Two Kinds of Composition
in French Complex Predicates*

Anne Abeillé
IUF & U. Paris 7

Danièle Godard
CNRS & U. Paris 7

Ivan A. Sag
Stanford University

June 29, 1997

1 Introduction

Romance causative constructions, and French causatives in particular, have well-known properties which set them apart from other kinds of infinitival complementation. Their most distinctive property perhaps is the fact that pronominal clitics interpreted as semantic arguments of the infinitival verbal complement appear attached to the causative verb. This phenomenon is illustrated in (1b); *le*, the cliticized counterpart of the NP *Proust* in (1a) and the semantic argument of *lire*, obligatorily occurs attached to the causative verb.

(1) a. Paul fera   lire   Proust aux   élèves   de terminale
           Paul make-fut to-read Proust to-the students of senior-year

           Paul will make the senior year students read Proust

    b. Paul le fera   lire   aux   élèves   de terminale
           Paul it make-fut to-read to-the students of senior-year

           Paul will make the senior year students read it

    c. *Paul fera   le lire   aux   élèves   de terminale
           Paul make-fut it to-read to-the students of senior-year

           (same interpretation as (1b))

1

This situation contrasts with the classical complementation found in (2), where the pronominal clitic cannot attach to the main verb *convaincra*.[1]

(2) a. Paul convaincra   Marie de lire   Proust
         Paul convince-fut Marie of to-read Proust

         Paul will convince Marie to read Proust

     b. Paul convaincra   Marie de le lire
         Paul convince-fut Marie of it to-read

         Paul will convince Marie to read it

     c. * Paul le convaincra   Marie de lire
         Paul it convince-fut Marie of to-read

         (same interpretation as (2b))

A similar situation holds for the French tense auxiliaries *avoir* and *être*, which also exhibit 'clitic climbing':[2]

(3) a. Paul a lu Proust
         Paul has read Proust

     b. Paul l'a   lu
         Paul it-has read

         Paul has read it

     c. * Paul a le lu

(4) a. Paul est parti à Rome
         Paul has gone to Rome

     b. Paul y   est parti
         Paul there is   gone

         Paul has gone there

     c. * Paul est y parti

These contrast with other auxiliaries such as *aller* (near future) or *venir* (near past) which do not allow clitic climbing in Modern French:

(5) a. Paul va lire Proust
         Paul is-going to-read Proust

---

[1]Here and throughout, we gloss clitics with their English pronominal equivalent attached to the V that hosts them. This is in keeping with the analysis that we adopt for Romance clitics (Miller 1991, Sag and Miller in press), where they are treated as pronominal affixes rather than syntactically independent words (see below, section 2.1). In this context then, the term 'clitic' is a misnomer; nonetheless, we continue to use it for reasons of familiarity.

[2]Other cases of clitic climbing in French are passive and copular constructions and genitive *en*. See Abeillé and Godard 1994, 1996a, Sag and Godard 1994 for compatible analyses in HPSG.

      b.   Paul va   le lire
             Paul goes it to-read

             Paul is going to read it

      c.   * Paul le va lire

(6) a.   Paul vient de partir à Rome
             Paul comes of to-go to Rome

             Paul has just gone to Rome

      b.   Paul vient d'y   partir
             Paul comes of-there to-go

             Paul has just gone there

      c.   * Paul y vient de partir

Both causative and tense auxiliary constructions have been analyzed as complex predicates in various frameworks. (For early proposal, see Emonds 1978 (on French auxiliaries), Zubizaretta 1985, and Aissen and Perlmutter 1983, inter alia.) However, there are important differences between the two constructions. For example, the causative verb has its own role-assigned subject while the tense auxiliary can be analyzed as a subject-to-subject raising verb. Also, the causative verb introduces a new predication while the tense auxiliary only contributes tense and aspect information to the predicate denoted by the past participle. And finally, some clitics can stay on the infinitival verb after FAIRE, while no clitics can be realized on the past participle. In this paper, we focus on this third contrasting property. We present an account of this difference between the two kinds of complex predicates in terms of two different ways the two predicates share grammatical information, or two different types of what we will call 'argument composition'.

It has long been known (Kayne 1975, Hyman & Zimmer 1976, Rouveret & Vergnaud 1980) that clitics are not always attached to the causative verb in French. In fact, while they must be so attached in most instances, e.g. (1b), there are cases where they must attach to the infinitival verb, or else may occur in both positions.[3] (7a) and (7b) illustrate the downstairs attachment of idiomatic and reflexive clitics, respectively:

(7) a. Cette décision va faire   en   avoir   marre aux   Guyannais
         This decision goes to-make of-them to-have enough to-the Guyanese

         This decision will make the Guyanese be fed up

      b. C'est une révélation brutale qui a   fait   se convertir Claudel
         It is a   revelation sudden that has made se to-convert Claudel

         It is a sudden revelation that made Claudel be converted

---

[3]The possibility of attaching pronominal clitics to an infinitive is not a general trait of Romance causative constructions; Italian seems to disallow all downstairs clitics on the infinitival complement (e.g. Monachesi 1995), while Spanish and Catalan allow more such attachments than French does, though there is some variation among speakers. (See Moore 1991, Alsina 1996).

In construction with tense auxiliaries, on the other hand, these same clitics must occur attached to the auxiliary verb:

(8) a. Les Guyannais en   ont   eu   marre
         The Guyanese of-them have had enough

         The Guyanese got fed up

     b. Claudel s'est converti
         Claudel se-is converted

         Claudel was converted

We propose a solution to this set of contrasts in terms of two different ways that predicates share their arguments. In the framework of Head Driven Phrase Structure Grammar (Pollard & Sag 1987, 1994), verbs have an argument structure (ARG-ST) specification: a list of elements (syntactico-semantic complexes called *synsem*s) that are dependent upon the verb. In addition, a verb selects for the complements that it combines with syntactically via the COMPS feature, which is a sublist of the ARG-ST list. A (syntactic) complex predicate arises whenever a the ARG-ST list of a verb A includes a predicative word B and B's arguments.

Given these constructs, our proposal is that there are two ways that a verb can share information with its lexical argument (a participle or infinitive in the two cases we discuss here): the verb can either require that a part of its argument structure be identical to that of the lexical argument or else it can require that part of its argument structure be identical to the COMPS list of the lexical argument. Since the combination of a predicate with a lexical argument is like composition of mathematical functions (a functor f_1 combines with another functor f_2, and the resulting functor '$f_1 \circ f_2$' then combines with the arguments of both f_1 and f_2), we may refer to analyses like these as argument composition analyses. Let us further distinguish between the two kinds of argument composition just mentioned as follows: a-composition, if it involves the lexical argument's ARG-ST list; c-composition, if it involves the lexical argument's COMPS list.

In the case of French, we will argue that the tense auxiliaries combine with their participial arguments (including idiomatic and reflexive clitics) via a-composition. FAIRE (and other causative verbs), by contrast, combine with an infinitival form of a verb via c-composition. Thus, since the COMPS list is the vehicle for selecting overt complements, only complements that have a potential to be realized syntactically can climb in the composition causative construction.

Following Miller and Sag (1995) (see also Monachesi 1995), argument composition provides the basis for the account of clitic climbing, since the cliticized elements are analyzed as arguments of the verb on which they appear. But given the affixal analysis of cliticization, even with the distinction between two kinds of composition, the argument composition analysis per se is not sufficient to rule out downstairs cliticization with causatives, as cliticized infinitives, though bonafide words in French, cannot in general appear as complements of composition FAIRE. Our analysis must include something more.

The extra ingredient we posit is a distinction between two kinds of verb: basic and reduced.[4] Intuitively, basic verbs are either those realized without clitics or else 'intrinsic' clitic verbs, one of whose arguments must always be realized as a clitic. The basic verbs are thus those that realize SYNTACTICALLY all those arguments that CAN be realized syntactically. By contrast, the reduced verbs are those that realize AFFIXALLY at least one ARG-ST element that could have been realized syntactically. The intuition is that in the case of most verbs, there is a basic mode of realization (arguments as overt subject or complements) and a secondary mode (one or more arguments is an affix). But because one of the arguments of an intrinsic clitic verb must always be affixal, their argument realization is not reduced or secondary in any way: intrinsic clitic verbs always exhibit a basic valence pattern. This distinction between basic and reduced verbs plays a crucial role in our account of discrepancies betwen the two kinds of complex predicates: composition causatives allow only basic verbs as their infinitival argument.

In section 2, we expand the treatment of Romance pronominal clitics that has been developed in HPSG and distinguish between two types of words that can realize a given verbal lexeme: those with clitic morphology and those without it. In section 3, we analyze tense auxiliaries, providing an account of clitic realization on the auxiliary. In section 4 we discuss the infinitival complements of composition FAIRE, and explain how and why they are different from the complements of tense auxiliaries. This includes a discussion of intrinsic clitics. Section 5 focuses on the grammar of reflexives and leads up to an account of the 'clitic-trapping' phenomenon.

2   A Lexical Analysis of French Clitics

Before explaining how the two kinds of argument composition can account for clitic climbing with causative and tense auxiliary constructions, we briefly summarize the analysis of cliticization presented in Sag and Miller (in press), which, unlike its HPSG predecessors, makes no use of a valence reducing lexical rule.

2.1   French Clitics as Pronominal Affixes

Verbal clitics in French have two main properties, which together constitute an apparent paradox. On the one hand, they are affixes, or inflexionally attached affixal pronouns (Miller 1991, Auger 1994). This analysis is based on a number of properties:

(9)   a. high degree of selection with respect to a host

        b. arbitrary gaps in the set of combinations

        c. morphophonological idiosyncrasies

---

[4]Actually, in the analysis we present below, the distinction in question is made as two types of verb HEAD values. Nothing essential hinges on this.

    d. rigid and idiosyncratic ordering

    e. lexical phonological rules applying to clitic-host combinations

    f. the impossibility of clitics attaching to a coordination of verbs

On the other hand, as we know, clitics do not always occur on the verb which subcategorizes for them. Some of them must attach to a causative verb (as in (2)), and all of them must attach to a tense auxiliary (as in (3),(4), and (8)), rather than to the participle that selects for them. The intuitive solution to this paradox that we adopt is the argument sharing or 'composition' analysis of FAIRE and the tense auxiliaries, according to which arguments of the verbal complement (infinitive or participle) are also arguments of the embedding predicate (*faire* or the tense auxiliary). Realization of an argument as a pronominal affix on the embedding predicate is thus an alternative to realization as an overt complement. Before presenting the composition analysis, we sketch in broad outline the new treatment of cliticization in French, which builds directly on suggestions made to us by Gosse Bouma.[5]

2.2 Types of Words

The affixal analysis of clitics led to an analysis in terms of a lexical rule (Miller and Sag 1995, Monachesi 1995). This LR allowed for an alternation between basic verbal forms (subcategorizing for overt complements) and verbal forms bearing clitics with reduced subcategorization frames. Here we propose a related, but distinct analysis stated in terms of constraints on lexical types.

    We begin by dividing the type *synsem* (the type of the syntactico-semantic complexes that appear on all valence and ARG-ST lists in HPSG) into the various subtypes shown in (10).

(10)
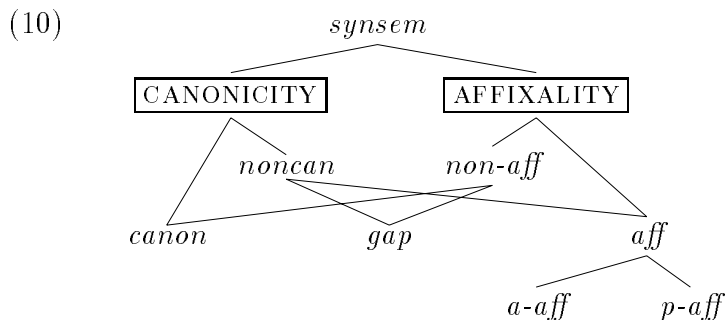
The most fundamental type of *synsem* here is *canon(ical)*. A constraint on signs (i.e. on all *word*s and *phrase*) requires that they must have *canon* synsems, thus *canon* is intuitively the type associated with all overt elements that combine syntactically with heads. This contrasts most directly with the type *noncan(onical)*. And all the *noncan* synsem
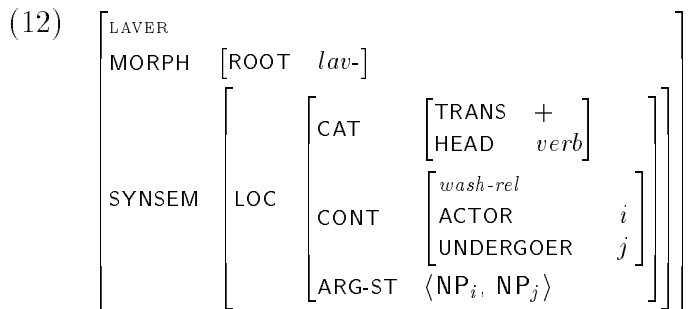
---

[5]See Bouma 1997 and Bouma et al. 1997.

types in (10) correspond to arguments that are not realized as overt (*sign*) expressions, but rather as a clitic (the type *aff(ixal)*) or as a *gap* (the argument that is extracted in a filler-gap construction). The type *aff* is further divided into personal pronominal affixes (*p-aff*) and anaphoric affixes (*a-aff*) for reflexives. The choice of *synsem* type for a subcategorized complement is not in general restricted, i.e. words generally select for an arguments without restricting them to being *canon* or *noncan*.

HPSG is a lexicalist theory, incorporating the principle of *Strong Lexicalism* (see Scalise (1984: 101ff)). We will assume here that each inflected word must belong simultaneously to three compatible types: (1) a (CLITIC-)REALIZATION (REALZN) type – either *plain-word* (*pl-wd*) or *cliticized-word* (*cl-wd*), with a further distinction between two subtypes of *cl-wd*: *su(bject)-cl-wd* and *n(on)s(ubject)-cl-wd*; (2) an INFLECTIONAL (INFLN) type, e.g. *3sg-pres-indic-vb*, *2sg-imper-vb*, etc.; and a LEXEME (*lxm*) type that specifies the phonological root, part of speech, argument structure, and meaning common to a family of inflected forms.[6] The hierarchically organized verbal LEXEME types correspond to what are normally regarded as lexical entries. The hierarchy of words is thus as partially described in terms of the three partitions indicated in (11).

(11)
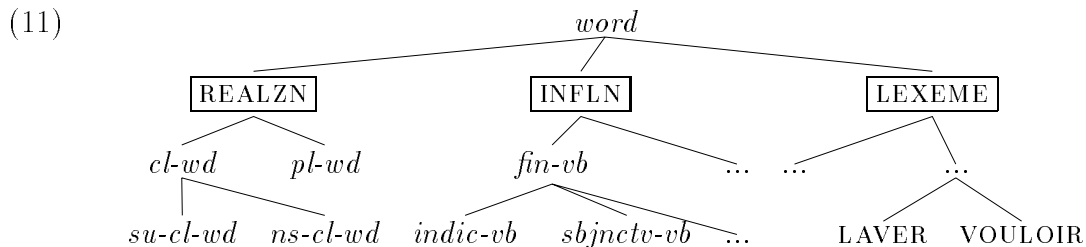
Following Wechsler (1995) and Davis (1996), much of the information in the lexical description of a LEXEME type – in particular information about the linking of ARG-ST members to semantic roles – is predictable on semantic grounds. A lexemic description thus need include little more than a specification of phonology, grammatical category, and meaning. (12) illustrates the French lexeme LAVER. (Here and throughout, the feature TRANS is used to specify transitivity.)

(12)

$$
\begin{bmatrix}
\text{LAVER} \\
\text{MORPH} & [\text{ROOT} \quad \textit{lav-}] \\
\text{SYNSEM} & \begin{bmatrix}
\text{LOC} & \begin{bmatrix}
\text{CAT} & \begin{bmatrix} \text{TRANS} & + \\ \text{HEAD} & \textit{verb} \end{bmatrix} \\
\text{CONT} & \begin{bmatrix} \textit{wash-rel} \\ \text{ACTOR} & i \\ \text{UNDERGOER} & j \end{bmatrix} \\
\text{ARG-ST} & \langle \text{NP}_i, \text{NP}_j \rangle
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

---

[6] We draw freely here from the approach to lexical organization developed in Koenig 1994. Koenig uses 'and-or' nets to constrain the interaction of types and type constraints.

The inflectional types of French are governed by constraints like those shown in (13). (F_{3spi} here designates the morphological function that maps each verbal lexeme to its *3sg-pres-indic-vb* inflected form.)

(13)

$$
\textit{3sg-pres-indic-vb} \Rightarrow
\begin{bmatrix}
\text{MORPH} & \begin{bmatrix} \text{I-FORM} & F_{3spi}\ (\boxed{1}) \\ \text{ROOT} & \boxed{1} \end{bmatrix} \\[4ex]
\text{SYNSEM} & \begin{bmatrix} \text{LOC} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} \\ \text{VFORM} & \textit{indic} \end{bmatrix} \end{bmatrix} \\[3ex] \text{CONT} & \begin{bmatrix} \text{LOC} & [...] \end{bmatrix} \\[2ex] \text{ARG-ST} & \langle \text{NP}[\textit{3sg}],... \rangle \end{bmatrix} \end{bmatrix}
\end{bmatrix}
$$

The description of the lexeme LAVER in (12) can thus unify with the information in (13) to yield the more complete (but still partial) description in (14).

(14)

$$
\begin{bmatrix}
\textsc{laver}\ \&\ \textit{3sg-pres-indic-vb} \\[1ex]
\text{MORPH} & \begin{bmatrix} \text{I-FORM} & \textit{lave} \\ \text{ROOT} & \textit{lav-} \end{bmatrix} \\[4ex]
\text{SYNSEM} & \begin{bmatrix} \text{LOC} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{TRANS} & + \\ \text{HEAD} & \begin{bmatrix} \textit{verb} \\ \text{VFORM} & \textit{indic} \end{bmatrix} \end{bmatrix} \\[5ex] \text{CONT} & \begin{bmatrix} \textit{wash-rel} \\ \text{ACTOR} & i \\ \text{UNDERGOER} & j \\ \text{LOC} & [...] \end{bmatrix} \\[5ex] \text{ARG-ST} & \langle \text{NP}[\textit{3sg}]_i,\ \text{NP}_j \rangle \end{bmatrix} \end{bmatrix}
\end{bmatrix}
$$

Note that the ARG-ST list in (14) does not specify what subtype of *synsem* the arguments must be, yet constraints on the agreement properties of the subject argument have been 'unified in' to the partial word description for *lave* in (14), which specifies an I-FORM value in addition to the ROOT value inherited from the lexeme. We assume further that inflectional information always combines in this way, i.e. monotonically. By contrast, any phenomenon involving a change in the number of arguments in the ARG-ST list will be treated as derivational, rather than inflectional, i.e. in terms of a relation between distinct lexemes.

The lexeme description in (12) is quite sparse, making no mention of the valence features SUBJ and COMPS, whose values are systematically related to the ARG-ST list. Nor do the inflectional types fix this relation. Rather, this job is left for the third dimension of lexical structure in French, that of REALIZATION. The first type, *pl-wd*, is subject to the following constraints:[7]

---

[7]The sign $\oplus$ means list concatenation (or append) and $\bigcirc$ designates the shuffle operation. In the more complete analysis, as presented by Sag and Miller (in press) and Abeillé et al. (in preparation),

(15)

$$pl\text{-}wd \Rightarrow \begin{bmatrix} \text{MORPH} & \begin{bmatrix} \text{FORM} & \boxed{0} \\ \text{I-FORM} & \boxed{0} \end{bmatrix} \\ \\ \text{SYNSEM} & \begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & bas\text{-}vb \\ \text{VAL} & \begin{bmatrix} \text{SUBJ} & \langle\boxed{2}\rangle \\ \text{COMPS} & \boxed{3} \end{bmatrix} \\ \text{ARG-ST} & \langle\boxed{2}\rangle \oplus \boxed{3} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

The constraint in (15) guarantees that *pl-wd*s have an argument structure list corresponding to the simple concatenation of the values of the valence features SUBJ and COMPS; the SUBJ list must furthermore contain exactly one element. Since the SUBJ and COMPS values in general get 'cancelled' as a head combines with overt complements and the subject, this constraint has the effect of ensuring that all the arguments of a *pl-wd* are realized syntactically, rather than affixally.[8]

As for the type *cl-wd*, this is subject to the constraints shown in (16).[9]

(16)

$$cl\text{-}wd \Rightarrow \begin{bmatrix} \text{MORPH} & \begin{bmatrix} \text{FORM} & \text{F}_{PRAF} \; (\boxed{0}\,\boxed{4}) \\ \text{I-FORM} & \boxed{0} \end{bmatrix} \\ \\ \text{SYNSEM} & \begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & \boxed{4} \; / \; red\text{-}vb \\ \text{VAL} & \begin{bmatrix} \text{SUBJ} & \boxed{2} \\ \text{COMPS} & \boxed{3}\text{list}(non\text{-}aff) \end{bmatrix} \\ \text{ARG-ST} & (\boxed{2} \oplus \boxed{3}) \; \bigcirc \; \text{nelist}(aff) \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(16) first requires that all the members of the COMPS list be of type *non-aff*, i.e. these complements must either be *gap*s or else *canon*s (overt complements). (16) also guarantees that SUBJ and COMPS lists add up to be the ARG-ST list, except that one or more ARG-ST elements of type *aff* must be absent from the SUBJ or COMPS list, i.e. 'shuffled in' to constitute the ARG-ST list. Whenever an argument is of type *aff* and therefore does not belong to either the SUBJ or COMPS list, then the cliticized verb is realized with appropriate pronominal affixation. This effect is obtained via the function F_{PRAF}, which determines the form of *cl-wd*s only. F_{PRAF}, defined roughly as shown in (17), takes as input an inflected form (as determined by the relevant inflectional type) and adds prefixal or suffixal clitics (or no clitic form in the case of past participles) to determine the FORM value of a given *cl-wd*:

(17) F_{PRAF} (X, Y) =
    (a) X, if Y is [VFORM   *past-p*]
    (b) X $\oplus$ AFF-CL(USTER), if Y is a positive imperative form

---

there is the further possibility of an ARG-ST element of type *gap* appearing on the ARG-ST list, but not on the COMPS list. We will ignore issues of extraction here.

   [8]Further types may be required in order to allow for other words whose SUBJ value is empty (e.g. case-marking prepositions).

   [9]'List(*type*)'designates a list of objects, all of which are of type *type*; 'nelist' stands for 'nonempty list'.

(c) AFF-CL $\oplus$ X, otherwise.

The definition of AFF-CL given by Sag and Miller (in press) uses a template to fix affix position. The motivation for having F_{PRAF} vacuously applying to past participle forms is discussed in section 3 below.

The two subtypes of *cl-type* are subject to the following further constraints:

(18)
$$su\text{-}cl\text{-}wd \Rightarrow \left[\text{SYNSEM|LOC|CAT} \begin{bmatrix} \text{VAL|SUBJ} & \langle \ \rangle \\ \text{ARG-ST} & \langle aff,... \rangle \end{bmatrix} \right]$$

(19) $ns\text{-}cl\text{-}wd \Rightarrow \left[\text{SYNSEM|LOC|CAT|VAL|SUBJ} \ \langle \ X \ \rangle \right]$

These constraints guarantee that a *su-cl-wd* (e.g. *je-lave* or *je-le-lave*) must have an empty SUBJ list and a first argument that is of type *aff* (allowing for the possibility that other arguments are also of type *aff*). A *ns-cl-wd* (e.g. *le-lave*), by contrast, must have an element on its SUBJ list (and hence combines with a *canonical* subject locally or else has an extracted subject) and an *aff* elsewhere in its ARG-ST list (because the ARG-ST list of all *cl-wd*s must include at least one *aff* element that is not on any valence list).

Finally, notice that the constraints in (15) and (16) make reference to an additional HEAD feature type distinction: all *pl-wd*s are *basic-verb*s (*bas-vb*s), whereas the DEFAULT value for *cl-wd*s is *reduced-verb* (*red-vb*).[10] This distinction is crucial for our treatment of composition FAIRE, in virtue of the fact that it selects an infinitival argument specified as [HEAD *bas-vb*], will allow only uncliticized verbs (*pl-wd*s) as its argument, or else cliticized intrinsic clitic verbs (see below).

In light of these constraints, a form of LAVER that is both *3sg-pres-indic-vb* and *pl-wd* will obey not only the constraints in (14), but in fact all the constraints shown in (20).

(20)
$$\begin{bmatrix} pl\text{-}wd \ \& \ \text{LAVER} \ \& \ 3sg\text{-}pres\text{-}indic\text{-}vb \\[4pt] \text{MORPH} \begin{bmatrix} \text{FORM} & lave \\ \text{I-FORM} & lave \\ \text{ROOT} & lav\text{-} \end{bmatrix} \\[20pt] \text{SS|LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{TRANS} & + \\ \text{HEAD} & \begin{bmatrix} bas\text{-}vb \\ \text{VFORM} \ indic \end{bmatrix} \\ \text{SUBJ} & \langle \boxed{1} \rangle \\ \text{COMPS} & \langle \boxed{2} \rangle \\ \text{ARG-ST} & \langle \ \boxed{1}\text{NP[3sg]}_i \ , \ \boxed{2}\text{NP}_j \ \rangle \end{bmatrix} \\[20pt] \text{CONT} \begin{bmatrix} wash\text{-}rel \\ \text{ACTOR} & i \\ \text{UNDERGOER} & j \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

---

[10]The symbol '/' in (16) indicates a default type assignment for the value of the feature HEAD. For a conception of defaults particularly compatible with the present approach, see Lascarides et al. (1996), from whom we take the '/' notation.

This word (lexical description) enters into our analysis of such sentences such as *Jean lave les enfants* ('Jean washes the children.').

And a *su-cl-word* of this same inflectional and lexemic type obeys not only the constraint in (16), but also all the constraints in (21).

(21)
$$
\begin{bmatrix}
\textit{su-cl-wd} \text{ \& } \textsc{laver} \text{ \& } \textit{3sg-pres-indic-vb} \\[4pt]
\text{MORPH} \begin{bmatrix} \text{FORM} & \textit{il-le-lave} \\ \text{I-FORM} & \textit{lave} \\ \text{ROOT} & \textit{lav-} \end{bmatrix} \\[20pt]
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{HEAD} \begin{bmatrix} \textit{red-vb} \\ \text{VFORM} \quad \textit{indic} \end{bmatrix} \\
\text{SUBJ} \quad \langle\,\rangle \\
\text{COMPS} \quad \langle\,\rangle \\
\text{ARG-ST} \quad \langle\, \boxed{1}\text{NP}[\textit{p-aff,3sg}]_i \, , \, \text{NP}[\textit{p-aff}]_j \,\rangle
\end{bmatrix} \\[28pt]
\text{CONT} \begin{bmatrix} \textit{wash-rel} \\ \text{ACTOR} & i \\ \text{UNDERGOER} & j \end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

Here the SUBJ and COMPS value both are the empty list, and hence (21) cannot head a VP with an overt NP complement (complements must correspond to members of the head's COMPS list in HPSG); nor can it combine with an overt subject NP. The presence of the two *p-aff* elements in the argument structure of the verb triggers the desired morphological realization. Intuitively, when we consider *cl-wd*s from a lexeme like LAVER, whose subject and object are freely realized as a clitic affix or not, this is a 'reduced' realization of the lexeme. The situation is different in the case of intrinsic clitic verbs.

2.3   Intrinsic Clitics

Intrinsic (idiomatic) clitics represent complements which can only be realized affixally. Some examples of such expressions are (with the intrinsic clitic in boldface): ***en** vouloir à quelqu'un* ('have a grudge against someone'), ***en** avoir marre de quelque chose* ('to be fed up with something'), ***en** revenir de quelque chose* ('to be disappointed with something'), ***en** voir des vertes et des pas mûres* ('to have hard times'), ***n'y** voir que du feu* ('to be completely taken in'), ***y** voir clair* ('things are clear'), ***la** bailler belle* ('to tell a tall story'), ***le** porter beau* ('to look dapper'), ***se la** couler douce* ('to have it easy'), ***se** serrer la ceinture* ('to tighten one's belt'). Some examples are shown in (39):

(22) a. Jean en   veut   à tout le monde
Jean of-it wants to everybody

Jean is angry at everybody

b. Le responsable n'y verra   que du feu
the manager   in-it see-fut only fire

The manager will be completely taken in

Intrinsic clitics by definition never alternate with canonical arguments. The lexeme for an intrinsic clitic verb thus differs from those of other verbs in that it specifies one of its arguments as being of type *aff*. In addition, these verbs state lexemically that they are of type *cl-wd*, which has as a consequence not only that realization as a *pl-wd* is ruled out, but also that intrinsic clitic verbs never allow *aff* elements on their COMPS list (this is one of the constraints on the type *cl-wd* given in (16) above). This effect is crucial, as we shall see below. Finally, the HEAD value of an intrinsic clitic verb is lexically specified as *bas-vb*. This will also play a role in our analysis: it will have the effect of overriding the specification [HEAD   *red-vb*] that is given as a default for *cl-wd*s in (16).

For example, *en-vouloir à* ('be angry at') has the following lexemic description:

(23)   EN-VOULOIR-À:

$$
\begin{bmatrix}
\text{EN-VOULOIR-À \& } \textit{cl-wd} \\
\text{MORPH} \quad [\text{ROOT} \quad \textit{voul-}] \\
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{TRANS} & + \\
\text{HEAD} & \textit{bas-vb} \\
\text{ARG-ST} & \langle\, \text{NP}_i,\ \text{NP}[\textit{en-aff}]\,,\ \text{NP}[\textit{dat}]_j\,\rangle
\end{bmatrix} \\
\text{CONT} \begin{bmatrix}
\textit{anger-rel} \\
\text{EXPERIENCER} & i \\
\text{STIMULUS} & j
\end{bmatrix}
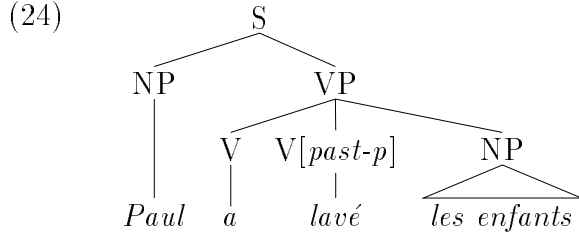\end{bmatrix}
\end{bmatrix}
$$

Thus the *cl-wd*s from this lexeme, unlike those from most verbal lexemes, are specified as [HEAD   *bas-vb*]. This property, as we will see, will endow such *cl-wd*s with many of the distributional properties of *pl-wd*s, including crucially the possibility of being an argument of composition *faire*. The lexeme in (23) is also (exceptionally, perhaps) transitive, a fact that will determine the realization of the causee when an infinitive form of this lexeme is embedded under composition *faire* (see sec. 4).

3   Composition With Tense Auxiliaries

Abeillé and Godard (1994, 1996a) defend an analysis of tense auxiliary constructions in French in terms of a flat structure where the auxiliary is the head and takes as complements the (bare) past participle and the complements of the latter. This analysis is motivated by several phenomena that set tense auxiliaries apart from control or raising verbs (taking VP complements) in French:
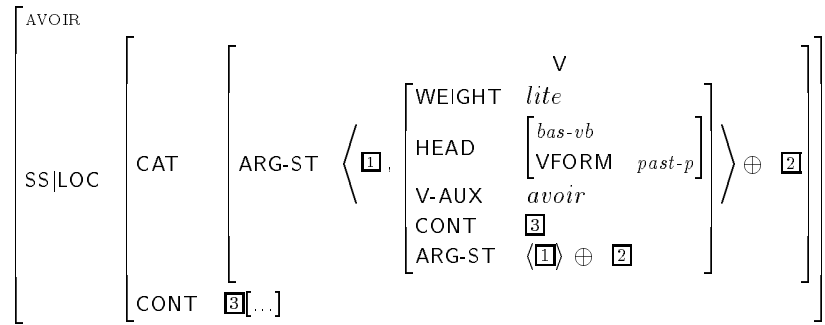
- constituency tests (pronominalization, question, cleft, VP preposing/deletion)

- *tough* constructions

- position and scope of manner adverbs

- coordination

The proposed structure for a sentence like *Paul a lavé les enfants* is the following:
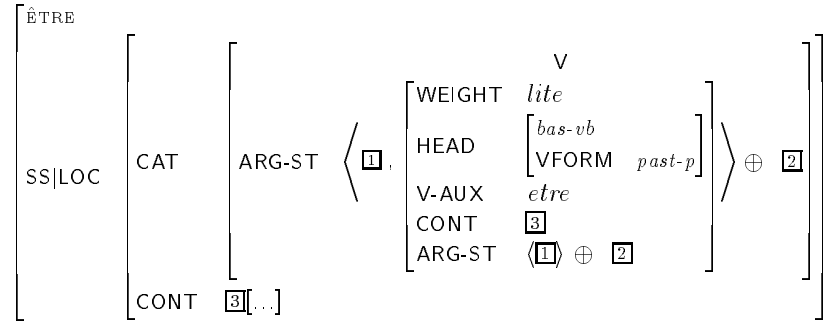
(24)

```
                    S
            ┌───────┴───────┐
           NP              VP
            │         ┌─────┴──────┐
            │         V   V[past-p]   NP
            │         │      │      ╱  ╲
          Paul        a    lavé   les enfants
```

In our present analsyis, the auxiliary specifies a sharing of ARG-ST members (rather than COMPS members) with the participle (a-composition). This modification[11] induces no change in the phrase structure, but is the key to accounting for the difference between the tense auxiliaries and FAIRE. Since tense auxiliaries involve a-composition, the arguments of the past participle are also arguments of the auxiliary verb. Hence clitic realization on the auxiliary (clitic 'climbing') is accounted for straightforwardly in terms of the following (simplified) lexemic descriptions of the tense auxiliaries:

(25) a. AVOIR (tense auxiliary):

$$
\begin{bmatrix}
\text{AVOIR} \\[2pt]
\text{SS|LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{ARG-ST} \left\langle \boxed{1},
\begin{bmatrix}
V \\
\text{WEIGHT} \quad lite \\
\text{HEAD} \begin{bmatrix} bas\text{-}vb \\ \text{VFORM} \quad past\text{-}p \end{bmatrix} \\
\text{V-AUX} \quad avoir \\
\text{CONT} \quad \boxed{3} \\
\text{ARG-ST} \quad \langle\boxed{1}\rangle \oplus \boxed{2}
\end{bmatrix}
\right\rangle \oplus \boxed{2} \\[4pt]
\text{CONT} \quad \boxed{3}[\dots]
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

b. ÊTRE (tense auxiliary):

$$
\begin{bmatrix}
\text{ÊTRE} \\[2pt]
\text{SS|LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{ARG-ST} \left\langle \boxed{1},
\begin{bmatrix}
V \\
\text{WEIGHT} \quad lite \\
\text{HEAD} \begin{bmatrix} bas\text{-}vb \\ \text{VFORM} \quad past\text{-}p \end{bmatrix} \\
\text{V-AUX} \quad etre \\
\text{CONT} \quad \boxed{3} \\
\text{ARG-ST} \quad \langle\boxed{1}\rangle \oplus \boxed{2}
\end{bmatrix}
\right\rangle \oplus \boxed{2} \\[4pt]
\text{CONT} \quad \boxed{3}[\dots]
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

The past participle arguments of tense auxiliaries share all of their arguments with the auxiliary, including the subject ($\boxed{1}$) (which is further constrained by various inflectional

---

[11]The c-composition analysis has been incorporated into previous HPSG analyses in order to analyze German nonfinite auxiliary, raising, and certain control constructions. See Kiss 1994, Hinrichs & Nakazawa 1994, and the references cited there.

types, as we have seen). This analysis gives the right analytic results: the auxiliary 'inherits' all the arguments of the infinitival (this is indicated by the two identities labelled [1] and [2] in (25a,b)). In addition, the auxiliary and its participle argument share their semantic content ([3]), to which the auxiliary adds only temporal or aspectual constraints. The feature V-AUX is the vehicle for auxiliary selection. (25a,b) specify that the two tense auxiliaries take past participles bearing the specification [V-AUX *avoir*] and [V-AUX *etre*], respectively. By default, past participles are specified as [V-AUX *avoir*], thus most verbal lexemes give rise to past participles that cannot combine with ÊTRE. The past participle complements in (25a,b) are further constrained: they must be [WEIGHT *lite*] (hence non-phrasal);[12] and they must be [HEAD *bas-vb*]. This is enough in the general case to ensure that cliticization happens only on the auxiliary.

In *Jean les a lavés* ('Jean has washed them.'), the form *les-a* has the following description (ignoring CONTENT):

$$(26) \quad \begin{bmatrix} \textit{ns-cl-wd} \ \& \ \textit{3sg-pres-indic-vb} \ \& \ \text{AVOIR} \\[4pt] \text{MORPH} \begin{bmatrix} \text{FORM} & \textit{les-a} \\ \text{I-FORM} & \textit{a} \end{bmatrix} \\[12pt] \text{SS|LOC|CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \textit{red-vb} \\ \text{VFORM} & \textit{indic} \end{bmatrix} \\[8pt] \text{VAL} \begin{bmatrix} \text{SUBJ} & \langle \boxed{1} \rangle \\[4pt] \text{COMPS} & \left\langle \boxed{3}\text{V} \begin{bmatrix} \text{WEIGHT} & \textit{lite} \\ \text{HEAD} & \begin{bmatrix} \textit{bas-vb} \\ \text{V-AUX} & \textit{avoir} \\ \text{VFORM} & \textit{past-p} \end{bmatrix} \\ \text{SUBJ} & \langle \boxed{1} \rangle \\ \text{ARG-ST} & \langle \boxed{1}, \boxed{2} \rangle \end{bmatrix} \right\rangle \end{bmatrix} \\[12pt] \text{ARG-ST} \ \langle \boxed{1}\text{NP}[\textit{3sg}], \boxed{3}, \boxed{2}\text{NP}[\textit{p-aff}] \rangle \end{bmatrix} \end{bmatrix}$$

The past participle is a *pl-wd*, hence its argument structure is the concatenation of its SUBJ and COMPS list. And, because LAVER is not an intrinsic clitic verb, this participle MUST be a *pl-wd*: if it were a *cl-wd* (with the *p-aff* present only in the ARG-ST list; the COMPS list being empty), then it would be [HEAD *red-vb*] (obeying the default constraint on *cl-wd*s) and could not be a complement of auxiliary *avoir*. On the other hand, as soon as one or more arguments of the auxiliary is typed as *aff*, then no finite words formed from the auxiliary can be a *pl-wd*: if such a word were a *pl-wd*, then it would also have an affix on its COMPS list and could not head a well formed VP, since no overt complements (all of which are [SYNSEM *canon*] – see above) would be compatible with the *aff* element on the head's COMPS list.[13] Hence when a past participle is not from an

---

[12]See Abeillé and Godard 1996b for discussion.

[13]For discussion of the participles of auxiliaries with special reference to the surcomposé, see Abeillé and Godard (1996a) and Abeillé et al. (in preparation). Infinitival *pl-wd* forms of auxiliaries, which do allow *noncan* elements on their COMPS list, are discussed below.

intrinsic clitic verbal lexeme, it must be a *pl-wd*; hence the clitics must be realized on the auxiliary, never on the participle.

When the participle is from an intrinsic clitic lexeme, however, it must always be a *cl-wd*. Yet, because intrinsic clitic verbs are lexemically specified as [HEAD *bas-vb*], they give rise to participles like the one in (27):

(27)

$$
\begin{bmatrix}
ns\text{-}cl\text{-}wd \,\&\, past\text{-}part \,\&\, \text{EN-VOULOIRÀ} \\[4pt]
\text{MORPH} \quad \begin{bmatrix} \text{FORM} & voulu \\ \text{I-FORM} & voulu \end{bmatrix} \\[16pt]
\text{SS|LOC} \quad \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{TRANS} & + \\[4pt]
\text{HEAD} & \begin{bmatrix} bas\text{-}vb \\ \text{V-AUX} & avoir \\ \text{VFORM} & past\text{-}p \end{bmatrix} \\[14pt]
\text{VAL} & \begin{bmatrix} \text{COMPS} & \langle\, \boxed{1}\, \rangle \end{bmatrix} \\[6pt]
\text{ARG-ST} & \langle\, \text{NP}_i,\ \text{NP}[en\text{-}aff],\ \boxed{1}\text{NP}[dat]_j \,\rangle
\end{bmatrix} \\[30pt]
\text{CONT} \begin{bmatrix} anger\text{-}rel \\ \text{EXPERIENCER} & i \\ \text{STIMULUS} & j \end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

And this is compatible with AVOIR, which will compose all members of the ARG-ST list in (27). The participle in (27) will not realize any clitics, however, because F_{PRAF} attaches no affixes to past participles (see the definition of F_{PRAF} in (17)). But again, the finite auxiliary has to be a *cl-wd*, realizing the clitics that are members of its argument structure via a-composition. The apparent result is the same, e.g. sentences like (28); but the type assigned to the participle is *ns-cl-wd*.

(28) Jean en   a   voulu   à   tout le monde
      Jean of-it has wanted to everybody

   Jean was angry at everybody

4   Composition FAIRE

Abeillé et al. (1997, to appear), following a suggestion by Hyman & Zimmer (1976), contrast two types of causative structure. The first of these, illustrated in (1) (repeated here as (29)), is a composition structure, where the causative verb is the head of a flat VP, subcategorizes for an NP (the causee), an infinitive and (via composition) the complements of that infinitive.[14]

---

[14]To account for what seems to be 'optional clitic climbing', Monachesi (1995), following a suggestion of Rizzi (1978), also proposes two different structures for restructuring verbs in Italian: a VP complement structure (with the clitics downstairs), and a flat structure (with the clitics upstairs). Under her proposal, the causative FARE only takes the flat composition structure. Moore (1990) posits two structures for a set of verbs in Spanish which includes causative and perception verbs, but they do not seem to completely correlate with clitic position.

(29) a. Paul fera   lire   Proust aux   élèves   de terminale
          Paul make-fut to-read Proust to-the students of senior-year

          Paul will make the senior year students read Proust

      b. Paul le fera   lire   aux   élèves   de terminale
          Paul it make-fut to-read to-the students of senior-year

          Paul will make the senior year students read it

      c. * Paul fera   le lire   aux   élèves   de terminale
          Paul make-fut it to-read to-the students of senior-year

          (same interpretation as (1b))

This contrasts with the second structure for causatives, similar to the VP complement structure usually posited for verbs like *convaincre*, as in (2) (repeated here as (30)):

(30) a. Paul convaincra   Marie [de lire   Proust]
          Paul convince-fut Marie [of to-read Proust]

          Paul will convince Marie to read Proust

      b. Paul convaincra   Marie [de le lire]
          Paul convince-fut Marie [of it to-read

          Paul will convince Marie to read it

      c. * Paul le convaincra   Marie de lire
          Paul it-convince-fut Marie of to-read

          (same interpretation as (2b))

Here the verb combines with two complements: an NP and an infinitival VP. Abeillé et al. argue that the double complementation analysis, which is widely accepted for *laisser* and perception verbs, should be extended to *faire* as well.

The VP complementation structure for FAIRE, which is subject to considerable variation across speakers, differs from the composition structure in that the object controller must be pronominal:

(31) a. * Paul fera les élèves de terminale [lire Proust]
          Paul will make the senior year students read Proust

      b. Paul les   fera   [lire   Proust]
          Paul them make-fut [to-read Proust]

          Paul will make them read Proust

The VP complementation structure also differs in freely allowing clitics to be realized on the downstairs verb heading the VP complement:

(32) Paul les   fera   [le lire]
      Paul them make-fut [it to-read]

      Paul will make them read it

Compare this with (29b,c), which show that in an example that is unambiguously an instance of composition *faire*, clitics can only be realized upstairs on the causative; never on the infinitive.

4.1 Composition Causatives and Upstairs Cliticization

If the double complementation analysis is correct, as we believe it to be, it changes the way we should look at the cliticization facts in causative constructions. One of our central claims is that composition causatives never allow downstairs cliticization of the sort shown in (32). From this perspective, so-called 'clitic climbing' is not optional in French. Rather, there is an alternation between two different structures; and in each structure there is a determinate position for the realization of clitics.

There are a number of other properties that distinguish the composition structure from the VP complementation structure. Most notable among these is the well known fact that the realization of the causee depends on the transitivity of the infinitival verb: it is a dative NP (NP[*dat*]) if the V is transitive (as in (29) or (33a)); it is an accusative NP (NP[*acc*]) if the V is intransitive (as in (33b)):[15]

(33) a.   Paul fera   lire   Proust aux/*les   élèves   de terminale.
           Paul make-fut to-lire Proust to-the/*the students of senior-year

           Paul will make the senior year students read Proust.'

      b.   Paul fera   travailler les   enfants/*aux enfants.
           Paul make-fut to-work   the/*to-the children

           Paul will make the children work

The flat structure analysis, where (an inflected form of) FAIRE, the infinitival and its complements, and the causee are all sisters in a single VP (Morin 1978, Aissen and Perlmutter 1983, Legendre 1987, Miller 1991, Koenig 1994), provides the basis for a simple account of these properties (which are surveyed in more detail in Abeillé al. (in preparation)). Here, we will focus on the analysis of the composition causative.
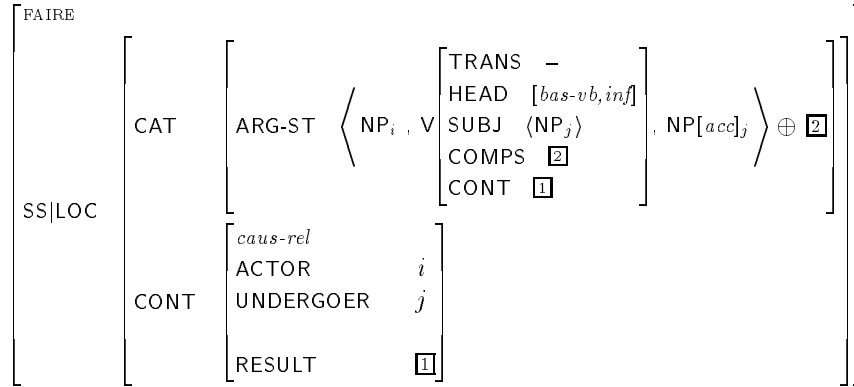
In our analysis, both the causee and the complements subcategorized by the infinitival V are complements of FAIRE.[16] Composition FAIRE takes as its arguments (a) the causer, (b) the infinitival V, (c) the causee, and (d) the complements which the infinitival V

---

[15]We ignore here the *faire-par* construction, which is also an instance of composition FAIRE.
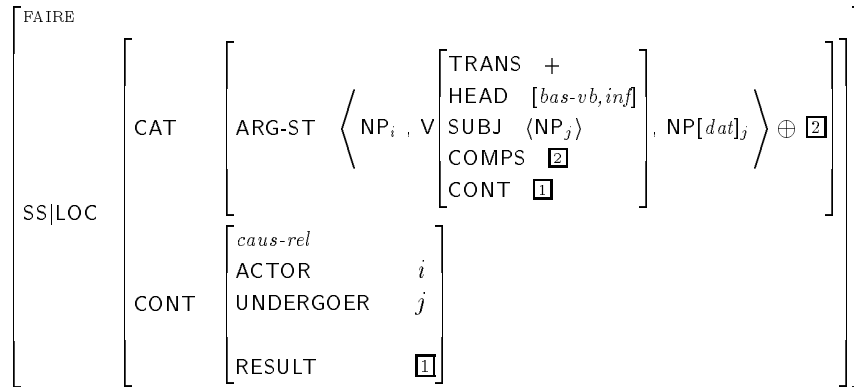
[16]There is also positive evidence that the causee is a complement of FAIRE, based on 'quantitative *en*' distribution (Milner 1978) and on heavy-NP shift (Miller 1991).

subcategorizes for.[17] Moreover, the causee is coindexed with the (unrealized) subject of the infinitival V, as in ordinary control constructions, and it is underspecified for case. The correct realization of the causee (accusative with intransitive infinitive; dative with transitive infinitive) is guaranteed by the existence of the two distinct lexemes illustrated in (34).[18]

(34) a. Composition FAIRE (intransitive complement):

$$
\begin{bmatrix}
\text{FAIRE} \\
\text{SS|LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{ARG-ST} \left\langle \text{NP}_i \, , \, \text{V}
\begin{bmatrix}
\text{TRANS} & - \\
\text{HEAD} & [bas\text{-}vb, inf] \\
\text{SUBJ} & \langle \text{NP}_j \rangle \\
\text{COMPS} & \boxed{2} \\
\text{CONT} & \boxed{1}
\end{bmatrix}
, \text{NP}[acc]_j \right\rangle \oplus \boxed{2}
\end{bmatrix} \\
\text{CONT}
\begin{bmatrix}
caus\text{-}rel \\
\text{ACTOR} & i \\
\text{UNDERGOER} & j \\
\text{RESULT} & \boxed{1}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

b. Composition FAIRE (transitive complement):

$$
\begin{bmatrix}
\text{FAIRE} \\
\text{SS|LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{ARG-ST} \left\langle \text{NP}_i \, , \, \text{V}
\begin{bmatrix}
\text{TRANS} & + \\
\text{HEAD} & [bas\text{-}vb, inf] \\
\text{SUBJ} & \langle \text{NP}_j \rangle \\
\text{COMPS} & \boxed{2} \\
\text{CONT} & \boxed{1}
\end{bmatrix}
, \text{NP}[dat]_j \right\rangle \oplus \boxed{2}
\end{bmatrix} \\
\text{CONT}
\begin{bmatrix}
caus\text{-}rel \\
\text{ACTOR} & i \\
\text{UNDERGOER} & j \\
\text{RESULT} & \boxed{1}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

In both of these patterns for composition FAIRE,[19] the argument structure ends in a sublist (tagged $\boxed{2}$ in both (34a,b)) that is identified with the COMPS list of the infinitive

---

[17]In the Lexical-Functional Grammar framework, complements can be shared (in the functional-structure) without being sisters of the causative verb (in the constituent structure). Zaenen and Dalrymple (1996), building on earlier work of Alsina (1996), represent causative constructions in French as hierarchical from the constituency point of view (FAIRE takes a VP complement) but 'flat' from the functional point of view (the functional structure of FAIRE and the infinitival are fused).

[18]We assume composition FAIRE takes three semantic arguments: the causer (ACTOR), the causee (UNDERGOER) and the event denoted by the infinitival V. The justification of this choice over the dyadic alternative is a matter of some debate. Nothing in what follows depends on this.

[19]It is of course tempting to try to collapse these two composition causative types into one, relying on the fact that French in general allows only one (role-assigned) accusative per argument structure to explain the distribution of accusative and dative causees. Such an analysis (first suggested by Liz Bratt – see Bratt 1990) would postulate that composition FAIRE is transitive, relying on the fact that transitives

argument. Note that this differs crucially from the tense auxiliaries, whose analogous ARG-ST sublist is identified with the ARG-ST of the infinitive. (35)–(36) show partial tree representations of the VPs in *Paul fait lire Proust aux élèves de terminale* ('Paul makes the senior year students read Proust.') and *Paul fait rire les enfants* ('Paul makes the children laugh').[20]

(35)

(36)
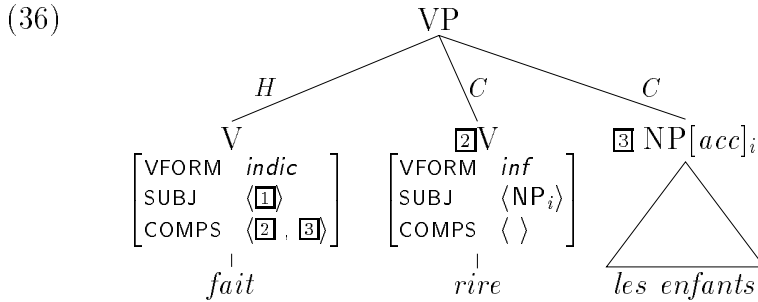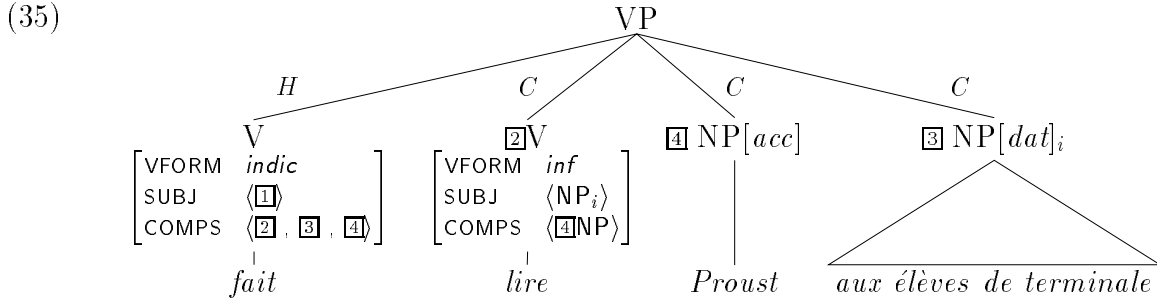
In these structures, the inflected form of FAIRE is a *pl-wd* – without clitic morphology.

Clitic climbing is straightforwardly explained under the composition analysis, since the elements cliticized onto FAIRE are analyzed as arguments of FAIRE. In (37), for example, *le-fait* is a *ns-cl-wd* with four elements on its ARG-ST including the *p-aff*, but only two elements on its COMPS list, as shown in (38).

(37)   Paul le fait lire aux élèves.
       'Paul makes the students read it.'

---

take one and only one NP object to explain the distribution of causees. Our best attempts at executing this to date, however, have been thwarted by the fact that some transitives need not realize their object on the COMPS list (e.g. VOIR), other transitive verbs require an S or VP complement instead of an NP (e.g. PROMETTRE), and certain intrinsic clitic verbs (e.g. EN VOULOIR À) require an argument (the *en*) which, while arguably accusative, cannot be composed into the ARG-ST of FAIRE (as they are not realizable as affixes on FAIRE), and hence cannot contribute an accusative to the determination of FAIRE's transitivity.

[20] Here we include functional annotations on the various branches (H for the head, C for complements).

$$
(38) \quad
\begin{bmatrix}
\textsc{faire} \ \& \ \textit{ns-cl-wd} \ \& \ \textit{3sg-pres-indic-vb} \\[4pt]
\text{MORPH} \quad
\begin{bmatrix}
\text{FORM} & \textit{le-fait} \\
\text{I-FORM} & \textit{fait}
\end{bmatrix} \\[12pt]
\text{SS}|\text{LOC}
\begin{bmatrix}
\text{CAT}
\begin{bmatrix}
\text{ARG-ST} \ \Big\langle NP_i \ , \ \boxed{2}V
\begin{bmatrix}
\text{HEAD} & [\textit{bas-vb,inf}] \\
\text{TRANS} & + \\
\text{SUBJ} & \langle NP_j \rangle \\
\text{COMPS} & \langle \boxed{4} \rangle \\
\text{CONT} & \boxed{1}
\end{bmatrix}
, \boxed{3}NP[\textit{dat}]_j \ , \ \boxed{4}[\textit{p-aff},\textit{acc}] \Big\rangle \\[4pt]
\text{VAL}|\text{COMPS} \ \langle \boxed{2} , \boxed{3} \rangle
\end{bmatrix} \\[12pt]
\text{CONT}
\begin{bmatrix}
\textit{caus-rel} \\
\text{ACTOR} & i \\
\text{UNDERGOER} & j \\
\text{RESULT} & \boxed{1}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

The infinitive *lire* in (37), on the other hand, is a *pl-wd*, with a *p-aff* on both its COMPS and ARG-ST lists (arising from unification with the relevant ARG-ST element of *le-fait*). Cliticization on the infinitival is ruled out in this case: if the complement V were a *ns-cl-wd* (with a *p-aff* element on its ARG-ST but not on its COMPS list), then it would be specified as [HEAD *red-vb*] (by the default constraint in (16)) and could not be a complement of FAIRE.

There are other cases, however, where cliticization is intuitively 'basic', and hence IS allowed on the infinitive. It is to these that we now turn.

4.2 Composition Causatives and Downstairs Cliticization

We can now deal with those clitics that occur on the infinitival V complement of composition FAIRE. These are either intrinsic clitic or reflexive clitic verbs.[21]

---

[21] For some speakers, quantitative *en* provides a third set of verbs that allow 'downstairs' cliticization (Rouveret & Vergnaud 1980):

(i) Paul fera   en   acheter trois à Marie
     Paul make-fut of-them to-buy three to Marie

Paul will make Marie buy three of them

Notice that the same *en* can also appear upstairs for the same speakers:

(ii) Marie en   fera   acheter trois à Paul
      Marie of-them make-fut to-buy three to Paul

Marie will make Paul buy three of them.

Since quantitative *en* is introduced by a lexeme-to-lexeme lexical rule that constrains the accusative complement to be an indefinite pronominal complement and adds a *p-aff en* in the ARG-ST of the verb (see Abeillé et al. in preparation), the HEAD value of the output can optionally be typed as *bas-vb* in our account of this dialect, thus allowing either the *pl-wd acheter* or the *cl-wd en-acheter* as the complement of composition FAIRE.

The examples in (39) illustrate the basic fact that intrinsic clitics are realized downstairs in the composition causative construction.[22]

(39) a. Une telle décision fera   en   vouloir à tout le monde à Jean
          A   such decision make-fut of-them to-want to everybody   to Jean

          Such a decision will make Jean angry at everybody

      b. Cette manoeuvre a fait n'y voir que du feu au   responsable
          This maneuver has made in-it to-see only fire   to-the manager

          This maneuver caused the manager to be completely taken in

      c. La   crise fait se   serrer   la ceinture à tout le monde
          The crisis makes se_{dat} to-tighten the belt   to everybody

          The crisis is making everyone tighten their belt

It is clear that we have here an instance of composition FAIRE, since the causee is realized as an NP[*dat*], and the idiomatic verb is transitive.

These facts follow from our analysis. Composition *faire*, like the tense auxiliaries, selects a *bas-vb* complement. As we saw earlier, the intrinsic clitic verbs and reflexive verbs are the only *cl-wd*s that are nonetheless specified as [HEAD *bas-vb*]. Thus any infinitive formed from an intrinsic clitic verb or reflexive verb can function as the complement of *faire*.

The key to explaining why the clitics of intrinsic clitic verbs cannot climb up to attach to composition FAIRE is the assumption that FAIRE involves c-composition. Given that the complements of intrinsic clitic verbs must all be *non-aff* (the constraint in (16) requires this of all *cl-wd*s), intrinsic clitics can only belong to the ARG-ST list of the infinitive – never to its COMPS list. Since composition FAIRE inherits its complements from the COMPS list of the infinitival, it follows that it can never compose an intrinsic clitic into its argument structure and hence can never realize an intrinsic clitic as a pronominal affix. This is how we block (40):

(40) *Ca en fera vouloir à tout le monde à Jean.
       That will make everyone mad at Jean.

Recall that this behavior is crucially different from what happens with tense auxiliaries, which involve a-composition (sharing of ARG-ST lists) rather than c-composition. The tense auxiliaries, as we saw in section 3, incorporate intrinsic clitics into their argument structure like any other clitic, and hence may realize them as pronominal affixes. Thus the

---

[22]Certain expressions (such as *en voir des vertes et des pas mûres* 'to go through hard times' [literally: 'to see green ones and unripe ones']) also allow their clitics to attach to FAIRE. In our analysis, this effect is achieved by lexically restricting the relevant argument to be *en-aff*, but not requiring the verb to be of type *cl-wd*. This correctly allows for an infinitival *pl-wd* realization with the *en-aff* on the COMPS list. This *en-aff* can then be realized on the composition causative via c-composition.

difference between c-composition and a-composition accounts for the fact that intrinsic clitics climb onto tense auxiliaries, but not onto composition *faire*.

The behavior of reflexive clitics is similar to that of intrinsic clitic verbs. Their properties are sufficiently complex, however, to warrant separate discussion.

5   Reflexive verbs

Reflexive clitics are the most discussed subset of clitics occuring downstairs with composition FAIRE. The data have been oversimplified in the literature (e.g. Kayne 1975, Grimshaw 1982), which assesses all reflexives as equally possible in composition FAIRE complementation. This is in fact an important area of variation, where speakers have no hesitation about their own judgments and express disbelief when learning that others may have different judgments. Although a complete description of reflexive verbs is clearly outside the scope of this paper, it is necessary to go into a bit of relevant background.

Let us call reflexive verbs the verbs which host reflexive clitics, and which have the form *se*+verb, where *se* stands for any reflexive clitic. Following Grevisse (1969: 549-555), and leaving aside possible further semantic distinctions, we distinguish between three classes of reflexive verbs:

(a) 'true' reflexives, where *se* alternates with an accusative or dative argument;

(b) 'medio-passives', where *se* appears to be a grammatical marker, not an argument; and

(c) 'intrinsic' reflexives, which only have a reflexive form.

These are illustrated in (41):[23]

(41)   a.   Jean se lave
            Jean se washes

            Jean washes himself

       b.   Ce   livre se vend bien
            This book se sells well

            This book sells well

       c.   Jean s' évanouit
            Jean se faints

            Jean is fainting

---

[23]Some add benefactive or ethical datives which are not syntactically different from intrinsic reflexives, or inchoative reflexives (Ruwet 1972, Koenig 1994), which are not syntactically different from mediopassives.

These reflexive clitics can all appear on the infinitives that function as complements of composition FAIRE:[24]

(42) a. Marie a fait se laver les enfants
          Marie has made se to-wash the children

          Marie made the children wash themselves

      b. Le snobisme fait se vendre bien les classiques
          The snobism makes se to-sell well the classics

          Snobism makes the classics sell well

      c. La chaleur a fait s'évanouir Paul
          The heat   has made se-to-faint Paul

          The heat made Paul faint

Morphologically, the status of *se* is clear: it belongs to the set of verbal clitics, and has its position in the clitic template (Sag and Miller in press). However, it is not at all clear whether it should be treated as a pronominal affix or as a 'marker'– the morphological reflex of a particular verbal type. In fact there are two families of analyses of Romance reflexives, which both have, as Alsina (1996) observes, certain strengths and weaknesses. In the first type of analysis, reflexive verbs do not differ in any essential way from other verbs that host clitics; the difference lies in the binding properties of the clitic, which must be coindexed with the verb's subject. Under the second approach, the reflexive clitic is simply an indicator of certain specific properties that make reflexive verbs different from other clitic-bearing verbs. It is natural that these two kinds of analysis should have arisen, as both are motivated by a desire to provide a unified analysis of a single morphological entity, in spite of the considerable syntactic and semantic heterogeneity of reflexive verbs. While we acknowledge the specific behavior of (most) reflexive verbs, we maintain that the reflexive morpheme in French corresponds systematically to an element of the verb's ARG-ST.

The behavior of certain reflexive verbs in causative and impersonal constructions for many speakers, as well as the selection of auxiliary *être*, provide insight perhaps into the recurrent intuition that reflexive clitics are somewhat different from other clitics. Certainly no other clitic causes a verb to change the auxiliary verb it selects (a change that is true for all reflexives in standard French). No other clitic changes argument structure (as medio-passives do: their subject is the complement of the input verb). And no other clitic alters the transitivity of a verb (as do medio-passives and certain cases of true reflexives). Finally, the reflexive clitic does not correspond to a semantic argument, at least in intrinsic reflexives and medio-passives. For all these reasons, it has been called a marker (Grimshaw 1982, Desclés et al. 1986, Koenig 1994).

---

[24]All speakers accept reflexive verbs of classes (b) and (c) as complement of causative verbs, while only some of them, accept class (a). See below for more on interspeaker variation.

However, other properties indicate that *se* corresponds to an element of the ARG-ST, just like other complement clitics. Consider for instance participle agreement. In most cases, the (active) past participle in French agrees in number and gender with a non-canonical accusative complement.[25] With most reflexive verbs, it is impossible to decide whether the participle agrees with the subject or the reflexive element. However, dative reflexivization makes it clear that these participles follow the general pattern. Thus (43a), where the accusative reflexive induces participle agreement, contrasts with (43b), which contains a dative reflexive and a non-agreeing participle, and with (44), where the participle agrees with the gap, rather than the subject:

(43) a. Marie s'est coupée.
    Marie$_{fsg}$ se$_{acc}$-is cut$_{fsg}$

    Marie cut herself.

  b. Marie s'est coupé le doigt
    Marie$_{fsg}$ se$_{dat}$-is cut$_{msg}$ the finger

    Marie cut her finger.

(44) La maison qu'il s'est construite
   The house$_{fsg}$ that he$_{msg}$ se$_{dat}$-is built$_{fsg}$
   The house that he built for himself

In our analysis, a past participle shows agreement with a *noncan* accusative element on its ARG-ST list (Abeillé and Godard 1996a; Sag and Miller in press). Since the participle of reflexive verbs follows the same pattern, this provides a reasonably clear indication that the ARG-ST contains an element corresponding to the reflexive, just as it does for clitics in general.

Here we analyze the reflexive element in terms of an anaphor (an *a-aff*) bound by the subject of the verb.[26] We know that different anaphors may have diverse antecedent

---

[25] This is true for all (active) verbs, except for a few intransitive verbs, which select *être*, and agree with the subject.

[26] Intriguing data in inversion and control structures indicate that this may be an oversimplification: the V does not agree in person with a subject or a controller that follows it, although it agrees in number (Marandin 1997); the reflexive morpheme does not agree in person either:

(i) A la Fac   se sont alors rencontrés [Marie et toi],
  At the University se are$_{3pl}$ then met [Marie and you]$_{2sg}$

  qui étiez tous deux étudiants en médecine
  who were$_{2pl}$ both students in medicine

  Marie and you, who were both medical students, met at the University.

These facts can be interpreted as showing that person agreement should be distinguished from number (and gender) agreement; *se* may thus be thought of as agreeing with the verb's agreement features, rather than with the subject. We leave this problem for future research.

conditions within the same language as well as cross-linguistically (see, e.g. Dalrymple 1993). In HPSG, Binding Principles are constraints on the (syntactic) argument structure (Pollard & Sag 1992, 1994; Manning 1994), which is the concatenation of the subject and complements. Within this theory, the obligatory coindexation illustrated above indicates that the argument structure of reflexive verbs contains an element coindexed with the subject, which corresponds to the reflexive clitic. We formulate Principle A of Binding theory for French as follows, with *a-aff* being the *synsem* type for s(ubject)-anaphors:

(45)   'Principle A' ('parameterized' for French):
       A locally (s-)commanded (s-)anaphor must be locally (s-)bound.

A type hierarchy which is relevant here concerns the types of content for nominal categories, which includes the content of *aff* elements. Non-reflexive clitics are of type *personal-pro*; reflexive clitics are of type *anaphor*, since such verbs have either a reflexive or a reciprocal interpretation.

Finally, all reflexive clitic verbs in standard French select auxiliary *être*, in spite of their differences. We may thus assume the following constraint on past participles:[27]

(46)
$$\left[\text{SS|LOC|CAT} \begin{bmatrix} \text{HEAD} & \left[\text{VFORM } {past\text{-}p} \right] \\ \text{ARG-ST} & \textit{ana-list} \end{bmatrix} \right] \Rightarrow \left[\text{SS|LOC|CAT} \left[\text{HEAD} \left[\text{V-AUX } {etre} \right] \right] \right]$$

Here an *ana-list* is a list that contains an *a-aff* element. So what (46) says is that any past participle containing an *a-aff* element must be specified as [V-AUX *etre*].[28]

We now turn to a more detailed consideration of the individual categories: intrinsic reflexives, true reflexives and medio-passives.[29]

---

[27]As argued in Abeillé et al (in prep), it is impossible to account for the difference in auxiliary selection between the basic verb and the reflexive verb by appeal to any independent syntactic or semantic property in French, contrary to what has been proposed for Italian (Perlmutter 1983, Burzio 1986) or Dutch (Zaenen 1993). Coindexation between the subject and a complement is certainly insufficient to induce *être*, since the non-reflexive verb with a pronoun co-indexed with the subject has auxiliary *avoir*:

(i) Paul n'a lavé que lui-même
     Paul washed only himself

The explanation based on the presence of a 'trace' in object position (Burzio 1986) is also problematic. It is unsupported for intrinsic reflexives (like s'ÉVANOUIR), as well as for medio-passives, since the reflexive clitic does not alternate with any overt constituent. In the unaccusative analysis of medio-passives (Grimshaw 1990), there is a 'trace' in object position. However, there are decisive arguments against this analysis. See Alsina 1996 for discussion.

[28]This conditional formulation is easily replaced by one where the relevant constraints all 'live on' types. That formulation appeals to two subtypes of *past-part*.

[29]True reflexive verbs may have a reflexive or reciprocal interpretation (if the subject denotes a plurality), v. Melis (1987). We keep the name 'reflexive' in spite of this slight inaccuracy.

5.1 Intrinsic reflexive verbs

Intrinsic reflexive verbs, like the one in (47), do not alternate with nonreflexive verbs, at least synchronically.[30]:

(47) a. Julie s'évanouit souvent
          Julie often faints

      b. * Julie évanouit (son esprit)
          Julie faints (her mind)

Traditional intrinsic reflexives are intransitives: not only do they cooccur with an accusative causee in causative constructions (as in (42c)), they also alternate with an impersonal verb:

(48) a. Plusieurs personnes s'évanouissaient   sous l'effet   de la   chaleur
          Several   persons   se-faint-imperf-3pl under the-effect of the heat

          Several people fainted because of the heat

      b. Il s'évanouissait   plusieurs personnes sous   l'effet   de la   chaleur
          It se-faint-imperf-3sg several   persons   under the-effect of the heat

          There were several people fainting because of the heat

Our analysis of verbs of this category is the same as our treatment of intrinsic clitic verbs, except that the [V-AUX *etre*] constraint applies to all participles formed from this lexeme:

(49) S'ÉVANOUIR:

$$
\begin{bmatrix}
\text{S'ÉVANOUIR \& } cl\text{-}wd \\
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{TRANS} & - \\
\text{HEAD} & bas\text{-}vb \\
\text{ARG-ST} & \langle \text{ NP}_i, \text{ NP}[acc,\ a\text{-}\mathit{aff}] \rangle
\end{bmatrix} \\
\text{CONT} \begin{bmatrix}
\mathit{faint\text{-}rel} \\
\text{UNDERGOER} & i
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

Like other intrinsic clitic verbs, intrinsic reflexive verbs can be complements of composition FAIRE because they are lexically specified as [HEAD *bas-vb*], and this value is inherited by their cliticized verbal forms. They do not allow clitic climbing because their COMPS list disallows *aff*-type elements (again because of the constraints on *cl-wd* in (16) above). The intrinsic clitic *se* thus cannot be attached to composition FAIRE, because it cannot be part of the COMPS list of the infinitive and hence cannot be inherited as an argument of FAIRE.

---

[30]They are called 'inherent reflexives', 'intrinsic reflexives', or 'essential reflexives' in reference grammars; we use the term 'intrinsic' for the whole class of clitics (and verbs bearing them) which occur downstairs in causative constructions.

5.2   True reflexives

With true reflexive verbs, the clitic alternates with an argument, either an accusative or dative NP complement, in the same way as pronominal non-reflexive clitics. True reflexive verbs can occur as complements of FAIRE only for certain speakers (who we will refer to as 'A-speakers'). Thus, there are two descriptions of true reflexive verbs: one for A-speakers, which treats them as *bas-vb*; and one for B-speakers, which analyzes them as *red-vb* (like other cliticized verbs).

Reflexive verbs are often characterized as intransitive in the literature. However, whereas medio-passives are always intransitive (see below), true reflexives are somewhat more complicated, as we will explain. We make use of two main criteria for transitivity: impersonal and causative constructions. If a given verb alternates with an impersonal verb, and makes the causee appear as an accusative NP (in the composition causative), then that verb is intransitive. For A-speakers, who accept them as complements of FAIRE, true reflexives with an accusative affix are intransitive, since they co-occur with an unmarked causee (as in (42a)) and alternate with an impersonal verb:[31]

(50)   a.   Quelqu'un se lavait   dans la   fontaine
            Someone   se wash-imperf-3sg in   the fountain

            Someone was washing himself in the fountain.

       b.   Il se lavait   quelqu'un dans la   fontaine
            It se wash-imperf-3sg someone   in   the fountain

            There was someone washing himself in the fountain.

However, the transitivity of true dative reflexives is independently determined. These verbs have the same transitivity as their non-reflexive counterparts. Thus the verb S'OFFRIR is transitive because OFFRIR is:

(51)   a.   Certains journalistes s'offriront   un exemplaire des   Mémoires
            Some   journalists se-give-fut-3pl a   copy   of-the Memoirs

            Some journalists will buy a copy of the Memoirs
            for themselves.

       b.   *Il s'offrira   un exemplaire des   Mémoires certains journalistes
            It se-give-fut-3sg a   copy   of-the Memoirs some   journalists

---

[31]Cliticization by itself does not turn a transitive verb into an intransitive; there is no impersonal construction corresponding to *un enfant le lavait dans la fontaine* ('a child was washing it in the fountain'):

(i)   *Il le lavait   un enfant dans la   fontaine
       It it wash-imperf-3sg a   child in   the fountain

      (putatively) *There was a child washing it in the fountain.*

27

There will be some journalists who buy a copy of the Memoirs
for themselves

c. Leur   profession fera   s'offrir un exemplaire des   Mémoires à
    Their job   make-fut se-give a   copy   of-the Memoirs to
    certains journalistes
    some   journalists

Their job will make some journalists buy a copy of the memoirs
for themselves

By contrast, for B-speakers, who do not accept true reflexive verbs under composition FAIRE, the impersonal usage in (50b) is also unacceptable.

For A-speakers, then, we define a lexical rule that derives intransitive reflexive lexemes like (52) (with an accusative *a-aff*) from the corresponding basic transitive lexeme.[32] The result is lexemes like the one shown in (52):

(52)
$$\begin{bmatrix} acc\text{-}refl\text{-}lxm \\ \text{MORPH} \quad \begin{bmatrix} \text{ROOT} & lav\text{-} \end{bmatrix} \\ \text{SS|LOC} \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{TRANS} & - \\ \text{HEAD} & \begin{bmatrix} \text{VFORM} & indic \end{bmatrix} \\ \text{ARG-ST} & \langle\ \text{NP}_i,\ \text{NP}[acc,\ a\text{-}aff]_j\ \rangle \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} wash\text{-}rel \\ \text{ACTOR} & i \\ \text{UNDERGOER} & j \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Binding theory, which all words must obey, then guarantees that the two indices i and j in (52) must be identical. Thus an inflected form like *se-laver* inherits all the information in (52) and hence is a possible complement of composition FAIRE for A-speakers. B-speakers lack this rule; for them, *se-laver* must obey the default [HEAD *red-vb*] specification. Hence in this variety, there is no possibility of embedding true reflexives under composition FAIRE.

For dative reflexives, where no change in transitivity is involved in any variety of French we are familiar with, there is no need to posit a lexical rule. A-speakers allow such verbs in the composition causative because their grammar apparently includes the following constraint:

(53) (A-Varieties only)

$$\begin{bmatrix} \text{SS|LOC|CAT} & \begin{bmatrix} \text{ARG-ST} & ana\text{-}list \end{bmatrix} \end{bmatrix} \Rightarrow \begin{bmatrix} \text{SS|LOC|CAT|HEAD} & bas\text{-}vb \end{bmatrix}$$

---

[32]Note that in our analysis, ARG-ST cannot be used to predict transitivity, as there are intransitive verbs with an accusative NP on their ARG-ST list.

Thus for the A variety, all reflexive verbs override the *red-vb* default for *cl-wd*s and hence all reflexive verbs may appear in the composition causative.[33]

To conclude our discussion of true reflexives and composition FAIRE, notice that the *a-aff* element is a member of the infinitive's ARG-ST list, but not its COMPS list. Therefore, it is not part of the ARG-ST of FAIRE. This means that true reflexives behave like the intrinsic reflexives: they attach to tense auxiliaries (under a-composition), but never to FAIRE (under c-composition). Our analyis also has consequences for binding theory. The lexical description of composition FAIRE in (34) above requires that the unrealized subject of the V[*inf*] is coindexed with the causee, as in object control constructions. Thus, the argument structure of *se laver* in (42a), repeated here in (54a), where 'i' is the index of the causee, is as shown in (54).

(54)   a.   Marie a fait se$_i$ laver les enfants$_i$

   b. $se\text{-}laver$: $\left[\text{SS|LOC|CAT} \begin{bmatrix} \text{VAL|SUBJ} & \langle \boxed{1} \rangle \\ \text{ARG-ST} & \langle \boxed{1}\text{NP}_i \ , \ \text{NP}[acc, \ a\text{-}aff]_i \rangle \end{bmatrix} \right]$

And when an NP[*dat*] causee (indexed as 'k') cooccurs with a dative reflexive, the argument structure of a verb like *s'acheter* in (55a) is (55b):

(55)   a.   Le   froid a   fait   s$_k$'acheter un manteau$_i$ à   Paul$_k$
            The cold has made se-to-buy a   coat   to Paul

            The cold made Paul buy himself a coat.

   b. $s'acheter$: $\left[\text{SS|LOC|CAT} \begin{bmatrix} \text{VAL|SUBJ} & \langle \boxed{1} \rangle \\ \text{ARG-ST} & \langle \boxed{1}\text{NP}_k \ , \ \text{NP}_i \ , \ \text{NP}[dat, \ a\text{-}aff]_k \rangle \end{bmatrix} \right]$

Our binding principles thus correctly guarantee that all such examples receive the correct semantic interpretation.

5.3   Medio-passives

Medio-passives appear under a variety of names in the literature, ('middle-se', 'inchoative reflexives', 'ergatives', 'neuter') some of which pertain to only a subset of the phenomena we treat here. As a class, medio-passive verbs alternate with transitive verbs, whose direct object NP corresponds to the subject of the medio-passive.[34]

---

[33]There are speakers who accept (50b), but still do not allow true accusative reflexives in the composition causative (they do not accept (51c)). These speakers have the lexical rule creating intransitive *acc-refl-lxm*s like (52), but not the constraint in (53). Accordingly, true accusative reflexives are intransitive (hence a possible input for the Impersonal Subject LR whose outputs appear in the impersonal construction), but they are not *bas-vb* (and hence are unacceptable as complements of composition FAIRE).

[34]That only transitive verbs alternate with medio-passives is challenged by Desclés et al. (1986) on the basis of such examples as: *le pain moisit/le pain se moisit* ('bread goes moldy'), *les fruits pourrissent/les fruits se pourriront vite* ('fruit will get rotten quickly'), *Jean guérira très vite/Jean se guérira très vite*

The acceptability of mediopassives in the impersonal construction, and the fact that they occur under FAIRE with an accusative causee (as in (42b)) together show that they must be analyzed as intransitive:[35]

(56) a.   Beaucoup de livres se vendront ce   mois-ci
           Many   of books se sell-fut   this month

           Many books will be sold this month.

      b.   Il se vendra beaucoup de livres ce   mois-ci
           It se sell-fut many   of books this month

           There are many books that will be sold this month.

Since the argument structure, the transivity and the content of medio-passives and their corresponding basic lexemes are different, we propose a lexical rule for medio-passive lexemes which we formulate as follows:

(57) Medio-Passive Lexical Rule:

$$\left[\text{SS|LOC} \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{TRANS} & + \\ \text{ARG-ST} & \langle\, \text{NP},\, \text{NP[acc]}_i \,\rangle \oplus \boxed{1} \end{bmatrix} \\ \text{CONT} & \boxed{2} \end{bmatrix} \right] \implies$$

$$\begin{bmatrix} \textit{medio-pass-lxm} \\ \text{SS|LOC} \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{TRANS} & - \\ \text{HEAD} & \textit{bas-vb} \\ \text{ARG-ST} & \langle\, \text{NP}_i,\, [\textit{a-aff},acc] \,\rangle \oplus \boxed{1} \end{bmatrix} \\ \text{CONT} & \boxed{2}[...] \end{bmatrix} \end{bmatrix}$$

This lexical rule supresses the first element in the ARG-ST of the input; the NP complement is thus promoted to first position in the output's ARG-ST. It also adds an *a-aff* complement (realized as *se*) in the output.[36] There is a complex semantic effect of the medio-passive, but we make no attempt to describe it here.

The transitive lexeme VENDRE ('to sell') thus undergoes the Medio-Passive LR and the resulting lexeme gives rise to inflected words like the following:

('Jean will be cured very fast'). However, the corresponding transitive verbs exist (*moisir* 'make moldy', *pourrir* 'make rotten', *guérir* 'cure'); they enter into two alternations: one with the medio-passive verb, and one with intransitive verbs in the examples above, often called 'ergatives' (similar to the alternation of the two verbs *break* in English).

[35] In spite of the fact that their complement list contains an accusative NP. See footnote 36.

[36] The *a-aff* is analyzed as an accusative complement because of agreement facts. See the discussion at the beginning of sec. 5.

(58)

$$
\begin{bmatrix}
\textit{med-pass-lxm} \ \& \ \textit{ns-cl-wd} \\[4pt]
\text{MORPH} \begin{bmatrix} \text{FORM} & \textit{se-vendre} \\ \text{I-FORM} & \textit{vendre} \end{bmatrix} \\[12pt]
\text{SS|LOC} \begin{bmatrix}
\text{CAT} \begin{bmatrix}
\text{TRANS} & - \\[4pt]
\text{HEAD} & \begin{bmatrix} \textit{bas-vb} \\ \text{VFORM} & \textit{inf} \end{bmatrix} \\[8pt]
\text{SUBJ} & \langle \boxed{1} \rangle \\
\text{COMPS} & \langle \ \rangle \\
\text{ARG-ST} & \langle \boxed{1}\text{NP}_i \ , \ \text{NP}[\textit{acc}, \textit{a-aff}]_i \ \rangle
\end{bmatrix} \\[28pt]
\text{CONT} \begin{bmatrix}
\textit{sell-rel} \\
\text{ACTOR} & j \\
\text{UNDERGOER} & i \\
\cdots
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

This infinitive can function as the complement of composition FAIRE because it is classified as *bas-vb*. Koenig and Jurafsky (1994) point out that using lexical rules for medio-passive may raise a problem when one considers the interaction with the lexical rule used for impersonal constructions. Given that the subject is 3rd person, and *se* doesn't distinguish between singular and plural antecedent, it is difficult to know whether the antecedent of *se* is the impersonal subject *il* or the complement NP which is the subject of the corresponding basic transitive verb. However, the difference appears when the subject of the verb is a first or second person NP. Consider then the impersonal verb in (59), whose argument *toi* has a metonymic interpretation ('your books', rather than 'you'):

(59) a.   Il   ne se vend   bien que toi   dans ce   salon
          It-3sg ne se sell-pres-3sg well only you-2sg in   this meeting

The only one (whose books are) selling well in this meeting is you.

      b. * Il   ne te   vend   bien que toi   dans ce   salon
          It-3sg ne te-2sg sell-pres-3sg well only you-2sg in   this meeting

This example shows that the antecedent of the reflexive clitic is the impersonal subject *il*, which is a third person, while the complement is a second person pronoun. If the Medio-Passive LR output were to explicitly force coindexation (which entails sharing of person features) of its subject and the anaphor, then this would incorrectly require the agreement pattern of (59b) in the impersonal.

But notice that the ouput of our Medio-Passive LR does not stipulate coindexation. This is unnecessary because precisely this coindexation is independently required (on words) by Principle A of the binding theory. The difficulty noted by Koenig and Jurafsky thus disappears given our analysis. In other words, the interaction between the Impersonal Subject Lexical Rule and the (one or two) lexical rules whose output is a reflexive verb is correctly described if none of these rules specifies the index of the *a-aff* element on the ARG-ST. Principle A, through its interaction with other independently motivated

aspects of our grammar of French, thus plays a crucial role in the analysis of medio-passive constructions.[37]

5.4   Clitic Trapping With Composition FAIRE

We can now turn to one remaining question about downstairs clitics with FAIRE: clitic trapping. When a clitic stays on the infinitival, all complement clitics (including non reflexive non intrinsic ones) must stay downstairs as well:[38]

(60) a.   Marie a   fait   s'en   souvenir   Jean.
           Marie has made se-of-it to-remember Jean

           Marie made Jean remember it.

     b.   *Marie en   a   fait   se souvenir   Jean.
           Marie of-it has made se to-remember Jean

     c.   Ça lui   fera   leur   en   vouloir.
           this him$_{dat}$ make-fut them$_{dat}$ of-it to-want

           This will make him get annoyed at them.

     d.   *Ça leur   fera   en   vouloir à Jean.
           this them$_{dat}$ make-fut of-it to-want to Jean

           This will make Jean get annoyed at them.

This puzzling behavior is straightforwardly accounted for in our analysis, given the constraint that the COMPS list of a *cl-wd* can never contain *aff* elements. This means that if a complement of a *cl-wd* is inherited by FAIRE, it cannot be of type *aff*, so it cannot be realized as a clitic on FAIRE. Thus the only clitics that may appear on the causative in these examples (*lui* in (60c); *leur* in (60d)) correspond to arguments of FAIRE (e.g. the causee) that are not themselves part of the argument structure of the infinitival complement.

---

[37]Koenig (1994: 62ff.), in discussing an earlier version of this analysis (Godard and Sag 1995), argues that binding principles should play no role in the analysis of medio-passives. He suggests that binding principles, as part of a module of syntactic principles, should not be accessible to constructs that are part of the lexical module, e.g. principles of lexical well-formedness. We share Koenig's concern for processing autonomy, but binding principles must be constraints on words in HPSG, as words (more precisely their categories) are the only constructs that have ARG-ST lists. Thus it seems reasonable to interpret binding principles (as long as they constrain only coarguments) as lexically specified disjunctive constraints on ARG-ST lists that function monotonically in syntactic processing. Some such scheme is necessary in any case, as third person *p-aff* clitics (*le, la, les, lui,* etc.) must interact with Principle B of the binding theory in just the same way that we propose *se* interacts with Principle A.

Koenig's other objection is based on his view that the medio- passive clitics are really subject agreement markers rather than reflexive anaphors. While he may be right that they mark agreement, inversion facts show that it is not straightforwardly subject agreement marking (see fn. 26). In any case, it would be straightforward to modify our Medio-Passive LR so that it induced the appropriate agreement leaving all other aspects of our analysis unchanged.

[38]See Kayne 1975, Rouveret and Vergnaud (1980: 153-154), Aissen and Perlmutter 1983, and Tasmowski (1985: 330).

6 Conclusion

Drawing on previous analyses of complex predicates in French, we have proposed an account of the contrast between tense auxiliaries and causative verbs with respect to downstairs clitic realization. We have defined a small set of verbal types. On the one hand we distinguish verbs bearing clitic morphology (following Sag and Miller in press) from uncliticized verbs. Independent of this is our distinction between basic verbs (either uncliticized verbs or verbs realizing lexemes whose clitics never alternate with nonclitics) and reduced verbs (those which realize potentially nonaffixal arguments as clitics). Reflexive verbs, as we have seen, have a complex relation to this last distinction.

Both tense auxiliary and causative constructions are analyzed as complex predicates whose argument structures contain elements that are selected by the complex predicate's lexical argument (a participle or infinitive). Tense auxiliaries and the past participles they combine with share elements of their argument structure. Composition FAIRE (and other causative verbs), by contrast, incorporate into their argument structure members of their infinitive's COMPS list. (These are always arguments that have a potential for nonaffixal realization.) Both tense auxiliaries and causative verbs constrain their lexical complement, requiring that it be a basic verb, but they differ with respect to the possibility of downstairs clitic realization. The distinction in composition type that we have posited (c-composition vs. a-composition) plays a fundamental role in our account of the fact that clitics always 'climb' onto the tense auxiliary but intrinsic clitic verbs (and these alone) require downstairs realization in the composition causative construction.

7 References

Abeillé, Anne and Danièle Godard. 1994. The Complementation of Tense Auxiliaries in French. *Proceedings of WCCFL 13.* Stanford: CSLI Publications. 157–172.

Abeillé, Anne and Danièle Godard. 1996a. La Complémentation des auxiliaires français. *Langages* 122: 32–61.

Abeillé, Anne and Danièle Godard. 1996b. French Word Order and Lexicality. Paper given at the HPSG 96 Conference, Marseille. To appear in R. Borsley (ed.) *Syntactic Categories.* New York: Academic Press.

Abeillé Anne, Danièle Godard, Philip Miller and Ivan A. Sag. 1997. Bounded Dependencies in French. In S. Balari and L. Dini (eds.), *HPSG in Romance.* Stanford: CSLI Publications.

Abeillé Anne, Danièle Godard, Philip Miller and Ivan A. Sag. to appear. The Causative Structures of French. Unpublished manuscript. Paris and Stanford.

Abeillé, Anne, Danièle Godard, and Ivan A. Sag. in preparation. *The Major Syntactic Structures of French.*

Aissen, Judith and David Perlmutter. 1983. Clause Reduction in Spanish. In D. Perlmutter (ed.), *Studies in Relational Grammar 1.* Chicago: The University of Chicago Press, 360–403.

Alsina, Alex. 1996. *The Role of Argument Structure in Grammar: Evidence from Romance.* Lecture Notes Series. Stanford: CSLI Publications.

Auger, Julie. 1994. *Pronominal Clitics in Quebec Colloquial French, A Morphological Approach.* Doctoral dissertation. University of Pennsylvania. Distributed as IRCS report 94-29.

Bouma, Gosse, 1997. Monotonic lexical rules, Unpublished manuscript. Rijkuniversiteit Groningen.

Bouma, Gosse, Robert Malouf, and Ivan A. Sag. 1997. Lexicalized Extraction without lexical rules. Unpublished manuscript, Groningen and Stanford.

Bratt, Elizabeth Owen. 1990. The French Causative Construction in HPSG. Unpublished manuscript. Stanford.

Bresnan, Joan (ed.) 1982. *The Mental Representation of Grammatical Relations.* Cambridge, Mass: MIT Press.

Burzio, Luigi. 1986. *Italian Syntax.* Dordrecht: Reidel.

Dalrymple, Mary. 1993. *Syntactic Constraints on Anaphora.* Stanford: CSLI Publications.

Desclés, Jean-Pierre, Zlatka Guentcheva and Sebastian Shaumyan. 1986. Theoretical Analysis of Reflexivization in the Framework of Applicative Grammar. *Lingvisticae Investigationes* X: 1–65.

Dobrovie-Sorin, C. to appear. Impersonal *si* Constructions and the Passivization of Unergatives. *Linguistic Inquiry.*

Emonds, Joseph. 1978. The Verbal Complex V′-V in French. *Linguistic Inquiry* 9: 151–175.

Godard, Daniele, and Ivan A. Sag 1995. Reflexivization and Transitivity in French. Paper presented at annual meeting of the LSA. New Orleans.

Grevisse, Maurice. 1969. *Le Bon Usage.* Liege: Duculot.

Grimshaw, Jane. 1982. On the Lexical Representation of Romance Reflexive Clitics. In J. Bresnan (ed.) 1982. Pp. 87–148.

Grimshaw, Jane. 1990. *Argument structure*. Cambridge, Mass.: MIT Press.

Hinrichs, Erhard and Tsuneko Nakazawa. 1994. Linearizing Aux's in German Verbal Complexes. In J. Nerbonne, K. Netter and C. Pollard (eds.), *German Grammar in HPSG*. Stanford: CSLI Publications.

Hyman, Larry M., and Karl E. Zimmer. 1976. Embedded Topic in French. In Charles N. Li (ed.), *Subject and Topic*. New York: Academic Press. Pp. 191–211.

Kayne, Richard. 1975. *French Syntax: the Transformational Cycle*. Cambridge, MA: MIT Press.

Kiss, Tibor. 1994. Obligatory Coherence: the Structure of German Modal Verb Constructions. In J. Nerbonne, K. Netter and C. Pollard (eds.), *German Grammar in HPSG*. Stanford: CSLI Publications. Pp. 71–107.

Koenig, Jean-Pierre and Daniel Jurafsky. 1994. Underspecification and On-line Type Construction in the Lexicon. In *Proceedings WCCFL 13*. Stanford: CSLI Publications. Pp. 270–285.

Koenig, Jean-Pierre. 1994. *Lexical Underspecification and the Syntax-Semantics Interface*. Doctoral dissertation. UC Berkeley.

Lascarides, Alex, Edward Briscoe, Nicholas Asher, and Ann Copestake. 1996. Order Independent and Persistent Typed Default Unification. *Linguistics and Philosophy* 19.1: 1–89.

Legendre, Geraldine. 1987. *Topics in French Syntax*. Doctoral dissertation. University of California, San Diego.

Marandin, Jean-Marie. 1997. Dans le titre se trouve le sujet; l'inversion locative en français. Unpublished manuscript. Université Paris 7.

Melis, Ludo. 1987. *La Voie Pronominale*. Liège: Duculot.

Manning, Christopher. 1994. *Ergativity: Argument Structure and Grammatical Relations*. Doctoral dissertation. Stanford University.

Miller, Philip. 1991. *Clitics and Constituents in Phrase Structure Grammar*. Doctoral dissertation. Rijksuniversiteit Utrecht. [published 1992; New York: Garland].

Miller, Philip and Ivan A. Sag. 1995. Une analyse lexicaliste des affixes pronominaux en français. *Revue Québécoise de Linguistique* 7: 135–171.

Milner, Jean-Claude. 1978. *De la Syntaxe à l'interpretation.* Paris: Le Seuil.

Milner, Jean-Claude. 1982. *Ordres et raisons de langue.* Paris: Le Seuil.

Monachesi, Paola. 1995. *A Grammar of Italian Clitics.* Doctoral dissertation. KUB, Tilburg.

Moore, John. 1990. *Reduced Constructions in Spanish.* Doctoral dissertation. UC Santa Cruz.

Morin, Jean-Yves. 1978. Une théorie interprétative des causatives en français. *Linguisticae Investigationes* II.2: 363–417.

Perlmutter, David. 1983. Personal vs Impersonal Constructions. *Natural Language and Linguistic Theory* 1: 141–199.

Pollard, Carl and Ivan A. Sag. 1992. Anaphors in English and the Scope of Binding Theory. *Linguistic Inquiry* 23: 261–303.

Pollard, Carl and Ivan A. Sag. 1987. *Information-based Syntax and Semantics, Vol. 1.* Lecture Notes Series. Stanford: CSLI Publications.

Pollard, Carl and Ivan A. Sag. 1994. *Head Driven Phrase Structure Grammar.* Chicago: University of Chicago Press and Stanford: CSLI Publications.

Rizzi Luigi.1978.A Restructuring Rule in Italian Syntax. S.J. Keyser (ed), Transformational Studies in European Languages, Cambridge, Mass: MIT Press.

Rouveret, Alain and Jean-Roger Vergnaud. 1980. Specifying Reference to the Subject. *Linguistic Inquiry* 11.1: 97–202.

Ruwet, Nicolas. 1972. Les Constructions pronominales neutres et moyennes. In *Théorie syntaxique et syntaxe du français.* Paris: Le Seuil. Pp. 87–125.

Sag, Ivan A. and Daniele Godard. 1994. Extraction of *de*-Phrases from the French NP. *Proceedings of NELS 24.* University of Massachusetts, Amherst. Amherst: GLSA. Pp. 519–541.

Sag, Ivan A. and Philip Miller. In press. French Clitic Movement without Clitics or Movement. *Natural Language and Linguistic Theory.*

Scalise, Sergio. 1984. *Generative Morphology.* Dordrecht: Foris Publications.

Tasmowski, Liliane. 1985. *Faire* Infinitif. In Melis L., L. Tasmowski, P. Verluyten and Dominique Willems (eds.), *Les Constructions de la Phrase Française. Invitation à la Réflexion sur le Passif, le Pronominal, l'Impersonnel, et le Causatif.* Gent: Communication and Cognition.

Wechsler, Stephen. 1995. *The Semantic Basis of Argument Structure*. Stanford: CSLI Publications.

Zaenen, Annie. 1993. Unaccusativity in Dutch: Integrating Syntax and Lexical Semantics. In Pustejovsky, James (ed.), *Semantics and the Lexicon*. Dordrecht: Kluwer. Pp. 129–161.

Zaenen, Annie and Mary Dalrymple. 1996. Les verbes causatifs 'polymorphiques': les prédicats complexes en français. *Langages* 122: *Nouveaux raisonnements syntaxiques*, A. Abeillé and D. Godard (eds.). Pp. 79–95.

Zubizarreta, María Luisa. 1985. The Relation Between Morphophonology and Morphosyntax: The Case of Romance Causatives. *Linguistic Inquiry* 16: 247–289.