

THE OPACITY CONDITION, CORE GRAMMAR
AND THE FRENCH CAUSATIVE CONSTRUCTION*

Jeanne Gibson and Eduardo Raposo

A recent attempt within the EST framework to account for the facts of the French causative construction is that of Rouveret and Vergnaud (1980). Here, we discuss two major flaws contained in their proposal and the relevance of the issues we raise to the Opacity Condition of Chomsky (1980). One of these flaws involves the various devices which are used to account for the distribution of y and en in the causative construction. Rouveret and Vergnaud fail to recognize that there are significant differences among these devices with respect to core grammar. The other problem with their proposal that we discuss concerns a serious mistake in overgeneration. In addition, we point out that the Opacity Condition of Chomsky (1980) allows an ambiguous interpretation of the notion 'domain of subject' and that the French causative construction provides a set of empirical facts which suggest a resolution of this ambiguity. This is accomplished through a slight modification of the OC. Furthermore, we show that there is a close relationship between this reformulation and the devices used to account for y and en. Only when certain of the devices used to account for y and en are recognized as being outside of core grammar is an empirically adequate account possible. Our revisions result in an account which is both empirically justified and metatheoretically desirable.

0. Introduction

In a recent issue of Linguistic Inquiry, Rouveret and Vergnaud (1980) (henceforth RV) present a detailed analysis of French causative constructions which relies heavily on the Opacity Condition (henceforth OC) of Chomsky (1980)¹ as a constraint on anaphoric relations in logical form. The purpose of this paper is twofold. On the one hand, we point out some weaknesses in RV's account, both on theoretical grounds and in their interpretation of the status of some of the French data used in reaching their conclusions. This data involves the syntactic behavior of the clitic pronouns y and en in the causative construction. Particularly, we want to question the status relative to core grammar of the grammatical devices used in accounting for this set of data. On the other hand, we discuss Chomsky's (1980) formulation of the Opacity Condition and we propose a slight modification of it which has interesting empirical consequences concerning the data under discussion. As will be seen, this modification will make it possible to analyze in an appropriate perspective the distrib-

ution of y and en in the causative construction. We propose specifically that a subset of the data judged to be grammatical by RV should not be accounted for by means of devices belonging to core grammar. However, this account is possible only if the OC is modified along the lines discussed in section 1 of this article.

Our proposed revision should be understood within the context of a theory of grammar like the one described in Chomsky (1980), namely one which "should be expected to have the property that slight changes in the parameters would lead to complex effects on generated structures." (Chomsky 1980, 15)

It will become clear in the course of this paper that the French causative construction provides crucial data for deciding between the two logically possible formulations of the OC considered here: the one presented in Chomsky (1980) and discussed in this paper and the one we propose at the end of section 1. Thus, the discussion in the paper of the two issues mentioned above is intimately connected.

1. The Notion "Domain of Opacity of the Subject": A Modification of the OC

In "On Binding" (Chomsky 1980), the following formulation of the OC is given:

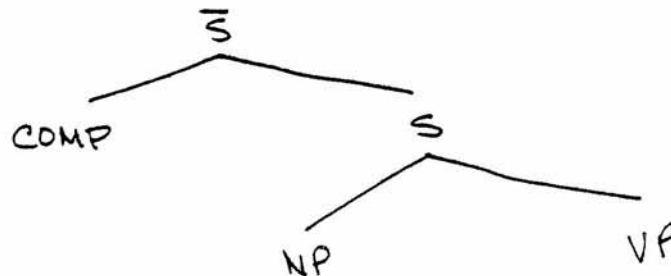
- (1) If α is in the domain of the subject of β , β minimal, then α cannot be free in β , $\beta = NP$ or \bar{S} ; and α an anaphor.

In order to interpret (1), it is obviously necessary to have a principled notion of what qualifies as the subject of \bar{S} . That is, it is necessary to present a definition of the notion "subject of \bar{S} ". Taking French, like English, to be a "configurational language", we expect the definition to be framed in configurational terms. A specific and rigorous definition of this type, which we assume here, is proposed in RV.

- (2) NP is the subject of a category A if and only if, for some VP node:
- a) VP c-commands NP
 - b) either NP or the domain of NP c-commands VP
 - c) A is the domain of VP.

Consider now one of the configurations to which this definition is supposed to apply.

(3)



It is clear that, in the above configuration, S but not \bar{S} satisfies the requirements for term A in (2). Thus, by definition, the NP in (3) is the subject of S , but not of \bar{S} . Furthermore, there is no category B in (3) such that B could be properly called the "subject of \bar{S} ". Only by "assumption" (see Chomsky 1980, 10) can the NP in (3) be taken to be the subject of \bar{S} . While this may seem at this point to be a minor, technical problem, its clarification will be shown to be nontrivial.

Let us now return to the Opacity Condition. Notice that, in light of the discussion of the preceding paragraph, the phrase "the subject of β " in (1) must be interpreted as referring to the NP which is in fact, by definition, not the subject of $\bar{S} = \beta$ in (3), but the subject of the S node contained in \bar{S} .

It becomes clear at this point that the OC, as formulated in (1) makes reference not to a single domain but to two distinct domains, one of which is properly included in the other. Let us make this point more explicit. The first of these domains gives the position of the anaphor: "If α is in the domain of the subject..." In accordance with current definitions (cf. Reinhart 1976, RV note 9), we take the domain of a category C to be defined by the first branching category dominating C . Referring back to (3), notice that the domain of the subject NP is the S node. This does not include either the COMP node or any other node that might be dominated by \bar{S} but not by S . The relevance of this particular point will become clearer as we proceed in our discussion of the causative construction.

The second domain referred to in the OC (1) gives the position of the antecedent of (the anaphor) α : "... then α cannot be free in β ", where in the relevant case $\beta = \bar{S}$. The requirement for the antecedent of the anaphor is thus that it be inside \bar{S} but not necessarily inside the S node, i.e. not necessarily inside what is, by definition, the domain of the subject. There are thus two distinct domains involved in the formulation of the OC (1): the domain giving the position of the anaphor (i.e. S) and the domain giving the position of the antecedent (of the anaphor) (i.e. \bar{S}). Note that the first of these is properly included in the second. At a meta-theoretical level, one consequence of this is that the concept "domain of opacity of the subject" is not well-defined. That is, it is unclear whether S or \bar{S} is the intended referent.

Let us now question the empirical need for such a duality in the statement of the OC. The choice of \bar{S} as the domain relevant for the position of the antecedent is clearly motivated by considerations having to do with wh-movement into COMP. Consider the following structure:

- (4) $[\bar{S} \text{ } [_{\text{COMP}} \text{ wh-phrase...}] \text{ } [_S \text{ NP...V...t...}]]$
 $\quad \quad \quad \underline{t}$ the trace of the wh-phrase

In (4), the anaphor \underline{t} is in the domain of the subject NP, i.e. it is in S . But the wh-phrase that binds it is in COMP, which is in \bar{S} , but not in S . Thus the antecedent is outside the domain of the subject, as defined above. Such cases motivate the choice of \bar{S} in the second part of the OC (1). In other words, at least in languages like English or French which admit wh-movement of non-subjects to COMP position, the range of allowable positions for the antecedent of the anaphor (of the trace) must be extended from S

(the structurally defined domain of the subject) to \bar{S} , in order to include COMP. Only in this way is the relationship between the wh-phrase and its trace legitimate, under the Opacity Condition.

Putting aside for the moment the issue of wh-traces, it would clearly be preferable to have the domain relevant for the position of the anaphor coextensive with the domain relevant for the position of the antecedent in the formulation of the OC. This would have the desirable result of permitting a nonambiguous definition of the notion "domain of opacity of the subject" as either S or \bar{S} . One particular resolution of this problem will be shown to have interesting empirical consequences for the syntax of the French causative construction in accounting for the distribution of the clitics y and en.

Notice that the ambiguity of the formulation in (1) does not appear overtly in the statement due to a hidden assumption about the interpretation of the notion "subject". As we saw, "the subject of \bar{S} " is not defined in the theory. Thus, if the OC were to be rigorously stated, (1) would have to be reformulated as in (5).

- (5) If α is in the domain of the subject of γ , γ immediately contained in β , β minimal, then α cannot be free in β , $\beta = NP$ or \bar{S} ; $\gamma = S$ if $\beta = \bar{S}$, and $\gamma = \beta$ if $\beta = NP$ and α an anaphor.

In light of the precise formulation of the OC (1) as (5), the main purpose of this paper can be seen as an attempt to avoid reference to two distinct domains β and γ in (5).

We would now like to consider a possible solution to this problem suggested to us by some remarks of Chomsky (1980, 15) concerning the status of wh-traces with respect to the OC.

Essentially, the suggestion stems from the observation that languages may vary as to what elements count as "anaphors" for the binding conditions. Luigi Rizzi (forthcoming) suggests that in Italian the trace of wh-movement is not governed by the OC although it is governed by subadjacency (a property of cyclic movement rules). Furthermore, Rizzi hypothesizes that S counts as a bounding node for subadjacency in English but not in Italian. If this is correct, then there are no observable consequences if wh-traces fall under the OC. Thus, the differences between English and Italian can be accounted for solely by reference to different sets of bounding nodes and in neither case is it desirable to have wh-traces be subject to the OC. Let us assume, accordingly, that wh-traces are never governed by the OC (1).⁵

If this is in fact the case, then it should be clear that, as far as wh-movement into COMP is concerned, there is no longer any need to mention \bar{S} in the formulation of the OC. Suppose then that we reformulate this condition as in (6).

- (6) If α is in the domain of the subject of β , β minimal, then α cannot be free in β , $\beta = NP$ or S , α an anaphor.

(6) specifies only one node for each domain where the Opacity Condition is

relevant (NP or S). In that sense, it is clearly preferable to (1) which, if properly formulated as in (5), has to refer to two distinct domains. (6) does not refer to \bar{S} as a relevant domain for the OC. The only relevant domain is the structurally (and precisely) defined domain of the subject, i.e. the S node. Notice again that if wh-traces are not governed by the OC, movement of a wh-phrase to COMP obviously does not create a violation of opacity, even if the antecedent ends up outside of S.

One immediate theoretical consequence of the reformulation (6) is that the notion "domain of opacity of the subject" is clearly well-defined. It is the S node and not the \bar{S} node. This is furthermore consistent with the structural definition of the notion "domain" given above.

What we will show in the remainder of this paper is that this reformulation also has empirical consequences for the treatment of some aspects of the causative construction in French.

2. Some Inadequacies in RV's Treatment of the French Causative Construction

Let us now turn to RV's account of the grammar of the causative construction in French. We will restrict our attention to the first part of their paper, up to and including their section 3. This means that we will not include in the scope of this discussion their system of thematic indexing or the extension of the OC involving argument status.

RV attempt to account for the causative construction within the context of an overall description of infinitival constructions in French. Their framework is basically a version of the EST framework represented in Chomsky (1980). Central to their account of infinitival constructions is a filter that lists proper contexts for NPs in outer structure.

(7) = RV's (125)

- *NP, unless
 - (a) NP is governed by Tense
 - (b) NP is governed by -WH or +WH
 - (c) NP is governed by A nondistinct from [-N],
where A dominates lexical material

The approach of RV to infinitival structures, incorporating the syntactic filter (7), is related to that of Chomsky (1980), although it is formally different in a number of respects, as they note. (See their section 1.2 and their Appendix A.)

The syntactic peculiarity of the constructions involving verbs like faire 'make', laisser 'let', entendre 'hear', voir 'see', etc. as main predicates is that the subject of the embedded sentence can (or must, with faire) appear to the right of the embedded verb (and its direct object when there is one). Thus, alongside (8), we have also (9).

(8) on a laisse les enfants courir

(9) on a laisse courir les enfants

'We let the children run.'

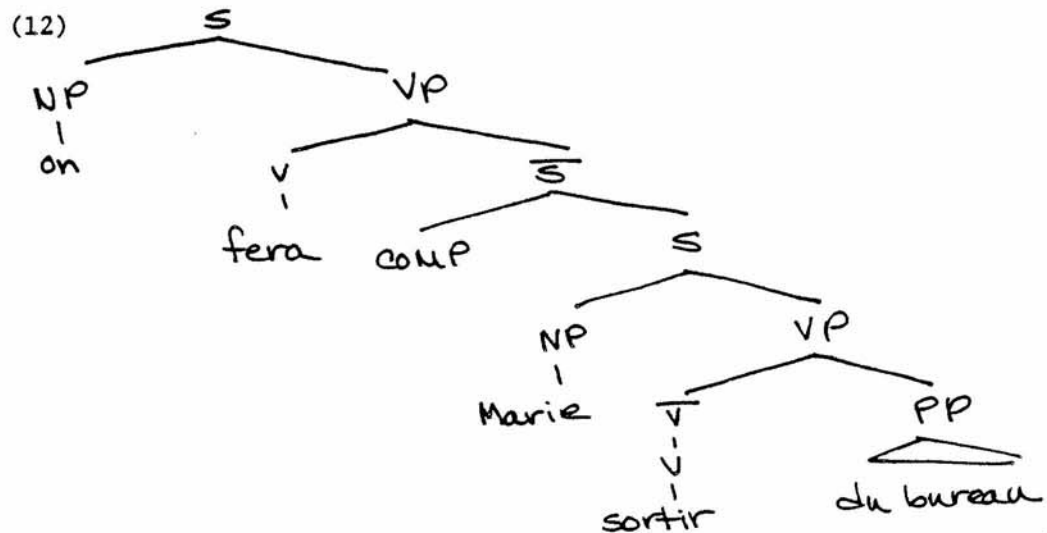
RV posit a rule of VP Preposing to account for the generation of structures like (9). This rule is formulated as follows:

- (10) = RV's (117) VP Preposing
 Chomsky-adjoin *V to S, where *V is some projection of the category V.

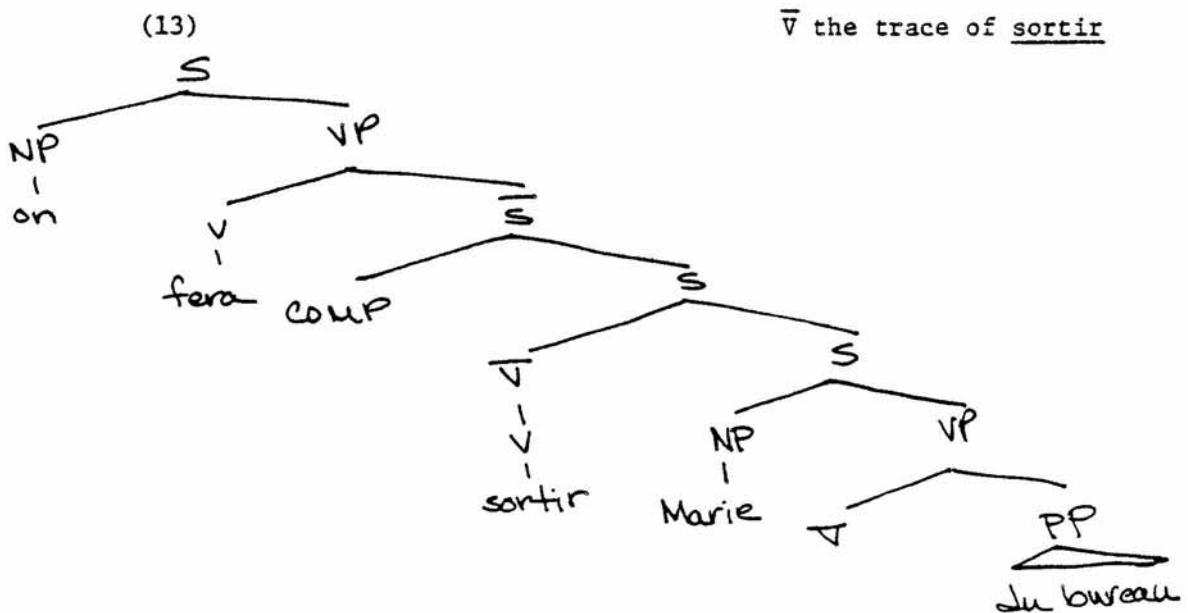
Consider then sentence (11) and its derivation. We begin with the base structure (12).

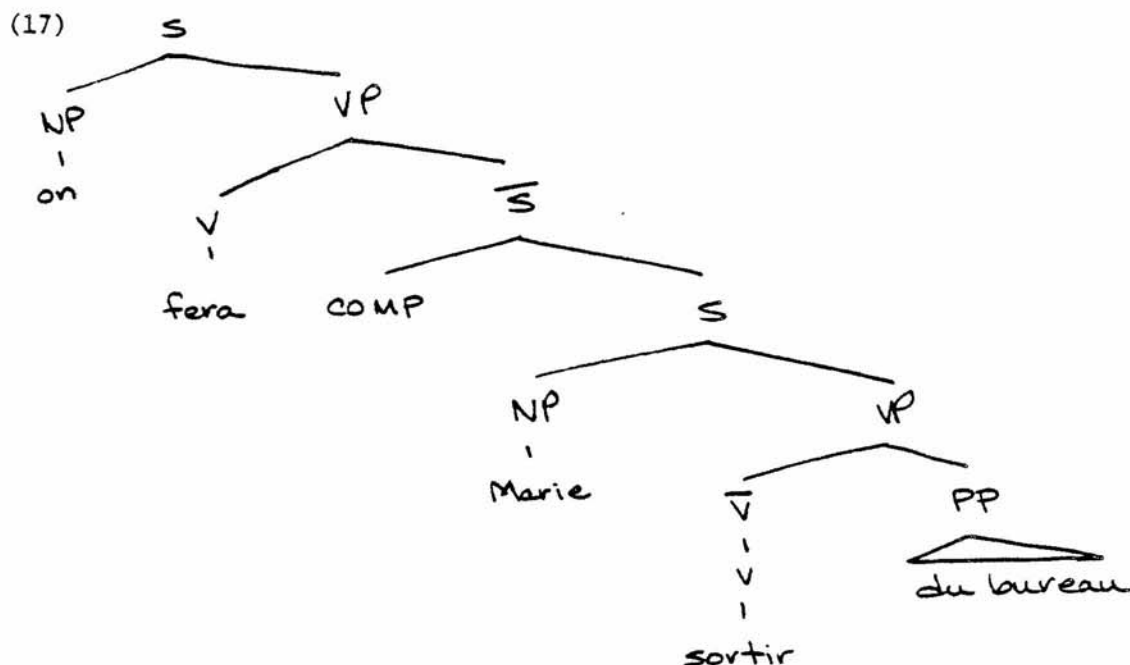
- (11) on fera sortir Marie du bureau

'We will make Mary leave the office.'



VP Preposing applies in the lower cycle, giving (13).





In (17), due to the branching of \bar{S} , neither the NP Marie nor its domain, S, c-commands the main verb faire: the conditions for the embedded NP subject to be governed by the main verb are thus missing, and the filter rules this structure out.

However, while RV's grammar characterizes the distributional properties of NPs in the causative construction with a main verb like faire, it completely fails to distinguish between grammatical and ungrammatical sentences with laisser.¹¹ As is well-known, there is a basic contrast between these two verbs. Faire does not allow an NP subject of an infinitival complement sentence to occur in its normal, preverbal position (cf. the ungrammaticality of (16)). With laisser, however, the situation is not the same. Observe the following basic contrast between these two verbs.

(18) * on fera Marie sortir du bureau

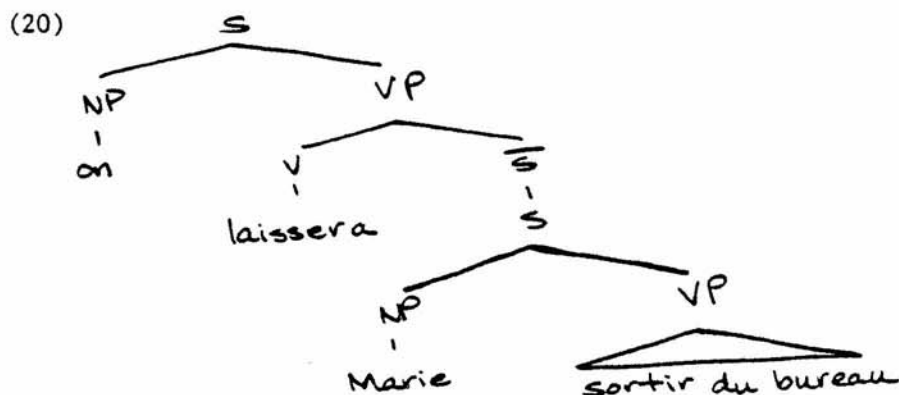
(19) on laissera Marie sortir du bureau

'We will let Marie leave the office.'

Thus, as RV note, laisser, contrary to faire, seems to be an example of a verb that allows assignment of (objective) Case across a clause boundary to the subject of its complement sentence (adopting the proposals concerning Case assignment of Chomsky (1980)). This class of verbs is characterized by being marked with the feature [+F].

In order to formalize this property within their grammar, RV make [+F] a context for their (obligatory) rule of COMP Deletion. This deletion places the lexical NP subject of the infinitival complement sentence in a good context relative to the filter (7). Based on (18) and (19) above, laisser

will thus be marked [+F], while faire will be marked [-F]. The outer structure of (19) is the following:



In (20), the subject NP Marie is properly governed by the main verb laisser, since laisser c-commands Marie and the domain of the NP Marie, the S node, c-commands laisser.

The contrast exhibited in (18) and (19) is the only surface difference in the syntactic behavior of the two verbs laisser and faire.¹² Unfortunately for RV's analysis, however, their grammar makes the incorrect prediction that this contrast will extend to the whole range of possibilities within the causative construction. But when VP Preposing applies, the behavior of laisser and faire is exactly the same. Thus, parallel to (14) above, we have the following ungrammatical sequence with laisser:

(21) * on laisser sortir du bureau Marie

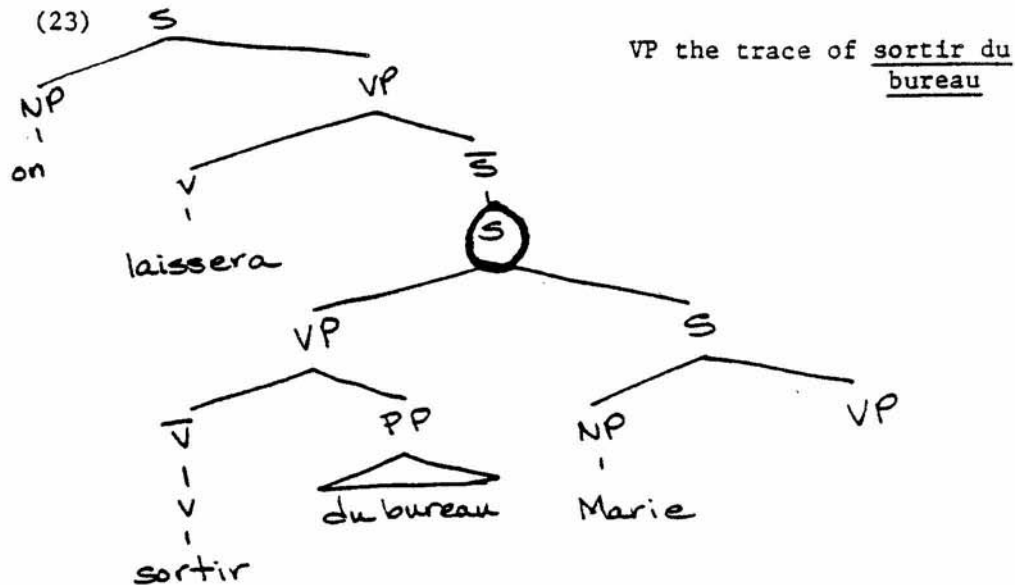
RV's grammar predicts that (21) is grammatical. Before we proceed to explain this, it is necessary to introduce RV's convention (198), which plays an important role within their system in the correct functioning of the Opacity Condition but which, as we will see, is directly responsible for the inadequacy of their grammar.

(22) = RV's (198)

In the structure resulting from VP Preposing, take the higher embedded S node to define the domain of the subject.

We postpone our discussion of the reasons why RV need convention (22) to ensure the proper functioning of the OC to section 3.4. One of the purposes of this paper is to show that a more revealing grammar of the French causative construction can be attained without RV's convention (198). For the moment, we want to show that incorporating (22) into the grammar leads to incorrect empirical predictions with regard to the verb laisser and in particular with regard to sentences such as (21).

Note first that laisser being a [+F] verb, COMP will obligatorily delete. In the derivation of (21), VP Preposing has moved the whole VP. The outer structure of (21) is thus similar to (15), except that the COMP node has been deleted. This is shown in (23).



As noted above, (15) is ruled out because the subject NP Marie is not governed by any [-N] element. In particular, it is not governed by the embedded verb sortir since the preposed VP branches. And it is also not governed by the main verb faire since S branches, making (22) irrelevant. But in (23), crucially, the embedded subject NP Marie is properly governed by a [-N] element, namely the main verb laisser. This is so because (i) S does not branch, COMP being deleted, and (ii) crucially, the domain of the subject is, according to (22), the higher S node resulting from Chomsky-adjunction (circled) and not the original S node. (23) is thus not filtered out by the filter (7), and (21) is predicted to be grammatical.¹⁵

Consider now the case of a causative construction with a transitive complement sentence.

(24) Marie fera lire ce livre à Jean

'Marie will make Jean read this book.'

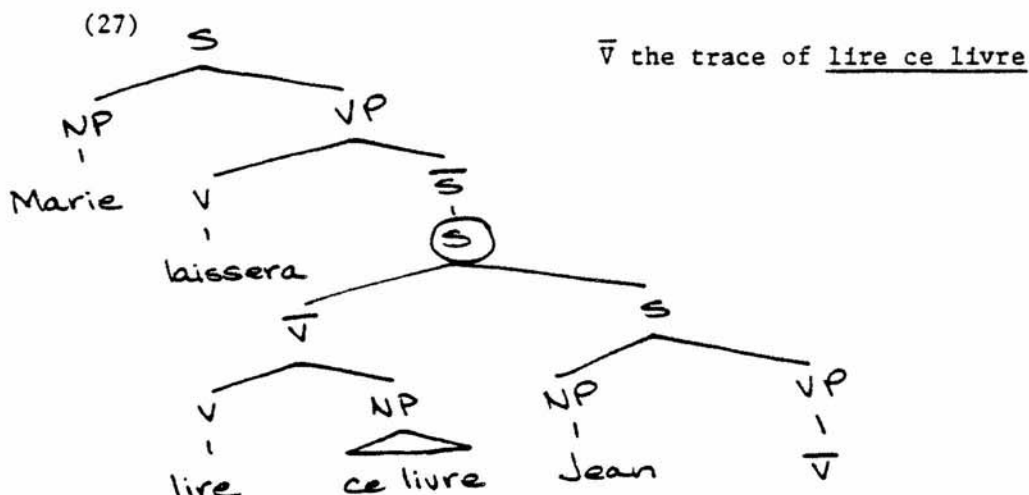
(24) is derived by application of VP Preposing in the lower cycle, which moves the embedded V lire ce livre and subsequent application of ̂-Insertion. In RV's framework, ̂-Ins is an optional rule which serves to exempt the embedded subject NP from the operation of the *NP filter (7) by putting it in a permissible context. After ̂-Ins, the embedded subject NP is governed by the preposition ̂, which is a [-N] element. If ̂-Ins fails to apply, the embedded subject will not be properly governed, and the structure will be ruled out. Recall that V, which dominates the verb and the direct object, branches.

(25) * Marie fera lire ce livre Jean

Once again, however, RV's grammar makes a wrong empirical prediction concerning parallel structures with laisser. That is, it predicts that (26) should be grammatical.

(26) * Marie laissera lire ce livre Jean

Of course, there is no difference in grammaticality between (25) and (26). The outer structure of (26) is given in (27).



Since the domain of the subject NP Jean is the higher S node resulting from Chomsky adjunction (circled), this NP is properly governed by the main verb laisser. Thus the subject NP Jean is in a permissible context even without the application of the optional rule of \bar{a} -Ins.

It should be clear at this point that every sentence with faire that RV predict to be ungrammatical only because the subject is not properly governed has a parallel with laisser which will not be blocked (i.e. which is predicted to be grammatical) in RV's system.¹⁵ To summarize, given (i) convention (22) and (ii) the assignment to laisser of the feature [+F] which triggers obligatory deletion of COMP, a subject NP embedded under laisser will always be governed by [-N], independently of the phrase that is preposed by VP Preposing (V, \bar{V} or VP). As a consequence, a wide range of ungrammatical structures will be allowed like (21) and (26), including structures with an accusative clitic attached to the embedded verb like (28).

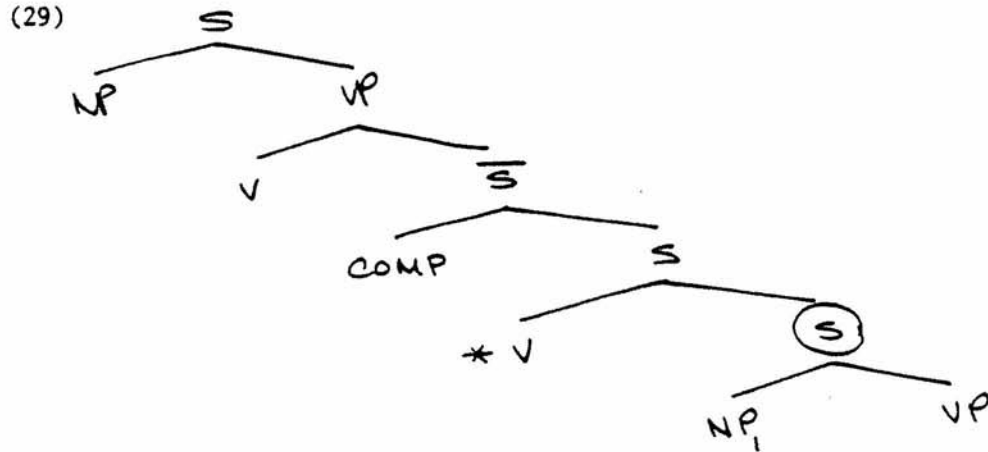
(28) * Pierre laisser les acheter Jean
P will let them buy J

3. The Opacity Condition and the French Causative Construction

3.0. Introduction

Suppose that we abandon (22), RV's convention (198). Then, as can easily be seen, the problems discussed in the previous section disappear. Since in, e.g. (23) and (27), the domain of the subject would now be the lower S node, the embedded NP subject will not be properly governed by any [-N] element, in particular it will not be governed by the main verb laisser. The filter (7) will operate correctly in all cases, differentiating between laisser and faire through the deletion of COMP in the one and only case that needs differentiation: (18) vs. (19).¹⁵

Suppose further that we adopt the reformulation of the Opacity Condition given in (6). An immediate consequence is the following: in the structure (29) resulting from VP Preposing, an anaphor in the domain of the subject NP₁ (the circled S node) must be bound inside this lower S.¹⁶



Note that the rule of VP Preposing formulated with Chomsky-adjunction produces exactly the type of configuration that is necessary to decide between the alternative formulations of the OC under discussion. The rule creates a position for lexical material which is still inside \bar{S} but which is outside of the domain of the subject (i.e. the lower S node). This provides a context for empirical distinctions between the two formulations.

The empirical predictions of a grammar with the two changes that we propose here actually differ from those of RV's grammar with respect to a subset of data from the French causative construction. Whether or not this is a desirable result is, of course, an empirical question. We claim that a different and more revealing perspective of the constructions we consider in this section can be gained. This different perspective involves the distinction between core grammar and noncore or peripheral grammar. However, the view taken here hinges crucially on the abandonment of (22) and the reformulation of the OC represented by (6).

3.1. The Clitics y and en in the French Causative Construction

In RV, causative constructions with the clitics y and en attached to the embedded verb are considered uniformly grammatical, on a par with constructions in which these clitics are positioned on the main verb. (30a,b) are from RV and (30c,d) are adapted from Kayne (1975).

- (30) a. Marie fera y aller Jean
'Marie will make Jean go there.'
- b. Marie fera en parler Jean
'Mary will make Jean speak of it.'

- (30) c. on essaiera de faire en parler ton ami
 'We will try to have your friend speak of it.'
- d. cela fait y penser tout le monde, à la deuxieme guerre mondiale
 'That makes everone think of it, WWII.'
- (31) a. Marie y fera aller Jean
 b. Marie en fera parler Jean
 c. on essaiera d'en faire parler ton ami
 d. cela y fait penser tout le monde, à la deuxieme guerre mondiale

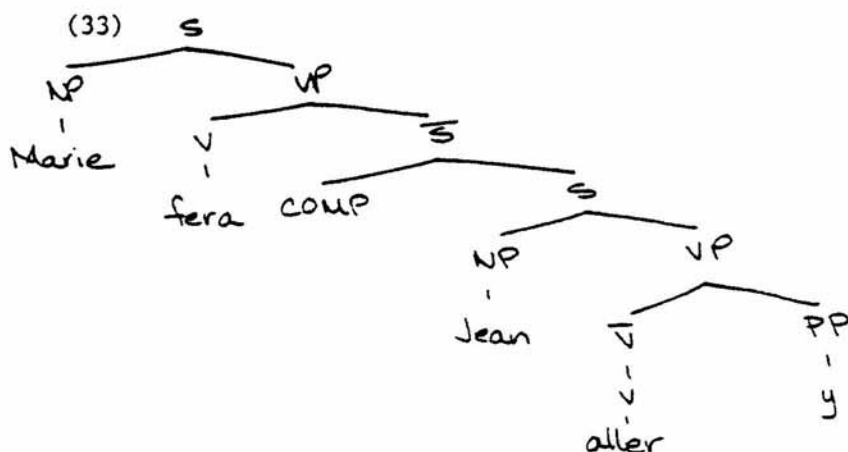
We disagree, however, with the implicit claim made by RV that (30) and (31) are on a par with each other with respect to grammaticality. Many native speakers of French reject (30). Others find these sentences strained, to say the least. A careful reading of Kayne (1975) will show that he also judges them to be unacceptable for most speakers. There is thus a high degree of uncertainty and variation associated with this type of construction. Our claim is that while the constructions in (31) are "unmarked", the constructions in (30) are, on the contrary, highly marked, and that they belong rather to the "periphery" of the French language. Accordingly, we think that at least part of the mechanisms and principles responsible for the sentences in (30) should be outside the framework of core grammar. On the other hand, core grammar is, in this perspective, entirely responsible for the generation of the unmarked sentences of (31). Our approach (recall, without (22) and with the OC as in (6)), as we will see, blocks (30) while allowing (31). Thus our account differs in a significant way from RV's, as far as this subset of the French causative construction is concerned.

We assume, with RV, a cyclic and optional rule of Clitic Placement (Cl Pl). RV formulate this rule as follows:

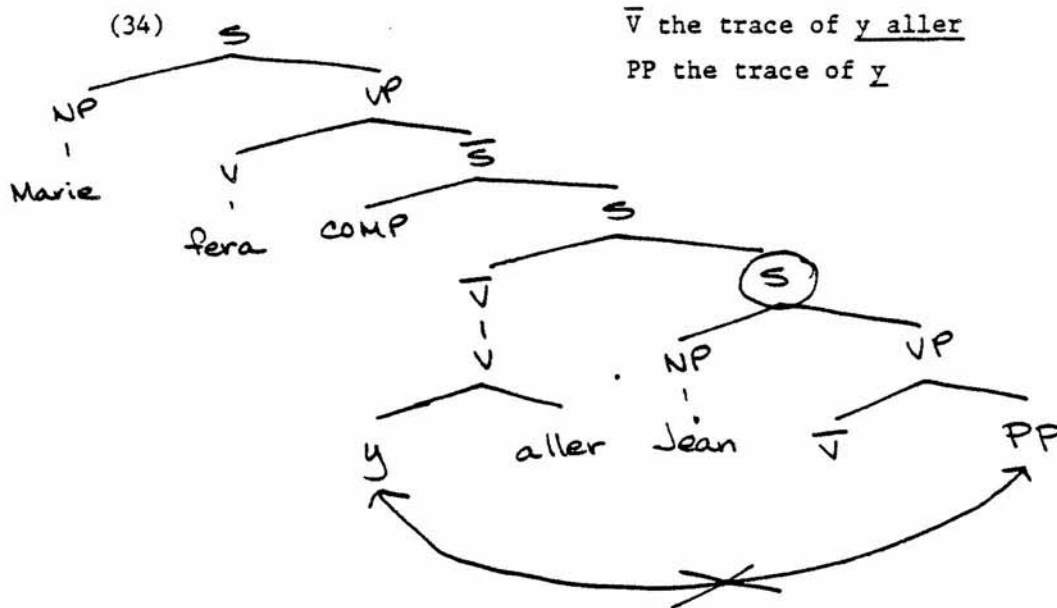
(32) = RV (135) Clitic Placement (Cl Pl)

Cliticize X onto V.

To illustrate, consider then the derivation of e.g. (30a). We begin with the base structure (33).



After Cl P1 on the lower cycle, and VP Preposing, we have the following structure:



(34) is blocked by the Opacity Condition (6) since the trace (PP) of the clitic y does not have its antecedent inside the lower S node (circled). Note, crucially, that formulation (1) of the OC will not block (34) since PP is not free inside \bar{S} . If our judgements concerning the distinction between (30) and (31) are correct, then the fact that they can be appropriately captured under formulation (6) of the OC, but not₁ under formulation (1), is an argument in favor of our proposed revision.

3.2. The Clitic se on the Embedded Verb: An Extension of the OC

Consider now, in light of this discussion, an interesting contrast noted by Kayne (1975, 432, note 32).

(35) * elle a fait y asseoir ses beaux-parents

(36) elle a fait s'y asseoir ses beaux-parents

'She had her parents-in-law sit there.'

According to the judgement of our informants (and contrary to the judgements of RV), a similar contrast obtains between the following two sentences:

(37) ?? Marie a fait y aller Jean

(38) Marie a fait s'y rendre Jean

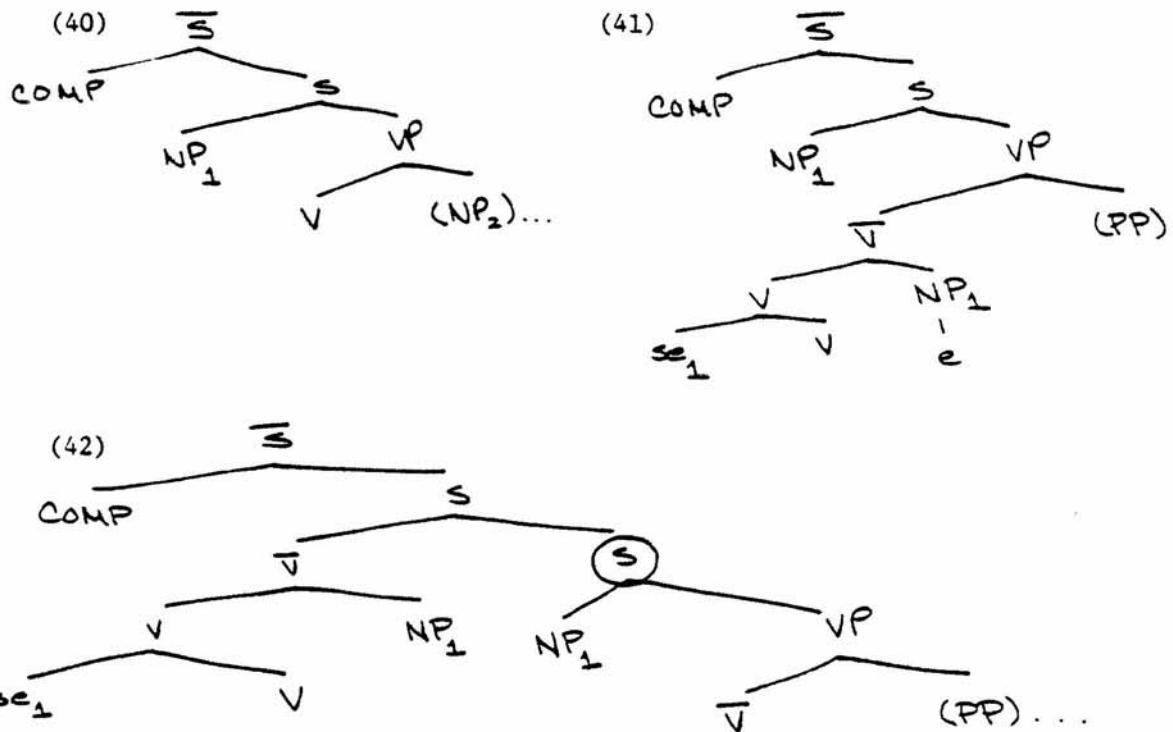
'Marie made Jean go there.'

What these paradigms show is that y can be cliticized onto the embedded verb just when se is also cliticized to the same verb.

We suggest the following account: the presence of the clitic se on the embedded verb is responsible for an extension of the domain of the subject. Let us try to state this idea in a principled way. We begin by redefining the notion "domain of opacity of the subject" as follows:¹⁸

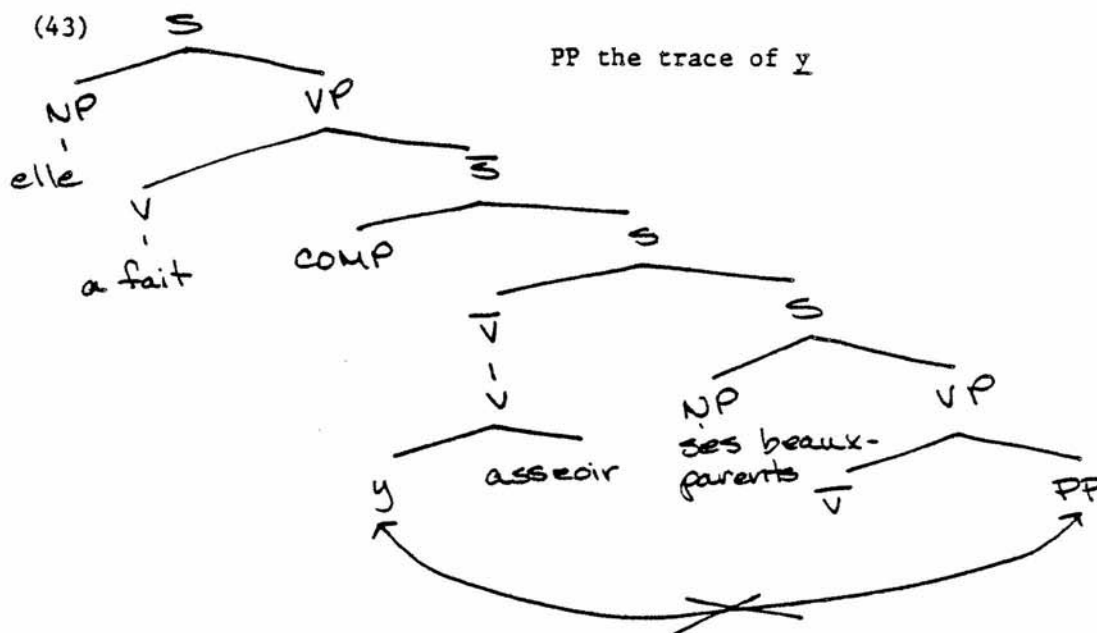
- (39) Take the union of the domains of the subject NP and any elements coindexed with it within S to define the domain of the subject.

As an illustration of what we have in mind, consider the following three hypothetical structures:



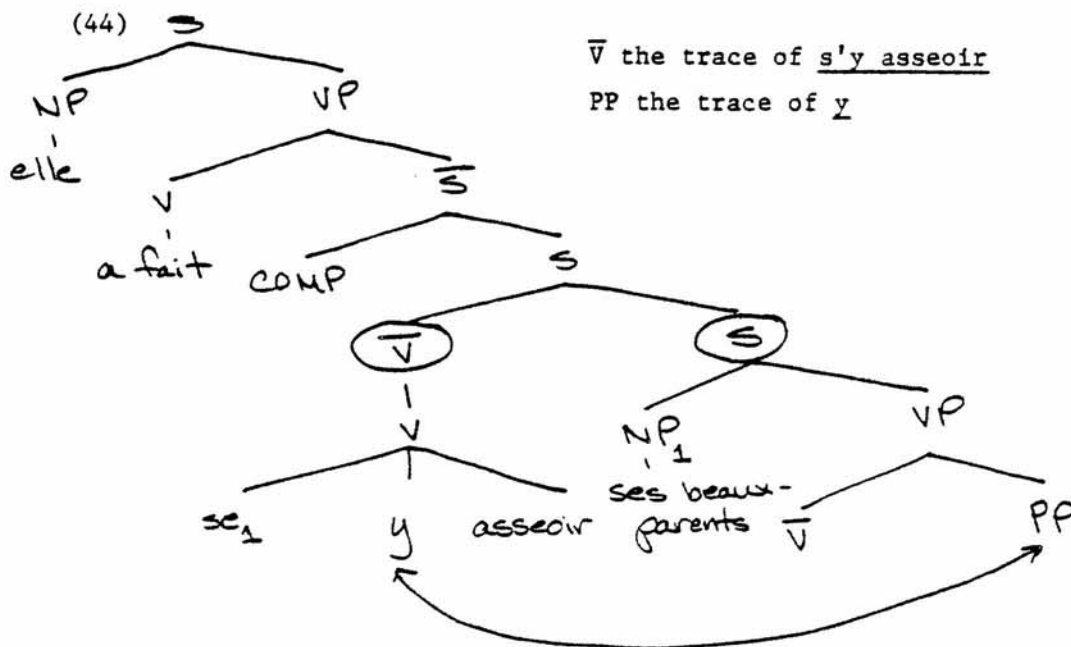
(40) represents a nonreflexive declarative clause. The domain of opacity of the subject NP₁ is the S node. (See our discussion in section 1.) The same holds for (41), a structure with a reflexive clitic coindexed with the subject NP. This is so since the domain of se₁ and its coindexed empty NP₁ is V, which is properly included within the domain of the subject NP₁. The relevant case is the structure (42) which results from the application of VP Preposing. Here, the domain of the subject NP₁ and the domains of the reflexive clitic se₁ and the empty NP₁ coindexed with it are disjoint. They are, respectively, the lower, circled S node and the node \bar{V} Chomsky-adjointed by the operation of the rule.¹⁹ This extension of the domain of a subject seems to us to be a natural one, since at the level of logical form (the level at which the Opacity Condition is to apply), it is natural to suggest that what counts as defining domains are the actual indices assigned to grammatical categories, rather than the categories themselves.

Under our proposed redefinition of the opacity domain, the contrast between (35) and (36) can be accounted for. In the case of (35), with no reflexive clitic *se* on the embedded verb, the domain of opacity of the subject is simply the lower S. The structure of (35), after Cl P1 in the lower cycle and VP Preposing, is thus the following:



In (43), there is a violation of the Opacity Condition (6): the relation between the clitic y and its trace is illegitimate.

The structure of the grammatical (36), on the other hand, contains no such violation.



Here, crucially, the domain of opacity of the subject, under our revision of this notion in (39), includes the preposed \bar{V} . Consequently, there is no violation of the Opacity Condition in the relation between \bar{y} and its trace, and the structure is not blocked.

To the extent that our approach succeeds in distinguishing between (35) and (37) on the one hand, and (36) and (38) on the other hand, it provides an argument in favor of our reformulation of the Opacity Condition as in (6), as well as our restricted and principled extension of the notion of the domain of opacity of the subject, given in (39).

3.3. A Convention of French outside Core Grammar

To this point, we have seen that, in contrast to RV's system, our approach succeeds in predicting correctly the facts of standard French. Our alternative approach covers most of the cases handled by RV's description, but it has different empirical predictions concerning the sentence types of French discussed in this section. Our claim is that this is surely a warranted result in standard French. Concerning specifically the sentences of (30), we believe that they should be generated, but at a very high cost to the grammar of French, since they belong to the periphery of the language. At least part of the apparatus to describe them should not fall within core grammar. We thus propose the following extension of the notion of the "domain of opacity of the subject" to be included in the noncore grammar of French.

- (45) In the structure resulting from VP Preposing, take the domain of a verb within \bar{S} to which the clitics \bar{y} and \bar{en} are attached to be included in the opacity domain of the subject.

As a highly marked mechanism, (45) makes reference to specific lexical items, \bar{y} and \bar{en} . (45) is expected to be subject to a high degree of variation and to be²⁰ dialect-bound. To the extent that this is true, it confirms our approach. To illustrate, refer back to tree (34). As can be seen, the opacity domain of the subject now includes the preposed \bar{V} . Under this interpretation, the relation between the clitic \bar{y} and its trace is legitimate.

Note finally that the extension of the notion "domain of opacity of the subject" that we proposed in (39) is entirely within the framework of core grammar, as opposed to the highly marked and variable (across speakers) extension (45).

3.4. The Function of RV's Extension of the Domain of the Subject

Within their system, RV need convention (22) to prevent a pronoun preposed by VP Preposing from being cliticized to the main verb when there is already a clitic on the embedded verb. Notice that within their system the combinations of possible clitics that can occur in this pattern are quite restricted. Only a direct object pronoun can be preposed inside \bar{V} and then cliticized to the main verb (by C1 P1 operating on the higher cycle).²¹ The only clitics that can be attached to the embedded verb are \bar{se} , \bar{y} or \bar{en} . The relevant cases are thus the following:

- (46) (i) * le(s) V ... se V ...
 (ii) * le(s) V ... (en) (y) V ...

The sentences which RV want to block, corresponding to the two cases of (46), are given below.

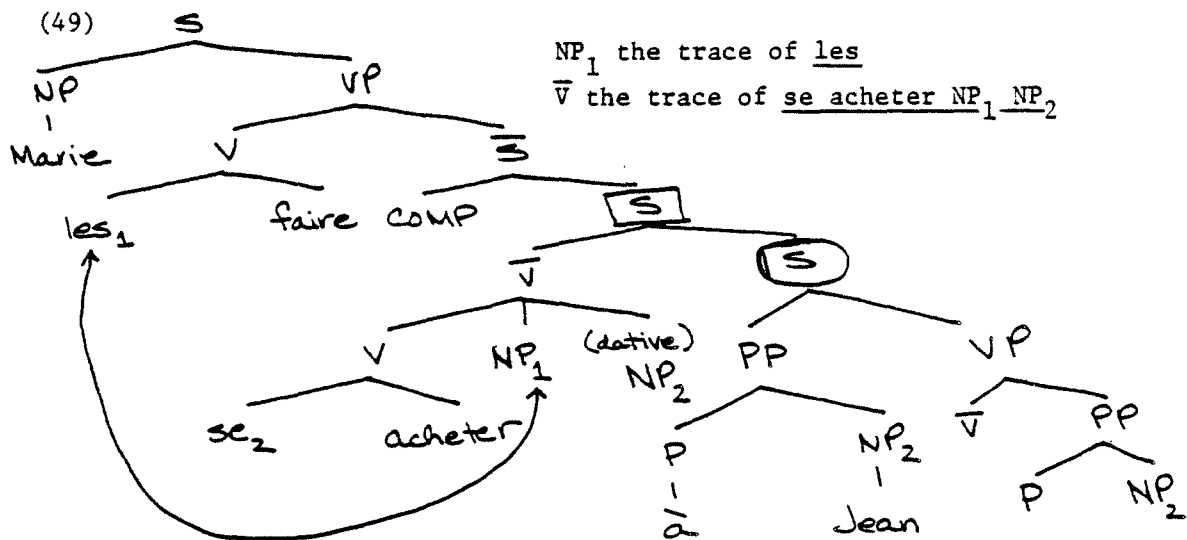
(47) = RV's (196c)

* Marie les a fait s'acheter à Jean
 M them made REFL-buy to J

(48) = RV's (197c)

* Marie les a fait y acheter à Jean
 M them made there buy to J

Consider, for example, the surface structure of (47) (prior to deletion).²²

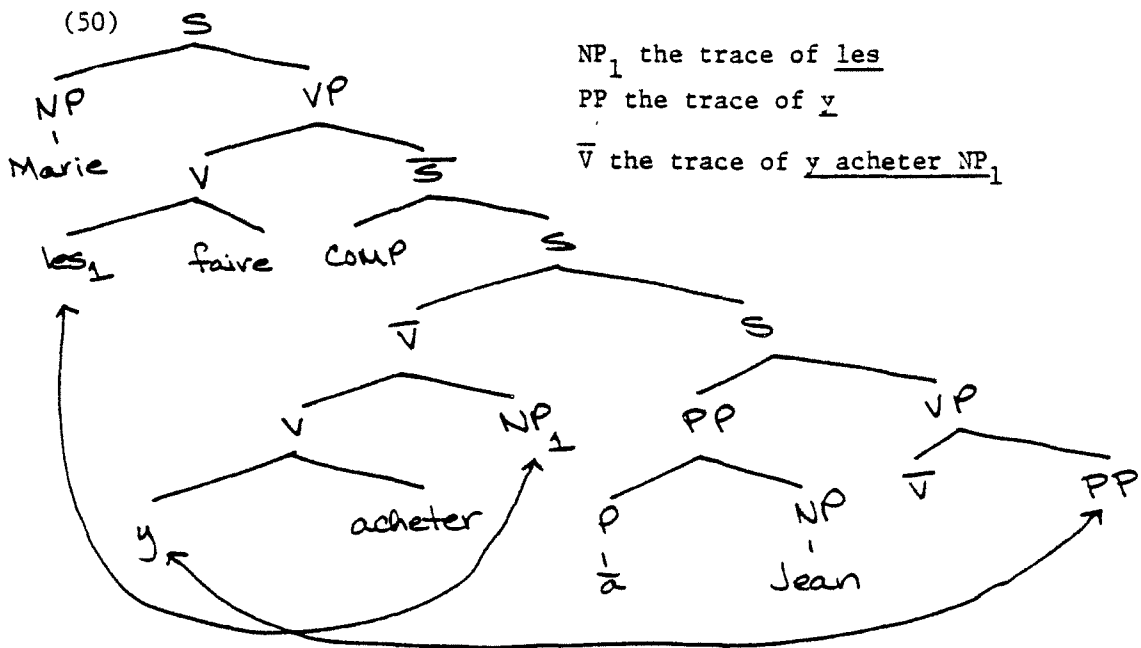


Clitic Placement moves les on the higher cycle, after VP Preposing on the lower cycle. If the domain of the subject is the lower S node (circled), then the relation between les₁ and its trace NP₁ will be legitimate, since both are entirely outside this domain. This, of course, is not the intended result, since RV want the Opacity Condition to block (47). An obvious move is to adopt convention (22), which takes the domain of opacity of the subject to be the higher S node (squared) created by Chomsky-adjunction (through the operation of VP Preposing). But this, as we have seen, has the unfortunate consequences that we presented in section 2.

It should be obvious by now that the two cases of (46) present no problem for our approach. In (49), since se₂ and the (dative) NP₂ are co-indexed with the subject NP₂ Jean, the domain of opacity of the subject includes \bar{V} . The relation between les₁ and its trace NP₁ is thus illegitimate under the Opacity Condition.

Consider now the more interesting case represented by the surface

structure of (48), given below.



For those speakers of French that do not have (45), the structure (50) is blocked by the Opacity Condition applying to the relation between the clitic y and its trace (PP). Even for the speakers of French that do have (45), the structure is still blocked since now the opacity domain of the subject includes \bar{V} , and consequently the relation between the clitic les₁ and its trace NP₁ is illegitimate. Note that for the speakers that do not have (45) the relation between les₁ and NP₁ is not blocked by the Opacity Condition since this relation is entirely outside of the domain of the subject, which is the lower S node. For these speakers, thus, this structure will be ruled out only on the basis of the ill-formed relation between y and its trace. This seems to correspond to the intuitions of the French speakers we have consulted. Note that precisely the opposite prediction is made by RV's approach.

To summarize: with our extended notion of the "domain of opacity of the subject" given in (39), together with the reformulation of the Opacity Condition proposed in (6) and the marked convention of French grammar (45), there is no need for a generalized convention extending the domain of opacity of the subject in VP Preposing constructions such as (22). The undesirable results that stem from this convention which we described in section 2 are thus avoided.

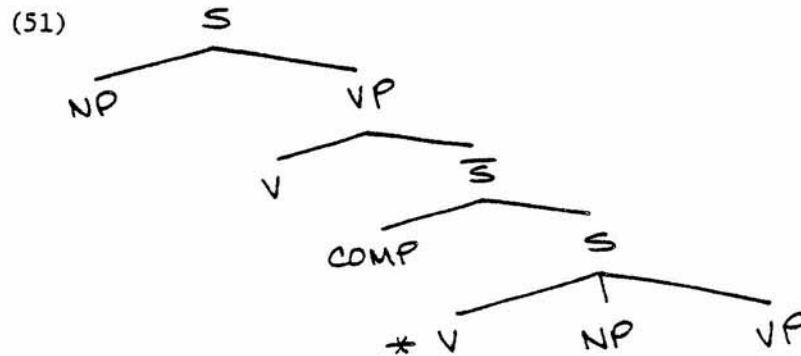
4. Conclusion

The data of the preceding section involving the clitics y and en in the causative construction (and, crucially, a different and more careful consideration of the grammaticality of that data than the one assumed in RV) demonstrate the extent to which a minor adjustment in the formulation of a general condition can affect the output of the grammar. Unifying the

notion of the "domain of the subject" in the statement of the Opacity Condition has been shown above to have the desirable consequence of separating those sequences that belong to the core grammar of French from those that belong to the periphery of the language. These data argue in favor of the formulation (6) of the Opacity Condition on empirical as well as metatheoretical grounds.

Appendix: VP Preposing as a Violation of the Opacity Condition

As we noted in footnote 16, the structure which results from VP Preposing is in violation of the OC, under our revised formulation (6). (Refer back to structure (29).) Note that under our approach these structures violate the OC because, crucially, VP Preposing is formulated (following RV) as a Chomsky-adjunction operation.²⁴ If VP Preposing were to be formulated as a simple adjunction, it would not violate the OC as stated in (6). The structure resulting from the operation of the rule would then be the following:



In RV's grammar neither output, (28) or (51), violates the OC, since their formulation of this condition is as in (1). In our approach, however, (29) is in violation of this condition, but (51) is not, since the preposed *V does not end up outside of the domain of opacity of the subject, the lower S node.

Interestingly enough, the formulation of VP Preposing as a Chomsky-adjunction operation is crucial to our approach. As can easily be seen, it is this specific formulation of the rule that makes possible our account of the data in section 3 of this paper. Thus, our approach crucially hinges on construing VP Preposing as a Chomsky-adjunction transformation. To illustrate, consider structure (34). If \bar{V} were simply adjoined to the lower S node, no violation of the OC would result from the application of Clitic Placement (to \bar{y}) and VP Preposing. Only the existence of the higher S node, created by Chomsky-adjunction, permits a configuration in which the relation between the clitic \bar{y} and its trace is illegitimate, given our formulation of the OC as in (6).

The price to pay for our account of the sentences in section 3 seems thus inescapable: VP Preposing, under our analysis, violates the Opacity

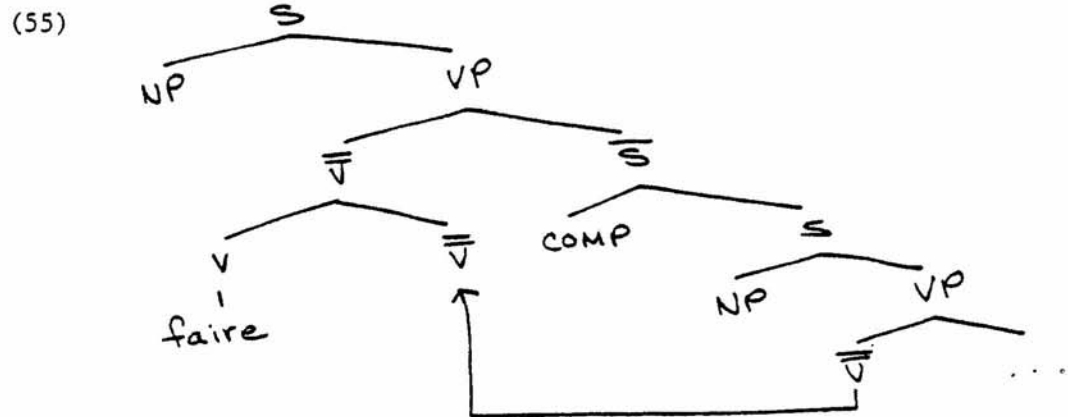
Condition. Note that this was already a problem in the first careful study of these constructions in a transformational framework, the one that resulted in Kayne (1975). Quicoli (1980) particularly insists on this point and reformulates the rule of VP Preposing essentially as a simple adjunction to S, thus keeping the preposed elements inside the complement sentence. The output of his rule is thus, basically, a structure like (51).

Next, note that both Kayne (1975) and Quicoli (1980) assume a framework in which the Specified Subject Condition (the Opacity Condition in the reformulation of Chomsky (1980) and in the text) is a condition on movement transformations (and perhaps interpretive rules) and is still not formulated as an output constraint operating at the level of logical form. As formulated in Chomsky (1980), the OC is viewed as a mechanism restricting the possible relations between antecedent and anaphor. At the same time, the relation between a moved NP and its trace is viewed as a particular case of the relation between antecedent and anaphor. In this framework, a trace is simply the empty node previously occupied by the moved category, retaining both its categorial status and its original index. See Chomsky (1977). This raises the following questions:

- (52) Is *V assigned an index in the base?²⁵
- (53) Does movement of *V leave a trace?
- (54) Are any traces left by movement of *V subject to the OC?

Under the theory of transformations and of traces of Chomsky (1977), it seems to us that movement of *V must indeed leave a trace -- i.e. an empty node *V. Whether or not this *V node retains an index depends upon the answer to question (53). Let us assume here that *V is not assigned an index in the base. And let us assume further that the Opacity Condition operates crucially on the indices of categories. Then, it follows that the "trace" left behind by VP Preposing is not subject to the OC. From this it follows also that VP Preposing, formulated as a Chomsky-adjunction operation as in RV, cannot possibly violate our reformulation of the OC (6).

One further point is worth mentioning, in the context of this discussion. Note that in every formulation mentioned here (Kayne, Quicoli and RV), VP Preposing is in open violation of the structure-preserving hypothesis of Emonds (1976).²⁶ We believe that one of the reasons for this state of affairs lies precisely in the necessity of not construing VP Preposing as a rule violating the Opacity Condition, at least in the cases of Quicoli and RV. But once one is willing to accept that the issue of violation of the OC does not arise with respect to VP Preposing, the way seems to us clearly open towards an analysis of this rule as a structure-preserving transformation. Although we do not explore this question further, we suggest below a possible general base structure for the causative construction in French which would permit VP Preposing to operate as a structure-preserving rule.²⁷



We think that this analysis permits us to capture three essential ideas advanced by different linguists in the framework of EST, reflecting what in our opinion are indeed deep-rooted properties of these constructions in French.

- (56) Kayne's insight that the movement of the preposed elements is outside the complement sentence.
- (57) Quicoli's insight that VP Preposing moves a constituent.
- (58) RV's insight that the formulation of VP Preposing is maximally general (*V).

Adopting, then, (55) as a base structure type for the causative construction, we can maintain (56) - (58) with the requirement that VP Preposing is a structure preserving transformation. Note also that our approach to the phenomena of section 3 would not be changed in its essential lines.

Footnotes

*We would like to thank Janis Williamson for extensive and valuable discussion and G. Fauconnier, R. Ishihara, S.-Y. Kuroda and D.M. Perlmutter for their comments on an earlier version of this paper. We would also like to thank Annie Olie for patient consideration of difficult judgements concerning standard and nonstandard dialects of French. All errors are our sole responsibility.

Gibson's work was supported by a University of California dissertation fellowship. Raposo's work was supported in part by a fellowship of the Instituto Nacional de Investigação Científica, Lisboa, Portugal, and in part by the National Science Foundation through grant no. BNS 78-17498 to the University of California, San Diego.

¹A reformulation of the Specified Subject Condition of Chomsky (1973).

²This paper does not take into account recent versions of EST including the latest proposals concerning Case Theory and Binding Theory. It assumes the same background as RV.

³Node A c-commands node B if A does not contain B and the first branching category dominating A dominates B. The domain of a category C is defined by the first branching category dominating C. See Reinhart (1976) and RV, note 9.

⁴That this is the intended interpretation of the OC (or the SSC), at least as far as the position of the trace is concerned, is hinted at in Chomsky and Lasnik (1977, note 70). See also their note 13.

⁵This is furthermore consistent with the partial lexicalization of wh-traces at the level of logical form. Chomsky (1980, 15) suggests that lexicalized items fall less freely under the binding conditions than trace and PRO.

⁶In our view, an enlightening discussion of these matters can only be provided in the context of a comparison with analyses provided by other syntactic frameworks. See Gibson and Raposo (in preparation).

The structure resulting from the output of the deletion subcomponent of the grammar.

⁷RV define "governed by" as follows: a category B is governed by a category A if and only if B=NP and B is c-subjacent to A. C-subjacency is defined as follows: a category B is c-subjacent to a category A if and only if A c-commands B and either B or the domain of B c-commands A.

⁸Chomsky's filter is dependent on Case assignment. RV's grammar does not include Case assignment (except in their Appendix A).

⁹And, irrelevantly, V itself or VP when it does not branch. This makes their rule somewhat equivalent to Quicoli's (1980) \bar{V} Preposing.

¹⁰As well as voir, entendre and other verbs of this class that have the syntactic behavior of "causatives". In the text we mention only the verb laisser. We have in mind, however, this larger class. Among the verbs that occur in the causative construction, faire appears thus to be unique in its syntactic behavior.

¹¹Apart from the fact (not relevant for this discussion) that laisser marginally accepts passivization in the main clause while faire does not.

¹²It is not clear to us whether or not RV (p. 154) suggest that this convention should be restricted to apply only in the context of the OC. It is not clear how a convention like (22) could be attributed specifically to a condition like the OC. In our conception of formal grammar, if (22) is stated in the grammar, it should apply wherever the notion "domain of the subject" is called for in the grammar. Our discussion will proceed with this interpretation of convention (22).

¹³Actually, the situation is worse yet. Consider the rule of COMP deletion given in RV (78).

$$(i) \text{ COMP} \rightarrow \emptyset \begin{cases} a. \text{ infinitive verb phrase} \\ b. [+F] \end{cases}$$

It is not clear what is meant here by "infinitive verb phrase". If it means "infinitive VP", VP Preposing will feed COMP deletion whenever VP is the preposed phrase. If it means "any phrase beginning with a verb in the infinitive" (i.e. V, \bar{V} or VP), then VP Preposing feeds COMP deletion whenever it applies. This has the result that even with faire COMP can be deleted, and examples like (14) or (25) are predicted to be grammatical. Clearly a reformulation of COMP deletion is required. Several possibilities come to mind, but we will not explore this issue here. Note however that no revision of COMP deletion will rectify the problem we noted with laisser. This verb will always trigger COMP deletion because of the feature [+F].

¹⁴Note also that the problem with COMP deletion referred to in the preceding footnote disappears too. The COMP node can now freely delete after VP Preposing, even with faire. Since the domain of the subject is the lower S node, it will never be properly governed by the main verb.

¹⁵But note that now the rule of VP Preposing itself violates the OC. We will return to this point in the Appendix. See also Quicoli (1980) for some discussion of this question.

¹⁷Note also, with respect to (34), that the subject NP Jean cannot be made "transparent" through the Thematic Index-Rewriting rules discussed by RV, since the preposed V branches. It is the operation of these rules which accounts for the grammaticality of the examples in (31). In these cases, cliticization of y and en takes place on the higher cycle, the subject is made "transparent" through the Thematic Index-Rewriting rules and the "argument status" clause of their Opacity Condition (317) exempts these structures from the condition. Since examples like those in (31) are not at issue here, we assume a similar account.

In our approach, one important type of example which can be accounted for without appealing to Thematic Index-Rewriting rules is illustrated by the following sentence:

- (i) Marie les a fait acheter à Jean
'Marie made Jean buy them.'

After VP Preposing applies to the underlying form of (i), we have the structure in (ii):

- (ii) Marie a fait [_S [_{COMP}] [_S [_V acheter les] [_S Jean [_V]]]]
V the trace of acheter les

Cl P1 can now operate in the higher cycle, cliticizing les onto faire, without violating the OC, since les in (ii) is already outside of the domain of opacity of the subject. Thus, the "transparency" of the subject is irrelevant. Although we have not explored this question, it seems to us that our approach will succeed in reducing considerably the number of cases where this device is needed.

¹⁸Our proposal is reminiscent of RV's own redefinition, their (316). Note however that their extension of the notion "domain of opacity of the subject" requires the subject to be an argument, while ours does not. In the case crucially accounted for by our revision, (42), the subject could never be an argument, since the verb branches.

¹⁹But note that we do not want to say, in this case, that the domain of the subject is the higher S node resulting from VP Preposing. This would again have wrong empirical results, allowing e.g. the ungrammatical sequence (i).

- (i) * Jean a laisse s'acheter un livre Marie
J let REFL-buy a book M

If the higher S is taken to be the domain of the subject, the embedded subject NP Marie will be properly governed by the main verb laisser, and à-Ins would not be required to apply.

²⁰Actually (45) is just a way (perhaps ad-hoc) of formalizing the fact that the OC is violated by these marginal sentences of French, for the speakers that allow them. We could thus propose (i) below, instead of (45).

- (i) In the structure resulting from VP Preposing, structures with y and en on the embedded verb are allowed to violate the Opacity Condition.

²¹This follows from the way their grammar is constructed. We refer the reader to RV's article.

²²The (dative) NP₂ in V in (49) is empty and coindexed with se₂ by RV's rule of Se Agreement.

²³The partitive en inside a direct object can also be preposed inside

\bar{V} and then cliticized to the main verb. Thus the relevant cases include also the following:

- (i) * (partitive) en V ... se V ...
- (ii) * (partitive) en V ... (en) (y) V ...
- (iii) below is thus parallel to (47) in the text and will be blocked in the same way.

- (iii) ?* Jean en a fait s'acheter un à Marie
J of them made REFL-buy one to M

Observe that our approach predicts that there will be a contrast in grammaticality between the following two sentences, the first with nonpartitive en, the second with partitive en, en being attached in both cases to the embedded verb.

- (iv) on fera en parler ton ami, de ses souvenirs de voyage
'We will make your friend speak of it, the memories of his trip.'

- (v) on fera en acheter un à ton ami
'We will make your friend buy one of them.'

(iv) parallels (30) and involves a violation of the OC. On the other hand, (v) does not involve a violation of the OC, under our approach. Consider its base structure:

- (vi) on fera [\bar{S} [S ton ami acheter [un en]]]

After Clitic Placement, we have the following structure:

- (vii) on fera [\bar{S} [S [\bar{V} en acheter [un PP]] [S ton ami [\bar{V}]]]]
 \bar{V} the trace of en acheter un PP
PP the trace of en

The relation between the partitive clitic en and its trace PP is legitimate. Under the nonmarked interpretation of what constitutes the domain of the subject, this relation is entirely outside of this domain, and thus does not fall under the OC; under the marked interpretation (45), this relation is entirely inside of the domain of opacity of the subject and, thus, again, it does not fall under the OC.

²⁴ Observe that in RV's analysis, the fact that VP Preposing is formulated in this way plays no role in their grammar.

²⁵ It seems to us that the question of indexing of nonterminal categories other than NP has not been widely discussed in the literature. Observe that the thematic indices of RV cannot serve as anaphoric indices since, for example, more than one verb in a single structure can have the same thematic index. Note that in (52) - (54) we are deliberately vague in mentioning *V.

²⁶ Kayne's formulation, in which the preposed elements are moved outside of the complement sentence, is more in the spirit of this hypothesis, though formally in violation of it.

²⁷ We assume here that $VP = V''$. Note that the rule VP Preposing sketched in (55) does not violate the condition of subadjacency on movement rules if, as RV claim, \bar{S} is a bounding node in French but S is not. Thus, if the claims RV make in section 2.5.4 concerning the affix C are correct, this can be attributed to the structure-preserving nature of VP Preposing and subadjacency rather than to the existence of some unrealized causative affix.

The relevance of subadjacency to this issue was brought to our attention by R. Ishihara.

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