

Varieties of ESSE in Romance Languages*

1. Introduction

All modern Romance languages have inherited the copula and the passive auxiliary from the latin ESSE paradigm. A few of them, French (F), Italian (I), Romanian (R), Occitan and the variety of Catalan spoken in Majorca and Minorca, also use forms inherited from ESSE as a tense or aspectual auxiliary. Concentrating on F, I and R, we show that (i) in the three languages, the copula and the tense/aspectual auxiliary should be considered different lexemes, (ii) the copula, identified with the passive auxiliary, has the same complement structure in these three languages, and (iii) the tense/aspectual auxiliary may have a different complement structure from that of the copula; namely, the perfective R *fî* has the same complement structure as the R tense auxiliaries, which differs from that of the copula.

The consequences of such findings are the following. First, it is wrong to take the copula or passive into account when stating the conditions on auxiliary selection in F and I. We provide an alternative to derivational generalizations such as Burzio 1986. Second, the difference in R between the complements of the tense and aspectual auxiliaries on the one hand, and of the copula on the other, shows that argument inheritance and constituent structure are two different phenomena, and to a certain extent, orthogonal properties: all the verbs which we examine here induce a complex predicate characterized by argument inheritance.¹ This supports a grammatical architecture which can distinguish between the two, by separating valence information from constituent structure, as in HPSG or LFG. We provide an analysis in HPSG and briefly compare it with the proposal by Andrews and Manning (1999).

2. Differences between tense and passive auxiliary ESSE

In the three languages, the tense and passive auxiliaries differ from each other with respect to a number of properties.

(i) In R, the two verbs have a different morphology: while the passive *a fi* has a complete morphological paradigm, the perfective *fî* is defective. The latter has one form only, which occurs where a subjunctive or an infinitive is expected.

- (1) R a. *să fiu chemat*
that I am called
b. *să fi chemat*
that I/you/... have called

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¹ For an overview of complex predicates in the Romance languages, see Abeillé and Godard (2000b).

(ii) While a tense or perfective auxiliary combined with a participle denotes a past or perfective event, the denotation of a passive construction depends on the tense of the auxiliary. This difference induces a different acceptability regarding sequences of auxiliaries in F: the passive auxiliary in (2a), but not the tense auxiliary in (2b), can follow two auxiliaries.² In (2a), the sentence denotes a past with respect to a past, while in (2b), it would have to denote a past with respect to a past with respect to a past. Presumably, such complex semantic constructions are not used in natural languages.

- (2) F passé surcomposé
- a. Quand le livre a eu été publié
when the book has had been published ('had been published')
 - b. * Quand Jean a eu été allé à Paris (vs a été allé)
when Jean has had been gone to P ('when J was gone to P')

(iii) In the three languages, while a passive participle with its complements can be extracted, an active participle cannot (Abeillé and Godard 1994 for F, Barbu 1998 for R):³

- (3) F
- a. Dédié à Jean comme il (l') est, le livre ...
Dedicated to J. as it (CL) is, the book ...
 - b. * Allé aux Etats-Unis comme il (l') est, Jean ne peut t'entendre
Gone to the US as he (CL) is, J. cannot hear you
- I
- a. Dedicato a Giovanni come (lo) è, il libro ...
Dedicated to G. as (CL) is, the book ...
 - b. * Andato negli Stati Uniti come (lo) è, ...
Gone to the US as he (CL) is, ...
- R
- a. Lăudată de colegii ar fi Maria
Praised by her colleagues will be M. ('it is Maria who will be praised')
 - b. * Fost în Statele Unite, el n-ar fi
Gone to the US, he will not be

(iv) In R, the passive auxiliary (4a), but not the tense auxiliary (4b), has scope over a coordination of participles with their complements (Barbu 1998). In F, I, both auxiliaries can have wide scope over a coordination of participles. Note that passive and active participles cannot be conjoined (4c):

- (4) R
- a. El a fost iertat de Maria și invitat la petrecere a doua zi
He is been absolved by M. and invited to the meeting the next day
 - b. * Înainte de a fi cumpărat ziarul și citit aceasta noutate
Before DE A have bought the newspaper and read this piece of news
- F
- a. Jean est allé chez Marie et rentré chez lui tard

² For some French speakers, certain active participle forms can also be predicative adjectives. In this case, they can be extracted and pronominalized, like other predicative complements.

³ Although we illustrate one structure only, the phenomenon is the same in cleft and left dislocation in F,I.

- Jean is gone to Marie and returned home late
- b. Jean est convoqué par le patron et critiqué par ses collègues
Jean is summoned by the boss and criticized by his colleagues
- c. * Jean est convoqué par Marie et allé chez elle
Jean is summoned by Marie and gone to her place

- I a. Oggi, Gianni è partito a piedi e tornato in bicicletta
To-day, Gianni is gone on foot and come back on a bicycle
- b. Giovanni è chiamato da Maria e criticato dai suoi colleghi
Giovanni is summoned by the boss and criticized by his colleagues
- c. * Giovanni è chiamato da Maria e andato da lei

(v) In R, adverbs (5) and subjects (6) can occur between the passive auxiliary and the participle, but not between the perfective auxiliary and the (active) participle (Dobrovie-Sorin 1994, Barbu 1998, Monachesi 1999b):

- (5) R a. Maria ar fi atent ascultată
Maria will be attentively listened to
- b. * Maria i-ar fi atent ascultat (vs OK i-ar fi ascultat atent)
Maria CLacc-will be attentively listened
(put) 'M. will have attentively listened to them'

- (6) R a. A fost Maria lăudată pentru acest succes ?
Has been Maria praised for this success
- b. * Ar fi Maria venit ? (vs OK Ar fi venit Maria ?)
Will be (= have) Maria come

(vi) in F and I, the tense auxiliary, but not the passive auxiliary, can bear a reflexive clitic (Kayne 1975, Couquaux 1979 for F, Burzio 1986 for I):

- (7) F a. Paul s'est acheté un livre
Paul SE is bought a book ('Paul bought a book for himself')
- b. * La vedette se fut présentée (à elle-même) par la journaliste
The star SE was introduced(to herself) by the journalist

- I a. Paolo si è comprato un libro
- b. * La diva si è stata presentata da la giornalista

(vii) Participle agreement is different. Although active participle agreement differs across F, I and R, it does not coincide with those the passive participle, which agrees in gender and number with the subject in the three languages. In R, the active participle is always invariable. In I, the active participle agrees with a cliticized object if there is one (*le* in (8a)); otherwise, it agrees with the subject (see (8b), with an intransitive verb, and (8c) where the reflexive clitic *se* is dative):

- (8) I a. Maria/ Mario se le è lavate (le mani)
M-fs/M-ms SE-dat CL-acc-fp is washed-fp ('Maria/Mario washed them').
- b. La nave è affondata/*affondato

- The-fs boat is sunk-fs/*sunk-ms
 c. Maria si è lavata /* lavato/ * lavate le mani
 M-fs SE-dat is washed-fs washed-ms/ washed-fp the hands-fp

In F, it agrees with the non-canonical (relativized or cliticized) object, if there is one (9a); it agrees with the subject if the intransitive verbal lexeme selects *être* (9b); otherwise, it does not agree (see (9c) where the reflexive clitic is dative):

- (9) F a. La maison qu'il s'est construite
 The house-fs which he SE-dat is built-fs ('the h. that he built for himself')
 b. Les fleurs sont mortes rapidement
 The flowers-fp are dead-fp quickly ('the flowers died quickly')
 c. Ils se sont parlé/ *parlés
 They-mp SE-dat are spoken-ms/ *spoken-mp ('they spoke to each other')

The R perfective and passive auxiliaries which differ on all accounts except for the occurrence of a reflexive clitic (possible on the passive auxiliary) are clearly different lexical items. For F and I, some might argue that the differences lie in the participles, rather than the auxiliary itself. However, this hypothesis cannot explain why the passive participle with its complements can be extracted (3a), but not the active one (3b). In both cases, the extracted complement would be a complement saturated (and subject unsaturated) phrase. Furthermore, the auxiliary would be semantically empty, except for an aspectual or temporal information due to its own morphology. This is not implausible but then one cannot appeal to a different semantics of the auxiliary to exclude extraction in one case and allow it in the other. If no explanation is given for the contrast in (3), the complement structures are different. This conclusion implies that there are two lexemes.

A consequence is that copular and passive constructions must not be taken into account when stating the conditions on auxiliary selection in French and Italian (contrary to e.g. Burzio 1986, Perlmutter 1989). Burzio (1986:55) wants to derive *essere* selection from a structural property common to reflexive, passives and unaccusative verbs:⁴ "The auxiliary will be realized as *essere* whenever a 'binding relation' exists between the subject and a 'nominal contiguous to the verb'", which can be a clitic or an (empty) direct object. This appeals to a derivational analysis of passives (with an empty object), and to a structural difference between intransitives taking *avere* and intransitives taking *essere*. Structural unaccusativity (with an empty object position linked to a raised subject) for intransitives taking *essere* does not explain the dialectal variations regarding auxiliary selection, or the lexical semantic factors which play a crucial role (Zaenen 1993, Levin and Rappaport 1995).⁵ More generally, since two different '*essere*' are involved in the passive and in the past tense, there is no point in trying to appeal to the same structure to account for both cases.

⁴ The generalization is also meant to explain participle agreement, which "will agree in gender and number with an element holding a 'binding relation' with its direct object". Thus, it agrees with an empty object (covering accusative reflexives and cliticized objects), and with the subject if it is unaccusative. But it does not follow that it agrees with the subject when there is a dative reflexive and an object NP (8c), as recognized by the author (p. 61).

⁵ For dialectal variation, see e.g. F *Je suis/ai grimpé au grenier* (I am/have climbed to the attic). Following Burzio's hypothesis, (i) and (ii) must have different phrase structures:

- (i) Hanno corso per tre ore
 (ii) Sonno corsi alla pasticceria

We informally state the correct empirical generalizations concerning auxiliary selection in F and I. The idea is that HABERE is the default specification, which is overridden in two cases.

(10) Auxiliary selection (I,F):

(i) By default, verbs select HABERE

(ii) A set of intransitive verbs (which may depend on an unaccusative type) are lexemically specified as taking auxiliary ESSE

(iii) All participles of reflexive verbs (which have a reflexive clitic in their argument list) select ESSE.

Without trying to motivate here such a lexical approach, we note that (ii) can be seen as a historical residue in French (where the intransitives involved often had reflexive forms, e.g. *se mourir* 'die') while it is correlated with other syntactic and semantic properties in Italian, and that (iii) can be explained in terms of suppletion (there is a morphological blocking between any form of HABERE and the reflexive, Abeillé and Godard 1996).⁶ The use of ESSE in the passive has a different explanation, as will be clear from the next section: the copular ESSE takes predicative complements, and the passive participle (contrary to the active one) is predicative (like predicative adjectives).

3. Identification of the passive auxiliary and the copula

The passive auxiliary and the copula, which have the same morphology in all RL, have identical properties.⁷ We briefly illustrate this observation. It is clear that the denotation time depends solely on the predicate; the F participle of *être* can be the complement of a 'surcomposé' (*Quand Jean a eu été ivre*, when Jean has had been drunk = 'when Jean had gone drunk'). The sequence of the predicate with its complements can be extracted and pronominalized:

(11) F a. Fidèle à ses amis comme il (l') a été, Paul ...

'Faithful to his friends as he has been, Paul' ...

I b. Fedele ai suoi amici come (lo) è stato, Paolo ...

R c. Cât de fidel ideii de libertate este Paul!

'How faithful to the idea of freedom Paul is!'

In R, adverbs (and the subject) can intervene between the copula and the complement predicate, and the copula has wide scope over a coordination of adjectives with their complements:

(12) R a. Maria a fost mult timp frumoasă

Maria has been a long time beautiful

b. A fost Maria frumoasă ?

Has been M beautiful ?

c. Maria esta fidelă ideii de libertate și ostilă lui

M was faithful to ideas of freedom and hostile to-him

⁶ Morphological blocking is shown with non auxiliary uses of *avoir* or *avere*:

F Il m'aura / * s'aura une bonne place (He will have a good seat for me / for himself)

I Mi / * Ti avrai un buon posto (You will have a good seat for me / for yourself)

⁷ This is also true of *estar* in Spanish, Portuguese or Catalan.

In F and I, the copula cannot bear a reflexive clitic, complement of the predicate:

- (13) F a. * Ils s'étaient fidèles
 I b. * Si erano fedeli
 (put.) They were faithful to each other/ to themselves

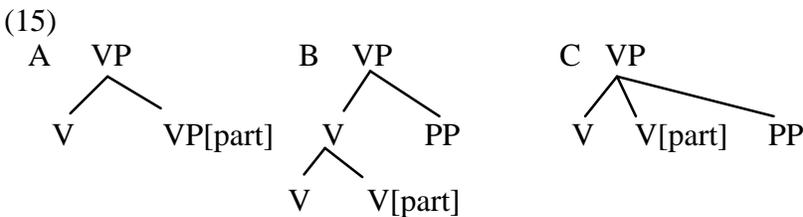
As is well-known, the adjectival predicate, like the passive participle, agrees in number and gender with the subject in F, I, R. Finally, coordination of passive participles and adjectives is allowed in all three languages:

- (14) F Jean est convoqué par Marie et amoureux d'elle
 I Giovanni è chiamato da Maria e innamorato di lei
 Giovanni is summoned by M and in-love with her
 R Acest ziar a fost foarte interesant și apreciat de profesor
 This newspaper has been very interesting and appreciated by the professor

The conclusion is that the passive auxiliary and the copula are the same item in the three languages.⁸

4. Discussion on the Complement structures

The copula and the tense or aspectual auxiliary are all obligatory clitic climbing verbs. In HPSG, this means that at least cliticized arguments are inherited (for argument inheritance in HPSG, see Hinrichs and Nakasawa 1994). However, clitic inheritance is compatible with different complement structures: a VP (or XP), unsaturated for clitics (structure A), a verbal complex (structure B) or a flat structure (structure C), two structures where the complement predicate is unsaturated for all of its arguments. Assuming the complement is verbal, we have the following array of possibilities:⁹



In this section, we contrast the participle complement of tense/aspectual auxiliaries, which never forms a constituent with its subcategorized complements, with the copula, which has a double

⁸ An argument sometimes offered for distinguishing passive from adjectives comes from *ne* cliticization in Italian. The clitic *ne* can be linked to a post-verbal quantifier (*molti*) with a passive (*riconosciute*), but not with an adjective (*sconosciute*). This is no counter-argument, since as noted in (Giusti, 1991), the copula can bear this clitic with some adjectives (*sicuri*):

- (i) Ne sarebbero riconosciute / * sconosciute molti (Many of them are recognized/ unknown)
 (ii) Ne sono sicuri molti (Many of them are sure)

⁹ The VP complementation is well accepted for auxiliaries (and, more generally, complex predicates in RL), see e.g. Pollock (1989), Andrews and Manning (1999); the verbal complex is proposed for F and R tense auxiliaries in e.g. Emonds 1978, Monachesi 1999a, respectively, and the flat structure for F complex predicates and I restructuring verbs in e.g. Abeillé et al. (1998), Monachesi (1999a).

complement structure: either structure A (with a saturated predicative phrase), or Structure B (with a flat structure). Tense auxiliaries exemplify either structure B (for R *fi*) or structure C (for F *être*, I *essere*).

4.1 Verbal complex for R perfective *fi*

Since *fi* is invariable, and occurs in restricted environments, it is tempting to analyze it as a morpheme, part of a complex verb form (as suggested in Dobrovie-Sorin 1994) rather than a verb. However, the fact that the lexical participles can be conjoined after *fi* argues against this solution; the subjunctive and infinitive *fi* are illustrated in (16a) and (16) respectively:

- (16) R a. % Nu cred ca Ion să fi știut sau spus adevarul
 Neg think that Ion SA has known or told the truth
 'I don't think that Ion knew or told the truth'
 b. Înainte de a fi cumpărat și citit ziarul
 Before DE A have bought and read the newspaper
 'Before having bought or read the newspaper'

To maintain that the combination of *fi* with the participle is a word, one would have to include coordination in the set of regular compounding rules for words. In the absence of evidence to this effect, it is safer to keep coordination as a syntactic construction.

Going back to syntactic structures, the impossibility of conjoining participles with their complements (16a) argues both against the hierarchical structure A and the flat structure B. Since constituents can be regularly conjoined, the agrammatical (4b) would be licensed as VP coordination under structure A (see (17)); since Romanian allows for Non Constituent Coordination (of sister complements or modifiers), it would also be licensed under structure C.

- (17) R a fi [VP [VP cumpărat [NP ziarul]] [VP și citit [VP aceasta nouitate]]]
 have bought the newspaper and read this piece of news

On the other hand, with the verbal complex, such coordinations are non natural: they would be asymmetric (a finite VP would be conjoined with a headless VP) or non strictly local (the second conjunct comprises an embedded participle and higher complements).

Let us turn to the impossibility of adverbs or of the subject between *fi* and the participle. In the flat structure C, this would have to be the effect of a linearization constraint, ordering such phrases after the verbs. But we know from the data on the copula that adverbs and subject are not ruled out before the passive predicate.¹⁰ On the other hand, in all cases where the verbal complex is adopted (German or Korean auxiliaries, Chung 1998), neither NPs nor adverbs are found between the verbs. This reflects the intuition that the verbal complex is a syntactic construction sharing some properties with words. For instance, a verbal complex can be the head of a head-complements-phrase like a lexical verb. An intervening subject would make it an ordinary valence reducing phrase. Similarly, the occurrence of adverbs in general would make one of the

¹⁰ One could say that adverbs and subject are allowed between the verb and a phrasal complement, but not between the head and a lexical complement. This is not true because they occur between R modal verbs (*a avea* and *a putea*) and the infinitive. R *a avea* and *a putea* behave like F and I tense auxiliaries (obligatory clitic climbing, wide scope over a coordination of Vinf and complements) and are analyzed as the head of a flat structure with a lexical (or lite, see below) Vinf complement (Abeillé and Godard 2000b, Monachesi 1999b).

daughters an ordinary head-adjunct-phrase.¹¹ We conclude that perfective *fi* has the complement structure B above (see figure 41 below), which is the structure proposed by Monachesi (1999b) for R tense (past, future and conditional) auxiliaries.

4.2 Flat structure for F, I tense auxiliaries

For F and I tense auxiliaries *être* and *essere*, the occurrence of adverbs (and PPs) in general between the two verbs eliminates the analysis of the auxiliary-verb combination as a word, and a verbal complex, if a verbal complex is characterized by the combination of lexical verbs:

- (18) F a. Paul est subitement parti à la plage
 I b. Paolo è subito partito a la spiaggia
 Paul is suddently gone to the beach

The occurrence of adverbs follows from the VP complement (A) or the flat structure (C).

The impossibility of extraction (and pronominalization) of the participle with its complements is expected in analyses B and C, while it is a serious problem for analysis A, especially because of the contrast between the tense auxiliaries and the copula (see (3)). Looking at restructuring verbs, Rizzi (1982) shows a correlation between non-extractability and complex predicate formation: some verbs allow the extraction of the infinitival complement when it is saturated, but not when there is clitic climbing. This correlation is interpreted directly if the participle does not form a constituent with its subcategorized complements (as in B,C). Some additional hypothesis must be put forward if they do form a constituent (as in A). One might say that extraction of an unsaturated phrase is impossible. But complements of the copula (to which we return below) show this to be false. In (19a,a'), the adjective is left-dislocated, leaving behind its complement:

- (19) F a. Fidèle, il l'est à ses amis plus qu'à ses convictions politiques
 I a'. Fedele, Giovanni lo è ai suoi amici ma non alle sue idee politiche
 Faithful, J. is it to his friends more than to his political convictions
 F b. * Allé aux Etats-Unis, il (l') est/ * Allé, il (l') est aux Etats-Unis
 b'.* Andato negli Stati Uniti, (lo) è/ * Andato, (lo) è negli Stati Uniti
 Gone to the US, he is it/ Gone, he is it to the US

Andrews and Manning (1999) suggest that having a discourse function is incompatible with sharing arguments with another predicate. But the same construction is exemplified in (19a,a') and (19b,b'). So this type of explanation cannot offer a general account for the unacceptability of the complement of auxiliaries.

Let us finally look at coordination. The possibility of conjoining participles with their complements is simply constituent coordination in structure A. In structures B and C, it must be interpreted as NCC, which proves to be problematic for B, but quite tractable in C. With a verbal complex, such coordination would be either non local or asymmetric NCC. But non local NCC (coordination of sequences of non sister dependents) is out in F and I, in a general way (20b).

¹¹ Five adverbs (the *mai* class) occur between a R tense or aspectual auxiliary (Dobrovie-Sorin 1994, Monachesi 1999b). They can be analyzed as V adjoined, lite adverbs (for liteness, see 4.4), or, alternatively as morphological affixes on the participle. We leave this problem aside.

- (20) F a. Paul donnera [un livre de Sartre] [à Nathan] et [un livre de Camus] [à Léo]
 Paul will give a book by Sartre to Nathan, and a book by Camus to Leo
 b. ?? Paul donnera [un livre de Sartre] [à Nathan] et [de Camus] [à Léo]
 I a. Paolo darà [un libro di Sartre] [a Nathan] e [un libro di Camus] [a Leo]
 b. ?? Paolo darà [un libro di Sartre] [a Nathan] e [di Camus] [a Leo]

Asymmetric NCC (with a second headless VP conjunct) cannot be right either, as shown by the placement of conjunctions in multiple coordination. They are placed before each sequence of complements rather than each (assumed) VP constituent. The first VP conjunct would begin with the verb, which cannot be preceded by a conjunction:

- (21) F a. * Paul soit donnera un livre à Nathan soit un disque à Léo
 a'. Paul donnera et un livre à Nathan et un disque à Léo
 Paul will give either a book to Nathan or a record to Leo
 b. ?? Paul soit est allé chez Marie soit rentré chez lui
 b'. Paul est soit allé chez Marie soit rentré chez lui
 Paul is either gone to Mary's or gone back home
 I a. * Paolo sia darà un libro a Nathan sia un disco a Leo
 a'. Paolo darà sia un libro a Nathan sia un disco a Leo
 b. * Paolo sia è andato a casa del professore sia ritornato a casa sua
 b'. Paolo è sia andato a casa del professore sia ritornato a casa sua

On the other hand, with flat structure C, such coordinations do not raise more problems than usual NCC, with sequences of dependents of the same head being conjoined. Multiple conjunctions are just before the sequences of complements. A possible counter-argument is that members of the second conjunct are not necessarily parallel with members of the first one:

- (22) F Paul s'est enfui du colloque et offert un après-midi de détente
 Paul CL is escaped from the conference and given a leisurous afternoon

In (22) the first participle takes a PP complement while the second one takes a direct NP object. But ordinary NCC does not require a strict parallelism either; it is sufficient that each conjunct independently satisfy the valence requirements of the head verb:

- (23) F a. Paul écrivait [des lettres] [à sa mère] et [des nouvelles fantastiques]
 P wrote letters to his mother as well as short stories of fantasy
 b. Paul disait [la vérité] [à sa mère] et [à son père] [qu'il travaillait]
 P told the truth to his mother and to his father that he was working
 I c. Paolo promette [a sua madre] [molti progressi] e [a suo padre] [di cambiare
 attitudine]
 Paolo promises a lot of improvements to his mother and to change his attitude to his
 father

We conclude that the flat structure is the best proposal for F,I tense auxiliaries, (see Abeillé & Godard 1994, Monachesi 1999a), since adverbs and coordination are problematic for the verbal complex, and absence of extraction (and pronominalization) for the VP complement.

To summarize, we show that the contrast between R *fi* and F, I tense auxiliaries *être, esse*, regarding the occurrence of adverbs and subject between the two verbs, and the possibility of conjoining the participles with their complements can be accounted for by positing two different complement structures, a verbal complex for *fi* and a flat structure for *être, esse*.

4.3 The double structure of copular (and passive) constructions

The copula (and passive auxiliary) contrasts with the tense/aspectual auxiliary in two respects. As already mentioned, the sequence made of the predicate and its complements can be extracted in the first case and not in the other (3), (11). In addition, it is possible to extract the complement predicate of the copula without its arguments, whether these are cliticized or not (24a,b,c); it is also possible to cliticize the predicate without its complements (see (19a) repeated in (24d)).

- (24) F a. Aussi fidèle à ses amis que Paul soit, ...
 As faithful to his friends as Paul is, ...
 b. Aussi fidèle que Paul soit à ses amis, ...
 As faithful as Paul is to his friends, ...
 c. Aussi fidèle qu'il leur soit, ...
 As faithful as he CL-dat is, ...
 d. Fidèle, il l'est à ses amis plus qu'à ses convictions politiques
- I a. Fedele a Paolo com'è Mario, ...
 b. Fedele com'è Mario a Paola, ...
 c. Fedele come gli è Mario, ...
 d. Fedele, Giovanni lo è ai sui amici ma non a le sue idee politiche.
- R a. Cât de fidel ideii de libertate este Paul!
 'How faithful to the idea of freedom Paul is!'
 b. Cât de fidel este Paul ideii de libertate!
 c. Cât de fidel îi este Paul!

Although somewhat surprising, the data follow if the copula has two complementations: a (complement) saturated complement (24a), or an unsaturated complement which nevertheless can be extracted (24b,c,d).

We propose a flat structure analysis for the unsaturated complement. Before entering the discussion, we should stress the fact that the copula has the same behavior in the other RL which we do not examine in detail here. In fact, the copula has the same description in all RL.

As we have seen, adverbs can occur between the copula and the passive participle or predicative complement in R. This is the case in all RL, whether there is clitic climbing or not.

- (25) F a. Les livres lui sont rapidement envoyés
 I b. I libri gli sono rapidamente inviati
 R c. Cartile îi sînt rapid trimise

The books CL are rapidly sent ('the books are rapidly sent to him')

Following the argumentation in section 4.2, this shows that the complement structure is not a verbal complex.¹² We must choose between structure A (the predicative complement would be saturated for its non-clitic arguments) or structure C (all the complements of the predicative complement would be inherited by the copula). Consider the 'bandwaggon effect' illustrated in (26). While the complement saturated predicate can be extracted (26a), as well as the lexical (unsaturated) predicate (26b), it is not possible to extract the predicate with one of its complements leaving the other behind (26c,d,e), whether cliticized or not (the data are the same in I, R):

- (26) F a. Aussi puni de sa bêtise par un échec qu'il ait été, ...
As punished of his stupidity by a failure that he has been
b. Aussi puni qu'il ait été de sa bêtise par un échec cinglant, ...
c. ?? Aussi puni de sa bêtise qu'il ait été par cet échec cinglant, ...
d. *Aussi puni par cet échec qu'il ait été de sa bêtise, ...
e. * Aussi puni par cet échec qu'il en ait été...

These data show that an analysis where the predicate complement is underspecified for its saturation (as in Nerbonne 1994 for German) is wrong, and that the copula has two different structures. The agrammaticality of (27e) is explained if there is no VP complement (but a flat structure with sister complements) as soon as there is clitic climbing. The agrammaticality of (27c,d) is explained if there is no partial VP complement. So the copular (and passive) construction has two distinct complement structures (which can be related by a lexical rule): a hierarchical one (with a saturated phrasal complement, see figure (43) below) and a flat structure with the bare predicative complement and its complements at the same level (see figure (44) below).

We still have to explain why the lexical, unsaturated, predicate can be extracted when it is the complement of the copula, but not when it is the complement of the tense auxiliaries. We appeal here to a different feature, elaborated in Abeillé and Godard (2000a). On the basis of word order observations, we propose a syntactic, cross-categorial feature WEIGHT, which is relevant both for words and phrases, and distinguishes between *lite* and *non-lite* constituents.¹³ Crucially, this feature is not only relevant for word order generalizations, but also for extraction. On the basis of adverb behavior for instance, we observe a correlation between extractability and weight: only non-lite constituents can be extracted. A similar observation can be made regarding pronominalization. Assuming the distinction between canonical and non-canonical (for gaps and clitics) synsemes from Miller and Sag (1997), and Abeillé et al. (1998), the constraint is as follows:

(27) [SYNSEM *non-canonical*] --> [WEIGHT *non-lite*]

¹² In addition, the subject NP can occur in this position in R (see (5)), and P.

¹³ Non-lite subsumes middle-weight and heavy (which is only relevant for phrases, not for words).

The contrast between the predicative complement of the copula and the lexical participle complement of tense/aspectual auxiliaries follows if the former is always non-lite, while the second is always *lite*.¹⁴

To summarize, we have made two points here: (i) tense auxiliaries have a different structure in R (a verbal complex) and in F or I (a flat structure), (ii) the copula (or passive auxiliary) has two complement structures in all RL: a phrasal complement (predicative VP or AP, NP) and a flat structure. This structural diversity is often overlooked in studies about Romance complex predicates, which focus more on the common monoclausal properties of these constructions. It is nonetheless important from the theoretical point of view because it argues in favor of non derivational lexicalist frameworks which can separate argument inheritance (or predicate union, or the sharing of grammatical functions) from phrase structure.

Let us briefly comment on the recent proposal by Andrews and Manning (1999) within LFG. Like us, they stress the advantage of separating the treatment of monoclausality from phrase structure. However, their aim is different. Instead of accounting for the structural diversity of complex predicates, they want a unique cross-linguistic, and possibly universal, phrase structure (a VP complement).¹⁵ In other words, they rigidly define complex predicates by the lack of coincidence between the grammatical function domain (there is sharing of grammatical functions between two predicates, or more) and the phrase structure (there is an ordinary, hierarchical, complement structure, that is a VP in our case). In our approach, complex predicates are defined by the sharing of arguments by several predicates, which is compatible with different phrase structures. The two aspects may be differently related in the different languages, and, even, within one language.¹⁶ This is a matter of empirical investigation.

Their analysis encounters serious difficulties with our F, I and R auxiliaries. First, it is not clear how they could account for the differences between F, I and R tense and aspectual auxiliaries regarding adverbs and coordination. Second, the data on copular constructions raise problems. As briefly discussed above (section 4.3), such data show that their account of the correlation between clitic climbing (or complex predicate formation) and absence of extraction cannot be generally valid. Moreover, there is an incompatibility between the LFG analysis of pronominalization (in our case, clitic pronominalization) and extraction, their account of complex predicates and the data illustrated in (24). Since, in their analysis (as well as in other proposals within LFG), the sharing of grammatical functions at the f(unctional)-structure level relies on the fact that the second predicate (although the head of a VP) does not bear a grammatical function, one cannot see how they could account for partial pronominalization or extraction in (24). If the predicative complement has a grammatical function in these cases (in

¹⁴ Neither in F, nor in I (Salvi 1991:223) can the predicative clitic co-occur with another clitic (whether this is a complement of the cliticized predicate or not). We take this constraint to belong to morphology:

- | | | |
|--------|----------------------------------|--------------------------------|
| (i) F | Paul est toujours malade à Paris | 'Paul is always sick in Paris' |
| | ? Paul l'est toujours à Paris | * Paul l'y est toujours |
| (ii) I | Mi sembra stupido | 'He seems stupid to me' |
| | * Me lo sembra | |

The constraint is different in Catalan, where it can co-occur with another clitic if the latter is not one of its complements (Alsina, p.c.). For C., we add the constraint that an affix argument cannot be unsaturated for an affix.

¹⁵ They wrongly assume that Abeillé & Godard (1994), Abeillé et al. (1998), Monachesi (1999a) propose that all complex predicates correspond to flat complement structures.

¹⁶ This is the case for R. See Monachesi (1999b), and fn 10. This is also the case for I. Andrews and Manning cite the case of clitic climbing out of an infinitival interrogative in colloquial I (from Rizzi 1982), as an argument for their VP complement analysis. In our approach, nothing precludes clitic argument inheritance coupled with a hierarchical complement structure (see Monachesi 1999a, for clitic climbing out of a tensed VP in Salentino).

order to be pronominalized or extracted) then one cannot have a complex predicate and clitic climbing should be impossible, contrary to fact.

5. An HPSG account

5.1. Representation of tense and aspectual auxiliaries

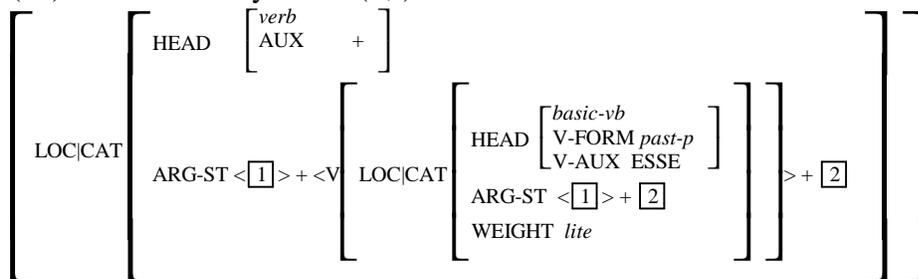
In this section, we provide a description of the F, I tense auxiliaries *être* and *esse*, and of R perfective *fi*, focussing on the feature required to build the verbal complex in R.

In the flat structure, the participle is a complement of the auxiliary, like the complements which it itself subcategorizes for. But a special feature is needed to build the verbal complex, since the auxiliary must combine only with the participle, and not the complements. We adopt the feature GOV, proposed for other languages (alternatively VCOMPL, see e.g. Chung 1998 for Korean, Kathol 1998 for German). GOV is a valence feature, appropriate for verbs; its value is a lexical (or a lite) verb. This valence requirement is discharged in a head-governed-phrase. To avoid an unnecessary complication of F and I grammar, we make the further hypothesis that the GOV feature is not used in all languages, and that even related languages like RL may differ from each other on this point: GOV is present in R, but not in F or I. Thus, the verbal complex is available in R, not in F or I. For R, the GOV feature is present on all verbs; its value is an empty list, except for auxiliaries, which we distinguish with the feature [AUX +]. Contrary to GOV, the feature AUX is also present in F and I (see e.g. Kim and Sag 1995).¹⁷

We adopt the analysis of cliticization proposed in Miller and Sag (1997), Abeillé et al. (1998). Pronominal clitics in F, I and R are considered verbal affixes, morphologically realizing elements of the argument structure of the verb on which they occur.¹⁸ In a general way, the list of arguments is the concatenation of the subject and the complements lists. However, there are two cases in which the affixal argument (member of the argument list) is absent from the list of complements: it is an 'intrinsic clitic' (in F, a reflexive or an idiomatic clitic), or it corresponds to a morphological affix realized on this verb (see (38) below).

Auxiliaries *être* and *essere* have a common syntactic description, given in (28) (see also figure (42) below). The feature V-AUX deals with auxiliary selection: these tense auxiliaries take as complement a participle specified [V-AUX ESSE].¹⁹

(28) Tense auxiliary ESSE (F,I)



¹⁷ In Kim and Sag (1995) the feature [AUX+] characterizes those verbs which can be followed by the negation in an infinitival VP (for the data, see Emonds 1978, Pollock 1989). Such verbs do not otherwise form a coherent class, comprising the full verb *avoir* as well as the tense auxiliaries *avoir* and *être*, and the copula.

¹⁸ This may be a simplification of the Romanian data. This analysis is (relatively) orthogonal to our purpose.

¹⁹ The sign '+' in list values notes concatenation.

Fi inherits the subject [1] (it is a subject raising verb) and the complements [2] of the participle. *Fi* identifies its COMPS list with that of the participle, rather than its ARG-ST like tense auxiliaries *essere*, *être*. This difference accounts for the peculiar behavior of feminine singular clitic *o* (Dobrovie-Sorin 1994), which contrary to other pronominal clitics (32b) can stay on the participle (32a):

- (32) R a. Nu cred să fi spus-o Ion a'.Nu cred s-o fi spus Ion
 Neg think SA has told-CLfs Ion Neg think SA+CLfs has told Ion
 'I don't think that Ion has told it(fem)'
 b. Nu cred să-l fi spus Ion b'.* Nu cred să fi spus-îl Ion
 Neg think SA-CLms has told Ion Neg think SA has told-CLms Ion
 'I don't think that Ion has told it(m)'

Using inheritance of complements rather than that of arguments allows cliticization on the past participle: if the complement is cliticized on the past participle, it does not belong to the COMPS list of the participle and is not inherited by *fi*. If it is not cliticized on the past participle, it belongs to its COMPS list and is inherited and cliticized on *fi*. To restrict downstairs cliticization to *o*, we appeal again to the distinctions between verb types, and verbal word types. We propose that in R all words without morphological clitics are basic-verbs and all words bearing clitics are reduced verbs, except that words bearing clitic *o* (and clitic *o* only) can be basic-verbs.²¹ So the only cliticized participles which can be a complement of *fi* are the ones with *o*.

To summarize this section, all tense auxiliaries are similar in having one underspecified lexical entry, in selecting a bare participle (typed *basic-verb*) and inheriting the subject and the complements of the participle. But the R *fi* is distinct from F, I tense auxiliary ESSE in two respects: (i) it selects the participle as a 'governed' category, rather than an ordinary complement. (ii) it inherits the subject and the complements of the participle but not necessarily all arguments (allowing clitic *o* to stay downstairs). To deal with the different puzzles concerning clitic climbing, we use Abeillé et al.'s (1998) distinction between two verb types, *basic-verb* and *reduced-verb*, allowing slightly different constraints on words with *basic-verb* head value in the three languages (no clitics at all in I, clitic *o* in R, inherent clitics on Vinf with *faire* in F).

5.2 The representation of Romance copula

We provide a description of the copula, and a lexical rule relating its two complement structures.²²

As is well-known, the copula can take a number of different predicative complements: an AP, NP or PP, in addition to the passive participle. Assuming that the latter is also predicative, we

²¹ Words with clitic *o* are reminiscent of F infinitives with intrinsic clitics as complement of *faire*; they differ in that they cannot be both basic-verbs and have other pronominal affixes; see fn 20, Abeillé et al (1998).

²² Contrary to F and I, the R copula can host a reflexive clitic:

(i) R Ion se este credincios (Ion is faithful to himself)

This is not a counter-argument to the identification of the copula across RL, because the impossibility of a reflexive affix is a constraint on predicative complements (including the passive participle) in F and I rather than on the copula. This is shown by the following contrast between active and passive adjunct participles (without auxiliaries):

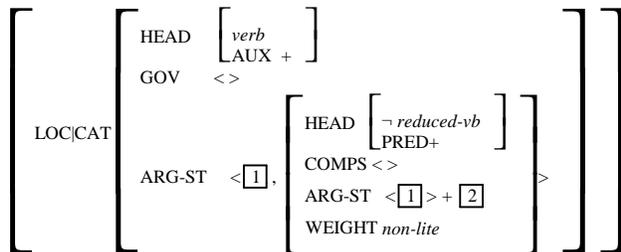
(ii) I Lavatosi Giovanni,... (G. having washed himself)

(iii) I * Affidatosi Giovanni, ... (G. being left to himself)

specify the complements as [PRED+]. Clitic climbing is obligatory, and there is no clitic morphology on the predicative complement, although the I passive participle can also host a morphological clitic (33c). Accordingly, we use the same constraint on the complement as for F, I tense auxiliaries. However, since the complement may be a category other than a verb, we use a negative constraint (it is not a *reduced-verb*). The description of the saturated copula is given in (34), where the feature GOV is only relevant for those RL which use it, like R:

- (33) I a. Paolo gli sarà presentato b. * Paolo (gli) sarà presentatogli
 Paolo CL-dat will-be presented Paolo (CL) will-be presented-CL
 Paolo will be presented to him'
 c. Presentatogli, Paolo è contento
 '(Having been) presented to him, Paolo is satisfied'

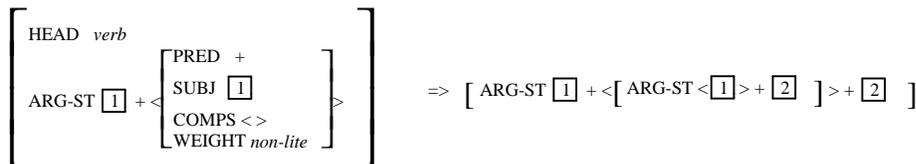
(34) Complement saturated Romance copula



A lexical rule (LR) relates the two copulas. As is usually accepted, this LR relates the two lexemes, and keeps identical what is not specified as being modified (Meurers 2000). The output for the copula is quite similar to the description of F, I tense auxiliaries, the difference lying in the weight of the complement from which the arguments are inherited: since the LR does not modify this specification, it remains non-lite, while the participle complement of tense auxiliaries is lite. In our approach, this accounts for the different behavior regarding extraction and pronominalization (see constraint (27)).

This general LR is given in (35). The list $\boxed{1}$ corresponds to the subject of the predicative complement and of the copula, and $\boxed{2}$ is the list of its subcategorized complements (the list can be empty).²³

(35) Predicative Lexical Rule in RL



The left side entry for the copula takes two syntactic arguments: a raised subject and a phrasal predicative complement of any category, saturated for its complements (COMPS list empty). The

²³ A more sophisticated version of the rule will allow it to apply not only to the copulas and other subject raising verbs, but also (a few) transitive verbs with an NP and a predicative complement.

right side entry preserves most features of the left side one, except that it now takes an unsaturated predicative complement plus an unspecified number of shared complements.

The entry for *être*, as instantiated in examples (43a) and (44a), is obtained by unifying the input (resp output) description of *être* in (35) with that of the participle *offert* :

$$(36) \text{ a. } \textit{sera} \text{ in (43a): } \left[\begin{array}{l} \text{HEAD } \textit{verb} \\ \text{SUBJ } \langle \boxed{1} \text{NP} \rangle \\ \text{COMPS } \left\langle \begin{array}{l} \text{HEAD } [\textit{passive}, \textit{PRED} +] \\ \text{SUBJ } \langle \boxed{1} \rangle \\ \text{COMPS } \langle \rangle \\ \text{WEIGHT } \textit{non-lite} \end{array} \right\rangle \end{array} \right]$$

$$\text{ b. } \textit{sera} \text{ in (44a): } \left[\begin{array}{l} \text{HEAD } \textit{verb} \\ \text{SUBJ } \langle \boxed{1} \text{NP} \rangle \\ \text{COMPS } \langle \boxed{3} [\textit{ARG-ST} \langle \boxed{1}, \boxed{2} \text{NP}[\hat{a}] \rangle] \\ \text{ARG-ST } \langle \boxed{1}, \boxed{3}, \boxed{2} \rangle \end{array} \right]$$

The entry (36a) is related to the cliticized form *le sera* (see fig. (43b) below), while entry (36b) is related to forms with partial pronominalization such as *lui sera offert* (see fig. (44b) below) or *le sera à Paul*.

5.3 Types of Phrases and examples

After the lexical descriptions of the verbs, we turn to the types of phrases. We describe here the head-complements-phrase, and the head-governed-phrase, as well as the main order principles which constrain those phrases.²⁴ A head-governed phrase is needed for the R verbal complex, while the standard head-complements-phrase is used both for the hierarchical (for the saturated copula) and for the flat structure (for I, F tense auxiliaries and the unsaturated copula).

The description for the head-complements-phrase, and the head-governed-phrase, subtypes of headed phrases, are as follows:^{25 26}

$$(37)\text{a. Head-complements-phrase } \tilde{>} \left[\begin{array}{l} \text{SYNSEM|WEIGHT } \textit{non-lite}, \text{COMPS } \langle \rangle \\ \text{HD-DTR|SYNSEM } \left[\begin{array}{l} \text{SUBJ } \boxed{3} \\ \text{COMPS } \langle \boxed{1}, \dots, \boxed{n} \rangle \\ \text{WEIGHT } \textit{lite} \end{array} \right] \\ \text{NON-HD-DTRS } \langle [\text{SYNSEM } \boxed{1}], \dots, [\text{SYNSEM } \boxed{n}] \rangle \end{array} \right]$$

²⁴We leave aside the head-subject-complements-phrase, which can be used for inverted subjects.

²⁵ We analyze postverbal adverbs in the VP as complements (e.g. Bouma et al. in press). Description (37a) is a simplification: French and Italian allow infinitival VP's to remain unsaturated for the object in certain constructions (infinitival VP[à] relatives and *tough* adjective complements).

²⁶ That head and governed daughters in (37b) must be both *lite* comes from a more general constraint that a *lite* phrase is solely made up of *lite* daughters (Abeillé and Godard 2000a).

$$b. \text{Head-governed-phrase} \sim \left[\begin{array}{l} \text{SYNSEM|WEIGHT} \\ \text{HD-DTR|SYNSEM} \\ \text{NON-HD-DTRS} \end{array} \begin{array}{l} \left[\begin{array}{l} \textit{lite} \\ \textit{verb} \\ \text{AUX +} \\ \text{GOV} \langle \boxed{1} \rangle \\ \text{WEIGHT} \textit{ lite} \end{array} \right] \\ \langle \text{[SYNSEM} \boxed{1} \text{] | WEIGHT} \textit{ lite} \rangle \end{array} \right]$$

The head-governed-phrase can only be relevant in a language which uses the feature GOV (thus, in R, not in F or I). Note that (37a) does not allow for the combination of the governed verb and the auxiliary in a flat structure, because, in our approach, the governed daughter is not considered a complement:

$$(38) \text{ word} \sim \left[\begin{array}{l} \text{SUBJ} \quad \boxed{1} \\ \text{COMPS} \quad \boxed{2} \\ \text{GOV} \quad \boxed{3} \\ \text{ARG-ST} \quad \boxed{1} + \boxed{2} + \text{list}(\textit{non-canonical}) \end{array} \right]$$

This constraint on words is also used to account for cliticization: when an argument is cliticized (typed *pronominal-affix* on the ARG-ST list of the verb), it does not belong to the COMPS list (*pronominal-affix* is a subtype of *non-canonical-synsem*) but only to the ARG-ST list; its realization is taken care of by verbal morphology.

Linearization results from constraints on the DOM value (Reape, 1994) associated with phrases. The relevant constraints for head-complements-phrases are as in Abeillé and Godard (2000a):²⁷

(39) Linearization Constraints:

- a. Head-Governed-phrase --> Head-DTR < X
- b. Head-Complements-phrase --> Head-DTR < X
- c. Head-Complements-phrase --> [COMPS $\boxed{1}$] < $\boxed{1}$ [ADV-]
- d. Head-Complements-phrase --> [*lite*] < [*non-lite*, ADV-]

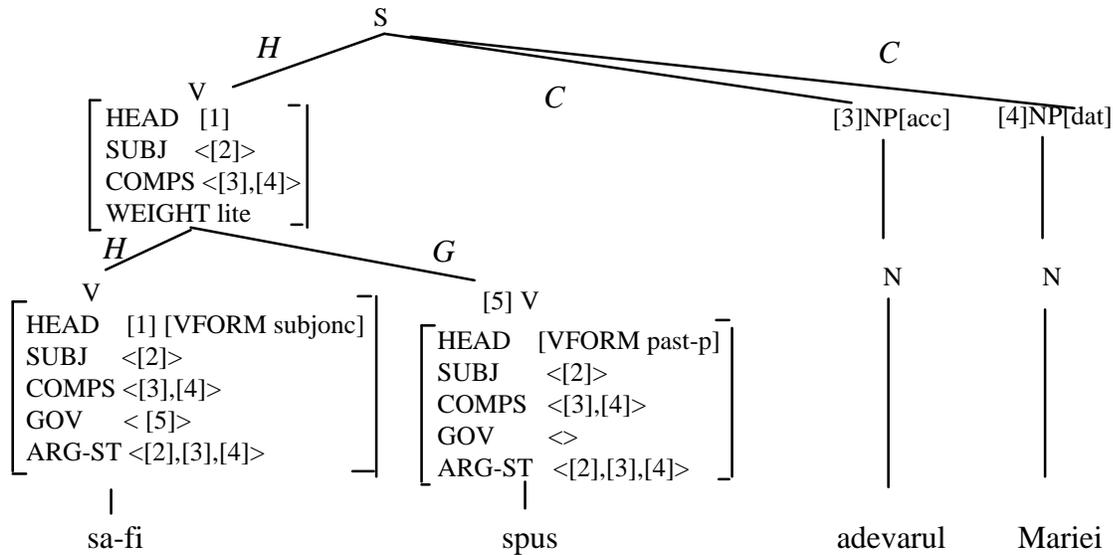
In the head-governed-phrase and the head-complements-phrase, the head daughter comes first (it precedes X which stands for any other daughter). Constraint (39c) orders the non saturated complement before the complements selected by it; that orders the (non-lite) bare predicative complement (in the flat structure for the copula) before the other complements (see (40b)). For the sake of completeness, we give here constraint (39d), which orders non-lite complements after lite ones in a general way (the lite participle in (40a) is ordered both by (39c) and (39d)):

²⁷ Adverbs and adverbials are [ADV+], while N and NP are [ADV-]. (39b,c) allow adverbials to escape from the constraint and precede the *lite* participle in F, I, even if they are *non lite*.

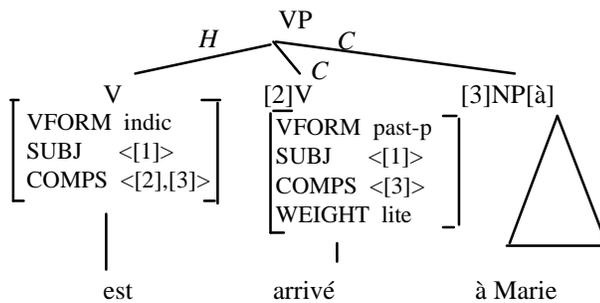
- (40) F a. * Jean s'est les mains lavé (lit: J. SE is the hands washed)
 I * Giovanni si è le mani lavato
 F b. ?? Jean est de Marie amoureux (lit: J. is of Marie in-love)
 I ?? Giovanni è di Maria innamorato

An example of a VP headed by subjunctive *fi* is given in (41), and an example of a VP headed by tense auxiliary *être* in (42), where the grammatical functions are annotated on the branches (H stands for head-daughter, G for governed-daughter and C for complement-daughter):

(41) (nu cred) sa(+) fi spus adevarul Mariei ((I don't think) that he has said the truth to M.)

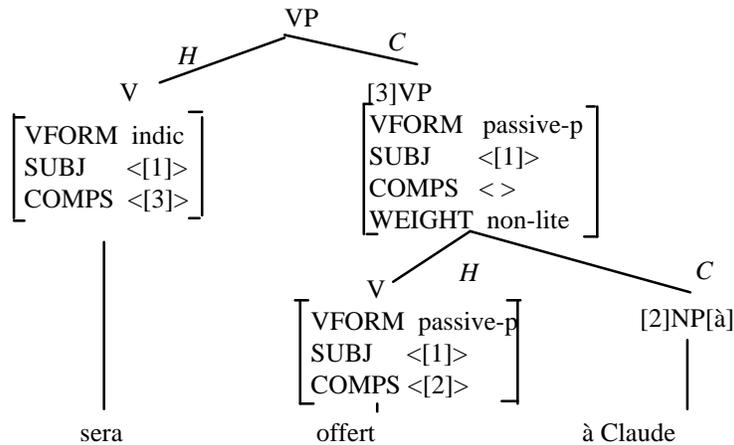


(42) (Un accident) est arrivé à Marie ((an accident)'has happened to Marie')

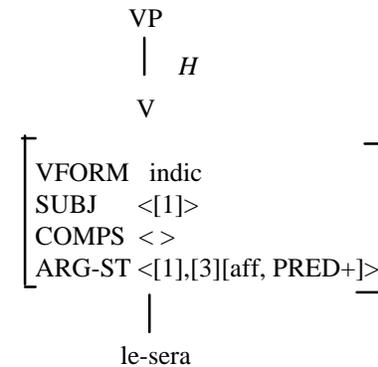


The VP with the complement saturated copula is illustrated in (43), and the VP with a complement unsaturated copula in (44):

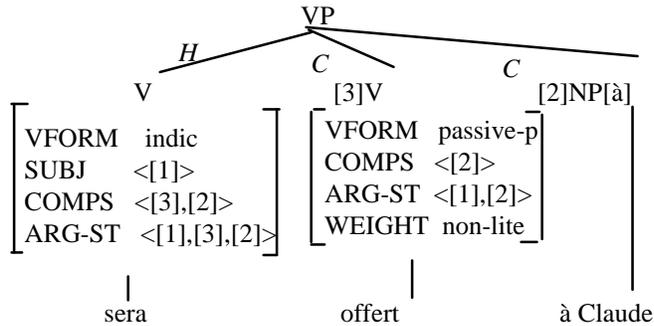
(43) a.



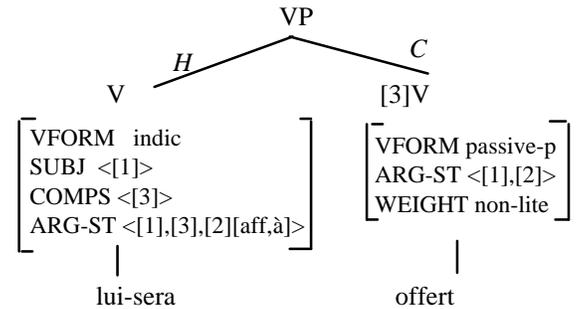
b.



(44) a.



b.



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