal work of Grice (1975, 1989), that a distinction must be drawn between the semantic assertion expressed by a given

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linguistic expression (what is said) and the implicatures associated with that expression (what is meant). The former aspect of meaning is said to be truth-conditional, for reasons to be discussed in a moment, whereas the latter, implied meaning, is characterized as being non-truth-conditional. To provide a concrete illustration of this distinction, consider the following classic example:

(6) John is sick again.

The preceding example is standardly analyzed as making a semantic assertion to the effect that the individual picked out by the proper name John possesses the property of being ill; this sentence implies that he also had that property at an earlier time. The distinction made between semantic assertions and implicatures is necessary in order to account for the fact that only the former are ordinarily affected by negation and questions. That is, when one questions or negates the sentence in (6), as has been done in (7a,b) below, one normally is only casting into doubt or denying the truth of the semantic assertion John is sick. The implicature that he possessed that property at an earlier time is maintained.

- (7) a. Is John sick again?
b. John isn't sick again.

This difference between implicatures like the preceding one and assertions has been captured formally in model-theoretic terms by Karttunen and Peters (1975, 1979). In particular, Karttunen and Peters suggest that the total meaning associated with a given linguistic expression be divided into the extension expression (equivalent to the semantic assertion) and an implicature expression, the latter being reserved solely for those implicatures, termed conventional implicatures or semantic presuppositions, which cannot be denied without contradiction. That is, in computing the truth value for the composite expression John is sick again, one adds together the truth value of the extension expression with that of the implicature expression, in a manner to be discussed in some detail in chapter 3. What is of importance for present purposes is simply that one must recognize two distinct aspects of meaning: truth-conditional aspects of meaning, i.e., those which

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directly determine the truth of the extension expression, and non-truth-conditional aspects of meaning, which include the conventional implicatures associated with lexical items like again, as well as certain syntactic structures like clefts and pseudoclefts. As a concrete example of the latter type of conventional implicature, consider the following paradigm:

- (8) a. John stole the vase.
b. It was John that stole the vase.

Both the simplex sentence in (8a) and the cleft sentence in (8b) make the same semantic assertion. That is, both (8a) and (8b) are said to have the same truth conditions: they are true just in case an individual named John stole the vase at some past time. However, the cleft construction used in (8b) licenses a conventional implicature which (8a) does not; namely, that someone stole the vase. Once again, this becomes clear if truth-functional negation is introduced in each of the sentences:

- (9) a. John didn't steal the vase.
b. It wasn't John that stole the vase.

By uttering (9a) the speaker simply denies the truth of (8a), leaving open the possibility that in fact, no one stole the vase. Uttering (9b), however, still commits the speaker to the truth of the implicature Someone stole the vase. This aspect of meaning, which is beyond the influence of truth-conditional operators like negation, is a conventional implicature/semantic presupposition tied to clefting.

As alluded to above, not all non-truth-conditional aspects of meaning fall under the rubric of conventional implicature. In particular, a subset of implicatures are conversational in nature, which simply means that there are certain aspects of meaning which arise because there are social rules governing the smooth functioning of human communication. Thus, the total meaning of a given linguistic expression is, in fact, a function of what is said (semantically asserted), what is conventionally implied, and the interaction between these two factors with certain rules of conversation, known as Grice's Maxims.

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One classic example of a conversational implicature is associated with the use of the conjunction and in sentences like Mary took a shower and ate breakfast. This sentence semantically asserts only that the individual known as Mary took a shower and ate breakfast, however, this sentence also conversationally implies that the first thing she did was take the shower and then she ate breakfast. This aspect of meaning is due to the interaction between what is said/asserted with a social convention to the effect that a cooperative speaker should be orderly, i.e., whenever possible he or she should state things in the order in which they occurred.

The feature of cancelability distinguishes these non-truth-conditional aspects of meaning from both semantic assertions and conventional implicatures. That is, one can deny the truth of a conversational implicature without contradicting oneself, as in Mary took a shower and ate breakfast, but I don't really know in what order. Cancelability is certainly not a feature possessed by semantic assertions and conventional implicatures, as witnessed by the non-sensical meaning of both !Mary took a shower, but she didn't take a shower and !John is sick again, but he's never been sick before. In this thesis, I will not be exploring conversationally-implied aspects of meaning in any detail since they do not form part of either the extension expression or the implicature expression associated with a linguistic expression (i.e., they do not form part of the logical grammar), although I will mention certain aspects of meaning which many have thought to be semantic in nature, but which, in fact, arise because of the interaction of conventional implicatures with the Maxims. (See, for example, the discussion at the end of section 5.5.3.)

Having made this standard distinction between semantic assertions, conventional implicatures, and conversational implicatures clear, it is now possible to return to the evidence mentioned earlier which supports the contention that certain non-truth-conditional aspects of meaning, specifically, conventional implicatures, also make crucial reference to LF configurations. I will begin with a further discussion of Linebarger's (1987) study of negative polarity.

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As was discussed above, Linebarger captures the distribution of NPIs which appear in the scope of overt negation by means of the Immediate Scope Constraint. There is, however, a class of NPIs, termed by Linebarger untriggered NPIs, which have no (obvious) syntactically present negative element to license them. Such NPIs appear underlined in the following sentences, due to Linebarger (1987):

- (10) a. He kept writing novels long after he had any reason to believe they would sell.
- b. At most three people in this room have anything coherent to say about Cantonese reversible verbs.

Linebarger convincingly argues that these contexts are not downward entailing in the sense of Ladusaw (1983), and, therefore, that NPI licensing cannot be captured in purely truth-conditional terms (see Linebarger (1987) for details). Instead, she proposes that to be grammatical, sentences like the ones in (10) above must bear some relation to a proposition expressible in a sentence whose LF representation contains a subformula representing the NPI which is in the immediate scope of a negation (i.e., obeys the ISC). This relationship, she argues, is not one of entailment, as suggested in Baker (1970), but rather, one of conventional implicature. That is, the contribution of NPIs to sentence meaning is the conventional implicature that two conditions be met: (i) there must be a negative implicatum (NI) available, and (ii) the truth of the NI must strengthen the proposition expressed by the sentence. The exact formulation of this mechanism is given below in (11).

- (11) Linebarger's (1987) NI account of NPI licensing:

A negative polarity item contributes to a sentence S expressing a proposition P the conventional implicature that the following two conditions be satisfied:

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- (11) a. There is some proposition NI (which may be identical to P) which is implicated or entailed by S and which is part of what the speaker is attempting to convey in uttering S. In the LF of some sentence S' expressing NI, the lexical representation of the NPI occurs in the immediate scope of negation. In the event that S is distinct from S', we may say that in uttering S the speaker is making an allusion to S'.
- b. The truth of the NI, in the context of the utterance, virtually guarantees the truth of P.

To see how Linebarger's NI account predicts the grammaticality of untriggered NPIs, consider once again the sentence in (10a). As Linebarger puts it, there is a tendency for expressions like long after to "close down" the previous situation associated with them, which makes available the negative implicature required by the NPI. The specific NI associated with the host sentence in (10a) is the proposition expressed by the sentence He didn't have any reason to believe they would sell. Though this negative implicature is pragmatic in nature as evidenced by the fact that it can be canceled in the absence of the NPI, such an implicature is nevertheless required (i.e., no longer cancelable) if the NPI is present in the structure. Thus, Linebarger argues, an NPI contributes to the host sentence which contains it the conventional implicature that the NPI occurs in the immediate scope of negation in either the LF of the host sentence or in the LF of a sentence expressing a negative implicature, the truth of which guarantees the truth of the host sentence.³ From this one can conclude that the type of conventional implicature associated with NPIs must be represented at LF since it makes reference to the scopal relations expressed at that level.

Another type of conventional implicature, that arising from the intonational contour found in so-called quiz master questions, is argued in Authier (1992b) to interact with the weak crossover constraint, a constraint standardly assumed to be operative at the level of LF (see the discussion of example (1b) above). Quiz master questions differ from genuine

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wh-questions in two ways: they may contain a wh-in-situ outside of multiple interrogation structures as in (12) and they display a flat or falling intonation.

(12) Mr. Smith, for \$1,000, Ivanhoe's cousin was named what?

Alternatively, quiz master questions may contain a fronted wh-phrase and the resulting construction, Authier observes, is not sensitive to the weak crossover constraint in most (but not all) dialects of English. The contrasting pair below, taken from Authier (1992b), but attributed by him to Peter Culicover, illustrates this phenomenon:

- (13) a. For \$1,000, do you know which empty category_i its_i antecedent must A-bind t_j at S-Structure? (Quiz master question)
- b. *By the way, do you happen to know which empty category_i its_i antecedent must A-bind t_j at S-Structure? (Genuine question)

Authier presents arguments that the grammaticality of (13a) (in the relevant dialects) cannot be a case of weakest crossover in the sense of Lasnik and Stowell (1991) because the quiz master wh-phrase behaves semantically and syntactically as a quantifier. As (13a) and (13b) both have the same syntactic structure and contain a wh-quantifier phrase, Authier suggests that the only way they can be distinguished is by considering the aspect of meaning contributed by the intonational contour found in quiz master questions. He argues that this contour commits the speaker to the truth of the proposition expressed by the following:

(14) The answer to my question is available to me.

He further observes that (14) is an implicatum which has all the characteristics of a conventional implicature; for example, it cannot be canceled or dissociated from the quiz master question without leading to a contradiction as (15), taken from Authier (1992b), shows:

(15) !For \$10,000, do you know who was the first Queen of England? I just have no way of finding out.

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Thus the conventional implicature in (14) seems to be the factor which overrides the weak crossover constraint in sentences like (13a). Since all accounts of weak crossover state that constraint over operator variable structures, the latest level at which weak crossover is checked is LF. From this, one can conclude that in order for the conventional implicature tied to quiz master questions to be computed in the weak crossover algorithm, it must be present at LF.

The final example of a grammatically encoded non-truth-conditional aspect of meaning, and the one which, in fact, forms the point of departure for the second goal of the present investigation, is to be found in the way Turkish expresses specificity in the sense of Enç (1991).

As is well-known, indefinite NPs in direct object position can be interpreted as specific or nonspecific in English. That is, when one utters a sentence like John wants to buy a piano, the speaker may understand either that John would be satisfied with any old piano (non-specific) or that he has a particular specimen in mind (specific). This view of specificity is naturally non-truth-conditional and, in fact, conventional in nature since, as was the case, for example, with the cleft sentences discussed above, this aspect of meaning is generally maintained under question formation and negation. (cf. John doesn't want to buy a certain piano.) and it cannot be denied without contradiction (cf. !John wants to buy a certain piano, but any old piano will do.)

Enç (1991) points out that in Turkish, this ambiguity is resolved through Case-marking: NPs in direct object position which bear the overt accusative morpheme *-(y)i* must be interpreted as specific while those without case morphology must be understood as nonspecific. This is illustrated in (16) below, due to Enç (1991: 4-5):

- (16) a. Ali bir piyano-yu kiralamak istiyor.
Ali one piano-ACC to-rent wants
'Ali wants to rent a certain piano.'

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(16) b. Ali bir piyano kiralamak istiyor.

Ali one piano to-rent wants

'Ali wants to rent a (nonspecific) piano.'

This contrast is also found in extensional contexts like (17) below. (Intensional contexts are those in which one may not substitute co-designative names while preserving truth values.) As Enç (1991: 5) argues, this shows that this type of specificity is not a matter of the relative scope of the indefinite and the intensional operator introduced by verbs like to want.

(17) a. Ali bir kitab-ı aldı.

Ali one book-ACC bought

'A book is such that Ali bought it.'

b. Ali bir kitap aldı.

Ali one book bought

'Ali bought some book or other.'

In addition to not being able to bear an overt accusative marker, Turkish nonspecific NPs are required to be adjacent to the verb. Thus, specificity also correlates with differences in word order as shown in (18), due to Enç (1987: 36-37), and (19), due to Enç (1991: 6):

(18) a. Daha önce iki kız görmüştüm.

more before two girls I-had-seen

'I had seen two girls earlier.'

b. *İki kız daha önce görmüştüm.

two girls more before I-had-seen

'I had seen two girls earlier.'

c. İki kız-ı daha önce görmüştüm.

two girl-ACC more before I-had-seen

'I had seen two (of the) girls before.'

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- (19) a. İki çocuđ-u yedinci sınıf-a, bir çocuđ-u da sekizinci
two child-ACC seventh grade-DAT one child-ACC and eighth
sınıf-a gönderdim.
grade-DAT I-sent
'I sent two (previously mentioned) children to the seventh grade, and
one (previously mentioned) child to the eighth grade.'
- b. Yedinci sınıf-a iki çocuk, sekizinci sınıf-a da bir çocuk gönderdim.
seventh grade-DAT two child, eighth grade-DAT and one child I-sent
'I sent two children to the seventh grade, and one child to the eighth
grade.'

Enç (1987) interprets the preceding facts as follows: objects with no overt accusative morphology must be adjacent to the verb because they are assigned structural Case while objects bearing an overt accusative morpheme are exempt from this adjacency requirement because they are inherently Case-marked (i.e., not Case-marked by the verb).⁴ She further proposes to express the correlation between overt vs. nonovert accusative case marking and specificity by means of the following generalization.

- (20) If an NP does not receive its Case from the element that assigns it a Theta
role, it must be specific. (Enç, 1987: 36)

This link between case and Theta-role dissociation on the one hand and specificity on the other hand is neither reiterated nor pursued in Enç (1991), most probably because, as stated, (20) correctly predicts the distribution of specificity in Turkish, but faces some recalcitrant data when applied, e.g., to ECM constructions in English, of which (21) below is an example. In particular, Kirsner and Thompson (1976) have argued that examples like (21) below involve Theta-marking of the whole clause between brackets by the matrix verb saw, while the indefinite NP subject of the embedded clause is assigned its Theta-role by the embedded predicate. The same indefinite NP, however, can only be Case-marked by the matrix verb. The indefinite NP a man, therefore, does not receive its Case from the

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element that Theta-marks it hence one would expect that by (20) that it must be specific. This, however, is clearly false: the indefinite in (21) can, in fact, be interpreted as some man or other.

(21) I saw [a man swim across the river]

In this thesis, I will present evidence indicating that the generalization in (20) does, in fact, come very close to expressing a type of phenomenon found across languages. The interesting question raised by the generalization in (20) is whether or not the non-truth-conditional aspects of meaning known as conventional implicatures/semantic presuppositions are conditioned by syntactic sub-modules such as Case-theory and Theta-theory and if so, in what way. As evidenced by the problems encountered when trying to apply (20) directly to English sentences like (21), a reformulation of Enç's correlation is in order. What I will be arguing for is that this correlation does exist, but that it is not as direct as originally proposed in Enç (1987). Instead, I would like to defend the hypothesis that the correct generalization is as follows:

(22) If an NP does not receive its Case from the element that assigns it a Theta-role, it may display a (marked) distinct phonetic or morphological variant which introduces a conventional implicature.

As it stands, (22) states that an environment allowing a distinct variant of the indefinite leading to a distinct implicatum is created in sentences like (21), but, crucially, nothing in (22) forces such a variant to be available cross-linguistically. Since in English, indefinites which receive their Case from an element distinct from that which assigns them a Theta-role do not take on a distinct phonetic or morphological form, no implicature that they must be specific arises. In Turkish, on the other hand, the idiosyncratic nature of the lexicon allows such indefinites to be distinguished from their V-adjacent counterparts by the addition of an overt case morpheme and the resulting implicatum is that they be interpreted as specific.⁵

To summarize the present section, this thesis has two objectives. First, I would like to show that the GB level known as LF is the semantically relevant level of syntactic

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structure which guides a compositional semantic treatment of natural language. That is, in the following chapters I would like to show how the level of representation available at LF can be made compatible with the compositional semantic framework known as Montague Grammar. The second principal goal of the present research is to further substantiate the claim that not only are truth-conditional aspects of meaning, such as scope relations, represented at LF, but also certain non-truth-conditional aspects of meaning known as conventional implicatures are represented at this level. In particular, conventional implicatures of the type specified in (22) are triggered by the syntactic configurations available at LF. In the next section of the present chapter, I will provide a brief overview of this evidence, all of which is drawn from the grammar of French.

1.2 Overview of the Chapters

The evidence to be put forth in the following chapters in favor the hypothesis expressed in (22), namely, that Case/Theta-role assignment dissociation “paves the way”, so to speak, for a language to encode a conventional implicature signaled at LF, involves the distributional and interpretive properties of some pronominals in causative and raising constructions. Specifically, the syntax and semantics of the two constructions found in (23) and (24) below will be explored in detail in the chapters to follow:

(23) Ils lui ont laissé entendre qu’il y avait du danger, et ça lui a fait boire comme un cochon.

they him-DAT have let to-hear that it there had some-of-the danger, and that him-DAT has made to-drink like a pig

‘They implied that there was some danger and that caused him to drink like a fish.’

(24) Notre prochain premier ministre, ce sera un homme qui dit toujours la vérité.

our next Prime Minister, he will-be a man who tells always the truth

‘Our next Prime Minister will be a man who always tells the truth.’

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The example in (23) above contains a French causative construction; (24), a Raising construction with a predicate nominal. Below, it will be argued that in both of these syntactic constructions a Case and Theta-role assignment dissociation takes place, is represented at LF, and is used by the grammar of French to encode a conventional implicature. The implicature in the causative construction in (23) regards a semantic contrast known in the literature as direct versus indirect causation, whereas the implicature in (24) will be argued to be aspectual in nature.

To be more explicit, the first half of this dissertation (chapters 2 and 3) is devoted to the determination of the syntactic structure and semantic interpretation of causative constructions like (23) above. In chapter 2, I have two goals. First, I seek to establish that the embedded understood subject in causative constructions is always a thematic argument of the embedded predicate alone, this issue being crucial to the hypothesis that a Case/Theta-role assignment dissociation may take place in these constructions. In essence, I will provide four arguments in section 2.2 to the effect that embedded subject, the underlined clitic lui 'him' in (23) above, receives an external Theta-role from the embedded predicate alone at D-Structure and this Theta-marking is maintained at all subsequent levels, from S-Structure to LF, in accordance with Theta Theory. Thus, lui 'him' in (23) above will be shown to be an external argument of boire 'to drink' at all syntactic levels. In sections 2.3-2.4, the actual syntactic structure of these constructions is developed. Based on this discussion, I will show that not only do a wide range of syntactic facts fall out from this approach (these will be discussed in sections 2.5.1-2.5.3), but also, in section 2.5.4, I will demonstrate that in examples like (23) above, the clitic corresponding to the embedded subject receives its (dative) Case feature from faire 'to make' alone. Thus, it will be established that causative constructions like (23) are indeed an area in which Case/Theta roles assignment dissociation takes place.

The conclusions reached in chapter 2 regarding the syntactic structure of these causative constructions provide the springboard for the discussion of their semantic

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interpretation in chapter 3. This chapter begins with a brief review of the direct/indirect contrast, a term used to refer to the fact that in examples like (23), i.e., in examples in which a Case/Theta role assignment dissociation takes place, the morphological case feature of the clitic corresponding to the embedded subject restricts the range of possible interpretations associated with the sentence. Specifically, the morphological case of this argument encodes the degree of influence the embedded subject is assumed to have had over his or her actions. To explain, in an example like (23) above, the use of the dative clitic correlates with a situation of indirect causation; that is, the embedded subject is portrayed as having had a great deal of choice in his decision to act or, to put the same thing somewhat differently, the matrix subject is viewed as having played an indirect role in bringing about the event expressed by the embedded complement to *faire* ‘to make’. In section 3.2, I apply the standard question and negation tests to this aspect of meaning to arrive at the conclusion that this is indeed a conventional implicature/semantic presupposition. Additionally, I formulate the meaning postulates needed to capture the contrast. These postulates capture the direct/indirect contrast in terms of Stalnaker’s (1968) notion of similarity worlds. (Similarity worlds are sets of sets of worlds which are minimally different from the world under consideration.) Finally, section 3.3 provides a model-theoretic account of the direct/indirect distinction. That is, this section shows how the GB syntactic tree available at LF provides the basis for a compositional semantic treatment of the phenomenon using a model along the lines of Montague (1973). With this, I conclude my discussion of the first area of the grammar of French which supports the hypothesis in (22).

The second half of this dissertation, that is, chapters 3 and 4, is devoted to the syntax and semantics of predicative constructions, of which (24) is an example. Once again, I open this discussion with an exploration of the syntactic structure associated with them, this being the topic of chapter 3. In this chapter I review, update, and develop additional arguments in favor of what many consider to be the “standard” GB analysis of

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these constructions, this being that predicative sentences are Raising contexts. That is, in section 4.2 I will argue, using ideas put forth in Couquaux (1979, 1981), Heggie (1988), and Stowell (1978, 1983), that verbs like être 'to be' in (24) above subcategorize for a small clause at D-Structure. In section 4.3, I will show, once again following the aforementioned authors, that the subject of this small clause raises at S-Structure to receive a Case feature from Agr-S. From this, it will be established that predicative structures, such as (24) above, are a second area in the grammar of French in which a Case/Theta-role assignment dissociation occurs, i.e., the pronominal ce 'he' in (24) above will be analyzed as receiving its external Theta-role from un homme qui dit toujours la vérité 'a man who always tells the truth' and its nominative case feature from the Agr-S associated with être 'to be'.

Once the syntactic structure of predicative constructions has been developed, chapter 5 moves on to the issue of their semantic interpretation. Briefly, sections 5.1-5.4 are all devoted to establishing that the pronoun ce is homonymic, a fact which I suggest accounts for the fact that this pronominal has so successfully eluded formal analysis in the past; section 5.5 provides a formal aspectual account of one of its homophones, the demonstrative ce, which is found only in contexts of Case/Theta-role assignment dissociation.

To be more explicit, section 5.2 provides an informal discussion of the four meanings of ce. There, it will be shown that ce has a demonstrative, expletive, neuter, and generic interpretation. Once the four meanings of ce have been made clear, section 5.3 explores the viability of a unified approach to this pronoun. In particular, all previous work done in this area of French grammar (e.g., Burston (1983), Coppieters (1974, 1975), Damourette and Pichon (1911-1934), and Wagner (1966), among others) has assumed that the same syntactic or pragmatic principles are at work in delimiting its distribution. As section 5.3 will demonstrate, all such unified approaches face data which indicate that this assumption is incorrect; section 5.4 will offer two additional arguments

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supporting this conclusion. Given the conclusion that ce is homonymic, I turn in section 5 to the development of a novel semantic analysis of demonstrative ce, the one homophone whose distribution is limited to environments in which Case/Theta-role assignment dissociation takes place. The major conclusion of section 5.5 is that this pronoun is semantically compatible only with predicative sentences which are true at the interval selected by a non-habitual tense, and even then only on the condition that the truth of this sentence not be asserted to hold at the initial or final endpoint of that interval. Thus, the distribution of this pronoun is accounted for in terms of an aspectual conventional implicature to this effect. To be more precise, section 5.5.1 provides a model-theoretic exposition of the aspectual system of French. There, the terms “tense” and “aspect” are compared, contrasted, and formally captured via a set of truth conditions. These truth conditions are subsequently shown in section 5.5.2 to play a crucial role in explaining the distributional characteristics of demonstrative ce. In particular, this type of ce is limited to just those formulas which express the aspectual characteristics noted above. Once the semantics of demonstrative ce has been deduced, section 5.5.3 incorporates the results of that investigation into a Montague-style treatment of the phenomenon, once using the GB syntactic configurations available at LF. The thesis concludes with chapter 6, which provides a brief summary of the results of this investigation and points out a possible correlation between Chomsky’s (1986b: 169) notion of Complete Functional Complex (CFC) and the conventional implicatures signaled by Case/Theta-role assignment dissociation.

FOOTNOTES

¹ Although May's (1977, 1985) and Montague's (1973) analyses share the feature of using an ambiguous syntactic derivation to capture scope ambiguities, the actual mechanisms proposed and the predictions made by them are quite different. For example, Montague's syntactic rule applies not only to quantified NPs, but also to non-quantificational ones. Additionally, May's QR must apply in every sentence, whereas Montague's quantifying in rule is optional. See May (1985: Chapter 1) for more details.

² Further discussion of the distinction drawn between semantic assertions and implicatures, as well as the core references on that topic can be found in chapter 3, section 3.2.

³ The requirement that the negative implicature "strengthen" the proposition expressed by the host sentence is used by Linebarger to exclude negative implicatures which may become available yet fail to license NPIs. For instance, sarcasm is ruled out as an appropriate NI by this requirement. To see how, consider the following:

- (i) I'm sure Mary has relatives in Philadelphia.
- (ii) I'm sure Mary doesn't have any relatives in Philadelphia.
- (iii) *I'm sure Mary has any relatives in Philadelphia.

As Linebarger notes (i) can be uttered in a tone suggesting sarcasm, from which (ii) can easily be inferred. However, (i) may not contain an NPI, as in (iii), because the truth of (ii) does not guarantee the truth of (i) taken literally. Other contexts of this type include sentences with even, lies, contextually inferred surprise, counterfactuals, etc. See Linebarger (1987: 348-350) for details.

⁴ Enç (1991: 4, ft. 4) credits Belletti (1988) for originally noticing the correlation between case and the definiteness/specificity effect.

⁵ This leaves open the question of why V-adjacent indefinites which are both Case-marked and Theta-marked by the verb must be interpreted as non-specific. This could be

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due to the fact that since the marked variant must be used to indicate specificity, the unmarked (V-adjacent) variant has come to be used to indicate non-specificity by contrast. I will not attempt to resolve this issue tied to the grammar of Turkish, but will instead focus on a number of French cases which also support (22) and which do not involve this complication.

THE THEMATIC AND SYNTACTIC STRUCTURE OF
FRENCH CAUSATIVES*

2.1 Introduction

French causative sentences have long proved problematic for syntacticians working in the standard Government-Binding (GB) framework because of the issues this construction raises both for Theta Theory and for the projection of arguments from the lexicon to D-Structure.¹ To illustrate, consider the following example of a faire-infinitive causative sentence:

(1) J'ai fait travailler Jean.

I have made to-work Jean

'I made Jean work.'

Examples like (1) are problematic for Theta Theory because the embedded understood subject, i.e., Jean in example (1) above, is interpreted as being both a thematic argument of travailler 'to work' and of the matrix verb faire 'to make' in the sense that one understands that this argument both performs the action denoted by the embedded predicate and is influenced by the matrix subject to do so. This sort of "double theta-marking" is strictly ruled out by the two principles which collectively make up Theta Theory; namely, the Theta Criterion, given in (2) below, and the Extended Projection Principle (EPP), given in (3). According to these principles, an argument must be associated with one and only one theta-role and this theta-role must remain constant at all levels of representation.

(2) Theta Criterion: (Chomsky, 1981: 36)

Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument.

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- (3) Extended Projection Principle (EPP): (Chomsky, 1982: 10)
- a. The theta-marking properties of each lexical item must be represented at each syntactic level: i.e., LF, S-Structure, and D-Structure.
 - b. Clauses must have subjects.

Causative constructions are also interesting with respect to the issue of which categories can be projected from the lexicon to the level of D-Structure. To account for the puzzling postverbal placement of the embedded subject in such sentences, linguists have proposed various mechanisms, all of which rely crucially on the subcategorization frame associated with the matrix verb. Thus, the postverbal placement of the DP Jean in a sentence like (1) has been explained via VP small clause complementation with "complex predicate" formation in either the lexicon (Rosen, 1989) or in the syntax (Rochette, 1988), or alternatively as evidence for the base-generation of this argument in the "normal" preverbal position with subsequent movement of the embedded predicate at S-Structure, in the spirit of Kayne (1975).

In this chapter, I have two fundamental goals. First, I present several new arguments which indicate that causative constructions in faire 'to make', laisser 'to allow', and perception verbs like voir 'to see' are, in fact, unproblematic for Theta Theory as it is presently expressed in (2) and (3). That is, I provide evidence which establishes that the embedded understood subject (Jean in example (1) above) is a thematic argument of the embedded predicate alone, and that this theta-marking remains constant at all levels. As such, this construction, which has long been cited as evidence for weakened versions of Theta Theory (cf. Bailard (1982a,b), Cannings and Moody (1978), J.-Y. Morin (1978), Y.-C. Morin (1980), Rouveret and Vergnaud (1980), Zubizarreta (1985)), will be shown to accord perfectly with the maximally restrictive version standardly assumed in the GB framework.

The second goal of the present chapter is to demonstrate that only a predicate movement analysis which assumes a CP subcategorization frame for Standard French

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faire 'to make' can properly capture the widest range of data associated with this particular causative construction. In particular, I will show that neither an analysis in terms of argument merger in the lexicon, nor any approach which assumes a subcategorization frame other than CP is capable of accounting for the facts found in the *faire*-infinitive causative construction. I conclude by proposing a novel predicate raising approach which incorporates several innovations in the GB framework: specifically, the structure of IP put forth in Chomsky (1986a, 1988) and Pollock (1987, 1989), proposals that subjects are base-generated VP-internally (e.g., Koopman and Sportiche, 1985, 1987; Zagana, 1982, among many others), and finally, the verb movement analysis for French proposed in Pollock (1987, 1989). It will be shown that these innovations in the framework receive indirect support from the French causative construction because it is only by adopting them that one may account for the word order, Case-marking, and other distributional characteristics of this construction.

As is obvious from the preceding paragraphs, this chapter is primarily devoted to the development of a syntactic analysis of the French causative construction. A third, subsidiary goal of the present chapter, however, is to establish the status of the embedded subject in these sentences with respect to the issue of Theta-role and Case-assignment dissociation. In particular, it will be argued below in sections 2.3 and 2.5.4 that certain dialects of French allow a syntactic structure for causatives in which Case and Theta-role assignment dissociation occurs. In the chapter following this one, this Case/Theta-role assignment dissociation will be shown to give rise to a conventional implicature regarding direct and indirect causation. Thus, this chapter not only offers a novel analysis of causative sentences, but it also provides the crucial background for an exploration of the first area in the grammar of French which supports the primary thesis of this dissertation, this being that Case/Theta-role assignment dissociations are used to encode certain semantic presuppositions.

The Thematic and Syntactic Structure of French Causatives

2.2 The Thematic Structure of French Causatives

The purpose of this section is to establish the argument status of the embedded subject in French causative sentences. In particular, this section will address the issue of whether or not the embedded understood subject, Jean in example (1), is a thematic argument of the matrix verb, the embedded verb, or both.

To begin, two basic positions to the thematic structure of this construction have been taken. First, the standard GB position, implicit in the work of Burzio (1986) and Kayne (1975), states that the embedded understood subject in causative sentences is a thematic argument of the embedded verb alone. This argument is asserted to be base-generated in "normal" preverbal position at D-Structure, as is illustrated in (4) below. A major consequence of the up-dated structure in (4) is that this argument receives only the external theta-role assigned by the embedded predicate and, by the principles of Theta Theory, this theta-marking is assumed to remain constant at all subsequent levels.

(4) [CP je faire[CP/IP Jean [VP travailler]]]

I to-make Jean to-work

Kayne (1975) offers two pieces of evidence indicating that the embedded DP Jean receives the external theta-role of the embedded predicate.² The first is naturally based on interpretation: the DP Jean is understood to be the Agent who performed the action denoted by the embedded verb; it is not interpreted as an internal argument of the verb travailler 'to work'. As Kayne points out, this fact is an expected consequence of base-generating Jean in preverbal subject position at D-Structure.

Secondly, the selectional restrictions placed on the understood subject are identical to those which the embedded predicate normally places on its subject, as illustrated in (5).

(5) a. #Le balai-brosse a travaillé.

the mop has worked

#'The mop worked.'

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(5) b. #J'ai fait travailler le balai-brosse.

I have made to-work the mop

#'I made the mop work.'

Thus, if one assumes that le balai-brosse 'the mop' is a D-Structure subject of travailler 'to work' then an explanation for this selectional restriction in causatives straightforwardly follows from the lexical entry of the embedded verb.

To summarize, both the interpretation associated with this DP and the selectional restrictions placed on it militate in favor of analyzing this argument as receiving an external theta-role from the embedded predicate. Such evidence does not, however, exclude the second possibility which has been explored in the literature; namely, that this DP is not only an external argument of the embedded predicate, but that it is also an internal argument of faire 'to make'. In other words, while there is a certain degree of consensus that this argument receives the external theta-role of the embedded predicate, it is a matter of some debate as to whether or not this DP could also be a thematic argument of faire 'to make'.³ Rouveret and Vergnaud (1980: 99), for example, explicitly state that "...under certain conditions, faire 'to make' and the verb embedded under it combine to form a semantically complex verbal unit and the embedded subject becomes an argument of this complex verbal unit...(via)...thematic re-writing rules." Similar "double theta-marking" approaches have also been proposed in Bailard (1982a,b), Cannings and Moody (1978), Y.-C. Morin (1980), and Zubizarreta (1985), although these approaches differ with respect to how this theta-marking is achieved, as well as at what level(s) it takes place.

The motivation behind this type of approach to thematic structure is clearly based both on the interpretation assigned to these sentences, as well as on the word order one finds at S-Structure. In particular, the embedded understood subject not only appears postverbally, in what is normally considered to be "object" position, but it is also interpreted in some sense as an object of the causative verb in that one understands

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that the matrix subject enters into some sort of relation with the embedded subject, for instance, in example (1), he caused him to act in a particular way. Thus, these authors conclude that at some level(s) the causative verb and the embedded verb combine to form a thematically complex verb which "double theta-marks" the embedded understood subject. Abstracting away from details, these analyses propose an S-Structure like the following for example (1):

(6) [IP je [V faire travailler] Jean]

I to-make to-work Jean

Four pieces of evidence indicate that a "double theta-marking" analysis is incorrect. First, I would like to point out that this approach to French causatives is parallel to the analyses offered for a class of "causative" verbs in English. To illustrate, Peterson (1985) asserts that verbs like to walk, to feed, etc., are also "semantically complex" verbs which double theta-mark their object. Consider the following examples:

- (7) a. John walked the dog.
b. John fed the dog.

In these sentences, the DP the dog appears to be receiving two theta-roles: an Agent theta role (i.e., the dog did the walking and the eating) and some sort of internal theta role (i.e., he was caused to do so by John). Thus, this type of "causative" verb in English also appears to assign two theta-roles to the argument in object position, just as has been asserted to be the case for French. The only notable difference between the two languages is the presence in French of what J.-Y. Morin (1978) calls the "quasi-auxiliary" verb faire 'to make'.

Given the fact that faire 'to make' / laisser 'to allow' / perception verb+infinitive is being treated on a par with certain causative constructions in English, one would expect this construction to behave similarly with respect to interpretation. This is not, however, the case since English contrasts with French in that in the former but not in

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the latter one may explicitly rule out or cancel the object's alleged external theta role, as the following English examples and their French counterparts demonstrate.

- (8) a. John walked the dog, well, actually the dog didn't walk since John carried him in his arms.
- b. *Jean a fait marcher son chien, mais en fait son chien n'a pas marché parce qu'il l'a porté dans ses bras.
- Jean has made to-walk his dog, but in fact his dog NEG has not walked because that he him-ACC has carried in his arms
- 'John walked the dog, well, actually the dog didn't walk since John carried him in his arms.'
- (9) a. I think Fido is sick because I fed him last night, but he didn't eat any of his food.
- b. *Je pense que Médor est malade, parce que hier soir je l'ai fait manger mais il n'a rien mangé.
- I think that Médor is sick, because that yesterday night I him-ACC have made to-eat but he NEG has nothing eaten
- 'I think Fido is sick because I fed him last night, but he didn't eat any of his food.'

This difference between "thematically complex" causative verbs in French and English can easily be accounted for if one assumes the basic premises embodied in Theta Theory; namely, that an argument can receive a theta-role from one and only one predicate and this theta-marking remains constant at all levels. That is, in English, the object of the "causative" verb only receives an internal theta-role from the predicate: at no level is this DP a true external argument. The inference that this DP is also an Agent of the walking in example (7a) and of the eating in (7b) is due to pragmatic, i.e., real world knowledge. Generally when we take a dog for a walk, we expect him to do some walking. Similarly, when we give a dog something to eat, he generally

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cooperates and eats it. Because this aspect of interpretation is pragmatic, not semantic, in nature, it may be contextually cancelled. In contrast, in French causative constructions, the embedded understood subject le chien 'the dog' is a true external argument of the embedded predicate. As such, this theta-marking must remain constant at all levels. It would therefore straightforwardly follow that one should never be able to cancel the external theta-role assigned to this argument in any context.

The "thematically complex verb" approach to French causatives makes a second testable prediction, although one must turn specifically to the class of causative perception verbs in order to demonstrate that it is not met. To reiterate, these analyses all assume that at some level(s) the embedded subject receives two theta-roles from the verbal complex causative verb+embedded verb. To illustrate what is meant by "double theta-marking" with a perception verb, consider the following example.

(10) J'ai vu travailler Jean.

I have seen to-work Jean

'I saw Jean work.'

In interpreting such examples, speakers report that the embedded DP Jean is understood both to have performed the action of working (i.e., this argument receives an external theta-role from travailler 'to work') and to have been seen by the matrix subject (that is, this argument is an internal argument of the causative verb voir 'to see'). Thus, all causative verbs, including faire 'to make', laisser 'to allow', and the perception verbs, e.g., voir 'to see', entendre 'to hear', etc., are asserted to "double theta-mark" the embedded understood subject; the matrix subject is understood to enter into some sort of relation with the embedded subject.

In the preceding discussion, it was shown that the Agent theta-role of English "complex causatives" can be cancelled: an unexpected phenomenon if one assumes that this argument receives two theta-roles. In the case of French "complex causatives" it was shown that one cannot cancel the external theta-role assigned to this argument.

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However, as Kirsner and Thompson (1976) have shown for English and as the following examples clearly demonstrate for French, one can in fact cancel the "internal" theta-role associated with this argument—the one in which the matrix subject actually "sees" the embedded subject.

(11) *J'ai vu manger l'homme invisible.*

I have seen to-eat the man invisible

'I saw the invisible man eat.'

In example (11), the invisibility of the embedded subject explicitly rules out a reading in which the matrix subject has seen the embedded subject. As such, the sentence in (11) cancels the alleged internal theta-role asserted to be assigned to the embedded subject by the matrix causative verb *voir* 'to see'. The possibility of cancelling the second theta-role of the embedded subject is again a totally unexpected result if one assumes "double theta-marking," but one which is totally in line with the assumption that the embedded subject is a thematic argument of the embedded predicate alone. Specifically, the speaker's intuition that the embedded subject is a thematic argument of the matrix causative verb is purely a pragmatic matter based on real world knowledge. Generally when one sees an event one also sees the participants in that event. Because this aspect of meaning is pragmatically, not semantically based, it can be cancelled. I must point out, however, that extending Kirsner and Thompson's (1976) explanation to *faire*-infinitive is perhaps inappropriate since one cannot ever cancel the pragmatic inferences found in *faire* 'to make' and *laisser* 'to allow' causative constructions. It is my contention, however, that non-cancelability in these instances is also due to real world knowledge: one always has a degree of influence over participants in an event one has brought about or allowed to take place.

An additional argument can be offered in favor of a maximally strict approach to thematic structure in causative constructions. To begin, a standard assumption of the GB framework is that *il* 'it' in examples like (12) is void of semantic content; that is, a

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weather verb like neiger 'to snow' does not assign a theta-role to its external argument position.

- (12) Il neige.
it is-snowing
'It's snowing.'

As evidence for the expletive status of *il* 'it', consider the following sentences, which are illicit presumably because the denotation of *il* 'it' yields the null set, hence, no value can be assigned to the variable bound by the *wh*-word, resulting in the nonsensical interpretation of such examples.

- (13) a. *Qui neige?
who is-snowing
'Who is snowing?'
b. *Qu'est-ce qui neige?
what is it that is-snowing
'What is snowing?'

According to the analyses of Bailard (1982a,b), Cannings and Moody (1978), J.-Y. Morin (1978), Y.-C. Morin (1980), Rouveret and Vergnaud (1980), and Zubizarretta (1985), the embedded subject in a faire-infinitive causative sentence is theta-marked at some level(s) by the matrix verb. Because this argument position is theta-marked, we would expect weather verbs like neiger 'to snow' to be ungrammatical in causative sentences, but such is not the case, as is clearly shown by the grammaticality of (14a,b).⁴

- (14) a. Ce sorcier peut faire neiger [e].
this sorcerer can to-make to-snow
'This sorcerer can make it snow.'

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- (14) b. C'est pas le fric qu'ils ont investi dans cette station de ski
qui va faire neiger [e] cette année.
it is not the money that they have invested in this station of ski
that is-going to-make to-snow this year
'It isn't the money they've invested in this ski resort that's going
to make it snow this year.'

The perfect acceptability of these examples indicates that the embedded subject position remains at all levels a non-theta position, thus seriously calling into question any approach which allows theta-marking by the matrix verb. In contrast, the strict GB approach, according to which this position is only assigned an external theta role by the embedded predicate if it has one to assign accounts for these facts. As was the case with the example in (12), proof for the contention that the embedded subject position remains a non-theta position lies in the impossibility of forming wh-questions, as in (15a,b) below.

- (15) a. *Qui est-ce que ce sorcier a fait neiger?
who is it that this sorcerer has made to-snow
'Who did this sorcerer make snow?'
- b. *Qu'est-ce que ce sorcier a fait neiger?
what is it that this sorcerer has made to-snow
'What did this sorcerer make snow?'

The fourth piece of evidence in favor of the unique external argument status of this DP concerns the behavior of the binominal quantifier chacun 'each,' which, as pointed out in Safir and Stowell (1987) for English, may only modify DPs which are not D-Structure subjects. This constraint is also operative in French as shown by the following examples:

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- (16) a. *Les jeunes filles ont reçu une rose chacune.*
the young girls have received a rose each
'The girls received one rose each.'
- b. **Une rose chacune embaumerait les jeunes filles.*
a rose each would-give-fragrance-to the young girls
'One rose each would give its fragrance to the girls.'

Given this constraint on the distribution of binominal each, the ungrammaticality of (17) below remains unexplained under any account of faire-infinitive which analyzes the understood subject un garçon 'a boy' as a thematic object of faire 'to make' or of the thematically complex verb faire ramasser 'to make to pick' alone, e.g., an analysis such as J.-Y. Morin (1978). In contrast, this ungrammaticality is a straightforward consequence of the type of structure given in (4) above, in which un garçon 'a boy' would be an external argument at D-Structure and remain so at all subsequent levels.^{5, 6}

- (17) *? *Les jeune filles ont fait ramasser du foin à un garçon chacune.*
the girls have made to-pick some hay to one boy each
'The girls made one boy each pick some hay.'

To summarize this section, I have offered four arguments against a "thematically complex verb" approach to French causatives and in favor of the standard GB approach to thematic structure. These arguments indicate that the embedded understood subject receives one and only one theta-role (this being the external theta-role of the embedded predicate) and that this theta-marking remains constant at all levels. In particular, I demonstrated that the external theta-role associated with this argument can never be cancelled, but that the alleged internal theta-role assigned by the matrix verb may be. Additionally, the licitness of weather expletives and the ungrammaticality of binominal each as a modifier of the embedded understood subject in this construction were shown to follow from this hypothesis. These results all support the maximally restrictive

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principles of Theta Theory, but are problematic for any approach which assumes a "thematically complex predicate."

2.3 The D-Structure of French Causative Sentences

The purpose of this section is to determine the D-Structure associated with the *faire*-infinitive causative construction and to compare it with that of the other causative verbs. As was briefly mentioned in the introduction, two basic approaches have been taken to this problem. The first is in the spirit of Kayne (1975), according to which *faire* 'to make' subcategorizes for a sentential complement at D-Structure. If this approach is updated, i.e., if one adopts recent innovations in the framework, in particular, the structure of IP proposed in Chomsky (1986a, 1988) and Pollock (1987, 1989), as well as the notion of base-generated VP-internal subjects, the causative sentence given in (18a) below would be associated with the D-Structure given in (18b).⁷

(18) a. J'ai fait téléphoner Jean à Marie.

I have made to-telephone Jean to Marie

'I made Jean call Marie.'

b. [CP je [VP faire[CP[IP[FP[NegP[AgP[VP1 Jean [VP2 téléphoner à Marie]]]]]]]]]

The second approach to this construction assumes that *faire* 'to make' subcategorizes for a constituent smaller than CP; specifically, Kayne (1989), Rochette (1988), and Rosen (1989) have all proposed that *faire* 'to make' subcategorizes for a VP small clause.⁸ To illustrate, Rosen (1989: 40) associates the sentence given in (18a) with the following up-dated D-Structure.

(19) [CP[IP[FP[AgP[VP je [VP faire{VP1 [VP2 téléphoner à Marie] Jean]]]]]]]]

I to-make to-telephone to Marie Jean

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Rosen's (1989) D-Structure contrasts with that of Rochette (1988) in the base-generated position of the embedded lexical subject. Rosen (1989) base-generates this argument VP-internally to the right of the embedded predicate, while Rochette (1988) base-generates it to the left.⁹

The goal of this section is to demonstrate that *faire* 'to make' in Standard French subcategorizes only for a CP complement at D-Structure, in contrast to the other causative verbs *laisser* 'to allow', *voir* 'to see', etc. In other words, I will argue for the D-Structure given above in (18b) and against any version of the VP small clause analysis of this construction, as well as against an IP subcategorization frame (cf. Martineau (1989, 1990)). In this chapter, I will generally illustrate my arguments using Rosen's (1989) analysis. The reason for this is simply that this particular VP small clause analysis has been worked out in detail; Kayne (1989) and Rochette (1988) are primarily concerned not with causative constructions per se, but rather with other issues raised by them. Nonetheless, it should be borne in mind that all of my arguments, except the first, apply equally to all three small clause analyses.

My first argument against the D-Structure in (19) concerns theta-role assignment in French. In particular, the structure in (19) implicitly assumes that external theta-roles in French may be assigned to the right in this language. This assumption, which is correct for other Romance languages like Spanish and Italian, cannot, however, be extended to French.¹⁰ As evidence for this contrast between French and other Romance languages like Spanish and Italian, consider the following example of subject inversion in Spanish, taken from Gili Gaya (1973), and its French counterpart given in (21).

- (20) Trajo una carta para mí el criado.
brought a letter for me the servant
'The servant brought a letter for me.'

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(21) *A apporté une lettre pour moi la bonne.

has brought a letter for me the maid

'The maid brought a letter for me.'

As the contrast in grammaticality between (20) and (21) demonstrates, Spanish differs from French in that the former allows subject inversion, while the latter does not. In other words, French contrasts with Spanish in that it is a language in which the directionality of external theta-role assignment is fixed to the left.¹¹ Given this parametric difference, the structure proposed in Rosen (1989) is not an option in French, unless, of course, one stipulates that theta-role assignment to the right is possible in French only in causative sentences.

My second set of arguments against a VP small clause analysis for *faire*-infinitive is based on the possibility of having projections higher than VP in such constructions. The analyses put forth in Rochette (1988) and Rosen (1989) are crucially based on the assumption that *faire* 'to make' has a unique VP small clause subcategorization frame, in contrast to the other causative verbs, which are assumed to have a "dual" IP and VP small clause subcategorization frame. According to Rochette (1988) and Rosen (1989), the VP small clause status of this complement clause is due to the semantic nature of *faire* 'to make'. Specifically, Rochette (1988) proposes that all causative verbs belong to the semantic class of effective verbs (verbs which entail the truth of their complement in the affirmative) and that such verbs subcategorize for an Event argument, canonically realized as either a VP small clause or an IP at D-Structure.¹² According to this analysis, the choice of IP or VP small clause complement is due to the presence or absence of an <e> role in the argument structure of the predicate: *faire* 'to make' contrasts with other causative verbs in that it lacks an <e> role in its argument structure whereas the other causative verbs optionally contain an <e> role.¹³ According to Rochette, *faire*'s lack of an <e> role "forces" argument merger in the syntax. That is, *faire* 'to make' merges with the embedded predicate

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because this verb does contain an <e> role in its argument structure. Rosen's (1989) analysis contrasts with Rochette's in that faire 'to make' is not assumed to lack an <e> role, but rather is simply stipulated to obligatorily undergo <e> role "merger" with the embedded verb in the lexicon. The assumption that both analyses crucially share is that faire 'to make' must, for semantic reasons, only project to the VP level.

If it is true that faire 'to make' can only subcategorize for a VP small clause for semantic reasons, then one would not expect to ever find examples, such as the following, in which an auxiliary verb separates faire 'to make' and the other member of the "complex predicate."

- (22) a. Bien que le patron m'eût fait lui avoir dit de vider les lieux et de ne jamais revenir, je ne pouvais pas m'empêcher de souhaiter qu'il se montre à nouveau.

even that the boss me has made him to-have said of to-empty the place and of NEG never to-return, I NEG was-able not myself to-prevent from to-wish that he himself show at new

'Even though the boss made me tell him to get lost and never come back, I couldn't stop myself from wishing that he would show up again.'

- b. Je vous affirme qu'il n'y a à ce jour personne au monde qui m'ait fait avoir bu plus d'un verre en présence de mes parents.

I you affirm that there NEG there has to this day no-one in-the world who me has made to-have drunk more than one glass in presence of my parents

'I swear to you that there is no one in this world who has ever made me have more than one drink in front of my parents.'

To explain, if one follows Jackendoff (1972) and Kayne (1975) in assuming that auxiliary verbs are base-generated external to VP, the perfect acceptability of the

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preceding examples indicates that the embedded verb projects higher than just a simple VP small clause. Following a suggestion made by Lema (1989), as well as adopting the following structure of IP proposed in Chomsky's (1988) version of Pollock (1987, 1989), I will tentatively assume that this projection is AgrP, a projection higher than VP as (23) illustrates.¹⁴

(23) [CP[IP[FP[NegP[AgrP[VP]]]]]]

As further evidence that *faire* 'to make' does not obligatorily subcategorize for a VP small clause, consider the following (dialectally restricted) examples in which the clitics corresponding to the embedded objects appear on the embedded verb, not on *faire* 'to make'.¹⁵

(24) a. Je l'ai fait les y mettre. (les livres sur la table)

I him-ACC have made them-ACC there to-put (the books on the table)

'I made him put them there.' (the books on the table)

b. Ça les fera leur en expédier. (des médicaments aux victimes du
tremblement de terre)

this them-ACC will-make to-them-DAT some to-send (some medicine
to-the victims of-the earthquake)

'This will make them send some to them.' (medicine to victims of the
earthquake)

In particular, if we adopt the analysis of Romance clitics developed in Chomsky (1988) according to which they are base-generated in Agr-O, these data also indicate that the embedded clause may project higher than VP, specifically, to AgrP.¹⁶ Furthermore, these data appear to be particularly problematic for an analysis like that of Rosen (1989) according to which merger takes place in the lexicon since French clitics normally appear on the first element of a verbal unit.

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Additional support for the position that *faire* 'to make' does not necessarily subcategorize uniquely for a VP small clause includes the existence of the following examples, all of which contain an embedded NegP.

- (25) a. (Par ses incantations,) le sorcier l'a fait ne pas se sentir bien pendant des jours.
(through his incantations,) the sorcerer him-ACC has made NEG not himself to-feel well during some days
'(Through his incantations,) the sorcerer made him not feel well for days.'
- b. Les doutes que j'ai à son égard m'ont fait ne pas lui parler pendant une semaine.
the doubts that I have to his respect me have made NEG not to-him-DAT to-speak during a week
'The doubts that I have about him made me not speak to him for a week.'
- c. Ce genre d'attitude ne peut que leur faire ne pas prendre au sérieux une situation qui est cependant des plus graves.
this type of attitude NEG can only to them-DAT to make NEG not to-take to serious a situation which is nonetheless of-the utmost importance
'This kind of attitude can only make them not take seriously a situation which is nonetheless of the utmost importance.'

Again, if one adopts the structure of IP provided earlier in (23), the sentences containing embedded negation not only suggest that *faire* 'to make' and the embedded verb do not obligatorily form a single verbal constituent, but they also point to a NegP as the minimal projection for the embedded clause.¹⁷

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Finally, the existence of tensed complements to faire 'to make' in a restricted number of contexts like those in (26) clearly indicates that faire 'to make' must be allowed to subcategorize for a tensed CP complement in some instances.¹⁸

(26) a. Nous voulons attirer d'avantage de journalistes qui vont faire que le public sache d'avantage ce qu'est notre sport.

we want to-attract of more of journalists who are-going to-make that the public know of more that which is our sport

'We want to attract a greater number of journalists who will get the public to learn more about what our sport really is about.'

(French snowmobile enthusiast interviewed on CHOT, February, 1991.)

b. Mon Dieu, faites que mes parents reviennent vite!

my God, make that my parents come back quickly

'God, please make my parents come back soon!'

c. Sa négligence a fait qu'il a perdu beaucoup d'argent.

his carelessness has made that he has lost a lot of money

'His carelessness wound up costing him a lot of money.'

Thus the data provided in (22), (24), (25), and (26), all of which contain embedded constituents higher than the VP level, cast serious doubt on any analysis which assumes that faire 'to make' must subcategorize only for a VP small clause. Such data are, of course, unproblematic for an analysis which assumes a CP subcategorization frame for faire 'to make' since one would expect such intermediate projections. The question that is now raised is whether or not one may assume a multiple subcategorization frame for faire 'to make', as Kayne (1989) suggests. Specifically, one might propose that faire 'to make', like the class of French causative verbs which includes laisser 'to allow' and the perception verbs, may subcategorize not only for a

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VP small clause, but also for higher categories like CP. As the following discussion will show, this suggestion is also untenable.

To begin, Kayne (1989), Rochette (1988), and Rosen (1989) assert that *faire* 'to make' causative constructions, like *laisser* 'to allow' and perception verb sentences, are associated with a VP small clause complement at D-Structure. To be precise, Rochette (1988) adopts the D-Structure in (27a) for all causative verbs. Rosen (1989) assumes that *faire* 'to make' is only associated with the D-Structure in (27b), but that the other causative verbs (*laisser* 'to allow'/perception verbs) allow both (27a) and (27b), for the semantic reasons discussed earlier.

- (27) a. [CP[IP[FP[AgP[VP je [VP faire/laisser/voir
[VP1 Jean [VP2 téléphoner à Marie]]]]]]]
I to-make/to-allow/to-see Jean to-telephone to Marie
- b. [CP[IP[FP[AgP[VP je [VP faire/laisser/voir [VP1 [VP2 téléphoner à
Marie] Jean]]]]]]
I to-make/to-allow/to-see to-telephone to Marie Jean

Given the D-Structure in (27a), it is important to note that, barring some independent mechanism, at S-Structure the causative verb L-marks its VP small clause complement and therefore may theoretically assign Case to the embedded lexical subject directly in its base-generated position. Thus, Rochette's D-Structure in (27a) will incorrectly derive examples like the following in Standard French:¹⁹

- (28) *J'ai fait Jean téléphoner à Marie.

I have made Jean to-telephone to Marie

'I made Jean call up Marie.'

As a consequence, these examples must be ruled out by this type of analysis via a semantic difference: specifically, *faire* 'to make' causative sentences are assumed to differ from *laisser* 'to allow' and perception verb complements in that *faire* 'to make' causative sentences undergo obligatory predicate merger while *laisser* 'to allow' and

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perception verb complements are subject to optional merger. To explain, Rochette (1988) suggests that the logical link between faire 'to make' and the embedded verb is "tighter" in some sense than the link between laisser 'to allow'/perception verbs and their complements. Because of this difference (which is formalized by Rochette (1988) as a contrast in subcategorization for an <e> role in argument structure), laisser 'to allow' and perception verbs only optionally merge with the embedded verb. Thus these verbs allow the following variants in which the embedded subject appears preverbally. In these examples, this argument is Case-marked directly by the causative verb in its base-generated position.

(29) a. J'ai laissé Jean partir.

I have let Jean to-leave

'I let Jean go.'

b. J'ai vu Jean partir.

I have seen Jean to-leave

'I saw Jean leave.'

The problem now is that, given the preceding discussion, we know that faire 'to make', just like the other causative verbs, cannot be analyzed as undergoing obligatory merger. That is, the sentences with intervening AgrPs, NegPs, and tensed CPs indicate that merger is optional with this verb as well. Consequently, any analysis which assumes a "dual" VP small clause and CP complement for faire 'to make' will leave unexplained the ungrammaticality of preverbal embedded subjects with this verb in Standard French. The same is also true of any analysis which assumes an IP complement to faire 'to make'. To illustrate, consider the following D-Structure in which faire 'to make' subcategorizes for an IP complement.

(30) [CP je [VP faire [IP[FP[NegP[AgP[VP1 Jean [VP2 téléphoner
à Marie]]]]]]]

I to-make

Jean to-telephone to Marie

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At S-Structure, the embedded lexical subject Jean may raise to Spec of IP, as in (31) below:

- (31) [CP je [VP faire [IP Jean_i [FP[NegP[AgP[VP1 t_i [VP2 téléphoner
à Marie]]]]]]]]
I to-make Jean to-telephone to Marie

Given that Jean appears in Spec of IP, faire 'to make' may once again govern this argument and assign it Case, incorrectly allowing for the existence of preverbal embedded subjects with faire 'to make'.

To conclude this discussion, the existence of categories which intervene between faire 'to make' and the embedded verb was offered as evidence indicating that the embedded predicate may project higher than a simple VP, as is crucially assumed by the obligatory predicate merger approaches put forth in Rochette (1988) and Rosenthal (1989). Given this, it was shown that a VP small clause analysis (as well as an IP approach) will be unable to rule out preverbal lexical embedded subjects with faire 'to make' in the relevant dialects. To illustrate how a CP subcategorization frame correctly rules out such examples, consider the following D-Structure:

- (32) [CP je [VP faire[CP[IP[FP[NegP[AgP[VP1 Jean[VP2 téléphoner
à Marie]]]]]]]]]]
I to-make Jean to-telephone to Marie

Given the structure in (32), the lexical embedded subject Jean cannot be directly Case-marked in its base-generated position at S-Structure since faire 'to make' does not govern Jean, being separated from it by three barriers: VP, which passes barrierhood up to IP, which in turn passes barrierhood up to CP. Similarly, if the embedded subject raises to Spec of IP, it still cannot receive Case from faire 'to make' since two barriers, IP and CP, block the relation. In conclusion, a CP subcategorization frame for faire 'to make' will correctly rule out preverbal lexical embedded subjects with this verb since the embedded lexical subject would remain Caseless at S-Structure both if it

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remains in its base-generated position and if it raises to Spec of IP. To account for the difference between faire 'to make' and other causative verbs in Standard French then, one need only assume a difference in subcategorization. Faire 'to make' only subcategorizes for CP, while the other causative verbs also subcategorize for IP or a VP small clause.

As a third piece of evidence in favor of a CP subcategorization frame for faire 'to make', consider the following sentences. (Example (33d) was taken from Authier and Reed, 1991a: 199.) In particular, note that the sentence in (33b), which contains a lexical embedded subject, disallows a dative variant in à 'to', but that a dative clitic corresponding to this DP is licit, as in (33d).

- (33) a. Ça a fait patienter Jean.
this has made to-wait Jean
- b. *Ça a fait patienter à Jean.
this has made to-wait to Jean
'This got Jean to wait.'
- c. Ça l'a fait patienter.
this him-ACC has made to-wait
- d. Ça lui a fait patienter.
this him-DAT has made to-wait
'This got him to wait.'

The contrast between (33b) and (33d), i.e., the contrasting acceptability of lexical dative DPs and dative pronominal clitics, remains unexplained under obligatory predicate merger accounts, such as those offered in Rochette (1988) and Rosen (1989) since, according to these analyses, the syntactic structure of both (33b) and (33d) is identical. However, a CP subcategorization frame approach to faire-infinitive can account for these facts. In particular, Authier (1991) suggests that CP complements may, although they need not, be assigned an accusative Case feature. As evidence for

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optional Case assignment to CP, Authier (1991: 727) offers examples like the following.

- (34) a. Il a dit beaucoup de choses/que je n'étais pas la personne qu'il cherchait.
he has said many of things/that I NEG-was not the person that he was-looking-for
'He said many things/that I wasn't the person he was looking for.'
- b. Il a averti *beaucoup de choses/qu'il arriverait en retard.
he has warned many of things/that he would-arrive in late
'He warned *many things/that he would be late.'

In sentence (34a), the transitive verb *dire* 'to say' subcategorizes for and therefore may theoretically discharge its accusative Case feature to either the DP *beaucoup de choses* 'many things,' or to a CP complement, in this instance, *que je n'étais pas la personne qu'il cherchait* 'that I wasn't the person he was looking for.' Example (34b) clearly shows that CP complements are only optionally assigned accusative Case, since in this example the verb *avertir* 'to warn' does not subcategorize for an accusative Case feature, as evidenced by the ungrammaticality of the DP variant *beaucoup de choses* 'many things.'²⁰

The fact that CP complements may optionally be assigned accusative Case immediately explains why the dative clitic in (33d) is grammatical. Specifically, the dative clitic is a straightforward consequence of accusative Case assignment to the embedded CP with subsequent absorption of dative Case by the pronominal clitic. While an account for the ungrammaticality of the dative lexical DP variant in (33b) must be delayed until my analysis of *faire*-infinitive has been made explicit, for the moment, what is relevant is simply to note that an obligatory "argument merger" account cannot explain this contrast.

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A final piece of evidence against a semantically-based argument merger account of faire-infinitive can be found in Reed (1992). As is pointed out in this article, a number of Canadian speakers from the Ottawa (Ontario)-Hull (Québec) area allow preverbal subjects with faire 'to make', as illustrated by the following examples, which were extracted from the Ottawa-Hull corpus (Poplack, 1989).²¹

(35) a. ...j'essayais de faire ma voix changer.

I tried of to-make my voice to-change

'I tried to make my voice change.'

b. ...c'était Charlebois qui faisait leurs élèves signer un contrat...

that was Charlebois who made their students to-sign a contract

'It was Charlebois who made their students sign a contract.'

Examples like the preceding ones are particularly damaging for any account based on a semantic distinction between faire 'to make' and other causative verbs since in these examples faire 'to make' does not obligatorily merge with the embedded verb. The only means available to a semantic account to accommodate such sentences would be to propose that faire 'to make' in these dialects is semantically different from faire 'to make' in Standard French. A syntactic analysis based on subcategorization frames, however, can easily account for such dialects. In particular, as Reed (1992) suggests, one need only claim that faire 'to make' in the Ottawa-Hull dialect is associated with a "dual" CP/IP subcategorization frame, just as is the case with the other causative verbs even in Standard French.

To summarize, this section has argued that faire-infinitive in Standard French must be associated with a CP complement at D-Structure. In particular, the existence of intermediate projections like NegP, AgrP, and tensed CPs are clearly evidence that propositional complements to faire 'to make' may project higher than just the VP level, i.e., that faire 'to make' and the embedded verb do not have to form a syntactic unit for semantic reasons. Given this, a VP small clause analysis becomes untenable since it

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relies on obligatory merger to rule out preverbal lexical embedded subjects in this dialect. In addition, it was shown that a CP complementation frame may straightforwardly allow for pronominal clitics whose Case feature does not match that of their lexical counterpart while a VP small clause approach leaves these data unexplained. Finally, the existence of dialects of French which allow preverbal subjects with faire 'to make' casts further doubt on a semantic account of the word order found in this construction.

2.4 A Barriers Approach to Raised Causative Sentences

In this section I propose a raising analysis of French causative constructions which uses the novel idea of verbal government chain formation, as well as certain innovations in the GB framework, to account for the word order, clitic placement, and Case-marking found in this construction. While the idea of raising per se is not a new one (Baker, 1988; Burzio, 1986; Rouveret and Vergnaud, 1980; and Zubizarreta, 1985 being just a few examples in the generative framework alone), I would like to emphasize from the onset that this analysis differs from its predecessors in a number of crucial respects which I briefly discuss once the analysis has been made explicit. In this section, I will illustrate my analysis exclusively with the causative verb faire 'to make' since this verb uniquely subcategorizes for CP in the dialect under consideration. The analysis applies equally, however, to raised laisser 'to allow' and perception verb sentences.

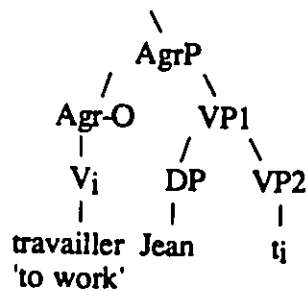
The goals of this section therefore are to outline the basic tenets of my proposal, as well as to briefly show how this analysis differs from previous accounts in terms of the movement, mechanism of Case assignment, and the theta-marking proposed. Due to space limitations, this discussion assumes a certain degree of familiarity with the literature on faire-infinitive.

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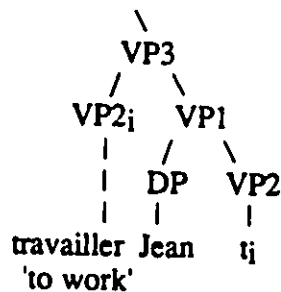
The first objective of this section is to motivate raising. Given the D-Structure of *faire*-infinitive in (32) above, we have already seen that if no movement takes place at S-Structure, then the embedded lexical subject will not receive Case since there is no SPEC-head agreement in French infinitival clauses. The only other potential source of Case for the embedded lexical subject is *faire* 'to make', but *faire* 'to make' cannot directly Case-mark the embedded subject because it is separated from it by three barriers: VP, which passes barrierhood up to IP, which in turn passes barrierhood up to CP. As it stands, (32) is therefore not a licit S-Structure.

Given the need for Case-marking the lexical embedded subject, and following Burzio (1986) in hypothesizing that *faire* 'to make' plays a principal role in achieving this end, I assume that the two types of movement put forth in Chomsky (1986a) are available to create the proper structural environment: specifically, X^0 movement (substitution) and XP movement (adjunction).²² The S-Structure resulting from V^0 movement is illustrated in (36); and the structure resulting from VP movement is given in (37).

(36) V^0 Movement



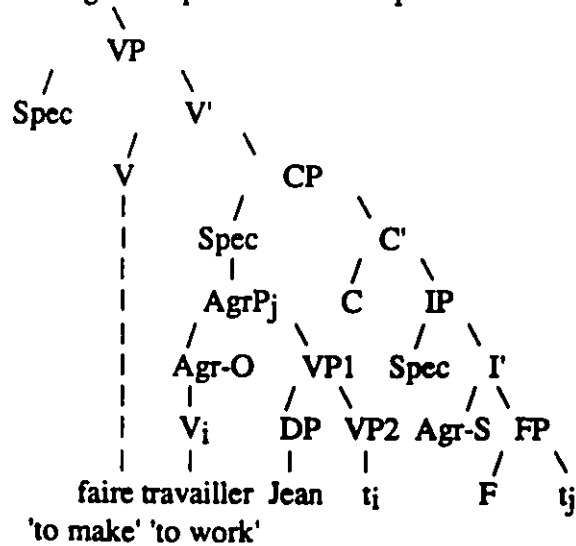
(37) VP Adjunction



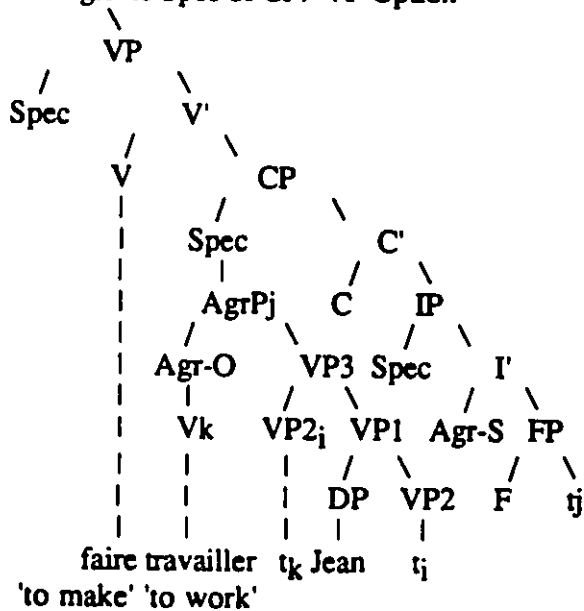
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Given these two possible structures, faire 'to make' still does not govern (and therefore cannot play any role in Case assignment to) the embedded lexical subject because the three barriers CP, IP and VP still block this relation. For this reason I assume an additional (non-ordered) movement of AgrP to Spec of CP.²³

(38) Movement of AgrP to Spec of CP: V⁰ Option



(39) Movement of AgrP to Spec of CP: VP Option



Given the structures in (38) and (39), a government relation now obtains between faire 'to make' and the embedded verb travailler 'to work' since faire 'to make' L-marks its

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CP complement and AgrP is defective and thus not a barrier in this instance.²⁴ Additionally, the raised embedded verb *travailler* 'to work' governs the embedded lexical subject since it L-marks each of the embedded VPs after V-raising.²⁵ I would like to propose that it is the government relation which exists between *faire* 'to make' and the embedded verb which results in Case-assignment to the embedded lexical subject. More specifically, I propose that whenever *faire* 'to make'/'laisser' 'to let'/ perception verbs govern a raised verbal element, these two verbs become a unit with respect to Case assignment. That is, for purposes of Case-marking, the raised embedded verb acts as if it were a verbal trace of the matrix verb.

In this analysis I also distinguish simple verbal government chains from complex verbs, a special type of verbal government chain. In particular, this distinction is based on the Case frames associated with the two verbs that make up the chain. As a background, first consider the Case frame of *faire* 'to make' given in (40). The sentences in (41a,b) justify this Case array.

(40) __ACC__(DAT)

(41) a. *On vient de faire quelque chose d'assez désagréable (à ton frère).*
one comes from to-make some thing of rather disagreeable (to your brother)

'They've just done something rather nasty (to your brother).'

Cannings and Moody (1978: 336)

b. **On vient de faire à ton frère.*
one comes of to-make to your brother
'They've just done to your brother.'

Keeping *faire*'s Case frame in mind, the difference between simple verbal government chain formation and complex verb formation can be made explicit. A simple government chain is hypothesized to be the result of *faire* 'to make' governing a verb whose obligatory Case features are different from its own; a complex verb, on the

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other hand, results when faire 'to make' governs a verb with a compatible Case frame, compatibility being determined by shared obligatory Case features. In other words, when there is a mismatch in the obligatory Case features associated with the two elements of the verbal government chain, I assume that these two verbs function in one sense as a unit, but in another sense as independent verbs. Specifically, the two verbs act as a unit with respect to government in that it is the government relation between faire 'to make' and the embedded verb which allows faire 'to make' to use the embedded verb as a bridge to Case-mark the lexical embedded subject. Thus, in this respect the embedded verb acts as if it were a verbal trace of faire 'to make'. At the same time, the two verbs are independent since the mismatch in Case features prevents them from sharing a single Case array. That is, when a simple government chain is formed, faire 'to make' retains its independent Case frame and Case-marks the lexical embedded subject, while the embedded verb independently assigns its Case features to the embedded objects.

Complex verb formation is the special type of verbal government chain which results when faire 'to make' does govern a verb with a compatible Case frame. A complex verb is therefore only formed when faire 'to make' governs a verb which, like itself, obligatorily subcategorizes for accusative Case. Whenever a complex verb is formed, faire 'to make' and the embedded verb are hypothesized to become a true syntactic unit with a single Case frame __ACC__(DAT), which as a single constituent assigns Case to the embedded arguments.

In summary, this analysis assumes that V/VP raising and the movement of AgrP to Spec CP is motivated by Case Theory.²⁶ That is, the embedded lexical subject needs to be Case-marked at S-Structure and Case-assignment to the embedded lexical subject by faire 'to make' (verbal government chain formation) or the complex verb faire V (complex verb formation) can only be achieved via the government relation

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established through raising. The only new assumption required by this analysis is that causative verbs be lexically marked to allow verbal government chain formation.²⁷

Before showing how this analysis can account for the word order, clitic placement, and Case-marking facts found in the faire-infinitive construction, I would first like to make a few remarks about two possible objections to the mechanisms I am proposing.²⁸ First, my analysis rests on the assumption that Case grids, unlike theta-grids, may be modified between levels of representation. That is, I propose an analysis that explicitly rejects the existence of a "Case Projection Principle" since I assert that faire 'to make' and the embedded verb become a syntactic unit with respect to Case-marking. As such, one of the verbs in the verbal complex has in a sense "lost" its individual Case features. I would like to point out, however, that I am not the first to assume that Case grids may be altered. Specifically, resultative clauses in English (Rivière, 1982), ergatives (Burzio, 1986), middle constructions in Romance (Wehrli, 1986), and certain passives in German and Dutch (Jaeggli, 1986a) are all constructions which have been analyzed in terms of altering the Case assigning properties of a verb between D-Structure and S-Structure. To illustrate Case grid alterations in resultatives, consider the following examples:

- (42) a. *The audience laughed the actors.
b. The audience laughed the actors off the stage.

(Rivière, 1982: 686)

As is discussed in Rivière (1982), the ungrammaticality of example (42a) clearly shows that the verb to laugh is intransitive, i.e., that it does not assign accusative Case to the direct object position. Further, Rivière (1982) shows that if this verb co-occurs with a resultative clause, the direct object DP becomes acceptable, as in (42b). Rivière (1982) suggests that these facts indicate that an accusative Case feature is added to the Case grid of to laugh only when this verb appears with small clause complement at S-

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Structure. As additional evidence supporting Case grid modification based on S-Structure configurations, consider the following example of an ergative verb.

(43) a. Le gouvernement a augmenté l'impôt sur le revenu.

the government has increased the tax on the income

'The government raised the income tax.'

b. L'impôt sur le revenu_i a augmenté t_j cette année.

the tax on the income has increased this year

'The income tax increased this year.'

(Adapted from Burzio, 1986: 25)

The grammaticality of the example in (43a) clearly shows that the verb augmenter 'to increase' subcategorizes for and discharges its accusative Case feature to direct object position. As is discussed in Burzio (1986), this subcategorization appears to change if this verb phrase containing augmenter 'to increase' fails to assign an external theta-role at D-Structure. That is, failure to assign an external theta-role to subject position at D-Structure results in the loss of this verb's ability to assign accusative Case to object position at S-Structure (Burzio's Generalization). As a consequence, the D-Structure object is hypothesized to move to subject position to receive a nominative Case feature at S-Structure, as is illustrated in (43b). Ergatives are therefore a second area of the grammar in which one finds a modification in a verb's Case grid between levels. A third construction analyzed in this manner is the middle construction, an example of which is given in (44b) (taken from Wehrli (1986: 266)).

(44) a. J'ai lavé ce veston de laine.

I have washed this jacket of wool

'I washed this wool jacket.'

b. Un veston de laine_i se lave t_j facilement.

a jacket of wool itself washes easily

'A wool jacket washes easily.'

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In (44a) above, it is clear that the verb laver 'to wash' must subcategorize for an accusative Case feature. This ability to assign accusative Case is apparently lost in the structure in (44b), i.e., the structure resulting from "middle" formation. Specifically, Wehrli (1986) argues that se 'itself' is a morpheme which suppresses external theta-role assignment, i.e., it "absorbs" the external theta-role of the verb laver 'to wash'. Because se blocks external theta-role assignment, from Burzio's Generalization it follows that the verb laver 'to wash' loses its ability to assign accusative Case, and the embedded object moves to subject position to receive a nominative Case feature. Thus, the morpheme se 'itself' has a "detransitivizing" effect: it transforms a transitive verb into an intransitive one.

Finally, as Jaeggli (1986a) points out, intransitive verbs in German (and Dutch) may appear in passivized sentences like the following:

- (45) Es wurde getanzt.
it was danced
'There was dancing.'
(Jaeggli, 1986a: 595)

Given the standard assumption that intransitive verbs do not subcategorize for an accusative Case feature, and given the additional assumption that the passive morpheme is an obligatory accusative Case absorber, Jaeggli (1986a) accounts for the grammaticality of such examples by proposing that German and Dutch, in contrast to languages like English, add an accusative Case feature to the Case grid of the verb in just this syntactic environment. Given the existence of Case grid alterations like these elsewhere in the grammar, I conclude that such a phenomenon in causatives is not as surprising as it may appear at first sight and, therefore, that there is adequate evidence to reject a "Case Projection Principle."

The second matter that I wish to discuss before moving on to a discussion of the data concerns the movement of AgrP to Spec of CP assumed in my analysis. As

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the previous discussion showed, movement of AgrP to this position is crucial in all predicate raised causative sentences in order to allow the causative verb to govern the embedded verb and form with it a verbal government chain. The movement of AgrP to Spec of CP is theoretically licit within the Barriers framework since we are moving a maximal projection to Spec of CP, a position which normally harbors X" categories (Chomsky, 1986a: 4). Further, as Bowers (1976) and Higgins (1973) have proposed, categories other than wh-elements have been analyzed as appearing in this position. In particular, VPs, NegPs, and DPs may appear in this position, as illustrated in the following examples taken from Hooper and Thompson (1973: 466-468).

- (46) a. Mary plans for John to marry her, and marry her he will.
b. Never in my life have I seen such a crowd.
c. This book, you should read.

As Hooper and Thompson (1973) discuss in depth, the net effect of all preposing constructions is to emphasize the preposed constituent. For example, in sentence (46a) the preposed VP marry her is emphasized, similarly, in example (46b), the preposed negation is put into a focussed position. Given that I am analyzing predicate raised causatives as instances of VP preposing, one might expect to find a similar pragmatic force in these constructions as well and this prediction is indeed borne out. In particular, Hatcher (1944:284-5) has noticed that raised versus non-raised causative structures differ in pragmatic force. To illustrate, consider the following:

- (47) a. J'ai vu Jean arriver.
I have seen Jean to-arrive
'I saw Jean arrive.'
b. J'ai vu arriver Jean.
I have seen to-arrive Jean
'I saw the arrival of Jean.'

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The examples in (47) contrast in the placement of the lexical embedded subject DP Jean. Specifically, this DP appears before the embedded predicate in (47a) and after the predicate in (47b). The choice of position for this argument corresponds to a slight difference in meaning: in the preverbal example in (47a), what is emphasized is the fact that I saw Jean arriving and not someone else; in (47b) on the other hand, what is focussed is the activity expressed by the raised embedded predicate, i.e., what the speaker was interested in was the arrival, and of secondary interest was who it was. While it is possible to construct similar examples illustrating this point with other perception verbs, as well as laisser 'to allow' (for examples, see Kayne, 1975: 232), preverbal examples with faire 'to make' are always illicit in Standard French, for the reason discussed in section 2.2; namely, that faire 'to make' subcategorizes uniquely for a CP complement. What is of importance is that an analysis in terms of VP preposing is consistent with the pragmatic force normally associated with such structures.

To conclude this section, I would like to briefly contrast my analysis with several earlier raising approaches. First, this analysis differs from its predecessors in the type of movement(s) proposed. Specifically, I assume that three types of movement are at work in this construction: V^0 movement, VP adjunction, and movement of AgrP to Spec of CP. In contrast, Baker (1988) proposes VP Raising to Spec of CP with V incorporation at LF; Burzio (1986) and Rouveret and Vergnaud (1980) both propose VP adjunction structures within the embedded IP, while Zubizarreta (1985) assumes that there is no movement at S-Structure, i.e., she proposes that causatives are formed at the level of lexical structure.

Secondly, the mechanism of Case-assignment put forth in this analysis differs from that of previous accounts. My approach asserts that faire 'to make' alone assigns Case to the lexical embedded subject whenever the embedded verb does not agree with it in Case features, but that it is the complex verb faire V which does so when faire₂ 'to

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'make' governs a verb with a compatible Case array. Baker (1988) asserts that the embedded subject always receives Case from the complex verb *faire* V, while the embedded objects, if any, are assigned Case via a special rule of preposition insertion; Burzio (1986) assumes that it is *faire* 'to make' alone which assigns Case to the embedded lexical subject, while Rouveret and Vergnaud (1980) assert that government of the embedded lexical subject by the embedded verb determines licit S-Structures.²⁹ Finally, Zubizarreta (1985) proposes that the verbal complex as a unit assigns Case to the embedded arguments.

Lastly, as was discussed in detail in section 2.2, this analysis assumes that theta-marking is not altered at any level, contra Rouveret and Vergnaud (1980) and Zubizarreta (1985), among others. That is, I propose that the embedded subject receives only the external theta-role associated with embedded predicate and that this theta-marking remains constant at all subsequent levels. In this respect I follow Baker (1988) and Burzio (1986).³⁰

2.5 The Data

This section illustrates how this analysis accounts for the problems of word order, clitic placement, and Case-marking in the *faire*-infinitive construction in Standard French, as well as the contrasting clitic placement and Case-marking found in dialects of French spoken in Southern France and Ontario-Québec (Canada).

2.5.1 Placement of the Embedded Lexical Subject in Standard French

As discussed extensively in the literature, the placement of the embedded lexical subject in Standard French causatives contrasts with the usual SVO word order found in complement clauses in French in that the subject always follows the embedded verb.³¹ In addition to this problem, the placement of this DP varies with the transitivity of the embedded verb. Specifically, when the embedded verb is intransitive (as in (1) above, repeated below as (48) for convenience) or indirect transitive as in (49), the embedded

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lexical subject must immediately follow the embedded verb, i.e., in the case of (49a,b), it must precede any indirect object.

(48) J'ai fait travailler Jean.

I have made to-work Jean

'I made Jean work.'

(49) a. J'ai fait téléphoner Jean à Marie.

I have made to-telephone Jean to Marie

'I made Jean call Marie.'

b. *J'ai fait téléphoner à Marie (à) Jean.

I have made to-telephone to Marie (to) Jean

'I made Jean call Marie.'

In contrast, when the embedded verb is a direct transitive, as in (50a,b), the embedded subject must follow any complements of the verb.³²

(50) a. J'ai fait quitter ma maison à Jean.

I have made to-leave my house to Jean

'I made Jean leave my house.'

b. *J'ai fait quitter (à) Jean ma maison.

I have made to-leave (to) Jean my house

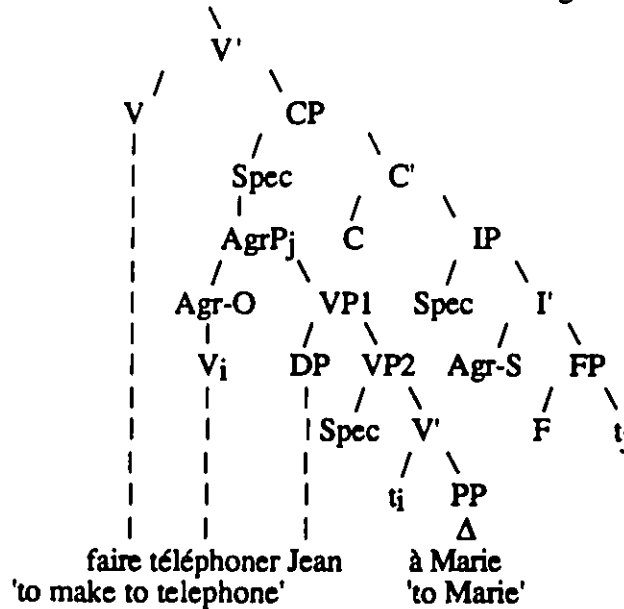
'I made Jean leave my house.'

In section 2.4, I showed that both VP adjunction and V⁰ movement can account for the word order found with intransitive verbs like travailler 'to work' in (48) above. Below, I will argue that this analysis can also account for the variable placement of the lexical embedded subject in indirect transitive examples and direct transitive sentences through an interaction of certain principles of Case theory, in particular the adjacency requirement on accusative Case assignment.³³ I will show that the presence or absence of various types of complements determines the type of movement, VP adjunction or V⁰ movement, which results in a licit S-Structure.

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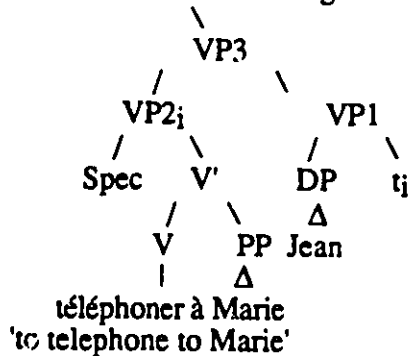
Consider first the structure which results from V^0 movement when the embedded verb is an indirect transitive, given in (51):

(51) S-Structure After V^0 Movement and Movement of AgrP to Spec CP



As discussed in section 2.4, the government relation that exists between faire 'to make' and the embedded verb results in the formation of a verbal government chain by means of which faire 'to make' assigns accusative Case to Jean. (Marie is assigned dative Case by the verbal trace of téléphoner 'to call up'.) V^0 movement therefore correctly derives the placement of the embedded lexical subject immediately after the infinitival verb. Compare this with the S-Structure resulting from VP adjunction, illustrated in (52).³⁴

(52) S-Structure after VP Raising

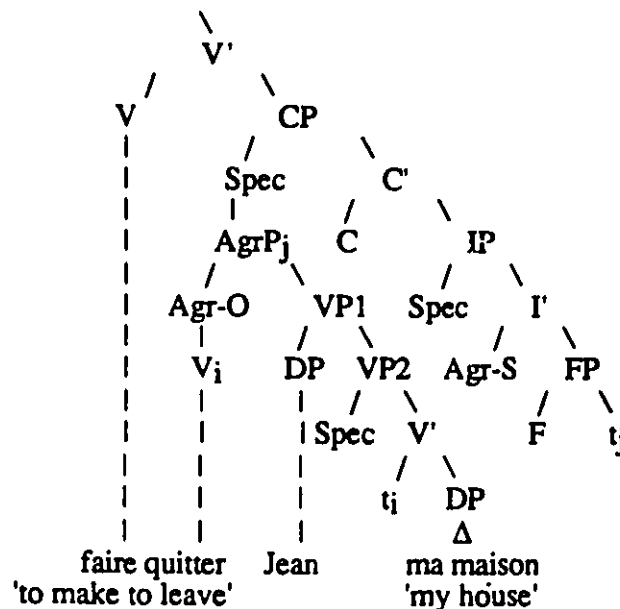


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VP adjunction does not result in a licit S-Structure when the embedded verb is an indirect transitive because Jean cannot receive Case, given that accusative Case requires adjacency and the PP à Marie 'to Marie' separates Jean from the verbal government chain. In sum, we see that the presence of a PP complement "forces" V^0 movement and disallows VP adjunction since only V^0 movement results in an S-Structure in which the embedded lexical subject may receive Case.

The opposite case obtains with direct transitive verbs, such as (50). When the embedded verb is a direct transitive, V^0 movement results in an illicit structure while VP adjunction allows for Case-marking of the embedded lexical subject. To illustrate, examine the S-Structure resulting from V^0 Movement given in (53).

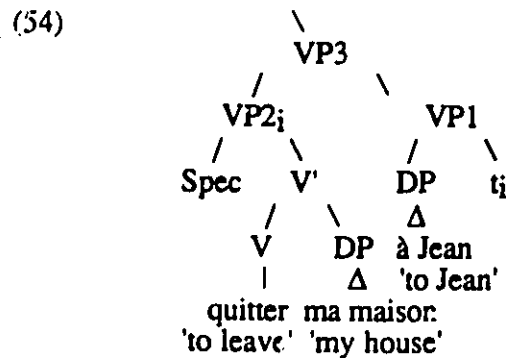
(53)



The ungrammaticality of this example is due to a conflict in accusative Case assignment. Specifically, there are two DPs, Jean and ma maison 'my house', which can potentially receive accusative Case: Jean from the verbal complex faire quitter 'to make to leave' and ma maison 'my house' from a trace of that complex, specifically, t_j.

Since V^0 movement is not an option with direct transitives, we now must consider the second option, namely VP adjunction. This structure is given in (54).

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Following short verb movement to Agr-O and movement of AgrP to Spec of CP, the S-Structure in (54) allows the verbal complex faire quitter 'to make to leave' to straightforwardly assign accusative Case to the adjacent DP ma maison 'my house' and dative Case to the embedded subject.

In sum, this analysis can account for the variable placement of the embedded lexical subject through principles of Case theory already assumed in the GB framework. We have seen that the type of movement available is not stipulated, but falls out from these restrictions. I have shown in section 2.4 that intransitive verbs allow both V^0 and VP adjunction, while the present section has shown that indirect transitives allow only V^0 movement, and direct transitives allow only VP adjunction. The only modification to the framework which this analysis requires is the assumption that faire 'to make'/'laisser 'to allow'/perception verbs are lexically marked for verbal government chain formation.³⁵

2.5.2 Standard Clitic Placement

As pointed out in Kayne (1975), the placement of clitics in the faire-infinitive construction contrasts with that found in other infinitival complements in that the clitics corresponding to the embedded arguments are generally found on the matrix verb.^{36, 37} This difference between causatives and Control structures in French is illustrated in (55) and (56).

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(55) Je la lui ai fait quitter.

I it-ACC him-DAT have made to-leave

'I made him leave it.'

(56) *Je le veux voir.

I him-ACC want to-see

'I want to see him.'

Under this analysis, the clitic placement on faire 'to make' in example (55) is a natural consequence of complex verb formation. That is, if we follow Jaeggli (1986b) in assuming that French accusative and dative clitics are obligatory Case absorbers which appear on the element from which they absorb Case, then the appearance of these clitics on the first element of the complex verb is to be expected.³⁸

In addition to accounting for the placement of the clitics corresponding to the embedded arguments on faire 'to make' when the embedded verb is transitive, this analysis also offers an explanation for the contrasting clitic placement we find with indirect transitive verbs like téléphoner 'to telephone.' As examples (57a,b) below show, when the embedded verb is an indirect transitive the clitic corresponding to the indirect object must appear on the embedded verb, while the clitic corresponding to the embedded subject must appear on faire 'to make'.

(57) a. *Je le lui ai fait téléphoner.

I him-ACC her-DAT have made to-telephone

b. Je l'ai fait lui téléphoner.

I him-ACC have made her-DAT to-telephone

'I made him call her.'

This analysis relates this contrast in object clitic placement to the distinction between complex verbs and simple verbal government chains. Example (55) is an instance of complex verb formation since the embedded verb matches faire 'to make' in its obligatory Case features. Here, the government relationship established via raising

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forms a single complex verb *faire quitter* 'to make to leave' with the Case array __ACC__(DAT). The placement of both clitics on the first element of the verbal complex reflects this.

In contrast, *téléphoner* 'to telephone' in example (57) cannot form a verbal complex with *faire* 'to make' since it does not subcategorize for an accusative Case feature. As a consequence, the clitics in example (57b) each appear on the element from which they absorb Case: the clitic corresponding to the embedded subject appears on *faire* 'to make'; the clitic corresponding to the embedded indirect object appears on *téléphoner* 'to telephone'.

In sum, this analysis straightforwardly accounts for the standard placement of accusative and dative clitics in the *faire*-infinitive construction by means of the notions of verbal government chain and complex verb formation.

2.5.3 Standard Case-Marking

A third property of the *faire*-infinitive construction is the variability of the Case features assigned to the embedded subject. In particular, the embedded subject receives accusative Case when the embedded verb does not subcategorize for a direct object (58a,b), but dative when it does (59).

(58) a. Je l'ai fait partir.

I him-ACC have made to leave

'I made him leave.'

b. Je l'ai fait téléphoner à Marie.

I him-ACC have made to telephone to Marie

'I made him call Marie.'

(59) Je la lui ai fait quitter.

I it-ACC him-DAT have made to leave

'I made him leave it.'

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The descriptive generalization then is that the embedded subject is assigned the first available Case feature on the following hierarchy, adapted from Comrie (1976b).

(60) __ACC__DAT

The present account of the *faire*-infinitive construction offers an explanation for these facts in terms of the notion verbal chain/verbal complex. The working hypothesis of this analysis is that V/VP raising (and the movement of AgrP to Spec of CP) is motivated by the need for Case-marking of the embedded subject. Moreover, I assume that it is *faire* 'to make', with the Case array __ACC__(DAT), which achieves this Case-marking either directly, via the formation of a simple government chain, or indirectly, by means of complex verb formation. In other words, the embedded subject receives Case from either *faire* 'to make' alone (when a simple government chain is formed) or from the complex verb *faire* V (when *faire* 'to make' governs a verb with a compatible Case frame). In either instance, the Case-marker of the embedded subject is associated with the Case frame __ACC__(DAT). From this fact, it logically follows that the actual Case feature assigned to the embedded subject will be the first available feature in the array.

Returning now to the data, in (58a,b) we naturally find that when a simple government chain is formed the clitic corresponding to the embedded subject appears on the element from which it absorbs Case, namely *faire* 'to make', and this clitic absorbs the first Case feature available in *faire*'s Case array, specifically the accusative Case feature.

In contrast, example (59) is an instance of complex verb formation. As a consequence, the complex verb *faire quitter* 'to make to leave' is associated with the single array __ACC__(DAT). The Case-marking in (59) directly follows from the absorption of accusative Case by the clitic corresponding to the DP adjacent to the verbal complex and the absorption of the remaining dative Case feature by the clitic corresponding to the embedded subject.

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In sum, the Case-marking variation found in this construction is shown to be a consequence of the basic tenets of the analysis.

2.5.4 Dialectal Variation in Clitic Placement and Case-Marking

As pointed out in Hyman and Zimmer (1976), a proper characterization of the clitic placement and Case-marking of the *faire*-infinitive construction is complicated by the existence of dialects of French which allow not only the Standard clitic placement found in (61b), but also examples like (61c), in which the clitic corresponding to the embedded subject appears on *faire* 'to make', but the object clitics appear on the embedded verb.³⁹ As was discussed in section 2.3, these data are problematic for any account of causatives which assumes obligatory "merger" of *faire* 'to make' and the embedded verb.

(61) a. J'ai fait mettre les bières dans le frigo à Jean.

I have made to-put the beers in the fridge to Jean

'I made/had Jean put the beers in the fridge.'

b. Je les lui y ai fait mettre.

I them-ACC him-DAT there have made to-put

'I made/had him put them there.'

c. Je l'ai fait les y mettre.

I him-ACC have made them-ACC there to-put

'I made him put them there.'

While previous syntactic accounts of this dialectal variation (e.g., Dorel, 1980) have used examples like (61b,c) to argue for the existence of two verbs *faire* 'to make': one which triggers raising and another which is a Control verb, the present approach offers a new possibility.

The analysis in the present chapter makes the claim that V/VP raising and the formation of a verbal Case unit are "forced" in the syntax because of the embedded

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subject's need for Case. This assumption makes a clear prediction; namely, should the need for Case-marking be removed, then we would expect to find that the formation of a verbal Case unit faire V becomes optional. If Authier (1988), Jaeggli (1986b), and Roberge (1986, 1990) are correct in their claim that *pro* is Caseless, then one such "optional" environment would be any example in which the embedded subject appears as a clitic identifying a *pro* in the embedded subject position. In such instances, we would still expect raising to be obligatory in order for the *pro* to be governed by the verbal element (faire 'to make') which bears its identifier (the pronominal clitic), but that the formation of a complex verb with a single Case array should be optional.⁴⁰ The two verbs may still theoretically maintain their independent Case arrays since nothing in the theory forces Case frame sharing.

Given this, let's return now to the data to see if these facts can account for the attested non-Standard Case marking. Example (61a) contains a lexical embedded subject. Here we would expect both raising and Case frame collapsing to be obligatory since this is the only means available for this DP to receive Case. Example (61b) also has this structure. (We know this by the placement of all clitics corresponding to the embedded arguments on faire 'to make'.) In this instance, the clitics absorb their Case features from the complex verb faire mettre 'to make to put'. The final logical possibility is given in (61c), an example in which the clitic placement indicates that no Case frame collapsing has taken place. The clitic corresponding to the embedded subject absorbs Case directly from faire 'to make' and the embedded object clitics absorb Case from the embedded verb.⁴¹

At this point it is now possible to return to the final set of the problematic data originally introduced in section 2.3; that is, the contrasting acceptability of examples like (33b) and (33d), repeated below as (62a,b). Recall that the contrast between (62a,b) was shown to be problematic for any account which assumes that faire 'to make' and the embedded verb obligatorily form a complex predicate at S-Structure.

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- (62) a. *Ça a fait patienter à Jean.
this has made to-wait Jean
'This got Jean to wait.'
- b. Ça lui a fait patienter.
this to-him-DAT has made to-wait
'This got him to wait.'

The licitness of the dative clitic in (62b) follows from two assumptions (a) CP complements may optionally be assigned accusative Case and (b) Case frame merger is optional whenever the embedded subject appears as a clitic on *faire* 'to make'. In this example then, complex verb formation has not taken place; *faire* 'to make' has assigned accusative Case to the embedded CP complement; and the clitic corresponding to the embedded subject has absorbed *faire*'s dative Case feature. The ungrammaticality of the lexical à DP variant in (62a) is a consequence of the fact that Case frame merger becomes obligatory whenever the embedded subject is a lexical DP: this is the only means by which this argument may receive Case. As a consequence, *faire* 'to make' cannot independently assign accusative Case to the embedded CP since it shares a single Case array with the embedded predicate. The verbal chain as a unit cannot do so either since CP is not adjacent to the last link in the chain (the embedded verb). From this, it follows that the lexical embedded subject must receive the first available Case feature in the Case array, i.e., an accusative Case feature.

While the present analysis actually predicts the existence of examples like (61c) and (62b), it is rather surprising that such examples are unacceptable in Standard French. To account for this, I recast ideas put forth in Hyman and Zimmer (1976) and Dorel (1980) by proposing that in Standard French there is an on-going process of generalization of Case frame merger to all instances of the *faire*-infinitive construction. That is, it seems that Standard speakers are extending the process of Case frame collapsing to the construction as a whole, rather than limiting it to obligatory contexts

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(i.e., those in which it is strictly necessary for Case-marking). This change is almost complete in Standard French, but it has not, as yet, been extended to the relevant dialects spoken in Southern France or Canada.⁴² The relevant parameter can be formulated as follows:

- (63) Given x and y , where x and y are links in a verbal government chain Z ,
 x and y $\left\{ \begin{array}{l} \text{must} \\ \text{need not} \end{array} \right\}$ share a single Case array.

It is interesting to consider the parameter given above in (63) from the point of view of language acquisition, particularly when one determines which value, positive or negative, is the marked option. Following Berwick (1982), I will assume that the marked option of a given parameter is the one which results in an increase in the number of well-formed structures that the syntactic system can produce (Berwick's Subset Principle). Under this assumption, the negative setting of the parameter in (63) is immediately identified as being the marked option since allowing Case frame collapsing to be optional generates not only the Standard clitic Case examples discussed in section 2.5.3, but also the "non-Standard" ones discussed above in (61c) and (62b). Given that the negative setting of this parameter is the "marked" option, the language learner would be expected to assume the positive setting unless s/he is forced, on the basis of positive evidence, to adopt the negative value, thus accounting for the restricted number of speakers who accept such "unexpected" Case variants.

To summarize, in this chapter I have argued, contra the majority of previous work done on this topic, that French causative constructions are unproblematic both from the point of view of Theta Theory and from the point of view of the projection of lexical items from the lexicon to D-Structure. With respect to Theta Theory, the embedded understood subject was shown to receive only the external theta-role of the embedded predicate, and to maintain this theta-marking at all levels; with respect to projection of lexical items at D-Structure, it was argued that there is no evidence in favor of and quite a bit of evidence against the semantically-based process of argument

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merger in either the syntax, as proposed in Rochette (1988), or the lexicon, as put forth in Rosen (1989). Instead, this chapter offered evidence indicating that Standard French faire 'to make', unlike other causative verbs, has a unique CP subcategorization frame. From this, the problematic word order, clitic placement, and Case-marking facts found in this construction follow, provided first that one adopts several recent innovations in GB theory and secondly that one assumes the existence of V-government chain formation and Case frame sharing.

Having arrived at an analysis of both Standard and non-Standard French causatives, it is now possible to explore the issue of Case/Theta-role dissociations in these constructions. In particular, the next chapter will make crucial use of the conclusions reached above regarding the thematic and syntactic structure of non-Standard French causatives to argue for the existence of a semantic presupposition regarding direct versus indirect causation.

FOOTNOTES

* Various parts of this chapter have either appeared in published form or been accepted for publication. (See Reed (1991a,b) and Reed (1992).) As such, the content in this chapter owes a great debt to the anonymous reviewers of Linguistic Inquiry and Probus, as well as the following individuals who made detailed comments on these articles: J.-Marc Authier, Paul Hirschbühler, Paul Postal, María-Luisa Rivero, Anne Rochette, and Karen Zagona. The usual disclaimers apply.

¹ In this chapter I treat all French causative constructions except faire...par, an example of which follows: Marie fera boire cette eau par son chien 'Marie will have that water drunk by her dog'. The latter construction differs from other French

causatives both syntactically and semantically. For a discussion of these differences see Burzio (1986), Cannings and Moody (1978), and Kayne (1975) among others.

² Actually, Kayne presents two additional arguments indicating that the embedded understood subject is an external argument of the embedded predicate. They are complement selection and choice of adverbial phrases in the *faire*-infinitive construction. See Kayne (1975: 213-217) for more details.

³ Only J.-Y. Morin (1978) has taken the position that the embedded understood subject is at all levels a thematic internal argument of the complex verb *faire* V alone.

⁴ The reason why the embedded subject in (14a,b) is an empty category is presumably due to the fact that French does not have expletive pronominal clitics.

⁵ The argument regarding the distribution of binominal *chacun* 'each' is not relevant for analyses which recognize that the embedded understood subject is an external argument at some level(s), e.g., Rouveret and Vergnaud (1980) and Zubizarreta (1985).

⁶ As an anonymous *Probus* reviewer points out, the ungrammaticality of (17) cannot be due to a restriction on *chacun* 'each' in embedded clauses since (i) below is acceptable. In this example, *chacun* 'each' (correctly) modifies the embedded direct object.

- (i) Les jeune filles ont fait lire un livre chacun aux garçons.
the young girls have made to-read a book each to-the boys
'The girls made the boys read a book each.'

⁷ The D-Structures in (18b) and (19) incorporate the notion of base-generated VP-internal subjects; a notion which has been explored by a number of authors including Aoun and Li (1989), Kitagawa (1986), Koopman and Sportiche (1985, 1987), Kuroda (1985), and Zagana (1982), among others.

⁸ Kayne (1989) postulates a VP small clause for "at least certain instances" of faire-infinitive. Rochette (1988) and Rosen (1989) assume that faire 'to make' subcategorizes uniquely for a VP small clause.

⁹ Kayne (1989) does not specify the exact position of this argument.

¹⁰ Rosen (1989: 46-47) follows proposals in Sportiche (1988) regarding the possibility of having sentence-final floating quantifiers to support her hypothesis that French is a language in which external theta-role assignment is not fixed to the left.

¹¹ See Safir (1985) for an analysis of subject inverted sentences in terms of theta-role assignment to the right.

¹² According to this type of argument structure approach, only verbs that do not semantically entail the truth of their complement in the affirmative (e.g., believe), subcategorize for CP. (See Rosen (1989: 31-36) for discussion.)

¹³ See Grimshaw (1990) for a discussion of the theoretical framework assumed by Rochette (1988) and Rosen (1989).

¹⁴ As a reviewer for Probus points out, the assumption that auxiliary verbs are base-generated outside of VP is tentative. In particular, there is no clear evidence available to choose between this position as opposed to that put forth in Emonds (1978), according to which such verbs are VP-internal. As such, the data in (22) are not necessarily proof that the embedded clause projects to AgrP.

¹⁵ Girault-Duvivier (1856) was the first to point out the existence of dialects of French which allow this clitic placement. While Girault-Duvivier (1856) does not specifically name these dialects, I have established with certainty that they include dialects spoken in the Languedoc-Roussillon region (Southern France) as well as dialects spoken in the provinces of Ontario and Québec (Canada).

16 As was the case with the argument regarding auxiliary verbs, this evidence is somewhat tentative since alternative accounts of clitic placement exist. In particular, Kayne (1989) argues that pronominal clitics may be base-generated adjoined to V.

17 On the basis of the following sentence taken from Kayne (1989: 255, footnote 13), a reviewer for *Probus* suggests that there may exist two types of negation: VP external negation, corresponding to Pollock's (1987, 1989) NegP, and VP negation, i.e., the second *ne pas* 'not' in (i) below. This second type of negation is hypothesized to not be structurally higher than the VP level.

- (i) ?Jean a promis de ne pas ne pas en parler.

Jean has promised of NEG not NEG not of-it to-talk

'Jean promised not to not talk about it.'

If such VP negation exists, it is possible that the negated causative sentences in (25) are of this type, and thus not evidence for projection to NegP. I would like to argue that such "double negative" sentences cannot, however, be treated as evidence for VP negation. In particular, the relative order of the second negation, the embedded verb, and the placement of an adverb in a sentence like the following indicates that even the second *ne pas* 'not' is external to VP.

- (ii) ?Jean lui a promis de ne pas ne pas finir complètement son verre de vin avant d'en redemander.

Jean to-him-DAT has promised of NEG not NEG not to-finish completely his glass of wine before of of-it to-ask-again

'Jean promised him not to not completely finish his glass of wine before asking for more.'

Assuming Chomsky's (1988) revised version of the structure of IP proposed in Pollock (1987, 1989: 384), the placement of the embedded verb *finir* 'to finish' before the adverb clearly indicates that short verb movement to Agr-O has taken place, i.e., the

verb has moved outside of VP. Given this, the placement of negation before the verb is expected only if we assume that it is in NegP, a position which precedes Agr-O. The fact that one may have two negative elements in sentences like (i), therefore, only indicates that NegPs may be "stacked," and not that one of the negative elements is an instance of VP internal negation.

¹⁸ As a Probus reviewer points out, tensed complements to faire 'to make' are not only contextually restricted, but they are also associated with a slight difference in meaning, which s/he suggests could perhaps be taken as evidence that there are two semantically distinct verbs faire 'to make'. Extending arguments in Kirsner and Thompson (1976), I would like to argue that this is incorrect. First, Kirsner and Thompson (1976: 206) have noticed that tensed and untensed complements to perception verbs in English are likewise associated with slight differences in interpretation, differences which are illustrated in the following pair of examples.

- (i) a. Len saw that Margie played croquet.
- b. Len saw Margie play croquet.

The tensed complement example in (ia) is normally said in a context in which Len has not actually seen Margie herself, but rather has seen croquet mallets and balls strewn about the lawn. In other words, he has seen evidence that the game has been played. In contrast, the untensed (b) variant is uttered in a situation in which Len actually perceived with his own eyes a croquet game in which Margie was playing. Thus, a tensed complement, as in (ia), is generally associated with indirect perception of an event, while an untensed structure like (ib) is interpreted as a direct perception of the event. These slight differences in meaning are argued by Kirsner and Thompson (1976) to be due to pragmatic, not semantic factors. As evidence, consider the fact that such aspects of meaning may be explicitly cancelled, as in the following example:

- (ii) I saw the invisible nerve gas kill the sheep.

In (ii) the inference that I actually directly perceived the embedded subject is explicitly ruled out by the context (the subject is invisible). Thus this aspect of meaning must be pragmatic. Secondly, the use of tensed and untensed complements to refer to indirect and direct perception is, in fact, only a tendency since one can use a sentence like (iii) below even in a situation of "indirect" perception, i.e., in which one sees for example tennis balls, trophies, etc.

(iii) I see you play tennis.

Kirsner and Thompson's (1976) explanation for meaning differences in tensed and untensed English perception verb complements can be extended to the class of causative verbs in French. For example, tensed CP complements to faire 'to make' generally encode indirect causation of an event, as in (iva) below, while untensed complements like (ivb) encode direct causation.

(iv) a. Faites qu'il vienne.

make that he come

'Make it so that he'll come.'

b. Faites-le venir.

make him-ACC to-come

'Make him come.'

Again, such differences in interpretation are purely pragmatic. For example, one may utter (ivb) in a situation of indirect causation, although (iva) is favored and vice versa. In sum, meaning differences in tensed and untensed faire 'to make' causatives are not evidence for two semantically distinct verbs faire 'to make': such differences are pragmatic in nature.

The issue of the restricted occurrence of tensed complements to faire 'to make' is somewhat more problematic, although it may be put on a parallel with the rarity of such examples with certain causative verbs in English. Specifically, verbs like to feel

with tensed embedded clauses are sometimes judged to be odd, as illustrated in the following example, again taken from Kirsner and Thompson (1976: 208).

- (v) #Henrietta felt that the cold stethoscope glided across her shoulder blades.

Kirsner and Thompson argue that unacceptability of (v) is due to the fact that it is pragmatically impossible to indirectly feel something glide across one's body. Similarly, I would argue that it is rare to indirectly have influence over someone that you are causing to do something, although the tensed examples in the text do provide a few pragmatically appropriate instances of "indirect" causation.

¹⁹ While Rosen's D-Structure does not face the problem of pre-verbal subjects, this analysis does encounter word order problems of a different nature since the embedded lexical subject Jean appears after the PP à Marie 'to Marie' in the structure in (27b). To correctly derive J'ai fait téléphoner Jean à Marie 'I made Jean call Marie', Rosen (1989: 52) must resort to PP extraposition presumably with subsequent erasure of the trace of the extraposed PP in order for the embedded subject to be adjacent to and hence receive accusative Case from the complex verb.

²⁰ As a Probus reviewer points out, sometimes the verb avertir 'to warn' apparently can assign accusative Case, as made clear by the grammaticality of examples like (i) below.

- (i) Jean a averti Marie de ce qu'il arriverait en retard.

Jean has warned Marie of that he would-arrive in late

'Jean warned Marie that he would be late.'

The fact that the verb avertir 'to warn' can assign accusative Case in examples like (i) above does not, however, invalidate Authier's argument regarding optional Case assignment to CP. Rather, it only indicates that this verb has two possible lexical entries: one without Case, the other, with both accusative and partitive Case. As

evidence for this claim, compare the sentences in (iib) and (iiib) below. Sentence (iiib) is due to Marc Dominicy (p.c.).

- (ii) a. Il a averti qu'il arriverait en retard.
he has warned that he would-arrive in late
'He warned that he would be late.'
- b. *Il l'a averti.
he it-ACC has warned
'He warned it.'
- (iii) a. Il a averti Marie de ce qu'il arriverait en retard.
he has warned Marie of that he would-arrive in late
'He warned Marie that he would arrive late.'
- b. Il l'en a averti.
he her-ACC it-PARTITIVE has warned
'He warned her of it.'

As expected, it is impossible to cliticize the CP complement of avertir 'to warn' when its Case frame is the null set. That is, the ungrammaticality of (iib) is due to the fact that French accusative clitics are obligatory Case absorbers, but the verb lacks any accusative Case. In contrast, it is possible to cliticize the CP complement in (iiib) because the verb avertir 'to warn' used in that instance has a Case frame containing both accusative and partitive Case, the latter being assigned to the CP complement.

²¹ These speakers also allow the Standard postverbal placement of the lexical embedded subject with faire 'to make' as is illustrated by (i) below, which was also drawn from the Ottawa-Hull corpus (Poplack, 1989).

- (i) Oui, ils faisaient travailler les vieux.
yes, they made to-work the old
'Yes, they made the old people work.'

²² The generalization that all DPs require Case at S-Structure is formalized as the Case Filter (attributed to Jean-Roger Vergnaud) or alternatively as the Visibility Condition (Aoun, 1979; Chomsky, 1981).

²³ These movements are not ordered. That is, the analysis still holds even if movement of AgrP to Spec CP applies before V/VP movement. In this paper I always illustrate the movements lowest in the tree simply for ease of exposition.

²⁴ I assume, following Pollock (1989:397) that the morphologically defective nature of AgrP accounts for the fact that this category does not block movement. The fact that wh-extraction is allowed in negated sentences further indicates that NegP is defective in this respect.

²⁵ See Chomsky (1986a: 69-70) for the relevant discussion of L-marking.

²⁶ In the negated examples given in (25a,c), NegP, not AgrP, must be the minimal category which raises to Spec of CP.

²⁷ This analysis rests upon the novel idea of verbal government chain/complex verb formation to account for the word order, clitic placement, and Case-marking found in this construction. Of course, this unique aspect of causative verbs does not extend to all verbs since we do not find *Je veux partir Jean 'I want Jean to leave.' Thus, I am suggesting that only the class of causative verbs be lexically marked to allow verbal government chain formation. Perhaps the need to lexically mark faire 'to make'/'laisser 'to let'/perception verbs is not a significant drawback, however, since every analysis must say something special about this class of verbs. Additionally, other verbs subcategorize for similar idiosyncratic features, for example, verbs like se demander 'to wonder' in French are lexically marked for a CP complement whose Spec position

must be filled at S-Structure. To explain, it is well known that French, unlike English, allows a *wh*-element in a matrix clause to either remain in situ, as in (ia) or to *wh*-move to Spec of CP, as in (ib). (Example (ia) has the necessary non-echo reading.)

- (i) a. Tu as vu qui?
you have seen who
- b. Qui as-tu vu?
who have you seen
'Who did you see?'

With indirect questions embedded under verbs like se demander 'to wonder', however, the *wh*-element must appear in Spec of CP at S-Structure, as illustrated in (ii) below.

- (ii) a. *Je me demande tu as vu qui.
I myself ask you have seen who
- b. Je me demande qui tu as vu.
I myself ask who you have seen
'I wonder who you saw.'

This fact may only be captured by lexically specifying that verbs like se demander 'to wonder' requires a [+*wh*] element in Spec of CP at S-Structure. Verbal government chain formation is therefore to be treated on a par with other idiosyncrasies like this one which must be specified in the lexicon.

Finally, it may be that other verbs, in fact, do allow V-government chain formation. In particular, as Harmer (1979: 149-150) points out, there do exist a number of literary examples containing verbs like savoir 'to know', vouloir 'to want', and attendre 'to wait for' which exhibit a clitic placement much like that of faire 'to make', laisser 'to allow', and the perception verbs:

- (i) Il était allé jusqu'à la pension de famille où il la savait habiter.
he was went until to the boarding-house of family where he her-ACC
knew to-live
He went to the boarding-house where he knew she lived.'
(Taken from J. Dhie, *Les liens secrets*, p.143.)

28 I wish to thank my Probus reviewers for raising these issues.

29 Rouveret and Vergnaud (1980) explicitly rule out Case-marking of the embedded lexical subject by both *faire* 'to make' and the embedded verb. Instead, they propose that a special filter is needed in addition to the Case Filter to determine when lexical subject DPs are permissible in infinitival complements. The purpose of Rouveret and Vergnaud's (1980) filter is to insure government, but not Case-marking, of the embedded lexical DP by a verb at S-Structure.

30 Since Kayne (1975) was working at a time prior to the development of the Extended Projection Principle and the Theta-Criterion, he obviously does not take a position with respect to possible changes in the argument status of the embedded external argument at levels subsequent to D-Structure.

31 See the end of section 2.3 for an account of those dialects of French which allow preverbal subjects.

32 Of course, as Marc Dominicy (p.c.) has pointed out to me, to be truly accurate, one must qualify these generalizations regarding the placement of the lexical embedded subject in causative constructions since they do not capture examples like (i) and (ii) below in which Heavy NP Shift has taken place.

- (i) J'ai fait téléphoner au professeur tous les étudiants qui s'étaient plaints de son cours.

I have made to-telephone to-the professor all the students who themselves were complained of his course

'I had all of the students who complained about his course call up the professor.'

- (ii) Elle a fait quitter à Jean tous ses amis.

she has made to-leave to Jean all his friends

'She made Jean leave all of his friends.'

33 The adjacency requirement on accusative Case assignment holds for lexical verbs in languages with no V-raising, such as English, and for verbal traces and lexical verbs in languages with V-raising, for example French. To illustrate, I use the following example from Chomsky (1981). In (i), accusative Case assignment to John is blocked by very much.

- (i) John wants (*very much) Bill to win.

34 For space considerations, I am assuming but not showing subsequent movement of AgrP to Spec of CP as well as short verb movement to Agr-O. These movements are always necessary to obtain government between faire 'to make' and the embedded verb.

35 One question which naturally arises with respect to an analysis using verbal government chain formation concerns the difference in placement of the lexical embedded subject in French and English causatives. Specifically, why is it that in English we do not find sentences such as (i) below in which V/VP raising has taken place?

- (i) *I made to leave my house (to) John.

In Reed (1992), the answer to this question is argued to follow from a parametric difference between French and English put forth in Pollock (1987, 1989). In his article, Pollock accounts for certain word order differences in French and English via a parametric variation in the strength of Agr, which Chomsky (1988) later split into two nodes Agr-O and Agr-S. In particular, English Agr-O in infinitival clauses is weak and therefore opaque to theta-role transmission. In contrast, French Agr-O is always strong. One consequence of the weakness of English Agr-O is that short verb movement of the embedded infinitival verb to Agr-O, which in my analysis is essential to establish a verbal government chain between make and the embedded verb, is always impossible in English. A raising analysis of English causatives is therefore not an option. Given this, we can account for the word order in English causatives if we assume that to make subcategorizes not for CP, but for either IP or for a VP small clause as in (ii).

- (ii) [CP [IP [VP made [IP/VP[John [VP leave]]]]]]

Under the IP option, John raises to Spec of IP at S-Structure in order to be assigned Case by make. If we adopt a VP small clause approach, make assigns Case to John directly in its base-generated position.

³⁶ With respect to clitic placement in the faire-infinitive construction, I only consider those clitics which have been termed "argument clitics," specifically, le/la/les/lui/leur 'him/it-ACC' 'her/it-ACC' 'them-ACC' 'him/her-DAT' 'them-DAT.' These clitics differ from other clitics (e.g., se 'self' y 'there' en 'some of it') in several respects.

First, they have morphologically distinct accusative and dative forms. Second, they are assumed to correspond to nominal empty categories which are obligatorily subcategorized for by the verb. Third, and most importantly, they have been analyzed as obligatory Case absorbers (cf. Borer (1983), Jaeggli (1982, 1986b)). All of these

properties distinguish the class of argument clitics from clitics like *y* 'there' and *en* 'of it' which are not Case absorbers and do not correspond to arguments of the verb. I do not, therefore, discuss the placement of *y* 'there' and *en* 'of it' in the *faire*-infinitive construction precisely because these differences have the effect of making the placement of these clitics irrelevant in determining the Case-marking properties of this construction.

For similar reasons, I also will not discuss the distribution of reflexive *se* 'self.' In particular, I assume, following Wehrli (1986) that *se* 'self' does not correspond to a syntactic object position and therefore that this clitic is not an obligatory Case absorber. This means that the placement of reflexive *se* 'self' is not pertinent in determining the Case-marking mechanism at work in the *faire*-infinitive construction.

37 As originally pointed out in Perlmutter (1971), judgments vary depending upon whether a third person clitic is used or whether a first or second person clitic is used. That is, while speakers universally accept (i), they are generally uneasy with examples like (ii).

- (i) Je l'ai fait embrasser à Marie.
I him-ACC have made to-kiss to Marie
'I had Marie kiss him.'
- (ii) ?*Je vous ai fait embrasser à Marie.
I you have made to-kiss to Marie
'I had Marie kiss you.'

I would like to suggest that example (ii) is not syntactically ill-formed and as a consequence should not be ruled out by the grammar. Instead, the mixed judgment elicited by this example should more properly be related to the morphological ambiguity of the clitic. Specifically, a clitic such as *vous* 'you' can encode either accusative or

dative Case features, hence the uneasiness speakers report when processing such sentences.

38 The generalization that accusative and dative clitics in French appear on the element from which they absorb Case is not true of Romance languages in general. Spanish and Italian, for example, allow the clitic corresponding to the embedded object in Control structures like (56) to appear on the matrix verb. One possible approach to resolving the issue of variable clitic placement within the Romance languages has been suggested in Suñer (1988) who modifies Jaeggli's (1986b) approach to Case absorption parameters. Specifically, Suñer provides evidence that clitics in Spanish and Italian are never Case absorbers, but are simply agreement affixes. The placement of Spanish (and by extension Italian) clitics therefore does not indicate which element they receive Case from. It is possible that the accusative and dative clitic placement facts in Italian and Spanish causatives differ from the distribution found in French because of this parametric variation in Case absorption, although this remains an issue beyond the scope of the present discussion.

39 A discussion of the interpretive difference between sentences (61b) and (61c) is the topic of chapter 3, but see also Authier and Reed (1991), Bailard (1982a,b), Dorel (1980), Hyman and Zimmer (1976), Y.-C. Morin (1980), and Reed (1990). As a *Probus* reviewer points out, examples of this type are also found in Spanish (Bordelois, 1974; Strozer, 1976).

40 See Jaeggli and Safir (1989: 26-38) for a discussion of identification conditions on *pro*.

41 Two additional facts support this account of this dialectal variation in terms of optional versus obligatory Case frame sharing. First, consider the following example which contrasts with (61c).

- (i) *J'ai fait les y mettre à Jean.

I have made them-ACC there to-put to Jean

'I made Jean put them there.'

The ungrammaticality of (i) straightforwardly follows from the following two assumptions: (a) Case frame merger is obligatory when the embedded subject is lexical and (b) merger is blocked anytime a clitic absorbs the Case feature(s) of a verb. That is, assumption (b) entails that the accusative clitic in (i) block the relation necessary for the formation of a verbal complex. If (a) and (b) are valid assumptions, then we would expect (i) to be illicit since the embedded lexical subject could not receive Case from faire 'to make' or from the complex verb faire mettre 'to make to put'.

A second piece of evidence concerns the contrast illustrated in (ii) and (iii).

- (ii) Je l'ai fait la lui envoyer. (la lettre à Marie)

I him-ACC have made it-ACC to her-DAT to send (the letter to Marie)

'I made him send it to her. (the letter to Marie)'

- (iii) *Je la lui lui ai fait envoyer.

I it-ACC him-DAT to her-DAT have made to send

'I made him send it to her. (the letter to Marie)'

The acceptability of (ii) follows from the assumption that it is a structure in which Case frame collapse has not occurred. In this example, there are two distinct verbs, each with their own respective Case arrays. The clitic corresponding to the embedded subject absorbs Case directly from faire 'to make', while the object clitics absorb their Case features from envoyer 'to send.'

In contrast, the ungrammaticality of (iii) follows if we assume that it is a merged structure, i.e., one in which a complex verb has been formed. This complex verb has a

single Case array with maximally one accusative and one dative feature. As a consequence, there is no Case feature available for the "extra" argument.

42 Some speakers of Standard French report that they do in fact allow the variants in (61c) and (62b). However, for these speakers these sentences are of a different register than (61b). Specifically, it is described as being typical of français populaire (colloquial French).

THE SEMANTICS OF DIRECT AND INDIRECT CAUSATION

3.1 Introduction

The last chapter was devoted to a determination of the thematic and syntactic structure of French causative sentences. There, it was argued that the the word order, clitic placement, and Case-marking facts found in various dialects of French can be accommodated by a verbal government chain analysis which strictly adheres to the principles of Theta Theory in the Government-Binding (GB) framework. In the present chapter I focus on the semantic interpretation associated with one particular type of dialectally restricted causative sentence discussed in chapter 2. As was mentioned in that discussion, many speakers, in particular those of southern France (Authier and Reed, 1991: 199), as well as certain dialects of Québec and Ontario (see Y.-C. Morin (1980: 205) and Appendix 1), accept causative sentences in which the morphological case of the clitic corresponding to the embedded subject fails to match that of its nominal counterpart, as in (1d) below:¹

- (1) a. Ça fera patienter les élèves.
 that will-make to-wait the students
 ‘That’ll { make } the students (to) wait.’
 get
- b. *Ça fera patienter aux élèves.
 that will-make to-wait to-the students
 ‘That’ll get the students to wait.’
- c. Ça les fera patienter.
 that them-ACC will-make to-wait
 ‘That’ll { make } them (to) wait.’
 get
- d. Ça leur fera patienter.
 that to-them-DAT will-make to-wait
 ‘That’ll get them to wait.’

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That is, as Kayne (1975) notes, Standard French speakers require that a nominal embedded subject receive accusative, not dative, Case whenever the embedded verb is intransitive. Thus these speakers accept (1a), but not (1b). While this fact regarding nominal embedded subjects is equally true of all non-Standard speakers, when one considers the cliticized version of (1a), a difference between the two groups emerges. In particular, the non-Standard speakers allow the clitic corresponding to the embedded subject to appear in either the Standard accusative Case in (1c) or in the non-Standard dative Case, as in (1d), with the latter being typical of more colloquial styles of speech. Furthermore, the "marked" variant in which the clitic does not match its nominal counterpart in Case features, i.e., (1d), is associated with a restricted meaning with respect to the degree of influence the matrix subject is implied to have had over the embedded subject. That is, as I have attempted to indicate by my English glosses, the "marked" dative variant in (1d) can only be interpreted as an instance of "indirect causation", which means that the embedded subject is portrayed as having had a certain degree of choice in his or her decision to act. In contrast, the Standard variants with the nominal DP in (1a), as well as the accusative clitic variant in (1c), are vague with respect to the direct/indirect distinction. In other words, in (1a) and (1c), the embedded subject may either have freely chosen to comply with the matrix subject's wishes or she/he may have had little opportunity to refuse.

A parallel, although not identical, situation obtains when one considers causative sentences containing embedded transitive verbs. In particular, as the data in (2a,b) below demonstrate, most non-Standard speakers of French, like Standard speakers, require that the nominal embedded subject receive dative, not accusative Case. (The * in (2b) is in parentheses because some speakers, in particular, those from the Ottawa-Hull area, do allow such examples, as is discussed in detail in Reed (1992).) However, when the embedded subject appears as a clitic in all non-Standard dialects, it once again becomes possible to vary its morphological case, a possibility which is strictly disallowed in Standard French. As was the case for the intransitive examples discussed above, the

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“marked” variant in which the morphological case of the clitic corresponding to the embedded subject does not “match” that of its nominal counterpart is associated with a particular interpretation. However, as is reflected by the English glosses, the unexpected accusative Case variant in (2d) is associated uniquely with direct causation.²

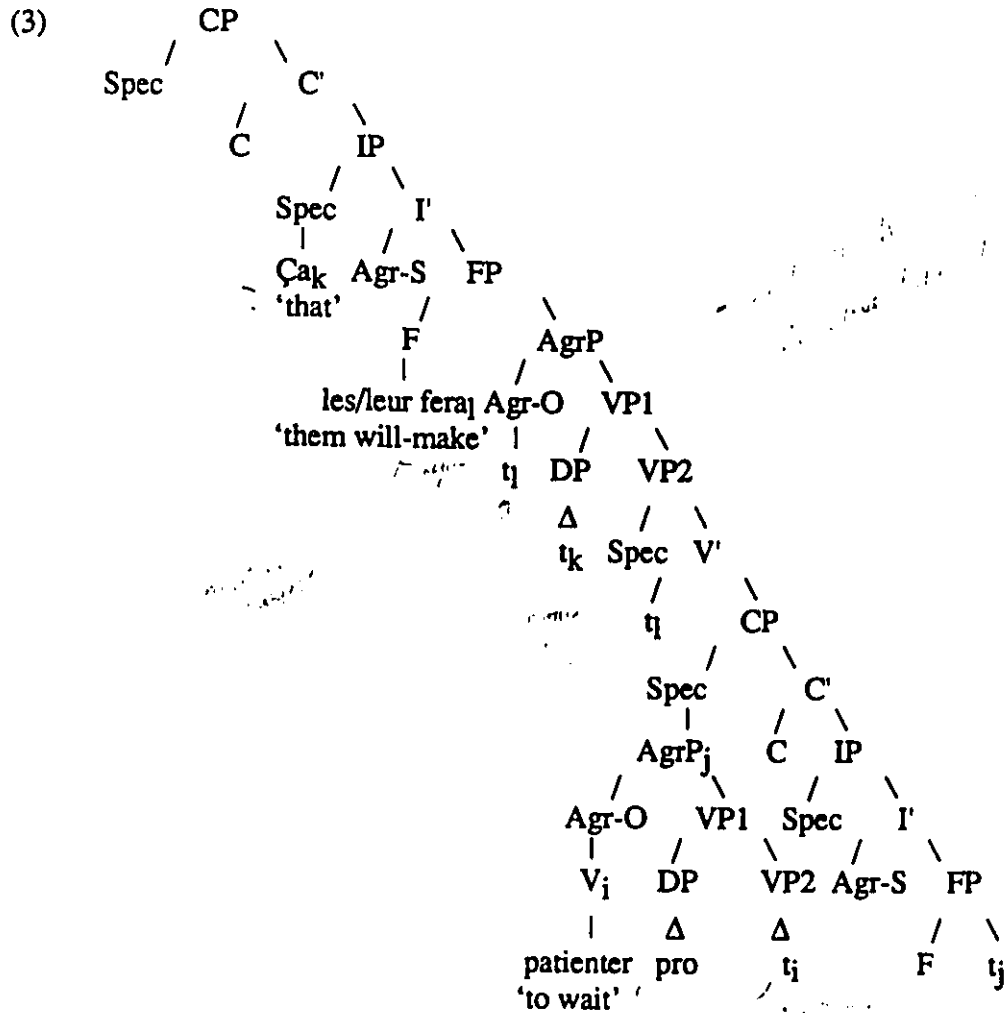
- (2) a. Marie faisait apprendre l’anglais à ses enfants.
Marie made to-learn the English to her children
'Marie { $\begin{matrix} \text{made} \\ \text{got} \end{matrix} \}$ her children (to) learn English.'
- b. (*)Marie faisait ses enfants apprendre l’anglais.
Marie made her children to-learn the English
'Marie { $\begin{matrix} \text{made} \\ \text{got} \end{matrix} \}$ her children (to) learn English.'
- c. Marie leur faisait apprendre l’anglais.
Marie to-them-DAT made to-learn the English
'Marie { $\begin{matrix} \text{made} \\ \text{got} \end{matrix} \}$ them (to) learn English.'
- d. Marie les faisait apprendre l’anglais.
Marie them-ACC made to-learn the English
'Marie made them learn English.'

In sum, certain speakers of French allow the morphological case feature of the clitic corresponding to the embedded subject in causative sentences to vary and whenever this clitic absorbs a case feature which is not the same as that of its nominal counterpart, the sentence becomes “marked” with respect to whether the embedded subject had a great deal of choice in his or her decision to act (indirect causation) or whether s/he had little choice in the matter (direct causation).

Focussing uniquely on the cliticized variants, it is interesting to note that only the “unexpected” Case variants in (1d) and (2d) above were argued in the previous chapter to be associated with a syntactic structure in which a Case and Theta-role assignment dissociation occurs and, curiously, only these variants unambiguously encode the direct/indirect contrast. That is, in the previous chapter, I argued that both the Standard and

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the non-Standard examples containing an embedded intransitive verb in (1c,d) are associated with the S-Structure in (3) below in which predicate raising has occurred. Further, this S-Structure is identical to the LF configuration associated with this sentence since none of the LF rules discussed in chapter 1 apply in this example.



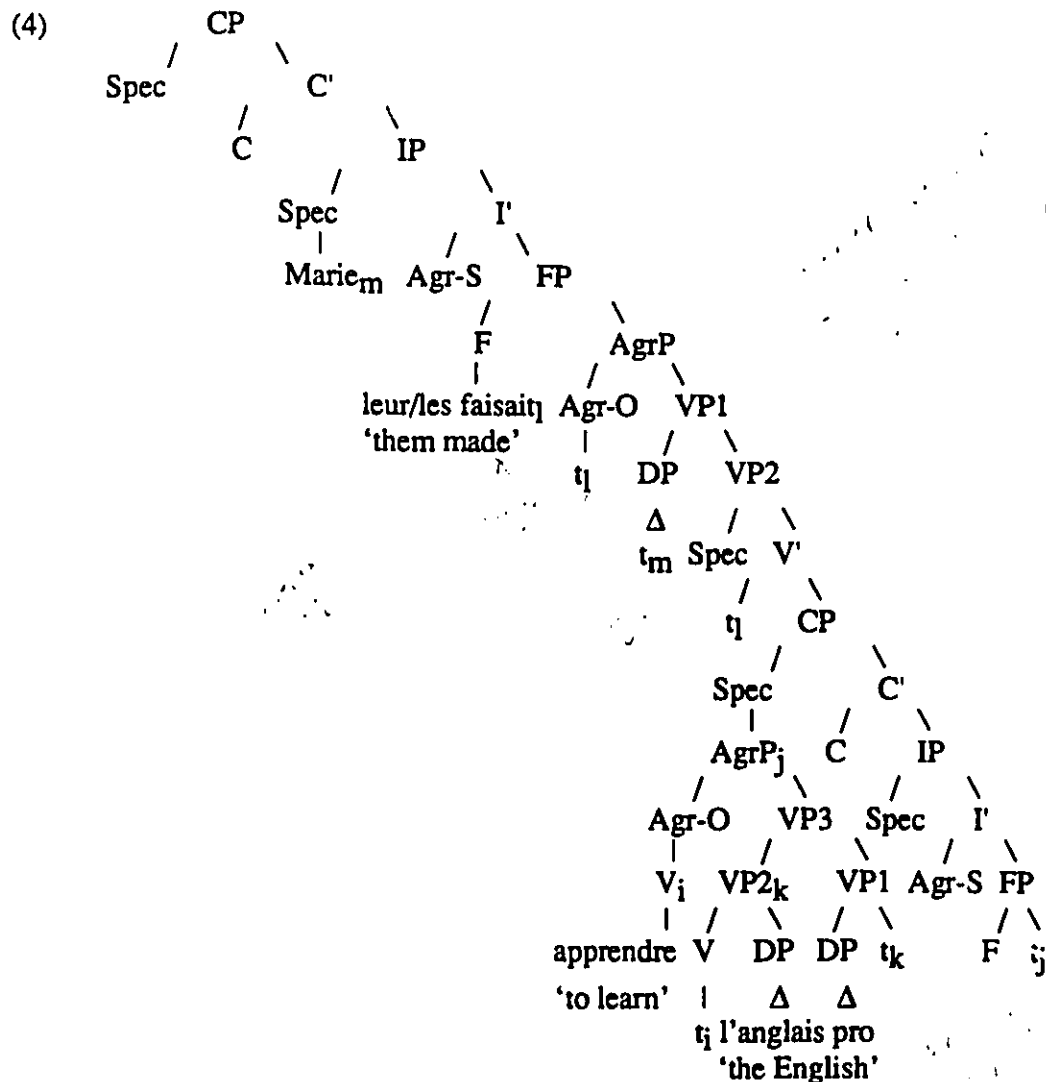
While both the Standard and the non-Standard examples in (1c,d) were argued to have the predicate Raised structure in (3) above, the Case-marking mechanism was said to be quite different. Specifically, with respect to the Standard accusative example, I suggested that this was due to the formation of a verbal government chain faire patienter 'to make to wait' which has a shared __ACC__(DAT) Case grid. Thus, in the Standard accusative variant, the clitic corresponding to the embedded subject has absorbed accusative Case from the

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same element which assigns it an external theta-role, i.e., the embedded predicate. In contrast, the dative Case feature associated with the clitic corresponding to the embedded subject in the non-Standard example in (1d) is due first to the fact that Case frame sharing is not “forced” by Case theory in such examples, and secondly to the fact that the CP complement of faire ‘to make’ may be assigned an accusative Case feature. If this is so, it was suggested, then the clitic corresponding to the embedded subject may absorb dative Case directly from faire ‘to make’ alone. Thus, in the case of the non-Standard dative variant, the clitic corresponding to the embedded subject receives its external theta-role from the embedded predicate (here, patienter ‘to wait’) and its Case from a distinct one (here, the tensed F associated with faire ‘to make’).³

A similar state of affairs is true of the Standard and non-Standard examples containing an embedded transitive verb in (2c,d), which is associated with the S-Structure in (4) below.⁴

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In particular, in section 2.5 of chapter 2, it was argued that the clitic corresponding to the embedded subject may either absorb its Case feature from the verbal unit faire apprendre 'to make to learn', as in the Standard dative example, or it may absorb its accusative Case feature from faire 'to make' alone since Case frame collapsing is not "forced" by the embedded subject's need for Case. In the former instance, this argument is receiving both its external theta-role and its (dative) Case from the same element. In the latter, it receives its Case feature from one predicate (tensed faire 'to make') and its external theta-role from another, i.e., the embedded predicate. Once again, all of this information is recoverable at LF.

Chapter 3

In this chapter, I would like to argue that non-Standard causative constructions are the first area in the grammar of French in which one finds evidence supporting my contention that Case/Theta-role assignment dissociation is a means by which natural language may signal conventional (non-truth-conditional) aspects of meaning. In particular, in the sections below I will argue that it is the Case/Theta-role assignment dissociation found in these structures which “triggers” a conventional implicature regarding direct versus indirect causation. The organization of this chapter is as follows. It is divided into two major sections. The first section is devoted primarily to providing arguments in support of my view that the aspect of meaning signalled by the use of non-Standard morphological case is indeed an instance of a conventional implicature, as well as to formulating the meaning postulates associated with these non-Standard clitics. The second major section of this chapter provides a formal syntactic and semantic fragment of French which combines GB syntactic “rules” with the model-theoretic semantic framework put forth in Montague (1973) to arrive a partial grammar of French which can accommodate this phenomenon.

3.2 Direct versus Indirect Causation: Conventional Aspects of Meaning?

The notion of conventional implicature/semantic presupposition has long been the subject of interest and heated debate in the philosophical and linguistic literature. Central to the discussion, which originated with the logical analysis of definite descriptions, are such figures as Frege (1892), Russell (1905), and Strawson (1950), each of which has defended a strikingly different view as to how these aspects of meaning should be properly analyzed.⁵ In this dissertation, I adopt the view of conventional implicatures originally put forth by Frege (1892) and expanded upon in Gazdar (1979a,b), Grice (1975), Karttunen and Peters (1975, 1979), and Strawson (1950). As was mentioned earlier in chapter 1, according to this view, one must recognize that a given linguistic expression not only has a semantically asserted meaning, but also a conventionally implied or presupposed aspect

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of meaning. To briefly review this difference, consider the following classic example, taken from Russell (1905):⁶

(5) Le roi de France est chauve.

the king of France is bald

'The king of France is bald.'

According to the view of presuppositions that I am adopting, which is contrary to that of Russell (1905), the preceding example is associated with the semantic assertion in (6a) and the conventional implicature in (6b). That is, the sentence in (5) above asserts that the individual who is the King of France possesses the property of baldness and it presupposes (or conventionally implies) that such a person exists. The presupposition that such an individual exists is said to be tied to the use of the lexical item the, which is frequently referred to as one type of "presupposition trigger".⁷

(6) a. The King of France is bald.

b. There is a present King of France.

As was also mentioned in chapter 1, aspects of conventional meaning, such as the presupposition of existence tied to definite descriptors, are traditionally distinguished from semantic assertions by a number of tests. First, as Frege (1892: 123) originally pointed out, presuppositions "survive" internal negation.⁸ That is, in the negated version of (5) given below, the semantic assertion that the individual who is the king of France possesses the property of baldness is denied, but the presupposition that such an individual exists is still maintained.

(7) Le roi de France n'est pas chauve.

the king of France NEG is not bald

'The king of France is not bald.'

A related test for presupposition-hood is the question test. As was the case with internal negation, presuppositions remain in questions, but semantic assertions do not. That is, in (8) below, the speaker is questioning the truth or falsity of the semantic assertion (i.e., he

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or she is asking “Is it or is it not the case that this individual possesses the property of baldness?”); s/he is not questioning his existence or non-existence.

(8) Est-ce que le roi de France est chauve?

is it that the king of France is bald

‘Is the king of France bald?’

A third test, taken from Karttunen and Peters (1975, 1979), who further develop ideas put forth in unpublished work by Stalnaker (1974) and Thomason (1973), is that of “challengeability”. As these authors note, conventional implicatures contrast with semantic assertions in that they cannot be easily challenged by the listener. This is so because these aspects of meaning form part of the common ground assumed to be uncontroversial by both participants in the conversation.

To illustrate the functioning of this test, I will use the same example, Le roi de France est chauve ‘The king of France is bald’, considering first a situation in which the listener does not accept the speaker’s semantic assertion that the individual who is the king possesses the property of baldness. This semantic assertion is said by Karttunen and Peters (1975, 1979) to be “challengeable” because the listener may express disagreement with this aspect of meaning with a simple “I don’t think so”, in which case the speaker understands that the interlocutor accepts the presupposition that such an individual exists, but does not believe that that individual is bald. While challenging a semantic assertion is a rather simple matter, one encounters difficulty in denying a presupposition. Imagine once again that a speaker utters Le roi de France est chauve ‘The king of France is bald’, but that the listener does not believe that there is a king of France. To challenge this aspect of meaning, the listener cannot simply answer “I disagree” or the presupposition will still be assumed by the speaker to be accepted. Instead, one must be much more direct and disruptive and state something along the lines of “No, I disagree. The king of France isn’t bald, because there is no king of France”.⁹

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The preceding tests, when applied to the relevant causative sentences, provide positive proof that the direct/indirect distinction is indeed a conventional aspect of meaning. First, when one negates such examples, one finds that the aspect of meaning contributed by the unexpected morphological case feature is not affected by this operator. That is, in interpreting (9) below, the semantic effect of ne...pas 'not' is to deny the truth of the semantic assertion "Marie is causing them take English"; the negation is not interpreted as operating on the truth or falsity of the implicature that she is giving them little choice in the matter.

(9) Marie ne les faisait pas apprendre l'anglais.

Marie NEG them-ACC made not to-learn the English

'Marie didn't make them learn English.'

Similarly, when one questions such examples, it is once again the truth or falsity of the semantic assertion "Marie is causing them to take English" which is being operated upon and not whether or not she is forcing them to learn it or giving them a choice in the matter:

(10) Est-ce que Marie les faisait apprendre l'anglais?

is it that Marie them-ACC made to-learn the English

'Did Marie make them learn English?'

Finally, in these causative sentences, if a speaker utters the sentence Marie les faisait apprendre l'anglais 'Marie made them learn English' and the listener disagrees with the implicature that the children had no choice, but he or she accepts the truth of the semantic assertion, the listener is forced to disrupt the normal flow of conversation in order to explain what is believed to be inaccurate. For example, he or she will have to say something like "Well, she didn't make them learn English since they actually wanted to."

Having shown that the direct/indirect contrast passes all of the traditional presupposition tests, I turn next to the issue of how such aspects of meaning can be formally captured. Under the approach to presuppositions that I am adopting, such aspects are not truth-conditional, i.e., they do not form part of the intension or extension of a given

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linguistic expression, contra the approach to presuppositions advanced by Russell (1905). Instead, following Karttunen and Peters (1979), such aspects of meaning are part of the separate implicature expression which, together with the intension and extension expression, provides a final semantic value for the entire composite expression.

I would like to digress for a moment and clarify the preceding paragraph, and in particular, why I characterized presuppositions as “non-truth-conditional” aspects of meaning since this term may initially appear quite confusing. The confusion surrounding truth-conditional versus non-truth-conditional aspects of meaning most probably results from the fact that both aspects of meaning do affect the final semantic value assigned to the expression containing them. That is, if one utters Marie les faisait apprendre l’anglais ‘Marie made them learn English’ and, in fact, Marie did cause the children to learn English, but they asked her to let them do so, it seems that the semantic value of the entire proposition is affected, i.e., the proposition is not entirely true. In other words, since the truth or falsity of the presupposition does seem to affect the truth value associated with the entire expression, presuppositions do seem, in this sense, to be “truth-conditional”. While no one denies the fact that presuppositions do affect the truth value of the expression containing them (a fact originally noted in Frege (1892)), the term “truth-conditional” is nonetheless reserved solely for those expressions which directly determine the conditions under which the semantic assertion is true. Thus, if someone utters Marie les faisait apprendre l’anglais ‘Marie made them learn English’ and it is true that Marie did cause them to learn this language, but it was untrue that they had no choice in the matter, the semantic assertion is nonetheless entirely true, i.e., it is the case that Marie caused them to learn English. Therefore, the truth or falsity of the presupposition plays absolutely no role in the computation of the truth value of the semantic assertion. The semantic value of the presupposition only plays a role when one combines the semantic value of the semantic assertion with that of the presupposition to arrive at the semantic value of the composite expression.

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Given that presuppositions do ultimately affect the truth value of a linguistic expression that contains them, exactly how is this interaction captured formally? In the literature, two approaches have been taken: one may either adopt a bivalent system with truth-value gaps or one may resort to logical systems with more than two values. In this dissertation, I adopt the latter since it is generally much easier to conceptualize.¹⁰

In standard logic, all formulas are assigned a semantic value (meaning) of either true (1) or false (0). According to a many-valued logical system, such expressions can have multiple values; for example, Kleene (1952) proposed a logical system in which formulas may either be assigned the value 1 (true), 0 (false), or # (indeterminate). Under this view, if one utters the sentence Marie les faisait apprendre l'anglais 'Marie made them learn English' and, in fact, the children asked her to let them take English lessons, the formula will be assigned a semantic value of # since its presupposition is not satisfied.

Logical systems have been proposed that have even greater than three values and, in analyzing presuppositions, it is, in fact, quite advantageous to adopt a four-valued system because one can differentiate between degrees of truth, i.e., one can assign the relative weight that should be attributed to the semantic value of the semantic assertion versus that of the presupposition. Karttunen and Peters (1979), for example, adopt a system very similar to Herzberger's (1973) "two-dimensional" logic to explain how one arrives at a composite value based on both the values assigned to the presupposition(s) and the semantic assertion. Under this approach, one must recognize four logical possibilities. First, both the semantic assertion and the presupposition(s) may be false, in which case the composite expression is assigned a value of F. The second possibility is that the semantic assertion is false, but the presupposition(s) is/are satisfied. In this instance, the composite expression is assigned a value of f. Third, the assertion could be true, but the presupposition(s) false in which case the final value is t. Finally, both the semantic assertion and the presupposition(s) could be true, resulting in a composite value of T.

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As is obvious, this approach allows one to further refine exactly what importance is attributed to each aspect of meaning, with the semantic assertion being given a heavier weight. In contrast, the three-valued system fails to make any distinction between a situation in which both the semantic assertion and the presupposition(s) is/are false and a situation in which only the presupposition(s) is/are false since both will be assigned the value # (indeterminate). Thus, using the same example Marie les faisait apprendre l'anglais 'Marie made them learn English', imagine a situation in which both the presupposition that the children had a choice is false and the semantic assertion that Marie caused them to learn English is false and compare it with a situation in which only the presupposition is false. It seems desirable to say that someone has at least uttered a partial truth in the latter case, whereas the former should be characterized as a complete falsehood, a distinction which is easily captured if one adopts a four-valued logical system.

Having provided evidence that the "unexpected" Case variants are indeed instances of conventional implicatures, as well as some of the formal apparatus needed to capture these aspects of meaning, the only task remaining in the present section is to devise the intensional logic translations or meaning postulates that will be incorporated into the fragment of French to be provided in the next section. I choose to use meaning postulates for these particular aspects of meaning instead of "special" intensional logic translations, although, of course, either route ultimately would achieve the same end.

As is usual in model-theoretic semantics, meaning postulates are assumed to form part of the lexical entry of a given item and their function is to further specify the meaning of that expression. In this way, meaning postulates not only capture capture valid relationships that hold between various expressions, but they also serve to "filter out" semantically anomalous sentences, these being expressions which contain an item whose meaning is incompatible with that of another item in the sentence. To clarify how meaning postulates perform the first function, consider the following classic example originally discussed in Carnap (1947).

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(11) All bachelors are unmarried.

This sentence is analytically true, i.e., it is true not because of the syntactic form of the sentence, but because the lexical semantics of English requires that the meaning of bachelor be related in a very specific way to the meaning of unmarried. In particular, the extension of bachelor is a subset of the extension of unmarried. In order to capture this relationship, one must limit the set of theoretically possible models to just those in which the extension of bachelor is disjoint from the extension of married. As Carnap suggested, this can be achieved by incorporating the following meaning postulate into the fragment of English. (In this formula, L represents the necessity operator.)

(12) $\forall x L [\text{BACHELOR}(x) \rightarrow \neg \text{MARRIED}(x)]$

Having shown how meaning postulates specify the semantic relationships that hold between various lexical items, it is now possible to also demonstrate how they function to rule out semantically deviant sentences like (13) below:

(13) *John is a married bachelor.

Given the meaning postulate in (12) above, it is impossible to satisfy the truth conditions for the sentence in (13). That is, in order for (13) to be true, the sentence John is a bachelor must be true, as well as the sentence John is married. However, (12) explicitly rules out just such models, thus capturing the contradictory nature of the English sentence.

Having clarified the theoretical import of meaning postulates, it is now possible to turn to the task of developing ones capable of capturing the direct/indirect contrast in French causatives. I will first consider the case of direct causation; that is, examples in which the clitic corresponding to the embedded subject appears in accusative case in a causative sentence containing an embedded transitive verb. As was mentioned earlier, in such sentences the speaker is said to have committed himself or herself to the implication that the embedded subject had little choice in his or her decision to act. Thus, in examples like Marie les faisait apprendre l'anglais 'Marie made them learn English', the children are

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being portrayed by the speaker as having been forced in some sense to comply with Marie's wishes.

I would like to suggest that this aspect of meaning can be captured by using innovations Lewis (1973), Stalnaker (1968), and Stalnaker and Thomason (1970) originally developed in their analyses of counterfactual conditionals, in particular, the primitive selection function S . S is a function which assigns to each world a set of sets of worlds which are equally similar to each other and minimally different from the world under consideration. This set of sets of worlds is referred to as the set of equally similar worlds for w and that set of worlds which is most like w is referred to as the "closest set of similar worlds" for w .

Returning to the notion of direct causation, I would like to propose that when a speaker utters Marie les faisait apprendre l'anglais 'Marie made them learn English' he or she is conventionally implying that in all of the closest similar worlds to the one under consideration, it is necessarily the case that the children learned English. In other words, the speaker states that in any world in which a very similar set of circumstances held, the children must have learned English; that is, there is no possible world very much like this one in which they, for example, chose not to.

The meaning postulate given below formalizes this idea. Regarding the notation in (14), the symbol p is a propositional variable; the symbol L represents the necessity operator; the double indexing on the clitic pronoun reflects the fact that an "unexpected" Case/Theta-role assignment dissociation has taken place. In the postulate, I have specified only les 'them-ACC', but of course this postulate will also apply to all "unexpected" accusative clitics, e.g., le 'him-ACC', la 'her-ACC'; thus, les_{i/j} should technically be CLITIC-ACC_{i/j}. For the moment, I will not explain why I have chosen to represent the non-Standard clitic as a sentential operator, but the syntactic motivation for this will become clear in the next section.

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- (14) $\forall p \text{ L } [les_{ij}(p) \leftrightarrow \forall w' [w' \in \$w \rightarrow [!^v p !]_{U,w',i,g} = 1]]$, where
 $\langle i, w \rangle$ refers to the index under consideration and w' is a member
of the set of possible worlds closest to w .

In plain English, the meaning postulate given above states that every proposition p such that p is modified by the sentential operator les_{ij} is equivalent in meaning to the proposition 'it must be the case that for every closest similar world associated with the world under consideration, the formula expressed by p is true'.

Before turning to the meaning postulate which captures indirect causation, I would like to briefly consider an objection to the preceding postulate raised to me by Marc Dominicy (p.c.). The postulate in (14) makes use of the biconditional (\leftrightarrow). Therefore, I am making the claim that the expressions $[les_{ij}(p)]$ and $\forall w' [w' \in \$w \rightarrow [!^v p !]_{U,w',i,g} = 1]$ are equivalent. That is, every time one finds the former, one could replace it with the latter without changing the meaning and vice versa. Thus, my meaning postulate contrasts with that of Carnap in that the latter, given above in (12), makes use of the conditional (\rightarrow). Of course, the use of the conditional only requires that when the antecedent is true, then the consequent must also be true. That is, in the relevant example, the conditional only requires that if it is true that one is a bachelor, then it must also be the case that one is unmarried. Crucially, the conditional does not require that if the consequent is true, then so too must be the antecedent. That is, just because one is unmarried, it does not follow that one must be a bachelor since one could, for example, be a bachelorette. Thus, the use of the conditional correctly rules out the substitution of the expression is a bachelor for the expression is unmarried. Could it be the case then that the meaning postulate in (14) is too strong in stating that the two simple sentences are equivalent? If so, then perhaps this meaning postulate should be reformulated as in (15):

- (15) $\forall p \text{ L } [les_{ij}(p) \rightarrow \forall w' [w' \in \$w \rightarrow [!^v p !]_{U,w',i,g} = 1]]$, where
 $\langle i, w \rangle$ refers to the index under consideration and w' is a member
of the set of possible worlds closest to w .

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Although the formulation in (15) would do for present purposes, I believe that one should nonetheless maintain the strong version in (14), at least until some example has been found which falsifies it. That is, since I presently know of no expression which would translate into $\forall w' [w' \in \$_w \rightarrow [! \forall p !]_{U,w',i,g} = 1]]$ 'In every closest similar world associated with the world under consideration, p is true' which would not be an instance of a clitic Case alternation in a causative construction, I will continue to adopt (14).

Turning now to the postulate associated with examples of indirect causation, i.e., sentences like Ça leur fera patienter 'That will get them to wait', it is a simple matter to provide a formulation in a similar vein. Specifically, the meaning postulate for this non-Standard Case variant, given below in (16), specifies that the "unexpected" dative Case triggers a conventional implicature to the effect that in at least one of the closest similar worlds associated with this one, it is the case that the individuals in question do not wait. In other words, in using this clitic, the speaker states that in some other world in which a very similar set of circumstances held, but they didn't wait; for example, there may be a possible world much like this one in which they chose not to. Once again, for ease of exposition, I have just used the plural dative clitic $leur_{i/j}$ in (16), but it is actually intended to apply to all "unexpected" dative clitics.

$$(16) \forall p L [leur_{i/j} (p) \leftrightarrow \exists w' [w' \in \$_w \wedge [! \forall p !]_{U,w',i,g} = 0]], \text{ where}$$

$\langle i, w \rangle$ refers to the index under consideration and w' is a member
of the set of possible worlds closest to w .

To summarize, in this section, evidence was offered supporting an analysis of direct and indirect causation in terms of the notion of conventional implicature/semantic presupposition. Additionally, the semantic formalism needed to capture these aspects of meaning was developed. With respect to the former, the direct/indirect contrast was shown to resist internal negation, to survive questions, and to resist challenges. Concerning the latter, I proposed two meaning postulates which impose restrictions on the possible interpretations of the expressions that contain the "unexpected" Case variants. Specifically,

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the meaning postulate relating to direct causation requires that no proposition modified by an unexpected accusative clitic have a closest similar world in which the state of affairs did not hold. In contrast, the meaning postulate for indirect causation requires such a world.

In the next section, I will incorporate the proposals developed thus far into a “fragment” of French capable not only of generating these syntactic structures, but also of translating them into intensional logic, and of providing a model-theoretic interpretation for them.

3.3 A Fragment of French

This section is devoted to the formulation of a Montague-style treatment of the direct/indirect contrast. Throughout this thesis, I adopt Montague’s (1973) model as proposed in “The Proper Treatment of Quantification in Ordinary English”, the PTQ model, rather than the various other versions of logical grammar that are available, e.g., Bartsch and Vennemann (1972), Cresswell (1973), and Montague (1970a,b). My reason for doing so is simply that the PTQ model is probably the best-known and most widely used, nothing more.

The PTQ model, like all model-theoretic treatments, is based on the Principle of Compositionality (Frege’s Principle), according to which the semantic interpretation of a complex linguistic expression is guided in a bottom-up fashion by its syntactic structure. Specifically, the syntactic “rules” of a given natural language specify the syntactic category of each lexical item, as well as how that basic syntactic category may licitly “combine” with other basic categories to form successively larger complex syntactic constituents. The semantic interpretation rules “feed-off” that syntactic structure in that the meaning of a complex syntactic categories is determined as a function of its parts and their mode of combination.

The PTQ model, unlike the other alternatives mentioned above, uses the indirect method of semantic interpretation. Under this approach, natural language expressions must

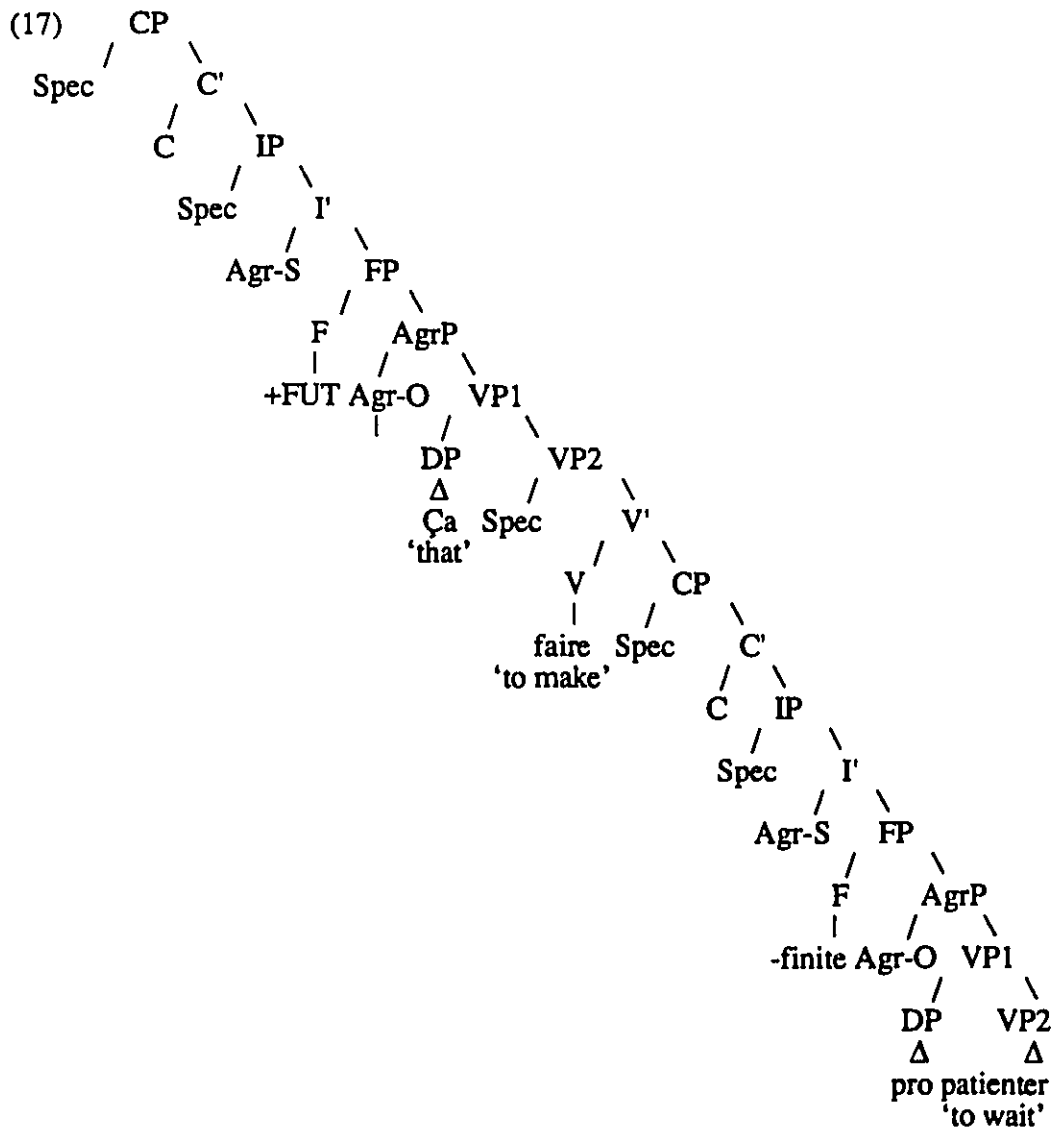
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first be translated into expressions of a different language, specifically, the language of intensional logic (IL), and then the resulting IL expressions are actually interpreted compositionally by the semantic module. The motivation behind this translation process is to provide a separate unambiguous IL translation for each ambiguous natural language expression.

Thus, the task of the present section is three-fold. First, I must provide the syntactic rules of French needed to generate the construction under investigation; this is simply the parametrized version of Universal Grammar (UG) that has been developed for this language in the GB framework. Second, I must develop a set of translation rules which will take the GB syntactic tree and translate it into its IL equivalent. Finally, I must provide the standard syntactic and semantic modules of IL which will ultimately provide the interpretation assigned to these expressions.

Beginning with the syntax, the D-Structure associated with causative sentences such as Ca leur fera patienter 'That will get them to wait' was argued in chapter 2 to be the following:

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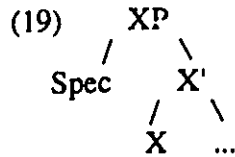
GB theory accounts for the syntactic well-formedness of the preceding D-Structure through an interaction of the lexical entry of the categories involved with the parametrized version of the principles of X' Theory and Theta Theory selected by the French language. To illustrate this briefly, X' Theory embodies the following principles:

(18) X' Theory:

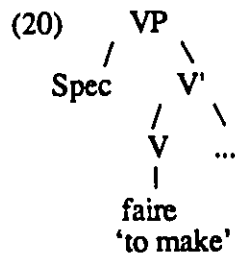
- a. Every syntactic category is a projection of a lexical head.
- b. X^n immediately dominates X^{n-1} , down to X^0 .
- c. Head Parameter: French is a head-initial language.

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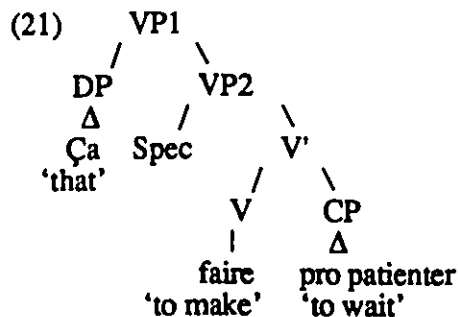
By clauses (18a,c), the following French structure will be projected before any lexical insertion takes place. This structure captures the fact that in French a head (X^0) must always precede its complements (...), and that each category projects in uniformity from XP, to X', down to X^0 .



Once a lexical item is inserted, the projections immediately dominating it must, by (18b), be of the same syntactic category. To illustrate, assume the item faire 'to make' is chosen:



At this point, the lexical entry of faire 'to make' and certain principles of Theta Theory, ensure that positions be projected for the internal and external arguments selected by this lexical item. Specifically, the Projection Principle requires that a verb's theta-assigning properties be represented at every syntactic level. Additionally, the External Theta-Role parameter for French specifies that external theta-role assignment is fixed to the left in this language. The combined effect of these requirements is illustrated in the following:

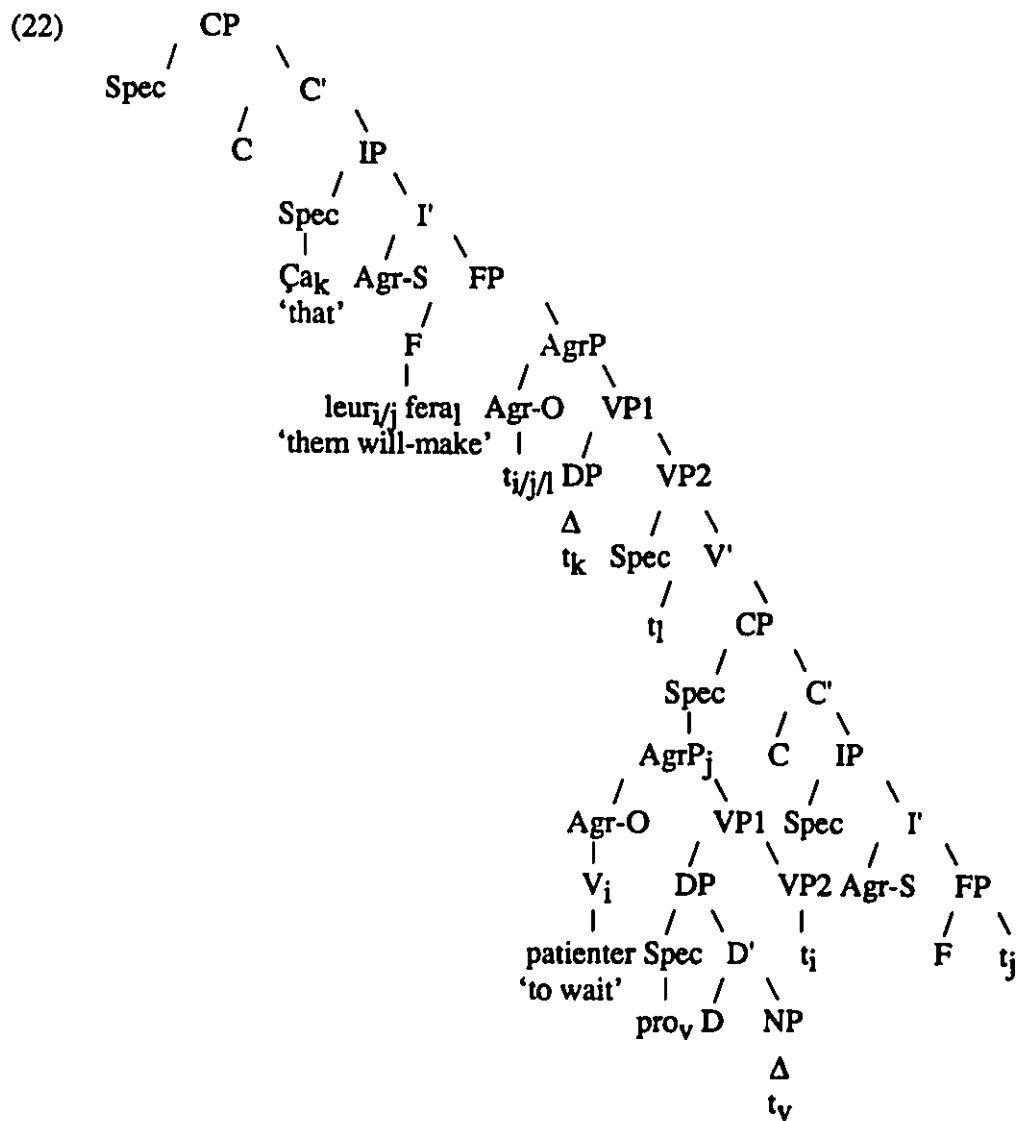


At this point, the spirit of the enterprise is probably obvious. Specifically, to account for the remainder of the D-Structure in (17), one must assume that the structure of IP proposed

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in Chomsky (1988) and Pollock (1987, 1989) is a reflection of subcategorization, i.e., C subcategorizes for IP; Agr-S for FP, and so on. If this is so, then the tree given in (21) above must project up and down in accordance with these subcategorization requirements acting in tandem with the principles of X' Theory already mentioned, resulting finally in the desired D-Structure originally provided in (17).

In the previous chapter, it was also argued that the sentence Ça leur fera patienter 'That will get them to wait' is associated with the S-Structure given below:



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This S-Structure is due to the interaction of three modules: Case Theory, the ban on vacuous quantification, and the identification conditions imposed on thematic pro. First, Case Theory requires that lexical DPs receive a Case feature at S-Structure. This requirement motivates the movement of Ca 'that' to the uppermost Spec of IP, where it receives nominative Case from Agr-S.

The ban on vacuous quantification explains why V-Raising of faire 'to make' must take place at S-Structure. In particular, Chomsky (1982) argues that all operators must bind a variable at LF. Further, Pollock (1989: 392) suggests that [+finite] F is a member of the class of operators. As Pollock (1989) points out, a consequence of these two assumptions is that V-Raising in French is "forced" at S-Structure in order for the [+finite] F operator to bind a variable, i.e., its trace. Thus, this principle explains why V-movement takes place in the S-Structure given above.

The final relevant syntactic principle involves the identification conditions on thematic pro. This principle explains why the clitic pronoun leur 'them-DAT' must appear in this sentence, as well as why the embedded predicate and the embedded pro must raise at S-Structure. First, according to Jaeggli and Safir (1989: 32-38), pro is an empty category which is only licit if it is identified, identification being the association of the empty category with an element which bears person, number, and gender features. Identification can be achieved in a number of ways, depending on the type of pro involved, however, for present purposes, this requirement forces the appearance of leur 'them-DAT' since this is the only means by which pro may receive the relevant features from it. Thus, the appearance of leur 'them-DAT' is necessary in order to identify the pro in the embedded external argument position.

Further identification requirements on pro explain why AgrP Preposing, short verb movement of patienter 'to wait' to Agr, and raising of pro_v take place in (22). Specifically, Authier (1992a) proposes that thematic pro must be identified by agreement features on the closest c-commanding X⁰ category which heads the XP in which it is contained. In the

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preceding chapter, I argued that this proposal “forces” predicate raising and short verb movement to Agr, even in those causative sentences in which it is not motivated by the lexical embedded subject’s need for a Case feature, since, without predicate raising, the embedded subject *pro* will violate Authier’s conditions. That is, without raising of AgrP to Spec of CP, short verb movement to Agr, and raising of *pro_v*, the closest c-commanding X^0 category would be the embedded verb *patienter* ‘to wait’, but *patienter* ‘to wait’ does not bear the identifier for *pro*, and, therefore, the resulting structure would be ill-formed. However, if one adopts the predicate raised structure in (22) above, the first c-commanding X^0 is still the embedded verb, but now this verb is the foot of a V-government chain headed by *faire* ‘to make’, which, as required, does bear the identifier *leur* ‘them-DAT’. Of course, this identification can only take place if *pro* also moves to Spec of DP, since otherwise D would be the closest c-commanding X^0 category.

In conclusion, the syntactic “rules” that make up GB theory, which are actually a series of principles and parameters, do indeed generate the S-Structure provided above in (22). Of course, since no additional syntactic movement takes place in LF in this example, the S-Structure representation in (22) is identical to the LF configuration.

Given the parametrized version of the syntactic “rules” that are found in French, how may the syntactic structure guide the translation of the natural language expressions in this language into expressions of IL? As is standard, translation of any natural language involves a three step process. First, the procedure for converting the syntactic categories used in GB theory into the syntactic categories of intensional logic must be provided. Then, a set translation rules for lexical items is given. Finally, the translation rules which operate on the “higher” syntactic categories are devised.¹¹

To begin, the definitions necessary to achieve the mapping of GB syntactic categories onto their intensional logic counterparts are provided below in (23). This mapping procedure will derive a subset of all of the possible causative sentences, specifically, those with embedded intransitive verbs. This (incomplete) set of rules is

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sufficiently large to show how the semantic system functions. Regarding the notation used in the following mapping function, XP_{NL} and X'_{NL} refer to the maximal projection and the X' level projection of any non-lexical category, the non-lexical categories being C, Agr-S, F, and Agr-O. CFC refers to any Complete Functional Complex, a CFC being a category which contains a given syntactic item, its subcategorized internal arguments, as well as its external argument, as defined in Chomsky (1986b: 169). A CFC corresponds to the nodes marked VP1 in the tree given in (22) above. I have chosen to use the term CFC rather than simply VP1 for reasons that will become clear in chapter 5; specifically, there I will show that CFC is a useful cover term for all predicative structures, be they VPs, PPs, or DPs. Finally, the term V_S refers to any verb, like faire 'to make', which subcategorizes for a sentential complement and an external argument.

(23) f is a function from the set of GB syntactic categories to the set of logical

types of IL such that:

- a. $f(XP_{NL}) = f(X'_{NL}) = f(CFC) = t$
- b. $f(X^0_{NL}) = \langle \langle s, t \rangle, t \rangle$
- c. $f(D'_{\text{non-predicative}}) = f(DP_{\text{non-predicative}}) = \langle \langle s, \langle e, t \rangle \rangle, t \rangle$
- d. $f(N) = f(N') = f(NP) = f(V_{\text{monadic}}) = f(V'_{\text{monadic}}) = f(VP_{\text{monadic}}) = \langle e, t \rangle$
- e. $f(D_{\text{non-predicative}}) = \langle \langle s, \langle e, t \rangle \rangle, \langle \langle s, \langle e, t \rangle \rangle, t \rangle \rangle$
- f. $f(V_S) = \langle \langle s, t \rangle, \langle e, t \rangle \rangle$

Having provided the necessary mapping procedure, the second step of the translation process involves the translations of actual lexical items into equivalent IL expressions. As is usual, some lexical items are simply translated into constants of IL whose form closely resembles that of the equivalent natural language expression. This is the case for expressions like patienter 'to wait' and faire 'to make' whose lexical meaning remains largely unspecified. This standard translation procedure is embodied in the following translation rule:

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(24) a. g is a function from X_{α}^0 to $\text{CON}_{f(X)}^{\text{IL}}$, except for the exceptions to follow.

b. If $\alpha \neq \beta$, then $g(\alpha) \neq g(\beta)$.

The translation rule in (24a) states that a lexical item α is translated into a constant of intensional logic of whatever syntactic category is specified by the procedure given above in (23). To provide some concrete examples of how the translation rule in (24) operates, the expression patienter 'to wait' will be translated by (24) into the IL expression PATIENTER and, similarly, the future tense morpheme is mapped onto the IL constant FUT. The clause in (24b) ensures that two distinct lexical items are never mapped by (24a) onto the same constant of IL. Thus it is impossible to map the third person future morpheme -a and patienter 'to wait' onto the same constant of IL.

As was mentioned earlier, in Montague Grammar some lexical items are given special translations, the purpose of which is to more accurately reflect their meaning. For example, it is standard in Montague Grammar to translate determiners in the manner indicated below in (25a) and proper names as in (25b). (The relevance of the subscript $\text{DP}_{\text{non-predicative}}$ refers to the usual, non-predicative use of these categories. As will become clear in chapter 5, however, the semantic function of Ds is not always the same as that given in (25a) below.)

(25) a. $\underline{\text{un}}_{\text{DPnon-predicative}} \text{-----} \rightarrow \lambda Y \lambda X \exists z (\forall Y(z) \wedge \forall X(z))$

b. $\underline{\text{Marie}}_{\text{DPnon-predicative}} \text{-----} \rightarrow \lambda P^{\forall P}(m)$

The decision to translate a determiner like un 'a' as in (25a) above rather than, say, as the constant UN is motivated by the need to express more precisely exactly what the meaning of this lexical item is. That is, the translation $\lambda Y \lambda X \exists z (\forall Y(z) \wedge \forall X(z))$ clearly shows that this determiner expresses a particular relation between properties of individuals; specifically, un 'a' refers to a relation between two properties X and Y which holds in a given world at a given time if and only if there is at least one individual who has both of the properties in question. Thus, Un homme marche 'A man is walking' will be true if and

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only if there exists some individual in the world who possess not only the property of being a man, but also the property of walking. Similar considerations explain the standard translation of proper names as denoting the set of properties that are true of an individual, as in (25b).

In the present “fragment” of French, I will use the following special rules to translate null determiners, (optional) clitics in Agr-O and Agr-S, infinitival morphemes in F[-TNS], (optional) complementizers in C, *pro*, the trace of a moved pronoun, and the extensional verb *faire* ‘to make’.

- (26) a. $\emptyset_{\text{definite det}} \text{ ----> } \lambda Y \lambda X \exists x (\forall y ({}^Y Y(y) \leftrightarrow (x = y)) \wedge {}^X X(x))$
 b. $(\text{CLITIC})_{\text{Agr-O/S}} \text{ ----> } \lambda p (\text{CLITIC}) \forall p$
 c. $\text{INFINITIVAL MARKER}_F \text{ ----> } \lambda p \forall p$
 d. $(\text{COMPLEMENTIZER})_C \text{ ----> } \lambda p (\text{COMP}) \forall p$
 e. $\text{pro}_N \text{ ----> } Z_n$
 f. $t_N \text{ ----> } W_n$
 g. $\text{faire} \text{ ----> } \lambda p \text{ FAIRE } \forall p$

The meaning of and motivation behind the translation rule in (26a) was explained in some detail in the preceding paragraph in reference to lexicalized determiners. My decision to posit a null determiner for examples containing pronouns like *ça* ‘that’ is simply to ensure compositionality within the DP, as will become clear from my translation list to be given shortly. The translations in (26b,d) expresses the meaning of optional lexical material in Agr-S, Agr-O, and C as being a function from propositions to truth values. For present purposes, (26b) will be of particular use since it is the appearance of the non-Standard clitic *leur_{i/j}* ‘to them’, generated in Agr-O, which contributes the conventional aspect of meaning regarding indirect causation in sentences like *Ça leur fera patienter* ‘That will get them to wait’. Specifically, the clitic in Agr-O in this sentence will be translated by (26b) into the IL expression $\lambda p \text{ LEUR}_{i/j} \forall p$. By the meaning postulate in (16) above, any sentence modified by this non-Standard clitic must have at least one closest world in which the

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sentence is not true. I have also provided what are essentially semantically null translations for complementizers like *que* 'that', as well as the infinitival morphemes (e.g., -ir, -re, -er) in $F_{[-TNS]}$. I have done so simply to allow for a compositional translation for each syntactic head. I am in no way taking the position that the morpheme in $F_{[-TNS]}$, has no meaning, I am simply not investigating what exactly its meaning is since it has no bearing on the analysis of direct and indirect causation I have proposed. Additionally, I have translated *pro* and the trace of a moved pronominal as a bound variable over properties of individuals. Finally, *faire* 'to make' is translated in a manner parallel to (26b,d).

At this point, it is now possible to determine the IL type of any GB expression found in predicative structures, as well as the IL translation for particular lexical items. The third and final step in the translation process involves the formulation of the translation rules for categories beyond the lexical level, i.e., the translation rule for the X^0 s dominating the lexical item in the tree, as well as various types of X's and XPs. These rules are provided below:

(27) a. Translation rule for X^0 s:

If $\alpha \in P_{X^0}$ and β is a lexical item of the same syntactic category, and α immediately dominates β , and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.

b. Translation rule for non-branching X's:

If α is a non-branching X' category and β is an X^0 immediately dominated by α and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.

c. Translation rule for internal arguments:

If α is an X^0 category and β is an XP and α subcategorizes for β and $\alpha \rightarrow \alpha'$ and $\beta \rightarrow \beta'$, then the X' or XP immediately dominating α and β , called $\gamma \rightarrow \alpha'(\wedge\beta')$.

d. Translation rule for XPs:

If $\alpha \in P_{XP}$ and $\beta \in P_{X^0}$ or X' and α immediately dominates β and possibly the SPEC of β and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.

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(27) e. Translation rule for CFC:

If $\alpha \in P_{XP}$ and $\beta \in P_{DP}$ or CP and α assigns an external theta-role to β and $\alpha \rightarrow \alpha'$ and $\beta \rightarrow \beta'$, then the XP immediately dominating α and β , $\gamma \rightarrow \beta' (\wedge \alpha')$

The careful reader may have noted that the only syntactic category which I have not translated is Spec. This is so because this position seems to only have a syntactic function, i.e., it is a position to which movement occurs. The expressions which are subject to movement will receive translations through their trace, therefore, material in Spec is “ignored” by the semantic component.

In order to see how the mapping from GB categories is achieved, as well as how all of these translation rules function in a bottom-up compositional fashion from the syntactic structure, I will now provide the IL translation list which corresponds to the sentence Ca leur fera patienter ‘That will get them to wait’, the LF (and S-Structure) of which was given above in (22).

- | | | |
|---------|--|--------|
| (28) a. | $t_i \rightarrow \text{PATIENTER}$ | T(24) |
| b. | $V \rightarrow \text{PATIENTER}$ | T(27a) |
| c. | $V' \rightarrow \text{PATIENTER}$ | T(27b) |
| d. | $VP_2 \rightarrow \text{PATIENTER}$ | T(27d) |
| e. | $\emptyset_{\text{definite det}} \rightarrow \lambda Y \lambda X \exists x (\forall y ({}^v Y(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$ | T(26a) |
| f. | $\text{pro} \rightarrow Z_n$ | T(26e) |
| g. | $N \rightarrow Z_n$ | T(27a) |
| h. | $D \rightarrow \lambda Y \lambda X \exists x (\forall y ({}^v Y(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$ | T(27a) |
| i. | $N' \rightarrow Z_n$ | T(27b) |
| j. | $NP \rightarrow Z_n$ | T(27d) |
| k. | $D' \rightarrow \lambda Y \lambda X \exists x (\forall y ({}^v Y(y) \leftrightarrow (x = y)) \wedge {}^v X(x)) (\wedge Z_n)$ | T(27c) |

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- (28) l. $= \lambda X \exists x (\forall y ({}^v Z_n(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$ λ -conv.
- m. $= \lambda X \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$ ${}^v \wedge$ -elim.
- n. DP $\text{-----} \rightarrow \lambda X \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$ T(27d)
- o. VP1 $\text{-----} \rightarrow \lambda X \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge {}^v X(x))$
 $({}^v \text{PATIENTER})$ T(27e)
- p. $= \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge {}^v \text{PATIENTER}(x))$ λ -conv.
- q. $= \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ ${}^v \wedge$ -elim.
- r. $\emptyset_{\text{Agr-O}} \text{-----} \rightarrow \lambda p {}^v p$ T(26b)
- s. Agr-O $\text{-----} \rightarrow \lambda p {}^v p$ T(27a)
- t. AgrP $\text{-----} \rightarrow \lambda p {}^v p (\wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27c)
- u. $= \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ λ -conv.,
 ${}^v \wedge$ -elim.
- v. -er $\text{-----} \rightarrow \lambda p {}^v p$ T(26c)
- w. F $\text{-----} \rightarrow \lambda p {}^v p$ T(27a)
- x. FP $\text{-----} \rightarrow \lambda p {}^v p (\wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27c)
- y. $= {}^v \wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ λ -conv.
- z. $= \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ ${}^v \wedge$ -elim.
- a'. $\emptyset_{\text{Agr-S}} \text{-----} \rightarrow \lambda p {}^v p$ T(26b)
- b'. Agr-S $\text{-----} \rightarrow \lambda p {}^v p$ T(27a)
- c'. I' $\text{-----} \rightarrow \lambda p {}^v p (\wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27c)
- d'. $= \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ λ -conv.,
 ${}^v \wedge$ -elim.
- e'. IP $\text{-----} \rightarrow \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ T(27d)
- f'. $\emptyset_C \text{-----} \rightarrow \lambda p {}^v p$ T(26d)

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- (28) g'. C ----> $\lambda p \forall p$ T(27a)
 h'. C' ----> $\lambda p \forall p (\wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27c)
 i'. = $\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ λ -conv.,
 \forall -elim.
 j'. CP ----> $\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))$ T(27d)
 k'. t_l ----> $\lambda p \text{FAIRE } \forall p$ T(26g)
 l'. V ----> $\lambda p \text{FAIRE } \forall p$ T(27a)
 m'. V' ----> $\lambda p \text{FAIRE } \forall p (\wedge \exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27c)
 n'. = $\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$ λ -conv.,
 \forall -elim.
 o'. VP2 ----> $\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))$
T(27d)
 p'. t_k ----> W_n T(26f)
 q'. N-----> W_n T(27a)
 r'. $\emptyset_{\text{definite det}}$ ----> $\lambda W \lambda Z \exists z (\forall q (\forall W(q) \leftrightarrow (z = q)) \wedge \forall Z(z))$
T(26a)
 s'. D ----> $\lambda W \lambda Z \exists z (\forall q (\forall W(q) \leftrightarrow (z = q)) \wedge \forall Z(z))$ T(27a)
 t'. N'-----> W_n T(27b)
 u'. NP ----> W_n T(27d)
 v'. D' ----> $\lambda W \lambda Z \exists z (\forall q (\forall W(q) \leftrightarrow (z = q)) \wedge \forall Z(z)) (\wedge W_n)$
T(27c)
 w'. = $\lambda Z \exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge \forall Z(z))$ λ -conv.
 \forall -elim.
 x'. DP ----> $\lambda Z \exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge \forall Z(z))$ T(27d)

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- (28) y' . $VP1 \text{-----} \rightarrow \lambda Z \exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge \forall Z(z))$ T(27e)
 $(\wedge \text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x))))$
- z' . $= \exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge$
 $(\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z))$
- λ-conv.
 \forall^\wedge -elim.
- a". $t_{i/j} \text{---} \rightarrow \lambda p \text{ LEUR}_{i/j} \forall p$ T(26b)
- b". $\text{Agr-O} \text{---} \rightarrow \lambda p \text{ LEUR}_{i/j} \forall p$ T(27a)
- c". $\text{AgrP} \text{---} \rightarrow \lambda p \text{ LEUR}_{i/j} \forall p$ T(27c)
 $(\wedge \exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge$
 $(\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z)))$
- d". $= \text{LEUR}_{i/j} (\exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge$
 $(\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z)))$
- λ-conv.
 \forall^\wedge -elim.
- e". $-a \text{---} \rightarrow \text{FUT}$ T(24)
- f". $F \text{---} \rightarrow \text{FUT}$ T(27a)
- g". $\text{FP} \text{---} \rightarrow \text{FUT } (\wedge \text{LEUR}_{i/j} (\exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge$
 $(\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z)))$
- T(27c)
- h". $\emptyset_{\text{Agr-S}} \text{---} \rightarrow \lambda p \forall p$ T(26b)
- i". $\text{Agr-S} \text{---} \rightarrow \lambda p \forall p$ T(27a)
- j". $I' \text{---} \rightarrow \lambda p \forall p (\wedge \text{FUT } (\wedge \text{LEUR}_{i/j} (\exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge$
 $(\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z))))$
- T(27c)

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- (28) k". = FUT (\wedge LEUR_{i/j} ($\exists z$ ($\forall q$ ($W_n(q) \leftrightarrow (z = q)$) \wedge
 (FAIRE ($\exists x$ ($\forall y$ ($Z_n(y) \leftrightarrow (x = y)$) \wedge PATIENTER(x)))) (z)))
 λ -conv.
 \forall^\wedge -elim.
- l". IP \rightarrow FUT (\wedge LEUR_{i/j} ($\exists z$ ($\forall q$ ($W_n(q) \leftrightarrow (z = q)$) \wedge
 (FAIRE ($\exists x$ ($\forall y$ ($Z_n(y) \leftrightarrow (x = y)$) \wedge PATIENTER(x)))) (z)))
T(27d)
- m". $\emptyset_C \rightarrow \lambda p \forall p$ T(26d)
- n". C $\rightarrow \lambda p \forall p$ T(27a)
- o". C' $\rightarrow \lambda p \forall p$ (\wedge FUT (\wedge LEUR_{i/j} ($\exists z$ ($\forall q$ ($W_n(q) \leftrightarrow (z = q)$) \wedge
 (FAIRE ($\exists x$ ($\forall y$ ($Z_n(y) \leftrightarrow (x = y)$) \wedge PATIENTER(x)))) (z))))
T(27c)
- p". = FUT (\wedge LEUR_{i/j} ($\exists z$ ($\forall q$ ($W_n(q) \leftrightarrow (z = q)$) \wedge
 (FAIRE ($\exists x$ ($\forall y$ ($Z_n(y) \leftrightarrow (x = y)$) \wedge PATIENTER(x)))) (z)))
 λ -conv.
 \forall^\wedge -elim.
- q". CP \rightarrow FUT (\wedge LEUR_{i/j} ($\exists z$ ($\forall q$ ($W_n(q) \leftrightarrow (z = q)$) \wedge
 (FAIRE ($\exists x$ ($\forall y$ ($Z_n(y) \leftrightarrow (x = y)$) \wedge PATIENTER(x)))) (z)))
T(27d)

The final translation for the sentence Ca leur fera patienter 'That will get them to wait.' is provided in (28q"). Of course, this translation is not entirely faithful to the system put forth in Karttunen and Peters (1979) in that, technically speaking, one should have a separate translation for the semantic assertion and the conventional aspects of meaning rather than a combination of the two. That is, to be entirely accurate one should factor out of (28q") the presupposition of the existence of the matrix and embedded subject, the presupposition of indirect causation, as well as the presupposition that this event will take place at a time subsequent to speech time. When one undertakes these changes, one arrives

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at the pair of formulas in (29) below, the first of which is the semantic assertion and the second of which is the implicature expression. The truth value of the composite is then derived in the manner discussed in section 3.2 above.

$$(29) \quad \langle \text{FAIRE}(\text{PATIENTER}(x))(z), \text{FUT} (\wedge \text{LEUR}_{i/j} (\exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge (\text{FAIRE} (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z)))) \rangle$$

For brevity's sake, throughout this work I will continue to combine the semantic assertion and the conventional implicatures of a given sentence since a step-by-step derivation of separate trees would be needlessly repetitious. For example, in the case of the preceding sentence, it is obvious that the implicature expression would be derived exactly as in (28), while the tree associated with the semantic assertion would just be a simplified version of that same tree.

At this point, the GB syntax of causative sentences and its IL translation have been developed. While I have translated the GB syntactic tree into the equivalent syntactic tree used in IL, I have not yet provided the standard definitions employed by this syntactic theory (known as type theory), nor have I provided an explicit semantic component which will interpret that tree.

To begin, the syntax of IL is composed of three things: a list of the kinds of syntactic categories that are found in the language, which by tradition are referred to as the set of types, a list of the basic expressions of the language; that is, the actual items which belong to the various syntactic classes, and finally, the set of syntactic rules of IL which determine which expressions, simple and complex, are syntactically well-formed expressions of the language. In this thesis, I adopt the version of IL syntax put forth in Dowty (1979: 352-3) since my analysis of predicative sentences to follow in chapter 5 will make crucial use of notions of interval semantics.

The standard definition in (30) below specifies the set of types found in IL. Specifically, the syntax of this language contains three primitive expressions: entities, truth

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values, and intervals of time, as well as various things which can be constructed out of them:

- (30) The set of types is the smallest set T such that...
- a. e, t , and i are in T (regarded as the types entities, truth values, and intervals of time respectively)
 - b. if $a, b \in T$, then $\langle a, b \rangle \in T$
 - c. if $a \in T$, then $\langle s, a \rangle \in T$.

The primitive e has no direct equivalent in GB syntax, nor, of course, does i , however, as the preceding discussion showed, the type t refers to any syntactic category the semantic value of which is a truth value. That is, as suggested in (23) above, the GB categories CP, IP, FP, Agr-P, their X' equivalents, and any Complete Functional Complex (CFC) are all correlates of this syntactic type in IL. The various complex categories in (30b,c) also have GB equivalents. For example, earlier I proposed that all verbs which subcategorize for an internal CP argument and an external argument, of which faire 'to make' is an example, are of the type $\langle \langle s, t \rangle, \langle e, t \rangle \rangle$, which simply means that, from a semantic point of view, these expressions are functions from propositions $\langle s, t \rangle$ to sets of individuals $\langle e, t \rangle$. Thus, faire 'to make' in Ca leur fera patienter 'That will get them to wait' is a function from the proposition They wait to the set of individuals who have the property of causing them to wait.

As was mentioned above, the syntax of IL must also specify the set of basic expressions that are attested in this language, the basic expressions being the actual lexical items that are found. The set of basic expressions of this fragment of intensional logic includes the following:

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- (31) The set of basic expressions of IL includes...
- a. a set of non-logical constants of type a , designated, Con_a , e.g.,
PATIENTER 'to wait' is a non-logical constant of type $\langle e, t \rangle$.
 - b. a denumerably infinite set of variables of type a , designated Var_a ,
for each $a \in T$. For example, W_n is a variable of the type $\langle e, t \rangle$.
 - c. the logical constants FUT, PRES, IMP, and PC, which
are of the type $\langle \langle s, t \rangle, t \rangle$.

The final step necessary to define the syntax of IL is that of providing the syntactic formation rules, i.e., the set of rules which specify which expressions are recognized as well-formed in the translation language. This step is referred to as providing a set of "meaningful expressions of IL" of a given type a , designated ME_a , and it is defined recursively as follows, borrowing from Dowty (1979: 352):

- (32) The set of meaningful expressions of IL of type a is defined as follows:
- a. If $\alpha \in Con_a$, then $\alpha \in ME_a$.
 - b. If $u \in Var_a$, then $u \in ME_a$.
 - c. If $\alpha \in ME_{\langle a, b \rangle}$ and $\beta \in ME_a$, then $\alpha(\beta) \in ME_b$.
 - d. If $\alpha \in ME_a$ and $u \in Var_b$, then $\lambda u \alpha \in ME_{\langle b, a \rangle}$.
 - e. If α and $\beta \in ME_a$, then $[\alpha = \beta] \in ME_t$.
 - f. If $\varphi \in ME_t$, then $\neg \varphi \in ME_t$.
(Similarly for \wedge , \vee , \rightarrow , and \leftrightarrow .)
 - g. If $\varphi \in ME_t$ and $u \in Var_a$, then $\forall u \varphi \in ME_t$. (Similarly for $\exists u \varphi$.)
 - h. If $\varphi \in ME_t$, then $L\varphi \in ME_t$.
 - i. If $\alpha \in ME_a$ then $\wedge \alpha \in ME_{\langle s, a \rangle}$.
 - j. If $\alpha \in ME_{\langle s, a \rangle}$ then $\forall \alpha \in ME_a$.
 - k. If $\varphi \in ME_t$ and $\zeta \in ME_i$ then $AT(\zeta, \varphi) \in ME_t$.
 - l. If ζ and $\xi \in ME_i$ then $[\zeta \subseteq \xi]$ and $[\zeta < \xi] \in ME_t$.

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These rules define all of the syntactically well-formed expressions in IL. For example, the syntactic rules in (32a,b) simply state that all constants and variables of a given type are well-formed expressions of IL; similarly, (32c) specifies that if a category combines with its subcategorized argument a well-formed complex expression results.

Having provided all of the necessary syntactic definitions for the translation language, it is now possible to provide the semantic interpretation rules which are guided by them. The first step to providing the semantic component of IL resides in specifying those aspects of semantic interpretation which determine how one effects the mapping from the basic expressions to things in the world. This is known as providing the model for semantic interpretation. Natural languages are quite complex in that one must make reference to quite a large number of features about the world in order to construct the meaning of a given simple or complex expression. For instance, one must make reference to what individuals exist, what world or set of worlds are being considered, what moment in time the utterance is made at, how that moment is ordered relative to other moments (earlier, later, concurrent; contained in a larger interval etc., etc.), as well as what denotation a given expression is associated with relative to these factors. In sum, this means that the model, referred to as U , interprets a given expression of IL in the following manner:¹²

- (33) A model U for IL is an ordered octuple $\langle E, W, M, <, R, I, n, r, \$, F \rangle$ such that...
- a. E is the non-empty set of entities.
 - b. W is the non-empty set of possible worlds.
 - c. M is the non-empty set of moments in time.
 - d. $<$ is a simple (linear) ordering on M .
 - e. (i) The set of intervals of time I is the set of all subsets i of M such that if $i \in I$, then for all $m_1, m_2, m_3 \in M$, if $m_1, m_3 \in i$ and $m_1 < m_2 < m_3$, then $m_2 \in i$. (I.e., intervals have no internal gaps.)
(ii) i is a subinterval for j iff $i \subseteq j$, where i and j are intervals.

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- (33) e. (iii) i is an initial subinterval for j iff i is a subinterval of j and there is no moment $m \in (j - i)$ for which there is a $m' \in i$ such that $m < m'$.
- (iv) i is a final subinterval for j iff i is a subinterval of j and there is no moment $m \in (j - i)$ for which there is a $m' \in i$ such that $m > m'$.
- (v) m is an initial bound for i iff $m \notin i$ and $[m]$ is an initial subinterval for $\{m\} \cup i$. (I.e., m is the last moment just before i .)
- (vi) m is a final bound for i iff $m \notin i$ and $[m]$ is a final subinterval for $\{m\} \cup i$. (I.e., m is the first moment just after i .)
- f. Let $i_1 < i_2$ abbreviate "for all $m_1 \in i_1$, there exists an $m_2 \in i_2$ such that $m_1 < m_2$. (I.e., i_1 either completely precedes i_2 , i_1 is contained within i_2 but is not a final subinterval of i_2 , or i_1 and i_2 partially overlap with some part of i_2 later than i_1 .) Given this, R is a three-place relation $WXWXI$ such that ...
- (i) if $\langle w_1, w_2, i \rangle \in R$, then for all $i' \in I$ such that $i' < i$, $\langle w_1, w_2, i' \rangle \in R$, and
- (ii) where R' is that two-place relation such that $\langle w_1, w_2 \rangle \in R'$ iff for some i , $\langle w_1, w_2, i \rangle \in R$, R' is transitive, reflexive, and symmetric. (" $\langle w_1, w_2, i \rangle \in R$ " is read "world w_1 is exactly like w_2 at all times up to and including i .")
- g. Inr is a function from WXI into subsets of W such that if $w_1 \in \text{Inr}(\langle w_2, i \rangle)$, then $\langle w_1, w_2, i \rangle \in R$, for all $w_1, w_2 \in W$, $i \in I$. (I.e., the inertia worlds for a given index $\langle w, i \rangle$ are always a subset of the worlds that are exactly like w up to i , according to R .)

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- (33) h. $\$$ is a function that assigns to each $w_i \in W$ a set of sets of members of W , designated $\$_{w_i}$, such that...
- (i) $\$_{w_i}$ is centered on w_i , (ii) $\$_{w_i}$ is nested,
 - (iii) $\$_{w_i}$ is closed under unions, and (iv) $\$_{w_i}$ is closed under non-empty intersections. (i.e., each set in $\$_{w_i}$ is a set of worlds that are equally similar to w_i .)
- i. The interpretation function, designated F , assigns to each non-logical constant of IL of type a , a denotation, designated D_a , as follows:
- (i) $D_e = E$
 - (ii) $D_t = \{0,1\}$ (the truth values "false" and "true" respectively)
 - (iii) $D_i = I$
 - (iv) $D_{\langle a,b \rangle} = D_b^{D_a}$
 - (v) $D_{\langle s,a \rangle} = D_a^{WXI}$

The interpretation function (F) also assigns each logical constant of IL of type a a denotation as follows:

- (i) **FUT**: FUT is a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, FUT is a function which gives the value 1 when applied to any proposition p just in case $[! \forall p !]_{U,w,i,g} = 1$ at at least one moment t in i and $i > i_0$; otherwise, FUT gives the value 0.
- (ii) **PRES**: PRES is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, PRES is a function which gives the semantic value 1 when applied to any proposition p iff $i = i_0$ and there is some interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, $[! \forall p !]_{U,w',i',g} = 1$; otherwise, PRES maps the semantic value of p onto 0.

The Semantics of Direct and Indirect Causation

- (33) i. (iii) IMP: IMP is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, IMP is a function which gives the value 1 when applied to any proposition p just in case $i < i_0$ and there exists some interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, $[\forall p]_{U, w', i, g} = 1$; otherwise, IMP gives the value 0.
- (iv) PC: PC is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, PC is a function which gives the semantic value 1 when applied to any proposition p just in case $[\forall p]_{U, w, i, g} = 1$ at at least one moment $t \in i$ and $i < i_0$ and i is a closed interval, i.e., an interval whose beginning point and endpoint are included; otherwise, PC gives the value 0.

A value assignment g is a function that assigns to each variable of type a , a value in D_a .

While the preceding model specifies those aspects of meaning which have to do with assumed facts about the connections between language and the way the world is, the semantic rules of IL represent those aspects of meaning which are fixed by the nature of the language itself. These aspects of meaning, which are referred to as the definition of the denotation of a meaningful expression α with respect to an interpretation U , a world w , and interval of time i , and a value assignment g , or using formal notation, $[\alpha]_{U, w, i, g}$, are determined as in (34) below, as suggested in Dowty (1979: 352). As is usual to ensure compositionality, these semantic interpretation rules “feed off” their syntactic counterparts provided above in (32).

(34) Semantic Interpretation Rules of IL:

- a. If $\alpha \in \text{Con}_a$, then $[\alpha]_{U, w, i, g} = [F(\alpha)](\langle w, i \rangle)$.
- b. If $u \in \text{Var}_a$, then $[u]_{U, w, i, g} = g(u)$.

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- (34) c. If $\alpha \in ME_{\langle a,b \rangle}$ and $\beta \in ME_a$, then $[\mid \alpha(\beta) \mid]_{U,w,i,g} = [\mid \alpha \mid]_{U,w,i,g} ([\mid \beta \mid]_{U,w,i,g})$.
- d. If $\alpha \in ME_a$ and $u \in Var_b$, then $[\mid \lambda u \alpha \mid]_{U,w,i,g}$ is that function h with domain D_b , s.t. for any object x in the domain, $h(x) = [\mid \alpha \mid]_{U,w,i,g'}$ where g' is that value assignment exactly like g with the possible difference that $g'(u)$ is the object x .
- e. If α and $\beta \in ME_a$, then $[\mid \alpha = \beta \mid]_{U,w,i,g} = 1$ iff $[\mid \alpha \mid]_{U,w,i,g}$ is $[\mid \beta \mid]_{U,w,i,g}$.
- f. If $\varphi \in ME_t$, then $[\mid \neg \varphi \mid]_{U,w,i,g} = 1$ iff $[\mid \varphi \mid]_{U,w,i,g} = 0$.
(Similarly for \wedge , \vee , \rightarrow , and \leftrightarrow .)
- g. If $\varphi \in ME_t$ and $u \in Var_a$, then $[\mid \forall u \varphi \mid]_{U,w,i,g} = 1$ iff $[\mid \varphi \mid]_{U,w,i,g'} = 1$ for all g' exactly like g except possibly for the value assigned to u . (Similarly for $\exists u \varphi$.)
- h. If $\varphi \in ME_t$, then $[\mid L\varphi \mid]_{U,w,i,g} = 1$ iff $[\mid \varphi \mid]_{U,w',i',g} = 1$ for all $w' \in W$ and $i' \in I$.
- i. If $\alpha \in ME_a$ then $[\mid \wedge \alpha \mid]_{U,w,i,g}$ is that function h with domain WXI such that for each $\langle w',i' \rangle \in WXI$, $h(\langle w',i' \rangle) = [\mid \alpha \mid]_{U,w',i',g}$.
- j. If $\alpha \in ME_{\langle s,a \rangle}$ then $[\mid \forall \alpha \mid]_{U,w,i,g} = [\mid \alpha \mid]_{U,w,i,g} (\langle w,i \rangle)$.
- k. If $\varphi \in ME_t$ and $\zeta \in ME_i$, then $[\mid AT(\zeta, \varphi) \mid]_{U,w,i,g} = 1$ iff $[\mid \varphi \mid]_{U,w,i',g} = 1$ where $i' = [\mid \zeta \mid]_{U,w,i,g}$.
- l. If ζ and $\xi \in ME_i$, then $[\mid \zeta \subseteq \xi \mid]_{U,w,i,g} = 1$ iff $[\mid \zeta \mid]_{U,w,i,g} \subseteq [\mid \xi \mid]_{U,w,i,g}$, and $[\mid \zeta < \xi \mid]_{U,w,i,g} = 1$ iff for all $m_1 \in [\mid \zeta \mid]_{U,w,i,g}$ and all $m_2 \in [\mid \xi \mid]_{U,w,i,g}$, $m_1 < m_2$.

The semantic component for IL requires one final standard definition before it is complete:

- (35) If $\varphi \in ME_t$, φ is true with respect to U and $\langle w,i \rangle$ iff $[\mid \varphi \mid]_{U,w,i,g'} = 1$ for all g' .

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The syntactic and semantic rules for the translation language have now been provided. At this point it is possible to return to our final translation for Ca leur fera patienter 'That will get them to wait', repeated below in (36), to see how this would be interpreted.

$$(36) \text{ CP } \text{----> FUT } (\wedge \text{LEUR}_{i/j} (\exists z (\forall q (W_n(q) \leftrightarrow (z = q)) \wedge \\ (\text{FAIRE } (\exists x (\forall y (Z_n(y) \leftrightarrow (x = y)) \wedge \text{PATIENTER}(x)))) (z))))$$

The translation for this sentence says that at some future time, the individual picked out by the syntactic variable z will have the property of having caused the individual(s) picked out by x to wait. Furthermore, the meaning postulate associated with the non-Standard clitic leur 'them-DAT' (the fact that it is non-Standard clitic is signalled by the non-matching Case and Theta-role indices i/j), repeated below in (37), requires that in at least one of the closest similar worlds associated with the present index, z does not cause x to wait. Thus, the possibility that x refuses is envisaged, capturing the notion of "indirect" causation.¹³

$$(37) \forall p L [\text{leur}_{i/j}(p) \leftrightarrow \exists w' [w' \in \$_w \wedge [! \forall p l]_{U,w',i,g} = 0]], \text{ where} \\ \langle i, w \rangle \text{ refers to the index under consideration and } w' \text{ is a member} \\ \text{of the set of possible worlds closest to } w.$$

To summarize, this section was devoted to developing a model-theoretic account of the direct/indirect contrast which is capable of working from the GB syntactic tree available at LF. In this discussion, I first explained how the parametrized version of UG selected by the French language generates these sentences. Then, I developed a translation procedure which takes the LF configuration and maps it onto its IL equivalent. Finally, the standard syntactic rules of type theory used by IL were provided, as were the semantic interpretation rules which are guided by them.

3.4 Conclusion

This chapter explored the first area in the grammar of French which supports my thesis that a dissociation of Case and Theta-role assignments, represented at LF, may be used by a language to encode non-truth-conditional aspects of meaning. That is, in chapter 2 I argued

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that the clitic corresponding to the embedded subject in dialectally-restricted examples of the type *Ça leur fera patienter* 'That will get them to wait' receives its Case feature from one predicate (tensed *faire* 'to make') and its external theta-role from another (the embedded predicate). In this chapter I provided arguments indicating that this dissociation is used to encode a conventional implicature regarding the degree of choice this argument is asserted to have had over his or her actions. The remainder of this chapter was devoted to capturing this semantic presupposition in model-theoretic terms.

I would like to conclude this chapter by noting that the conventional implicatures discussed above may not be as arbitrary as they initially appear. In particular, in the preceding discussion it was shown that a non-Standard accusative Case feature encodes direct causation, whereas as a non-Standard dative feature is linked to indirect causation. Interestingly, there is across the board in French a correlation between dative clitics and animacy, as illustrated by the following examples in which the dative clitic is judged to be unacceptable when it is coreferential with an inanimate being.¹⁴

- (38) a. Je lui ai écrit une lettre. (lui = { à ma mère
*à l'université })
I to-her/*it-DAT have written a letter. (lui = { to my mother
*to the university })
'I wrote { her
*it } a letter.'
- b. Les soldats lui ont résisté. (lui = { à l'ennemi
*à la tentation })
the soldiers to him/*it have resisted (lui = { to the enemy
*to the temptation })
'The soldiers resisted { him.
*it. }'

As these data clearly show, dative cliticization seems to closely correlate with animate arguments. Since animacy is, in the real world, perceived as being synonymous with a certain degree of free choice over one's actions, it does not seem so surprising that the dative variant in causatives was the one selected to encode a degree of autonomy of action attributed to the embedded subject.

FOOTNOTES

¹ To the best of my knowledge, the unexpected Case variants discussed in this chapter were first noticed by Girault-Duviver (1856) and later by Damourette and Pichon (1911-1934). This variation is also mentioned in Harmer (1979) and Kayne (1975: 210, ft. 9), and it is discussed in depth in Authier and Reed (1991), Bailard (1982a,b), Dorel (1980), Hyman and Zimmer (1976), Postal (1981), Quicoli (1980), Reed (1990, 1991a) and Tasmowski-De Ryck (1985). Such Case variability in causatives has been reported in Spanish (Bordelois, 1974; Strozer, 1976) and Italian (Burzio, 1986: 277). Similar facts involving overt case-marking on Japanese DPs are discussed in Kuroda (1965), Shibatani (1973), and Tonoike (1978). Finally, Shibatani (1971) points out that a similar phenomenon appears to be at work in Quechua.

² An anonymous reviewer for Linguistic Inquiry has pointed out to myself and J.-Marc Authier that the dative example in (1d) is less acceptable than the unexpected accusative variant in (2d) in his/her dialect of Québec French, although s/he does not judge it to be ungrammatical. Furthermore, Paul Hirschbühler (p.c.) has pointed out to me that this difference in register is only attested with "pure" intransitive examples and not with intransitives like the following, which was drawn from the local Ottawa-Hull newspaper, LeDroit (August 21, 1991). In contrast to the "pure" intransitive example given in the text, (i) below is even judged to form part of high register speech.

- (i) Quant à la maison Saint-Laurent, elle ne pourrait continuer longtemps sans lui (Saint-Laurent, L.R.) aux commandes. Les gens, les acheteurs n'accepteraient pas. L'amour leur ferait refuser.

as to the house Saint-Laurent, it NEG would-be-able to-continue long without him at-the commands the people, the buyers Neg to-accept not the love them-DAT would-make to-refuse

'As for the Saint-Laurent firm, it would not be able to continue long without him at the helm. The people, the buyers would not stand for it. Love would oblige them to refuse.'

My syntactic and semantic account has nothing to say about what seems to be a very real difference in register between unexpected accusative (colloquial) and unexpected dative sentences with pure intransitive verbs (very colloquial). However, with respect to the issue of why dative clitics are less acceptable with "pure" embedded intransitives than with certain intransitives which also have a transitive lexical entry, I feel compelled to suggest that prescriptive grammar may be working in tandem with the pragmatic situation. Specifically, examples of the *patienter* 'to wait' variety are quite likely frowned upon because one never finds an à DP 'to-DAT' with this verb when the embedded subject is lexical, as is the case for the transitive use of verbs like *refuser* 'to refuse'. Additionally, it is interesting to note the type of situation such "high register" datives represent. Typically, one finds the "high register" unexpected dative with dual subcategorization verbs like *comprendre* 'to understand', *voir* 'to see', etc. Suspiciously, these verbs all favor the indirect reading that the dative clitic unambiguously encodes since it is difficult to directly cause someone to understand or see something. The sentence in (i) above follows this pattern: it is very difficult to imagine that love could directly cause someone to refuse to buy something from the Saint-Laurent company if Saint-Laurent is no longer there. Since

the situation strongly favors an indirect reading and the transitive use of the verb exhibits an à DP, the speaker is now licensed to use the unexpected dative clitic.

³ In consulting the Ottawa-Hull French corpus (Poplack, 1989), I found no examples of unexpected dative clitics with “pure” intransitive verbs like patienter ‘to wait’. (See appendix 1.) However, I did find many examples of such dative variants with verbs like comprendre ‘to understand’ which have both a transitive and an intransitive lexical entry, as in the following.

(i) ...Je leur ferais comprendre, hein.

I to-them-DAT would-make to-understand, huh

‘...I could get them to understand, eh.’

(Speaker number: 040; Text line number: 1508)

In this chapter, I am suggesting that the syntactic analysis proposed for dialects of Québec French (Morin, 1980: 205) and European French (Authier and Reed, 1991: 199), which definitely allow dative clitics with verbs like patienter ‘to wait’, extends to the Ottawa-Hull dialect. However, Paul Hirschbühler (p.c.) has indicated to me that the lack of examples of dative clitics with “pure” intransitives like patienter ‘to wait’ in the corpus may indicate that speakers of the Ottawa-Hull dialect do not allow clitic Case alternations of the dative type. That is, to account for examples like (i) above, he has suggested to me that the dative clitics in these sentences are due to some sort of “omitted” direct object. In other words, the “null object” is being assigned accusative Case, thus allowing the clitic corresponding to the embedded subject to absorb dative Case, which would explain why I was unable to find such examples with “pure” intransitive verbs in the corpus. If this analysis of the Ottawa-Hull dialect were valid, it would nullify my account of indirect causation for these speakers as being signalled by a Case/Theta-role dissociation. I would like to offer four arguments against such a view and in favor of the hypothesis that examples like (i) truly are “unexpected” dative Case variants parallel to those with “pure” intransitive verbs.

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First, if the dative clitic leur 'to them' in example (i) is to be attributed to the presence of some sort of empty direct object which is being assigned accusative Case, then the prediction is made that this same "null object" could be assigned accusative Case when the embedded subject is lexical, thus incorrectly ruling in examples like (ii) below:

(ii) *J'ai fait comprendre [e] aux élèves.

I have made to-understand to-the students

'I got the students to understand.'

Secondly, if one assumes the presence of some sort of empty category in the apparently intransitive use of verbs like comprendre 'to understand', then it is expected that such an object could enter into a predication relation with an adjectival phrase, as is the case when these verbs have a lexically-realized DP. That this prediction is also not met is illustrated by the following examples containing a second verb of this type, manger 'to eat'. In particular, as the contrast in grammaticality between (iii) and (iv) below clearly shows, this the alleged null argument, unlike the nominal counterpart cannot enter into such a relation.

(iii) Jean mange sa nourriture crue.

'Jean eats his food raw.'

(iv) *Jean mange [e] cru(e).

'Jean eats (something) raw.'

Third, this approach is making the implicit claim that verbs like comprendre 'to understand' and manger 'to eat', in fact, are purely transitive; i.e., the apparently "intransitive" use in examples like (i) above is actually syntactically transitive. This treatment of these verbs would lead one to expect similar null objects with all transitive verbs, but such is obviously not the case since one never finds "null objects" with transitive verbs like casser 'to break':

(v) Jean a compris [e].

Jean has understood

'Jean understood (something).'

(vi) *Jean a cassé [e].

Jean has broken

'Jean broke (something).'

As the preceding contrast demonstrates, an implicit argument approach leaves totally unexplained the idiosyncratic nature of the distribution of these alleged null arguments. The standard "dual" transitive/intransitive subcategorization frame approach that I am adopting, however, leads one to expect such idiosyncrasies.

Finally, assuming the presence of a null object in examples like (i) leaves the following contrasts in grammaticality unexplained:

(vii) *Jean a déjà donné à Marie.

Jean has already given to Marie

'Jean has already given (something) to Marie.'

(viii) On a déjà donné à la Croix-Rouge.

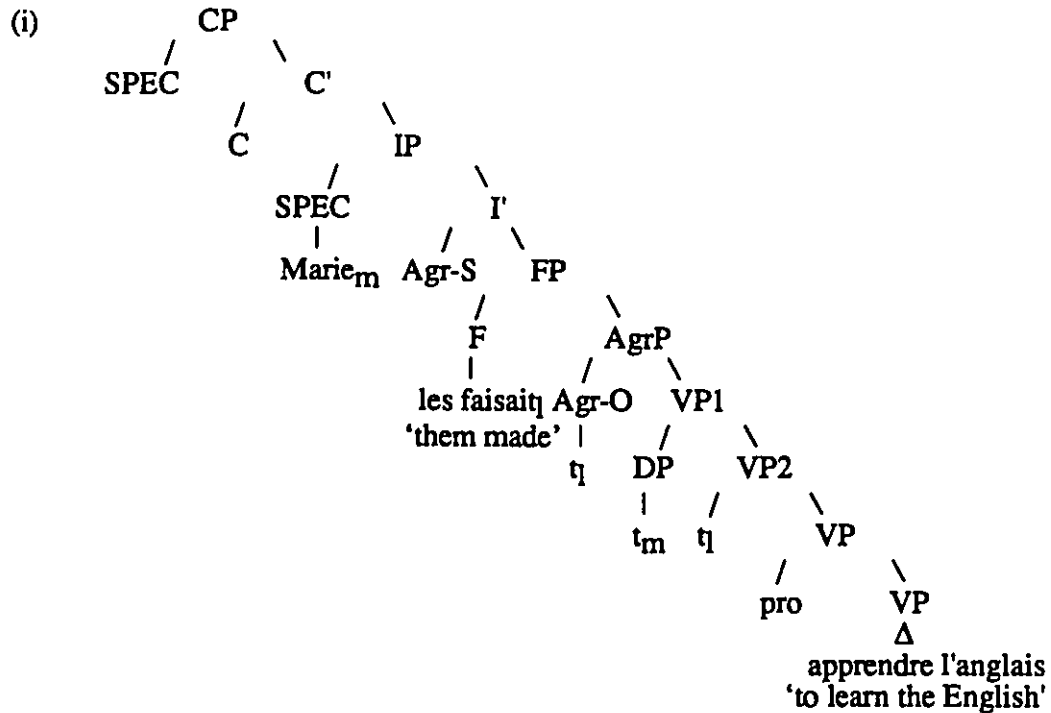
one has already given to the cross red

'We already gave to the Red Cross.'

If a verb like donner 'to give' allows a null argument in (viii), why shouldn't it allow such an argument in (vii)? Once again, these contrasts are explained if one makes the standard assumption that verbs like donner 'to give', comprendre 'to understand', etc., have both a transitive and an intransitive lexical entry and that these two entries may be similar, but they do not have the same meaning. Specifically, the transitive use of donner 'to give' means literally to give some object x to y, whereas the intransitive use means to donate.

⁴ Of course, for the Ottawa-Hull speakers, the "unexpected" accusative variant may also be due to the following small clause structure, or to an IP structure, which I have not provided. It is important to note that, regardless of which structure is responsible for the "double accusative" Case variants in this particular dialect, a Case/theta-role assignment

dissociation takes place and, therefore, the syntactic ambiguity in no way invalidates the extension of my analysis to the Ottawa-Hull dialects.



⁵ See Levinson (1983: Chapter 4) for a complete and critical review of various analyses of presuppositions.

⁶ See Gamut (1991: Vol. 1, Chapter 5, Section 5.5.6) for arguments to the effect that definite descriptions are, in fact, not instances of conventional implicatures, but rather are instances of generalized conversational implicatures in the sense of Grice (1975). Despite the controversial nature of this particular example, I nonetheless choose to use it to illustrate the notion simply because it is the best known.

⁷ Following Karttunen and Peters (1975, 1979) I use the terms presupposition and conventional implicature interchangeably, but see Levinson (1979) for arguments supporting the recognition of two distinct phenomena. It is also an issue of some debate as to whether these aspects of meaning are the subject matter of semantics or pragmatics. (See

Levinson (1983: Chapter 4) for the various positions and arguments.) I agree with Gamut (1991, Vol 1: 178) that the choice of field is basically irrelevant.

⁸ It is generally recognized that presuppositions do not survive a second type of negation, known as external or metalinguistic negation. To illustrate, in the following sentence, the truth of the presupposition that there exists a king of France is denied by the use of the external negative operator.

(i) The king of France is not bald, since there is no king of France.

⁹ For space considerations, I have only provided one example of a presupposition trigger in this chapter, this being the (controversial) definite descriptor. Many other presupposition triggers have been discussed in the literature, however. For an excellent summary of the various implicature-inducing expressions that have been proposed, see Levinson (1983: 181-185).

¹⁰ See Van Fraassen (1971) for a discussion of truth-value gaps.

¹¹ A step-by-step introduction to model-theoretic semantics (so-called "Montague Grammar") can be found in Dowty, Wall, and Peters (1981), Gamut (1991), and Partee (1975), among others.

¹² All of the clauses in (33) except for those pertaining to the tenses are taken from Dowty (1979: 351-352). For arguments supporting the analysis of the French tenses indicated in (33), see chapter 5.

¹³ In this chapter, I do not deal with the question of how to account for the judgments speakers assign to sentences like (i) and (ii) below because I have explored this issue in other work and it would greatly extend the length of the present chapter to do so again here. In particular, in Reed (1990) I argue that the unacceptability of examples like (i) is due to pragmatic (i.e., real world) knowledge. With respect to the ill-formedness of examples like (ii), originally noted in Postal (1984: 116), J.-Marc Authier and myself propose this is to be linked to a lexical-semantic difference in Control between base-

generated internal and external arguments. (See Authier and Reed (1991) for details and arguments.)

- (i) *Le soleil l'a fait enlever son manteau.
the sun him-ACC has made to-take-off his coat
'The sun made him take his coat off.'
- (ii) *Ça lui a fait grossir.
that to-him-DAT has made to-get-fat
'That got him to get fat.'

¹⁴ Kayne (1975: 106) notes that there are a few exceptions to this restriction on dative clitics in French, provided below in (i)-(ii):

- (i) Je leur ferai prendre l'air, à mes vêtements.
I them-DAT will-make to-take the air, to my clothes
'I'll give my clothes a good airing.'
- (ii) Jean lui survivra, à sa nouvelle théorie.
Jean it-DAT will-outlive, to his new theory
'Jean will outlive it, his latest theory.'

The dative clitic in these examples results in a special interpretation, discussed in Barnes (1980: 272). In particular, the inanimate DP is portrayed as being personally involved in or benefiting from in the action in much the same manner as an animate being would be.

THE SYNTAX OF FRENCH COPULAR SENTENCES

4.1 Introduction

The goal of this chapter is to review, update, and develop additional arguments in favor of what is generally considered to be the “standard” Government-Binding (GB) syntactic analysis of the French copula (*être* ‘to be’). In a nutshell, the discussion below will show that copular sentences such as those in (1) below are associated with the D-Structure in (2) and the S-Structure in (3).

- (1) Jean est { malade.
à la maison.
cet homme là-bas. }
- Jean is { sick.
at the house.
that man over-there. }
- ‘Jean is { sick.’
at home.’
that man over there.’ }

- (2) [CP [IP [FP [AgrP [VP être [AP/PP/DP Jean
[AP/PP/DP malade/à la maison/cet homme là-bas]]]]]]]]

- (3) [CP [IP Jean_i est_j [FP_{tj} [AgrP t_j [VP t_j [AP/PP/DP t_i
[AP/PP/DP malade/à la maison/cet homme là-bas]]]]]]]]

As the D-Structure in (2) and the S-Structure in (3) above demonstrate, GB syntacticians have analyzed the copula as a member of the class of Raising verbs, i.e., verbs which do not assign an external Theta-role to their subject position. Further, this particular Raising verb is assumed to subcategorize for an Adjective Phrase (AP), Prepositional Phrase (PP), or Determiner Phrase (DP) “small clause”, but, since this verb is hypothesized to lack Case-assigning properties, the surface subject DP must raise to Spec of IP at S-Structure in order to receive the nominative Case feature from Agr-S required by the Visibility Condition.^{1, 2}

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The discussion below will show why syntacticians have adopted this type of analysis of the copula. It is organized as follows. This chapter is divided into two sections, the first of which is devoted to the determination of the D-Structure of copular sentences and the second of which addresses the subject of their S-Structure. The first section on the D-Structure of copular constructions is divided into three subparts, each of which explores a plausible D-Structure for these sentences. The first possible D-Structure to be considered is that in which the surface subject of a copular sentence is base-generated as an external argument of *être* 'to be'. This analysis, which is put forth in Kayne (1969, 1975) and Ruwet (1972), will be shown to be untenable for French on the basis of two arguments drawn from Couquaux (1979, 1981) regarding a "surplus" in the distribution of *en* 'of-him/her/it/them' and a "hole" in the distribution of reflexive/reciprocal *se* 'himself/herself/itself/themselves'. On the basis of this discussion, it will be shown that the surface subject in these constructions must be base-generated after the copula. The second possible D-Structure, due to Couquaux (1979, 1981) and Stowell (1978), is that this DP is an internal argument of *être* 'to be'. This hypothesis too will be discarded on the basis of two arguments, these being the thematic interpretation of these sentences (due to Stowell (1983)), to which I will add an argument concerning the ad hoc nature of the type of "double direct objects" entailed by this type of analysis when one considers predicate nominal sentences. Section 4.2 concludes with postulating the D-Structure given above in (2), a D-Structure which is an obvious extension of Stowell's (1983) analysis of non-Raising small clause structures in English. Having determined the D-Structure of the construction under investigation, Section 4.3 turns to its S-Structure configuration. As was illustrated above, the surface subject of copular sentences is analyzed as raising from the subject position of the small clause to Spec of IP. This movement is motivated by the surface subject DP's need for a Case feature. In this section, the issue of proper government in these constructions will also be explored, i.e., I will demonstrate how the Barriers framework accommodates DP-Raising. Finally, this section will conclude by

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exploring the question of Case assignment to the “second” predicative DP (i.e., the S-Structure post-copular DP) in predicate nominal sentences, a discussion which draws from and expands on ideas in Heggie (1988).

As is clear from the preceding summary, my goals in this chapter are not to propose a novel analysis of copular sentences, as was the case for causative constructions in chapter 2, but rather I simply wish to trace the development of the standard analysis and, in some points, further develop the argumentation for it. My reason for doing so is simply this: copular sentences, being Raising structures, are another area in the grammar of French in which a dissociation of Case and Theta-role assignments occurs and is encoded at LF, therefore, I will argue in the chapter following this one that this opens the way for the encoding of a semantic presupposition (conventional implicature) regarding aspect. This chapter is, therefore, to be viewed as essential background for the discussion of the semantics of Raising constructions which is to follow, although it may also be of some more general interest in that it distills the work put forth by a number of authors (e.g., Couquaux (1979, 1981), Heggie (1988), and Stowell (1978, 1983)) and updates these proposals in light of many subsequent developments in the framework, in particular, Abney’s (1987) analysis of the DP, Chomsky’s (1986a) Barriers framework, Pollock’s (1987, 1989) analysis of the IP and the phenomenon of V-Raising in languages like French, and finally, the notion of VP-internal subjects, as put forth in Koopman & Sportiche (1985, 1987) and Zagana (1982), among many others.

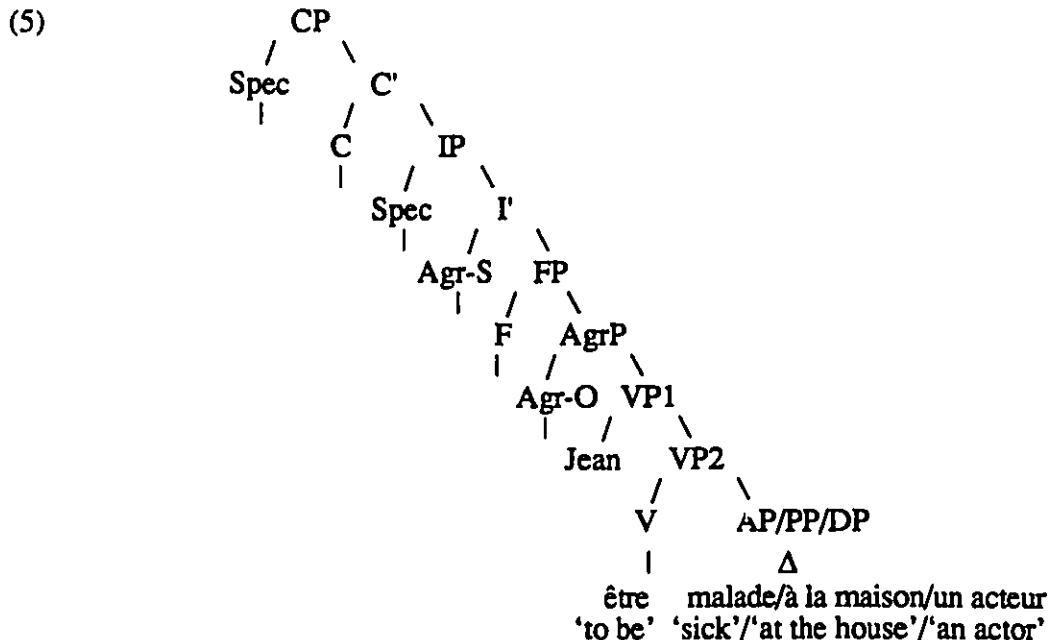
4.2 The D-Structure of Copular Sentences in French

This section will explore three possible analyses of the D-Structure associated with copular sentences. The first hypothesis, which can be found in Kayne (1969, 1975) and Ruwet (1972), associates copular sentences such as those in (4a,c) below with the (up-dated) D-Structure in (5). According to this approach, the surface subject DP is base-generated in

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“normal” subject position, i.e., VP-internally, following Koopman and Sportiche (1985, 1987) and Zagana (1982), among many others.³

- (4) a. Jean est malade.
 ‘Jean is sick.’
 b. Jean est à la maison.
 ‘Jean is at the house.’
 c. Jean est un acteur.
 ‘Jean is an actor.’



There are two arguments, originally put forth in Couquaux (1979, 1981), indicating that the D-Structure given above for être ‘to be’ is incorrect and that, this verb is, in fact, a Raising verb, i.e., a member of the class of verbs which do not subcategorize for an external argument.

Couquaux’s first argument for être ‘to be’ as a Raising verb concerns what initially appears to be an idiosyncratic surplus in the distribution of the indefinite object pronoun en ‘of him/her/it/them’ in copular sentences. Specifically, several authors, e.g., Gross (1968) Kayne (1969, 1975: 191), and Ruwet (1972: Chapter 2), have noted that the clitic pronoun

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en 'of him/her/it/them' is, for the most part, licit only when it corresponds to an object position, as in (6a,b) below. In other words, en 'of him/her/it/them' usually cannot correspond to an empty category in subject position, as the sentences in (7a,b), drawn from Couquaux (1979: 245 and 249), clearly demonstrate.

- (6) a. Ils ont parlé de ton livre.
they have spoken of your book
'They talked about your book.'
- b. Ils en ont parlé.
they of-it have spoken
'They talked about it.'
- (7) a. Les auteurs de ce théorème ont répondu aux critiques.
the authors of this theorem have answered to-the criticisms
'The people who developed this theorem answered objections to it.'
- b. *Les auteurs en ont répondu aux critiques.
the authors of-it have answered to-the criticisms
'The authors of it answered objections.'

This generalization about the distribution of en 'of him/her/it/them' is qualified because there do exist a number of exceptions to it, as Gross (1968: 25), Kayne (1969, 1975: 190), and Ruwet (1972: 49) have all noted; in particular, only a very limited class of verbs, e.g., être 'to be', paraître 'to appear', sembler 'to seem', devenir 'to become', rester 'to remain', and demeurer 'to remain', seem to exceptionally allow en cliticization from the subject position, as shown by the following examples drawn from Couquaux (1979: 249-250) and Ruwet (1972: 49).^{4, 5}

- (8) a. La préface de ce livre est trop flatteuse.
the preface of this book is too flattering
'The preface of this book is too flattering.'

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- (8) b. La préface en est trop flatteuse.
the preface of-it is too flattering
'Its preface is too flattering.'
- (9) a. La porte du garage { paraît
semble } ouverte.
the door of-the garage { appears
seems } open
'The door of the garage { appears
seems } open.'
- b. La porte en { paraît
semble } ouverte.
the door of-it { appears
seems } open
'Its door { appears
seems } open.'
- (10) a. La lecture de cette thèse devient intéressante à partir de la page 850.
the reading of this thesis becomes interesting from the page 850
'This thesis becomes interesting reading at page 850.'
- b. La lecture en devient intéressante à partir de la page 850.
the reading of-it becomes interesting at to-leave from the page 850
'Reading it becomes interesting from page 850.'
- (11) a. La parution de ton livre { reste
demeure } fixée au 30 février prochain.
the coming of your book { remains
remains } fixed at-the 30th February next
'The publication of your book is still set for the 30th of next February.'
- b. La parution en { reste
demeure } fixée au 30 février prochain.
the coming of-it { remains
remains } fixed at-the 30th February next
'Its publication is still set for the 30th of next February.'

Although none of the authors cited above, including Couquaux (1979, 1981), discuss the case of predicate nominals as opposed to predicative APs and PPs, the same surplus in the distribution of en 'of him/her/it/them' is found in this type of copular sentence:

- (12) a. Les cimes des Rocheuses sont un spectacle inoubliable.
the peaks of-the Rockies are a sight unforgettable
'The peaks of the Rockies are an unforgettable sight.'

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- (12) b. Les cimes en sont un spectacle inoubliable.
the peaks of-it are a sight unforgettable
'The peaks of it are an unforgettable sight.'
- (13) a. Les bords du Gange sont un lieu sacré.
the banks of-the Ganges are a place sacred
'The banks of the Ganges are sacred.'
- b. Les bords en sont un lieu sacré.
the banks of-it are a place sacred
'The banks of it are sacred.'
- (14) a. La toiture de ce temple est une véritable oeuvre d'art.
the roof of this temple is a true work of art
'The roof of this temple is a true work of art.'
- b. La toiture en est une véritable oeuvre d'art.
the roof of-it is a true work of art
'Its roof is a true work of art.'
- (15) a. Le jus de ce fruit est un breuvage apprécié des habitants de l'île.
the juice of this fruit is a beverage appreciated by-the inhabitants of the-
island
'The juice of this fruit is a beverage that is appreciated by the inhabitants
of the island.'
- b. Le jus en est un breuvage apprécié des habitants de l'île.
the juice of-it is a beverage appreciated by-the inhabitants of the-island
'Its juice is a beverage that is appreciated by the inhabitants of the island.'
- (16) a. La sève de cette plante est un poison mortel.
the sap of this plant is a poison deadly
'This plant's sap is a deadly poison.'

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- (16) b. La sève en est un poison mortel.
the sap of-it is a poison deadly
'Its sap is a deadly poison.'

To account for the apparent surplus in the distribution of *en* 'of him/her/it/them' with these verbs, Kayne (1969, 1975: 191-193) introduces an exceptional transformation called **EN-Extrapolation**. This rule, which is lexically-specified to apply only when *en* 'of him/her/it/them' appears in the subject position of the class of verbs illustrated above, has the effect of extraposing the *en* 'of him/her/it/them', which is base-generated within the DP in subject position, to the end of the sentence. From the end of the sentence, the pronoun cliticizes to the verb. In this way, Kayne preserves the generalization the *en* 'of him/her/it/them' may only be associated with a post-verbal position. Of course, as Couquaux (1979, 1981) points out, this is achieved at the cost of a lexically-restricted, ordered transformation.

Ruwet (1972: 54) suggests that the apparent exceptions provided above be handled in a slightly different manner. Ruwet, like Kayne, assumes the (up-dated) D-Structure provided earlier in (5), i.e., a D-Structure in which the subject is base-generated as the external argument of *être* 'to be'. Instead of assuming an extraposition rule, as Kayne does, however, Ruwet proposes the existence of an idiosyncratic rule, **EN-AVANT 'EN-FORWARD'**, which takes an *en* 'of him/her/it/them' in the subject position of the appropriate verb, e.g., *être* 'to be', and cliticizes it to the verb. Again, as Couquaux points out, an undesirable aspect of this type of approach is that it treats such sentences as idiosyncratic.

To account for these data in a more explanatory manner, Couquaux (1979: 251, 1981) proposes that copular sentences are associated not with the D-Structure Kayne and Ruwet adopt, repeated below for convenience as (17b), but rather with that of (17c). According to this (up-dated) D-Structure, which can also be found in Stowell (1978: 465),

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the surface subject is base-generated following the verb, i.e., it is apparently an internal argument of être 'to be'.

- (17) a. La préface de ce livre est trop flatteuse.
the preface of this book is too flattering
'This preface of this book is too flattering.'
- b. DP V AP
- c. e V DP AP

Given that the updated D-Structure in (17c) base-generates the surface subject of copular sentences in postverbal position, the fact that en 'of him/her/it/them' can cliticize in these constructions follows straightforwardly. That is, the D-Structure Couquaux (1979, 1981) and Stowell (1978) propose allows for the generalization that en 'of him/her/it/them' must correspond to an empty category in postverbal position to be maintained without resort to the exceptional lexically-marked syntactic rules proposed in Kayne (1969, 1975) and Ruwet (1972).^{6, 7, 8}

A second argument for the proposal that the surface subject of copular sentences is base-generated post-verbally, again due to Couquaux (1979, 1981), concerns an apparent gap in the distribution of reflexive/reciprocal se 'himself/herself/itself/themselves/each other'. In particular, Couquaux points out that the same class of verbs (i.e., être 'to be', sembler 'to seem', etc.) that exhibit a surplus in the distribution of en 'of him/her/it/them' also display gaps in the distribution of the reflexive/reciprocal pronoun se 'himself/herself/itself/themselves/each other'. As the following examples attest, se is normally grammatical if it is coindexed with the subject of a sentence:

- (18) a. Pierre s'est confié cette tâche.
Pierre to-himself is entrusted this task
'Pierre entrusted himself with this task.'

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- (18) b. Pierre et Odile s'écrivent de longues lettres.
Pierre and Odile to-each-other write some long letters
'Pierre and Odile write each other long letters.'

However, verbs like être 'to be' and sembler 'to seem' are apparent exceptions to this generalization regarding the distribution of se, as is illustrated by the following ungrammatical sentences.⁹

- (19) a. *Le sage s'est complètement indifférent.
the wise to-himself is completely indifferent
'The wise man is completely indifferent to himself.'
- b. *Pierre et Odile se sont semblables.
Pierre et Odile to-each-other are alike
'Pierre and Odile are alike.'
- c. *Ce saint homme se semble complètement indifférent.
this holy man to-himself seems completely indifferent
'This saintly man appears completely indifferent to himself.'

Once again, although Couquaux did not address predicate nominals in his articles, the same "hole" in the distribution of se 'himself/herself/itself/themselves/each other' is found in these constructions:

- (20) a. *Jean s'est un être cher.
Jean to-himself is a being dear
'Jean is endearing to himself.'
- b. *Pierre et Odile se sont des amants fidèles.
Pierre and Odile to-each-other are some lovers faithful
'Pierre and Odile are lovers who are faithful to each other.'

As Couquaux (1979, 1981) suggests, the generalization that reflexive/reciprocal se must be coreferential with a D-Structure subject can be preserved without exception if one assumes

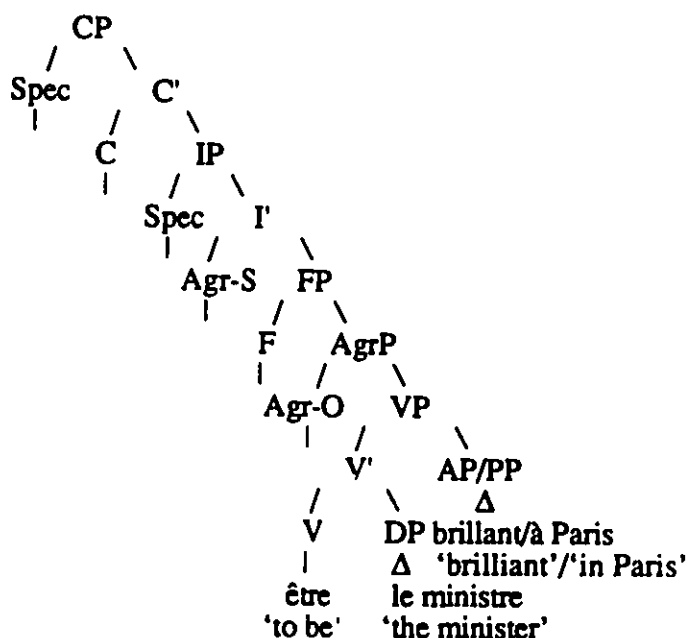
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with Couquaux (1979, 1981) and Stowell (1978) that the surface subject of verbs like être 'to be' is a D-Structure object of the verb.^{10, 11}

To briefly summarize the discussion thus far, two arguments have been reviewed which indicate that the surface subject of copular sentences is base-generated post-verbally. Specifically, as Couquaux (1979, 1981) first pointed out, in these structures the "surplus" in the distribution of en, a pronoun which must be associated with a postverbal empty category, and the "hole" in the distribution of reflexive/reciprocal se, a pronoun which must be associated with a D-Structure external argument, can be explained if one assumes that the surface subject of copular sentences is base-generated post-verbally, as in the updated D-Structure in (21b) below:¹²

- (21) a. Le ministre a été { brillant.
à Paris. }
the minister has been { brilliant
in Paris }
'The minister was { brilliant.'
in Paris.' }

b.



According to the preceding structure, être 'to be' subcategorizes for an internal (direct object) DP, and either an AP or a PP. It is, therefore, a bitransitive verb similar to e.g., remettre à 'to award' in (22) below, with which it would share the preceding D-Structure,

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excepting, of course, for the fact that remettre à 'to award' also subcategorizes for an external argument.

(22) *Le ministre a remis une médaille aux trois anciens combattants.*

the minister has awarded a medal to-the three former soldiers

'The minister awarded the three veterans a medal.'

While the preceding D-Structure can account nicely for the facts regarding en and se, two arguments militate against it. First, as Stowell (1983: 300) points out for non-Raising small clause constructions in English, this analysis assumes a theory of subcategorization which is at odds with the GB framework. In particular, verbs are standardly assumed to only subcategorize for arguments to which they assign a Theta-role; that is, subcategorization is nothing more than the specification of the syntactic category of a verb's internal arguments. Thus, an approach to copular sentences like that in (21b) would implicitly assume that the DP Jean in sentences like Jean est brillant 'Jean is brilliant' is assigned some sort of internal Theta-role by être 'to be'. Stowell (1983) suggests that this hypothesis is counterintuitive and indeed at first sight it is difficult to imagine what type of internal Theta-role être 'to be' would assign to this argument. Stowell's intuition, which remains undeveloped, receives support if one compares the semantic interpretation of être 'to be' with that of other transitive verbs. To explain, if one simplifies semantic theory to the extent that one takes into account only a purely extensional model (a simplification which is useful here for expository purposes), one notes that être 'to be' contrasts quite markedly with all other transitive verbs in that it does not express the usual relation between individuals, but is instead interpreted as a characteristic function of individuals, just as is the case with intransitive verbs. That is, as Dowty, Wall and Peters (1981: 30-32) explain, in model-theoretic semantics, all transitive verbs (e.g., aimer 'to love') are interpreted as functions which map the semantic value of their external argument into the semantic value of the VP, which is itself a function from individuals to truth values. As an illustration, consider the following sentence:

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(23) *Jean aime Marie.*

'Jean loves Marie.'

In this simplified model, transitive verbs like *aimer* 'to love' express a relationship between individuals; i.e., they are interpreted semantically as a function from individuals (the person(s) loved, in this example, *Marie*) to the semantic value of the VP, which is itself a function from individuals, e.g., *Jean*, to truth values.

Consider, in contrast, the interpretation of predicate adjectival sentences like *Jean est brillant* 'Jean is brilliant', which, given Couquaux's (1979, 1981) structure, should clearly follow the pattern exhibited by other transitive verbs like *aimer* 'to love'. Immediately it becomes obvious that the "transitive" verb *être* 'to be' does not subcategorize for an external argument, therefore, there is no other individual that the surface subject can enter into any relation with. Instead of expressing a relation between two individuals, what intuitively appears to be the case with *être* 'to be' is that the property denoted by the PP or AP is predicated of the surface subject, as many linguists such as Williams (1980) have noted. That is, *Jean est brillant* is true just in case Jean is a member of the set of individuals denoted by the adjective *brillant*. In this respect, the interpretation of predicate adjectivals actually mirrors that of intransitive verbs like *courir* 'to run'. In particular, as Dowty, Wall, and Peters (1981) point out, sentences containing intransitive verbs like *Jean court* 'Jean is running' are true just in case *Jean* is a member of the set of individuals denoted by *court* 'is running'. Thus intransitive verbs are characteristic functions of sets of individuals; they are functions from individuals (like *Jean*) and onto truth values (i.e., this function will take *Jean* as an argument and map the result onto 1 just in case it is true that *Jean* is a member of the set of running individuals.) Similarly, in predicate adjectivals, it seems as if the surface subject is an external argument of the intransitive "predicate" *brillant* 'brilliant', i.e., *brillant* 'brilliant' is a function from individuals like Jean to truth values. *Être* 'to be', therefore, does not seem to assign any thematic role to the surface subject at all. If one accepts Couquaux's D-Structure, this fact concerning the interpretation of

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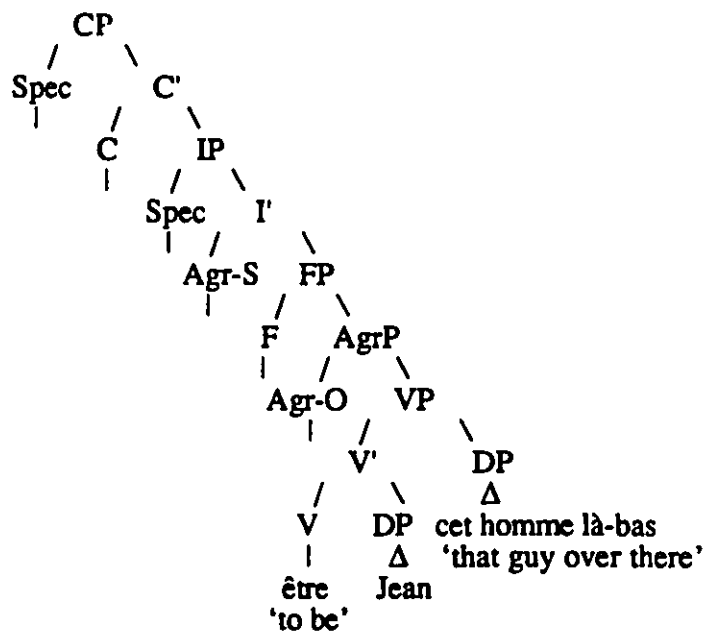
copular sentences is quite unexpected and the system would need to be modified in some way to accommodate this.

A second piece of evidence against the type of structure proposed by Couquaux (1979,1981) and Stowell (1978) concerns the ad hoc nature of such a D-Structure when one considers the case of predicate nominal sentences. (Couquaux (1979, 1981) and Stowell (1978) only considered predicate adjectivals and predicate PPs in their papers.) In particular, we have already seen that in predicate nominal sentences, the surface subject must be base-generated post-verbally (see e.g., the *en* cliticization facts in (12b)-(16b)). This means that if one extends the “internal argument” approach to the copula to predicate nominals, one associates them with the following D-Structure:

(24) a. Jean est cet homme là-bas.

‘Jean is that guy over there.’

b.



Interestingly, the structure in (24) is strikingly similar to one of the possible structures Kayne (1984: 134) notes in his discussion of English double object constructions of the type John sent Mary a letter. *Prima facie*, then, it would appear desirable to extend such an analysis to copular sentences. Although this hypothesis appears initially plausible, it is, in

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fact, somewhat dubious given the ungrammaticality of (25) below. To explain, to date, it has been assumed that in double object constructions Case is assigned to both object DPs (see for instance Larson (1988: 360)). However, (25) seems to indicate that the copular construction is an exception to the rule. That is, if the copula is assumed to be some kind of “double object” verb the ungrammaticality of sentences such as (25) remains unexplained.

(25) *Il est Jean cet homme là-bas.

it is Jean that man over there

‘It is the case that Jean is that man over there.’

What the status of (25) suggests is that the copula is not a Case-assigning verb. So, if one wishes to maintain the structure in (24), this decision amounts to recognizing a novel type of double object construction, one as yet found nowhere else in the grammar. In view of the general program of restricting the stipulatory power of the grammar, this move would seem ill-advised, especially if an alternative structure can be found.

Given the aforementioned problems with respect to the semantic interpretation associated with copular sentences and the stipulatory nature of this type of “double direct object”, one is led to the following seemingly paradoxical situation: the surface subject of copular sentences must be base-generated post-verbally, but behaves unlike any “normal” internal argument of the verb. What then is the status this DP? As will be shown below, an elegant solution to these problems can be found in proposals put forth in Stowell (1983); specifically, if one extends Stowell’s (1983) proposals regarding non-Raising ECM verbs like consider, make, etc., to the copula, this DP is not an internal argument of être, but rather an external argument (logical subject) of the embedded AP, PP, or DP.

To explain, Stowell’s (1983) primary objective was to simplify the Phrase Structure Rules (PSRs) of English by eliminating certain categorial asymmetries imposed on the subject position. Previously, it was assumed (e.g., in Chomsky (1970)) that the distribution of subjects was defective, i.e., limited to DP and IP, and that this fact had to be speci-

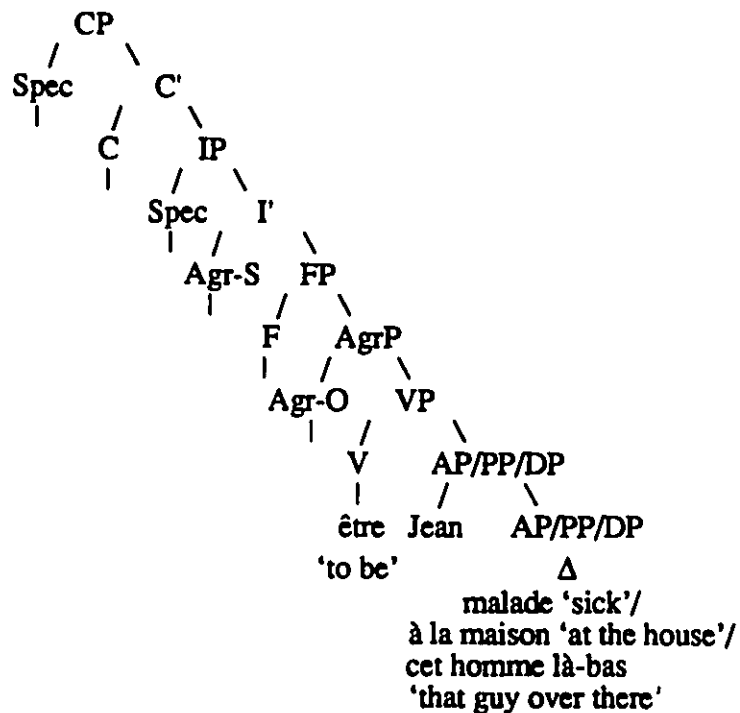
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fied by the PSRs. Stowell's main idea was this: let's simplify the PSRs by eliminating any asymmetry with respect to subject position, thereby reducing them to the following.¹³

- (26) a. $XP \rightarrow \text{Spec of } XP, X'$
 b. $X' \rightarrow X \dots$

Stowell then proposed a Universal Grammar (UG) principle defining subjects. Specifically, all syntactic categories project a subject position in Spec, but the actual realization of a lexical subject in this position is determined by principles of Case Theory, Binding Theory, and Theta Theory. Thus, all syntactic categories, including APs, VPs, and PPs, may theoretically project a subject in Spec of XP, provided that the subject may "pass" all of the constraints independently imposed by the other modules. One major consequence of this proposal which is particularly relevant for the issue at hand is that copular sentences could be associated with the following D-Structure.^{14, 15}

(27)



As the structure in (27) demonstrates, the surface subject of copular sentences is assumed to be base-generated as a logical subject of an AP, PP, or DP rather than as in external or internal argument of être 'to be'. Thus, être 'to be' is assumed not to subcategorize for a

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direct object, but rather for an AP, PP, or DP "small clause". As will be shown in the next section on the S-Structure of copular sentences, a lexical subject of a small clause is licit with *être* 'to be' because the external argument of AP/PP/DP may raise to Spec of IP in order to receive the Case feature from Agr-S necessary to satisfy the Visibility Condition.

Given that this D-Structure configuration is theoretically possible and, in fact, desirable in light of eliminating any "special" PSRs for subjects, how does it solve the problems raised earlier by the internal argument analysis? Recall that the first problem, pointed out in Stowell (1983), concerned the semantic (thematic) interpretation of copular sentences. Specifically, the surface subject was shown to exhibit behavior strikingly unlike a normal transitive direct object and parallel to that of an external argument of an intransitive verb. These facts, of course, follow straightforwardly from a small clause analysis since the surface subject of the copular sentence is base-generated as an external argument of the "intransitive" predicative AP, PP, or DP and not as an internal argument of *être* 'to be'.

The second problem concerned the issue of allowing a novel type of "double direct object" construction in the grammar. That is, Couquaux's (1979, 1981) and Stowell's (1978) D-Structure necessitated the stipulation that *être* 'to be' be the only exception to the generalization that double objects are assigned Case in their D-Structure position. This issue too is obviously resolved via a small clause analysis of the copula, as in (27) above. Such an elimination is naturally desirable on grounds of limiting stipulations in the grammar in favor of explanatory principles.

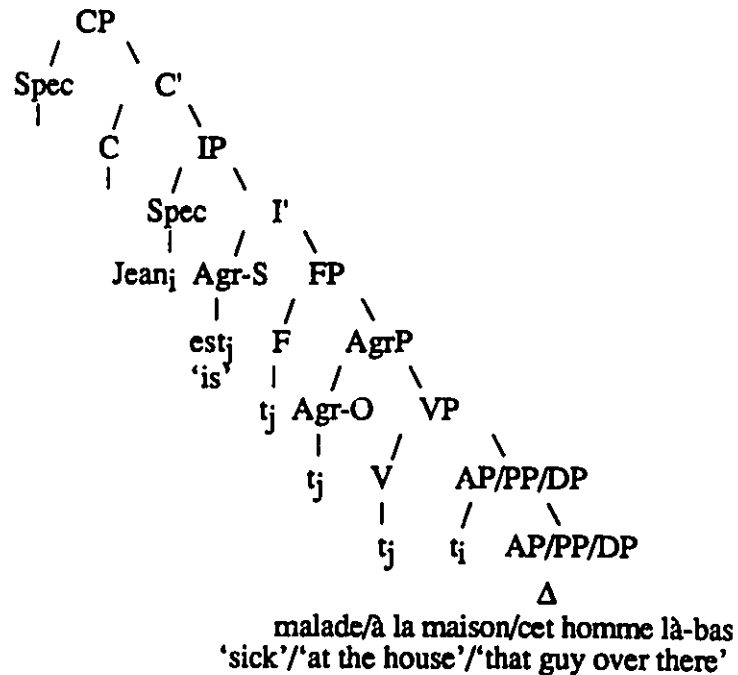
4.3 The S-Structure of French Copular Sentences

The previous section was devoted to the determination of the D-Structure associated with French copular sentences. In the present section, I turn to the S-Structure associated with the copula, and Raising verbs in general. Below, I will address the issue of proper government in these structures, as well as that of Case assignment to the predicative DP.

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As was mentioned briefly in the preceding section, the D-Structure of copular constructions entails DP Raising at S-Structure since this is the only means available for this argument to receive the Case feature necessary for it to satisfy the Visibility Condition. Consider below the S-Structure configuration that results from this movement, as well as that of *être* 'to be' to Agr-O, F, and subsequently to Agr-S. (As is true throughout this chapter, this structure adopts Chomsky's (1988) revised version of Pollock (1987, 1989).)

(28)



This S-Structure is syntactically well-formed in the Barriers framework because all of the traces are properly (antecedent) governed as required by the Empty Category Principle (ECP). (Cf. Chomsky (1986a: 17) for a definition of the ECP.) Specifically, Jean_i and est_j have the same index by SPEC-Head agreement (in other words, the index *i* is equivalent to the index *j*).¹⁶ The raised verb est_j properly governs the trace in F, as well as the one in Agr-O since FP and AgrP are “defective” categories and thus are not barriers to government.¹⁷ In its turn, *t_j* in Agr-O governs the *t_j* in the head of VP because VP is L-marked by this trace after V-Raising (cf. Chomsky: 1986a: 69-70). Finally, *t_j* in the subject position of AP/PP/DP is properly governed by *t_j* in V since *être* ‘to be’

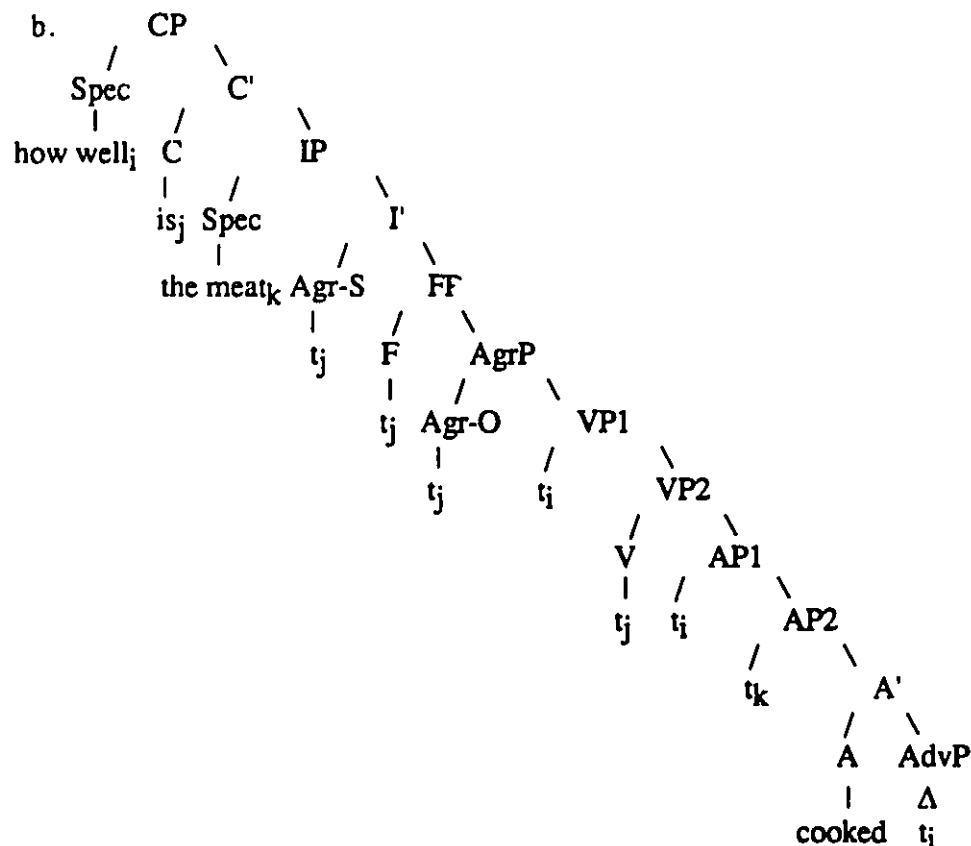
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subcategorizes for and, therefore, must Theta-mark its complement AP/PP/DP. That is, given that *être* 'to be' Theta-marks its complement, that V and AP are sisters, and that *être* is a lexical category, this trace L-marks the embedded AP/PP/DP, thus voiding the barrierhood of this maximal projection.

In conclusion, the S-Structure derived via DP Raising results in a syntactically well-formed sentence. However, from the preceding discussion, it is apparent that for this structure to be licit, I am crucially adopting an analysis in which the copula Theta-marks (and L-marks) its complement AP/PP/DP since this is necessary for the trace of the surface subject to be properly governed, as required by the ECP. This is in line with the now standard assumption that "...all syntactic representations are projections of thematic structure (hence the subcategorization) indicated in the lexicon..." (Chomsky, 1981: 39), an assumption that is highly desirable since it allows one to dispense almost entirely with PSRs. I should point out, however, that Chomsky (1986a: 78-79) suggests that this is incorrect with respect to the copula (i.e., Chomsky explicitly proposes that the copula exceptionally does not Theta-mark its complement) on the basis of two facts, for which I would like to suggest alternative accounts. First, Chomsky argues that the acceptability of the sentence in (29a), which would be associated with the S-Structure in (29b), must be taken to indicate that the embedded AP cannot be Theta-marked by the copula.¹⁸

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(29) a. How well is the meat cooked?



To explain, what is of interest in the structure in (29b) is that the constituent how well must adjoin to AP2 in order “escape” this constituent without violating the ECP. That is, adjunction is the only means by which the trace in AdvP may be properly governed by the trace in the adjoined position. Given that adjunction is only possible to non-arguments (Chomsky, 1986a: 6), the grammaticality of (29) would seem to entail that the AP not be a thematic argument of be. Before accepting this conclusion, however, one must also consider ECM constructions like the following with respect to this same issue.

(30) I consider [_{AP} John [_{AP} very intelligent]]

In the preceding example, consider must Theta-mark the AP in order for John to be governed by, and hence receive a Case feature from, this verb at S-Structure. If this is so, then one would once again predict adjunct extraction from this clause to be impossible since

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adjunction is only possible to non-arguments. This is not the case, however, as examples like the following are licit:

(31) How intelligent_i do you consider [_{AP} him [_{AP} t_i]]

Thus, we are led to the same paradox as in the preceding example: in order for the trace of how intelligent to be properly governed, it must adjoin to AP, but this should theoretically be impossible since the AP is Theta-marked by consider. It would appear then that whatever allows adjunctions such as those in (31) will also allow the adjunction in (29b), without resort to the stipulation that to be is the only verb which subcategorizes for a complement to which it does not assign a Theta-role.

One possible solution to the problem, put forth in Chomsky (1986a: 84-85) for verbs like consider, is that the wh-phrase adjoins to the "lower" AP. In other words, only the "upper" AP is Theta-marked by the verb in examples like (31), thus allowing adjunction to the lower AP constituent. It would therefore seem plausible to simply extend this analysis to the copula as well, although Chomsky himself does not do so.

Chomsky's (1986a: 78) second argument supporting the contention that the copula does not Theta-mark its complement concerns the ungrammaticality of sentences like (32):

(32) *John_i is [_{AP} probable [_{IP} t_i to win]]

The unacceptability of (32), according to Chomsky (1986a), follows from the fact that the trace in Spec of IP is not properly governed since the intervening AP is not Theta-marked by is and therefore this AP is a barrier to government of the trace by the copula, resulting in an ECP violation. Of course, if the copula L-marked its complement AP, such a structure would be predicted to be licit. However, these facts too can be interpreted in a different way. As Chomsky himself (1986a: 78) points out, there are apparently equivalent constructions in which this raising is licit, i.e., examples like the following:

(33) John_i is [_{AP} likely [_{IP} t_i to win]]

Example (33) seems to indicate that be does L-mark its complement AP since otherwise the trace would not be properly governed. I would therefore conclude that the difference be-

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tween likely and probable with respect to raising is most likely idiosyncratic in nature and should not be taken as evidence that the copula does not Theta-mark its complement, a move which is equivalent to reintroducing PSRs just for the verb to be.

To summarize this chapter thus far, the discussion has led to the conclusion that the copula is a Raising verb which subcategorizes for an AP, PP, or DP small clause. The subject of this small clause receives its Case feature from Agr-S when it raises to the Spec of IP and its (external) Theta-role from the embedded AP, PP, or DP. I would like to address one final problem with regard to copular sentences before moving on to the next chapter, which addresses the topic of how this Case/Theta-role dissociation leads to a "special" conventional aspect of meaning. This problem is the following: how does the "second" DP in sentences like (34) receive Case?

(34) Jean es. le père de Marie.

Jean is the father of Marie

'Jean is Marie's father.'

That is, it has been shown above that être 'to be' does not subcategorize for an accusative Case feature and this is why the lexical NP Jean must raise to the Spec of IP at S-Structure. Given that the copula is not a Case-assigning verb, how does the DP le père de Marie 'Marie's father' receive the Case feature that apparently would be necessary for it to pass the Visibility Condition?

In addressing this problem, Heggie (1988: 128) suggests that one possible solution lies in the fact that in these sentences the second DP is not, properly speaking a referential expression. That is, in copular sentences this DP is functioning as a predicate, not an argument. (It is important to bear in mind that in GB terms, a referential expression is equivalent to being a thematic argument of a predicate, a view of referentiality which contrasts strikingly with that of formal semantics in which all non-quantificational linguistic expressions, including predicates have both a sense and a reference/denotation.) The Visibility Condition (Aoun, 1979; Chomsky, 1981: 337) simply states that to be visible for

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Theta-marking at LF, an argument must have Case; arguments that do not have Case fail to receive a Theta-role at LF, in violation of the Theta-Criterion which requires every argument to receive one and only one Theta-role. Heggie (1988), therefore, proposes that a possible solution to the problem be formulated as follows: since the “second” DP is not functioning semantically as a thematic argument of anything, the Visibility Condition does not, properly speaking, apply to it. In other words, the answer to our question is simply that this DP does not have to receive a Case feature because it does not need one to pass Visibility. Two pieces of evidence indicate that Heggie’s view of the “second” DP as a non-referential expression is correct.¹⁹

The first argument is taken from Heggie (1988: 69). As Heggie points out, the “second” DP when it appears as a pronominal clitic on the verb surfaces not as an argument clitic, but as a predicate clitic. This fact is illustrated by the following examples, taken from Heggie (1988).

- (35) a. Jean et Marie sont les parents de Christine.
Jean and Marie are the parents of Christine
'Jean and Marie are Christine's parents.'
- b. *Jean et Marie les sont.
Jean and Marie them-ACC/PL are
'Jean and Marie are them.'
- c. Jean et Marie le sont.
Jean and Marie it-ACC/SING are
'Jean and Marie are.'

As the contrast between (35b,c) shows, the clitic corresponding to the DP les parents de Christine ‘Christine’s parents’ must surface as the non-agreeing predicate clitic le ‘it’ rather than the argument clitic les ‘them’, indicating that this DP is not functioning as a referential (thematic) argument which requires a Case feature, but as a predicate.

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As a second piece of evidence in favor of this hypothesis, I would like to point out that predicate nominal sentences like the following appear to be clear violations of Condition C of the Binding Theory (Chomsky, 1981: 188), according to which an R(efering)-expression must be free.

(36) Il_i était maintenant l'homme le plus riche du monde_j.

he was now the-man the most rich in-the world

'He_i was now the richest man in the world_j.'

That is, given the S-Structure in (28), it is clear that l'homme le plus riche du monde 'the richest man in the world' is co-indexed with and c-commanded by a pronominal in violation of Principle C of the Binding Theory.²⁰ This apparent counterexample to Binding Theory can be straightforwardly dismissed if one adopts Heggie's proposal that the second DP in predicate nominals is not an R-expression at all, but a predicate.

To summarize this chapter, the preceding discussion has shown that the copula is a Raising verb. That is, the surface subject of être 'to be' is actually a D-Structure external argument of a predicative DP, PP, or AP. This external argument raises to SPEC of IP at S-Structure to receive its Case feature from Agr-S. Thus, copular sentences and Raising structures in general are a second area in the grammar of French (in addition to the causative constructions explored in chapters 2 and 3), in which an argument receives its (external) Theta-role from one predicate (the embedded AP/PP/DP) and its Case feature from another (the Agr-S associated with the Raising verb). As was the case with causative constructions, this information is available at the level of LF and, in the next chapter, I will use this fact to argue that this Case/Theta-role assignment dissociation triggers a second conventional implicature concerning the aspectual nature of the predicate involved.

FOOTNOTES

¹ The Visibility Condition, attributed by Chomsky (1981) to Aoun (1979), simply states that to be “visible” to Theta-marking at LF, an argument must receive Case; Caseless arguments fail to be assigned a Theta-role at LF and thus are violations of the Theta-Criterion. The Case Filter (“* lexical NPs which lack Case”), attributed to Jean-Roger Vergnaud, is generally viewed as an alternative to the Visibility Condition. I choose to use the former in this chapter, however, because, as Heggie (1988) points out, it accounts for certain facts regarding predicate nominals which would remain unexplained under a Case Theory account. (See the end of Section 4.3 for discussion.)

² In this thesis, I will consider only an AP, PP, or DP small clause subcategorization frame for the copula since these are the only options that have been discussed in the literature on this topic. However, it may be that other types of small clauses are possible with this verb; for example, *être* ‘to be’ may take a CP small clause as in the following example:

(i) Jean_i est t_j à PRO battre.

Jean is at to-beat

‘Jean is the one to beat.’

³ The structure of the IP used throughout this chapter is Chomsky’s (1988) revised version of Pollock (1987, 1989).

⁴ As Couquaux (1979: 250) points out, other verbs which allow this “exceptional” cliticization of *en* include *avoir l’air* ‘to appear’, *se révéler* ‘to prove to be’, *s’avérer* ‘to turn out to be’, and *se trouver* ‘to be located’.

⁵ As Kayne (1975: 192) points out, *en* ‘of him/her/it/them’ cliticization from surface subject position in Raising constructions contrasts in register with *en* cliticization from object position, i.e., the former is typical of high register speech and literary styles, while the latter is found in all registers.

6 As Couquaux (1979: 264) discusses, the hypothesis that only D-Structure objects are subject to en-cliticization receives further support from the grammaticality of en 'of him/her/it/them' in passive sentences like (ii) below:

- (i) La porte du garage a été ouverte par le chat.
the door of-the garage has been opened by the cat
'The garage door was opened by the cat.'
- (ii) La porte en a été ouverte par le chat.
the door of-it has been opened by the cat
'Its door was opened by the cat.'

7 While en cliticization from the surface subject position does provide a means to determine the base-generated position of this argument, an exact account for the generalization that en 'of him/her/it/them' must originate post-verbally has not yet been proposed. This issue, however, is not crucial for the construction under investigation since I am concerned uniquely with the syntactic structure of French copular sentences and not with a syntactic analysis of en 'of him/her/it/them'.

8 As pointed out originally in Gross (1968: 25), there is a peculiar restriction on en 'of him/her/it/them' cliticization in quantificational Raising sentences like (ia,b) below. The reason for this restriction on en 'of him/her/it/them' remains unclear, although Couquaux (1981) explores a possible solution.

- (i) a. Plusieurs de ces livres sont exécrales.
several of these books are abominable
'Several of these books are abominable.'
- b. *Plusieurs en sont exécrales.
several of-them are abominable
'Several of them are abominable.'

⁹ The se examples in (18b)-(19a,c) in the text are taken from Couquaux (1979: 253-255).

¹⁰ As was the case for the facts regarding en, Couquaux (1979: 267) points out that passive sentences also exhibit this exceptional distribution of se:

(i) *Ces garçons se furent jadis présentés par Odile.

these boys to-each-other were long-ago introduced by Odile

'These boys were introduced to each other a long time ago by Odile.'

¹¹ Although the precise explanation for this restriction on reflexive/reciprocal se is not unproblematic, two accounts have been given, the first in Couquaux (1981: 57-58), based on ideas put forth in Chomsky (1980), and the second in Rizzi (1986). Consider the S-Structure of the sentence in (i).

(i) *Jean_i se_j semble t_i indifférent pro_j

Jean himself seems indifferent

'Jean seems to be indifferent to himself.'

Using Chomsky's (1980) system of indexing and counterindexing, Couquaux (1981) accounts for the ungrammaticality of (i) as follows: se c-commands the trace of the raised DP Jean, i.e., these two arguments bear the same index. The two indices therefore "cancel" each other out, leaving se without an index.

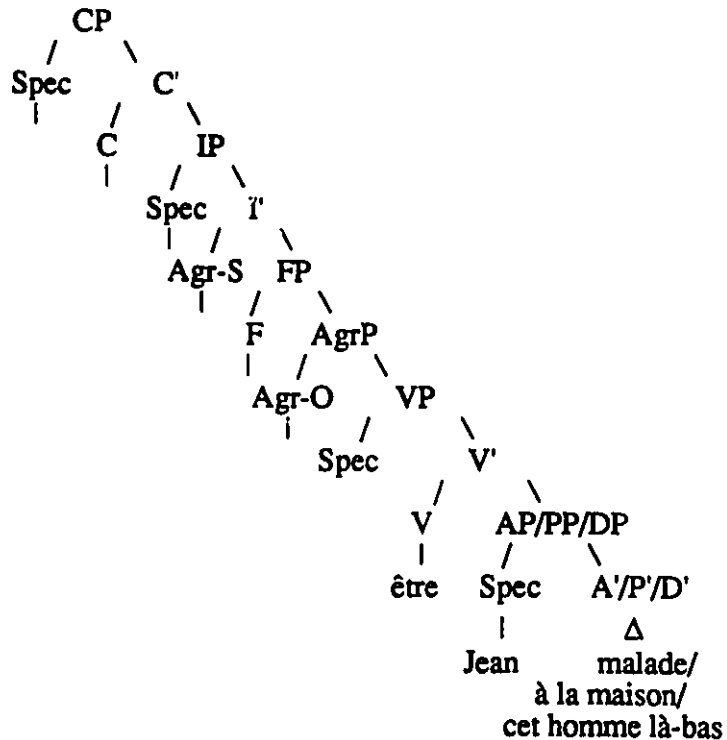
Alternatively, Rizzi (1986: 66) accounts for these facts via a chain algorithm. Essentially, the link in the chain between pro and se is broken by the trace of the raised subject, resulting in an illicit S-Structure. As was the case for the generalization regarding en, what is of importance for the present discussion is simply that se provides a test for the D-Structure position of the surface subject NP, whatever the actual account of this fact may be.

12 See Stowell (1978) for additional arguments for analyzing English to be as a Raising verb. See also Heggie (1988) for a unified Raising analysis of the copula cross-linguistically.

13 These phrase structure rules have since been furthered simplified as the ordering of categories within a given constituent no longer needs to be specified in the X' component, but is instead a consequence of fixing the parameters of directionality of Case and Theta-role assignments for a given language. (See Travis (1984) and Li (1985) for details and arguments.)

14 In view of Stowell's (1983) PSRs given in (26) in the text, it might seem more elegant to propose the following D-Structure instead of the one I am adopting in (27). (The only crucial difference between the two structures is that the subject of the small clause is base-generated in Spec of XP in (i) below rather than in an adjoined position as in the text.)

(i)



The choice of an adjunction structure over the one given above is based on theory-internal considerations. Specifically, if one wishes to allow extraction out of the embedded

AP/PP/DP, as would seem necessary for sentences like *Où est-il?* 'Where is he?', this can only be done via adjunction to the embedded AP/PP/DP. (See Chomsky (1986a: 29) for discussion of wh-extraction as adjunction.) That is, the Barriers framework explicitly rules out X' adjunction (Chomsky, 1986a: 6). This problem is not unique to copular sentences, however, since all subjects must be base-generated in an adjoined position in the Barriers framework to allow wh-extraction. Therefore this fact should not be taken as evidence against the syntactic analysis I am adopting. In relation to this issue, van Riemsdijk (1989) argues that the Barriers framework should, in fact, be revised to allow adjunction to X' to accommodate certain topicalization facts found in southern varieties of German. The structure in (i) may therefore be considered an alternative to the conservative structure which I have adopted.

15 Stowell (1983: 310, ft. 20) does not explicitly propose the D-Structure for *être* 'to be' given in the text since he was concerned only with defending the small clause analysis for verbs like find/make/prove/consider, etc. However, if one combines the proposals in Stowell (1978) with those in Stowell (1983) one arrives at the D-Structure I am adopting.

16 See Chomsky (1986a: 24, 74-75) for a discussion of SPEC-head agreement.

17 See Pollock (1989: 397) for a discussion of the nature of AgrP.

18 From the structures provided in Chomsky (1986a), it also appears that he does not adopt a Raising analysis of the copula, although I am somewhat uncertain about this matter since many structures are "abbreviated" for expository purposes.

19 Of course, this still leaves open the possibility that this DP may receive Case in other languages. I am only stating that it is not necessary in French.

20 The problem that predicate nominals raise for Binding Theory applies equally well to the alternative "flat" structure that has been proposed for the copula in Williams

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(1984). For additional arguments against a “flat” structure beyond those summarized in this chapter, see Heggie (1988).

THE SEMANTICS OF DEMONSTRATIVE CE*

5.1 Introduction

The previous chapter was devoted to the determination of the D-Structure and the S-Structure associated with French copular sentences. Following Couquaux (1979, 1981), Heggie (1988), and Stowell (1978, 1983), it was argued that the copula (être 'to be') subcategorizes for a small clause at D-Structure and that the subject of the small clause raises at S-Structure in order to receive a Case feature from Agr-S. The major conclusion of chapter 4, therefore, was that copular sentences like (1) below share with other Raising verbs, e.g., rester 'to remain', the D-Structure provided in (3) and the S-Structure in (4).

- (1) Jean sera {
 pantois.
 à la maison.
 le plus riche des imbéciles. }
- Jean will-be {
 dumbfounded
 at the house
 the most rich of-the imbeciles }
- 'Jean will be {
 dumbfounded.'
 at home.'
 the richest idiot.' }
- (2) Jean restera {
 pantois.
 à la maison.
 le plus riche des imbéciles. }
- Jean will-remain {
 dumbfounded
 at the house
 the most rich of-the imbeciles }
- 'Jean will remain {
 dumbfounded.'
 at home.'
 the richest idiot.' }
- (3) [CP [IP [FP [AgrP [VP { être
 rester } [AP/PP/DP Jean [AP/PP/DP pantois/
 à la maison/le plus riche des imbéciles]]]]]]]]
- (4) [CP [IP Jean_i { sera_j
 restera_j } [FP_{t_j} [AgrP _{t_j} [VP _{t_j} [AP/PP/DP _{t_j}
 [AP/PP/DP pantois/à la maison/le plus riche des imbéciles]]]]]]]

The conclusions reached in the previous chapter form the background for the present one, which is an in-depth investigation of an interesting and unique feature of the grammar of French that is found in such Raising structures. I will refer to this phenomenon as

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demonstrative ce 'he/she/they/it' versus personal il 'he/it' alternations.¹ What this phenomenon entails is the following: the pronoun ce "competes" with the personal pronoun il for the subject position of Raising sentences like those given below.^{2, 3}

- (5) a. En deux jours, l'ennemi entra dans la ville. Il était un vainqueur
impitoyable et il voulait que tous le sachent.
in two days, the enemy entered into the city he was a conqueror
pitiless and he wanted that all it know
'In two days, the enemy entered the city. He was a pitiless conqueror and
he wanted everyone to know it.'
- b. En deux jours, l'ennemi entra dans la ville. C'était un vainqueur
impitoyable et tout le monde le savait.
in two days, the enemy entered into the city he was a conqueror
pitiless and all the world it knew
'In two days, the enemy entered the city. He was a pitiless conqueror and
everyone knew it.'
- (6) a. Max, il restera à jamais l'homme de sa vie.
Max, he will-remain to forever the man of her life
'Max, he will always be the most important man in her life.'
- b. Il n'y a pas de raison que Jean change. Ça restera toujours un
directeur sans coeur.
it NEG there has not of reason that Jean change he will-remain
always; a boss without heart
'There's no reason why Jean would change. He'll always remain
a coldhearted boss.'

As will be shown in this chapter, the choice of ce versus il in these Raising constructions corresponds to a subtle difference in meaning which is not lexically encoded in the grammar of English. (Cf. the English glosses for ce and il given above which are both

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translated as 'he'.) In this chapter, I will argue that these differences in meaning are to be attributed to a conventional implicature triggered by the dissociation in Case and Theta-role assignments attested in Raising sentences. That is, I will contend that since the surface subject receives its Case feature from one predicate (the Agr-S associated with *être* 'to be') and its Theta-role from another one (the embedded DP in (5)-(6) above), this opens the way for the encoding of a non-truth-conditional feature of meaning pertaining to aspect at the level of LF. Specifically, it will be argued that demonstrative *ce* is licit only when the predicative sentence is asserted to be true at the interval of time picked out by the non-habitual tense and even then only if the truth of that sentence is not asserted to hold at an endpoint of the interval selected. The personal pronoun *il* will be argued to be semantically well-formed in all other types of sentences.

This chapter explores two broad subjects. The goal of sections 5.2-5.4 is to argue in favor of the recognition of four homonymic pronouns *ce*. The goal of section 5.5 is to provide a formal semantic account of one of these homophones, the demonstrative *ce*. The first issue is, of course, crucial to the second since the type of (non-unified) analysis I am proposing can only be justified if one first accepts the hypothesis that different modules of the grammar may, in fact, be responsible for the other types of *ce*.

With respect to the first issue, section 5.2 provides an in-depth examination of the four possible meanings of *ce*, these being the demonstrative, expletive, neuter, and generic *ce*. In that section, it will be shown that these four types of *ce* contrast with one another with respect to the features of gender, referentiality, and genericity. Section 5.2 concludes by noting that although one must recognize that *ce* has each of these various meanings, a unified analysis of all of them would, *a priori*, be preferable over a non-unified account, on the condition that such an analysis can indeed account for the full range of the data. Section 5.3 will show that this does not appear to be possible. That is, I will critically examine each of the two types of analyses that have been developed in the past and I will show that each fails, presumably because unifying the various uses of *ce* has the effect of

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imposing contradictory requirements on any analysis proposed. Section 5.4 will advance two additional arguments in favor of a non-unified account of ce. In particular, it will first be shown that ce/il alternations encode strikingly different meaning contrasts depending on whether the ce is demonstrative, generic, expletive or neuter and, secondly, that a number of surprising restrictions on the distribution of demonstrative ce exist, restrictions which remain unexplained under a unified account of ce.

Once evidence has been offered in support of a non-unified approach to ce, I turn in section 5.5 to the formalization of a semantic analysis which can account for the demonstrative type. In this section, I argue that demonstrative ce is semantically well-formed only with non-habitual equative sentences which are not evaluated with respect to the endpoints of the interval of time selected by the tense. This semantic account is developed by first exploring the aspectual system of French in section 5.5.1. In this section, the truth conditions and meaning postulates associated with the relevant tense and aspectual distinctions are developed, and then in section 5.5.2, the features of meaning associated with demonstrative ce are deduced from them. This chapter concludes with section 5.5.3, in which a fragment of French incorporating these ideas is formulated in traditional model-theoretic terms.

5.2 The Four Meanings of Ce

The topic of ce/il alternations has been the subject of much discussion in the literature on French linguistics from a purely descriptive, as well as from a theoretical point of view. (See, for example, Boone (1987), Burston (1983), Burston and Monville-Burston (1981), Cadiot (1988), Carlut and Meiden (1983), Coppieters (1974,1975), Damourette and Pichon (1911-1934), Kupferman (1979), Tamba-Mecz (1983), and Wagner (1966), among others for various proposals.) The majority of these authors have noted in passing that the interpretation associated with the pronoun ce does not remain constant across sentences. To illustrate how one author has described the various meanings associated

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with this pronoun, Coppieters (1974) characterizes the interpretation of ce as being, first, generic (p. 3), then, non-generic (p.4), and, finally, “objectivizing” (p.5 and p.12, ft.4). To these possible meanings of ce, other authors, for example, Burston (1983: 3), have added a non-anaphoric, expletive use of ce.

The goal of this section is to provide the first systematic examination of exactly how the interpretation of ce varies from sentence to sentence with respect to the factors of gender, referentiality (in the Government-Binding (GB) sense of the word), and genericity. The purpose of this discussion is to provide the reader with a clear idea of exactly how many possible meanings are associated with ce, as well as how these various interpretations can be recognized in a given example. Here, it will be argued that one must recognize four possible meanings for this pronoun: the demonstrative, the expletive, the neuter, and, finally, the generic. A clear understanding of the four possible interpretations of ce provides crucial background to the issue of how to properly formulate an analysis of ce/il alternations, which is the topic of the sections following the present one.

To begin this discussion, consider the following four sets of sentences which illustrate instances of what I will henceforth refer to as the demonstrative, expletive, neuter, and generic uses of ce in (7a,b)-(10a,b) respectively.⁴

- (7) a. Dans une semaine, l'ennemi va conqu rir notre ville.
Ce sera un vainqueur impitoyable et je veux que tous le sachent.
in one week, the enemy is-going to-conquer our city
he will-be a conqueror pitiless and I want that all it-ACC know
'In one week, the enemy will conquer our city. He will be a pitiless
conqueror and I want everybody to realize that.'
- b. Notre prochain premier ministre, ce sera un homme qui dit toujours
la v rit .
our next Prime Minister, he will-be a man who tells always the truth
'Our next Prime Minister, he will be a man who always tells the truth.'

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- (8) a. C'est naturel de vouloir se détendre.
it's natural of to-want oneself to-relax
'It's natural to want to relax.'
- b. C'est difficile de lire à la lumière d'une bougie.
it's difficult of to-read by the light of a candle
'It's difficult to read by candlelight.'
- (9) a. C'est comptable et ça ne sait pas faire une addition juste!
it is accountant and it NEG knows not to-make an addition right
'It calls itself an accountant, but it doesn't even know how to add right!'
- b. Chomsky, c'est beau!
Chomsky, it's beautiful
'Chomsky, it's beautiful!'
- (10) a. Tu vois cette fleur, c'est une espèce de rose.
you see this flower, it is a species of rose
'You see this flower, it's a kind of rose.'
- b. Un premier ministre, c'est toujours honnête.
a Prime Minister, he is always honest
'A Prime Minister, he is always honest.'

In the preceding examples, the contrasting interpretations associated with the pronoun ce are made evident by the English translations. In examples (7a,b), which contain instances of what I refer to as the demonstrative use of the ce, the pronoun translates as he; that is, the pronoun is interpreted as being co-referential with a non-generic, animate, masculine entity. Additionally, the individual picked out by ce is semantically asserted to have the property denoted by the embedded DP (i.e., it is referential in the GB sense of the word), which would follow from the hypothesis, defended in the chapter preceding this one, that ce is an external argument of the predicative DP and therefore bears the external Theta-role

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assigned by it. Thus the so-called “demonstrative ce” is interpreted as being non-generic, as bearing the gender features of its antecedent, and as being a referential expression.

Compare this use of ce to that in (8a,b), which I deem the “expletive” ce.⁵ Here, ce translates as expletive it not he. In other words, the first characteristic of this use of the pronoun is that it is not interpreted as bearing any gender features and this follows from the fact that ce in these examples is not interpreted as being co-referential with any antecedent. This pronoun is also a non-referential expression; that is, unlike the previous example, this ce does not bear a Theta-role, but is instead simply a place-holder of nominative Case. Finally, expletive ce is obviously not generic since it does not pick out referential properties from any discourse antecedent at all. In sum, “expletive” ce contrasts with “demonstrative” ce in that it does not bear any features of gender, nor is it referential; it shares with demonstrative ce the “feature” of non-genericity.

The third use of ce is illustrated in (9a,b). (As was mentioned above, this will be referred to as the “neuter” ce.) The ce in (9a,b) contrasts in interpretation with both of the two preceding types of ce, although it does share with both the feature of non-genericity.

Comparing first expletive and neuter ce in (8a,b) and (9a,b) respectively, in both cases ce translates into English as it. However, this it is not of the same status since the neuter use of ce in (9a,b) is a referential expression, whereas the expletive use is not. That is, in (9a,b), the entity picked out by ce is asserted to have the property denoted by the DP predicated of it, however, as was just discussed in the preceding paragraph, such is not the case for expletive ce.

Turning to a comparison of neuter ce and demonstrative ce in (7a,b) and (9a,b) respectively, the English glosses do bring out the contrasting interpretation quite clearly. The neuter pronoun picks out as its antecedent an animate, masculine entity, but the pronoun itself is not interpreted as agreeing with its antecedent with respect to gender. Specifically, this ce, unlike the demonstrative counterpart, is interpreted as not bearing any gender feature at all, hence the term “neuter”. The fact that the speaker has deliberately

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chosen to use a pronoun which does not share the gender features of its antecedent gives rise to special readings as the listener will attempt to deduce why the speaker chose to use the neuter variant, with the exact interpretation arrived at being contextually determined. In the case of (9a), for example, the use of neuter ce results in a “depreciatory” or “objectivizing” reading of ce which has been noted in, e.g., Coppieters (1975: 242, 277 ft.12) and Wagner (1966: 341). That is, the listener in this type of example uses contextual clues to deduce that the speaker chose to use the neuter pronoun because (s)he thinks that that individual is an “it” and not a “he” or “she”. As (9b) demonstrates, the use of the neuter ce does not always lead the listener to the conclusion that the speaker is expressing disdain for the referent of ce since the decision to use the neuter pronoun can also result in a reading in which everything about an individual is associated with a given property, as Coppieters (1974, 1975) discusses in some detail. In (9b) above, for example, the use of neuter ce creates a reading in which everything about Chomsky, e.g., his writings, speeches, etc., is a thing of beauty. This reading is quite likely due to the fact that all of the things associated with Chomsky may be assigned different genders in the language and the neuter pronoun allows one to collapse them all.⁶ Regardless of which interpretation the listener finally associates with a given sentence containing neuter ce, however, this pronoun can always be characterized as a non-generic, genderless, referential expression.

Finally, the examples in (10a,b) contain generic ce's. This type of ce is quite similar to demonstrative ce with respect to both its gender and its referential properties (again, in the GB sense of the term “referential”). Like demonstrative ce, generic ce translates as he in English when it is interpreted as referring to an animate, masculine entity, representative of a class of individuals. In this respect generic ce differs from neuter ce, which often encodes a “depreciatory” connotation due to its lack of gender, as well as expletive ce, which does not refer to any antecedent at all. As concerns referentiality, generic ce is once again like demonstrative ce in that it is asserted that the individual referred to by ce possesses the property denoted by the predicative expression. In other

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words, this pronoun receives the external Theta-role assigned by the predicate DP or AP in (10a,b). This characteristic of generic ce further distinguishes it from expletive ce, which is not referential. Having seen how the interpretation of generic ce is parallel to demonstrative ce with respect to gender and referentiality, how then does it differ? Generic ce contrasts with demonstrative ce in that, as the name implies, the former type of ce must refer to kinds and not to a particular (set of) individual(s) in the sense of Carlson (1977, 1979). Thus generic ce is of different semantic type than demonstrative ce. Specifically, following Carlson (1979), generic ce is of the type $\langle\langle s, \langle e^k, t \rangle \rangle, t \rangle$, which simply means that it does not denote the set of properties that a particular individual or group of individuals possesses at a given index (i.e., it is not of the type $\langle\langle s, \langle e^s, t \rangle \rangle, t \rangle$), but rather the set of properties that a particular kind of individual, e.g., the prototypical lion, has at all time indices. Thus these two types of ce differ in that generic ce denotes a kind of individual whereas demonstrative ce denotes a stage of a particular individual.

To summarize the discussion of this section, the examples given above have shown that the interpretation of ce varies according to (a) whether or not the ce is interpreted as being a referential expression or as a non-referential expression, i.e., a pronoun which is thematic or non-thematic (b) whether or not the ce is interpreted as sharing the gender features of its antecedent, and (c) whether or not the pronoun refers to a stage of an individual or to a kind. For convenience, these factors are summarized in the following table.

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(11) TABLE 1: THE FOUR MEANINGS OF CE

Type of <u>ce</u>	Referential	Gender Features	Genericity
Demonstrative <u>ce</u>	+	+	-
Expletive <u>ce</u>	-	-	-
Neuter <u>ce</u>	+	-	-
Generic <u>ce</u>	+	+	+

The next section will explore both how and why previous authors have analyzed all of these four contrasting interpretations of ce in a unified manner, as well as the degree of success attained by such “unified” approaches.

5.3 Previous Approaches to Ce/Il Alternations

The ce's in (7a,b)-(10a,b) above were shown to contrast with respect to referentiality, as well as gender and semantic type. Given this, it is interesting to note that it is possible to find examples in which each of these possible meanings of ce “alternate” with il, as the following sentences, containing the demonstrative, expletive, neuter, and generic uses in turn, clearly illustrate.⁷

- (12) a. Dans une semaine, l'ennemi va conqu rir notre ville.
 { Ce } sera un vainqueur impitoyable et je veux que tous le sachent.

in one week, the-enemy is-going to-conquer our city

he will-be a conqueror merciless and I want that all it-ACC know

‘In one week, the enemy will conquer our city. He will be a merciless conqueror and I want everybody to realize that.’

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(12) b. Dans la nouvelle Russie de l'an 2000, { $\begin{smallmatrix} \text{ce} \\ \text{il} \end{smallmatrix} \}$ sera naturel de vouloir se détendre.

in the new Russia of the year 2000, it will-be natural of to-want oneself to-relax

'In the new Russia of the year 2000, it will be natural to want to relax.'

c. Regarde-moi cet imbécile: quand { $\begin{smallmatrix} \text{ca} \\ \text{il} \end{smallmatrix} \}$ se retrouvera en terminale, { $\begin{smallmatrix} \text{ca} \\ \text{il} \end{smallmatrix} \}$

ne saura même pas compter.

look-at for-me that imbecile: when { $\begin{smallmatrix} \text{it} \\ \text{he} \end{smallmatrix} \}$ { $\begin{smallmatrix} \text{itself} \\ \text{himself} \end{smallmatrix} \}$ will-find

in senior-year { $\begin{smallmatrix} \text{it} \\ \text{he} \end{smallmatrix} \}$ NEG will-know-how even not to-add

'Will you just look at that idiot: when { $\begin{smallmatrix} \text{it's} \\ \text{he's} \end{smallmatrix} \}$ in 12th grade,

{ $\begin{smallmatrix} \text{it} \\ \text{he} \end{smallmatrix} \}$ won't even know how to add.'

d. (What is the difference in color between domestic and wild ducks?)

-Le canard domestique, { $\begin{smallmatrix} \text{c'} \\ \text{il} \end{smallmatrix} \}$ est souvent blanc, tandis que le canard sauvage, { $\begin{smallmatrix} \text{c'} \\ \text{il} \end{smallmatrix} \}$ est souvent brun.

the duck domestic, he is often white, while that the duck wild, he is often brown

'What is the difference in color between domestic and wild ducks?'

'-The domestic duck, he's often white whereas the wild duck, he is often brown.'

The licitness of ce/il alternations with all four types of ce would seem to lead to the following conclusion regarding a possible analysis of this phenomenon: ideally, one should try to capture all instances of ce/il alternations via the same syntactic, semantic, or pragmatic principle(s). This conclusion is precisely that which was reached by all previous authors working in this area. While such a line of investigation is indeed merited, it can only be accepted as sound if the analysis based upon it leads to a formal account of the full range of data. In this section, I will argue that this does not appear to be possible. In particular, I will provide data which are counterexamples to each of the two types of unified

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approaches that have been put forth in the literature, thus paving the way for a re-examination of the assumption that ce/il alternations are all manifestations of the same syntactic, semantic, or pragmatic principles at work.

As was mentioned in the preceding paragraph, only two types of analyses have been put forth in all of the previous work done on ce/il alternations. Specifically, authors have either formulated syntactically-based analyses or, alternatively, pragmatic ones. The syntactic approach is generally taken by elementary pedagogical grammars of French, the aim of which is to allow the learner of French as a second language to understand the rules of use for these two pronouns. The pragmatic-type of analysis, which developed largely in reaction to syntactically-based descriptions, asserts that these alternations are discourse-determined; that is, it is argued that the choice of pronoun is determined by such contextual factors as "old" and "new" information and "point of view".

I begin with an examination of syntactic approaches to the problem. Many elementary pedagogical grammarians have formulated "rules" of use for il and ce like those in (13a,b)-(14a,b) below which presumably would lead to a syntactic account of the phenomenon since they implicitly embody the claim that it is the syntactic nature of the complement which determines the choice of ce or il. (See, e.g., Carlut and Meiden (1983: 117-119).) While these pedagogical grammarians do not offer any specific syntactic principles to account for these descriptive generalizations, some syntactic principles would obviously have to be responsible for the fact that the syntactic complement determines the choice of discourse pronoun.

- (13) a. ce + Raising Verb + $\left\{ \begin{array}{c} \text{DP} \\ \underline{\hat{a}} + \text{Infinitive} \end{array} \right\}$
 b. *ce + Raising Verb + $\left\{ \begin{array}{c} \text{AP} \\ \text{PP} \\ \underline{de} + \text{Infinitive} \end{array} \right\}$
 (14) a. *il + Raising Verb + $\left\{ \begin{array}{c} \text{DP} \\ \underline{\hat{a}} + \text{Infinitive} \end{array} \right\}$
 b. il + Raising Verb + $\left\{ \begin{array}{c} \text{AP} \\ \text{PP} \\ \underline{de} + \text{Infinitive} \end{array} \right\}$

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A syntactically-based approach based on descriptions like (13)-(14) above initially receives support from the grammaticality judgments speakers assign to examples like the following in which the “rules” do correctly describe the distribution of *il* and *ce*.⁸

- (15) a. Jean, c'est {
 mon fils.
 un médecin.
 le plus beau des hommes. }
 'Jean, he's {
 my son.'
 a doctor.'
 the most handsome of men.' }

- b. Ce sera très difficile à annoncer.
 it will-be very difficult at to-announce
 'It will be very difficult to announce.'

- c. *Jean, c'est {
 effaré.
 inquiet.
 surpris. }
 'Jean, he's {
 frightened.'
 worried.'
 surprised.' }

- d. *Jean, c'est {
 à la maison.
 chez nous.
 sous le divan. }
 'Jean, he's {
 at the house.'
 at our house.'
 under the sofa.' }

- e. *Il ne nia pas que ce fût dorénavant impossible de rebrousser chemin.
 he NEG denied not that it was henceforth impossible of to-turn-back path
 'He did not deny that henceforth it was impossible to turn back.'

- (16) a. *Jean, il est {
 mon fils.
 un médecin.
 le plus beau des hommes. }
 'Jean, he's {
 my son.'
 a doctor.'
 the most handsome of men.' }

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- (16) b. *Il sera très difficile à annoncer.
 it will-be very difficult at to-announce
 'It will be very difficult to announce.'

- c. Jean, il est { effaré. }
 { inquiet. }
 { surpris. }
 'Jean, he's { frightened. }
 { worried. }
 { surprised. }

- d. Jean, il est { à la maison. }
 { chez nous. }
 { sous le divan. }
 'Jean, he's { at the house. }
 { at our house. }
 { under the sofa. }

- e. Il ne nia pas qu'il fût dorénavant impossible de rebrousser chemin.
 he NEG denied not that it was henceforth impossible of to-turn-back path
 'He did not deny that henceforth it was impossible to turn back.'

While the rules given in (13)-(14) above do correctly predict the judgments speakers associate with the immediately preceding examples, these generalizations fail once one examines a wider range of data, as linguists and traditional grammarians alike have noted. (See, for example, Burston (1983), Coppieters (1974, 1975), Damourette and Pichon (1911-1934: 543-580), and Wagner (1966), among many others.) The distribution of ce and il is, in fact, much more complex, given the existence of sentences like the following which are direct counterexamples to each of the descriptive generalizations given above in (13) and (14). It thus appears that a unified syntactic approach to ce/il alternations is too strict in that it would incorrectly rule out the perfectly acceptable sentences given below and that it is also too loose in that it would rule in the ungrammatical ones.^{9, 10}

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- (17) a. *Claudette, ça a été { ma copine.
une secrétaire de direction.
la femme de Pierre. }
- Claudette, she has been { my friend
a secretary of management
the wife of Pierre }
- 'Claudette, she was { my friend.'
a managerial secretary.'
Pierre's wife.' }

- b. Est-ce que ce livre est facile à lire?

*-Non, c'est plutôt difficile à comprendre.

is-it that this book is easy of to-read

no, it is rather difficult of to-understand

'Is this book easy to read?'

'-No, it's rather difficult to understand.'

- c. La mort subite de cette jeune fille, c'est { troublant.
triste.
désolant. }
- the death sudden of this young girl, it's { troubling
sad
unsettling. }
- 'The sudden death of this young girl, it's { troubling.'
sad.'
unsettling.' }

- d. Cette année, le réveillon, c'est { au restaurant de père Dodu.
chez nous. }
- this year, the New-Year's-Eve, it's { at-the restaurant of father Dodu
at us
under the bridge Jacques Cartier }
- 'This year, New Year's Eve, it's { at father Dodu's restaurant.'
at our house.'
under the Jacques Cartier bridge.' }

- e. C'est difficile de lire à la lumière d'une bougie.

it is difficult of to-read at the light of a candle

'It's difficult to read by candlelight.'

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- (18) a. Claudette, elle a été { ma copine.
une secrétaire de direction.
la femme de Pierre. }
- Claudette, she has been { my friend
a secretary of management
the wife of Pierre }
- 'Claudette, she was { my friend.'
a managerial secretary.'
Pierre's wife.' }

- b. Est-ce que ce livre est facile à lire?

-Non, il est plutôt difficile à comprendre.

is-it that this book is easy at to-read

-no, it is rather difficult at to-understand

'Is this book easy to read?'

'-No, it's rather difficult to understand.'

- c. *La mort, elle est { horrible!
triste!
déplolante! }
- the death, it is { horrible
sad
unsettling }
- 'Death, it's { horrible!
sad!
unsettling! }

- d. *Un flic, il est toujours au bureau en train de taper des rapports.

a policeman, he is always at-the office in process of to-type of-the reports

'A cop, he's always at the office typing reports.'

- e. Merci beaucoup Marie. *Il est gentil de m'avoir conduit à la gare.

thanks a-lot Marie it was nice of me-ACC to-have driven to the station

'Thanks a lot Marie. It was nice of you to drive me to the station.'

The seemingly contradictory facts illustrated by the preceding data have led a number of authors, for example, Boone (1987), Burston (1983), Burston and Monville-Burston (1981), Cadiot (1988), Coppieters (1974, 1975), Kupferman (1979), Tamba-Mecz (1983), and Wagner (1966), among others, to the conclusion that the distribution of ce and il cannot be syntactically motivated and that, in fact, ce/il alternations must be accounted for

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via contextual factors; in other words, ce/il alternations are asserted by these authors to be a purely pragmatic (i.e., discourse) phenomenon. That is, the fact that two sentences with seemingly parallel syntactic configurations impose completely opposing requirements on ce or il (cf. e.g., sentences (15a) and (17a)) would appear to militate in favor of a pragmatic account of the choice of discourse pronoun. Let's consider then the viability of this type of approach.

To illustrate the basic tenets of pragmatic accounts of ce/il alternations, I will use the analysis put forth in Coppieters (1974, 1975) first because it offers the most thorough examination of the data to date and secondly because the pragmatic principles proposed therein have been adopted in one form or another by all subsequent work done in this area of French grammar. (But see e.g., Boone (1987), Burston (1983), Burston and Monville-Burston (1981), Kupferman (1979), Tamba-Mecz (1983), among others for variations.)

Coppieters' (1974: 5-6, 1975: 243-244) analysis is formulated in terms of discourse principles; specifically, Coppieters asserts that two primary distinctions which fall under the rubrics of "old versus new information" and "speaker's versus antecedent's point of view" account for the distribution of ce and il.

The old/new contrast will be considered first. Coppieters (1975: 243) argues that ce must be used whenever the complement of the verb contains "old or implicit contextual information" for the hearer, while il is to be chosen if it contains "new, unpredictable" information. As an example of the former type of context, Coppieters (1975: 224) cites the "identificational sentence", which is a sentence whose pragmatic function is to identify the antecedent of the pronoun to the hearer for the first time. One example of an identificational sentence is the following:

- (19) Qui est M. Martin?
-M. Martin, $\left\{ \begin{array}{l} c' \\ *il \end{array} \right\}$ est mon professeur de français.

'Who's Mr. Martin?'

'-Mr. Martin, he's my French professor.'

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According to Coppieters, the necessity of ce in example (19) is explicable in terms of the “old” versus “new” information distinction. Specifically, identification of an individual unfamiliar to the listener is achieved by putting him into a familiar class; that is, the predicative DP mon professeur de français ‘my French professor’ in (19) above is treated as “familiar” or “old” information for the listener in some sense which, as will be discussed in more detail shortly, Coppieters leaves quite unclear. In any case, whenever the predicative DP is “old” or “familiar” to the hearer in this way, one must use ce and not il.

According to Coppieters, identificational sentences like the preceding one contrast with sentences in which the hearer is already familiar or acquainted with the individual picked out by the subject pronoun. The latter type of sentence, an example of which follows, has the discourse function of further specifying the properties a familiar individual possesses. Such sentences are termed “characterizational” in Coppieters (1974, 1975) and this type of sentence is claimed to require to use of il.¹¹

- (20) Tu te rappelles M. Martin, ton prof d'anatomie?
 { *C' }
 II } est maintenant mon professeur de français.

you yourself remember Mr. Martin, your prof of anatomy

he's now my professor of French

‘You remember Mr. Martin, your anatomy prof? He's now my French professor.’

In this context, the listener is obviously already familiar or acquainted with the antecedent of the pronoun. Therefore, the pragmatic function of this sentence is to characterize, not to identify. That is, according to Coppieters, the information represented by the predicative DP mon professeur de français ‘my French professor’ in this example is not functioning as “familiar” or “old” information for the hearer, but as “new” information. Since this is new information for the hearer, the speaker must now obligatorily use il and s/he cannot use ce.

While this type of approach seems to account for the preceding examples, it encounters a number of difficulties both from the point of view of the formulation of the

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pragmatic principles which are asserted to determine the use of ce and il, but, more importantly, with respect to the predictions that this type of approach makes with respect to the data.

First, from the point of view of formalization, it is quite difficult to see exactly what is meant by the old/new contrast since the distinctions are never actually defined. Instead, Coppieters provides an intuitive presentation of what the terms mean through discussion of individual examples. However, even then the intent of the terms remains vague since, for example, it seems that in both sentences (19) and (20) one could quite plausibly contend that the listener is equally “unfamiliar” or “familiar” with the property expressed by both predicative DPs. That is, the listener is equally unaware in both examples of the fact that the individual picked out by the pronoun possesses the property of being a French professor, or inversely, he is equally familiar with the fact that this DP denotes a “familiar” class (i.e., he knows what it means to be a French professor).

One might counter this criticism of Coppieters’ terminology by suggesting that this is simply misinterpretation of what is meant by the old/new distinction. Perhaps what Coppieters actually means by the old versus new information distinction depends not on whether the predicational DP is familiar (in some sense) to the listener, but rather on whether or not he is acquainted with the individual picked out by the pronoun. Specifically, one could interpret Coppieters’ distinction as entailing that the speaker must use il when the listener is already acquainted with the referent of the pronoun and ce when the listener is not. However, even this option is not viable in light of sentences like the following, which appear to have discourse contexts parallel to those just discussed in (19) and (20), but which have completely opposing judgments with respect to ce and il.

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- (21) a. Tu connais pas Claudette!? Eh bien, crois-le ou non,
Claudette, { ^{*ça} / elle } a été ma copine pendant un bon bout de temps.

you know not Claudette well good, believe it or not,

Claudette, she has been my friend during a good bit of time

'You don't know Claudette!? Well, believe it or not, Claudette, she was my friend for a good long time.'

- b. Je sais que tu sais que Neil Young est un musicien célèbre aux Etats-Unis, mais ce que tu ne sais pas, c'est que Neil Young, { ^{c'} / *il } est

aussi un musicien très populaire en Europe.

I know that you know that Neil Young is a musician famous at-the

United States, but that which you NEG know not, it is that, Neil Young,

he is also a musician very popular in Europe

'I know that you know that Neil Young is a famous musician in

the United States, but what you don't know is that he is also a very popular musician in Europe.'

The example in (21a) has a context which is parallel to that in (19) in that it is obvious that the listener does not know who Claudette is. The speaker is therefore identifying her for the listener by putting her into a class; however, (21a) contrasts with (19) in that in the former only elle is licit. Turning next to example (21b), this sentence has a context very similar to that of (20) in that both the speaker and the hearer are obviously familiar with Neil Young, i.e., his identity is apparently already known to both, and it would therefore seem that the speaker is adding "new" information regarding Neil Young since he is making the novel assertion that Neil Young is also a very popular musician in Europe. Since this is new information for the hearer in the relevant sense, one would expect only il to be licit, but, in fact, just the opposite is the case.

Thus it appears that regardless of which way one finally interprets the new/old distinction, one comes to an impasse regarding the distribution of ce and il. Similar

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definitional and data-oriented difficulties arise with respect to Coppieters' second distinction based on point of view. Coppieters argues that ce, in addition to being required in identificational contexts, is also obligatorily used to represent the speaker's point of view. (Il represents the antecedent's.) To illustrate this distinction, Coppieters (1974: 4) uses a sentence almost identical to the following. (Only maintenant 'now' has been added.)

(22) Napoléon entrait dans la ville; { ^{*c'}
il } était maintenant un

vainqueur impitoyable et il voulait que tous le sachent.

Napoleon entered into the city; he was now a conqueror pitiless and he wanted that all it-ACC know

'Napoleon marched into the city; he was now a pitiless conqueror and he wanted everyone to realize it.'

According to Coppieters (1974: 5) the obligatory use of il in this example is due to the fact that the information that Napoleon was a pitiless conqueror was known only to Napoleon himself; that is, it was Napoleon's point of view that he was a pitiless conqueror. If the information represented by the predicate nominal represents the speaker's point of view, on the other hand, and not the antecedent's, then one must use ce as in the following example, taken from Coppieters (1974: 4):

(23) Jean, { ^{c'}
*il } est un vrai imbécile et il devrait le savoir.

Jean, he is a true imbecile and he should it-ACC to-know

'Jean, he's a real imbecile and he should know it.'

Once again, while "point of view" appears to explicate these particular examples, it is possible to construct sentences which contradict what is apparently meant by the distinction. That is, there are examples such as (24) below in which il is licit, even though the property denoted by the predicate nominal obviously does not represent the antecedent's point of view; likewise, it is possible to construct sentences like (25) in which this DP obviously does not represent the speaker's point of view and ce is nonetheless licit.

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(24) Dans une semaine, l'ennemi va conquérir notre ville.

Bien qu'il ne se doute pas qu'il puisse l'être, je pense qu'il sera un vainqueur impitoyable et je veux que tous le sachent.

in one week, the enemy is-going to-conquer our city

well that he NEG himself suspects not that he can it-ACC to-be, I think that

he will-be a conqueror pitiless and I want that all it-ACC know

'In a week, the enemy is going to conquer our city. Even though he himself doesn't suspect it, I think that he will be a pitiless conqueror and I want everyone to realize it.'

(25) Marie a dit de Jean que c'est un vrai imbécile et qu'il le sait, mais moi, je ne suis pas d'accord.

Marie has said of Jean that he is a real imbecile and that he it-ACC knows, but me, I NEG am not of agreement.

'Marie said that Jean is a real imbecile and that he knows it, but I myself don't agree.'

From these examples, it is clear that, at least as it is presently formulated, Coppieters' (1975a,b) pragmatic principle regarding speaker's versus antecedent's point of view is also incomplete in that it leads one to expect judgments opposite to those speakers actually provide.

From this discussion, I conclude that neither the syntactic nor the pragmatic accounts that have been offered in the past can predict the judgments native speakers of French assign to sentences containing ce and il. In particular, each type of unified approach leads to contradictions with respect to the data. I interpret this result as indicating that a re-examination of the assumption common to all of these approaches is warranted; namely, it appears that the hypothesis that the same syntactic or pragmatic principles are at work in all ce/il alternations is incorrect. In other words, different principles and modules of the grammar are apparently responsible for different types of ce/il alternations. In the

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next section, some novel data will be introduced that offer even more convincing evidence that a “non-unified” approach is called for. In particular, this section will show that, contrary to expectations raised by a unified approach, ce/il alternations across sentences do not encode the same meaning distinctions. Furthermore, and equally unexpected, certain meanings of ce are restricted to particular environments, a fact which has never been noticed before and which present unified accounts are quite ill-equipped to explain.

5.4 Two Additional Arguments in Favor of a Non-Unified Approach to Ce

The discussion in section 5.2 was centered on sifting out the four possible meanings of ce, these being the demonstrative, expletive, neuter, and generic ce. In section 5.3, the syntactic and pragmatic proposals that have been advanced to account for ce/il alternations in a unified manner were examined. It was noted that, at least as they are presently formulated, they are incapable of handling the full range of the data. The fact that the meaning of ce does not remain constant across sentences, as well as the inadequacy of unified accounts of all four types of ce could indicate that different modules of the grammar may be responsible for various types of ce/il alternations. In this section, two further sets of facts which support this conclusion will be introduced. In particular, a unified account would logically lead one to expect that there must be some shared core meaning contrast encoded by all such alternations. Further, one might expect that one would find all four types of ce alternating with il in the same environments. This section will demonstrate that this is not the case and that, therefore, it is quite legitimate to make the novel proposal that not all alternations are of the same semantic type. This discussion will lead to a non-unified semantic account of one type of ce/il alternation, demonstrative ce/il alternations, in the next section.

The case of generic ce will be considered first with respect to these two issues. As the discussion will show, the personal pronoun il has an extremely limited distribution in generic contexts. Also, the nature of the meaning contrast encoded by ce/il alternations,

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when they are permitted, is different from that found with the other three types of ce. To begin, consider the following set of sentences, the majority of which are taken from Coppieters (1974: 1-4). These data illustrate the fact that ce/il alternations are always illicit for indefinite generics (as in (26a,b)) and that they have limited grammaticality for the case of definite generics (provided in (27a,b)).¹² Specifically, as Coppieters points out, il is only acceptable with (definite) generics when one is contrasting one subset of a group with another, e.g., when one is comparing domestic ducks with wild ones, or Bengal tigers with African ones.

(26) a. Un fonctionnaire, $\left\{ \begin{array}{c} c' \\ *il \end{array} \right\}$ est un bureaucrate.

a government-employee, he is a bureaucrat

'A government employee is a bureaucrat.'

b. Un lion, $\left\{ \begin{array}{c} c' \\ *il \end{array} \right\}$ est féroce.

a lion, he is ferocious

'Lions are ferocious.'

(27) a. Le tigre, $\left\{ \begin{array}{c} c' \\ *il \end{array} \right\}$ est un animal féroce.

the tiger, he's an animal ferocious

'The tiger is a ferocious animal.'

b. (What is the difference in color between domestic and wild ducks?)

-Le canard domestique, $\left\{ \begin{array}{c} c' \\ il \end{array} \right\}$ est souvent blanc, tandis que le canard sauvage, $\left\{ \begin{array}{c} c' \\ il \end{array} \right\}$ est souvent brun.

the duck domestic, he is often white, while that the duck wild, he is often brown

'What is the difference in color between domestic and wild ducks?'

'-The domestic duck, he's often white whereas the wild duck, he is often brown.'

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The first point raised by these data, therefore, is that present unified approaches to ce/il alternations leave unexplained this apparent “hole” in the distribution of generic il. That is, given either a syntactic or a discourse-based analysis, one is left with no explanation for why il should be perfectly acceptable in examples like (27b), but not in the others. Secondly, it is interesting to note the meaning contrast that definite generics encode by the choice of one pronoun when alternations are acceptable. In the case of example (27b), the contrast between ce and il is based on how one views the referent of the pronoun: if the pronoun is interpreted as referring to the whole class, ce is the required choice. If the pronoun is interpreted as taking one specific member of the class and attesting that he bears the property, then il is chosen. This extremely subtle meaning difference should be borne in mind as the ce/il alternations of the demonstrative, expletive, and neuter type are compared.

Now consider the other three types of ce with respect to the issues of distribution and the nature of the meaning contrast encoded by alternations. The following sets of sentences illustrate that il alternates much more freely with the demonstrative, expletive type, and neuter ce than it does with generic ce. Also of particular interest in these sets of examples is the meaning of ce and il in the same sentence.

- (28) a. Dans une semaine, l'ennemi va conqu rir notre ville.
 { Ce }
 { il } sera un vainqueur impitoyable et je veux que tous le sachent.

in one week, the enemy is-going to-conquer our city

he will-be a conqueror merciless and I want that all it-ACC know

'In one week, the enemy will conquer our city. He will be a merciless
conqueror and I want everybody to realize that.'

- b. Notre prochain premier ministre, { ce }
 { il } sera un homme qui dit

toujours la v rit .

our next Prime Minister, he will-be a man who tells always the truth

'Our next Prime Minister, he will be a man who always tells the truth.'

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- (29) a. Dans la nouvelle Russie de l'an 2000, { $\begin{smallmatrix} ce \\ il \end{smallmatrix}$ } sera naturel de vouloir se détendre.
 in the new Russia of the year 2000, it will-be natural of to-want oneself to-relax
 'In the new Russia of the year 2000, it will be natural to 'want to relax.'
- b. Vu l'obscurité totale qui règne à trois cent mètres sous terre, { $\begin{smallmatrix} ce \\ il \end{smallmatrix}$ } sera difficile d'éclairer quoi que ce soit avec une lampe de poche.
 seen the darkness total that prevails at three hundred meters under earth, it will-be difficult of to-light what that it may-be with a lamp of pocket
 'Given the complete darkness one finds at a depth of 300 meters beneath the earth's surface, it will be difficult to see anything at all with a flashlight.'
- (30) a. Regarde-moi cet imbécile: quand { $\begin{smallmatrix} ça \\ il \end{smallmatrix}$ } se retrouvera en terminale, { $\begin{smallmatrix} ça \\ il \end{smallmatrix}$ } ne saura même pas compter.
 look-at for-me that imbecile: when { $\begin{smallmatrix} it \\ he \end{smallmatrix}$ } { $\begin{smallmatrix} itself \\ himself \end{smallmatrix}$ } will-find in senior-year, { $\begin{smallmatrix} it \\ he \end{smallmatrix}$ } NEG will-know-how even not to-add
 'Look at that idiot: when { $\begin{smallmatrix} it's \\ he's \end{smallmatrix}$ } in 12th grade, { $\begin{smallmatrix} it \\ he \end{smallmatrix}$ } won't even know how to add.'
- b. Chomsky, { $\begin{smallmatrix} c' \\ il \end{smallmatrix}$ } est beau!
 Chomsky, { $\begin{smallmatrix} it \\ he \end{smallmatrix}$ } is { $\begin{smallmatrix} beautiful \\ handsome \end{smallmatrix}$ }
 'Chomsky, { $\begin{smallmatrix} it's \\ he's \end{smallmatrix}$ } { $\begin{smallmatrix} beautiful! \\ handsome! }'$

As these data demonstrate, these three types of ce/il alternations are unexpectedly quite free when compared with the generic ce and one also can see that the choice of one pronoun over the other either does not make a difference in meaning (in the case of the expletive ce in (29a,b)) or that the meaning contrast is markedly different, as is the case for

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demonstrative versus neuter ce in (28a,b) and (30a,b) respectively. To explain this latter point, the examples in (28a,b) illustrate demonstrative ce alternations with the personal pronoun il. In these sentences, both ce and il translate into English as he. (The grammar of English does not contain an equivalent to French demonstrative ce.) The choice between ce and il does encode a subtle difference in interpretation, however, in that the ce variant in (28a) implies (in a sense to be discussed at the end of section 5.5.3) that the enemy was a merciless conqueror before invading the city; perhaps he has previously invaded other towns and his conduct has shown him to be merciless towards his conquests. Thus, the ce variant may imply that the enemy now displays a pitiless conduct and it asserts that he will (continue to) do so at some future time as well. In contrast, the personal pronoun il in (28a) has no such implication of previous class membership. The enemy may or may not be a member of the class of pitiless conquerors at the present time; the sentence asserts only that at some future time he will be. The examples in (28b) illustrate similar meaning contrasts. The ce variant in (28b) may imply that the man who will be elected Prime Minister in the future tells the truth at present. The il variant has no such implication associated with it; the man who will be elected Prime Minister may or may not tell the truth now, but it is asserted that at some future time he definitely will.

Now compare the examples in (28a,b) with those provided in the expletive examples in (29a,b). In the expletive ce/il alternations given in (29a,b) the choice of a ce or il makes no absolutely no difference in interpretation. There is no implication regarding what state of affairs is likely to hold at some previous time. The only contrast between ce and il in these examples is one of register: ce would be a more natural choice in spoken French, whereas il is of a more elevated style.

Turning finally to the examples of neuter ce/il alternations, as in (30a,b), the choice of ce or il does result in a difference in interpretation, but the difference is not at all parallel to that found with demonstrative ce versus personal il, nor with that encoded by the generic alternation. As was mentioned in section 5.2, the choice of a ce in examples like (30a)

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encodes an especially derogatory view of the entity picked out by ce, whereas il lacks this depreciatory connotation. In the example in (30b), the use of the neuter pronoun has the effect of saying that everything associated with the name Chomsky is beautiful, whereas the use of the personal pronoun makes the assertion that only the individual has the property in question. (For example, perhaps the speaker does not find his writings, speeches etc. to be such things of beauty.) Importantly, in neither example is there an implication with respect to class membership at some time other than the time denoted by the tense of the verb, as was the case with demonstrative ce/animate il alternations.

To summarize, the distribution of generic il is inexplicably restricted, a fact which unified accounts do not lead one to expect. Secondly, the choice of ce or il in a given sentence, when it is permitted, does not always encode a difference in interpretation (i.e., in the “expletive” uses considered above, ce and il are in free variation) and even when a ce/il alternation does encode a meaning distinction, the contrast is not of the same nature across the various types of ce. (For example, neuter and demonstrative ce/il alternations do not share any “core” aspect of meaning.) These facts cast doubt on the validity of the assumption that the same syntactic or pragmatic principles are responsible for all of these alternations.

The second argument in favor of non-unified approach ce/il alternations focuses uniquely on limitations on the environments in which demonstrative ce is licit. In particular, below I will show that expletive, neuter, and generic ce are all licit in diverse syntactic environments, but that demonstrative ce is limited to Raising structures and even within that environment, only to certain tenses and semantic verb classes, as well as to particular syntactic complement types. Once again, these restrictions are completely unexpected and unexplained by present unified accounts to ce/il alternations.

To begin, first consider the fact that the demonstrative meaning of ce, unlike its other three interpretations, is never found outside of Raising constructions. This restriction on this type of ce is illustrated in the following sets of examples containing non-Raising

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verbs which provide instances of demonstrative, expletive, neuter, and generic ce respectively.^{13,14}

- (31) a. *Jean, ça veut vous donner des conseils.
Jean he wants you to-give of-the advice
'Jean? He wants to give you some advice.'
- b. *Jean, ça marche vite.
'Jean, he walks fast.'
- (32) a. Ça pleut.
it is-raining
'It's raining.'
- b. Ça commence à faire chaud par ici.
it is-beginning of to-make hot by here
'It's starting to get hot around here.'
- (33) a. Regarde-moi ce petit! Ça a dix ans et ça veut toujours vous donner des conseils.
look-at for-me that little-one it has ten years and it wants always you to-give of-the advice
'Do you believe that little kid! It's only ten years old but it still always wants to give you advice.'
- b. Regarde-moi ce gros tas de merde aux cheveux sales!
Et dire que ça travaille pour le gouvernement!
look-at for-me that big pile of shit with-the hair dirty
and to-say that it works for the government
'Look at that big piece of shit with the dirty hair! Would you believe that it works for the government?!'

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- (34) a. Les hommes, ça bavarde sans arrêt.
the men, they jabber without end
'Men, they're always jabbering.'
- b. Un lion, ça mange beaucoup!
a lion, it eats a lot
'Lions eat a lot!'

The impossibility of having a demonstrative reading of ce in non-Raising constructions is mysterious if one adopts a unified account of this pronoun, but, if one adopts a non-unified account of ce, and, if one further assumes that the contrast between demonstrative ce and the personal pronoun il is only rendered possible by the Case/Theta role dissociations found in Raising contexts, then this hole in the distribution of demonstrative ce in non-Raising sentences is accounted for.

Even within the environment of Raising structures, demonstrative ce is subject to further constraints not imposed on the other three types of ce. (As the next section will show, these restrictions provide the key to what semantic mechanisms underlie demonstrative ce/ il alternations.) First, demonstrative ce is never found with APs or PPs, as the examples in (35a,b) show. In other words, this type of ce is found uniquely in predicate nominal sentences. (It is important to bear in mind that the grammaticality judgment of (35a,b) is intended to apply only to the demonstrative reading of ce.)¹⁵

- (35) a. *Jean, c'est malin.
'Jean, he's clever.'
- b. *Jean, c'est encore au bureau.
'Jean, he's at the office again.'

This restriction is not imposed on the other three homophones, as the following sentences containing APs and PPs clearly show. (The following sentences continue to follow the pattern of providing examples of expletive ce, followed by neuter, and generic ce.)¹⁶

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- (36) a. C'est très difficile de lire ce livre.
it is very difficult of to-read this book
'It's very difficult to read this book.'
- b. C'est à la mode de porter un chapeau.
it is at the fashion of to-wear a hat
'It's in fashion to wear a hat.'
- (37) a. Ce général, c'est puant!
this general, it is smelly
'This general, it stinks!'
- b. Regarde-moi cette fainéasse, c'est encore au bureau, le cul sur un fauteuil.
look-at for-me that lazy-ass, he is again at-the office, the ass on a chair
'Look at that lazy ass, once again he's at the office with his ass planted on a chair.'
- (38) a. Un bureaucrate, c'est méfiant.
a bureaucrat, he is distrustful
'A bureaucrat is distrustful.'
- b. Un bureaucrate, c'est souvent en congé.
a bureaucrat, he is often on vacation
'A bureaucrat is often on vacation.'

As was the case with the restriction imposed on demonstrative ce in non-Raising constructions, this hole in the environment of APs and PPs is quite unexpected if one assumes that all ce's are of the same semantic type, but it is not unexpected if one assumes that there are various distinct ce's which are theoretically subject to different constraints in the grammar.

A second type of restriction on demonstrative ce in Raising constructions concerns the unacceptability of this variant with certain semantic verb classes in certain tenses.¹⁷ For the purposes of the present chapter, the only two relevant verb class distinctions are the

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stative versus the non-stative since the set of Raising verbs in French includes members of both sets. For example, the verbs être 'to be', avoir l'air 'to appear', paraître 'to appear', sembler 'to seem', and what I shall refer to as rester₂ 'to be left' are all members of the class of stative verbs, while the lexical items devenir 'to become', demeurer 'to remain', and rester₁ 'to remain' are all non-statives.¹⁸ As evidence for this claim, it is necessary to briefly consider a few of the tests for stativity due to Kenny (1963) and Lakoff (1965).

The first test is the "progressive" test. Lakoff (1965) noticed that statives contrast with non-statives in that the former are ill-formed in the progressive tense/aspect while the latter are not. Thus, one finds a contrast between stative verbs, like être 'to be', and non-statives, such as devenir 'to become' in examples like the following.^{19,20}

- (39) a. $\left\{ \begin{array}{c} ! \\ \# \end{array} \right\}$ Dr. Jekyll is $\left\{ \begin{array}{c} \text{being} \\ \text{seeming to be} \end{array} \right\}$ Mr. Hyde.
 b. Dr. Jekyll is $\left\{ \begin{array}{c} \text{becoming} \\ \text{remaining} \end{array} \right\}$ Mr. Hyde.

Similar results obtain for Lakoff's second test regarding the pseudo-cleft construction. Once again, stative verbs are unacceptable in pseudo-clefts, whereas non-statives are perfectly acceptable:

- (40) a. $\left\{ \begin{array}{c} ! \\ \# \end{array} \right\}$ What Dr. Jekyll did was $\left\{ \begin{array}{c} \text{be} \\ \text{seem to be} \end{array} \right\}$ Mr. Hyde.
 b. What Dr. Jekyll did was $\left\{ \begin{array}{c} \text{become} \\ \text{remain} \end{array} \right\}$ Mr. Hyde.

As a final test, this one due originally to Kenny (1963), consider the fact that stative examples like those in (41a) below have a non-habitual present tense reading that non-statives lack. That is, example (41a) may felicitously be true of Dr. Jekyll right now, whereas the non-stative examples in (41b) disallow such a reading.

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- (41) a. Oh my God, look, Dr. Jekyll is now My. Hyde!
b. $\left\{ \begin{array}{c} ! \\ \# \end{array} \right\}$ Oh my God, look, Dr. Jekyll $\left\{ \begin{array}{c} \text{becomes} \\ \text{remains} \end{array} \right\}$ Mr. Hyde
right now!!

In conclusion, these three tests show that Raising verbs fall into two semantic classes: the stative and the non-stative. Having established the semantic verb class associated with the various Raising verbs, I return now to the issue of restrictions on demonstrative ce. Recall that the existence of such restrictions on demonstrative ce is being advanced here as evidence that not all ce's are semantically equivalent and, therefore, that it is quite possible to maintain the position that ce/il alternations are not a unified phenomenon.

The first restriction concerns the past tense in French known as the imparfait 'imperfect'. In this tense, the occurrence of the demonstrative pronoun ce is limited to the class of stative verbs. That is, while stative imperfect examples like those in (42a,b) are quite acceptable with the demonstrative reading of ce, non-statives like those in (43a,b) are not:

- (42) a. Jean, c'était un homme instruit.
Jean, he was a man educated
'Jean, he was an educated man.'
- b. Après avoir éliminé toutes les autres personnes ayant eu des contacts avec la victime, j'en vins à la conclusion que, Jean, ça restait mon suspect numéro un.
after to-have eliminated all the other people having had some-of-the contacts with the victim, I of-it came to the conclusion that Jean, he was-left my suspect number one
'After having eliminated all of the other people who had contact with the victim, I arrived at the conclusion that Jean was left as my number one suspect.'

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- (43) a. *Quant au fils du voisin, ça devenait un homme instruit un peu plus chaque jour, ce qui nous ravissait.
as to-the son of-the neighbor, he was-becoming a man educated a little more each day, that which us delighted
'As for the neighbor's boy, he was becoming more and more of an educated man each day, which delighted us.'
- b. En dépit des compressions budgétaires, Jean était pas mal satisfait.
*Après avoir été le directeur de cette fichue banque pendant vingt ans, ça restait le directeur de cette fichue banque!
in spite of-the pressures budgetary, Jean was not badly satisfied after to-have been the director of this stupid bank during twenty years, he was-remaining the director of this stupid bank
'In spite of budgetary pressures, Jean was pretty satisfied. After having been the director of this stupid bank for twenty years, he remained its director!'

Given Coppieters' (1975a,b) pragmatic account of the distribution of ce discussed in the previous section, as well as any syntactic account based on complement type, this gap in the imperfect for non-statives appears quite puzzling. That is, there appears to be no reason why one could not ever construct an appropriate discourse context for demonstrative ce with non-stative verbs in this particular tense, and, in fact, a pragmatic analysis of this type would predict that all types of ce should be possible in all environments, given the appropriate discourse. As the preceding examples show, however, this is not the case. Similar criticisms arise with respect to syntactic accounts. While a semantic account of this restriction will be delayed until the next section, for now it is simply important to note that (a) present analyses cannot handle the facts in (43a,b) and (b) only demonstrative ce is subject to this restriction, supporting a non-unified treatment of the various meanings

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associated with this pronoun. With respect to the latter point, let's consider now the licitness of expletive, neuter, and generic ce's in the imperfect:

- (44) a. *Ça devenait très difficile à admettre.*
'It was becoming very difficult to admit.'
- b. *Cet imbécile de Jean: quand ça devenait la coqueluche de ces dames, ça ne se rendait même pas compte!*
that imbecile of Jean: when it was-becoming the whooping-cough of those ladies, it NEG itself realized even not account
'That idiot of a Jean: when it was becoming a lady killer, it didn't even realize it!'
- c. *Au temps des romains, les esclaves, ça devenait gladiateur si par malheur leur maître se mettait à s'intéresser aux jeux de l'arène.*
in-the time of-the Romans, the slaves, they became gladiator if by misfortune their master himself put to himself to-interest in-the games of the arena
'In Roman times, a slave, he would become a gladiator if by bad luck his master should happen to get interested in the Games.'

Having shown that demonstrative ce exhibits an unexpected restriction in the imperfect not attested for the other three types of ce, I turn now to a second restriction that is also related to both verb class and tense. This time I shall consider the distribution of demonstrative ce in the passé composé 'the compound past'. Strikingly, the facts found here are the exact opposite of those found in the imperfect. That is, as the examples in (45a,b) and (46a,b) show, this time demonstrative ce is limited to the class of non-statives.²¹

- (45) a. **Claudette, ça a été ma copine.*
Claudette, she had been my friend
'Claudette, she was my friend.'

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- (45) b. *A l'issue du bombardement, Jean, c'est resté le seul homme en vie à trois kilomètres à la ronde.
at the end of-the bombardment, Jean, he is left the only man in life at three kilometers at the roundabout
'By the end of the bombardment, Jean was the only man left alive within a two mile radius.'
- (46) a. Jean, c'est devenu un grand garçon.
Jean, he is become a big boy
'Jean has become a big boy.'
- b. Jean, c'est resté un petit garçon.
Jean, he is remained a little boy
'Jean has remained a little boy.'

The same criticisms formulated earlier regarding the restriction on demonstrative ce in the class of non-statives in the imperfect apply to these facts regarding the compound past. That is, this hole in demonstrative ce's distribution is both unexpected by previous analyses and it also shows that demonstrative ce exhibits a behavior distinct from the other interpretations associated with this pronoun. In regard to the latter point, a few examples will be considered. First, note the following sentence which clearly shows that generic ce is also disallowed in the passé composé 'compound past'.²²

- (47) a. *Un dinosaure, ça a mangé des algues.
a dinosaur, he has eaten some kelp
'A dinosaur ate kelp.'

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- (47) b. *Le dinosaure, ça a été un animal qui ne pouvait survivre que dans les climats tropicaux.
the dinosaur, it has been an animal that NEG could to-survive only in the climates tropical
'The dinosaur, it was an animal that could only survive in tropical climates.'

Once again, a complete discussion of how to formally capture the meaning of this tense as well as the other tenses discussed in this section will be delayed until the next section. What is of importance for the moment is simply that this restriction on generic ce in the passé composé 'compound past' is not to be accounted for in the same manner as the similar restriction on demonstrative ce. That this is correct is indicated by the fact that demonstrative ce is permitted in this tense provided that the Raising verb belongs to the non-stative class, whereas this tense is never acceptable for generics. (See the sentences in (46a,b) above for examples of demonstrative ce in the passé composé 'compound past'.) Turning now to the expletive and neuter uses of ce, both are acceptable in the passé composé 'compound past':

- (48) a. Ça a été difficile de ne pas le gifler.
it has been difficult of NEG not him-ACC to-slap
'It was difficult not to slap him.'
- b. Jean pense que ça a été bien naturel de vouloir se détendre.
Jean thinks that it had been very natural of to-want oneself to-relax
'Jean thinks that it was very natural to have wanted to relax.'
- (49) a. Regarde-moi cette andouille! Et dire que ça a été président?!
look-at for-me that tripe-sausage and to-say that it has been president
'Look at that moron! Who would believe it was once president?!'

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- (49) b. Regarde-moi ce gros tas de merde aux cheveux sales!
Et dire que ça a été une star des années soixante!
look-at for-me that big pile of shit with-the hair dirty
and to-say that it has been a star of-the years sixties
'Look at that big piece of shit with the dirty hair! Would you believe
that it was a star in the sixties?!'

In sum, the compound past has been shown to be a second area in which the distribution of demonstrative ce is limited. Thus, it once again appears that previous unified accounts face serious difficulties with regard to these restrictions and also, that these facts lend credibility to a non-unified account of ce.

The third and final area of restriction for demonstrative ce pertains to the present tense.²³ This tense exhibits a constraint on demonstrative ce parallel to that found in the imperfect, i.e., this pronoun is unacceptable with the class of non-stative verbs, as the sentences in (51a,b) clearly show.²⁴

- (50) a. Jean, c'est un homme instruit.
Jean, he is a man educated
'Jean, he's an educated man.'
- b. A l'issue de ces éliminatoires, il me paraît évident que, Jean, ça reste
la seule personne à pouvoir assumer les fonctions de directeur.
at the end of these eliminations, it to-me-DAT seems evident that, Jean, he
is-left the only person at to-be-able to-assume the functions of director
'After this process of elimination, it seems obvious to me that Jean is the
only person left who is capable of taking on the job of director.'

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- (51) a. *Quant au fils du voisin, ça devient un homme instruit un peu plus chaque jour.

as to-the son of-the neighbor, he is-becoming a man educated a little more every day

'As for the neighbor's boy, he is becoming more and more of an educated man every day.'

- b. *Chantal était une personne désagréable hier, et ça reste une personne désagréable aujourd'hui.

Chantal was a person disagreeable yesterday, and she remains a person disagreeable today

'Chantal was a disagreeable person yesterday and she still is today.'

In contrast, expletive, neuter, and generic ce are all grammatical in this tense regardless of verb class, as evidenced by the following (b) sentences which contain non-stative verbs.²⁵

- (52) a. C'est naturel de vouloir se détendre.

it's natural of to-want oneself to-relax

'It's natural to want to relax.'

- b. Ça reste difficile de lire à la lumière d'une bougie.

it remains difficult of to-read by the light of a candle

'It's still difficult to read by candlelight.'

- (53) a. C'est comptable et ça ne sait pas faire une addition juste!

it is accountant and it NEG knows not to-make an addition right

'It calls itself an accountant, but it doesn't even know how to add right!'

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- (53) b. Regardez-moi ce général! Ça ne sait pas donner des ordres et ça devient un peu plus incompetent chaque jour!
look-at for-me that general it NEG knows-how not to-give some orders
and it is-becoming a little more incompetent every day
'Look at the general, will you! It doesn't even know how to give orders
and it's getting more and more incompetent every day!'
- (54) a. Tu vois cette fleur, c'est une espèce de rose.
you see this flower, it is a species of rose
'You see this flower, it's a kind of rose.'
- b. Un premier ministre, avec le temps, ça devient toujours honnête.
a Prime Minister, with the time, he becomes always honest
'A Prime Minister, with time he always becomes honest.'

Once again, the contrasting distribution of the demonstrative reading of ce in comparison with the other three readings would appear problematic for a unified account, but such contrasting distribution would be a natural consequence of the claim that there is more than one type of ce and that different principles and modules of the grammar account for each type of alternation.

To summarize this section, I have argued that all four meanings of ce do not exhibit the same distribution, nor do they share any core aspect of meaning when they alternate with il. Additionally, a large number of restrictions on demonstrative ce were explored. Demonstrative ce is never found in non-Raising constructions. It is never attested with Raising constructions involving AP or PP complements. Finally, it is subject to a number of constraints related to semantic verb class and tense, which are summarized in the table given below. (See appendix 2 for a compilation of the data.)

(55) TABLE 2: ASPECTUAL RESTRICTIONS ON DEMONSTRATIVE CE

	<u>Imparfait</u>	<u>Passé Composé</u>	<u>Present</u>	<u>Future</u>
<u>Stative Verbs</u> e.g., <u>avoir l'air</u> 'to appear' <u>être</u> 'to be', <u>rester</u> ₂ 'to be left'	both <u>ce</u> & <u>il</u>	<u>il</u> only	both <u>ce</u> & <u>il</u>	both <u>ce</u> & <u>il</u>
<u>Non-Stative Verbs</u> e.g., <u>devenir</u> 'to become', <u>rester</u> ₁ 'to remain'	<u>il</u> only	both <u>ce</u> & <u>il</u>	<u>il</u> only	both <u>ce</u> & <u>il</u>

The facts discussed in this section, which are unexplained by previous accounts of ce/il alternations, provide additional evidence in support of the view that it is misguided to attempt to collapse all uses of ce under the rubric of a unique syntactic or pragmatic phenomenon. The goal of the next section will be to provide a formal semantic account capable of handling all of those facts which pertain to demonstrative ce, which has been selected for investigation in this thesis because it is the only type of ce which appears uniquely in environments in which Case/Theta Role assignment dissociation has taken place.²⁶

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5.5 A Semantic Analysis of Demonstrative Ce

This section will provide a formal semantic account of ce/il alternations within the grammar of French. In the previous section, three key factors were shown to play a role in the distribution of demonstrative ce. The first of these is simply that one must have a Raising construction in order for demonstrative ce to be licit. Given the thesis defended in this dissertation; namely, that Case/Theta role assignment dissociation is a means by which the grammar of a given language may encode a semantic presupposition/conventional implicature, this restriction on demonstrative ce is expected. The second key factor determining the use of demonstrative ce is somewhat more mysterious. This is that demonstrative ce is only licit in predicate nominal sentences. Finally, the data showed that both the tense and the semantic class of the Raising verb influence the acceptability of demonstrative ce. The analysis to be developed below will account for all of these factors.

5.5.1 The French Tense and Aspectual Systems

The goal of this subsection is to provide the background on the topic of tense and aspect necessary to arrive at an analysis of demonstrative ce, a task to be undertaken in the next two subsections.²⁷ In particular, the meaning of the terms “tense” and “aspect” will be explicated below; that is, it will be shown how these concepts are similar, how they differ, as well as how they can be captured formally. Additionally, and most importantly, this section will develop the truth conditions needed to capture the past, present, and future “tenses” in French in model-theoretic terms, as well as those necessary to capture the notion of semantic verb class. It is these truth conditions which will subsequently be shown to play a crucial role in accounting for the distribution of demonstrative ce.²⁸

As Comrie (1976a: 5) points out, tense and aspect are similar to one another in that both are concerned with time reference and both resort to morphological and lexical means to encode it. The primary factor which distinguishes tense from aspect is the type of time

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reference that is involved. In particular, Comrie (1976a) defines tense as situation-external time reference and aspect as situation-internal time reference.²⁹

Situation-external time reference (tense) situates the time of some state of affairs relative to a distinct time. Generally, but not necessarily, this distinct reference time is speech time.³⁰ Thus, the past, present, and future tenses in the following examples all locate a situation relative to a reference point which is external to the moment at which the event itself is asserted to hold.³¹

- (56) a. Jean lisait.
Jean was-reading
'Jean was reading.'
- b. Jean a lu.
Jean has read
'Jean read.'
- c. Jean lit.
Jean is-reading
'Jean is reading.'
- d. Jean lira.
Jean will-read
'Jean will read.'

To explain, the past tenses known as the imparfait 'imperfect' and the passé composé 'compound past' in examples (56a,b) respectively both encode the fact that the state of affairs, namely, the event of Jean's reading, is situated at a time previous to speech time. Similarly, the present tense in (56c) locates this state of affairs at a time concurrent with the moment of utterance. Finally, the future tense in (56d) places the time of the event at some moment subsequent to speech time. In all three cases, tense orders the time of the situation relative to a moment of time external to the time of the event itself, this time most often being the moment of utterance.

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The preceding examples were intended to illustrate what is meant by the notion of situation-external time reference, but they also demonstrate the fact that French is a language which obligatorily uses its morphological system to situate an event in time; that is, French, unlike, for example, Chinese, always encodes the time at which a state of affairs is situated via morphological markings on the verb. Of course, French also shares with languages like Chinese the alternative, lexical means of encoding situation-external time reference, this being the use of temporal adverbs like hier 'yesterday', aujourd'hui 'today', and demain 'tomorrow'.

Thus far, the discussion has focused on what tense is, as well as how it is encoded. The next issue to be considered is how the meaning of the past, present, and future tenses may be formally captured by the semantic component. Montague (1968, 1973) and Prior (1967) propose that the meaning of a formula modified by a temporal expression (operator) be captured via truth conditions which reflect exactly how a given temporal operator "shifts" the time at which some state of affairs holds from the external time (e.g., speech time) to some other time. Thus, under this system, the formulas expressed in the examples in (56a,d) above are said to be true just in case the state of affairs they describe respectively holds at a moment previous, concurrent, and subsequent to speech time, a fact which is captured via truth conditions like the following:

- (57) a. Where φ is a sentence, PAST (φ) is true at a time t if and only if (iff) there is a time t' such that $t' < t$ and φ is true at t' .
- b. Where φ is a sentence, PRES (φ) is true at a time t iff there is a time t' such that $t' = t$ and φ is true at t' .
- c. Where φ is a sentence, FUT (φ) is true at a time t iff there is a time t' such that $t < t'$ and φ is true at t' .

As will be demonstrated below, these truth conditions are accurate in that they do indeed reflect the fact that tense situates an event relative to an external time. Unfortunately, certain features of them ultimately prove to be inaccurate when one considers data beyond

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those provided in (56a,d) above, as will be done shortly. For the moment, however, the point of interest is simply that situation-external time reference (tense) has the semantic effect of situating an event relative to a point in time that is external to the time of the event itself.

As was mentioned earlier, aspect contrasts with tense in that the former looks at the internal temporal constituency of a given state of affairs. (Hence Comrie's use of the term "situation-internal" time reference.) To make the notion of situation-internal time reference (aspect) a bit clearer, consider once again the examples which respectively contain the two past tenses of spoken French known as the passé composé 'compound past' and the imparfait 'imperfect'.

- (58) a. Il a lu.
 he has read
 'He read.'
- b. Il lisait.
 he was-reading
 'He was reading.'

As was noted earlier, both of the immediately preceding examples encode past tense. Specifically, the event of the reading is located at some time previous to the moment of utterance. These two examples are not equivalent from an aspectual point of view, however. In particular, as Comrie (1976a: 18) aptly puts it, the passé composé 'compound past' in (58a) represents the situation as a "complete" event (referred to as "perfective aspect"), whereas the imparfait 'imperfect' in (58b) denotes an incomplete situation (i.e., it encodes imperfective aspect). A formal definition of these concepts will be undertaken below, for the moment, however, it can be seen that what is meant by saying that aspect looks at the internal temporal constituency of a situation is simply that aspect indicates which of the moment(s) collectively making up the event the speaker has chosen to focus upon. For example, in the perfective (58a) the speaker focuses on the totality of an event

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which has a beginning, a middle, and an end; in the imperfective (58b), the speaker is focussing only on a midpoint or set of midpoints.

As was the case for tense, aspectual distinctions may be encoded either in the verbal morphology or lexically. Concerning the former, the preceding examples clearly show that, in French, the past tense and the perfective/imperfective aspectual markers are “combined” in the verbal inflectional system rather than being clearly distinguishable from one another via separate morphological markings, as is the case in other languages. The fact the tense and aspectual markings are “combined” in this language accounts for the traditional grammar usage of the term “tense” to refer to contrasts, such as that between the passé composé ‘compound past’ and the imparfait ‘imperfect’, which, in fact, are technically aspectual in nature.

In French, aspect distinguishes itself from tense not only in the type of time reference it involves, but also with respect to the obligatoriness of morphologically marking such features of meaning. Specifically, aspectual distinctions are not obligatorily marked by the verbal morphology in every sentence. To provide a concrete example, although the imperfective/perfective contrast is indeed obligatorily marked in the past tense morphemes in this language, such is not the case for the present and future tenses which lack a verbal stem explicitly signalling the incomplete versus complete distinction. One consequence of this, pointed out in Comrie (1976a: 74) and illustrated by the examples in (59b,c) below, is that in these two tenses the same verbal form may signal either an imperfective or a perfective reading in narratives, which is certainly not the case in the past tense example in (59a).³²

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- (59) a. Un homme s'amenait sur la route, il conduisait trois moutons. Il aperçut l'âne chargé et dit...
- a man himself was-leading on the road, he was driving three sheep he saw the donkey loaded and said...
- 'A man was walking down the road driving three sheep. He saw a loaded donkey and said...'
- b. Un homme s'amène sur la route, il conduit trois moutons. Il aperçoit l'âne chargé et dit...
- a man himself is-leading on the road, he is-driving three sheep he sees the donkey loaded and says...
- 'A man is walking down the road driving three sheep. He sees a loaded donkey and says...'
- c. Un homme s'amènera sur la route, il conduira trois moutons. Il apercevra l'âne chargé et dira...
- a man himself will-be-leading on the road, he will-be-driving three sheep he will-see the donkey loaded and will-say
- 'A man will be walking down the road driving three sheep. He will see the loaded donkey and will say...'

Although the narrative use of the present and future tenses may denote both complete and incomplete situations, this is not the case for the more common non-narrative use of these tenses. In particular, as Comrie (1976a: 66) and Garey (1957: 110) point out, the present tense is generally imperfective, i.e., it describes on-going, "incomplete" situations, whereas the future tense, like the passé composé 'compound past' and the passé simple 'past definite', is generally perfective in that it is generally used to refer to "complete" future events.

Having considered a morphologically-realized type of aspectual distinction, it is important to note that French, like many other languages, also contains in its grammar a

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number of syntactic constructions which explicitly encode these features of meaning.³³ For example, in French one may explicitly encode the imperfective (incomplete) aspect with expressions like être en train de 'to be in the process of' and the perfective (complete) aspect with expressions like venir de 'to have just'. Thus even the morphologically ambiguous propositions in the present and future narratives may be modified by such expressions in order to make the complete/incomplete distinction clear:

(60) Imagine un peu ça: il y a un homme qui est en train de conduire ses moutons.

Il vient d'apercevoir l'âne chargé.

imagine a little this: it there has a man who is in the-process of to-drive his
sheep he comes from to-notice the donkey loaded

'Just picture this: there's a man who's driving his sheep. He has just seen a
loaded donkey.'

Further, it was stated above that the present and future tenses are generally imperfective and perfective respectively. The qualification "generally" was added precisely because each of these tenses allow for a syntactic expression denoting the contrary aspect to be added, thereby, "converting" them into the opposing aspect. For example, the sentence in (61) below contains the present tense form of the verb venir 'to come', but the lexical semantics of the syntactic expression venir de 'to have just' nonetheless encodes the perfective, "completed" aspect. Similarly, the example in (62) contains the normally perfective future form of the verb être 'to be', but, once again, the lexical semantics of the idiomatic expression être en train de 'to be in the process of' nonetheless encodes imperfective aspect.

(61) Jean vient de lire ce roman.

Jean comes from to-read this book

'Jean has just read this book.'

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(62) Quand tu arriveras, Jean sera en train de finir ses devoirs.

when you will-arrive, Jean will-be in the process of to-finish his homework

'When you arrive, Jean will be finishing his homework.'

Thus, the preceding examples clearly demonstrate that the normal aspectual value of the present and future tenses is nullified whenever an idiomatic expression of the être en train de 'to be in the process of'-type is involved.

To briefly summarize, the discussion thus far has first demonstrated that tense and aspect contrast in the type of temporal reference they encode: tense is a term which refers to how situations are ordered relative to some time external to them; aspect is a term which refers to how the internal temporal constituency of an event is represented. The preceding discussion has also shown that while every formula in French is obligatorily situated in time via morphological markings on the verb, not every one is unambiguously morphologically-marked for a given aspectual distinction. In particular, the perfective/imperfective aspectual contrast referring to complete versus incomplete events was shown to be explicitly morphologically signalled only in the past tenses known as the passé composé 'compound past' and the imparfait 'imperfect'. The non-narrative uses of the present and future tenses, while lacking the aspectually-explicit morphological morphemes found in the past tenses, were said to be imperfective and perfective respectively.

Up to this point, only one type of aspectual value has been discussed, this being, of course, the perfective/imperfective contrast. Further aspectual distinctions exist in French (and other languages) beyond this one, however. In particular, the lexical meaning of predicates (their so-called "aktionsart") is such that the internal temporal structure of the event they denote must be represented in a fixed way.³⁴ For the purposes of this chapter, one particular type of aktionsart plays an important role in accounting for demonstrative ce. This is the stative versus non-stative contrast mentioned in section 5.4 above. To illustrate what is traditionally meant by saying that stative and non-stative predicates must represent

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their internal temporal structure in a fixed (and contrasting) manner, consider the following sentences. In particular, compare the meaning of the non-stative predicates devenir un homme instruit 'to become an educated man' and bouger 'to move' with that of a stative predicate, croire que le ciel lui tomberait sur la tête 'to believe that the sky will fall on his head':

(63) a. Jean { devenait un homme instruit. }
 Jean { bougeait. }
 Jean { was-becoming a man educated }
 was-moving }
 'Jean was { becoming an educated man.' }
 moving.' }

b. Jean { est devenu un homme instruit. }
 Jean { a bougé. }
 Jean { is become a man educated }
 has moved }
 'Jean { became an educated man.' }
 moved.' }

c. Jean { devient un homme instruit. }
 Jean { bouge. }
 Jean { is-becoming a man educated }
 is-moving }
 'Jean is { becoming an educated man.' }
 moving.' }

d. Jean { deviendra un homme instruit. }
 Jean { bougera. }
 Jean { will-become a man educated }
 will-move }
 'Jean will { become an educated man.' }
 move.' }

(64) a. Jean croyait que le ciel lui tomberait sur la tête.

Jean believed that the sky on-him-DAT would-fall on the head

'Jean believed that the sky would fall on his head.'

b. Jean a cru que le ciel lui tomberait sur la tête.

Jean has believed that the sky on-him-DAT would-fall on the head

'Jean believed that the sky would fall on his head.'

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(64) c. Jean croit que le ciel lui tombera sur la tête.

Jean believes that the sky on-him-DAT will-fall on the head

'Jean believes that the sky will fall on his head.'

d. Un jour, Jean croira que le ciel lui tombera sur la tête.

one day, Jean will-believe that the sky on-him-DAT will-fall on the head

'Someday, Jean will believe that the sky will fall on his head.'

As Dowty (1979), Taylor (1977), and von Wright (1963, 1968), among others, have noted non-stative predicates like (63a,d) above contrast with the stative ones like (64a,d) in that the former all denote situations that must make reference to at least two distinct points in time before one can determine whether the property they denote actually holds of some individual. In the case of devenir un homme instruit 'to become an educated man', for example, at some point in time an individual is not an educated man; at some later point in time, he is, and one must have reference to both points before one is warranted in saying that it is true of some individual that he has become an educated man. Similarly, the non-stative verb bouger 'to move' minimally requires one moment at which an entity is located at a point x and a second moment at which that individual is at a different point y before one can properly say of that entity that (s)he has moved. In contrast, the lexical meaning of a stative predicate like croire que le ciel lui tomberait sur la tête 'to believe that the sky would fall on his head' in (64a,d) above obviously does not require two points in time before the state of affairs which the stative predicate denotes can be properly said to hold since one need only determine whether the individual in question possesses the property denoted by the predicate at a single moment of time to be able to truthfully say whether or not that entity possesses the property. In sum, the lexical meaning of predicates also imposes restrictions on how the internal temporal constituency (aspect) of an event is represented.

For the purposes of the present work, the only semantic verb class distinction (aktionsart) which ultimately plays a role in accounting for the distribution of demonstrative ce is the stative versus non-stative one. However, as Comrie (1976a), Dowty (1979),

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Garey (1957), Kenny (1963), Ryle (1949), and Vendler (1967), among others, discuss in great detail, further aspectual distinctions of this nature do exist and one of them has played quite a significant role in the development of the proper truth conditions for the “tenses” (in the traditional grammar sense of the word) and, therefore, warrants further attention since the truth conditions for several of the French tenses will be developed below. This verb class distinction is known as the telic versus atelic one.

The term “telic” refers to any predicate which inherently contains some fixed termination point which must be reached before the property denoted by the predicate can truthfully be said to hold of some individual. The predicate devenir un homme instruit ‘to become an educated man’, for example, is telic since at some specific time, the event of becoming an educated man is completed and it is this point in time that must be reached before one can truthfully say of some individual that he has become an educated man. That is, if one interrupts the event before this accomplishment point is passed, the property cannot truthfully be said to hold of the individual since he has not yet acquired all of the characteristics necessary to be considered an educated man. In contrast, the atelic predicates, of which bouger ‘to move’ and croire que le ciel lui tomberait sur la tête ‘to believe that the sky would fall on his head’ are two examples, do not involve a particular point of time at which the event is accomplished. That is, once one has begun to move, if one is interrupted before the entire moving event is completed, it is still true that one has moved to a degree. Similarly, once one has begun to believe something, one can change one’s mind later, but it is still the case that one has believed it.

As the authors mentioned above have noted, this semantic difference between telic and atelic predicates comes out quite strongly when one tries to deny that the state *ce* affairs denoted by the predicate obtains of some entity in the imperfective tenses, the imperfective tenses being the imparfait ‘imperfect’ and the (non-narrative use of the) present and it is this fact which has led to a substantial revision of the truth conditions for the tenses originally proposed in Montague (1968, 1973) and Prior (1967), given above in (57a,c). In

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particular, while it is possible to deny that the state of affairs held in these “tenses” when the predicate is telic, such a denial leads to a logical contradiction in the case of atelic verbs, as the following illustrate.^{35, 36}

- (65) a. A ce stade, il était évident que Jean devenait un homme instruit, mais en fait, il ne l’est jamais vraiment devenu parce qu’il a été obligé de quitter l’université.

at that stage, it was obvious that Jean was-becoming a man educated, but in fact, he NEG it-ACC is never truly become because that he has been obliged of to-leave the university

‘At that stage, it was obvious that Jean was becoming an educated man, but he never actually became one because he had to drop out of the university.’

- b. Il est évident que Jean devient un homme instruit, mais il est probable qu’il ne le deviendra jamais complètement parce qu’il sera obligé de quitter l’université.

it is obvious that Jean is-becoming a man educated, but it is likely that he NEG it-ACC will-become never completely because that he will-be obliged of to-leave the university

‘It’s obvious that Jean is becoming an educated man, but he’ll never really become one because he’ll have to drop out of the university.’

- (66) a. !Jean bougeait, mais il n’a jamais bougé.

Jean was-moving, but he NEG has never moved

‘Jean was moving, but he didn’t move.’

- b. !Jean bouge, mais il ne bouge pas.

Jean is-moving, but he NEG moves not

‘Jean is moving, but he isn’t moving.’

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- (66) c. !Jean croyait que le ciel lui tomberait sur la tête mais il ne l'a jamais vraiment cru.
Jean was-believing that the sky on-him would-fall on the head but he
NEG it-ACC has never really believed
'Jean believed that the sky would fall on his head, but he never really believed it.'
- d. !Jean croit que le ciel lui tombera sur la tête, mais il ne le croit pas vraiment.
Jean believes that the sky on-him will-fall on the head, but he NEG it-ACC believes not really
'Jean believes that the sky will fall on his head, but he doesn't really believe it.'

In a moment, the problems raised by the telic/atelic distinction for the analyses of tense put forth e.g., in Montague (1968) and Prior (1967) will be discussed. For now, it is simply important to note that the preceding examples clearly show that predicates impose multiple aspectual requirements on the internal temporal constituency of the events they denote, in addition to those imposed by the "tense". In passing, it is interesting to note that this type of inherent lexical marking of aspect is never attested when one considers tense distinctions since no predicate is "inherently" marked for past, present, or future moments in time.

To summarize the preceding discussion, it has been shown that there are three primary tense distinctions made in French (and other languages), these being the past, present, and future. Thus far, two broad types of aspectual distinctions, i.e., the imperfective/perfective contrast and the semantic verb class distinctions, have been informally presented. Two of these aspectual distinctions (the perfective/imperfective and the stative/non-stative) will eventually be shown to play a crucial role in determining the distribution of demonstrative ce, but they are not the only ones. In particular, the final aspectual distinction of interest is the habitual versus non-habitual one.³⁷ To illustrate it,

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pairs of examples containing the past, present, and future tenses have been provided below. In these pairs, the (a) sentences encode non-habitual situations and the (b) examples, habitual ones. That is, the (a) sentences describe a state of affairs which is asserted to be true of an entity at one time, whereas the (b) sentences present the property denoted by the predicate as being held by an individual at a number of different times. A sufficiently large number of times, in fact, to be considered a sort of defining characteristic of that individual.

- (67) a. Hier, Jean a pris son petit déjeuner à la terrasse du Riche.
yesterday, Jean has taken his little lunch at the terrace of-the Rich-one
'Yesterday, Jean had breakfast at the Richman's Café.'
- b. De 1950 à 1960, Jean a pris son petit déjeuner chaque matin à la terrasse
du Riche.
from 1950 to 1960, Jean has taken his little lunch each morning at the
terrace of-the Rich-one
'Every morning from 1950 to 1960, Jean would have breakfast at the
Richman's Café.'
- (68) a. Quand je l'ai vu, Jean prenait son petit déjeuner à la terrasse du Riche.
when I him-ACC have seen, Jean was-taking his little lunch at the terrace
of-the Rich-One
'When I saw him, Jean was having breakfast at the Richman's Café.'
- b. Quand il était jeune, Jean prenait son petit déjeuner à la terrasse du Riche.
when he was young, Jean used-to-have his little lunch at the terrace of-the
Rich-One
'When he was young, Jean used to have his breakfast at the Richman's
Café.'

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- (69) a. Tu as vu? Jean prend son petit déjeuner à la terrasse du Riche ce matin!
you have seen Jean is-taking his little lunch at the terrace of-the Rich-One
this morning
'Did you see? Jean is having breakfast at the Richman's Café this
morning!'
- b. Tous les matins à huit heures, Jean prend son petit déjeuner à la terrasse
du Riche.
every the mornings at eight hours, Jean takes his little lunch at the terrace
of-the Rich-One
'Every morning at eight, Jean has breakfast at the Richman's Café.'
- (70) a. Demain matin à huit heures, Jean prendra son petit déjeuner à la terrasse
du Riche.
tomorrow morning at eight hours, Jean will-take his little lunch at the
terrace of-the Rich-One
'Tomorrow morning at eight, Jean will eat lunch at the Richman's Café.'
- b. Tous les matins à huit heures à partir de la semaine prochaine, Jean
prendra son petit déjeuner au Cheval Blanc.
all the mornings at eight hours at to-leave from the week next, Jean will-
take his little lunch at-the Horse White
'From next week on, Jean will have breakfast every morning at eight at
the White Horse.'

As the preceding data demonstrate, any tense, past, present, or future, may encode habitual aspect. Thus, the habitual/non-habitual aspectual distinction in French not only lacks a specific verbal suffix unambiguously indicating the status of the property denoted by the predicate, but it is also not linked in any way to a specific tense or set of tenses, as was the case for the perfective/imperfective one. Of course, as the preceding examples also

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demonstrate, the language does have the lexical means available to explicitly encode the contrast via expressions like tous les jours 'every day'.

This completes the informal comparison/contrast of the terms "tense" and "aspect", as well as the discussion of those French aspectual distinctions which will ultimately prove necessary for the analysis of demonstrative ce. In particular, four aspectual values: the imperfective/perfective, the stative/non-stative, the telic/atelic, and the habitual/non-habitual have been introduced, compared, and contrasted - not only with each other, but also with the three tenses. Up to this point, however, these aspectual notions have not been formally defined. Additionally, although a preliminary set of truth conditions for the various tenses (past, present, and future) has been provided in (57a,c) above, it was mentioned that these formulations are flawed in some way and are in need of revision. These tasks will be undertaken below, commencing with the case of the imperfective distinction, which is signalled by the verbal morphology in the non-narrative uses of the French "tenses".

Throughout this subsection, it has been noted, following Comrie (1976a), that the imperfective aspect denotes "incomplete" events and the perfective, "complete" ones. Comrie (1976a: 3) himself describes a complete event as one which presents the situation as an unanalyzable whole, one in which the beginning, middle, and end are rolled into one and an incomplete event as one in which the speaker focuses on a particular moment of the event, e.g., the beginning moment, a midpoint, or the endpoint. (In the case of a sentence like Jean lisait 'Jean was reading', for example, the focus is on a midpoint.) While Comrie's description of the perfective as an "unanalyzable" event ultimately proves to be unworkable in developing an account of demonstrative ce (both types of aspect will be argued to be "analyzable"), the idea of the imperfective being an incomplete, and, more particularly, an analyzable situation nonetheless does lead to a significant revision in the kinds of truth conditions seen thus far, a revision which is necessitated by any treatment of aspect. In particular, in order to be able to formally characterize this notion of "analyzable event", one must be able to make reference to the truth of a given state of affairs relative to

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an interval of time and not just to a single moment. To explain, consider the truth conditions Montague (1968) provides for the progressive, the imperfective aspectual operator.³⁸ (Note: Below, the symbol ϕ represents a variable which takes tenseless formulas like John read as its values.)

- (71) [PROG ϕ] is true at time p iff there exists an open interval of moments of time, say I , such that p is a member of I and for all times t in I , ϕ is true at t .

The truth conditions given above capture Comrie's notion of the imperfective as being "incomplete" by stating that when a speaker uses this aspect, an assertion is made to the effect that a given state of affairs holds at some moment(s) which is (are) crucially not final. So, for example, John is reading would be true at a given time p if and only if p is a member of a larger set of moments which collectively make up an interval I , and John read is true at p and at all of the other moments in I .

While Montague's (1968) truth conditions for the imperfective are a crucial step forward in the development of a formal semantic account of this aspectual distinction in that they recognize the importance of using intervals of time in one's semantic model, they are, nonetheless, flawed and the manner in which they are flawed is equally true of the truth conditions put forth for the past and present tenses given above in (57a,b). In particular, as Bennett and Partee (1978) and Dowty (1979) have noted, Montague's (1968) analysis of the progressive is incorrect in that it requires that a formula modified by the imperfective operator be true at all of the moments which make up the interval. This requirement makes incorrect predictions with respect to a semantic class of verbs (the telic verbs mentioned above) which differ from other predicates in precisely this way. In particular, recall that telic predicates, of which dessiner un cercle 'to draw a circle' and se noyer 'to drown' are two additional examples, never entail the truth of the state of affairs they express when they are in the imperfective aspect. That is, consider the following sentences.

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- (72) a. Marie était en train de dessiner un cercle.
Marie was in the-process of to-draw a circle
'Marie was drawing a circle.'
- b. Paul était en train de se noyer.
Paul was in the-process of himself to-drown
'Paul was drowning.'

The truth conditions Montague (1968) proposed for the imperfective progressive explicitly state that "...for all times t in I , ϕ is true at t ." This is obviously not the case for telic verbs like those given in (72a,b) above since, as the preceding discussion showed and as the following examples further illustrate, the truth of ϕ may, in fact, be denied when ϕ contains a member of this class of verbs:

- (73) a. Marie était en train de dessiner un cercle, mais elle ne l'a jamais vraiment dessiné parce qu'elle a été interrompue.
Marie was in the-process of to-draw a circle, but she NEG it-ACC never really drew because that she has been interrupted
'Marie was drawing a circle, but she never actually drew it because she was interrupted.'
- b. Paul était en train de se noyer, mais on a pu le repêcher à temps et en fin de compte il ne s'est pas noyé.
Paul was in the-process of himself to-drown, but one has could him-ACC to-fish-back-out in time and in end of account he NEG himself is not drowned
'Paul was drowning, but they were able to fish him out in time so in the end he didn't drown.'

Of course, the telic predicates given above contrast in this respect with the class of predicates that Montague (1968) actually considered in formulating his analysis, i.e., the class of atelic predicates of which lire 'to read', marcher 'to walk', and patiner 'to skate'

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are typical examples. With this type of predicate, it is indeed impossible to deny the truth of ϕ even when ϕ is modified by the imperfective operator:

- (74) a. !Marie était en train de lire, mais elle n'a pas lu parce qu'on l'a interrompue.

Marie was in the-process of to-read, but she NEG has not read because that one her-ACC interrupted

'Marie was reading, but she didn't read because she was interrupted.'

- b. !Paul était en train de patiner, mais il n'a pas patiné parce qu'il a fallu qu'il rentre chez lui.

Paul was in the-process of to-skate, but he NEG has not skated because that it was necessary that he return at him

'Paul was skating, but he never skated because he had to go home.'

In sum, while Montague's (1968) truth conditions for the imperfective did recognize the importance of evaluating the truth of a formula relative to an (open) interval of time rather than a moment, they failed to take into account the semantic difference between atelic predicates like lire 'to read', marcher 'to walk', patiner 'to skate', and être/rester un homme instruit 'to be/remain an educated man' - which are realized even in the imperfective "tenses" - and telic predicates like dessiner un cercle 'to draw a circle', se noyer 'to drown', devenir un homme instruit 'to become an educated man' which require that a particular moment be reached before they are accomplished. To be more specific, as Bennett and Partee (1978) and Dowty (1979) have pointed out, Montague's (1968) truth conditions for the progressive make incorrect predictions with respect to the entailments associated with the telic class of predicates precisely because he encoded as part of the meaning of the imperfective aspect, what is, in fact, due to the lexical meaning of the atelic verb class. Unfortunately, this same flaw is found in the truth conditions provided earlier for the past and present tenses, which have been repeated below for convenience in (75a,b):

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- (75) a. Where φ is a sentence, PAST (φ) is true at a time t if and only if (iff) there is a time t' such that $t' < t$ and φ is true at t' .
- b. Where φ is a sentence, PRES (φ) is true at a time t iff there is a time t' such that $t' = t$ and φ is true at t' .

As is obvious from the preceding discussion, the truth conditions in (75a,b) above will also have the undesirable consequence of entailing the truth of sentences containing telic predicates in the imperfective past tense known as the *imparfait* 'imperfect', as well as the (imperfective) present tense. In other words, sentences like (65a,b) above, repeated below as (76a,b), would be incorrectly predicted to be logical contradictions.

- (76) a. A ce stade, il était évident que Jean devenait un homme instruit, mais en fait, il ne l'est jamais vraiment devenu parce qu'il a été obligé de quitter l'université.
- at that stage, it was obvious that Jean was-becoming a man educated, but in fact, he NEG it-ACC is never truly become because that he has been obliged of to-leave the university
- 'At that stage, it was obvious that Jean was becoming an educated man, but he never actually became one because he had to drop out of the university.'
- b. Il est évident que Jean devient un homme instruit, mais il est probable qu'il ne le deviendra jamais complètement parce qu'il sera obligé de quitter l'université.
- it is obvious that Jean is-becoming a man educated, but it is likely that he NEG it-ACC will-become never completely because that he will-be obliged of to-leave the university
- 'It's obvious that Jean is becoming an educated man, but he'll never really become one because he'll have to drop out of the university.'

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Having shown where some of the earlier approaches to aspect and tense are in need of revision, how then can their shortcomings be corrected? In their analyses of the progressive, Bennett and Partee (1978: 15-16) and Dowty (1979: Chapter 3) develop the hypothesis that the past progressive contrasts with the simple past (a perfective tense) in that the progressive is a mixed modal-temporal operator. To be specific, Dowty (1979) proposes that expressions of the form [PROG ϕ] do not semantically assert the truth of ϕ at the non-final moment(s) picked out by the aspectual operator PROG, but rather, that such expressions assert that in some set of possible worlds accessible from that non-final moment or set of moments, ϕ is true. Thus a sentence like Jean is becoming an educated man does not assert that the tenseless formula Jean become an educated man is true at the non-final moment(s) picked out by PROG, but rather, it makes the assertion that in the set of possible worlds in which the normal course of events run their course, Jean become an educated man is true. Of course, these accessible worlds may or may not coincide with the real world, hence the lack of the entailment of the truth of Jean become an educated man in the latter.³⁹

To implement this idea formally, Dowty (1979: 149) reformulates the truth conditions for the imperfective operator PROG as in (77) below. (Note: Dowty's notation is to be understood as follows: i is a member of the set of intervals of time I ; w is a member of the set of possible worlds W ; $Inr(\langle i, w \rangle)$ refers to inertia worlds accessible from the world and time $\langle i, w \rangle$ picked out by the progressive operator. Inertia worlds are worlds just like the world under consideration up to the time in question, but which may have outcomes which differ from it.)

- (77) [PROG ϕ] is true at an index $\langle i, w \rangle$, iff for some interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in Inr(\langle i, w \rangle)$, ϕ is true at $\langle i', w' \rangle$.

Before it is possible to demonstrate how Dowty's imperfective truth conditions correctly eliminate the entailment of the truth of a formula modified by PROG in sentences like

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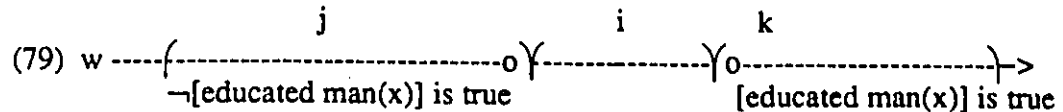
(76a,b), it first is necessary to construct the truth conditions associated with the telic predicates themselves. Recall from the preceding discussion that telic, non-stative verbs like devenir un homme instruit 'to become an educated man' impose two requirements before one can properly say that the state of affairs they denote holds of some individual. First, all non-stative predicates crucially make reference to at least two distinct moments in time. In the case of a non-stative like devenir un homme instruit 'to become an educated man', for example, the entire event makes reference to a moment or set of moments at which Jean is not a member of the set of educated men, as well as a distinct moment or set of moments at which he is. Secondly, all telic predicates crucially involve a particular moment which must be reached before one can truthfully say that the state of affairs denoted by the predicate holds, i.e., telic predicates contain some particular moment at which the individual actually completes the process. In the case of devenir un homme instruit 'to become an educated man', for example, at some particular moment, Jean finishes the process of becoming an educated man and he actually becomes one. To capture these facts, Dowty (1979: 141) proposes truth conditions for telic verbs identical in theoretical content to the following one that I would like to propose for devenir un homme instruit 'to become an educated man'.⁴⁰

(78) [become (x, an educated man)] is true at an interval i in a world w iff there is an interval j containing the initial bound of i such that \neg [educated man (x)] is true at $\langle j, w \rangle$ and there is another interval k which contains the final bound of i such that [educated man (x)] is true at $\langle k, w \rangle$ and there is no interval i' contained within i that meets these two conditions.

(Note: The initial bound is the last moment just before i ; the final bound is the first moment after i .)

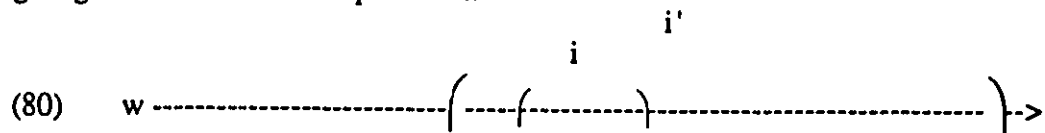
As specified in (78) above, a true event of becoming an educated man can be represented by the following diagram, where o represents the initial and final bound of the interval i .

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In sum, the lexical semantics of a telic predicate like devenir un homme instruit 'to become an educated man' can be captured by truth conditions like (78) above, which crucially encode as part of the meaning of this type of predicate the fact that one must check the truth of some state at two distinct moments (these being the initial and final bounds of *i*) and, additionally, that some particular moment, (i.e., the final bound of *i*), must be reached before the event is actually complete.

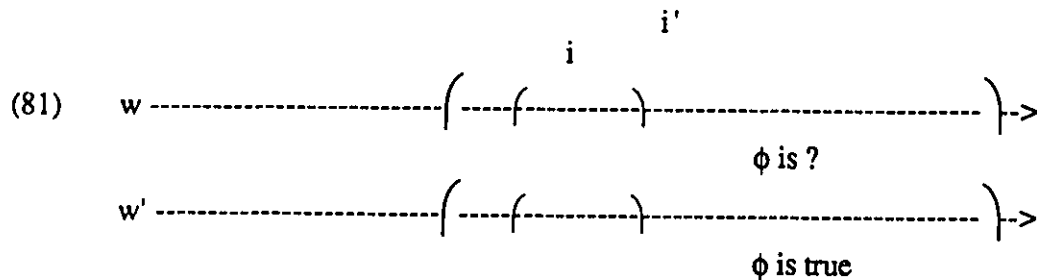
Returning now to the problem of the lack of entailment of the truth of ϕ in sentences containing such predicates in the imperfective aspect, note first that the preceding truth conditions say nothing about the truth of [educated man (*x*)] at the interval *i*. As Dowty (1979) discusses in relation to parallel examples, this is intuitively correct since at the interval *i* one is engaged in acquiring the properties of an educated man, but one has not actually yet become one. More importantly, however, is the fact that it is this feature of the truth conditions of telic predicates that also correctly eliminates the entailment of the truth of Jean become an educated man in sentences of the form [PROG [Jean become an educated man]]. To see this clearly, first recall that the imperfective truth conditions in (77) above state that for a sentence of the form [PROG ϕ] to be assigned the semantic value of 1 (truth) at a time interval *i* in a world *w*, it must first be the case that the moment(s) which make up the interval *i* be a non-final moment (or set of moments) of a larger interval *i'*. The following diagram illustrates this requirement:



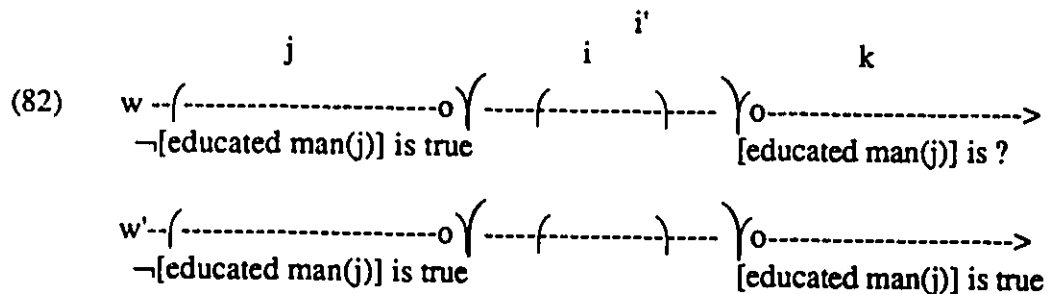
The truth conditions for the imperfective also require that in all the inertia worlds *w'* associated with the world and time under consideration (these being *i* and *w*), the sentence

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ϕ is true at the interval i' . Thus, (80) above must be modified to include the set of inertia worlds w' in which ϕ is true at i' . (Only one has been added for space considerations.)



This concludes those aspects of the meaning of [PROG ϕ] which are due to the semantics of the imperfective operator alone. It is now necessary to add in those aspects of meaning which are due to the lexical semantics of ϕ itself. Assume, for example, that the sentence ϕ contains a telic verb like devenir un homme instruit 'to become an educated man', i.e., in this case, ϕ is equal to the sentence Jean devenir un homme instruit 'Jean become an educated man'. By the truth conditions for this predicate provided in (78) above, ϕ (Jean become an educated man) can only be true at i' in the inertia world w' (as required by PROG) if it is the case that \neg [educated man(j)] is true in w' at some earlier time interval that contains the last moment before i' and if it also the case that [educated man(j)] is true in w' at some interval k which contains the first moment after i' . Furthermore, since the inertia worlds w' are just like the world w up to the non-final moment(s) picked out by i , it must also be the case that \neg [educated man(j)] is true in w at the time interval j . After these requirements have been added to the preceding diagram, one arrives at the following:



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The diagram above quite clearly shows that [PROG[Jean become an educated man]] does not entail the truth of Jean become an educated man at any time in w . Rather, sentences of this form merely assert that Jean become an educated man is true at the index i' in the set of worlds w' in which events proceed as expected.⁴¹

It has now been shown how Dowty (1979) uses the combined effect of the imperfective truth conditions in (77) with telic truth conditions like (78) to correctly eliminate the entailment of the truth of a formula containing such predicates in the world w . These two sets of truth conditions will be adopted in the present work to account for demonstrative ce. Note, however, that we are still left with the issue of the entailment of the truth of formulas modified by PROG when they contain the other class of predicates discussed earlier. In particular, it was shown above that atelic verbs like to be an educated man, to remain an unpleasant person, to skate, to move, and to believe that the sky will fall on one's head do entail the truth of the formula which contains them in w even in the imperfective "tenses". For example, John was skating entails the truth of John skate in the world w , and this fact was said to be due to the lexical semantics of this class of verbs. How then do linguists such as Bennett and Partee (1978) and Dowty (1979) handle this distinction between the class of telic predicates and the class of atelic predicates? In other words, what sort of truth conditions or meaning postulates can be devised to entail the truth of formulas containing atelic predicates in w , even when they are modified by the imperfective aspectual operator?

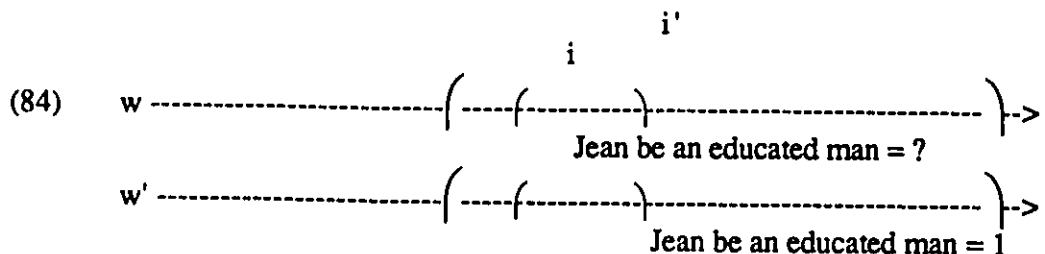
I will begin by considering the following meaning postulate which Dowty (1979: 166, 361) developed on the basis of earlier ideas in Taylor (1977). As noted below, this postulate is intended to account only for the lexical semantics of the class of stative atelic predicates, of which to be an educated man and to believe that the sky would fall on his head are two examples. It states that for every entity x , it is necessarily the case that if the property denoted by the atelic, stative predicate is be considered to be true of x , then for every time t that is a member of the set of moments which collectively make up the interval

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i , the state of affairs the predicate denotes must hold. To take a concrete example, the tenseless sentence Jean être un homme instruit 'Jean be an educated man' can only be assigned a value of 1 (truth) if it is the case that at every moment of time making up the interval(s) picked out by the "tense", the property of being a man is true of Jean. (Note: The symbol L represents the necessity operator, while n is an indexical constant which denotes at any index the time coordinate at that index.)

(83) $\forall x L[\delta(x) \leftrightarrow \forall t [t \subseteq n \rightarrow AT(t, \delta(x))]]$, where δ translates as a designated member of the class of atelic, stative predicates.

To return now to the issue of how this meaning postulate has the effect of entailing the truth of [Jean be an educated man] in w even when this sentence is modified by the imperfective aspectual operator, consider once again the situation imposed by the imperfective truth conditions, originally given in (81) above, but repeated below as (84) for convenience. Recall that the imperfective operator PROG does not require the truth of ϕ , where ϕ equals Jean être un homme instruit 'Jean be an educated man', at the time interval i picked out by PROG in w (nor for that matter at i' in w'), but only at the index $\langle i', w' \rangle$.



Adding in the conditions imposed by the lexical semantics of the atelic, stative verb itself, given above in (83), it is immediately obvious that if Jean être un homme instruit 'Jean be an educated man' is true at the moments in i' which follow i in the inertia world w' , it must also be true at every other moment in i' in this world, including the moments in i . Further, since inertia worlds are just like the world w up to the interval i , this sentence must also be true at least up to i in w . Thus, one arrives at the following representation, in which Jean être un homme instruit 'Jean be an educated man' is indeed true at the interval i in w , thus

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remaining event has occurred. To be more explicit, as long as Jean is a member of the set of unpleasant people at some time t and it is also true that he is still a member of that set at a later time t' , then one can truthfully say that Jean rester une personne désagréable 'Jean remain an unpleasant person' is true.

This difference between the two types of predicates accounts for the noted difference in the entailment of the truth of formulas that contain them when those formulas are modified by the imperfective operator. To demonstrate that this is so, I will first follow similar proposals in Dowty (1979: 166-169), by proposing that the atelic, non-stative predicate remain an unpleasant person is associated with the following truth conditions:

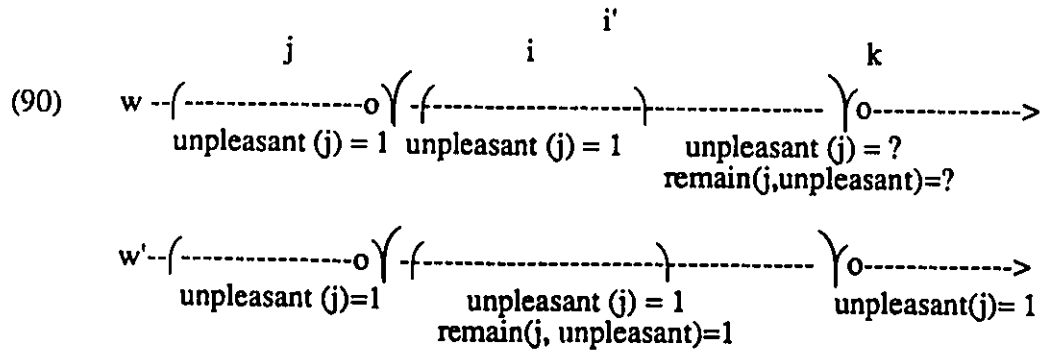
- (86) [remain (x , an unpleasant person)] is true at an interval i and a world w iff there is an interval j containing the initial bound of i such that [an unpleasant person (x)] is true at $\langle j, w \rangle$ and there is another interval k which contains the final bound of i such that [an unpleasant person (x)] is true at $\langle k, w \rangle$ and [an unpleasant person (x)] is true at all subintervals of $i \cup k \cup j$ in w .

(Note: The initial bound is the last moment just before i ; the final bound is the first moment after i .)

Given these truth conditions, it is now possible to illustrate how their interaction with the semantics of the imperfective has the effect of entailing the truth of the formula [Jean remain an unpleasant person] in w . Consider once again the situation required by the imperfective truth conditions, originally given in (81) above, repeated below for convenience as (87). Recall that the imperfective operator PROG does not require that [Jean remain a disagreeable person] be true at i , but only that this sentence be true at i' in the set of inertia worlds w' accessible from w .

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Finally, at all subintervals of the set of moments found in i' , j , and k in w' , Jean must be a member of the set of unpleasant people. This means that since i is a subinterval of i' , Jean must be a member of the set of unpleasant person at i as well. More importantly, however, is the fact that since w is just like w' up to and including i , this means that Jean is an unpleasant person at i in w as well, as represented below in the final representation.

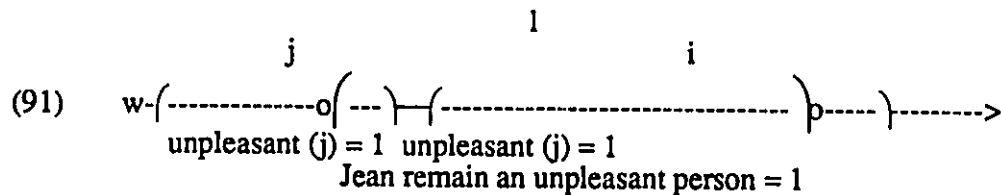


To summarize thus far, the truth conditions for the imperfective and the atelic, non-stative verb in question, represented graphically in (90) above, correctly capture the fact that in making the assertion like Jean reste₁ une personne désagréable 'Jean remains an unpleasant person', one only commits oneself to the assertion that Jean was a member of the set of disagreeable people in the past, that he is now, and that is possible that he still will be in the future. In other words, while the truth of ϕ (where ϕ equals Jean reste₁ une personne désagréable 'Jean remains an unpleasant person') is entailed at $\langle i, w' \rangle$, it is not entailed at $\langle i, w \rangle$ nor is it entailed at $\langle i', w \rangle$ since in neither instance is the condition regarding the final bound of these intervals met, i.e., in neither case is it necessarily true that at the final bound of i and i' in w , Jean has the property of being unpleasant.

While it is indeed the case that $[\text{PROG}[\text{Jean remain an unpleasant person}]]$ does not entail the truth of $[\text{Jean remain an unpleasant person}]$ at the indices $\langle i, w \rangle$ and $\langle i', w \rangle$, careful consideration of the preceding diagram reveals that it is nonetheless true that $[\text{PROG}[\text{Jean remain an unpleasant person}]]$ does entail the truth of $[\text{Jean remain an unpleasant person}]$ at a different set of intervals in w , which is a desired result in view of

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the impossibility of denying the truth of such formulas when they are in such “imperfective” tenses. (Cf. !Jean remains an unpleasant person, but he doesn’t remain an unpleasant person.) That is, it has already been established that Jean has the property of being unpleasant at the indices $\langle j, w \rangle$ and $\langle i, w \rangle$. Furthermore, it has been shown that this state of affairs is also true of every moment intervening between these two intervals in w . By the truth conditions in (86) above, therefore, it follows that [Jean remain an unpleasant person] is indeed true in w of the interval whose initial bound is j and whose final bound is i , which I will call l , as the following revised version of (90) illustrates. (Note: The symbol “o” represents the initial and final bounds of the interval l . Irrelevant details contained in (90) have been omitted for clarity.)



Having shown how Dowty’s (1979) approach captures the semantics of the imperfective aspectual operator, as well as the various verb classes, two aspectual oppositions still remain before it will be possible to formulate the truth conditions of the French “tenses” which will be used in the next section to explain the distribution of demonstrative *ce*. These two aspectual values are the perfective and the habitual.

Throughout this discussion, it has been noted that formulas modified by the imperfective operator are characterized as “incomplete” events in the world w under consideration, while those modified by the perfective aspectual operator are “complete” ones. Formally capturing the notion of “incompleteness” required reference to the relatively complex notion of inertia worlds. Fortunately, a formal semantic account of “completeness” is a much simpler matter. In particular, to do so one need only construct

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truth conditions for the perfective operator that require that the formula modified by that operator be true in the world under consideration, as in the following:

(92) [PERFECTIVE ϕ] is true at an index $\langle i, w \rangle$ iff ϕ is true at $\langle i, w \rangle$.

The semantic effect of (92) will be to ensure that any formula that is modified by the perfective operator is true, regardless of the semantic class of the predicate contained in that formula. Thus, Jean est devenu un homme and Jean devint 'Jean became a man' will correctly entail the truth of the tenseless formula [Jean become a man] and similarly for the other verb classes discussed above.

Turning finally to the habitual aspectual operator, it was noted above, following Carlson (1979), that the semantic effect of the habitual operator can be broadly characterized as requiring that a given property holds of an entity "a sufficiently large number of times so as to be considered to be a defining characteristic of that individual". The following sentences provide concrete illustrations of this aspectual value. In particular, in sentences (93a) and (93b), it is asserted that the event of Jean's having breakfast at the Richman's Café and John's writing a novel took place a sufficiently large number of times in the past so as to be considered a defining characteristic of Jean during this period.

- (93) a. Quand il était jeune, Jean prenait son petit déjeuner à la terrasse du Riche.
when he was young, Jean used-to-have his little lunch at the terrace of-the Rich-One
'When he was young, Jean used to have his breakfast at the Richman's Café.'
- b. A cette époque, Jean écrivait des romans.
'At that time, Jean wrote novels.'

Before formulating the truth conditions for this aspectual value, it is important to note two facts. First, as Carlson (1979: 59) originally pointed out, the exact number of "sufficient" times which must obtain before one can truthfully make habitual statements like (93a,b) must be left intentionally vague since it varies pragmatically from predicate to predicate. To

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see this clearly, first consider the case of (93a) above. For this statement to be true, it seems that one would want to require that Jean had breakfast at the Richman's Café at least as often and possibly more often than he had it at home. Thus, in the case of this predicate, one would apparently want to require an almost daily event of breakfast-eating at the Café. In contrast, in example (93b), one would not want to require a daily event of novel-writing in order for the habitual statement to be true, but perhaps a yearly novel-writing event would suffice. In sum, these two examples clearly demonstrate the need to leave the term "sufficient" vague in one's truth conditions.

Secondly, as was noted earlier, in French, the habitual aspect is not limited to any particular "tense" as is the case for the perfective/imperfective distinction. Instead, this language uses particular lexical items, such as quand il était jeune 'when he was young' to explicitly single out the habitual reading. There are various means which could be employed to capture this formally. Carlson (1979), for example, re-organizes the types of entities and predicates normally found in Montague Grammar in order to do so. Specifically, he divides the domain of entities into three subtypes - objects, kinds, and stages and he makes a similar division with respect to predicates in that certain predicates only accept a stage, kind, or an object external argument. Furthermore, under Carlson's analysis, one would capture the difference between the non-habitual and the habitual sentences via the morphologically unrealized VP operator Gn'. That is, a non-habitual sentence like Quand je l'ai vu, Jean prenait son petit déjeuner à la terrasse du Riche 'When I saw him, Jean was having breakfast at the Richman's Café' would be analyzed as containing the stage-level predicate [have breakfast at the Richman's Café] and the habitual version would contain the object-level predicate [Gn'[have breakfast at the Richman's Café]].

While it is indeed possible to treat the habitual aspect in this manner, I will not do so here simply because this would necessitate my adopting a much more complicated semantic model, i.e., one which employs a three-sorted logic. Hopefully, this

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simplification will be considered justified on the grounds of clarity, as well as the fact that the main objective of this chapter is not to provide an in-depth analysis of the habitual aspect, but rather to explore the role it plays in determining the distribution of demonstrative *ce*. Also, I cannot see any data which can be captured by one approach which cannot be captured by the other. Thus, I will simply note, again following Carlson (1979), that the non-habitual aspect can be distinguished from the habitual in that the former makes reference to a single index consisting of a world and an interval of time, whereas the latter makes reference to a number of distinct indices. In the case of (93a) above, for example, the sentence [HABITUAL ϕ] will only be true if it is indeed the case that at a sufficient number of indices in the past interval picked out by Jean's youth, Jean did have his breakfast at the Richman's Café. Therefore, in broad terms, the following truth conditions will provide an adequate semantic account of this aspectual value.

- (94) Where ϕ is a sentence, [HABITUAL ϕ] is true at an index $\langle i, w \rangle$ iff for a sufficiently large number of the intervals i' such that $i' \subset i$, ϕ is true at i' .

This completes the discussion of the various aspectual values and their formal analysis. It is now possible to construct the truth conditions which are specific to the various French "tenses" (in the traditional grammar sense of the word), recalling, of course, that this is a language which "combines" the verb-stem markings encoding true tense with those relating to the perfective/imperfective aspectual distinctions. Four such "tenses" will be used in the analysis section of demonstrative *ce*. These are the imperfective "tenses" known as the *imparfait* 'imperfect' and the non-narrative present, as well as the perfective "tenses" referred to as the *passé composé* 'compound past' and the non-narrative use of the future. The task of devising the truth conditions for each of these "tenses" reduces to encoding as part of their meaning, those features relating to the given tense (provided above in (57a,c)), along with those relating to the particular imperfective/perfective aspectual value associated with that "tense" (provided in (77) and (92)). I will begin with the *passé composé* 'compound past'.

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The passé composé 'compound past' encodes past tense, i.e., the event is situated at a time prior to speech time; it also encodes perfective aspect, that is, the event must be completed at the past interval. To capture both features of meaning, I would like to propose the following truth conditions, which combine the theoretical import of the past tense in (57a) with the perfective in (92).⁴² (Note: PC is simply an abbreviation for passé composé 'compound past'; i_0 denotes speech time.)

- (95) Where ϕ is a sentence, [PC ϕ] is true at $\langle i_0, w \rangle$ iff there is an index $\langle i, w \rangle$ such that i is a closed interval, i.e., an interval whose beginning point and endpoint are included, $i < i_0$, and ϕ is true at $\langle i, w \rangle$.

The truth conditions proposed above for the passé composé 'compound past' state that for a sentence like [PC [Jean draw a circle]] (i.e., Jean a dessiné un cercle 'Jean drew a circle') to be assigned the semantic value of 1 (truth) at the moment of utterance, it must be the case that the formula Jean draw a circle is assigned a semantic value of 1 at the closed past interval of time i in the world w .

While the preceding discussion has clearly shown why the truth conditions for the passé composé 'compound past' must situate the event at a time previous to speech time, as well as why this "tense" requires that the formula be true at this past interval in the world under consideration, the decision to require that that past interval be closed, i.e., have both a beginning and an end, remains unexplained. Evidence in favor of this requirement pertains to the following contrast between the passé composé 'compound past' and its English simple past translation:

- (96) !J'ai habité à Paris en 1976 et je n'ai jamais cessé d'y habiter.

I have lived at Paris in 1976 and I NEG have never stopped of there to-live

'I lived in Paris in 1976 and I still do now.'

As the preceding sentence shows, one may not use the passé composé 'compound past' to refer to some event that began in the past and continues, uninterrupted, into the present. That is, the ill-formedness of (96) clearly shows that this tense selects a closed interval of

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time. In this respect, the passé composé 'compound past' is not semantically equivalent to the English simple past, which does allow for such situations.

Turning next to the imparfait 'imperfect', it was noted earlier that one feature of the meaning of this "tense" is that it too situates an event at a time previous to speech time. The imparfait 'imperfect' was shown to contrast with the passé composé 'compound past' in that the former encodes incomplete events, with the notion of incompleteness being captured via the truth conditions in (77) above. To capture both of these facts, I would like to adopt the following truth conditions for the imparfait 'imperfect'.⁴³

- (97) Where ϕ is a sentence, $[\text{IMP } \phi]$ is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i < i_0$ and there is another interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, ϕ is true at $\langle i', w' \rangle$.

As is clear from the preceding, the passé composé 'compound past' not only differs from the imparfait 'imperfect' in its perfective aspectual value, but also with respect to the type of interval that is selected. In particular, while the passé composé 'compound past' selects a closed past interval, the imparfait 'imperfect' does not. Evidence for this contrast is provided by the following, which is to be compared with (96) above. In particular, the semantic well-formedness of (98) clearly shows that the imperfect is compatible with situations which began in the past and which have continued, uninterrupted, until the present, a possibility which is disallowed by the passé composé 'compound past'.

- (98) J'habitais à Paris en 1976 et j'y habite encore.

I lived at Paris in 1976 and I there live still

'I was living in Paris in 1976 and I still do now.'

The present tense shares with the imparfait 'imperfect' the aspectual feature of "incompleteness". It contrasts with the imparfait 'imperfect' with respect to its situation-external time reference. Therefore, the truth conditions that I would like to propose for this "tense" are as follows:

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- (99) Where φ is a sentence, [PRES φ] is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i = i_0$ and there is some other interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, φ is true at $\langle i', w' \rangle$.

It is clear from the preceding that the present “tense” also does not select closed intervals, as evidenced by the following:

- (100) J'habite à Paris, j'y habiterai encore en l'an 2010, et je continuerai à y habiter jusqu'à ma mort.
I live at Paris, I there will-live still in the year 2010, and I will-continue at there to-live until at my death
'I live in Paris now, and I will still live there in 2010 and I will continue to live there until I die.'

Finally, the future “tense” situates a completed state of affairs at some time after speech time. Therefore, the truth conditions put forth in Montague (1968, 1973) and Prior (1967) are straightforwardly applicable to this “tense” in French, the only modification being the use of intervals of time as opposed to moments:

- (101) Where φ is a sentence, [FUT φ] is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i > i_0$ and φ is true at $\langle i, w \rangle$.

Although the future shares with the compound past the aspectual value of perfectivity, it clearly contrasts with the latter not only in its situation-external time reference, but also in the types of interval it selects. Specifically, this “tense”, like the present and the imperfect, does not select closed intervals as the well-formedness of the sentence in (100) above has already made clear.

As was discussed above, the habitual/non-habitual distinction is never encoded in the French verbal inflectional system, nor is it linked to any particular “tense”. Instead, it was suggested, every “tense” is actually ambiguous between a habitual reading and a non-habitual one. While the truth conditions for the non-habitual reading of each of the “tenses”

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have just been developed in the preceding discussion, their habitual counterparts can be captured by the following:

- (102) a. Where φ is a sentence, [HABITUAL PC φ] is true at $\langle i_0, w \rangle$ iff there is an interval i such that i is a closed interval, $i < i_0$, and φ is true at a sufficient number of the subintervals of i in w .
- b. Where φ is a sentence, [HABITUAL IMP φ] is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i < i_0$, and φ is true at a sufficient number of the subintervals of i in w .
- c. Where φ is a sentence, [HABITUAL PRES φ] is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i = i_0$, and φ is true at a sufficient number of the subintervals of i in w .
- d. Where φ is a sentence, [HABITUAL FUT φ] is true at an index $\langle i_0, w \rangle$ iff there is an interval i such that $i > i_0$ and φ is true at a sufficient number of the subintervals of i in w .

This concludes the discussion of those features of the French aspectual system which play a role in the semantic analysis of demonstrative ce to be put forth in the next two subsections. It was argued, on the basis on ideas put forth in Bennett and Partee (1978), Comrie (1976a), and Dowty (1979), among others, that aspect looks at the internal temporal constituency of an event. Further, four aspectual distinctions at work in this language were informally and formally explored: the perfective/imperfective contrast, the stative/non-stative, the telic/atelic, and the habitual/non-habitual. These distinctions and the analysis proposed for them will be shown below to play a crucial role in analyzing demonstrative ce.

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5.5.2 Accounting for Demonstrative Ce

The goal of this subsection is to offer a semantic account of the distributional characteristics of demonstrative ce mentioned in section 5.4. Recall that the purpose of section 5.4 was to argue for a non-unified account of ce, and to do so, it was shown that demonstrative ce is subject to a number of constraints not found with the other types of ce, a fact which is unexpected if one adopts a unified approach to accounting for the distribution of this pronoun. In section 5.4, it was shown that demonstrative ce is (a) found only in Raising constructions (b) never attested with AP or PP complements and (c) subject to a number of constraints related to semantic verb class and tense (in the traditional usage of the word “tense”). These distributional characteristics will be used below to devise a formal semantic account of demonstrative ce. They will be dealt with in the reverse order in which they have been listed.

To begin, it was noted earlier that non-stative verbs (e.g., devenir ‘to become’ and rester₁ ‘to remain the same’) exhibit completely opposing constraints on demonstrative ce in the past and present tenses than do stative verbs like être ‘to be’ and rester₂ ‘to be left’. In particular, while the demonstrative pronoun is licit with non-statives in the passé composé ‘compound past’, it is illicit with this class of verbs in the imparfait ‘imperfect’ and the present, as (103a,c) demonstrate. When one considers the class of stative verbs, one finds the opposite distribution: this pronoun is acceptable in the imparfait ‘imperfect’ and the present, but it is disallowed in the passé composé ‘compound past’.^{44,45} (Note: Parallel examples containing each of the Raising verbs can be found in appendix 2.)

- (103) a. *Quant au fils du voisin, ça devenait un homme instruit un peu plus chaque jour, ce qui nous ravissait.
as to-the son of-the neighbor, he was-becoming a man educated a little more each day, that which us delighted
‘As for the neighbor’s boy, he was becoming more and more of an educated man each day, which delighted us.’

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- (103) b. Quant au fils du voisin, c'est devenu un homme instruit, ce qui m'enchante au plus haut point.
as to-the son of-the neighbor, he is become a man educated, that which me delights to-the most high point
'As for the neighbor's son, he has become an educated man, which pleases me to the nth degree.'
- c. *Quant au fils du voisin, ça devient un homme instruit un peu plus chaque jour, ce qui m'enchante.
as to-the son of-the neighbor, he is-becoming a man educated a little more each day, that which me delights
'As for the neighbor's son, he's becoming an educated man, which pleases me.'
- (104) a. Jean, c'était un homme instruit.
Jean, he was a man educated
'Jean, he was an educated man.'
- b. *Claudette, ça a été ma copine.
Claudette, she has been my friend
'Claudette, she was my friend.'
- c. Qui est M. Martin?
-M. Martin, c'est mon professeur de français.
who is Mr. Martin
-Mr. Martin, he is my professor of French
'Who's Mr. Martin?'
'-Mr. Martin, he's my French professor.'

It seems obvious that the key to explaining the meaning of demonstrative *ce* lies in unravelling the interaction between the lexical semantics of the predicates involved, the aspectual meaning of the "tenses", and the interpretation associated with the demonstrative

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pronoun itself. Specifically, since the constraints imposed by the lexical semantics of the predicates, as well as those imposed by the various “tenses” have already been ascertained, it seems that a promising strategy to discover the interpretational properties associated with demonstrative ce would be to attribute to the meaning of this pronoun anything which cannot be linked to either the “tense” or the verb class.

Adopting this strategy, the unacceptable non-stative data in the imperfective tenses will be considered first. The sentence in the imparfait ‘imperfect’ in (103a) and the present tense example in (103c) both share as part of their meaning the notion of “incompletedness” in w at the intervals i and i' picked out by the imperfective “tenses”. That is, as the discussion of the parallel example in (82) above clearly showed (recall that in (82) only the feature of meaning attributed to the situation-external time reference was factored out), the truth of the formula [Jean become a man] is not asserted at the indices $\langle i', w \rangle$ and $\langle i, w \rangle$ when this formula is modified by the imperfective operator. Similarly, as the discussion of the example in (90) above showed, this is a general characteristic of non-stative predicates since the truth of [Jean remain an unpleasant person] is also not asserted at these indices when this formula is modified by an imperfective “tense” operator. Given this, coupled with the ungrammaticality of demonstrative ce with this type of predicate in this aspect, it seems logical to deduce that demonstrative ce is associated with the following semantic constraint: demonstrative ce semantically requires that the formula [Raising Verb [p]] be true in w at the interval(s) picked out by the tense. If this assumption is correct, the fact that this pronoun is always rejected with non-stative predicates in the imperfective tenses will follow. I, therefore, conclude that this is indeed one aspect of the meaning of demonstrative ce.

Turning next to the illicit stative example in the passé composé ‘compound past’ in (104b), recall from the discussion of the truth conditions for this tense given in (95) that the truth of formulas modified by this operator are necessarily true in w at the interval selected by that tense. Since this factor cannot account for the ungrammaticality of this example, it

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must be the case that some other feature of the meaning of this “tense” and/or verb class does. The truth conditions for the passé composé ‘compound past’ in (95) further specify that this tense selects a closed interval. In addition, the meaning postulate for stative verbs in (83) above requires that any formula containing a member of this class must be true at every moment in the interval selected by the tense. Since demonstrative ce is always unacceptable with stative predicates in the perfective passé composé ‘compound past’, it seems plausible to maintain that this pronoun is illicit with formulas of the form [Raising Verb [p]] which are true at either the initial or final endpoint of the interval picked out by the tense. If this assumption is accepted, the ungrammaticality of (104b) would follow from the fact that stative predicates semantically assert the truth of the state of affairs at every moment, including the initial and final endpoints, in the closed interval selected by the passé composé ‘compound past’.

Thus far, the unacceptable data have led to the hypothesis that demonstrative ce is a pronoun which is licit solely with formulas which are true at the interval picked out by the “tense”, provided that the truth of the formula is not also asserted at an initial or final endpoint of that interval. Before considering additional unacceptable data which might lead to further restricting the meaning of this type of ce, it seems wise to first verify that the constraints proposed do not have the undesirable consequence of ruling out the licit data given above.

Looking first at the case of the non-stative example in (103b), we see that, as required, the formula [become [p]] is indeed asserted to be true at the world and time picked out by the tense. (See the truth conditions for the passé composé ‘compound past’ in (95) above.) The semantics of demonstrative ce are therefore satisfied with respect to this issue. Turning to the second constraint on demonstrative ce, it must be determined whether or not the truth of the formula [become [the neighbor’s son, an educated man]] is asserted at the endpoints of the closed interval selected by the passé composé ‘compound past’ since demonstrative ce has already been hypothesized to be incompatible with

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formulas of this type. The meaning postulate for devenir 'to become' in (78) above specifies that [become [the neighbor's son, an educated man]] is true relative to the entire interval picked out by the tense and crucially not at each of the moments that make it up, as was the case with stative predicates. (This characteristic of the meaning postulate of devenir 'to become' is shared by all non-stative predicates.) As a consequence, it is clear that the second condition on demonstrative ce can be satisfied only if one selects an interval larger than one single moment. But what would happen if the interval selected did consist of just one single moment since nothing bars this possibility? By the analysis developed thus far, one would expect such a sentence to disallow demonstrative ce. To see if this prediction is met, let's first consider the following example in which speakers report that they accept both pronouns.

(105) Quant au fils du voisin, $\left\{ \begin{array}{c} c' \\ il \end{array} \right\}$ est devenu un homme instruit,

ce qui m'enchante au plus haut point.

as to-the son of-the neighbor, he is become a man educated, that which
me delights to-the most high point

'As for the neighbor's son, he has become an educated man, which
pleases me to the nth degree.'

While native speakers of French report that both demonstrative ce and the personal pronoun il are acceptable in the preceding example, they also indicate that the meaning is not equivalent. Specifically, they describe ce as focussing in some sense on the result of the process, while il narrows in on the process itself. That is, the demonstrative pronoun indicates that the speaker is concerned not with when the change from being an uneducated man to being an educated one actually took place, but only with the fact that it did, whereas the personal pronoun narrows in on exactly when the change took place. I would like to suggest that these intuitive observations correlate with a difference in the types of intervals selected: demonstrative ce is chosen when the speaker simply asserts the truth of [The neighbor's son become an educated man] at a closed interval i which consists of more than

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one moment (hence the impression of a process); the personal pronoun is used whenever this interval consists of a single moment (which would account for the observation that the speaker is focussing on when exactly the change took place). If these assumptions are correct, then these facts do support the approach developed thus far since once again demonstrative ce is asserted to be incompatible with formulas whose truth is asserted at initial or final endpoints. Interestingly, these ideas may receive independent support from sentences like the following in which the addition of the time adverbial au moment même où 'at that very moment' has the effect of ruling out the demonstrative ce, presumably because the adverbial explicitly requires that an interval of a single moment be selected.

- (106) Quant à Jean, au moment même où il a posé sa candidature à la mairie,
 { ^{?'*c'}
 il } est devenu la coqueluche de ces demoiselles.

as for Jean, at-the moment very where he has put-in his candidature for
the mayor's-office, he is become the whooping-cough of these
young-ladies

'As for Jean, from the very moment that he entered the race for mayor,
he became a favorite topic of discussion among these young ladies.'

Turning finally to the grammaticality of the stative imperfect examples in (104a) and (104c), these judgments follow from the fact that stative predicates do semantically assert the truth of formulas containing them, even at the moments of the open intervals *i* and *i'* picked out by the imperfective "tenses".

In conclusion, the data observed up to this point have supported the hypothesis that demonstrative ce is a pronoun which is licit solely with formulas which are true at the interval(s) of time picked out by the tense, and even then, only on the condition that the truth of that formula not be asserted at an initial or final endpoint of that interval. Interestingly, there may be one additional piece of evidence in favor of the restriction regarding the endpoints, although this evidence is again somewhat tentative. Consider the following imperfective examples containing stative predicates and in particular, note that

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while demonstrative *ce* is generally licit with the imperfective statives (see (104a) and (104c) above), this pronoun becomes unacceptable whenever an adverb like *maintenant* 'now' or *désormais* 'from then on' is added.⁴⁶

- (107) a. Jean se rendit compte qu'il venait de commettre un meurtre et il se mit à courir. { $\begin{smallmatrix} ?*C' \\ \Pi \end{smallmatrix}$ } était désormais un fugitif recherché par toutes les polices.

Jean himself gave-back account that he was-coming from to-commit a murder and he himself put at to-run he was henceforth a fugitive looked-for by all the police

'Jean realized that he had just committed a murder and he began to run. From then on, he was a fugitive sought by every police officer.'

- b. Regarde notre chef de section! Le général lui épingle sa nouvelle médaille et voilà! { $\begin{smallmatrix} ?*C' \\ \Pi \end{smallmatrix}$ } est maintenant l'homme le plus décoré de la compagnie.

look-at our head of platoon the general him pins his new medal and there he is now the man the most decorated of the company

'Look at our platoon leader! The general is pinning his new medal on him and that's it! He is now the most decorated man in the company.'

To account for these data, it is first necessary to determine exactly what semantic contribution the adverb makes to the preceding sentences. Intuitively, it seems plausible to maintain that the adverb has the effect of narrowing in on the exact moment in the past that the subject first attained the property denoted by the predicative DP. In (107a), for example, the adverb appears to pick out a particular moment in the past and make the assertion that that moment is the moment at which [Jean be a fugitive] is first true. In other words, it appears that this adverb picks out the initial endpoint of the event of being a

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fugitive. If this assumption regarding the semantic contribution of such adverbs is correct, then the ungrammaticality of the ce variant in (107a,b) would already follow from the constraint on endpoints first proposed to explain the ungrammaticality of (104b) above.

Having motivated the first two constraints placed on demonstrative ce, I turn now to the final one, which is illustrated by the following pairs of sentences. The (b) variants are similar to one another, and contrast with their (a) counterparts, in that each contains a time adverbial of a particular semantic type. In particular, the semantic effect of this type of adverb is to introduce the requirement that the state of affairs hold not at a single interval, but rather at a number of distinct intervals which collectively make up the larger interval picked out by the tense. That is, as the (b) examples below plainly show, demonstrative ce is illicit with the habitual aspect.^{47,48}

- (108) a. Paul, $\left\{ \begin{array}{c} c' \\ *il \end{array} \right\}$ était un journaliste attaqué de toutes parts.
 Paul, he was a journalist attacked from all sides
 'Paul, he was a journalist under fire.'
- b. Paul venait souvent chez nous quand $\left\{ \begin{array}{c} *c' \\ il \end{array} \right\}$ était un journaliste
 attaqué de toutes parts.
 Paul used-to-come often at us when he was a journalist attacked
 from all sides
 'Paul used to come and see us whenever he was a journalist under
 fire.'
- (109) a. Quant au fils du voisin, peut-être bien qu'un jour $\left\{ \begin{array}{c} ça \\ il \end{array} \right\}$
 deviendra un homme instruit.
 as to-the son of-the neighbor, can to-be that one day he will-become
 a man educated
 'As for the neighbor's boy, maybe someday he will become
 an educated man.'

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- (109) b. Jean a appris quelques bonnes blagues, comme ça, toutes les fois qu'il rendra visite à sa famille, { ^{*ça} il } deviendra l'amuseur public numéro un.

Jean has learned some good jokes, like that, all the times that he will-give visit to his family, he will-become the entertainer public number one

'Jean has learned a couple of good jokes so now whenever he visits his family, he'll turn into a big-time entertainer.'

On the basis of the contrast in acceptability of demonstrative ce in the (a) and (b) examples of the preceding pairs, it seems plausible to further modify the semantics of demonstrative ce to require that it be licit only with formulas whose truth is asserted at a single interval of time.

To conclude, the preceding discussion was devoted to the deduction of the semantics of demonstrative ce via a thorough examination of each of the types of sentences in which it is never permitted. It was argued that this type of ce is acceptable only with formulas which are true at the interval of time picked out by the non-habitual tense, and only then, crucially not at the initial or final endpoints of that interval.

At this point, I have offered an informal analysis of the distributional characteristics of demonstrative ce in the past and present tenses, as well the habitual reading of the future tense. Thus far, however, I have not explicitly explained why the future tense should differ from the imparfait 'imperfect', the passé composé 'compound past', and the present in that it normally accepts demonstrative ce with both semantic classes of predicates:

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- (110) a. Jean et moi, on ne s'est jamais bien entendus, mais, qui sait? Peut-être qu'un jour ça deviendra mon meilleur ami.
 Jean and me, one NEG each-other is never well got-along-with, but, who knows could to-be that one day he will-become my best friend
 'Jean and I have never got along that well, but who knows? Maybe someday he'll become my best friend.'
- b. Dans une semaine, l'ennemi va conquérir notre ville. Ce sera un vainqueur impitoyable et je veux que tous le sachent.
 in one week, the enemy is-going to-conquer our town he will-be a conqueror pitiless and I want that all it-ACC know
 'In one week, the enemy will conquer our city. He will be a pitiless conqueror and I want everybody to realize that.'

The examples in (110a,b) are licit first because the truth conditions for the future (see (101) above) do indeed require the truth of [Raising Verb [p]] at the interval picked out by the future "tense" and, secondly, because this tense does not necessarily select a closed interval, therefore meeting the restriction on initial and final endpoints. Of course, if one adds to non-stative examples an adverbial expression explicitly indicating that the future interval consists of a single moment, then demonstrative *ce*, as predicted, is rejected, as in (111) below. This is so because the truth of [Jacques become a leader who is enthralled with himself] is now asserted to be true of an interval consisting of just one moment, this moment serving as both the initial and final endpoint.

- (111) Quant à Jacques, au moment même où il sera investi de ces pouvoirs, { *ça / il } deviendra un leader imbu de lui-même.
 as for Jacques, at-the moment very where he will-be invested of these powers, he will-become a leader imbued of himself
 'As for Jacques, at the very moment that he is invested with this authority, he will become a leader enthralled with himself.'

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Similarly, if one adds to stative examples a time adverbial which either explicitly introduces just one endpoint, as in (112a), or which completely closes the future interval, as in (112b), demonstrative ce is once again ruled out by the constraint on endpoints since the meaning postulate for statives requires that the formula [Stative Raising Verb [p]] be true at all moments in the interval picked out by the tense.

- (112) a. Quand Jean commencera à travailler avec son nouvel entraîneur en 1993, { ^{*ce} il } sera le boxer le plus redoutable en Occident jusqu'en 1996, date à laquelle les chinois laisseront Xu Ling, le roi des poids légers, immigrer aux Etats-Unis.
when Jean will-begin of to-work with his new trainer in 1993, he will-be the boxer the most feared in the-West until in 1996, date at which the Chinese will-allow Xu Ling, the king of-the weights light, to-immigrate to-the United States
'When Jean begins working with his new trainer in 1993, he will be the most respected boxer in the West until 1996, the date at which the Chinese will allow Xu Ling, king of the feather-weights, to immigrate to the United States.'
- b. C'est dans les cartes. Jean, { ^{?*ce} il } sera le doyen de la Faculté de 1993 à 1996.
it is in the cards Jean, he will-be the Dean of the Faculty from 1993 to 1996
'It's in the cards. Jean, he'll be the Dean of the Faculty from 1993 to 1996.'

An informal account of a subset of the distributional characteristics of demonstrative ce has now been developed. In particular, this pronoun is hypothesized to be licit solely with formulas which are asserted to be true at a single interval of time which is picked out by the "tense", and even then crucially not at the initial or final endpoints of that interval.

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Before developing a formal semantic account of this type of ce, I would first like to examine the other two distributional constraints on this pronoun; namely, the fact that it is only found in Raising structures, as well as the absence of this pronoun with AP and PP complements. Concerning the latter, recall from section 5.4 that demonstrative ce, unlike its expletive, neuter and generic homophones, is never found in sentences like the following:⁴⁹

- (113) a. *Jean, c'est malin.
'Jean, he's clever.'
- b. *Jean, c'est à la maison.
'Jean, he's at the house.'

In discussing the intuitive motivation for this restriction on demonstrative ce with native speakers, it seems that the preceding examples are peculiar in that they give rise to a reading in which all of the entities which possess the property denoted by the predicate have the same referent, namely, Jean. That is, (113a,b) above are understood as making the assertion that all of the beings who are clever or who are at a house have the same identity as Jean. This interpretation, which is linked to predicative APs and PPs with demonstrative ce, contrasts with the same structures containing the personal pronoun variant in (114a,b) below. In these examples, speakers report that the sentences are only making the assertion that Jean has the property denoted by the predicate and not necessarily that every individual possessing this property has the same referent as Jean.

- (114) a. Jean, il est malin.
'Jean, he's clever.'
- b. Jean, il est à la maison.
'Jean, he's at the house.'

These data raise the following three questions. First, how do predicative adjectival phrases and prepositional phrases differ semantically from predicate nominals? Secondly, given this difference between predicate nominals on the one hand and predicative APs and PPs on

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the other, why is demonstrative ce unacceptable with the latter? Finally, why is the personal pronoun il licit with all three types of predicative structures?

In view of answering the first question, it would seem profitable to compare the interpretation associated with predicate nominal sentences, such as the ones provided below, with that of the preceding examples involving PPs and APs.⁵⁰

- (115) a. Jean, $\left\{ \begin{array}{l} \text{c}' \\ *_{il} \end{array} \right\}$ était un fugitif recherché par toutes les polices.

Jean, he was a fugitive sought by all the police

'Jean, he was a fugitive sought by every police officer.'

- b. Jean se rendit compte qu'il venait de commettre un meurtre et il se mit à courir. $\left\{ \begin{array}{l} ?*C' \\ \Pi \end{array} \right\}$ était désormais un fugitif recherché

par toutes les polices.

Jean himself gave-back account that he was-coming from to-commit a murder and he himself put at to-run he was henceforth a fugitive looked-for by all the police

'Jean realized that he had just committed a murder and he began to run. From then on, he was a fugitive sought by every police officer.'

The preceding sentences both make the assertion that Jean has the same identity as one of the individuals belonging to the class of fugitives. This reading is encoded by demonstrative ce in (115a) and by il in (115b). (Recall that the difference in the distribution of the two pronouns is attributable to the analysis developed thus far.) Since the semantic function of both predicate nominal sentences appears to be to assert that two individuals, namely, Jean and a member of the class of fugitives, have the same referent, it seems appropriate to characterize predicate nominals as being "equative", a term which is taken from the abundant literature on the copula, but which, in fact, also extends to all Raising verbs.⁵¹ Keeping in mind the meaning associated with predicate nominal sentences, and turning to a comparison of these sentences with the predicative APs and PPs in (113a,b), it

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is interesting to note that these latter examples, all of which contain demonstrative *ce*, also have an “equative” reading. That is, the meaning of (113a,b) is similar to that of (115a,b) in that the former sentences also assert that Jean has the same referent as another individual. In fact, Jean’s referent is being “equated with” every member of the class of clever beings in (113a) and with every member of the class of individuals who are at home in (113b). While predicate APs and PPs share an “equative” reading with the predicate nominals, they obviously contrast with predicate nominals in that the latter assert only that Jean’s identity is the same as one of the members of the class of fugitives, whereas the predicative APs and PPs state that every individual who is clever or at the house has the same identity as Jean. This difference in meaning is quite likely due to the presence of the determiner in the predicate nominal sentences. In sum, it appears that the answer to the first question is that while all predicative sentences have an “equative” reading, the exact type of reading differs.

Given that predicate nominals differ from predicative APs and PPs in this respect, how then does this fact account for the unacceptability of demonstrative *ce* in predicative AP and PP sentences like (113a,b)? I would like to suggest that this ill-formedness is pragmatic, not semantic in nature. Specifically, there is nothing in the semantic meaning of demonstrative *ce*, nor in the semantic meaning of predicative APs and PPs which disallows the equative reading. These sentences are peculiar only in that one knows that it is quite unlikely that every individual who possess some property, e.g., that of cleverness or that of being at the house, has the same identity as one individual. This hypothesis can be tested. In particular, this analysis would lead one to expect that whenever two properties are indeed asserted to denote the same individual or sets of individuals, demonstrative *ce* should become acceptable. That this prediction is borne out is illustrated by the following example:

- (116) *Noir, c’est blanc et blanc, c’est noir.*
‘Black is white and white is black.’

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Thus far, it has been suggested that predicate nominal sentences are purely equative, i.e., they assert that a given individual has the same referent as a member of the class picked by common noun. Further, both demonstrative ce and the personal pronoun ij have been shown to be acceptable in “equative” predicate nominal structures, with the distribution of each being determined by the factors discussed earlier, i.e., whether or not the truth of the formula is asserted at the interval selected by the “tense”, whether or not the truth of that formula is asserted at an initial or final endpoint of that interval, etc. With respect to predicative APs and PPs, it has been proposed that these structures also have an equative reading and that this equative interpretation is pragmatically odd with demonstrative ce because it makes the assertion that all of the individuals which have a given property share the same referent as the subject. This leads to the final question: why are (114a,b) grammatical? That is, what further semantic difference exists between predicative APs and PPs on the one hand and predicate DPs on the other which could account for this difference in the distribution of personal ij and demonstrative ce?

As was mentioned above, speakers report that the interpretation associated with the personal pronoun ij in predicate APs and PPs differs from that of predicate nominals in that in the latter structures one understands the sentence to be asserting that the individual picked out by the pronoun has the same referent as a member of the class denoted by the common noun, whereas in the former structures, the sentence is interpreted as simply asserting that the individual picked out by the pronoun possesses the property denoted by the AP or PP. Again adopting traditional terminology from the literature on the copula, I will refer to this second reading as “predicative”. It seems, therefore, that predicative APs and PPs have both “equative” and “predicative” readings and, further, that the personal pronoun ij, unlike demonstrative ce, is compatible with both types of predicates.

In sum, I am suggesting that (114a,b) are semantically ambiguous between an “equative” reading, i.e., one in which everything which is clever or at the house has the same referent as Jean, and a “predicative” reading, this being one in which the property of

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cleverness or being at home is asserted to be possessed by Jean. The equative reading with the personal pronoun il is assumed to be rejected by speakers for the same reason the demonstrative variant is, and the predicative one is ruled in.

Before devising a formal semantic account of the personal pronoun il and demonstrative ce which represents the dual equative/predicative nature of the former and the uniquely equative nature of the latter, I would first like to consider a piece of cross-linguistic evidence supporting my analysis since these proposals would be suspect if they were motivated solely by the behavior of demonstrative ce. This evidence concerns Mandarin Chinese, which is another language in which predicate DPs exhibit behavior distinct from predicate APs and PPs. In particular, as Hashimoto (1969: 73) and many others have noted, when one translates copular sentences involving predicate DPs, APs, and PPs into Mandarin Chinese one finds the overt copula shi only with predicate nominals and a “zero copula” with predicate APs and PPs, as the following sentences illustrate.^{52, 53}

- (117) a. Ta yiqian shi xuesheng.
he formerly be student
'He used to be a student.'
- b. Ta shi bing.
he be soldier
'He's a soldier.'
- c. Yue-han shi ta de daerzi.
John be his POSS eldest-son
'John is his eldest son.'
- (118) a. Zhe ge ren (*shi) hao.
this CLASSIFIER person good
'This person is good.'

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- (118) b. Zhang San (?*shi) zai bangongshi-li.
Zhang San in office postposition
'Zhang San is in his office.'

In light of the preceding discussion, these data can be interpreted as follows. Mandarin Chinese uses the overt copula shi in the same manner French uses demonstrative ce: to signal equative readings. If this is so, one would expect shi to be licit with predicate nominals, which I have proposed are associated uniquely with the equative meaning. While the overt shi encodes the equative reading, the zero copula signals predicative ones, a hypothesis which would account for the fact that shi is unacceptable with the AP and PP sentences, just as demonstrative ce is. Thus, this language, like French, exhibits a distribution of a lexical item which contrasts when one compares predicate DPs with predicate APs and PPs, thereby supporting the recognition of a distinct semantic analysis for these deceptively parallel predicative sentences.

As was the case for French, this hypothesis regarding Mandarin Chinese makes a prediction. Specifically, it was suggested above that predicate APs and PPs share with predicate nominals an equative reading, one which in general is ruled out on pragmatic grounds. That is, the examples in (118a,b) above are hypothesized to be ill-formed with shi because one is making the unlikely assertion that everything which is good or in his office has the same referent as the subject. If predicate APs and PPs are indeed semantically ambiguous in this way, then one would expect that pragmatically-plausible equative sentences with APs or PPs should be acceptable with the overt copula shi and, as the following example clearly indicates, this is indeed the case.

- (119) Hei shi bai bai shi hei.
white be black black be white
'White is black and black is white.'

In sum, it appears that Mandarin Chinese treats predicate DPs as uniquely equative structures, and that these equative readings are signalled by an overt copula. Additionally,

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it seems that predicate APs and DPs have a predicative reading, encoded by the non-overt copula, and they also have an equative reading since the overt “equative” copula is acceptable in pragmatically-plausible sentences.⁵⁴

To summarize this entire subsection up to this point, I have proposed that in Raising structures, demonstrative ce is licit only with non-habitual equative predicates which denote states of affairs that are true at the interval(s) picked out by the “tense”, provided that the truth of that formula is not asserted to be true at an initial or final endpoint in that interval. The personal pronoun il is attested with all other types of Raising predicates. It is now possible to devise the meaning postulates associated with demonstrative ce and the personal pronoun il which will formalize these ideas.⁵⁵ In particular, the meaning postulate associated with demonstrative ce is provided below in (120). In the following meaning postulate, *p* is a propositional variable; ϕ is any formula the * diacritic simply means that any number of formulas may precede the equative sentence; TNS refers to any tense, e.g., imparfait ‘imperfect’, passé composé ‘compound past’, etc.; RV is an acronym for the class of Raising verbs; Q refers to any quantifier; CONN is any logical connective. (The syntactic motivation for making demonstrative ce and the personal pronoun il sentential operators will become clear in the next subsection.)

- (120) $\forall p L [ce\ p \leftrightarrow p = [TNS\ RV\ Qy\ [\phi^*\ CONN\ y = z_n]]]$ and
 $[RV\ Qy\ [\phi^*\ CONN\ y = z_n]]$ is true at the index $\langle i, w \rangle$ picked out by
 TNS, but not at the initial or final endpoint of *i* and
 TNS is not habitual.]

Having provided the meaning postulate for demonstrative ce, it is a relatively easy matter to construct the meaning postulate associated with personal il. In particular, the meaning postulate for il, provided below, simply states that this pronominal form is found with all propositions which do not fit the description given above in (120). As Marc Dominicy (p.c.) has pointed out to me, the postulate given below is, technically speaking, superfluous since the postulate for demonstrative ce already given in (120) above will limit

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the personal pronoun to just those environments which disallow demonstrative ce. However, for clarity, I will nonetheless incorporate (121) into my fragment since it does not introduce any errors into the system.

- (121) $\forall p L [il\ p \leftrightarrow p \neq [TNS\ RV\ Qy\ [\varphi^*\ CONN\ y = z_n]],$ or if the truth of $[RV\ [Qy\ [\varphi^*\ CONN\ y = z_n]]$ is either not asserted at the interval picked out by TNS or the truth of this formula is asserted at an initial or final endpoint of that interval or TNS is habitual.]

In sum, I have proposed two meaning postulates which “filter out” the use of the demonstrative ce and the personal il in sentences which denote states of affairs of the inappropriate type. In the next and final subsection, the proposals put forth in this subsection, as well as the preceding ones, will be formally put together to arrive at a Montague-style fragment of French. Before doing so, however, I would like to conclude the present subsection by noting that it seems that other Romance languages lack an equivalent to demonstrative ce and that, as María-Luisa Rivero (p.c.) has pointed out to me, it is possible that this is a consequence the analysis of *pro* I am adopting. To explain, recall that I have assumed, following Authier (1988, 1992c), Jaeggli (1986), and Roberge (1986, 1990), and contra Rizzi (1986), that *pro* is a Caseless empty category. As was made clear in the previous chapter, in French, demonstrative ce appears in Agr-S where it obligatorily absorbs the available nominative Case feature. As this element receives a theta-role not directly, but by virtue of forming a theta-chain with the *pro* it identifies in Spec of VP, it is clear that French predicative structures always instantiate a Case and Theta-role assignment dissociation thus paving the way for the encoding of a conventional implicature of the type explored in this work. Consider now, however, the case of *pro*-drop Romance languages like Spanish or Italian. In these languages, it is generally assumed that object clitics are optional Case absorbers. Suppose that overt pronominal subjects are in fact clitics in Agr-S. If so, then one may attribute the lack of an equivalent to French demonstrative ce in these languages to the fact that predicate nominal sentences are not obligatory environments

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for Case and Theta-role assignment dissociation since clitics in Agr-S may not be absorbing a Case feature at all. This conclusion is necessarily quite tentative, however, for the following reasons. First, we are adopting a novel analysis of pro-drop in terms of optional nominative Case assignment. Second, we leave unexplained the absence of clitic doubling in subject position. Finally, it would be necessary to verify the assumption that that no pro-drop language has an equivalent pronoun to demonstrative *ce*. Nonetheless, it is interesting to note the possibility of developing a cross-linguistic account of this variation in these terms, if only to set it aside as a topic for future research.

5.5.3 A Fragment of French

Earlier in section 3.3 of chapter 3, a fragment of the grammar of French was developed to account for the direct/indirect contrast. In this subsection, I will provide another fragment, one which is specifically designed to generate semantically well-formed predicative constructions and to rule out ill-formed ones. As will be obvious in the ensuing discussion, the present fragment will incorporate many of the definitions and rules originally mentioned in chapter 3, a fact which is not unexpected given that both fragments make use of Dowty's (1979) version of interval semantics. It is important to make clear, however, that the fragment in chapter 3 and the fragment to be developed below are not mutually redundant: the first has only those clauses which prove necessary to capture the phenomenon of direct and indirect causation; the second has only those which are needed to account for demonstrative *ce*. Hopefully, the decision to develop two separate fragments rather than one complete fragment will be deemed judicious since it allows the reader to evaluate each analysis in isolation from the other.

I will therefore begin developing the present fragment by repeating the syntactic definitions and rules of the translation language originally found in chapter 3. These definitions are unmodified. I will then present a set of semantic interpretation rules which are capable of handling demonstrative *ce*, these rules will make use of many of the clauses

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originally found in chapter 3, but there are several additions to accommodate demonstrative ce as well as the habitual aspect.

To begin, throughout this work I have adopted the indirect method of the semantic interpretation as it is put forth in Montague (1973), the motivation simply being that this is the method that is most frequently employed by model-theoretic semanticists. As was explained in chapter 3, this type of approach first translates natural language expressions contained in a given syntactic tree into unambiguous expressions of a different language, this being intensional logic (IL); these translations are then interpreted compositionally by syntactically-guided semantic interpretation rules.⁵⁶

The first step in devising a semantic component capable of interpreting predicative constructions is to define the syntax and semantics of the translation language, this being intensional logic (IL). That is, one must specify what sorts of things there are in the world, as well as how they are interpreted. As was first mentioned in chapter 3 and as is quite clear from the discussion of the present chapter, my analysis makes crucial use of interval semantics. Therefore, I will make use of many of the model-theoretic definitions originally proposed in Dowty (1979: 351-4), although, of course, I will add a number of new clauses to handle predicative constructions, in particular, those pertaining to the truth conditions proposed for the various “tenses” in French, as well as the meaning postulates for demonstrative ce, the personal pronoun il, and the semantic verb classes.

To begin, the syntax of IL is composed of three things: a list of the kinds of syntactic categories that are found in the language, which by tradition are referred to as the set of types, a list of the basic expressions of the language; that is, the actual items which belong to the various syntactic classes, and finally, the set of syntactic rules of IL which determine which expressions, simple and complex, are syntactically well-formed expressions of the language. The standard definition in (122) below specifies the set of types found in IL. Specifically, the syntax of this language contains three primitive

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expressions: entities, truth values, and intervals of time, as well as various things which can be constructed out of them:

- (122) The set of types is the smallest set T such that...
- a. e, t , and i are in T (regarded as the types entities, truth values, and intervals of time respectively)
 - b. if $a, b \in T$, then $\langle a, b \rangle \in T$
 - c. if $a \in T$, then $\langle s, a \rangle \in T$.

The primitive e has no direct equivalent in GB syntax, nor, of course, does i , however, the type t refers to any syntactic category the semantic value of which is a truth value. Therefore, the GB categories CP, IP, FP, Agr-P, and small clauses are all correlates of this syntactic type in IL. The various complex categories also have GB equivalents. For example, all predicates (VPs) like croire que le ciel lui tomberait sur la tête 'to believe that the sky would fall on his head' are of the type $\langle e, t \rangle$, which simply means that, from a semantic point of view, these expressions are functions from entities (e) to truth values (t).

As was mentioned in the previous paragraph, the syntax of IL must also specify the set of basic expressions that are attested in this language, the basic expressions being the actual lexical items that are found. The set of basic expressions of this version of intensional logic includes the following:

- (123) The set of basic expressions of IL includes...
- a. a set of non-logical constants of type a , designated, Con_a , e.g., MARCHER 'to walk' is a non-logical constant of type $\langle e, t \rangle$.
 - b. a denumerably infinite set of variables of type a , designated Var_a , for each $a \in T$.
 - c. the logical constants FUT, PRES, IMP, PC, HABITUAL PC etc., CE, IL, ETRE etc. which are of the type $\langle \langle s, t \rangle, t \rangle$.

The final step necessary to define the syntax of IL is that of providing the syntactic formation rules, i.e., the set of rules which specify the set of expressions that are

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recognized as well-formed in the translation language. This step is referred to as providing a set of “meaningful expressions of IL” of a given type a , designated ME_a , and it is defined recursively as follows.

(124) The set of meaningful expressions of IL of type a is defined as follows:

- a. If $\alpha \in \text{Con}_a$, then $\alpha \in ME_a$.
 - b. If $u \in \text{Var}_a$, then $u \in ME_a$.
 - c. If $\alpha \in ME_{\langle a, b \rangle}$ and $\beta \in ME_a$, then $\alpha(\beta) \in ME_b$.
 - d. If $\alpha \in ME_a$ and $u \in \text{Var}_b$, then $\lambda u \alpha \in ME_{\langle b, a \rangle}$.
 - e. If α and $\beta \in ME_a$, then $[\alpha = \beta] \in ME_t$.
 - f. If $\varphi \in ME_t$, then $\neg \varphi \in ME_t$.
- (Similarly for \wedge , \vee , \rightarrow , and \leftrightarrow .)
- g. If $\varphi \in ME_t$ and $u \in \text{Var}_a$, then $\forall u \varphi \in ME_t$. (Similarly for $\exists u \varphi$.)
 - h. If $\varphi \in ME_t$, then $L\varphi \in ME_t$.
 - i. If $\alpha \in ME_a$ then $\wedge \alpha \in ME_{\langle s, a \rangle}$.
 - j. If $\alpha \in ME_{\langle s, a \rangle}$ then $\vee \alpha \in ME_a$.
 - k. If $\varphi \in ME_t$ and $\zeta \in ME_i$ then $AT(\zeta, \varphi) \in ME_t$.
 - l. If ζ and $\xi \in ME_i$ then $[\zeta \subseteq \xi]$ and $[\zeta < \xi] \in ME_t$.

These rules define all of the syntactically well-formed expressions in IL. For example, the syntactic rules in (124a,b) simply state that all constants and variables of a given type are well-formed expressions of IL; similarly, (124c) specifies that if a category combines with its subcategorized argument a well-formed complex expression results.

Having repeated all of the necessary syntactic definitions for the translation language, I will now provide the (revised version of the) semantic interpretation rules which are guided by them. The first step to providing the semantic component of IL resides in specifying those aspects of semantic interpretation which determine how one effects the mapping from the basic expressions to things in the world. This is known as providing the model for semantic interpretation. Of course, natural languages are quite

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complex in that one must make reference to quite a large number of features about the world in order to construct the meaning of a given simple or complex expression. For instance, one must make reference to what individuals exist, what world or set of worlds are being considered, what moment in time the utterance is made at, how that moment is ordered relative to other moments (earlier, later, concurrent; contained in a larger interval etc.), as well as what denotation a given expression is associated with relative to these factors. In sum, this means that our model, referred to as U , interprets a given expression of IL in the following manner, as suggested in Dowty (1979: 351-352), except, of course, for the addition of the clauses regarding the “tenses”, \underline{eg} , i_l , and the Raising Verbs.⁵⁷

- (125) A model U for IL is an ordered octuple $\langle E, W, M, <, R, Inr, \$, F \rangle$ such that...
- a. E is the non-empty set of entities.
 - b. W is the non-empty set of possible worlds.
 - c. M is the non-empty set of moments in time.
 - d. $<$ is a simple (linear) ordering on M .
 - e. (i) The set of intervals of time I is the set of all subsets i of M such that if $i \in I$, then for all $m_1, m_2, m_3 \in M$, if $m_1, m_3 \in i$ and $m_1 < m_2 < m_3$, then $m_2 \in i$. (I.e., intervals have no internal gaps.)
(ii) i is a subinterval for j iff $i \subseteq j$, where i and j are intervals.
(iii) i is an initial subinterval for j iff i is a subinterval of j and there is no moment $m \in (j - i)$ for which there is a $m' \in i$ such that $m < m'$.
(iv) i is a final subinterval for j iff i is a subinterval of j and there is no moment $m \in (j - i)$ for which there is a $m' \in i$ such that $m > m'$.
(v) m is an initial bound for i iff $m \notin i$ and $[m]$ is an initial subinterval for $\{m\} \cup i$. (I.e., m is the last moment just before i .)
(vi) m is a final bound for i iff $m \notin i$ and $[m]$ is a final subinterval for $\{m\} \cup i$. (I.e., m is the first moment just after i .)

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(125) f. Let $i_1 < i_2$ abbreviate “for all $m_1 \in i_1$, there exists an $m_2 \in i_2$ such that $m_1 < m_2$. (I.e., i_1 either completely precedes i_2 , i_1 is contained within i_2 but is not a final subinterval of i_2 , or i_1 and i_2 partially overlap with some part of i_2 later than i_1 .) Then R is a three-place relation $WXWI$ such that...

(i) if $\langle w_1, w_2, i \rangle \in R$, then for all $i' \in I$ such that $i' < i$,
 $\langle w_1, w_2, i' \rangle \in R$, and

(ii) where R' is that two-place relation such that $\langle w_1, w_2 \rangle \in R'$ iff for some i , $\langle w_1, w_2, i \rangle \in R$, R' is transitive, reflexive, and symmetric. (“ $\langle w_1, w_2, i \rangle \in R$ ” is read “world w_1 is exactly like w_2 at all times up to and including i .”)

g. Inr is a function from WXI into subsets of W such that if $w_1 \in Inr(\langle w_2, i \rangle)$, then $\langle w_1, w_2, i \rangle \in R$, for all $w_1, w_2 \in W$, $i \in I$. (I.e., the inertia worlds for a given index $\langle w, i \rangle$ are always a subset of the worlds that are exactly like w up to i , according to R .)

h. $\$$ is a function that assigns to each $w_i \in W$ a set of sets of members of W , designated $\$_{w_i}$, such that (i) $\$_{w_i}$ is centered on w_i , (ii) $\$_{w_i}$ is nested, (iii) $\$_{w_i}$ is closed under unions, and (iv) $\$_{w_i}$ is closed under non-empty intersections. (I.e., each set in $\$_{w_i}$ is a set of worlds that are equally similar to w_i .)

i. The interpretation function, designated F , assigns to each non-logical constant of IL of type a , a denotation, designated D_a , as follows:

(i) $D_e = E$

(ii) $D_t = \{0, 1\}$ (the truth values “false” and “true” respectively)

(iii) $D_i = I$

(iv) $D_{\langle a, b \rangle} = D_b^{D_a}$

(v) $D_{\langle s, a \rangle} = D_a^{WXI}$

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(125) i The interpretation function (F) also assigns each logical constant of IL of type a a denotation as follows:

(i) FUT: FUT is a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, FUT is a function which gives the value 1 when applied to any proposition p just in case there is another interval i and $[\forall p]_{U,w,i,g} = 1$ and $i > i_0$; otherwise, FUT gives the value 0.

(ii) PRES: PRES is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, PRES is a function which gives the semantic value 1 when applied to any proposition p iff for some interval i such that $i = i_0$, there is some other interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, $[\forall p]_{U,w',i',g} = 1$; otherwise, PRES maps the semantic value of p onto 0.

(iii) IMP: IMP is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, IMP is a function which gives the value 1 when applied to any proposition p just in case for some other interval i , such that $i < i_0$, there exists some interval i' such that $i \subset i'$ and i is not a final subinterval for i' , and for all w' such that $w' \in \text{Inr}(\langle i, w \rangle)$, $[\forall p]_{U,w',i',g} = 1$; otherwise, IMP gives the value 0.

(iv) PC: PC is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, PC is a function which gives the semantic value 1 when applied to any proposition p just in case there is an interval i such that $i < i_0$ and i is a closed interval, i.e., an interval whose beginning point and endpoint are included and $[\forall p]_{U,w,i,g} = 1$; otherwise, PC gives the value 0.

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- (125) i (v) **HABITUAL PC**: **HABITUAL PC** is also a function which maps propositions onto truth values. Specifically, at any index $\langle w, i_0 \rangle$, **HABITUAL PC** is a function which gives the semantic value of 1 when applied to a proposition p just in case there is an interval i such that i is a closed interval, $i < i_0$, and φ is true at a sufficient number of the subintervals of i in w ; otherwise **HABITUAL PC** gives the value 0. (Similarly for **HABITUAL IMP**, **HABITUAL PRES**, AND **HABITUAL FUT**.)
- (vi) **CE** is a function which maps truth values onto truth values. Specifically, **CE** is a function which maps sentences which have a semantic value onto 1 onto the truth value 1 and sentences which have a semantic value onto 0 onto the truth value 0. (But see the meaning postulate for demonstrative ce given in (120) above.)
- (vii) **IL** is also a function which maps truth values onto truth values. Specifically, **IL** is a function which maps sentences which have a semantic value onto 1 onto the truth value 1 and sentences which have a semantic value onto 0 onto the truth value 0. (But see the meaning postulate for il given in (121) above.)
- (viii) **ETRE** is a function which maps propositions onto truth values. Specifically, at any index $\langle w, i \rangle$, **ETRE** is a function which gives the semantic value 1 when applied to any proposition p just in case $\llbracket \forall p \rrbracket_{U,w,i,g} = 1$ at every moment of i , otherwise, **ETRE** gives the value 0. (And similarly for the other Stative Raising verbs.⁵⁸)

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- (125) i. (ix) DEVENIR is a function which maps propositions onto truth values. Specifically, at any index $\langle w, i \rangle$, DEVENIR is a function which gives the semantic value 1 when applied to any proposition p just in case there is an interval j containing the initial bound of i such that $[\lceil \forall p \rceil]_{U, w, j, g} = 0$ and there is another interval k which contains the final bound of i such that $[\lceil \forall p \rceil]_{U, w, k, g} = 1$ and there is no interval i' contained within i that meets these two conditions, otherwise, DEVENIR gives the value 0. (And similarly for the other Non-Static Raising verbs.)

A value assignment g is a function that assigns to each variable of type a , a value in D_a .

While the preceding model specifies those aspects of meaning which have to do with assumed facts about the connections between language and the way the world is, the semantic rules of IL represent those aspects of meaning which are fixed by the nature of the language itself. These aspects of meaning, which are referred to as the definition of the denotation of a meaningful expression α with respect to an interpretation U , a world w , and interval of time i , and a value assignment g , or using formal notation, $[\lceil \alpha \rceil]_{U, w, i, g}$, are determined as in (126) below, taken directly from Dowty (1979: 352-354). As is usual to ensure compositionality, these semantic interpretation rules “feed off” their syntactic counterparts provided above in (124).

- (126) Semantic Interpretation Rules of IL:
- a. If $\alpha \in \text{Con}_a$, then $[\lceil \alpha \rceil]_{U, w, i, g} = [F(\alpha)](\langle w, i \rangle)$.
 - b. If $u \in \text{Var}_a$, then $[\lceil u \rceil]_{U, w, i, g} = g(u)$.
 - c. If $\alpha \in \text{ME}_{\langle a, b \rangle}$ and $\beta \in \text{ME}_a$, then $[\lceil \alpha(\beta) \rceil]_{U, w, i, g} = [\lceil \alpha \rceil]_{U, w, i, g} ([\lceil \beta \rceil]_{U, w, i, g})$.

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- (126) d. If $\alpha \in ME_a$ and $u \in Var_b$, then $[\lambda u \alpha]_{U,w,i,g}$ is that function h with domain D_b , s.t. for any object x in the domain, $h(x) = [\alpha]_{U,w,i,g'}$ where g' is that value assignment exactly like g with the possible difference that $g'(u)$ is the object x .
- e. If α and $\beta \in ME_a$, then $[\alpha = \beta]_{U,w,i,g} = 1$ iff $[\alpha]_{U,w,i,g}$ is $[\beta]_{U,w,i,g}$.
- f. If $\varphi \in ME_t$, then $[\neg \varphi]_{U,w,i,g} = 1$ iff $[\varphi]_{U,w,i,g} = 0$.
(Similarly for \wedge , \vee , \rightarrow , and \leftrightarrow .)
- g. If $\varphi \in ME_t$ and $u \in Var_a$, then $[\forall u \varphi]_{U,w,i,g} = 1$ iff $[\varphi]_{U,w,i,g'} = 1$ for all g' exactly like g except possibly for the value assigned to u . (Similarly for $\exists u \varphi$.)
- h. If $\varphi \in ME_t$, then $[L\varphi]_{U,w,i,g} = 1$ iff $[\varphi]_{U,w',i',g} = 1$ for all $w' \in W$ and $i' \in I$.
- i. If $\alpha \in ME_a$ then $[\wedge \alpha]_{U,w,i,g}$ is that function h with domain WXI such that for each $\langle w', i' \rangle \in WXI$, $h(\langle w', i' \rangle) = [\alpha]_{U,w',i',g}$.
- j. If $\alpha \in ME_{\langle s,a \rangle}$ then $[\forall \alpha]_{U,w,i,g} = [\alpha]_{U,w,i,g}(\langle w, i \rangle)$.
- k. If $\varphi \in ME_t$ and $\zeta \in ME_i$, then $[AT(\zeta, \varphi)]_{U,w,i,g} = 1$ iff $[\varphi]_{U,w,i',g} = 1$ where $i' = [\zeta]_{U,w,i,g}$.
- l. If ζ and $\xi \in ME_i$, then $[\zeta \subseteq \xi]_{U,w,i,g} = 1$ iff $[\zeta]_{U,w,i,g} \subseteq [\xi]_{U,w,i,g}$, and $[\zeta < \xi]_{U,w,i,g} = 1$ iff for all $m_1 \in [\zeta]_{U,w,i,g}$ and all $m_2 \in [\xi]_{U,w,i,g}$, $m_1 < m_2$.

The semantic component for \underline{IL} requires one final standard definition before it is complete:

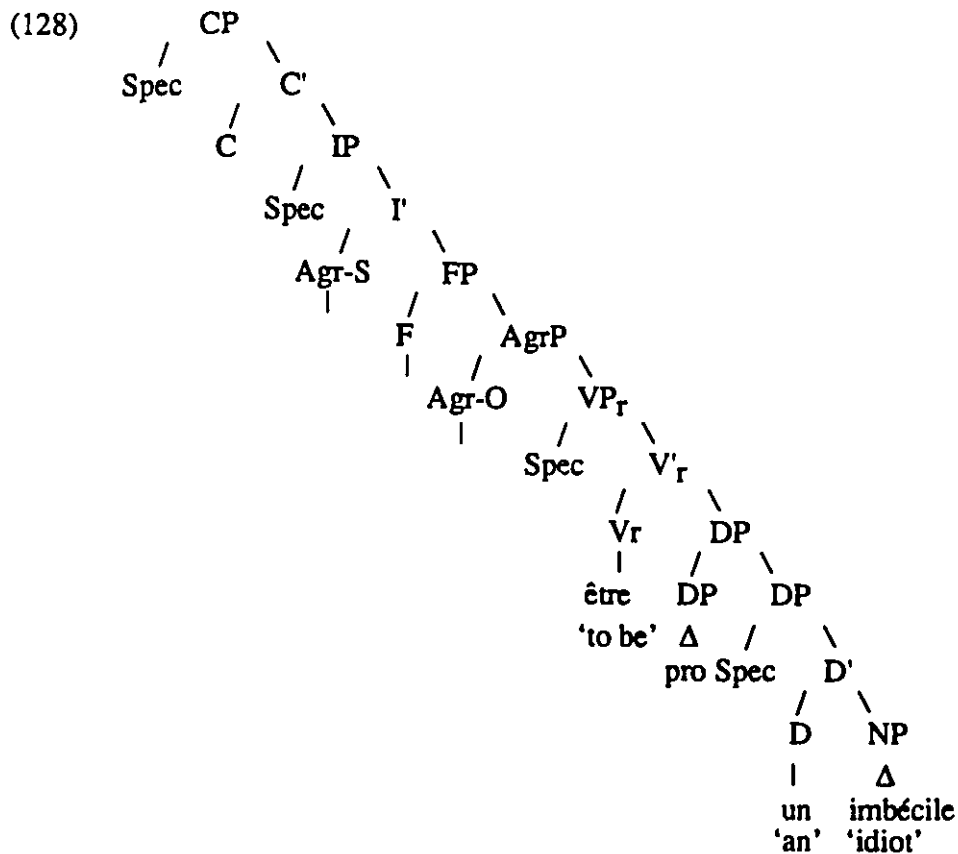
- (127) If $\varphi \in ME_t$, φ is true with respect to U and $\langle w, i \rangle$ iff $[\varphi]_{U,w,i,g} = 1$ for all g' .

The syntactic and semantic rules for the translation language have now been provided. The next task is to provide the syntactic rules for French needed to generate predicative constructions, as well as the paired translation rules which will convert the GB tree into

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intensional logic. Recall that once these two elements have been provided, the resulting translation will then be interpreted by the semantic component of IL which has already been given above in (125)-(127).

Beginning with the syntax, the D-Structure associated with predicate nominals such as Jean, c'est un imbécile 'Jean, he's an idiot' was been argued in the previous chapter to be as follows:



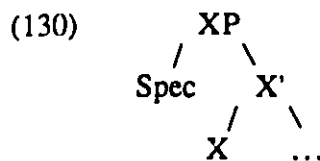
Given that the translation rules will be driven by the syntactic ones, it would be useful at this point to briefly review how GB theory accounts for the well-formedness of the preceding D-Structure. As will be shown below, this D-Structure reflects the interaction of the lexicon, principles of X' Theory, and certain tenets of Theta Theory. First, X' Theory embodies the following principles:

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(129) X' Theory:

- a. Every syntactic category is a projection of a lexical head.
- b. X^n immediately dominates X^{n-1} , down to X^0 .
- c. Head Parameter: French is a head-initial language.

Before any lexical items have been inserted, clause (129c) will project the following structure in which the head (X^0) precedes its complements. By clause (129a), once an X^0 is inserted, it must project up to the X' and XP levels.



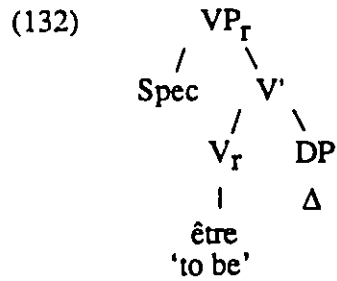
Assume next that the Raising Verb être 'to be' is inserted into the head of (130). By (129b), it follows that the projections dominating it must be of the same category (V). At this point, those aspects of the D-Structure in (128) which are due to X' Theory are complete. However, the module of Theta Theory also contributes to this structure. Theta Theory embodies the following principles:

(131) Theta Theory:

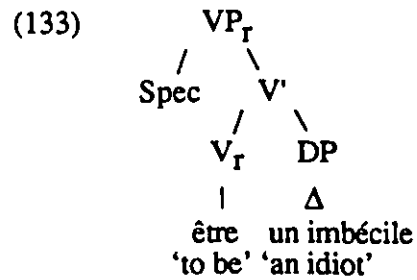
- a. Theta Criterion: Every argument must be assigned a theta role and every theta role must be assigned to an argument.
- b. Predication: Every category may theoretically assign an external theta role, unless this is prohibited by the category's lexical entry, as is the case, for example, with ergative verbs.
- c. External Theta Role Parameter: External Theta role assignment is fixed to the left in French.

The Theta Criterion in (131a) requires that the internal theta role selected by the verb être 'to be' be discharged to some category of the appropriate type. Assume that the complement projected for this purpose is a DP, rather than a PP or an AP. If so, then the following is generated:

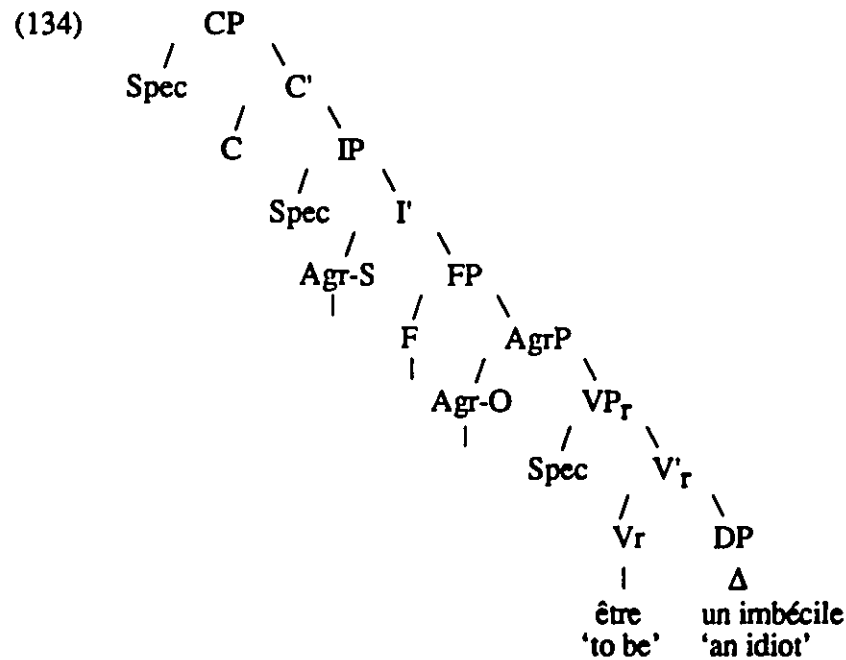
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Once the DP complement has been selected, it too must project its full structure in accordance with X' Theory:



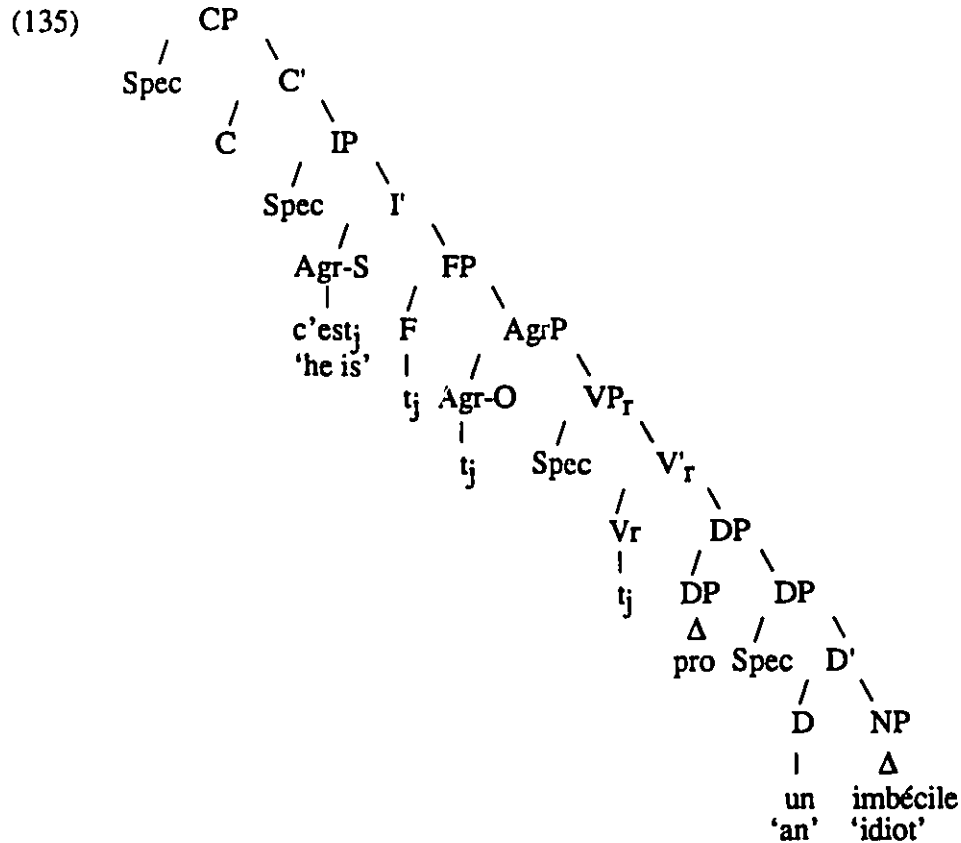
Finally, if we assume, as was the case in chapter 3, that C s-selects IP in some sense; that Agr-S s-selects FP, and so on, then each of the categories dominating VP must also be projected in order to satisfy the Theta Criterion in (131a). Thus we arrive at the following:



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Finally, consider the clauses in (131b,c). In particular, assume that the complement DP does assign an external Theta-role. If so, then an external argument will be projected adjoined to DP, resulting in the final D-Structure originally provided above in (128).

In the previous chapter, it was argued that the S-Structure of predicate nominal sentences such as Jean, c'est un imbécile 'Jean, he's an idiot' is as follows:



This S-Structure is due to the interaction of three modules: the ban on vacuous quantification, the licensing conditions on thematic pro, and certain principles of Case Theory. First, the ban on vacuous quantification explains why V-Raising must take place at S-Structure. In particular, Chomsky (1982) argues that all operators must bind a variable at LF. Further, Pollock (1989: 392) suggests that [+finite] F is a member of the class of operators. As Pollock (1989) points out, a consequence of these two assumptions is that V-Raising in French is “forced” at S-Structure in order for the [+finite] F operator to

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bind a variable, i.e., its trace. Thus, this principle explains why V-movement takes place in the S-Structure given above.

The second relevant syntactic principle, which explains why the pronoun *ce* must appear in this sentence, involves the identification conditions on thematic *pro*. According to Jaeggli and Safir (1989: 32-38), *pro* is an empty category which is only licit if it is identified, identification being the association of the empty category with an element which bears person, number, and gender features. Identification can be achieved in a number of ways, depending on the type of *pro* involved, however, for present purposes, this requirement forces the appearance of *ce* since this is the only means by which *pro* may receive the relevant features. One of the tenets of Case theory also conspires to force the appearance of a pronominal element like *ce* at S-Structure. In particular, Case Theory embodies the following principles, among others.^{59,60}

(136) Case Assignment Parameters:

- a. Nominative and oblique Case assignment is obligatory.
- b. In French, accusative Case assignment is optional.

Due to clause (136a), Agr-S must discharge its nominative Case feature. If one assumes, following Authier (1991), Jaeggli (1986b), and Roberge (1986, 1990), that *pro* is a Caseless empty category, this means that a pronominal element, e.g., *ce*, is needed to absorb this Case feature. Thus the appearance of *ce* in this example is explained not only via the identification conditions on *pro*, but also by the Case component of the grammar.

In conclusion, the syntactic “rules” that make up GB theory, which are actually a series of principles and parameters, do indeed generate the structure provided above in (135).⁶¹ Since none of the LF rules discussed in chapter 1 apply to these constructions, the LF configuration that “feeds” the semantic component will be identical to the S-Structure configuration in (135) above. Given the parametrized version of the syntactic “rules” that are found in French, how may the syntactic structure guide the translation of the natural language expressions in this language into expressions of IL? As is standard,

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translation of any natural language involves a three step process. First, the procedure for converting the syntactic categories used in GB theory into the syntactic categories of intensional logic must be provided. The definitions necessary to achieve this mapping for predicative sentences are provided below in (137). (Note: XP_{NL} and X'_{NL} refer to the maximal projection and the X' level projection of any non-lexical category, the non-lexical categories being C, Agr-S, F, and Agr-O. CFC refers to any Complete Functional Complex, a CFC being a category which contains a given syntactic item, its subcategorized internal arguments, as well as its external argument, as defined in Chomsky (1986b: 169).)

- (137) f is a function from the set of GB syntactic categories to the set of logical types of IL such that:
- a. $f(XP_{NL}) = f(X'_{NL}) = f(VP_r) = f(V'_r) = f(CFC) = t$
 - b. $f(X^0_{NL}) = f(V_r) = \langle \langle s, t \rangle, t \rangle$
 - c. $f(D'_{non-predicative}) = f(DP_{non-predicative}) = \langle \langle s, \langle e, t \rangle \rangle, t \rangle$
 - d. $f(N) = f(N') = f(NP) = f(ADJ_{predicative}) = f(ADJP_{predicative}) = f(D'_{predicative}) = f(DP_{predicative}) = \langle e, t \rangle$
 - e. $f(D_{DP_{predicative}}) = f(P_{PP_{predicative}}) = \langle \langle s, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle$
 - f. $f(D_{non-predicative}) = \langle \langle s, \langle e, t \rangle \rangle, \langle \langle s, \langle e, t \rangle \rangle, t \rangle \rangle$

Having provided the necessary mapping procedure, the second step involves the translations of actual lexical items at the X^0 level into equivalent expressions of IL. As is usual, some heads are just translated into constants of IL whose form closely resembles that of the equivalent natural language expression. This is the case for expressions like marcher 'to walk' and the non-predicative use of intelligent 'intelligent' whose lexical meaning remains unspecified. This standard translation procedure is embodied in the following translation rules:

- (138) a. g is a function from X^0_α to $CON_{f(x)}^{IL}$, except for the exceptions to follow.
- b. If $\alpha \neq \beta$, then $g(\alpha) \neq g(\beta)$.

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The translation rule given above in (138a) states that a lexical item α is translated into a constant of intensional logic of whatever syntactic category is specified by the procedure given above in (137). To provide some concrete examples of how the translation rule in (138a) operates, the expression marcher ‘to walk’ will be translated by (138a) into the IL expression MARCHER and, similarly, the non-predicative adjective intelligent ‘intelligent’ is mapped onto the IL constant INTELLIGENT.⁶² The clause in (138b) ensures that two distinct lexical items are never mapped onto the same constant of IL.

As was mentioned earlier in chapter 3, in Montague Grammar some lexical items are given special translations, the purpose of which is to more accurately reflect their meaning. For example, it is standard in Montague Grammar to translate determiners in the manner indicated below in (139a) and proper names as in (139b). Additionally, to ensure a compositional treatment of the DP, in chapter 3 I also proposed the “special” translation in (139c) for pro and the one in (139d) for the null definite determiner.

- (139)
- a. $\underline{un}_{DPnon-predicative} \text{ ----} \rightarrow \lambda Y \lambda X \exists z (\forall Y(z) \wedge \forall X(z))$
 - b. $\underline{Marie}_{DPnon-predicative} \text{ ----} \rightarrow \lambda P^{\forall} P(m)$
 - c. $\text{pro} \text{ ----} \rightarrow Z_n$
 - d. $\emptyset_{\text{definite det}} \text{ ----} \rightarrow \lambda Y \lambda X \exists x (\forall y (\forall Y(y) \leftrightarrow (x = y)) \wedge \forall X(x))$

The decision to translate a determiner like un ‘a’ as in (139a) above rather than, say, as the constant UN is motivated by the need to express more precisely exactly what the meaning of this lexical item is. That is, the translation $\lambda Y \lambda X \exists z (\forall Y(z) \wedge \forall X(z))$ clearly shows that this determiner expresses a particular relation between properties of individuals; specifically, un ‘a’ refers to a relation between two properties X and Y which holds in a given world at a given time if and only if there is at least one individual who has both of the properties in question. Thus, Un homme marche ‘A man is walking’ will be true if and only if there exists some individual in the world who possess not only the property of being a man, but also the property of walking. Similar considerations explain the standard translation of proper names as denoting the set of properties that are true of an individual,

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sentences containing verbs like chercher 'to look for' do. Thus the sentence in (141a) entails the existence of unicorns, i.e., it lacks a de dicto reading in which the verb être 'to be' takes wide scope over the scope of the indefinite, whereas that in (142a) does not, indicating that it does possess the de dicto reading.

- (141) a. Marie est une licorne.
 'Marie is a unicorn.'
- b. !Marie est une licorne, mais les licornes n'existent pas.
 Marie is a unicorn, but the unicorns NEG exist not
 'Marie is a unicorn, but unicorns don't exist.'
- (142) a. Marie cherche une licorne.
 Marie is-looking-for a unicorn
 'Marie is looking for a unicorn.'
- b. Marie cherche une licorne, mais les licornes n'existent pas.
 'Marie is looking for a unicorn, but unicorns don't exist.'

To capture the extensional nature of Raising verbs, I would like to adopt the translation in (143a). A similar extensional translation will also be postulated for demonstrative ce and the personal pronoun il. (The latter translation was originally proposed in chapter 3 to handle subject and object clitics in causative constructions.)

- (143) a. Raising Verb -----> λp RV $\forall p$
- b. (CLITIC)_{AgT-O/S} -----> λp (CLITIC) $\forall p$

The final special translation rule necessary to capture predicative constructions is provided below for the head of CP. As was the case in chapter 3, I am assuming an extensional translation for this expression and I am not taking a stance as to the meaning associated with it since the issue is irrelevant to the topic at hand.

- (144) (COMPLEMENTIZER)_C ----> λp (COMP) $\forall p$

At this point, it is possible to determine the IL type of any GB expression found in predicative structures, as well as the IL translation for particular lexical items. The third

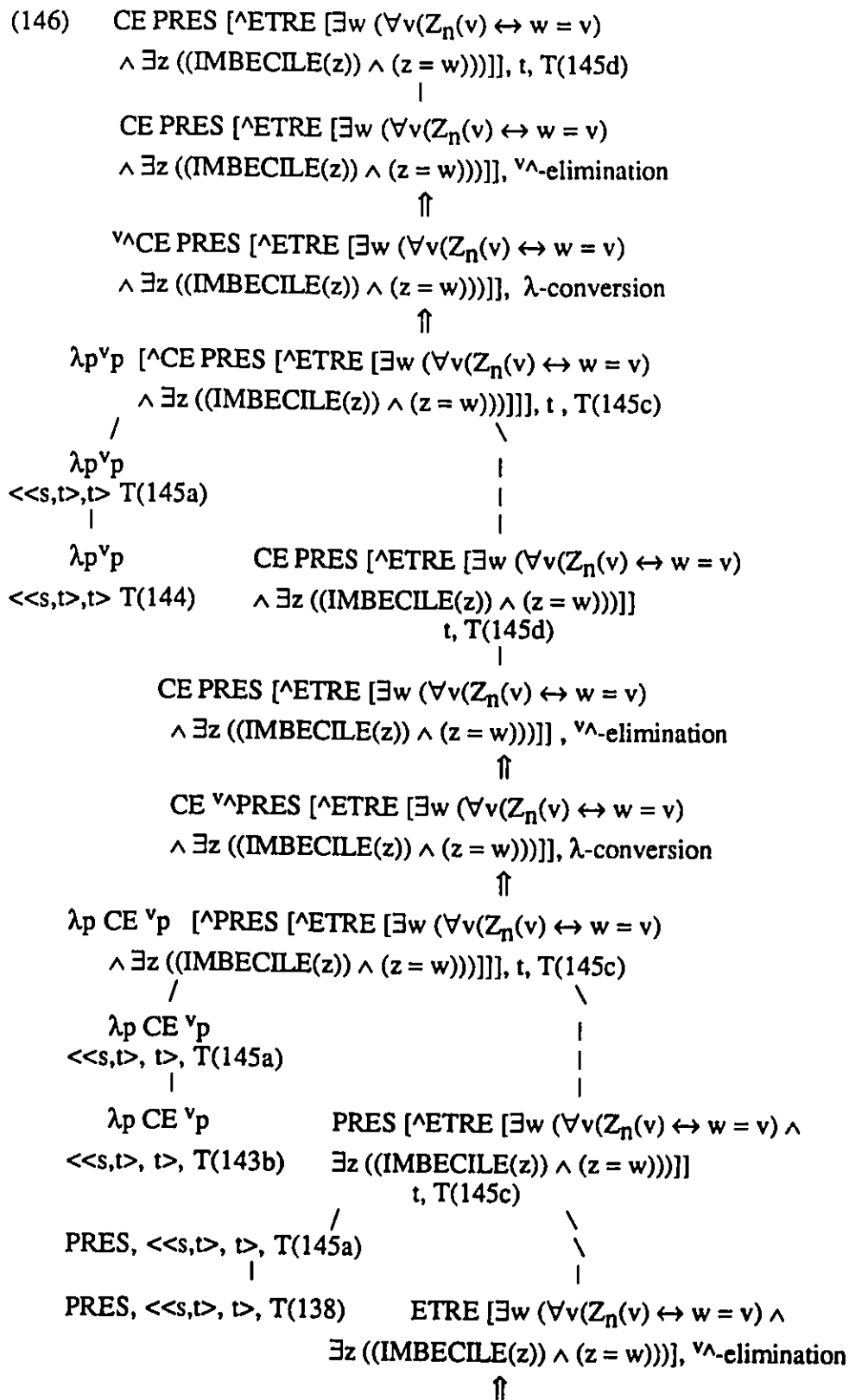
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and final step in the translation process involves the formulation of the translation rules for categories beyond the lexical level, i.e., the translation rule for the X^0 s dominating the lexical item in the tree, as well as various types of X 's and XP s. These rules are provided below:

- (145)
- a. Translation rule for X^0 s:
If $\alpha \in P_{X^0}$ and β is a lexical item of the same syntactic category, and α immediately dominates β , and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.
 - b. Translation rule for non-branching X 's:
If α is a non-branching X' category and β is an X^0 immediately dominated by α and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.
 - c. Translation rule for internal arguments:
If α is an X^0 category and β is an XP and α subcategorizes for β and $\alpha \rightarrow \alpha'$ and $\beta \rightarrow \beta'$, then the X' or XP immediately dominating α and β , γ , $\rightarrow \alpha'(\wedge\beta')$.
 - d. Translation rule for XP s:
If $\alpha \in P_{XP}$ and $\beta \in P_{X'}$ or X^0 and α immediately dominates β and possibly the SPEC of β and $\beta \rightarrow \beta'$, then $\alpha \rightarrow \beta'$.
 - e. Translation rule for CFC:
If $\alpha \in P_{XP}$ and $\beta \in P_{DP}$ or CP and α assigns an external theta-role to β and $\alpha \rightarrow \alpha'$ and $\beta \rightarrow \beta'$, then the XP immediately dominating α and β , γ , $\rightarrow \beta'(\wedge\alpha')$.

In order to see how the mapping from GB categories is achieved, as well as how all of these translation rules function in a bottom-up compositional fashion from the syntactic structure, I have provided the IL translation tree which corresponds to the sentence Jean, c'est un imbécile 'Jean, he's an idiot', the LF (and S-Structure) of which is given above in (135):

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$$\begin{array}{c}
 (146) \quad \forall^{\wedge} \text{ETRE} [\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], \\
 \lambda\text{-conversion} \\
 \uparrow \\
 \lambda p^{\forall} p [\wedge \text{ETRE} [\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], \\
 t, T(145c) \\
 / \qquad \qquad \qquad \backslash \\
 \lambda p^{\forall} p, \langle \langle s, t \rangle, t \rangle, T(145a) \qquad | \\
 | \qquad \qquad \qquad | \\
 \lambda p^{\forall} p, \langle \langle s, t \rangle, t \rangle, T(143b) \quad \text{ETRE} [\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \\
 \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], t, T(145d) \\
 | \\
 \text{ETRE} [\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], \\
 \forall^{\wedge}\text{-elimination} \\
 \uparrow \\
 \text{ETRE} [\forall^{\wedge} \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], \\
 \lambda\text{-conversion} \\
 \uparrow \\
 \lambda p \text{ETRE}^{\forall} p [\wedge \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w)))], \\
 t, T(145c) \\
 / \qquad \qquad \qquad \backslash \\
 \lambda p \text{ETRE}^{\forall} p, \langle \langle s, t \rangle, t \rangle, T(145a) \qquad | \\
 | \qquad \qquad \qquad | \\
 \lambda p \text{ETRE}^{\forall} p, \langle \langle s, t \rangle, t \rangle, T(143a) \qquad | \\
 \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w))), \\
 \lambda\text{-conversion} \\
 \uparrow \\
 \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \lambda x \exists z ((\text{IMBECILE}(z)) \wedge (z = x))(w)), \forall^{\wedge}\text{-elimination} \\
 \uparrow \\
 \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \forall^{\wedge} \lambda x \exists z ((\text{IMBECILE}(z)) \wedge (z = x))(w)), \lambda\text{-conversion} \\
 \uparrow \\
 \lambda X \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \forall^{\wedge} X(w)) (\wedge \lambda x \exists z ((\text{IMBECILE}(z)) \wedge (z = x))), t, T(145e) \\
 / \qquad \qquad \qquad \backslash \\
 \lambda X \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \forall^{\wedge} X(w)), T(145d) \qquad | \\
 | \qquad \qquad \qquad | \\
 \lambda X \exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \forall^{\wedge} X(w)), \forall^{\wedge}\text{-elimination} \qquad | \\
 \uparrow \qquad \qquad \qquad | \\
 \lambda X \exists w (\forall v (\forall^{\wedge} Z_n(v) \leftrightarrow w = v) \wedge \forall^{\wedge} X(w)), \lambda\text{-conversion} \qquad | \\
 \uparrow \qquad \qquad \qquad | \\
 \lambda W \lambda X \exists w (\forall v (\forall^{\wedge} W(v) \leftrightarrow w = v) \wedge \forall^{\wedge} X(w)) (\wedge Z_n), \\
 \langle \langle s, \langle e, t \rangle \rangle, t \rangle, T(145c) \qquad |
 \end{array}$$

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(125i) specify that this tense selects an open interval, i.e., an interval whose endpoints are not included. Additionally, the Raising verb être 'to be' is stative, as indicated by the relevant clause in (125i), therefore, it selects formulas which are true at every moment in the interval selected by the tense. Thus, the meaning associated with the present tense and the Raising verb être 'to be' conspire to produce a formula which is indeed compatible with the semantics of demonstrative ce.

Consider, in contrast, the following ill-formed example, associated with the final translation indicated in (147b):

- (147) a. *Jean, ça a été un imbécile.
 Jean, he has been an idiot
 'Jean was an idiot.'
- b. CE [PC [[^]ETRE [$\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w))))$]]]

The passé composé 'compound past' is a tense whose truth conditions require that a closed interval be selected. Further, the lexical semantics of être 'to be' require that this formula be true at all moments in that interval. Therefore, the formula [[^]ETRE[$\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w))))$]] (i.e., 'He be an idiot') is semantically asserted to hold at every moment, including the initial and the final endpoints, in the closed interval selected by the tense. Since demonstrative ce is lexically-specified not to accept such formulas, this sentence is correctly judged to be semantically ill-formed.

As a final example, using a Raising verb other than être 'to be', consider the sentence in (148a) below and its associated IL translation:

- (148) a. *Jean, ça devient un imbécile.
 Jean, he is-becoming an idiot
 'Jean is becoming an idiot.'
- b. CE [PC [[^]DEVENIR [$\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w))))$]]]

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Once again, the meaning postulate associated with demonstrative ce requires that the truth of He become an idiot be asserted at the interval picked out by the non-habitual tense, and then crucially not at initial or final endpoints. As was the case in the earlier examples, the present tense selects an open interval, therefore, the latter requirement is met. However, unlike être 'to be', the non-stative verb devenir 'to become' does not semantically entail the truth of the formula [Jean become an idiot] in w at the interval picked out by the imparfait 'imperfect'. (See the truth conditions for this predicate in (125i) above, as well as those for the imparfait 'imperfect' in an earlier clause of that same entry.) Consequently, this sentence is ruled out because the truth of $[^{\wedge}\text{DEVENIR}[\exists w (\forall v(Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{IMBECILE}(z)) \wedge (z = w))))]]$ ('He become an idiot') is not asserted at the interval picked out by the present tense in w .

Having provided a few examples illustrating the functioning of the semantic system I have proposed, I would like to conclude this chapter by noting that the aspect of meaning associated with demonstrative ce is indeed conventional in nature, which is in line with the thesis I am defending; namely, that a dissociation of Case and Theta-role assignments is one means by which a language may encode non-truth-conditional aspects of meaning. The usual tests for semantic presuppositions/conventional implicatures, discussed in detail in section 3.2 of chapter 3, indicate that not only is the feature of meaning associated with demonstrative ce conventional in nature, but so are the features of meaning linked to the various "tenses". That is, it has been proposed here that demonstrative ce semantically requires that the formula it modifies be true at the interval and world picked out by the tense, with the further provisos that this formula not be true at the initial or final endpoints of that interval and that the tense not be habitual. The present tense was hypothesized to select an interval concurrent with speech time that is a member of a larger open interval at which the formula is true in the set of inertia worlds associated with the world under consideration. Both of these aspects of meaning are maintained under negation and question formation, as indicated by (149a,b) below:

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- (149) a. Jean, ce n'est pas un imbécile.
 Jean, he NEG is not an idiot
 'Jean isn't an idiot.'
- b. Jean, c'est un imbécile?
 Jean, he's an idiot
 'Is Jean an idiot?'

Since the aspects of meaning contributed by the “tenses” and demonstrative \underline{ce} form part of the conventionally implied meaning of the sentence, and not the semantic assertion, the semantic contribution of these features of meaning is properly to be considered subsidiary to that of the truth-conditional ones. In other words, as was the case for the conventional implicatures related to clitic Case alternations in causative sentences discussed in chapter 3, the truth value of the entire sentence is determined as a composite of the truth values associated with the conventional aspects of meaning and the semantic assertion in the manner indicated below, as suggested in Karttunen and Peters (1979: 16, ft. 7), who adopt the two-dimensional logic proposed in Herzberger (1973):

(150)

VALUE OF α^e (α^e = extension expression)	VALUE OF α^i (α^i = implicature expression)	VALUE OF $\langle \alpha^e, \alpha^i \rangle$ (composite expression)
1	1	T
1	0	t
0	1	f
0	0	F

Thus, as was the case in chapter 3, I have simplified the system to the extent that I have provided a derivation which collapses the conventional meaning with the asserted meaning. Of course, as was demonstrated in chapter 3, it is a relatively easy matter to separate these aspects of meaning into two trees, but doing so needlessly lengthens the discussion.

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Therefore, I will just provide the final extension and implicature expressions for a simple sentence and I will then use these to demonstrate how the preceding table functions.

Consider the case of the sentence Jean, c'est mon meilleur ami 'Jean, he's my best friend.' This sentence would translate into the following extension and implicature expressions: $\langle ((\text{MON MEILLEUR AMI})_j), \text{CE} [\text{PRES} [\text{^ETRE} [\exists w (\forall v (Z_n(v) \leftrightarrow w = v) \wedge \exists z ((\text{MON MEILLEUR AMI}(z)) \wedge (z = w)))]]]] \rangle$. Assume that it is not the case that Jean is my best friend at the open interval picked out by the present "tense", but that it is the case that he was earlier. If so, then the extension expression, i.e., 'He be my best friend', is assigned a semantic value of 1, but the implicature expression, i.e., 'Jean is my best friend', is false. In this instance, the entire sentence receives a truth value of t, i.e., it is not entirely false, but it not entirely true either.⁶⁴

As a final remark, it is interesting to note that the choice of demonstrative ce or the personal pronoun il can also give rise to conversational implicatures, a fact which may be used to explain not only the various characterizations of demonstrative ce found in the literature, but also the subtle difference in meaning between these two pronouns that was discussed in Section 5.4 of the present chapter. (See the discussion of the examples in (28a,b) above.) In particular, virtually every paper that has addressed the topic, e.g., Boone (1987), Burston (1983), Coppieters (1974, 1975), Kupferman (1979), Tamba-Mecz (1983), among others, has described demonstrative ce in copular sentences as being identificational and il as being personalizing. That is, demonstrative ce is said to be used in copular sentences if the property denoted by the predicative element is one which can identify the referent because it represents a permanent, or characterizing property of the individual, while il, in contrast, is often described as being used to predicate transitory properties of an individual. This intuition that ce represents inherent properties and il transitory ones is quite likely due to the types of formulas they select in copular sentences and the conversational implicatures that result from that choice. That is, since in copular sentences ce is only compatible with formulas that are true at an open interval the speaker is

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obviously leaving open the possibility that the formula held earlier and that it continued to hold later, i.e., (s)he is conversationally implying that this may be a property that lasts. If, on the other hand, the speaker uses il, the choice of an explicitly bounded interval conversationally implies that the state either just began or just came to an end. That this aspect of meaning is a conversational implicature is proven by the fact that il can be used with “inherent” properties, and ce with temporary ones, as in, e.g., sentences like Max, il restera à jamais l’homme de sa vie ‘Max, he will always be the most important man in her life’ and Max, c’était un galopin quand il était jeune ‘Max, he was a brat when he was young’.

5.6 Conclusion

This chapter has presented a second area in the grammar of French in which Case and theta-role assignment dissociation leads to a special non-truth-conditional aspect of meaning. In particular, it was argued that in predicative constructions, a dissociation of Case and theta-role assignments to the pronominal element leads to an aspectual conventional implicature regarding the truth of the formula at the interval selected by the non-habitual tense in the world under consideration. Specifically, demonstrative ce is compatible only with formulas that are true at this interval, although not at the endpoints of it, whereas il is compatible with all other types of formulas. These conventional implicatures were formally captured in a model-theoretic semantic component, driven by the GB syntactic tree available at LF.

FOOTNOTES

* I would like to thank the participants at the Nineteenth Annual Meeting of the Berkeley Linguistics Society for their helpful comments and criticisms, in particular, Emmon Bach, Jean-Pierre Koenig, and Christine Poulin. A much abridged version of this chapter can be found in Reed (1993).

¹ As Coppieters (1975: 221) points out, the pronunciation of the neuter demonstrative pronoun as either ce or ça is determined by the verb which follows it: it is generally pronounced ce before the copula and ça when it precedes other verbs, e.g., sembler 'to seem' in the example given below:

- (i) *Ecoutez les enfants, vous verrez un tigre au zoo. Si on le taquine, ça semblera être un tigre méchant, mais en fait, c'est un tigre gentil.*
listen the children, you will-see a tiger at-the zoo if one him-ACC teases, he will-seem to-be a tiger mean, but in fact, he's a tiger nice
'Listen children, you'll see a tiger at the zoo. If you tease him, he will seem to be a mean tiger, but in fact, he's a nice one.'

² For simplicity, throughout this chapter I use ce 'he/she/it/they' as the cover term for both ce and ça and the masculine singular personal pronoun il 'he/it' as representing all of the various third person personal pronouns that exist in French. (The other third person personal pronouns are: ils 'they-masculine/plural', elle 'she/it-feminine/singular', elles 'they-feminine/plural'.) It is understood that ce/ça competes with all of the third-person pronouns, which differ from each other only in the gender and number features they bear.

³ The examples in (5a,b) are modified versions of those found in Coppieters (1975: 238).

⁴ Several of these examples have been either adapted or drawn directly from the literature on ce/il alternations. Specifically, the sentences in (8b) and (9a) were taken directly from Burston (1983: 3) and Wagner (1966: 341) respectively, while those in

(7a,b), (9b), and (10a) are modified versions of examples found in Coppieters (1975: 238, 228, 234, and 226).

⁵ A number of authors have recognized that ce has an expletive interpretation. See, for example, Burston (1983: 3) and Coppieters (1975: 277, ft. 13).

⁶ It is possible that in certain dialects of French the use of neuter ce gives rise to an additional affective interpretation which is similar in some respects to the one illustrated in (9a). In particular, this reading is parallel to examples like (9a) in that, first, it is extremely colloquial and, secondly, it expresses the speaker's feelings towards the referent of ce. It contrasts with examples of the type in (9a), however, in that it expresses a feeling of affection and not dislike towards the referent of ce. The following example illustrates this interpretation of neuter ce:

- (i) Quant au petit Jean, ça devient un homme instruit un peu plus chaque jour,
ce qui m'enchante.

as to-the little Jean, he is-becoming a man educated a little more each day, that
which me delights

'As for little Jean, he's becoming an educated man, which pleases me.'

⁷ The data in (12a) and (12d) are adapted from Coppieters (1975: 238, 241).

⁸ The examples in (15b) and (16b) were taken from Burston (1983: 1). The sentences in (15c), (16a), and (16c) were adapted from Coppieters (1975: 255, 224, 255).

⁹ The data in (17b), (17e), (18b), and (18e) were taken directly from Burston (1983: 3, 5). Those in (17c) and (18c) were adapted from Coppieters (1975: 254, 232). Finally, (17a) and (18a) are modified examples due to Kupferman (1979: 145, 146).

¹⁰ Marc Dominicy and Paul Hirschbühler (p.c.) have indicated to me that they accept (17a). This judgment was not supported by my other informant, Marc Authier, nor by the judgment reported for a similar example in Kupferman (1979: 145). (Kupferman's example is *Notre voisin, ça a été un balayeur célèbre. 'Our neighbor, he was a famous

street cleaner.’) This conflict indicates that one of the three following conclusions is warranted, although time constraints prevent me from exploring the matter further in this work. First, certain dialects of French may lack the demonstrative ce entirely. This does not appear to be the case for Marc Dominicy and Paul Hirschbühler’s dialect since they have indicated that they do agree with many other of the judgments reported for demonstrative ce. Second, it may be that the acceptable judgment they provide actually pertains to the affective reading of neuter ce discussed in footnote 6. Finally, it may be that the analysis of demonstrative ce to be proposed in later sections, which explicitly disallows examples like (17a), is in need of some refinement/parametrization to account for dialectal variation. In this thesis I will limit myself to an analysis which will account for the judgments I obtained from Marc Authier, although I will indicate in footnotes where others have expressed disagreement.

¹¹ The example in (20) was adapted from Burston (1983: 5).

¹² Although some of the examples in the text are drawn from Coppieters (1974, 1975), he did not notice the role of definiteness in determining the choice of pronoun.

¹³ While the distribution of neuter and generic ce in non-Raising environments is completely free, that of expletive ce is quite restricted. This issue will not be addressed in this thesis since the point at issue is simply that these other three types of ce can be found in non-Raising structures, while demonstrative ce is not.

¹⁴ The example in (34a) is adapted from Ruwet (1972: 95).

¹⁵ The sentence in (35a) is taken from Coppieters (1975: 232).

¹⁶ The example in (37a) is adapted from Coppieters (1975: 242).

¹⁷ For a complete discussion of semantic verb classes, as well as the tests that determine the class membership of a given lexical item, see Dowty (1979: Chapter 2, section 2.2 and Chapter 3, section 3.8), Kenny (1963), Lakoff (1965), Ryle (1949), and Vendler (1967), among many others. For a critical discussion of the notion of semantic

verb class and an alternative account in terms of Compositional Aspectual Theory (CAT), see Verkuyl (1989).

18 The verbs rester 'to remain' and demeurer 'to remain' in French are lexically ambiguous in the same way as their English counterpart. That is, to remain may either mean to stay to same, which I refer to as rester₁ or to remain may mean to be left after others have been eliminated, which is rester₂. To provide two clear examples, consider (i) and (ii) below which contain rester₁ and rester₂ respectively.

- (i) All of his life, Jean remained a child at heart.
- (ii) Since his competitors were devastated by the economic crisis, Jean remained the only man in town capable of handling that volume of business.

The same ambiguity exists with demeurer, although the 'to be left after elimination' reading is somewhat harder to get.

19 As Dowty (1979: 66-67) points out, the copula is another (Raising) verb which belongs to more than one semantic verb class (rester 'to remain' and demeurer 'to remain' being others mentioned earlier). This fact explains why judgements for a given test are sometimes clouded. In sentence (i) below, for example, to be has both a stative and an activity reading, as evidenced by the licitness of the progressive in examples like (ii).

- (i) John is a fool.
- (ii) John is being a fool!!

An effort has been made in the text to construct examples which rule out the activity reading of to be.

20 I do not take a position as to whether these sentences are semantically (!) or pragmatically (#) ill-formed.

21 The examples in (45a,b) are adapted from Kupferman (1979: 145). Marc Dominicy (p.c.) has indicated that he finds (45b) acceptable.

22 Marc Dominicy (p.c.) has pointed out the following apparent counterexample to my claim that the passé composé ‘compound past’ disallows generic ce:

- (i) Le dinosaure, ça a été un animal incroyablement dévastateur.
the dinosaur, he has been an animal unbelievably destructive
‘The dinosaur was an unbelievably destructive animal.’

Interestingly, Marc Authier (p.c.) has indicated that he marginally accepts this example, but only under a very specific reading. In particular, he judges this sentence to only be licit in the following type of context. Two individuals are discussing the devastating effects the dinosaur has had on the world today. That is, they note evidence of damage he has done and conclude that the dinosaur has been a destructive animal. Crucially, they are not making the statement that at some past time, distinct from the present, the animal had the defining characteristic of being destructive. Rather, they are making the statement that what he did in the past has earned him the characteristic of destructiveness today. It would seem then that this very special use of the passé composé allows one to “open up” the closed past interval of evaluation to include the present time. I will not consider this use of the tense further in this work.

23 There are no verb class restrictions on demonstrative ce in the future. Judgments associated with the passé simple ‘simple past’ were not checked nor were those for the subjunctive, the plus-que-parfait ‘the pluperfect’, the futur antérieur ‘the anterior future’, or the conditional.

24 Marc Dominicy and Paul Hirschbühler (p.c.) disagree with the judgments Marc Authier provides for the examples in (51a,b). See footnote 10 for possible reasons for this variation.

25 The sentence in (53a) is due to Wagner (1966: 341). Example (54a) was adapted from Coppieters (1975: 226).

26 Of course, this leave as an open question for future research the issue of how exactly to analyze ce/il alternations of the expletive, neuter, and generic type.

27 For a more complete discussion of past approaches to tense and aspect in a wide variety of frameworks, see Binnick (1991).

28 The discussion in this section owes much to ideas found in Bennett and Partee (1978), Comrie (1976a), Dowty (1979), Garey (1957), Kenny (1963), Ryle (1949), and Vendler (1967).

29 An alternative means to capture the notion of situation-external versus situation-internal time reference is to characterize tense as a deictic (indexical) expression and aspect as a non-deictic expression. That is, tense is an expression that makes the truth value of a formula dependent on the context of utterance, whereas aspect involves ordering the moments that make up the interval under consideration relative to each other. (See Lyons (1977: Chapter 15) for discussion.)

30 As Comrie (1976a: 2) notes, nonfinite participles and infinitivals are two constructions in which the situation-external reference point is not speech time. Thus, in (i) below, the time of the walking is situated at the same (past) time as the main verb. Similarly, in example (ii) the tense of to go is simultaneous with the (present) tense of try.

(i) When walking down the road, I often met Harry.

(ii) I am trying to go.

31 The examples in the text also have a habitual reading that is not indicated in the glosses. This reading will be mentioned and analyzed in sections 5.5.2-5.5.3. For an alternative analysis of habitual readings as individual-level predicates, see Carlson (1977, 1979).

32 The data in (59a,b) were taken from Comrie (1976a: 74). Because this is a narrative, the perfective is signalled by the passé simple 'past definite', rather than the passé composé 'compound past'.

33 See Comrie (1976a) for an in-depth discussion.

34 As is widely discussed in the literature on this topic, the term semantic verb class is somewhat misleading since it is, in fact, the entire predicate which determines the class of a particular item.

35 This semantic difference is known in the literature as the “imperfective paradox” and Aristotle (Metaphysics: 1048b) is given credit for having originally noticed it. Other authors who have discussed the paradox include Bennett and Partee (1978), Dowty (1979), Garey (1957), Kenny (1963), Ryle (1949), and Vendler (1967).

36 Of course, attempting to deny the accomplishment of the state of affairs in the perfective tenses (the passé composé ‘compound past’ and the future) leads to a logical contradiction with both types of predicates.

37 For a discussion of other aspectual values, see Comrie (1976a), Garey (1957), and Lyons (1977: Chapter 15).

38 See Scott (1970) for a similar proposal which may pre-date Montague’s.

39 Bennett and Partee (1978: 15-16) hint at this type of analysis, but do not formulate specific truth conditions to capture it.

40 As is mentioned in the text, I am adopting the non-stative telic truth conditions taken from Dowty (1979: 141). As Paul Hirschbühler (p.c.) has pointed out to me, Dowty (1979: 169) later proposes another set of truth conditions for non-stative verbs which technically differ from those that I have adopted, although Dowty does qualify these latter definitions as “informal”. In particular, on page 141, Dowty uses the terms “initial bound” and “final bound”, while on page 169, he employs the terms “lower bound” and “upper bound”, two sets of terms which are not synonymous. Specifically, while the terms initial and final bound respectively pick out the moment just preceding and following a given interval (see page 140), the terms lower and upper bound will respectively pick out the first and last moment of a closed interval (see the discussion on page 169). The reason for

Dowty's change in terminology is unclear to me. I will, however, be adopting the first set of truth conditions for the reason mentioned in the text; namely, these definitions do not require the truth of $\neg\phi$ at the initial moment of the interval picked out by the tense which seems correct since in uttering a sentence like Jean devient un homme instruit 'Jean is becoming an educated man' we do not want to require that Jean not be an educated man at the first moment of the interval i , but rather we want him to be in the process of acquiring the properties of an educated man, i.e., neither an educated man nor an uneducated one. (See Dowty (1979: 141).)

41 For further discussion of the semantics of the progressive "tense", see Hinrichs (1983), Ter Meulen (1985), and Vlach (1981).

42 The truth conditions for the passé composé 'compound past', provided in (95) in the text, would also apply to the literary version of that tense, the passé simple 'simple past'.

43 For a treatment of the imparfait 'imperfect' and the passé composé 'compound past' in Reichenbachian terms, see Vet (1980, 1981). For an analysis of tense and aspect in French in terms of discourse representation theory, see Kamp (1981b).

44 The example in (104b) is adapted from Kupferman (1979: 145).

45 Paul Hirschbühler (p.c.) has indicated to me that he accepts the example in (103c) in informal contexts. See footnote 10 above for discussion.

46 Paul Hirschbühler (p.c.) has indicated to me that his judgements for these sentences contrast with those of Marc Authier and Coppieters (1975: 239), from whom the example in (107a) is adapted. Possible explanations for this variability have already been mentioned in footnote 10 above.

47 Sentence (108b) was taken from Kupferman (1979: 148).

48 I am arguing that demonstrative ce is incompatible with the habitual aspect, however, there also appears to be a less robust constraint on this pronoun in the iterative

aspect, as indicated by the sentence in (i) below given to me by Paul Hirschbühler (p.c.). (Note: The judgment provided is that of Marc Authier; Paul Hirschbühler judges this example to be perfect.) (See Comrie (1976: 27) for a discussion of the iterative/habitual distinction.)

(i) Chaque fois que François a entrepris un nouveau sport, { ??c' }
il }

est très vite devenu un expert en la matière.

each time that François had undertaken a new sport, he is very quickly
become an expert in the matter

'Each time that François took up a new sport, he quickly became an expert
at it.'

Due to time constraints, I will not explore the truth conditions associated with the iterative aspect further in this thesis.

49 The data in (113a) and (114a) were taken from Coppieters (1975: 232).

50 The sentence in (115b) was adapted from Coppieters (1975: 239).

51 See Lyons (1977: 469-475) for discussion and references.

52 As Hashimoto (1969) and many others have noted, *shì* functions both as a copula and as an emphatic marker. The judgments in the text refer only to the copular meaning of this lexical item.

53 The data in (117a,c) and (118a) were taken from Hashimoto (1969). I would like to thank Da-Ming Xu for the rest of the Chinese data in the text.

54 It has been argued in the text that the distribution of the overt and non-overt copula in Mandarin Chinese further supports the novel semantic analysis put forth for predicative structures in French. An interesting question is whether or not this language also makes the aspectual distinction regarding endpoints that French encodes with demonstrative *ce*. Some of the data in Hashimoto (1969) indicate that this may indeed be the case. In particular, Hashimoto (1969) provides the following sentences which clearly

show that shi is not acceptable in copular predicate nominal sentences which are modified by a duration phrase:

- (i) *Ta shi yisheng san nian le.
he be doctor three years FINAL PARTICLE
'He was a doctor for three years.'

In such examples, the verb zuo must be used:

- (ii) Ta zuo (-le) san nian yisheng le.
he do ASP three years doctor FINAL PARTICLE
'He was a doctor for three years.'

These sentences can be translated into French as the following:

- (iii) { *Ca } a été un docteur pendant trois ans.
 Il
he has been a doctor for three years
'He was a doctor for three years.'

As is discussed in detail in the text, demonstrative ce is unacceptable with the stative predicate être un docteur 'to be a doctor' in the passé composé 'compound past' because this "tense" selects a closed interval and the lexical semantics of stative predicates entails that formulas containing them be true at all of the moments in the interval, including the initial and final endpoints - a possibility hypothesized to be incompatible with the lexical meaning of demonstrative ce.

From the Chinese data in (i)-(ii), it appears that this language may make the same distinction via the lexical items shi and zuo. Specifically, it is possible that shi is the semantic equivalent of demonstrative ce, whereas zuo is the counterpart of the personal pronoun il. Of course, this observation must be tested on the full range of data before it can be confirmed or dismissed and this task lies beyond the scope of the present work.

55 For a discussion of the function of meaning postulates in Montague Grammar, see chapter 3, pages 101-102.

56 A step-by-step introduction to model-theoretic semantics (so-called “Montague Grammar”) can be found in Dowty, Wall, and Peters (1981), Gamut (1991), and Partee (1975), among others.

57 As Marc Dominicy (p.c.) has pointed out, my truth conditions make use of the symbol $<$ to express a simple linear ordering between various intervals of time (see for example the meaning postulate for the future in (101)), yet in (125d) this symbol is only used to express this relationship that holds between moments of time. Therefore, it initially appears that my meaning postulates are technically uninterpretable under this model. This is not, however, the case since, as the definitions in (125e) make clear, intervals are made up of moments and therefore a linear ordering imposed on two moments is indirectly imposed on intervals containing them.

58 As Emmon Bach (p.c.) points out, the stative Raising Verb avoir l'air ‘to appear’ will have to be associated with truth conditions which are slightly different from the ones associated with être ‘to be’ and rester ‘to be left’ since avoir l'air ‘to appear’ shifts the world under consideration to a possible world or set of possible worlds in which the proposition is true at every moment of time in i .

59 See Authier (1991) for the optionality of accusative Case assignment parameter.

60 If the analysis of pro-drop is, in fact, the non-standard version mentioned in the conclusion of section 5.5.2, then clause (136a) will have to be parametrized as well.

61 Of course, predicate adjectival and predicative PPs are generated in a parallel fashion.

62 The tense morphemes IMPARFAIT, PC, PRES, and the FUT, as well as the personal and demonstrative pronouns, are also subject to this translation rule.

63 For a discussion of the intensional/extensional distinction see Dowty, Wall, and Peters (1981: Chapter 6, sections I and III) or Gamut (1991: Vol. 2, sections 3.1, 6.3.6, 6.3.7, and 6.3.8).

64 As Dowty (1979: 76-77) points out, the features of meaning of the non-stative Raising verbs regarding previous class membership are also conventional in nature, as evidenced by the fact that they too are maintained under question formation and negation in sentences like the following. That is, the examples in (i) and (ii) also commit the speaker to the view that Jean was not an educated man at the time interval preceding the interval selected by the passé composé 'compound past'.

- (i) Jean n'est pas devenu un homme instruit
Jean NEG is not become a man educated
'Jean didn't become an educated man.'
- (ii) Est-ce que Jean est devenu un homme instruit?
is-it that Jean is become a man educated
'Did Jean become an educated man?'

Chapter 6

CONCLUSION

6.1 Summary of the Chapters

As was made clear in chapter 1, one of the primary goals of this work was to further explore and clarify the relationship of the syntactic level of Logical Form (LF) to semantic interpretation. An additional, and equally important, topic of interest in this thesis was to extend the range of phenomena known to be present at this level. In this final chapter, I would like to review the preceding discussion to ascertain the degree to which these goals have been met; additionally, in the next section, I would like to note the possibility that semantic interpretation can be read off a level(s) other than LF, as well as the likelihood of Chomsky's (1986b: 169) notion of Complete Functional Complex (CFC) playing a crucial role in the licensing of the type of conventional implicatures focussed upon in the preceding chapters.

With respect to the first goal of the thesis, I began in chapter 1 by adopting May's (1977, 1985) hypothesis that LF is the level of representation at which the syntactic features relevant to semantic interpretation are represented. More specifically, the point of departure of this thesis was that it is LF which forms the interface between the syntactic and the semantic components of the grammar. As was noted in detail in chapter 1, previous work in the GB framework has focussed primarily on the syntactic configurations available at LF and the syntactic constraints placed upon them; in this thesis, however, I have also been quite concerned with the previously unexplored issue of how this level of representation can form the basis for a compositional semantic treatment along the lines of Montague (1973). To demonstrate the compatibility of the formal systems put forth in the GB framework and the semantic framework commonly referred to as Montague Grammar, sections 3.3 and 5.5.3 offered two fragments of French which illustrated in a step-by-step fashion, the functioning of model-theoretic interpretation based on the syntactic tree

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available at LF. To the same degree that these treatments are judged to be successful, so, too, will the first goal of this thesis have been reached.

With regard to the second issue, recall from the discussion in chapter 1 that I proposed to explore the viability of the hypothesis in (1) below. According to (1), there is an interaction between Case and Theta-role assignment dissociation and the possibility of encoding a certain class of non-truth-conditional aspects of meaning known as conventional implicatures. (As was mentioned in section 1.1, this correlation was partially noted in a different (and problematic) form, in Enç (1987: 36).)

- (1) If an NP does not receive its Case feature from the element that assigns it a Theta-role, it may display a (marked) distinct phonetic or morphological variant which introduces a conventional implicature.

In support of (1), two syntactic constructions found in the grammar of French were explored in detail; these were the causative and Raising constructions, of which (2) and (3) below are typical examples:

- (2) J'ai essayé de lui faire comprendre.
I had tried of him-DAT to-make to-understand
'I tried to get him to understand.'
- (3) Jean et moi, on ne s'est jamais bien entendus, mais, qui sait? Peut-être qu'un jour ça deviendra mon meilleur ami.
Jean and I, one NEG each-other is never well understood, but, who knows could to-be that one day he will-become my best friend
'Jean and I have never gotten along all that well, but who knows? Maybe someday he'll become my best friend.'

The discussion opened in chapter 2 with an in-depth examination of the syntax of French causative constructions. With respect to the hypothesis in (1) above, the major conclusion reached in chapter 2 was that a Case/Theta-role assignment dissociation may take place in this construction in certain dialects of (non-Standard) French. To establish this, however, a

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full investigation of this construction was required, and this proceeded in the following manner.

First, in section 2.2, four arguments were offered in favor of the position that in all French causative constructions and at all levels of representation, the embedded understood subject (the underlined pronoun lui 'him-DAT' in (2) above) is a thematic (external) argument of the embedded predicate alone. Specifically, this evidence concerned the impossibility of cancelling the external Theta-role associated with this argument, the possibility of cancelling its alleged internal one, the licitness of weather expletives in causatives, and the behavior of binominal each in these constructions. The remainder of chapter 2 was devoted to determining the D-Structure and S-Structure of French causative sentences. A major finding of this discussion was that the Case-marking found in these constructions varies from causative verb to causative verb in function of its subcategorisation frame (cf. the discussion faire 'to make' versus laisser 'to let' in Standard French in section 2.4) and even from dialect to dialect (see the cross-dialectal discussion of faire 'to make' in section 2.5.4.). Of greatest interest in view of the hypothesis in (1) was the analysis proposed in section 2.5.4 for certain dialects of French spoken in southern France and Canada. In particular, it was argued there that the formation of a verbal Case unit becomes optional when the embedded external argument appears as a clitic on the causative verb. In sentences like (2) above, the embedded subject was argued to receive its (dative) Case feature from faire 'to make' alone. Since this argument was already shown to always receive its external Theta-role from the embedded predicate alone, this means that in these dialects the structural description noted in (1) above is met.

The preceding conclusions regarding the syntactic structure of non-Standard causative constructions were used in chapter 3 to devise the first piece of evidence in support of the hypothesis in (1). In section 3.2, it was shown that the Case/Theta-role assignment dissociation in sentences like (2) above, which is overtly signalled by the use of the non-Standard Case feature, triggers a conventional implicature regarding the degree of

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influence that embedded subject is implied to have over his or her actions. In particular, this section first demonstrated that the aspect of meaning contributed by these marked Case features is conventional in nature since it survives internal negation, questions, and is not easily challenged. Secondly, meaning postulates were developed in this section to formally capture this distinction. According to one of those postulates, the indirect reading associated with (2) above (namely, the fact that the embedded subject is understood to have had a degree of choice in his decision to act), is due to a conventional implicature to the effect that in at least one of the closest similar worlds to the world under consideration, the individual picked out by *lui* 'him' did not perform the action denoted by the embedded predicate. Thus, by acknowledging that there is a closest similar world or set of worlds in which this individual did not perform this action, the speaker implies that the embedded subject had a choice in his actions. As was mentioned above, the final sections of chapter 3 provided a compositional, Montague-style fragment of French which works off the GB tree available at LF. Thus, the first half of this thesis, chapters 2 and 3, explored the first novel area in the grammar of French in which a Case and Theta-role assignment dissociation leads to a conventional aspect of meaning.

Raising constructions were argued to be the second area of French grammar which offer support for the hypothesis in (1). The discussion of these constructions opened in chapter 4 with an exploration of the syntactic structure of the French copula *être* 'to be'. The motivation behind this investigation was quite simply to establish that the copula is indeed a member of the class of Raising verbs, the Raising verbs being those verbs which subcategorize for a small clause at D-Structure, the subject of which raises to the Spec of IP position at S-Structure to receive nominative Case from the Agr-S associated with the Raising verb. Thus, chapter 4 sought to establish that the copula is indeed a member of the class of verbs which assign Case to their surface subject, but not a Theta-role.

This chapter was divided into two major sections: the first was devoted to the D-Structure of copular sentences, the second to their S-Structure. In particular, in section

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4.2, it was demonstrated, on the basis of two arguments put forth in Couquaux (1979, 1981), that the surface subject of copular sentences cannot be an external argument of être 'to be'. These arguments concerned a problematic "surplus" in the distribution of en 'of-him/her/it/them' and an apparent "hole" in the distribution of reflexive/reciprocal se 'himself/herself/itself/themselves/each other' in copular sentences. In particular, both of these facts can be explained if one assumes that this argument is base-generated post-verbally. Two arguments in section 4.2 were also offered in support of the position that this argument is, in fact, an external argument of a small clause (SC) at D-Structure and not, say an internal argument of être 'to be'. This evidence was based on the thematic interpretation of this construction, an argument due indirectly to Stowell (1983), as well as the ad hoc nature of the "double direct objects" entailed by the internal argument analysis when one considers predicate nominal sentences. Given the background regarding the D-Structure of copular sentences, section 4.3 turned to their S-Structure configuration. In particular, the D-Structure external argument of the predicative SC is analyzed as raising to the Spec of IP position in order to receive the Case feature needed to satisfy the Visibility Condition.

Once it had been established in chapter 4 that the copula is indeed a member of the class of Raising verbs, chapter 5 turned to an in-depth investigation of the semantics of a pronominal element which is found only in such Raising constructions—the so-called demonstrative ce 'he/she/they/it'. That is, the goal of chapter 5 was to argue that the Case/Theta-role assignment dissociation attested in Raising constructions licenses the appearance of a pronominal element which conventionally implies that the formula it modifies is true at the interval of time picked out by the non-habitual tense, although not at the initial or final endpoints of that interval. The discussion of that chapter proceeded as follows.

First, section 5.2 demonstrated that the lexical item ce actually has four distinct meanings. Ce may either be interpreted as a thematic, non-generic argument which agrees

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in gender with its antecedent; this is the demonstrative ce 'he/she/they/it', an example of which was given above in (3). Alternatively, ce may be interpreted as a non-thematic, non-gender-bearing, non-generic expression, equivalent to the English expletive it. Thirdly, ce can be used as a thematic, non-generic argument which is not understood to agree in gender with its antecedent, the so-called neuter ce found in sentences like Chomsky, c' est beau 'Chomsky, that's beautiful'. Finally, this pronoun can be a thematic, generic argument which is understood to agree in gender with its antecedent. This is the generic ce. The purpose of this discussion of the four meanings of ce was to provide a basis for the contention I later defend, namely, that this lexical item is homonymic. That is, the purpose of section 5.2 was to provide the reader with background necessary to follow the subsequent arguments in favor of recognizing that what superficially appears to be the same expression is, in fact, four distinct ones, the distribution of each possibly being determined by separate principles of the grammar. Arguments to this effect were first introduced in section 5.3, where the previous analyses of ce, all of which do not adopt this position, were reviewed. There, I showed that such "unified" analyses face contradictory data, a fact which was argued to be a clear indication that a non-unified approach to this issue is called for. In section 5.4, two additional arguments were presented in favor a recognizing four distinct homophones. In particular, I first suggested that if the same principles of the grammar were indeed responsible for explaining the complete distribution of ce, then one might reasonably expect that all alternations of this lexical item with the personal pronoun il 'he/it' would encode some core meaning contrast, which was shown not to be the case. Additionally, I argued that one would also reasonably expect all four interpretations of ce to be available in the same environments. Again, this expectation was not met. The demonstrative reading, for example, was found only in predicate nominals, and even then subject to some intriguing constraints regarding aspect, a characteristic which is not true of the other ce's which were shown to exhibit a relatively free distribution. Thus, the first three core sections of chapter 5 were devoted to supporting a non-unified approach to ce.

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The remainder of chapter 5 offered a semantic analysis of the demonstrative ce 'he/she/they/it'. First, in section 5.5.1, I provided some crucial background on the topic of tense and aspect, with an emphasis on these distinctions in the grammar of French. (This topic would later be shown to play a key role in accounting for the distribution of demonstrative ce 'he/she/they/it'.) This section showed that aspect is encoded morphologically in the tense morphemes of this language, as well as lexically in the entries of verbs. With respect to the former, it was shown that the past tense known as the passé composé 'compound past', as well as the future tense encode perfective aspect. That is, they entail that the state of affairs denoted by the proposition they modify is true at the interval under consideration. These two tenses differ in that only the former selects a closed interval (e.g., the past includes a final endpoint which separates it from the present), whereas the latter normally selects an open one (i.e., future intervals of time do not necessarily have endpoints, although adverbials may be added which do have this semantic effect). The other two tenses examined in section 5.5.1 include the present tense and the imparfait 'imperfect', both of which encode imperfective aspect. That is, following Dowty's (1979) analysis of English, these tenses were analyzed as not asserting the truth of the proposition modified at the (open) interval under consideration, but rather its truth in the set of inertia worlds accessible from that interval. Given this background, a set of formal truth conditions for the various tenses were proposed which captured these facts.

As was mentioned above, section 5.5.1 also explored lexically-encoded aspectual distinctions (the so-called "semantic verb classes"). For example, the oft-noted telic/atelic contrast was reviewed and formally captured via a set of meaning postulates and truth conditions. That is, the following famous contrast in entailments in the imperfective tenses exhibited by telic and atelic predicates in (4) and (5) respectively was noted and analyzed on the basis of proposals in Dowty (1979). Specifically, telic predicates like dessiner un cercle 'to draw a circle' were associated with truth conditions which specify that these predicates do not entail that the state of affairs they denote holds at the interval(s) of time

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selected by an imperfective tense, whereas atelic predicates like patiner 'to skate' are lexically specified to do so.

- (4) Marie dessinait un cercle. $\not\equiv$ Marie a dessiné un cercle.

Marie was-drawing a circle Marie has drawn a circle

'Marie was drawing a circle' $\not\equiv$ 'Marie drew a circle.'

- (5) Marie patinait. \equiv Marie a patiné.

Marie was-skating Marie has skated

'Marie was skating.' \equiv 'Marie skated.'

Similar truth conditions and meaning postulates were developed to accommodate the stative/non-stative aspectual contrast, which distinguishes between those predicates which can be determined to hold of an individual at a single moment of time (for example, to know) and those for which one must make reference to minimally two distinct moments (such as to move).

In sum, section 5.5.1 provided the truth conditions and meaning postulates necessary to capture a wide range of aspectual distinctions at work in this language. Given this background, it was then possible in section 5.5.2 to deduce the semantic constraints at work in determining the distribution of demonstrative ce 'he/she/they/it'.

Section 5.5.2 began with an exploration of the tense/verb class restrictions originally noted in section 5.4. In section 5.5.2, these restrictions were shown to correlate perfectly with the aspectual distinctions analyzed in section 5.5.1. Specifically, the discussion in 5.4 revealed that demonstrative ce 'he/she/they/it' is licit with non-stative Raising verbs in the passé composé 'compound past', but it is illicit with this class of verbs in the imperfective tenses (the present and the imparfait 'imperfect'). With respect to the stative predicates, one finds the opposite: demonstrative ce 'he/she/they/it' is acceptable in the imperfective tenses, but it is disallowed in the compound past. Because of these striking correlations, it was suggested that the distribution of demonstrative ce 'he/she/they/it' could be accounted for if one assumes that this element is compatible only

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with formulas of a particular aspectual type, specifically, formulas which denote states of affairs which are true at the interval of time picked out by a non-habitual tense, although not at the initial or final endpoints of that interval. From this assumption, and the analysis of the tenses and verb classes already adopted, the preceding distributional characteristics were shown to follow; e.g., this pronoun is disallowed with stative predicates in the passé composé 'compound past' because this tense selects closed intervals and stative Raising predicates lexically entail the truth of formulas containing them at every moment of the interval selected, including the initial and final endpoints.

Once the initial tense/verb class restrictions were accommodated, section 5.5.5, moved on to show that this analysis can account for some further distributional characteristics of this pronominal element. In particular, it was first noted that the addition of an adverbial like maintenant 'now' has the effect of making this pronoun illicit with stative Raising predicates in imperfective tenses. This, it was argued, is straightforwardly due to the fact that such adverbs have the semantic effect of introducing an initial endpoint for the interval which has the effect of disallowing demonstrative ce since the lexical semantics of stative predicates is such that the truth of formulas containing them is asserted at every moment in the interval picked out by the tense. Secondly, it was noted that this element is unacceptable in the habitual aspect, a fact which would also follow from the analysis proposed since the habitual aspect makes reference to states of affairs which hold across multiple intervals of time. This section concluded by offering a meaning postulate capable of accounting for the characteristics mentioned above, as well as for the fact that this pronoun is usually judged to be illicit with predicative APs and PPs. Regarding the latter, it was suggested that this constraint is due to the fact that this pronoun is acceptable only with the equative reading of SCs, a reading which is pragmatically odd in the case of predicative APs and PPs since the referent of ce is being equated with every individual having the property denoted by the AP or PP.

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Finally, section 5.5.3 put all of this discussion together into a fragment of French devised to handle this phenomenon. Once again, it was shown, in a step-by-step fashion, exactly how the syntactic configurations available at LF form the basis for a compositional, model-theoretic semantic interpretation. This concluded the discussion of the second novel area of the grammar of French which offers support for the hypothesis in (1) above.

In summary, at this point there appears to be a significant body of research in support of the contention that LF can serve as the “semantically-relevant” level of syntactic representation, as well as in favor of the hypothesis in (1). Regarding the former, it was shown above that not only are the aspects of meaning discussed in chapter 1 represented at this level, but so, too, are the semantic phenomena referred to as the direct/indirect contrast and the demonstrative *ce*. Furthermore, it proved to be quite possible to develop a formal semantic treatment of these two constructions which reads off the syntactic configurations available at LF. Concerning the hypothesis in (1), these two areas of French grammar, like Enç’s (1987, 1991) specificity facts, were argued to be instances of non-truth-conditional aspects of meaning triggered by Case/Theta-role assignment dissociation.

6.2 Final Remarks

I would like to close this discussion with two final remarks. First, the careful reader may have noted that both of the areas of non-truth-conditional semantics investigated in this thesis, as well as the original specificity facts noted in Enç (1987, 1991), do not crucially require access to the level of LF. That is, the fact that a Case/Theta-role assignment dissociation has taken place, triggering a non-truth-conditional aspect of meaning, is also signalled at S-Structure. This would naturally raise the issue of whether or not semantic interpretation can be read off this level, instead of, or perhaps in addition to, LF.

The view that semantic interpretation takes place at S-Structure has been defended by Lappin (1991) and Williams (1986). While Williams (1986) does not provide a detailed account of how rules of model-theoretic interpretation apply to the S-Structure of

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sentences, but focuses instead on showing that the level of LF can be dispensed with. Lappin (1991) suggests that standard LF phenomena can either be stated at S-Structure directly or be read off that level to yield the proper semantic interpretation via Cooper's (1983) rule of NP storage which assigns an argument NP a sequence consisting of a variable denotation and the stored denotation of the NP. The specifics of how this rule operates need not concern us here. Suffice it to say that storage allows, *inter alia*, for quantifier scope ambiguities and the interpretation of in situ wh-phrases without making reference to LF. Note that this type of approach, referred to by Lappin (1991) as "S-Structure Interpretivism", is by all means compatible with the analysis of non-truth-conditional aspects of meaning proposed in this thesis since the crucial factors which trigger them are present at S-Structure. While noting that this possibility must be recognized, pending future research, I would like to adopt the null hypothesis, which at this point clearly militates in favor of using only LF and not S-Structure configurations as the basis for semantic interpretation. In particular, as chapter 1 discussed in some detail, there are aspects of semantic interpretation which unambiguously require reference to LF configurations. (See, for example, the discussion of "untriggered" NPI licensing in section 1.1.) Since the interpretation of such constructions must make reference to LF, for the moment it seems desirable to maintain all syntactically-relevant aspects of semantic interpretation at this level, at least until positive evidence forces us to adopt a much more complex approach, i.e., one in which some aspects of semantic interpretation "plug in" at at S-Structure, while others do so at LF.

The final comment I would like to make is that the preceding investigation points to the recognition of Case/Theta-role assignment dissociation outside of a Complete Functional Complex (CFC) as a licensing condition on these non-truth-conditional aspects of meaning. In particular, in all three constructions in which a Case/Theta-role assignment dissociation has been shown to lead to a conventional implicature, this dissociation must take place outside of a Complete Functional Complex.

Conclusion

To explain, Chomsky (1986b: 169) defines a CFC as the syntactic category immediately dominating a predicate and its subcategorized arguments, both internal and external. From the preceding discussion, it appears that implicatures of the type in (1) are only found when the argument in question receives Case from a source other than the predicate which assigns it a Theta-role. That is, the direct/indirect contrast is only found if the embedded predicate plays no role in Case-assignment to the embedded subject; similarly, Turkish indefinites in object position are interpreted as being specific because they are inherently Case-marked (i.e., they do not receive Case from the predicate which assigns them a Theta-role); and, finally, demonstrative *ce* is only found in predicative constructions in which the surface subject receives its Case from the Agr-S associated with the Raising verb, i.e., once again this argument receives its Case feature from an element outside of the CFC.

From these three examples, it appears that there are no conventional implicatures of the type described in (1) which are signalled by simple DP Raising, a possibility which would initially seem plausible since simple raising constructions also appear to involve some sort of Case/Theta-role assignment dissociation, albeit within the same CFC. If one accepts a CFC licensing constraint on this type of conventional implicature, then one immediately accounts for the fact that one does not find, for example, the demonstrative *ce* in ergative or middle constructions, which have been analyzed as involving DP Raising within the CFC. (See Burzio (1986), Manzini (1983), Perlmutter (1971), and Ruwet (1972), among others for analyses of these constructions.) That is, this constraint would explain why sentences like the following are unacceptable:

- (6) a. Jean, $\left\{ \begin{array}{l} i_i \\ *c_i \end{array} \right\}$ est parti t_i .

Jean, he is gone

'Jean, he left.'

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(6) b. Ce livre, $\left\{ \begin{array}{l} il_i \\ *ç_a_i \end{array} \right\}$ s'est bien vendu t_i hier.

this book, it itself is well sold yesterday

'This book, it sold well yesterday.'

In conclusion, there appears to be some evidence indicating that there is a licensing condition on this type of conventional implicature to the effect that there must be a "complete" Case/Theta-role assignment dissociation, with the notion "complete" being definable as a Case/Theta-role assignment dissociation outside of a CFC.

APPENDIX 1: "UNEXPECTED" CASE VARIANTS IN CAUSATIVES

The following data, which are analyzed in chapters 2 and 3, were extracted from the Ottawa-Hull French Corpus (Poplack, 1989), a computer transcription of over 270 hours of natural speech. In the corpus I found 34 examples of clitic case alternations out of a total number of 137 potential alternation examples, i.e., examples in which the embedded subject appears as a clitic and the embedded object(s), if any, are lexical. Two types of examples were disregarded: (a) examples where performance errors together with the lack of extralinguistic context prevented me from determining with a reasonable degree of certainty that they were genuine instances of clitic case alternations and (b) examples with an embedded ergative verb like partir 'to leave'. (See Authier and Reed (1991) for a discussion of the ungrammaticality of clitic case alternations with ergative verbs.) Translations are my own.

I EXAMPLES IN WHICH THE EXPECTED CASE IS ACCUSATIVE

(i.e., one expects *le* 'him-ACC', *la* 'her-ACC', *les* 'them-ACC')

(1) 040 1327

...je lui ferais comprendre,...

I him-DAT would-make to-understand

'...I would help him understand...'

(2) 040 1398

...puis peut-être que là je lui ferais prendre.

then perhaps that there I him-DAT would-make to-take

'...then maybe at that point I could get him to-take (it).'

Appendix 1

(3) 040 1508

...je leur ferais comprendre, hein.

I them-DAT would-get to-understand, huh

'...I could get them to understand, huh.'

(4) 018 957

En quatrième là, ils leur font écrire en anglais,...

in fourth there they them-DAT make to-write in English

'In the fourth grade, they get them to write in English...'

(5) 008 1100

...ça lui a faite penser...

that him-DAT has made to-think

'...that got him to think...'

(6) 027 1863

...tu voyais qu'il était en choc parce que ça lui a faite penser à son garçon.

you saw that he was in shock because that him-DAT had made to-think of
his boy

'...you could see that he was in shock because that reminded him of his son.'

(7) 044 980

...lui avait mis ça sur le nez puis elle lui avait faite passer de la première à la
huitième avec la gomme...

him-DAT had put that on the nose then she him-DAT had made to-pass from
the first to the eighth with the gum...

'...put it on his nose, then she had him go from the first floor to the eighth
with gum...'

Appendix 1

(8) 119 2545

Puis là elle lui a faite répéter, ...

then there she him-DAT had made to-repeat

'Then, she had him repeat...'

(9) 047 1353

Puis son père lui faisait comprendre, une fois il dit...

then his father him-DAT made to-understand, one time he says

'Then his father helped him understand, one time he said...'

(10) 110 702

...elle voyait quelqu'un habillé de rouge, ça lui faisait penser à du sang puis...

she saw someone dressed of red that her-DAT made to-think of some blood

then

'...she saw someone dressed in red, that reminded her of blood then...'

(11) 025 1055

...mais pour le ralentir, pour lui faire penser à qu'est-ce qu'il fait dans sa vie.

but to him-ACC to-slow-down, to him-DAT to-make to-think of what he

does in his life

'...but to make him slow down, to get him to think about what he's doing

with his life.'

(12) 027 3201

C'est dur d'élever ton enfant, d-lui faire bien parler puis il va dehors avec...

it is hard of to-raise your child of him-DAT to-make well to-speak then he

goes outside with

'It's hard to raise your child, to get him to speak well and then he goes

outside with...'

Appendix 1

(13) 031 3066

...à lui parler puis à-à lui faire lire, puis...

to him-DAT to-speak then to to him-DAT to-make to-read, then

'...talk to him and get him to read, and then...'

(14) 040 1990

...sexe dedans, m-a leur faire-m-a toute bien leur faire regarder.

sex inside on-me had them-DAT to-make on-me all well them-DAT to-make
to-watch

'...sex in, (they) went and had them watch closely.'

(15) 042 1385

...qui veut leur faire apprendre ..

who wants them-DAT to-make to-learn

'...who wants to help them learn...'

(16) 066 1201

...puis leur faire comprendre-essayer de les faire comprendre.

then them-DAT to-make to-understand to-try of them-ACC to-make
to-understand

'...then help them understand, try to make them understand.'

(17) 068 1661

...de leur faire parler en français.

to them-DAT to-make to-speak in French

'...to get them to speak in French.'

Appendix 1

(18) 079 2347

...elle dit arrête donc de leur faire apprendre-de leur faire accrère n'importe
quoi.

she says stop then of them-DAT to-make to-learn of them-DAT to-make to-
believe no matter what

'She said why don't you stop teaching them-getting them to believe
anything.'

(19) 113 1696

...mais à l'école, va pas leur faire écrire ici.

but at the school, go not them-DAT to-make to-write here

'... but in school, don't go and have them write here.'

II EXAMPLES IN WHICH THE EXPECTED CASE IS DATIVE

(i.e., one expects *lui* 'him/her-DAT' *leur* 'them-DAT')

(1) 012 1654

Ça a l'air-c'est si on forçait à les faire parler français.

that has the air-that is if one forced to them-ACC to-make to-speak French

'It's almost as if, as if we used force to make them speak French.'

(2) 032 888

...comme ça, si le gars part-elle le fait lâcher l'école, ...

like that if the guy leaves she him-ACC makes to-quit the school

'...so that way, if the guy leaves, she'll make him drop out of school,...'

(3) 095 1355

C'est pour ça je les ai fait prendre des cours...

that's for that I them-ACC have made to-take some courses...

'That's why I made them take courses...'

Appendix 1

(4) 096 9846

Ça l'a faite hair les prêtres puis ça a faite hair la religion.

that him-ACC has made to-hate the priests and that has made to-hate the
religion

'That made him hate priests and religion.'

(5) 110 1445

...tu sais il a payé-on l'a faite payer un amende.

you know he has paid-they him-ACC have made to-pay a fine

'...you know he paid-they made him pay a fine.'

(6) 034 807

...si les mettraient en prison puis ils les feraient gagner leur pain, ça coûterait
pas si cher.

if them-ACC would-put in prison then they them-ACC would-make to-earn
their bread, that would-cost not so expensive

'...if they would put them in prison and then make them earn their own keep,
that wouldn't cost so much.'

(7) 018 8-0

...puis je la faisais traverser la rue...

then I her-ACC made to-cross the street

'...then I made her cross the street...'

(8) 095 1357

Oui. Je les faisais prendre l'anglais, mais...

yes I them-ACC made to-take the English, but

'Yes. I made them take English, but...'

Appendix 1

(9) 024 1448

...puis il les faisait couper l'arbre partout.

then he them-ACC made to-cut the tree everywhere

'then...he made them cut the tree all over.'

(10) 110 709

...pour les aider...on les faisait faire des pique-niques...

for them-ACC to-help...we them-ACC made to-make some picnics

'to help them...we made them go on picnics...'

(11) 004 872

Mais on essaie plutôt de les faire regarder des programmes, tu sais...

but one tries instead to them-ACC to-make to-watch some programs,
you know

'But instead we try to make them watch programs, you know...'

(12) 004 1453

C'était de le prendre le jeune puis le faire écrire deux, trois pages de
dictionnaire.

this was of him-ACC to-take the young-one then him-ACC to-make to-write
two, three pages of dictionary

'It was a matter of taking the youngster and then making him write two, three
pages out of the dictionary.'

(13) 062 800

...je serais pas mal sapée de la faire faire sa première communion puis pas
l'emmener à...

I would-be not bad shaken to her-ACC to-make to-make her first communion
and then not her-ACC to-take to

'...I'd have to be pretty crazy to have her take her first communion and then
not take her to...'

Appendix 1

(14) 089 1977

...pour aller travailler. Mais...je peux pas la faire lâcher l'école, elle est si jeune...

for to-go to-work but I can not her-ACC to-make to-quit the school she is so young

'...to go to work. But...I can't make her quit school, she's so young.'

(15) 063 2271

Mes enfants? Fais les nettoyer leur chambre ou faire la vaisselle...

my kids make them-ACC to-clean their room or to-make the dishes

'My kids? Make them clean up their room or do the dishes...'

APPENDIX 2: ASPECTUAL CONSTRAINTS ON DEMONSTRATIVE CE

This appendix contains a compilation of the core data involving demonstrative ce for each of the tenses and semantic verb classes that are analyzed in chapter 5, these being the imparfait 'the imperfect', the passé composé 'the compound past', the present, and the future with stative and non-stative Raising verbs. The only data from chapter 5 which have not been included below are those involving restrictions related to habitual aspect, as well as those containing adverbs selecting initial moments of the interval selected by the tense, final moments, or bounded intervals. (See section 5.5.2 for these data.)

Judgments were verified for the Raising verbs être 'to be', avoir l'air 'to appear', rester₁ 'to remain the same', rester₂ 'to be left', demeurer 'to remain', and devenir 'to become'. The verbs sembler 'to seem', paraître 'to appear', se révéler 'to prove to be', and s'avérer 'to turn out to be' were not tested because they take a complement in être (cf., Jean, ça semble être un excellent banquier. 'Jean, he seems to be an excellent banker. '), therefore, the judgments always mirror those found for the copula. The reading of demeurer which means 'to be left after elimination' was not tested because judgements are extremely difficult to obtain, this being a high register verb. Finally, the Raising verb se trouver 'to be located' was not tested because it does not take a DP complement. Several examples in this appendix were inspired by similar sentences found in the literature on this topic. Specifically, sentences (1b) and (10) were adapted from Coppieters (1975: 239, 238), while the data in (4), (16), and (17) were inspired by Kupferman (1979: 145, 146).

I STATIVE VERBS:

Examples: être 'to be', avoir l'air 'to appear', and rester₂ 'to be left'

Generalization: Demonstrative ce is attested in all tenses except the passé composé 'compound past'.

Appendix 2

A. Imparfait:

- (1) a. Jean, c'était un homme instruit.

Jean, he was a man educated

'Jean, he was an educated man.'

- b. Jean se rendit compte qu'il venait de commettre un meurtre et il se mit à courir. { ?*C' } était désormais un fugitif recherché par toutes

les polices.

Jean himself gave-back account that he was-coming from to-commit a murder and he himself put at to-run he was henceforth a fugitive looked-for by all the police

'Jean realized that he had just committed a murder and he began to run.

From then on, he was a fugitive sought by every police officer.'

- (2) a. Après avoir éliminé toutes les autres personnes ayant eu des contacts avec la victime, J'en vins à la conclusion que, Jean, { çà } restait mon suspect numéro un.

after to-have eliminated all the other people having had some-of-the contacts with the victim, I of-it came to the conclusion that Jean, he was-left my suspect number one

'After having eliminated all of the other people who had had contact with the victim, I arrived at the conclusion that Jean was left as my number one suspect.'

- b. Le meilleur candidat étant subitement décédé, Jean, { ?*ça } restait dès lors le seul homme à pouvoir nous tirer d'affaire.

the best candidate being suddenly deceased, Jean, he was-left from then the only man at to-be-able us to-pull-out of business

'Since the best candidate had suddenly died, Jean was the only man left who was capable of getting us out of that mess.'

Appendix 2

- (3) a. Jean, { $\begin{matrix} c' \\ *il \end{matrix}$ } avait l'air d'un criminel.

Jean, he has the air of a criminal

'Jean, he seems to be a criminal.'

- b. Jean enfila une paire de vieux jeans et se coiffa d'un chapeau troué.
 { $\begin{matrix} *Ca \\ \text{II} \end{matrix}$ } avait maintenant l'air d'un clochard et il était certain que

personne ne le reconnaîtrait.

Jean put-on a pair of old jeans and himself to-put-on-one's-head of a hat
 holy he had now the air of a bum and he was certain that no-one NEG
 him-ACC would-recognize

'Jean put on and old pair of jeans and a crumpled hat. He now looked
 like a bum and he was sure that no one would recognize him.'

B. Passé Composé:

- (4) Claudette, { $\begin{matrix} *ça \\ elle \end{matrix}$ } a été { $\begin{matrix} \text{ma copine.} \\ \text{une secrétaire de direction.} \\ \text{la femme de Pierre.} \end{matrix}$ }

Claudette, she has been { $\begin{matrix} \text{my friend} \\ \text{a secretary of management} \\ \text{the wife of Pierre} \end{matrix}$ }

'Claudette, she was { $\begin{matrix} \text{my friend.}' \\ \text{a managerial secretary.}' \\ \text{Pierre's wife.}' \end{matrix}$ }

- (5) A l'issue du bombardement, Jean, { $\begin{matrix} *c' \\ il \end{matrix}$ } est resté le seul homme en vie à

trois kilomètres à la ronde.

at the end of-the bombardment, Jean, he is left the only man in life at
 three kilometers at the roundabout

'When the bombardment was over, Jean was the only man left alive within a
 two mile radius.'

Appendix 2

- (6) Jean voulait prétendre qu'il connaissait le directeur mais il ne s'est pas souvenu de son nom. { *Ca
II } a eu l'air d'un imbécile.

Jean wanted to-pretend that he knew the boss but he NEG himself is not remember of his name he had had the air of an idiot

'Jean wanted everyone to think that he knew the boss, but he didn't remember his name. He looked like an idiot.'

C. Present:

- (7) a. Jean, { c'
*il } est un homme instruit.

Jean, he is a man educated

'Jean, he's an educated man.'

- b. Regarde notre chef de section! Le général lui épingle sa nouvelle médaille et voilà! { ?*C'
II } est maintenant l'homme le plus décoré

de la compagnie.

look-at our head of platoon the general him pins his new medal at there

he is now the man the most decorated of the company

'Look at our platoon leader! The general is pinning his new medal on him and that's it! He is now the most decorated man in the company.'

- (8) a. A l'issue de ces éliminatoires, il me paraît évident que, Jean, { ca
?*il }

reste la seule personne à pouvoir assumer les fonctions de directeur.

at the end of these eliminations, it to-me-DAT seems evident that, Jean, he is-left the only person at to-be-able to-assume the functions of director

'After this process of elimination, it seems obvious to me that Jean is the only person left who is capable of taking on the job of director.'

Appendix 2

- (8) b. Pierre s'est fait une entorse, Jean pense à prendre sa retraite, ce qui me fait dire que Paul, $\left\{ \begin{array}{c} ??\text{ça} \\ \text{il} \end{array} \right\}$ reste maintenant le seul athlète à pouvoir défendre les couleurs de l'école.

Pierre himself is made a sprain, Jean thinks of to-take his retirement, that which me makes to-say that Paul, he is-left now the only athlete at to-be-able to-defend the colors of the school

'Pierre went and sprained something, Jean is thinking about retiring, so I guess that Paul is now the only athlete capable of defending the school colors.'

- (9) Habillé comme ça, Jean, $\left\{ \begin{array}{c} \text{ça} \\ \text{il} \end{array} \right\}$ a l'air d'un clown.

dressed like that, Jean, he has the air of a clown

'Dressed like that, Jean looks like a clown.'

D. Future:

- (10) Dans une semaine, l'ennemi va conquérir notre ville.
 $\left\{ \begin{array}{c} \text{Ce} \\ \text{il} \end{array} \right\}$ sera un vainqueur impitoyable et je veux que tous le sachent.

in one week, the enemy is-going to-conquer our city

he will-be a conqueror pitiless and I want that all it-ACC know

'In one week, the enemy will conquer our city. He will be a merciless conqueror and I want everybody to realize that.'

Appendix 2

- (11) Si personne n'arrive à parler à ce fou sauf Jean, eh bien, Jean, { ça
il }
restera le seul homme à pouvoir essayer de le faire descendre du toit.
if nobody NEG arrives at to-speak to that fool except Jean, oh well, Jean, il
will-be-left the only man at to-be-able to-try of him-ACC to-make to-get-
down from-the roof
'If nobody but Jean can manage to talk to that fool, well then, Jean must be
the only man left who can get him to come down from the roof.'
- (12) S'il s'habille comme ça, Jean, { ça
il } aura l'air d'un clown.
if he himself dresses like that, Jean, he will-have the air of a clown
'If Jean dresses like that, he'll look like a clown.'

II NON-STATIVE VERBS:

Examples: devenir 'to become', demeurer 'to remain', and rester₁ 'to remain the same'.

Generalization: Demonstrative ce is attested in all tenses except the imparfait 'imperfect'
and the present.

A. Imparfait:

- (13) Quant au fils du voisin, { *ça
il } devenait un homme instruit un
peu plus chaque jour, ce qui nous ravissait.
as to-the son of-the neighbor, he was-becoming a man educated a little
more each day, that which us delighted
'As for the neighbor's boy, he was becoming more and more of an
educated man each day, which delighted us.'

Appendix 2

(14) En dépit des compressions budgétaires, Jean était pas mal satisfait.

Après avoir été le directeur de cette fichue banque pendant vingt ans,
{ *ça
il } restait le directeur de cette fichue banque!

in spite of-the pressures budgetary, Jean was not badly satisfied after
to-have been the director of this stupid bank during twenty years, he
was-remaining the director of this stupid bank

'In spite of budgetary pressures, Jean was pretty satisfied. After having
been the director of this stupid bank for twenty years, he remained its
director!'

(15) En dépit des compressions budgétaires, Jean était pas mal satisfait.

Après avoir été le directeur de cette fichue banque pendant vingt ans,
{ *ça
il } en demeurait le directeur de cette fichue banque!

in spite of-the pressures budgetary, Jean was not badly satisfied after
to-have been the director of this stupid bank during twenty years, he
was-remaining the director of this stupid bank

'In spite of budgetary pressures, Jean was pretty satisfied. After having
been the director of this stupid bank for twenty years, he remained its
director!'

B. Passé Composé:

(16) Quant au fils du voisin, { c'
il } est devenu un homme instruit,

ce qui m'enchante au plus haut point.

as to-the son of-the neighbor, he is become a man educated, that which
me delights to-the most high point

'As for the neighbor's son, he has become an educated man, which
pleases me to the nth degree.'

Appendix 2

(17) Jean, { $\begin{matrix} c' \\ il \end{matrix}$ } est resté un petit garçon.

Jean, he is remained a little boy
'Jean, he { $\begin{matrix} \text{has remained} \\ \text{remained} \end{matrix}$ } a little boy.'

(18) Jean, { $\begin{matrix} c' \\ il \end{matrix}$ } est demeuré un simple d'esprit.

Jean, he is remained a simple of mind
'Jean, he { $\begin{matrix} \text{has remained} \\ \text{remained} \end{matrix}$ } simple-minded.'

C. Present:

(19) Quant au fils du voisin, { $\begin{matrix} *ça \\ il \end{matrix}$ } devient un homme instruit

un peu plus chaque jour.

as to-the son of-the neighbor, he is-becoming a man educated a little
more each day

'As for the neighbor's boy, he is becoming more and more of an
educated man each day.'

(20) Chantal était une personne désagréable hier, et { $\begin{matrix} *ça \\ elle \end{matrix}$ } reste une personne

désagréable aujourd'hui.

Chantal was a person disagreeable yesterday, and she remains a person
disagreeable today

'Chantal was an unpleasant person yesterday, and she is still an unpleasant
person today.'

Appendix 2

- (21) Chantal était une personne désagréable hier, et $\left\{ \begin{array}{l} *ça \\ elle \end{array} \right\}$ demeure une personne désagréable aujourd'hui.

Chantal was a person disagreeable yesterday, and she remains a person disagreeable today

'Chantal was an unpleasant person yesterday, and she is still an unpleasant person today.'

D. Future:

- (22) Jean et moi, on ne s'est jamais bien entendus, mais qui sait? Peut-être qu'un jour $\left\{ \begin{array}{l} ça \\ il \end{array} \right\}$ deviendra mon meilleur ami.

Jean and I, one NEG each-other is never well got-along-with, but who knows could to-be that one day he will-become my best friend

'Jean and I have never got along very well, but who knows? Maybe someday he'll become my best friend.'

- (23) Il n'y a pas de raison que Jean change. $\left\{ \begin{array}{l} Ça \\ Il \end{array} \right\}$ restera toujours un directeur sans coeur.

it NEG there has not any reason that Jean changes he will-remain always a manager without heart

'There's no reason why Jean should change. He'll always be a heartless manager.'

Appendix 2

(24) Il n'y a pas de raison que M. Martin change. { $\frac{Ca}{II}$ } demeura toujours un directeur sans coeur.

it NEG there has not any reason that Mr. Martin changes he will-remain always a manager without heart

'There's no reason why Mr. Martin should change. He'll always be a heartless manager.'

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