

# ARGUMENT STRUCTURE AND MORPHOLOGY: THE CASE OF *EN*- PREFIXATION REVISITED\*

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## Abstract

In this paper I argue that *en*-prefixed words in Catalan and English (e.g. *amor*<sub>N</sub> ‘love’ > [[*en+amor*]<sub>V+ar</sub>]<sub>V</sub> ‘to make someone fall in love’; *noble*<sub>A</sub> > [*en+noble*]<sub>V</sub>) are not exceptions to the Right-hand Head Rule (RHR; Williams 1981a). I argue that a  $\emptyset$ -suffix, and not the prefix *en-*, is responsible for the conversion of adjectives and nouns to verbs (Neeleman & Schipper 1992). The  $\theta$ -grid of N/A-to-V prefixations provides the empirical evidence in favour of the conversion-suffix. The  $\emptyset$ -suffix will be responsible for the presence of a [+c] role and the prefix will account for the [-c-m] features sometimes present in denominal verbs. I will also show that an unaccusative approach (Grimshaw 1990, Sportiche 1998) to reflexives (in Romance) can deal with the data more satisfactorily than an unergative one (Reinhart & Siloni 1999). Finally, a syntactic theory of argument structure (cf. Hale & Keyser 1993, 1998, 2002) will prove not to be sufficient to account for the data.

## 1. Introduction<sup>1</sup>

The present study deals with the derivation of words and the consequences that word formation processes have on the argument structure of the base. A current topic in generative grammar is whether word-structure is built by the laws of the syntax (cf. Baker 1988, Marantz 1997, 2001, Hale & Keyser (henceforth HK) 1993, 1998, 2002, Mateu 2001a/b, 2002, 2005) or by the laws of the morphological component (cf. Williams 1981a, 1981b, Selkirk 1982, Di Sciullo & Williams 1987, Di Sciullo 1997, Kiparsky 1997, Varela & Haouet 2001, Williams 2004, Lieber 2004). Here I will adopt a modular theory of grammar that brings together the two different views. I will assume that morphology constitutes a component on its own that interacts with the other

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This article is a development of Padrosa's (2005a) study of Catalan *en-* prefixation and draws most of its content from an unpublished MA dissertation (Padrosa 2005b).

components of grammar, i.e. syntax, semantics and phonology (cf. Jackendoff 1997, Ackema & Neeleman 2004) and that there is some regularity behind the lexical items in any language, a belief that goes back to Gruber (1965), Chomsky (1970), Halle (1973), Jackendoff (1975), among others.

Headedness in morphology is regular. For instance, affixation processes in English (e.g. Williams 1981a) and Catalan (e.g. Mascaró 1986) are typically right-headed. Since these will be the languages under analysis, Williams' (1981a) Right-hand Head Rule (RHR) becomes relevant. The RHR<sup>2</sup> states that the head of a morphologically complex word is rightmost. The head will assign its category to the entire word by means of a mechanism referred to as percolation (see section 2.3 for discussion of such a mechanism). A direct result of the RHR is that suffixes, but not prefixes, are expected to determine the category of the word they attach to, since the head determines the properties of the whole. The following examples show that suffixes (1a, 2a) are typically category-changing and prefixes (1b, 2b) category-neutral. (1) and (2) illustrate the point for English and Catalan respectively.

- (1) a. mad<sub>A</sub>+ness<sub>N</sub> = madness<sub>N</sub>      b. re+write<sub>V</sub> = rewrite<sub>V</sub>  
 character<sub>N</sub>+ize<sub>V</sub> = characterize<sub>V</sub>      im+polite<sub>A</sub> = impolite<sub>A</sub>
- (2) a. groc<sub>A</sub> 'yellow' + or<sub>N</sub> = grogor<sub>N</sub> 'yellowness/having the quality of yellow'  
 industrial<sub>A</sub> 'industrial' + itzar<sub>V</sub> = industrialitzar<sub>V</sub> 'industrialize'  
 b. a + dormir<sub>V</sub> 'to sleep' = adormir<sub>V</sub> 'to make somebody fall asleep'  
 anti + higiènic<sub>A</sub> 'hygienic' = antihigiènic<sub>A</sub> 'antihygienic'

Although the RHR seems to apply quite consistently, there are some exceptions to the claim that the head in morphological constructions is on the right and these need to be accounted for. For example, Williams (1981a) observes that the English prefix *en-* systematically converts N(ouns) and A(djectives) into V(erbs), thus displaying the behaviour of a head:

- (3) rage<sub>N</sub> > [en+rage]<sub>V</sub>      dear<sub>A</sub> > [en+dear]<sub>V</sub>  
 case<sub>N</sub> > [en+case]<sub>V</sub>      noble<sub>A</sub> > [en+noble]<sub>V</sub>

A similar scenario exists in Catalan. The prefix *en-* also seems to convert Ns and As into Vs in a productive way:<sup>3</sup>

- (4) amor<sub>N</sub> 'love' > [[en+amor]<sub>V</sub>+ar]<sub>V</sub> 'to make someone fall in love'  
 caixa<sub>N</sub> 'box' > [[en+caixa]<sub>V</sub>+ar]<sub>V</sub> 'to put (something) in boxes'  
 car<sub>A</sub> 'expensive' > [[en+car]<sub>V</sub>+ir]<sub>V</sub> 'to raise the price (of something)'  
 cendrós<sub>A</sub> 'ashy' > [[en+cendrós]<sub>V</sub>+ar]<sub>V</sub> 'to cover something with ashes'

<sup>2</sup> Selkirk (1982) points out that the RHR is not universal and notes (citing from Lieber 1980) that left-headed types predominate in Vietnamese, for example. The RHR must therefore be stated as part of the grammar of Catalan and English, a parameter set for those languages with right-headed morphology.

<sup>3</sup> Of the alleged category-changing prefixes in Catalan (cf. Cabré & Rigau 1986, Cabré 1988, 1994: *a-*, *en-* (*em-*), *re-*, *des-* (*es-*)) and English (cf. Siegel 1979, Williams 1981a, Selkirk 1982: *a-*, *be-*, *de-*, *en-* (*em-*)), *en-* has been chosen to be the most productive one in the two languages.

In front of these counterexamples to the RHR, one is faced with different alternatives to explain them.<sup>4</sup> The first one is to say that these words have no head. However, this is not a very attractive option since all complex words seem to have a head. The notion of head, which plays an important role in syntax, can also be applied to the internal structure of words. Work on heads in morphology has been well-established for a long time (cf. Williams 1981a, Selkirk 1982, Scalise 1984, 1988a/b, Di Sciullo & Williams 1987).

A second option is to ascribe the prefix *en-* the attribute of a head and assign it to the category V. For instance, Williams (1981a) provides two arguments to support this view for English, the first of which is that it accounts for the systematic assignment of *en-X* words to the category V. The second argument is that *en-* potentiates the affix *-ment*, as seen in *ennoblement*, *enragement*, and *endearment*. As is usually observed in morphology studies, the potentiation of affix<sub>X</sub> by affix<sub>Y</sub> indicates that the latter must be in the head position. In this sense, it seems plausible to say that *en-X* words have leftmost heads.

A third alternative to deal with the counterexamples to the RHR is not to treat them as exceptions, which is the view defended by Neeleman & Schipper (1992) when dealing with apparent category-changing verbal prefixation in Dutch. The authors argue that prior to prefixation there is a conversion process of As and Ns to Vs, by means of a zero-affix. Some evidence for this conversion-analysis comes from the argument structure of Vs, assuming that the  $\Theta$ -grid of a complex word is derived from the thematic information of its morphemes via  $\Theta$ -role percolation. The Dutch prefix *ver-* provides a Theme when it attaches to a V. That becomes clear if the V *dobbelen* (5a), which takes an Agent, is contrasted with the prefixed version of the same V (5b), which takes an Agent and a Theme. However, when *ver-* is attached to a N/A, there is a Theme (which in this case originates in the A due to the Rel(ativized) RHR), and an optional Agent which cannot have originated in the prefix (see (6)), assuming that the prefix *ver-* provides a stable  $\Theta$ -role. In (5) it was established that the prefix provides a Theme, although its features are sometimes not visible, i.e. when the base on its right has the same features, as seen in (6). Another source for the Agent has to be found. Hence, the postulation of the conversion suffix.

- (5) a. *dobbelen*<sub>V</sub> 'to gamble' Agent  
 b. *verdobbelen*<sub>V</sub> 'to gamble away' Agent Theme
- (6) a. *nieuw*<sub>A</sub> 'new' Theme  
 b. *vernieuwen*<sub>V</sub> 'to renew' Agent Theme

<sup>4</sup> I discard the possibility that in Catalan the final suffix is responsible for the category change, since this suffix is part of the inflectional paradigm and inflectional elements do not change category. This option is considered and rejected in Padrosa (2005b), who gives an overview of the different analyses proposed in the literature to account for parasynthetic constructions (e.g. *ennegrir* 'to blacken', *embolden*). The overview includes the three alternatives proposed in the present study plus others, leaving the zero-conversion suffix as the only possible option. In addition, the same zero-suffix can explain the many cases of conversion from a N or A to a V without a prefix in Catalan (i) and English (ii).

(i) a. *salN* 'salt' - *salarV* 'to salt'  
 b. *arrelN* 'root' - *arrelarV* 'to root'

(ii) a. *saltN* - to *saltV*  
 b. *rootN* - to *rootV*

Reinhart's (2000, 2001) assumptions go well with the modular approach to grammar adopted here, and by adopting her theta system and a  $\Theta$ -role percolation approach to the inheritance of thematic information (Gràcia 1992, 1995, Neeleman and Schipper 1992), I will try to find out which of the two last alternatives (i.e. *en*-prefixations having leftmost heads and having a zero-suffix) is the most adequate one, thus addressing the question of whether the complex words derived by *en*-prefixation in both English and Catalan (like those in (3) and (4)) are really exceptions to the RHR or not.

To carry out this task, I will focus on the argument structure of derived Vs and investigate the possible source of  $\Theta$ -roles, which in turn will allow me to address the issue of whether the prefix contributes to the  $\Theta$ -grid of the derived word. If the prefix does indeed contribute to the  $\Theta$ -grid of the resulting word, I will corroborate a  $\Theta$ -role percolation approach to the inheritance of thematic information (cf. Boij 1988, Levin & Rappaport 1988, Gràcia 1992, 1995 and Neeleman & Schipper 1992 and Mateu's 2001a, 2002) view of complex denominal Vs. Mateu argues that the preverb of complex denominal Vs in Germanic languages (such as the German word *ver+gärtneren* 'to away-garden') is part of the main thematic structure, thus also contributing to the resulting  $\Theta$ -grid of the predicate.

Reinhart's theta system (2000, 2001) represents one of the different reinterpretations of the 'Theta' theory in Chomsky's Principles and Parameters approach which have been proposed recently. Another reinterpretation is embodied in HK (1993, 1998, 2002). While Reinhart's proposal relies on  $\Theta$ -roles, HK's is based on direct interpretation of the structure. According to the latter, the position of an argument in their lexical-syntactic structures equals its thematic role. For instance, the object is not assigned the role Theme, because it is already a Theme as a result of its being in a specific structural position which has this particular semantics. Therefore, the source of  $\Theta$ -roles will be crucial to determine which approach is superior. If thematic roles always originate in the same position, then HK's approach should be favoured for economy reasons, i.e. the semantics can be read off from the structure and there is no need for a linking system between  $\Theta$ -roles and syntactic positions. If  $\Theta$ -roles do not always come from the same structural position, then Reinhart's framework should be adopted. The two different views of Theta theory will be compared, although my study will be, as already noted, framed within Reinhart's theta system. HK's (1993, 1998, 2002) proposal will be briefly discussed to see how their analysis can explain the data presented in section 3. If their account can deal with the data satisfactorily, that will mean that my analysis should be revised and modified accordingly.

Given that the Catalan data will involve many reflexive Vs, a position as to how to consider them will be taken. That is, my study will provide an answer to the question of whether reflexive Vs should be treated as either unaccusative (Grimshaw 1990, Sportiche 1998) or unergative (Reinhart & Siloni 1999) entries.

This paper is organized as follows. Section 2 contains some theoretical background to understand Reinhart's theta system (2.1), a brief explanation of the different approaches to reflexives (2.2), and some discussion about  $\Theta$ -percolation and inheritance (2.3). In section 3 the results of the data are presented and discussed. Finally section 4 provides the present study with some conclusions and questions for further research.

## 2. Theoretical background

This section provides the basics of Reinhart's (2000, 2001) theta system (including her linking system), some discussion about the different analyses of reflexives, and a brief explanation of how  $\Theta$ -percolation and inheritance work.

### 2.1. Reinhart's theta system

Reinhart's theta system (2000, 2001) represents a formal definition of thematic roles. By proposing two binary features: [+/-*c*] and [+/-*m*] (which result in eight feature clusters; see below), Reinhart derives the  $\Theta$ -roles of the 'Theta theory' found in the Principles and Parameters framework (Chomsky 1995). Seeing that causality is crucial in thematic structures and observing that there is an overlap between the Cause and Agent roles: 'if an argument is an agent of some change of state, it is also a cause for this change' (Reinhart 2000: 25), Reinhart labels the property they share [*c*], 'cause change'. Then, she notes that agency, unlike causality, involves volition and intention, and she labels this feature [*m*], 'mental state of the participant'. By assuming two features and two possible values for each, the system generates eight feature-combinations or, in Reinhart's terms, eight feature bundles. Although some of them, namely the mixed-value clusters ([+*c*-*m*]) and the unary clusters ([-*c*]), are more varied in their role interpretation than fully specified clusters with a [+] value for each feature (e.g. [+*c*+*m*]), there is still a (strong) correspondence between the clusters and the  $\Theta$ -roles. Here I reproduce the correlations (Reinhart 2001: 3):

- (7) [+*c*+*m*] agent                      [+*c*-*m*] instrument  
 [-*c*-*m*] theme/patient                [-*c*+*m*] experiencer  
 [+*c*] cause (unspecified for /*m*; consistent with agent and instrument)  
 [+*m*] (unspecified for /*c*) with verbs such as *love, know, believe* (externally generated); *laugh, cry, sleep* (requiring an animate argument)  
 [-*m*] (unspecified for /*c*) usually expressing subject matter/locative source  
 [-*c*] (unspecified for /*m*) usually expressing internal roles like goal, benefactor (typically dative or PP)

Any linking theory about  $\Theta$ -roles has to map the thematic specification (irrespective of its representation by means of  $\Theta$ -role labels, feature clusters, etc.) of a lexical entry onto syntactic positions. That is, there must be rules or some mapping connecting the notion agent or the cluster [+*c*+*m*] to notions like external and to a specific position in the sentence. (See Williams 1981b, Carrier-Duncan 1985, Baker 1988, Grimshaw 1990, Neeleman & Schipper 1992, Samek-Lodovici 2003, for some linking suggestions).<sup>5</sup> Reinhart (2001) proposes that there is a lexical operation which assigns indices to the roles on the V's  $\Theta$ -grid: 1 marks the external role and 2 marks the internal role. These marking procedures only apply to verbal entries with at least

<sup>5</sup> For example, Williams (1981a) distinguishes the external  $\Theta$ -role by underlining it or in Grimshaw's (1990) thematic hierarchy, the external  $\Theta$ -role corresponds to the least embedded one. These are just some of the conventions to relate roles to syntactic positions. That is, the underlined  $\Theta$ -role in Williams or the least embedded  $\Theta$ -role in Grimshaw's system is merged externally.

two arguments, by assigning index 2 to a [-] cluster ([-c-m], [-c], [-m]) and index 1 to a [+] cluster ([+c+m], [+c], [+m]). The result is that a cluster marked 2 must merge internally and a cluster marked 1 must merge externally.<sup>6</sup> Only mixed clusters ([+c-m], [-c+m]), which are not marked, can merge in either position, subject to other requirements (e.g. Merge externally whenever possible for economy reasons, since the external position must always be filled eventually).

Given Reinhart's assumption that each V is associated with only one thematic structure and that all Vs are underlyingly transitive,<sup>7</sup> she derives reflexives, unaccusatives and unergatives by means of a lexical operation called reduction, which reduces the V's arity by one. If the internal argument is reduced (i.e. if the operation Reinhart calls reflexivization applies), a reflexive entry is derived. If the external argument (necessarily specified as [+c]) is reduced (i.e. expletivization has applied, in Reinhart's terms), the result can either be an unaccusative or an unergative alternate, a result which will depend on the feature specification of the remaining argument. To see how the marking procedures work and how the mapping is established, we will consider the basic verb entry of *break* (*{John/The storm/The stone} broke the window*) and its unaccusative variant (*The window broke*).

- (8) a. Base entry: *break* ([+c], [-c-m])  
 b. Marking: *break* ([+c]1, [-c-m]2)  
 c. Reduction<sub>Expletiv.</sub> (*break*) ([-c-m]2)

(8a) indicates that the V *break* is transitive and thus takes two feature clusters (two arguments). The marking system establishes that the [+c] (cause) cluster is marked 1 and that the [-c-m] (theme/patient) is marked 2. The mapping instructions will then determine that the [+c] and [-c-m] arguments will merge externally and internally on the transitive variant respectively. Although the [+c] argument will not be present if expletivization takes place (8c), such process does not directly affect the remaining argument because it is still marked 2. It cannot merge externally, although it can move to the external position later to satisfy the Extended Projection Principle (EPP). Given that the remaining argument is [-c-m], an unaccusative verb is derived. If the remaining feature cluster had been [-c+m] (*{The man/The storm/The box} worried Mary-Mary worried*), the argument bearing such specification would have been able to merge externally, since the cluster, being mixed, would not have been given an index. The requirement of external merger whenever possible would have had its effects and an unergative would have been derived.

Finally, to exemplify reflexivization, consider (9).

- (9) a. John dressed the baby. ([+c+m]1, [-c-m]2)  
 b. John dressed. ([+c+m]1)

<sup>6</sup> *External merging* refers to that role merged outside the maximal projection of its predicate, and *internal merging* refers to those roles merged within the maximal projection of their predicate.

<sup>7</sup> The relationship between the causative and inchoative forms of a V is still an open issue in generative grammar. It is generally assumed that one form derives from the other in the lexicon, but it is not clear which form is the basic one. For example, Reinhart (2000, 2001) believes that the inchoative form derives from the causative, whereas HK (1998) claims the opposite. See Gràcia (1995) for a different view, according to which the two forms share the same base, but neither of them is derived from the other.

The internal argument marked 2 in (9a) has been reduced in (9b). This has no effect on the merging of the remaining argument, since it is still marked 1. It will merge externally, as in (9a).

Because Reinhart's marking procedures apply only for the arguments on a V's  $\Theta$ -grid, it will only be at the verbal node, and not before, that arguments will get index 1 ([+] cluster), 2 ([-] cluster) or no marking at all (mixed cluster). That means that the  $\Theta$ -roles of As and Ns cannot follow Reinhart's marking system, since this is not applicable to them. With respect to the relationship between the  $\Theta$ -roles of As and Ns and their syntactic position (whether they are external or internal arguments), I follow the regularities already established in other work (for example, Williams 1981b). That is, a [-c-m] role on an A will be external. The same role on a N will be internal and the R-role,<sup>8</sup> which is associated with Ns, will be external. Such approach seems problematic at first sight, because the external argument of an A (*This apple is edible*) is internalized when it is on the V's node (*I ate the apple*). However, this apparent internalization is explained if we adopt the view according to which only  $\Theta$ -roles percolate, and the notions external or internal are determined by the category the  $\Theta$ -roles are associated with (see Neeleman & Schipper 1992 for a similar view). In other words, the A will force an argument specified as [-c-m] to be external, whereas the same role on a V will be given index 2, which will determine internal merging.

## 2.2. Two analyses of reflexives: unergative vs. unaccusative

As for the treatment of reflexives (quite abundant in my Catalan survey, cf. Appendix B), we have just seen that, according to Reinhart, they are unergative entries, which have been derived by reducing the internal argument of a transitive V (see Reinhart & Siloni 1999 and Reinhart 2000, 2001 for details). However, Reinhart is somehow forced to stipulate that reflexivization is the result of reducing the internal argument, because she already has an external reduction operation for expletivization (recall that this is how she derives unaccusative and unergative entries). Similarly, one could also stipulate that reflexivization is the outcome of reducing the external  $\Theta$ -role, and that *se* is the obligatory marker (in Romance languages) that results from the reduction operation. In fact, this is roughly the unaccusative approach to reflexives, which has also been defended (see Grimshaw 1990, Sportiche 1998, for instance). According to this approach, the subject of reflexives, like the subject of unaccusative verbs, is the underlying object. Within the unaccusative analysis of reflexives, there are two different variants: the lexical and the syntactic. While the former assumes that the external argument is lexically absorbed, the latter assumes

<sup>8</sup> The source of the R-role is to be found in Williams (1981b), who notes that Ns also have external  $\Theta$ -roles. In sentence (i),

(i) I consider that [destruction of a city by evil forces]

the predicative NP *destruction* has two internal arguments: the Theme *a city* and the Agent *evil forces*, but it also has an external argument which has no counterpart in the verbal system, i.e. *that*, which he gives the label R. That is, *destruction of a city by evil forces* is predicated of *that*. "The label R is meant to suggest 'referential', since it is this argument position R that is involved in referential uses of NPs as well" (p. 86)

that the clitic *se* is the external argument present in syntax. On theoretical grounds, there is no reason for choosing one approach (reflexives as unergatives vs. reflexives as unaccusatives) over the other. The data of my Catalan study will, however, suggest that the unaccusative approach to reflexives is the one which seems to be on the right track.

### 2.3. $\Theta$ -percolation and inheritance

As far as the  $\Theta$ -percolation approach is concerned, the basic idea is that the thematic information of a complex word is derived from the different elements that form the word, irrespective of whether they are prefixes or suffixes.<sup>9</sup> This view of  $\Theta$ -percolation is in conflict with the RHR, which states that only the head is able to transfer its features. The data analysed in my study will show that the strict RHR (Williams 1981a) has to be abandoned, in favour of the Rel. RHR (Di Sciullo & Williams 1987: 25-28), according to which the head for a specific feature is the rightmost element that contains the feature in question. To illustrate this, consider the Latin word in (10), which according to the Rel. RHR will have two heads, given that both *bi* and *tur* are the rightmost elements with respect to the features they are marked; i.e. the former is specified as [+future] and the latter is marked with the feature [+passive].

- (10)    ama    bi            tur  
                               [+future] [+passive]

Regarding inheritance, it refers to the relationship between the argument structure of a derived word and its input elements. A complex word inherits an argument from the base when the argument may be represented as an argument of the derived word either syntactically (sometimes referred to as external or syntactic inheritance) or internally to the complex word (sometimes called internal or morphological inheritance). To see the effects of inheritance, consider (11).

- (11) a. Manchester is industrial.  
       b. The government industrialized Manchester.

The fact that the suffix *-ize* forms agentive Vs from As can be explained under the assumption that *-ize* provides an Agent role. The immediate consequence will be that the A's external Theme will be inherited as the V's internal Theme. Inheritance then accounts for the shared thematic structure between (11a) and (11b) (cf. e.g. Booij 1988, Levin & Rappaport 1988, Neeleman & Schipper 1992, Gràcia 1992, 1995, Gràcia et al. 2000, Williams 2004) (see e.g. Hoekstra & van der Putten 1988 for a different view).

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<sup>9</sup> Other early statements of feature percolation can be found in Selkirk (1982), Fabb (1984), Scalise (1984), and Lieber (1989). For a modern version of a mechanism similar to percolation, see Neeleman & van de Koot (2002) who use upward copying of functions introduced by terminal nodes.



### 3. Prefixed verbs

This section provides the results of the Catalan (Padrosa 2005a) and English data. More specifically, this section analyses how Catalan and English *en*-prefixation works with respect to underived Vs (sections 3.1.1 and 3.2.1), deadjectival (sections 3.1.2 and 3.2.2) and denominal (sections 3.1.3 and 3.2.3) Vs. The study of “all” *en*-prefixation Vs has been carried out by means of dictionaries.<sup>10</sup>

#### 3.1. Catalan data

The Catalan classification of prefixed Vs presented in this section largely agrees with that of Gràcia et al. (2000). We both have reached the conclusion that there is no regularity in prefixed Vs whose source is a V, and that deadjectival Vs have the meaning ‘to make A’ when used transitively and ‘to become A’ when used intransitively. The only difference has to do with denominal Vs, which Gràcia et al. have classified into four categories, while I have classified them into three, namely location Vs, locatum Vs, and Vs of creation. Their fourth group includes Vs like *engelosir* ‘to make somebody jealous’ and *embasardir* ‘to frighten’ which in my classification have been included in the locatum group. Although they are not typical locatum Vs with a physical object being placed somewhere, they still show the same behaviour and semantic paraphrase. For instance, if you *frighten* somebody, you ‘put fear into that person’ somehow. Other Vs which I have included in the locatum group are *encoratjar* ‘to encourage’ and *enrabiar* ‘to enrage’.

##### 3.1.1. V-to-V prefixation

This study has focused on the Catalan prefixed Vs which maintain a semantic relation with their bases and speakers are aware of the connection. For instance, pairs of Vs like *cantar* ‘to sing’ and *encantar* ‘to cast a spell on somebody’ have not been included because the relation between them is lost, i.e. the prefix has become lexicalized and is not seen as a prefix any more (see details in the introduction to Appendix B).

Although the remaining Vs (seven on my list) should be relevant to find out how the argument structure of the prefixed V differs with respect to its base, no conclusions can be drawn (maybe due to its reduced number).

- (12) a. Una barca va travessar l’Atlàntic.  
 ‘A boat crossed the Atlantic’
- (13) a. Van entravessar un tronc al mig del carrer.  
 ‘They laid a trunk across the street’  
 b. Se m’ha entravessat un osset a la gola.  
 ‘A little bone got caught in my throat’

<sup>10</sup> Concerning the Catalan data, the *Gran diccionari de la llengua catalana* (GDLC) (1998) and the *Diccionari de la llengua catalana* (DLC) (1995) have been the main tools, whereas the *Diccionari general de la llengua catalana* (DGLC) (1932) has been used for clarification and further reference when necessary. As for the English data, the *Collins Cobuild English Dictionary* (CCED) (1995) has been used in conjunction with the *Concise Oxford Dictionary* (COD) (2001) and the *Merriam-Webster Online Dictionary* (MWOD).

Based on the examples given in (12, 13), one could suggest that the prefix *en-* gives a causative meaning to the V. That is, if people laid a tree trunk across the street, they caused the trunk to be somewhere. However, if we look at the base V to which the prefix attaches, we can also have a causative interpretation. Although such reading is not available in (12a), the same V can be used with a clear causative interpretation, as the following sentence shows:

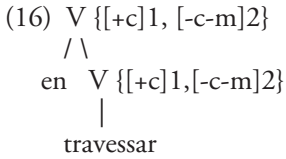
- (12) b. Li vaig travessar el pit amb l'espasa.  
 I thrust the sword through his chest.  
 'I caused the sword to go through his chest'

Although the prefix is not the source for the causative reading, because such meaning is available without the prefix, one could entertain the idea that the prefix contributes to the  $\Theta$ -grid of the prefixed V. It could seem that the *en-* prefix adds a locative role (*al mig del carrer* in (13a), *a la gola* in (13b)) to the  $\Theta$ -grid of the prefixed V. However, such a proposal has to be rejected on the basis of the following examples:

- (14) a. El treballador subornà el cap.  
 'The worker bribed the boss'  
 b. El venedor ensibornà el client.  
 'The seller fooled the client'
- (15) a. Ella va retirar els diners del banc.  
 'She withdrew the money from the account'  
 a' Va retirar la mà que jo li havia allargat.  
 'He pushed away my approaching hand'  
 a'' Ell es va retirar a un monestir.  
 'He retreated to a monastery'  
 b. Quan ell va allargar la mà, jo vaig enretirar la meva.  
 'When his hand approached me, I moved my hand away'  
 b' Ells van enretirar la taula.  
 'They moved the table out of the way'  
 b'' Si us enretireu, hi haurà prou espai per les taules.  
 'If you throw yourself back, there will be enough space for the tables'

In both cases (14, 15), there is no addition of any  $\Theta$ -role. Regarding *subornar/ensibornar* (14), both take the same roles: [+c+m] (agent) and [-c-m] (theme). As for *retirar/enretirar* (15), they show the opposite pattern of *travessar/entravessar*. When used transitively (15a, a' and 15b, b'), *retirar* has an extra  $\Theta$ -role in (15a) (*del banc*) which would get reduced in the prefixed V. That is, the V in (15a) needs a locative source but that is not compulsory for *enretirar* (15b, b') or even for *retirar* in (15a'). The same holds for the reflexive variants: i.e. *retirar-se* in (15a'') needs a locative source (*a un monestir*) but *enretirar-se* in (15b'') does not. The examples just mentioned show that no systematic patterns between the two argument structures can be observed, i.e. the prefix does not seem to bring anything visible to the V.

The  $\Theta$ -percolations in (16) will then be assumed for the previous Vs. Let us consider (*en*)*travessar* for concreteness sake.



Following Reinhart’s marking system, the [+c] role is assigned index 1, determining its external merger, and the [-c-m] role will get index 2, forcing internal merger of such role. I assume that some reduction process takes care of the reflexive variants.

At this point, the postulation of an empty suffix seems irrelevant and so does the question of whether *en-* is a left head. In V-to-V prefixations, the base is already a V and there is no conversion, for which the suffix or prefix can be made responsible. Further, there is no apparent change in the argument structure of prefixed Vs and those Vs without a prefix. With respect to the role of *en-*, one could suggest that the prefix does have some feature specification, but this does not percolate because the base V has the same features and, according to the Rel. RHR, the rightmost element specified for some features is the one which gets its features percolated. To check whether that can be the case, we will have to turn to the next sections which also provide an answer to the question of whether prefixed Vs are real exceptions to the RHR or not and to which approach to reflexives is the right one, given that in V-to-V prefixation there is only form (*endur-se* < *dur*) that admits the clitic *se* and nothing can be concluded on the basis of a single form.

3.1.2. *A-to-V prefixation*

A very common pattern for *en+A* Vs is that most of them allow a transitive (to make A) and an unaccusative (to become A) variant, the latter typically expressed with the reflexive clitic *se/es* (included within parentheses below). In the following examples, all of which allow the two verbal variants, the feature clusters of both the A’s Θ-role and the derived V’s Θ-roles have been placed next to them. The feature specification in parentheses indicates that this role is absent in the unaccusative variant of the V ((b.2) sentences), but present when the V is used transitively ((b.1) sentences).

- (17) a.  $\text{dolç}_A$  ‘sweet’ [-c-m]  
       b.  $\text{endolcir(-se)}_V$  ‘to make/become sweet’ ([+c]) [-c-m]  
       b.1 (pro [+c+m]) *Vaig endolcir la llet* [-c-m]. ‘I sweetened the milk’  
       b.2 *La llet* [-c-m] *s’ha endolcit*. ‘The milk became sweeter’
- (18) a.  $\text{negre}_A$  ‘black’ [-c-m]  
       b.  $\text{ennegrir(-se)}_V$  ‘to make/become black’ ([+c]) [-c-m]  
       b.1 *Els núvols* [+c] *ennegriren el cel* [-c-m]. ‘The clouds blackened the sky’  
       b.2 *El cel* [-c-m] *s’ennegrí*. ‘The sky turned blacked’
- (19) a.  $\text{ros}_A$  ‘blonde’ [-c-m]  
       b.  $\text{enrossir(-se)}_V$  ‘to make/become blonde’ ([+c]) [-c-m]  
       b.1 *El tint* [+c-m] *l’* [-c-m] *ha enrossit*. ‘The dye made his hair turned blonde’  
       b.2 *El seu cabell* [-c-m] *s’ha enrossit*. ‘His hair turned blonde’

To find out which role the prefix *en-* and the alleged  $\emptyset$ -suffix play in deadjectival Vs, their argument structures have to be compared with those of their corresponding As. In (17-19) the A from which the V is derived has a [-c-m] role, which is maintained in both transitive and unaccusative variants of the V. However, one needs to explain the presence and source of the extra  $\Theta$ -role [+c] in the transitive variant. Although the prefix might look as the most obvious source, this analysis would run into problems when considering Vs like those in (20) and (21):<sup>11</sup>

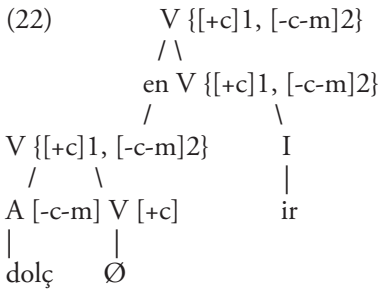
- |      |                               |  |               |
|------|-------------------------------|--|---------------|
| (20) | a. canut <sub>A</sub>         | ‘white-haired’                               | [-c-m]        |
|      | b. encanudir <sub>V</sub>     | ‘to become white-haired’                     | [-c-m]        |
| (21) | a. cresp <sub>A</sub>         | ‘curly’                                      | [-c-m]        |
|      | b. cresp <sub>V</sub>         | ‘to curl one’s hair’                         | [+c] [-c-m]   |
|      | c. encresp <sub>V</sub> (-se) | ‘to curl one’s hair’ ‘to heighten the waves’ | ([+c]) [-c-m] |

Although we would be able to explain *encanudir* by saying that the [+c] role of the prefix is reduced, and that it is not in the case of *encresp* (on the transitive variant), Vs like *cresp* still cannot be accounted for, since there is no source for the unexpected [+c] role if we assume that such role originates in the prefix. Another source for the [+c] role needs to be found. One could entertain the idea that the [+c] role originates in the inflectional suffix (e.g. *-ar* in the case of *encresp*), but that option is a dead end, since inflectional suffixes, unlike derivational ones, do not contribute to  $\Theta$ -grids. In addition, given that an inflectional suffix is present in each and every simplex V, such view implies that all unaccusative Vs are derived by a reduction operation, an option which needs to be investigated further. A  $\emptyset$ -suffix then seems to be the only possible candidate left. On the basis of examples like (20-21), I propose that the  $\emptyset$ -suffix always carries a [+c] role, although this is not active all the time (i.e. it can be reduced). I also propose that the same  $\emptyset$ -suffix is responsible for the conversion of As to Vs. The inflectional suffix and the prefix *en-* cannot be responsible for the conversion. Inflectional suffixes do not change category and the derived V *cresp* in (21) clearly illustrates that the prefix is not needed, since this is absent and a deadjectival V can still be derived.

Given that my analysis presupposes a specific direction of derivation:  $A \rightarrow V \rightarrow en+V$  ( $cresp_A \rightarrow cresp_V \rightarrow encresp_V$ ), one might think that a weakness of this analysis is that not always is it possible to derive existing intermediate Vs (marked as ‘!’ in  $canut_A \rightarrow !canudir_V \rightarrow encanudir_V$ ), but the possibility of deriving possible but non-existent words has been established in other work (for instance, see Stiebels 1998, Ackema & Neeleman 2004 who argue for an overgenerating morphology).

To see how the analysis just proposed for deadjectival *en-*prefixations works, the  $\Theta$ -percolations and marking procedures for (17), *endolcir(-se)*, will be presented.

<sup>11</sup> Go to Appendix B, the section of deadjectival Vs, to view other unprefixed Vs which contain a [+c] role, e.g. *agrir(-se)* ‘to sour’, *corbar* ‘to bend’.



The  $\Theta$ -role of both the A and the conversion-suffix percolate, resulting in a transitive  $\Theta$ -grid, where the marking procedures assign indices 1 and 2 to the [+c] and [-c-m] arguments respectively. The indices will, in turn, determine external merger for the [+c] role and internal merger for the [-c-m] argument. As noted, this V participates in the transitive-unaccusative alternation. I suggest that first a transitive  $\Theta$ -grid is generated and then a process reducing the [+c] role takes place. In this case, it is clear that reflexives are the result of reducing the external argument, thus explaining why the (b.2) sentences in (17-19) do not have the role [+c], but only the [-c-m] one, which is inherited from the A. It could be said that the [+c] role is lexically absorbed, leaving *se* as the marker of such process, or that the clitic itself is the external argument containing the [+c] feature. Either view is compatible with my analysis. Otherwise, if one tried to derive the unaccusative variants by reducing the internal argument, the meaning of the sentences would not make much sense. Consider (23).

- (23) a. El tint s'ha enrossit.  
 'The dye turned blonde'

On the basis of A-to-V prefixations, I conclude that the RHR can be maintained, since the  $\emptyset$ -suffix, and not the prefix, is responsible for the conversion of As to Vs and for providing the [+c] role sometimes present in deadjectival Vs, whether prefixed or not. The presence or absence of the [+c] role is in turn determined by the reduction operation. Given that it is the external argument that is reduced in the case of *en*+A Vs, the unaccusative approach to reflexives seems superior to the one which considers reflexives to be unergative entries (i.e. internal reduction has taken place). Again, the prefix does not have any visible effects on the resulting  $\Theta$ -grid. One can only hypothesize that if the prefix has some features, these should be the same as those of the base (i.e. [-c-m]) and that the Rel. RHR determines that the features of the A, and not those of the prefix, percolate. The next section shows that the basic pattern found in *en*+A Vs will also hold for *en*+N Vs.

3.1.3. *N-to-V prefixation*

Three semantic patterns can be distinguished within *en*+N Vs: the first one means 'to put something/somebody in/onto/towards N' (24) (cf. location Vs); the second one has the opposite relation between the two arguments, i.e. 'to put N around/in

something/somebody' (25) (cf. locatum Vs);<sup>12</sup> and finally, the third semantic pattern involves the creation of the N, namely, 'to make N', which is the same pattern found with As (26). The feature specification for each  $\Theta$ -role has been placed next to the derived V. The R-role is associated with every N (Williams 1981b) (see footnote 8).

- (24) a. caixa<sub>N</sub> 'box' R  
 b. encaixar<sub>V</sub> 'to put something in a N' [+c] [-c-m]  
 b. En Joan encaixà els llibres.  
 'John packed the books away'
- (25) a. caputxa<sub>N</sub> 'hood' R  
 b. encaputxar(-se)<sub>V</sub> 'to put the N on somebody's head' [+c] [-c-m]  
 b. Ell encaputxà la Maria.  
 'I put the hood on Mary's head' / 'I covered Mary's head with a hood.'
- (26) a. rai<sub>N</sub> 'raft' R  
 b. enraiar<sub>V</sub> 'to make a N' [+c] [-c-m]  
 a. Els homes enraïaren els troncs.  
 'The men created the raft out of logs' / 'The men tied logs together to create a raft'

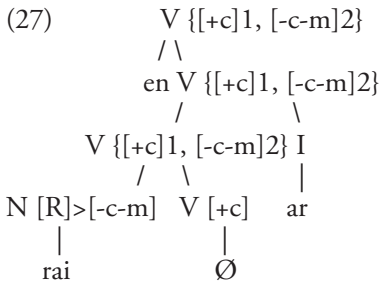
Although one could think that the semantics of the Vs in (24) and (25) looks quite distinct from each other, the division between the two may get blurred in some cases. This is made evident by Vs like *envinagrar* 'EN-vinegar<sub>V</sub>', which can have both readings. That is, *envinagrar* can either mean 'to soak something (e.g. pickles) in N' or 'to pour N over something (e.g. food)'. (See Appendix B, section A/B for other words like *envinagrar*).<sup>13</sup> This suggests that the division between the two groups may not be linguistically relevant after all, leaving us with two semantic patterns for denominal *en*-prefixations: one involving a change of location (24, 25) and the other involving the creation of the N (26).

Since Vs of creation have the same semantics as *en+A* Vs, it is logical to assume that similar  $\Theta$ -percolations take place. Although the [+c] role of *enraiar* can come from the conversion affix, the [-c-m] role has no apparent source, since the N only has an R-role. However, Williams (1981b) argues on semantic grounds that the R-role could be interpreted as a theme, a view I adopt, given that it is in accordance with the feature specification we would expect ([-c-m]) from the N.<sup>14</sup> Once the [+c] role and the reinterpreted R-role, [-c-m], are on the verbal node, they will get index 1 and index 2, which will determine external and internal merger respectively (see 27).

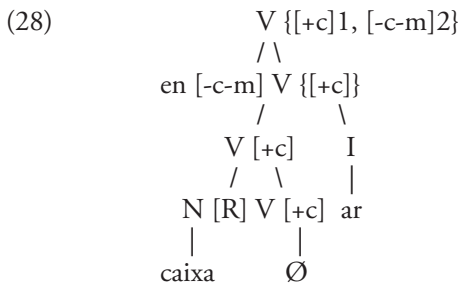
<sup>12</sup> For discussion about location and locatum Vs, see Clark & Clark (1979), Kiparsky (1997), HK (1993, 1998, 2002), Mateu (2001b, 2002), among many others. Regarding denominal Vs with a meaning of creation, see Clark & Clark (1979) and Gràcia et al. (2000) for example.

<sup>13</sup> Mateu (2001b, 2002) also groups location and locatum Vs together, and treats them as 'change of state' Vs.

<sup>14</sup> Williams rejects the option of considering the R-role an external theme, because then there would be two themes in a single  $\Theta$ -grid. In this respect, Neeleman & Schipper's (1992) remarks about  $\Theta$ -role reinterpretation are illustrative. According to them, a  $\Theta$ -role can only be reinterpreted as a role that is semantically close, and they also consider that that is the case for themes and R-roles.



Although the reinterpretation of the R-role accounts for Vs of creation, it leaves the presence of the [-c-m] role in verbs like *encaixar* or *encaputxar* unexplained, since their meaning is not ‘to make/become a box/hood’. For these Vs, I propose that the prefix is responsible for the [-c-m] role found in the V’s Θ-grid. In the two previous sections I already hinted at the possibility of the prefix having some feature specification, but due to the Rel. RHR, the prefix’s features were always obscured. In en+N Vs, though, the prefix constitutes the rightmost head specified for the features [-c-m], since the Ø-suffix only has a [+c] role and the noun’s R-role is not reinterpreted. Hence, the features of the prefix [-c-m] percolate up to the V’s node, where they will get index 2 (internal merger) (see 28).



Interestingly, some Vs can have both a creation and ‘change of location’ reading:

- (29) *coixí<sub>N</sub>* ‘cushion’ R  
*encoixinar<sub>V</sub>* ‘to make a N’ / ‘to put Ns in a place’    [+c] [-c-m]
- toia<sub>N</sub>* ‘bouquet’ R  
*entoiar<sub>V</sub>* ‘to make a N’ / ‘to put Ns in a place’    [+c] [-c-m]

I suggest that they will have one or the other reading, depending on the source of the [-c-m] role. If the R-role is reinterpreted, the V will have a creation meaning, but if it is not, then the [-c-m] features will come from the prefix and this will result in a locative meaning.

To explain the existence of the intransitive variant (typically marked with the clitic *se*) of en+N Vs, I will adopt the reduction mechanism already used before. Since most intransitive variants clearly show reduction of the external argument (30), and in only a few cases is it difficult to tell which argument gets reduced like in (25) (it could be either the external or internal one), I assume that external reduction takes place in en+N verbs uniformly. Crucially, there are no cases with clear internal reduction.

- (30) a. *encoratjar*<sub>V</sub> ‘to encourage’                    [+c] [-c-m]  
       b. *encoratjar-se*<sub>V</sub> ‘to become encouraged’    [-c-m]

- a. El primer gol els encoratjà. ‘The first goal gave them courage’  
 b. Amb el cinquè gol es (CL) van encoratjar. ‘With the fifth goal, they were encouraged.’

Like deadjectival *en*-prefixations, *en*+N Vs also seem to have an intermediate stage in which the N has become a V, but the prefix is not present as yet. Among the existing intermediate Vs, two groups can be differentiated. The first group includes those forms whose meaning is related to the prefixed V and the second one contains those intermediate forms which, according to the dictionaries, have the same meaning as the prefixed Vs. The two groups include location and locatum Vs, Vs that can have the two readings and Vs of creation (see Appendix B, section of denominal Vs). Whereas the first group does not pose a problem to my analysis, the second one does.

As for the first three types of Vs in the first group (i.e. location and locatum Vs, and Vs that can be interpreted either way), the locative meaning is associated with the prefixed V, in agreement with my analysis, according to which the prefix *en*- with the features [-c-m] contributes to such meaning. Compare *caminar*<sub>V</sub> ‘to walk’ with *encaminar*<sub>V</sub> ‘to put somebody in the correct path’.<sup>15</sup> Regarding Vs of creation, no locative reading is involved, so whether the prefix is present or absent is irrelevant.

Regarding the second group, the Catalan dictionaries define some intermediate Vs as having the same meaning as their prefixed version. Here are included the Vs with a locative reading, i.e. location and locatum Vs, and those Vs that can have the two readings. All these intermediate forms with a locative meaning question my analysis, since there is no source for the [-c-m] role, due to the absence of the prefix. A possible explanation for these locative intermediate forms is given in section 3.3.

The conclusion from this section is that the basic generalizations established in the previous sections also hold for Catalan *en*+N Vs. The  $\emptyset$ -conversion affix is responsible for the [+c] role. Finally, we have seen that the prefix does have some features, and that these play a role in Vs expressing a change of location. That is, a denominal V will express a change of location if the features of the prefix percolate, but it will have a creation reading if the N’s R-role is reinterpreted.

### 3.2. English data

Although several authors have worked on unprefixated locatum and location denominal Vs and have classified them into extensive lists (see footnote 12), no classification has been provided for *en*-prefixated Vs, as far as I am aware of (except for authors like Marchand (1969) who deal with historical data). I hope then that my classification and my findings here will shed light on a not much worked on area.

<sup>15</sup> At first sight, the intermediate V *sorrar* ‘to put sand on something’ would be an exception to my generalization. The locative reading has no source because the prefix is absent. However, Catalan speakers, when asked to choose between *sorrar* and *ensorrar*, prefer the prefixed version. According to the etymology of these words, first the V *sorrar* (c(entury) XIV) was formed out of the N, and then it may well be that speakers added *en*- to best express the locative meaning and the result was *ensorrar* (c. XVI).



### 3.2.1. *V-to-V prefixation*

Like in Catalan, there is no systematic change in the argument structures of the few examples of *V-to-V* prefixation in English with respect to their unprefixated version. Of the eight Vs on my list, one could argue that some should be removed because a N (and an A in one case), exists together with the unprefixated V, and could suggest that the N (or A), and not the unprefixated V, is the base on which the prefixated V is built.<sup>16</sup> If that were correct, it would be the case for most of the Vs, e.g. *enact*<sub>V</sub><*act*<sub>V</sub><*act*<sub>N</sub>, *enchant*<sub>V</sub><*chant*<sub>V</sub><*chant*<sub>N</sub>, *enclose*<sub>V</sub><*close*<sub>V</sub><*close*<sub>A</sub>. However, I do not think that is the correct approach. According to Corbin's (1976) [cited in Varela (1993)] semantic criterion, a N is derived from a V if it can be paraphrased by 'the act of Ving' and has no affix. A N which cannot have the previous paraphrasing and has no affix added to it precedes the V. If we apply this hypothesis to the pairs of Ns and Vs on my list, we will see that the V comes first and that the N and prefixated V are derived later. To exemplify, consider *chant*<sub>N/V</sub>. Given that a *chant* is the act (result) of chanting, *chant*<sub>V</sub> is the source on which the other forms are based. The result is that the prefixated Vs in question are not denominal Vs, as one might think at first sight, but rather are derived from a V. Although such forms do not have to be removed from the list, others need to, namely *engrave*, *enliven*, and *ensue*. The two first forms are based on archaic Vs: *grave*<sub>V</sub> is rarely used and *liven*<sub>V</sub> has been replaced by *liven up*. As for the V *ensue*, some speakers do not longer see its compositional structure, which would be related to the V *sue*.

Five Vs remain on the list of *en*-prefixated Vs, not enough to find a systematic pattern between the prefixated Vs and their unprefixated version, as will be seen shortly by the following examples. (To see the other Vs, go to Appendix A)

- (31) a. The young boy confessed his desire to act.  
 b. Her husband acted in Roberto's films.  
 c. The little child enacted old stories.
- (32) a. The people outside chanted mantras.  
 b. Merlin enchanted<sup>17</sup> the house.
- (33) a. I joined my sister in California.  
 b. The actress joined a dance company.  
 c. The boss enjoined him strictly not to tell anyone else.  
 d. Islam enjoins tolerance.

By comparing (31a) with (31c), one could initially suggest that *en-* adds a role to the  $\Theta$ -grid of the unprefixated V: (31c) contains a [+c+m] (agent) role and a [-c-m] (theme) role, the latter not present in (31a). However, this option has to be abando-

<sup>16</sup> Some authors have resolved the issue of what comes first in a derivation by means of category indeterminacy. For instance, Marantz (1997, 2001) argues that roots are underspecified for syntactic categories like N and V and that the morpheme attaching to the root will provide the category.

<sup>17</sup> Whereas English speakers can still perceive the compositional structure of the V *enchant*, Catalan speakers cannot do the same with the corresponding V *encantar*. That can be explained by a gradual process, according to which speakers would lose the sense of compositionality progressively, being faster with some speakers than others.

ned. The unprefixated V can also have two  $\Theta$ -roles, as shown in (31b) and there is no change between the argument structures of the unprefixated and prefixated Vs in (32) and (33). *Chant* and *enchant* both take the same roles (i.e. a [+c+m] (agent) role and a [-c-m] (theme) role) and so do *join* and *enjoin*. They can both show up in structures with three (33a, c) and two (33b, d) roles.

The reduced number of Vs that can be prefixated with *en-* and the lack of any apparent link between the two argument structures both in English and Catalan (section 3.1.1) questions whether V-to-V prefixation really constitutes a proper class in the two languages. In fact, HK (1993, 1998, 2002) and Mateu (2005) do not predict their existence. For instance, according to HK's theory of argument structure, unergative Vs like *laugh* and *dance* are derived from an initial transitive structure involving incorporation of a nominal head N into an abstract V (cf. HK 1993, 1998). More recently (2002), there is no incorporation mechanism although HK still assume an initial transitive structure, where the V, filled through Vocabulary Insertion this time, governs an empty nominal complement, thus accounting for the relationship between *laugh* as a N and V, the two clearly related. Similarly, Mateu (2002, 2005) also reaches the conclusion that Ns are the real primitive elements taken as complements by apparently underived Vs. The syntactic analysis proposed by HK will be taken up in the Discussion section.

For the moment, the  $\Theta$ -percolations in (34) will be assumed for the Vs discussed in this section (cf. (16) for Catalan). Let us consider how Reinhart's percolation system of  $\Theta$ -roles would derive the  $\Theta$ -grid of (*en*)*chant*.

$$(34) \quad \begin{array}{c} V \{ [+c]1, [-c-m]2 \} \\ / \backslash \\ \text{en } V \{ [+c]1, [-c-m]2 \} \\ | \\ \text{chant} \end{array}$$

The V *chant* has two  $\Theta$ -roles a [+c+m] (agent) and a [-c-m] (theme), a sufficient number of roles to allow marking. Accordingly, the [+] role will get index 1 and will merge externally, and the [-] role will receive index 2 and will merge internally.

To summarize V-to-V prefixation in English, no systematic patterns between the two argument structures can be observed, i.e. the prefix does not seem to bring anything visible to the V. At this stage, the question of whether *en-* is a left head is redundant, and so is the postulation of a zero-suffix. The base in V-to-V prefixation is already verbal and no conversion process can be attributed either to the prefix or empty suffix. After all, V-to-V prefixation may not constitute a proper class in English nor in Catalan.

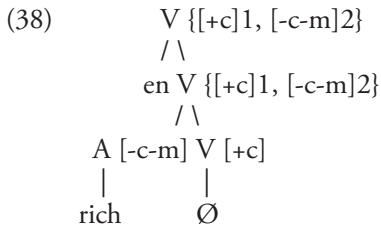
### 3.2.2. A-to-V prefixation

This section addresses the question of whether the same analysis for Catalan *en+A* Vs can also explain the different types of deadjectival Vs found in English. Examples like those in (35-37) show that the same analysis can be maintained, although in English *en+A* Vs only allow the transitive variant, illustrated in (a). The sentences in (b) indicate that the unaccusative variant is impossible and (c) provides some alternatives

to (b). Note that this type of deadjectival Vs is not really productive: seven en+A Vs are the only existing forms nowadays (Appendix A).

- (35) rich<sub>A</sub> [-c-m]  
 enrich<sub>V</sub> [+c] [-c-m]  
 a. She will enrich the country. b. \*The country will enrich.  
 c. The country will {be/become} rich.
- (36) large<sub>A</sub> [-c-m]  
 enlarge<sub>V</sub> [+c] [-c-m]  
 a. The reporter enlarged the picture. b. \*The picture enlarged.  
 c. The picture grew larger. / The picture was enlarged.
- (37) noble<sub>A</sub> [-c-m]  
 ennoble<sub>V</sub> [+c] [-c-m]  
 a. His willingness to help ennobled Steven enormously. b. \*Steven ennobled.  
 c. Steven was ennobled by his willingness to help.

Following the analysis proposed for Catalan deadjectival Vs, the extra  $\Theta$ -role [+c] present in the derived V is provided by a zero-suffix and the [-c-m] role comes from the A. The  $\Theta$ -percolations and marking procedures for any of the forms in (35-37) are the same as those for *endolcir(-se)* in (22), repeated as (38) here for the V *enrich(<rich)*, the only difference being that there is no inflectional morpheme in English.



Some evidence to confirm that the zero-suffix, and not the prefix, is responsible for the conversion process and the [+c] role of the prefixed V comes from a more productive type of English deadjectival Vs, namely those without prefix. Consider the As in (39a), their derived Vs in (39b) and some sentences ((40a) and (41a)) where the latter are used in context. The sentences in (40b) and (41b) show variability in behaviour with respect to the transitivity alternations (the unaccusative alternation is allowed by *clear*, but not by *clean*).

- (39) a. clean<sub>A</sub>, clear<sub>A</sub>, dirty<sub>A</sub>, empty<sub>A</sub>, narrow<sub>A</sub>, thin<sub>A</sub> [-c-m]  
 b. clean<sub>V</sub>, clear<sub>V</sub>, dirty<sub>V</sub>, empty<sub>V</sub>, narrow<sub>V</sub>, thin<sub>V</sub> [+c] [-c-m]
- (40) a. The old lady cleaned her glasses with a napkin.  
 b. \*Her glasses cleaned with a napkin.
- (41) a. The cook thinned the sauce slightly. b. The sauce thinned slightly.

The A has the usual [-c-m] role and the V has a [+c] role, whose presence cannot be accounted for without a zero-suffix, since the prefix is not available. From these examples it is then clear that the prefix cannot contribute to the [+c] role present in the derived V, and hence cannot be a causativizer, as already noted earlier.<sup>18</sup>

Still there exists a third type of deadjectival Vs in English, which have no prefix *en-*, but instead they end with the suffix *-en*. (42) provides some examples, and the sentences in (43) and (44) show that this kind of Vs can participate in the transitive-unaccusative alternation.

- (42) a. black<sub>A</sub>, bright<sub>A</sub>, hard<sub>A</sub>, sweet<sub>A</sub>, thick<sub>A</sub>, wide<sub>A</sub> [-c-m]  
 b. blacken<sub>V</sub>, brighten<sub>V</sub>, harden<sub>V</sub>, sweeten<sub>V</sub>, thicken<sub>V</sub>, widen<sub>V</sub> [+c] [-c-m]
- (43) a. The cook thickened the sauce. [+c] [-c-m]  
 b. The sauce thickened. [-c-m]
- (44) a. The sun reddened the sky. [+c] [-c-m]  
 b. The sky reddened. [-c-m]

From very early on, a number of authors (e.g. Halle 1973, Aronoff 1976, Siegel 1979, Scalise 1984, Fabb 1988) have noted their existence and have claimed that *-en* is the element triggering the conversion of As to Vs. If that is the correct approach, there are two sources for the [+c] role: a zero-suffix and the verb-forming suffix *-en*. That is an awkward situation for my analysis, and I suggest that there is a single suffix which sometimes has phonological content (the *-en* morpheme) and sometimes does not (the zero-suffix), thus avoiding the unwanted double forms for a unique function. The aforementioned authors agree that there are some constraints on the suffix's attachment. The suffix *-en* only attaches to monosyllabic As that on the surface end in a single obstruent, preceded by a vowel, which optionally may, in turn, be preceded by a sonorant. If an A violates the condition just stated and there is a related nominal form that satisfies it, then *-en* attaches to the N: e.g. *frighten<sub>V</sub>* (*afraid<sub>A</sub>* has two syllables), and *strengthen<sub>V</sub>/lengthen<sub>V</sub>* (*strong<sub>A</sub>* and *long<sub>A</sub>* end in a nasal). The focus here, though, is on A-based Vs derived by the suffix *-en* (cf. 42).

Although these *en*-suffixed forms have the same  $\Theta$ -percolations as *enrich* (cf. 38), now the zero-suffix is replaced by *-en*. This third type of deadjectival Vs provides further evidence to say that the *en*-prefix does not have any features, or if it does, they are probably the same as those of the base, and due to the Rel. RHR, the features of the base get percolated, obscuring those of the prefix.

The present scenario predicts the existence of deadjectival Vs constituted by both prefixation and visible suffixation. As seen earlier, the source of the [+c] role is a suffix which can be full or empty of phonological content (*widen<sub>V</sub>*, *sweeten<sub>V</sub>*, *brighten<sub>V</sub>* vs. *rich<sub>V</sub>*, *noble<sub>V</sub>*, *clear<sub>V</sub>*). If that is correct, and the constraints on the suffix's attachment are satisfied, the prefix *en-* should be able to attach to bases with both types of suffixes, deriving prefixed deadjectival Vs, suffixed and non-suffixed. Considering

<sup>18</sup> For a different view, see e.g. Zwanenburg (1988), and Grimshaw (1990) who have proposed that the prefix *en-* gives the causative reading ([+c] role in my analysis) to Vs like *ennoble* and *enrage*.

historical data (Marchand 1969), one observes that this prediction is borne out. There was one period where forms like *enwiden*, *ensweeten* and *embrighten* existed alongside of forms like *enrich*, *ennoble*, and *enclar*. However, of all these prefixed and suffixed forms, *embolden* is the only existing word nowadays. The productivity of the different types of deadjectival Vs will be discussed in section 3.3.

Regarding the disparate behaviour of English A-based Vs with respect to the transitive-unaccusative alternation, we have seen that the first group (e.g. *enrich*, *enlarge*) does not allow the V to have an unaccusative variant, an observation unnoticed until now as far as I know (cf. 35-37b), while the third group (e.g. *sweeten*, *redden*) does (cf. 43-44b). As for the second group, there is no uniform behaviour (40-41b). Vs like *clean* cannot have the two variants, whereas Vs like *clear* can. HK's (1993, 1998, 2002) syntactic theory of argument structure cannot explain this. According to their theory, all deadjectival Vs, i.e. Vs incorporating As, should participate in the transitive-unaccusative alternation. By looking at the numbers of Vs in each group that allow the alternation, one sees that their claim is generally true. Deadjectival Vs admitting both an unaccusative and transitive variants exceed those Vs that do not. However, there is still a group of Vs which need some explanation. As observed by Kiparsky (1997), the real generalization behind the transitivity alternations does not have to do with the category (A) which gets incorporated into the V, but with the notion of agentivity. In Kiparsky's words, 'the availability of the causative alternation depends on the nature of the Agent's involvement in the event' (p. 495). In other words, only those Vs denoting processes which can be initiated and continued without an agent will allow the causative alternation. This claim is confirmed by the data of this section. Vs like *ennoble* and *clean* require the presence of an agent, and accordingly do not permit an unaccusative variant, where the agent would be suppressed. By contrast, Vs like *clear* and *sweeten* do not need the participation of an agent for the process to initiate and continue, and admit both the transitive and unaccusative variants. The conclusion is that my data favour a semantic account, rather than a syntactic one. It is not the syntactic category of the element which gets incorporated (A) but the semantics of the V that determines whether a V will show the transitivity alternations.

To summarize this section, we have seen that the analysis proposed for Catalan deadjectival Vs can be maintained for the three types (the type *embolden* does not constitute a fourth group due to its single membership) of deadjectival Vs found in English. Like in Catalan, the RHR can be observed: the prefix *en-* is responsible neither for the conversion of As to Vs nor for the [+c] role present in A-based Vs in their transitive variant. I have shown that the element responsible for the conversion and addition of the [+c] role is a suffix, which can be empty (zero-suffix) or full (*-en* suffix), depending on some phonological constraints. Now I would like to conclude this section by noting the productivity of each group briefly. The first one (type *enrich*) is non-productive, and closed (only seven forms). The zero-suffixed group which has no prefix (type *clean*) is more productive and finally the productivity of the *en-*suffixed group (type *sweeten*) is subject to some phonological constraints. I will take up the issue of productivity in the Discussion section.

### 3.2.3. *N-to-V prefixations*

At first sight, the picture for Catalan denominal prefixation is duplicated in the English data. Three different semantic patterns can also be differentiated: location Vs with the paraphrase ‘to put something/somebody in/onto/towards N’ (45), locatum Vs which can be paraphrased as ‘to put N around/in/into something/somebody’ (46), and Vs of creation with the semantic paraphrase ‘to make N’ (47).<sup>19</sup>

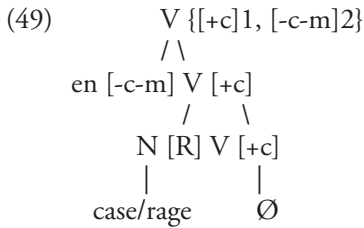
- (45) a. case<sub>N</sub> R  
       b. encase<sub>V</sub>            [+c] [-c-m]  
 b. They encased the dangerous substance in a container.
- (46) a. rage<sub>N</sub> R  
       b. enrage<sub>V</sub>            [+c] [-c-m]  
 b. He enraged the government by renouncing the agreement.
- (47) a. slave<sub>N</sub> R  
       b. enslave<sub>V</sub>            [+c] [-c-m]  
 b. The captain enslaved the poor boy and he had to do what he was told.

As said before (for Catalan), Vs of creation like *enslave* (‘to make N’) involve the same semantics as deadjectival Vs (‘to make A’), suggesting that they should both have the same  $\Theta$ -percolations. Recall that in deadjectival Vs the [+c] role came from the  $\emptyset$ -suffix and the [-c-m] role from the A. Although the same could be maintained for the [+c] role in Vs of creation, the [-c-m] role resulted from the reinterpretation of the N’s R-role (see section 3.1.3 for the explanation and footnote 14). Accordingly, (48) is the resulting structure for the V *enslave* (cf. 27). Note that the inflectional morpheme present in Catalan is now missing.

- (48)
- $$\begin{array}{c}
 V \{ [+c]1, [-c-m]2 \} \\
 / \quad \backslash \\
 \text{en } V \{ [+c]1, [-c-m]2 \} \\
 / \quad \backslash \\
 N [R] > [-c-m] \quad V [+c] \\
 | \quad \quad \quad | \\
 \text{slave} \quad \quad \quad \emptyset
 \end{array}$$

The same  $\Theta$ -percolations cannot explain Vs like *encase* and *enrage*, given that they do not mean ‘to make a case/rage’. For Vs like these I proposed (for Catalan) that the [-c-m] role does not come from the reinterpreted R-role, but from the prefix, whose features have been obscured until now due to the Rel. RHR. In other words, the prefix in these locative Vs is the rightmost head marked with the features [-c-m], because the  $\emptyset$ -suffix has a [+c] role and the base N has an R-role, which is not reinterpreted. The [-c-m] features of the prefix will get index 2 once it is at the verbal node together with the [+c] role from the  $\emptyset$ -suffix, which will receive index 1. The resulting picture is illustrated in (49).

<sup>19</sup> Appendix A shows the classification just mentioned. Although it contains another semantic pattern (i.e. ‘to give N’), that has been subsumed within the locatum Vs.



A single representation for location and locatum Vs may not look sufficient. How is one going to distinguish the two if both have the same representation? I suggest that the distinction between the two may not be linguistically relevant, given the existence of some Vs which can be interpreted either as location or locatum Vs. For instance, consider *entangle* which can mean ‘something (e.g. a whale) is caught in N’ or ‘to put N over somebody (e.g. people)’. The same phenomenon was found in Catalan. In the following section I will propose that the answer to the previous question has to do with pragmatics. If that view is correct, we are left with two semantic patterns with different  $\Theta$ -percolations: one involving the creation of the N with the [-c-m] features coming from the reinterpreted R-role (cf. 48) and another one involving a change of location with the [-c-m] features coming from the prefix (cf. 49).

Now it remains to be seen whether the same analysis can explain other types of denominal Vs in English. Like in deadjectival Vs, locative en+N Vs also have a stage where the N has become a V but the prefix is still not present. Among the intermediate forms, some have a meaning related to the prefixed version and others have the same meaning, always according to the definitions given in the English dictionaries. After checking these definitions with the speakers’ judgements, the result is that of the intermediate forms whose meaning is related to the prefixed V, we get different patterns. First, one of the two forms may be non-existing, which can either be the unprefixed V (e.g. *crust*, *compass*) or the prefixed V (e.g. *entrain*, *engirdle*), the latter questioning my analysis, since there is no possible source for the [-c-m] features (i.e. the prefix is absent). Second, the intermediate form does not have a locative meaning (e.g. *list*, *trench*), which according to my analysis follows from the absence of the prefix, the source of the locative features. Third, there are some intermediate forms which have a locative reading (e.g. *snare*, *tangle*), clearly going against my proposal.

Of all locative intermediate forms which are listed in the dictionaries as having the same meaning as their prefixed version, only three are really synonyms for English speakers: *encode* (*code*), *encircle* (*circle*), and *entitle* (*title*). They all go against my analysis: there is no source for the locative features if the prefix is absent. According to English speakers, all the remaining intermediate forms which supposedly have the same meaning as their prefixed version are non-existing (e.g. *throne*, *shrine*), with the exception of four, namely *encipher*, *engraft*, *enshroud*, and *enwrap*. While the former do not pose any problem, the second ones do. Again, there is no source for the locative reading in *cipher*, *graft*, *shroud*, and *wrap*, the prefix being absent.

In short, all the unprefixed intermediate forms with a locative reading require some explanation. Although this set of Vs is small and could be disregarded (cf. in Appendix A, the section of denominal Vs lists all en+N Vs with a locative reading as well as all possible intermediate forms also having a locative interpretation), one still

wants some explanation for their behaviour, and for another more productive type of unprefixed denominal V<sub>s</sub> with a locative reading. Consider the following location (50) and locatum (51) V<sub>s</sub> (see footnote 12 which gives references for lists of other location and locatum V<sub>s</sub>).

- |         |   |             |
|---------|---|-------------|
| (50) a. | box <sub>N</sub> , jail <sub>N</sub> , kennel <sub>N</sub>        | R           |
|         | b. box <sub>V</sub> , jail <sub>V</sub> , kennel <sub>V</sub>     | [+c] [-c-m] |
| (51) a. | crown <sub>N</sub> , curtain <sub>N</sub> , chain <sub>N</sub>    | R           |
|         | b. crown <sub>V</sub> , curtain <sub>V</sub> , chain <sub>V</sub> | [+c] [-c-m] |

Given that the prefix *en-* is the source of the [-c-m] features (the theme role) in 'change of location' V<sub>s</sub>, there is no visible source for such features in (50-51). This problem would be resolved if a null prefix performed the function of the visible prefix. Is there any evidence to postulate a zero-prefix for English? Is there an abstract element responsible for the [-c-m] features present in these V<sub>s</sub>? Padrosa (2005a) suggests that some historical reanalysis might have taken place, i.e. the prefix might have been attached to these V<sub>s</sub> originally, and then for some reason, it was dropped, although the meaning remained the same. I pursue this idea here, and I suggest that the prefix originally attached to the V had the [-c-m] features still present in the prefix of V<sub>s</sub> like *encase* and *enrage*. Historical data (cf. Marchand 1969) confirm my suggestion. All the forms in (50-51) were initially prefixed forms: *embox*, *enjail*, *enken- nel*, *encrown*, *encurtain*, and *enchain*.

Now it needs to be explained how all the forms which lost the prefix still have a [-c-m] role. I propose that the loss of the prefix has been a gradual process in which speakers have disassociated the [-c-m] features from the prefix and have relinked them to the base N (cf. autosegmental phonology, see e.g. Kenstowicz 1994, Roca et al. 2000). The prefix with no features of its own had no function in the word and was probably lost gradually. (Maybe phonological weakening helped to its loss). If that view is correct, one needs to explain how speakers can differentiate V<sub>s</sub> of creation from locative V<sub>s</sub>, because the [-c-m] features in both cases have the same source (the N), a question which will be discussed in the following section. Although the most productive type of denominal V<sub>s</sub> in English seems to complicate the picture as for the source of the [-c-m] features, at the same time it provides some evidence to say that the Ø-suffix, apart from providing the [+c] role in V<sub>s</sub> like (50-51), is the element responsible for the conversion of N<sub>s</sub> to V<sub>s</sub>.

The conclusion from this section is that the analysis proposed for Catalan *en+N* V<sub>s</sub> can be maintained, but only for few denominal V<sub>s</sub> in English, namely V<sub>s</sub> of creation (e.g. *enslave*) and those prefixed V<sub>s</sub> with a locative reading (e.g. *encase*, *enrage*). In both cases the [+c] role originates in the Ø-suffix, also responsible for the conversion (N→V). The [-c-m] features come from the reinterpreted R-role in V<sub>s</sub> of creation and from the prefix in locative denominal V<sub>s</sub>. However, another type of denominal V<sub>s</sub> was found, viz. those that have no prefix but have a locative reading. For those, I proposed that the [-c-m] features are contained in the base N. Crucially, in all cases, the RHR is observed: the element containing a specific feature specification constitutes the rightmost element marked with those features.



### 3.3. Discussion

This section is mainly devoted to explaining some points left unresolved from the previous sections. First, I will explain how speakers can distinguish locatum Vs from location Vs given that they have the same structure. Second, I will present how English speakers can derive the locative reading in unprefixated Vs like *box*. Third, I will discuss how my analysis can explain the fact that the prefix *en-* seems to potentiate the suffix *-ment* if the prefix is not a head. Finally, HK's (1993, 1998, 2002) proposal will be briefly presented to see whether it can handle the data of my study satisfactorily.

As seen in the two previous sections, there are some Vs which can be interpreted as locatum and location, like *envinagrar* and *entangle* with the paraphrases 'to put N into/over something' and 'to put something into the N'. Although the division between the two readings may not be linguistically relevant, one has to explain the fact that speakers can differentiate the two and assign the appropriate meaning (either locatum or location) to any denominal Vs given a specific context. According to Clark & Clark (1979), the characterization of denominal Vs into locatum and location depends on their predominant features. If the source N denotes things which are conventionally placed with respect to other objects (i.e. placeables in their terminology), then the locatum reading will be derived. If the source N denotes things which are used as places with respect to which other objects are placed, we will get the location interpretation. Clark & Clark also note that some Vs may have more than one predominant feature, thus giving rise to Vs like *envinagrar* and *entangle*.

Kiparsky (1997) reaches a similar conclusion by a conceptually-knowledge based principle making use of the canonical use (instead of Clark & Clark's predominant features) of the N on which the V is built. He derives the following fixed meanings for the two locative relations (p. 482):

- (52) a. Locatum verbs: putting x in y is a canonical use of x.  
 b. Location verbs: putting x in y is a canonical use of y.

Kiparsky explains that some Vs will be able to be interpreted either way if the object the source N denotes can have the two canonical uses, namely 'to be put on something' and 'to have something put on it'.

Although Clark & Clark and Kiparsky acknowledge the existence of Vs with two possible relations of location and explain them by the N having more than one predominant feature or canonical use respectively, nothing is said about how the speaker identifies which of the two locative relations is meant by a denominal V given a context. I assume speakers will resolve these ambiguities by looking at the context in which the V is uttered and by selecting the interpretation most relevant accordingly. This view is in line with Relevance Theory (RT) (cf. e.g. Sperber & Wilson 1986/1995, Wilson 1994, Wilson & Sperber 2004), which is based on some simple assumptions. Every utterance has several linguistically possible interpretations, not all of which occur to the hearer simultaneously. Hearers are assumed to be equipped with a criterion for evaluating (accepting or rejecting) interpretations, as they occur to them. This criterion excludes all interpretations, except for one at most. So, the hearer can assume that the first acceptable interpretation they find is the intended

one. In other words, the hearer considers interpretations in order of accessibility and stops when they find one that is relevant enough to satisfy their expectation of relevance, with the result that the first satisfactory interpretation is the only acceptable one. The criterion is ultimately based on the cognitive principle of relevance: human cognition is relevance-oriented (Wilson 1994: 17).

Following a relevance-theoretic account, when listeners are presented with the utterance 'to shelve the books' for example (*shelve* being a V that admits the two locative readings), the first interpretation they will consider will be that of 'putting books on the shelves' and not the other way round. Similarly, if they are given the utterance 'to shelve the closet', the first satisfactory interpretation they will find will be that of 'putting shelves in the closet', and not 'putting the closet on shelves'. By simply looking at the direct object of the V, hearers can pick out the interpretation they think the speaker intended on that occasion, the most relevant interpretation for them. In 'to shelve the books/closet', the interpretations 'putting shelves on the books' and 'putting the closet on shelves' are not relevant enough to satisfy the hearer's expectation of relevance (and will be rejected). In short, the hearer can readily identify which locative relation is intended (locatum or location) within RT.

Another question which remained unresolved from the previous section was how English speakers (and Catalan speakers to a much lower degree) can derive the locative reading in prefixless Vs like *box*, *crown*, *circle* and *snare* (the two last Vs being intermediate forms in the derivations of their prefixed version), if the prefix *en-* is the element responsible for such reading ([*-c-m*] features). I suggested that the [*-c-m*] role once associated with the prefix was relinked to the base N, with the consequence that the prefix was gradually lost. The prefix had no function to perform, i.e. the semantic content it had before (it contained the [*-c-m*] role) was affected and so was its productivity. As a result, native speakers refrained themselves from coining new members with the prefix, a tendency which led to its disappearance. If we look at numbers, the locative Vs without prefix largely exceeds those with prefix. That proposal seems to find further confirmation in the fact that locatum/location Vs that once had a prefix now do not have it any more. What I am implying here is a contrast between Catalan and English with respect to the productivity of *en-*prefixation. While it seems that this morphological process was and is still active in Catalan, it has become unproductive in English.

If it is true that the [*-c-m*] features of English locative denominal Vs and Vs of creation both come from the same source, namely the base N, one also has to explain how English speakers differentiate the two. Again, I think a relevance-theoretic account has the answer. The hearer will interpret a denominal V as locative if that is the first interpretation that satisfies their expectation of relevance. Similarly, a V will be interpreted as V of creation if that is the first acceptable interpretation for the listener. To illustrate the point, consider *to box the apples*. The first satisfactory interpretation will not be that of a V of creation, i.e. 'to make a N (box)', but that of a locative V (a location V in this case), 'to put the apples in the N (box)'. In short, one can readily pick out the interpretation intended by the speaker within RT.

A different question which also needs to be addressed in the Discussion is how my analysis can explain the fact that the suffix *-ment* seems to be potentiated by the prefix *en-* (if the prefix is not a head with respect to the category-changing ability, as I have defended). It is generally agreed that affixes may be sensitive to other affixes in

their base (cf. Fabb 1988, Hoeksema 1988). In line with this generalization some authors (cf. Aronoff 1976, Williams 1981a, Scalise 1984) have proposed that the suffix *-ment* attaches most productively to Vs of the form *en+X* (e.g. *encroachment*), claiming that the prefix *en-* potentiates the suffix *-ment* because the prefix is the head. One could claim that the same phenomenon exists in Catalan, given the large quantity of words with the form *en+X+ment* (e.g. *encoratjament* ‘the act of encouraging’). The GDLC lists more than 250 words with this form. However, the prefix *en-* is not the only element able to potentiate the suffix *-ment*. In English the prefix *be-* has the same ability (e.g. *bedazzlement*). The CCED and COD include more than 50 *en+X+ment* forms, and more than 30 *be+X+ment* forms. Although the number of the latter is lower, it is still significant. In Catalan it seems that several prefixes like *a-* and *des-* can also potentiate the suffix *-ment* (e.g. *allargament* ‘the act of lengthening’, *descargolament* ‘the act of unscrewing’). In this case, the GDLC lists more than 200 words for *a+X+ment* forms and more than 150 for *des+X+ment* forms, both numbers being substantial. All these numbers (always relatively speaking) seem to indicate that the suffix *-ment* is not favoured by a particular prefix but simply by the presence of a prefix (see Scalise 1988b for the same conclusion for Italian). To explain this fact I can only suggest that *-ment* has a particular feature [F] which needs to be satisfied and that the prefix has the relevant feature [F]. However, I am aware that this suggestion is only descriptively adequate since it explains why *-ment* seems to be potentiated by *en-*, but it does not say anything about the nature of the feature.

After discussing some points left unresolved from the previous sections, and before ending the present one, now I would like to briefly present another proposal, i.e. HK’s (1993, 1998, 2002), to see whether it can handle the data satisfactorily. HK adopt a syntactic approach to the representation of lexical argument structure. Vs are derived by conflation<sup>20</sup> of a N or A into an empty phonological V base, thus giving it phonological content. The structural types of lexical argument structure relevant here are those associated with the morphosyntactic category A and N, given that now I will focus on how HK’s theory can derive deadjectival and denominal Vs in English and Catalan. Recall that in V-to-V prefixation no systematic pattern was found, which explains its omission in the following discussion. Although HK’s theory may seem to cope with the data adequately at first sight, there are some questions which cannot be answered within their syntactic approach.

As already said, conflation explains the formation of deadjectival Vs. The phonological matrix of the A replaces that of the V, which can be empty like in *clean* (53a), or partially empty as in *enrich* which has a prefix or *thicken* which has a suffix. For the latter cases, HK assume that the host V is bipartite, consisting of an empty phonological matrix together with an overt matrix corresponding to that of the prefix or suffix (53b, c) (HK 1998: 85).

<sup>20</sup> Note that the discussion that follows is based on HK (1993, 1998). The same results, though, would be obtained by using HK’s more recent version. Let me just point out one remarkable difference between their earlier and later accounts, namely their use of the term conflation. In the more recent version, it does not refer to a movement operation. In HK’s terms, ‘it is merely the binding relation that holds between the semantic features of a V (phonologically overt now) and features of the nominal head of its complement’ (HK 2002: 103).

- (53) a.           V  
          / \  
          V A  
          | |  
          [Ø] clean
- b.           V  
          / \  
          V A  
          / \  
          pref [Ø]
- c.           V  
          / \  
          V A  
          / \  
          [Ø] suf

HK's treatment of deadjectival Vs can then explain the three types found in English. Regarding Catalan deadjectival Vs, they can also be accounted for by (53). The structure in (53a) would explain Vs like *agrir* (<*agre*<sub>A</sub> 'sour'), and the structure in (53b) could derive Vs like *endolcir(-se)* (<*dolç*<sub>A</sub> 'sweet'). Although the English and Catalan deadjectival Vs can be explained on the whole, Vs like *embolden* cannot be derived, because they involve simultaneous prefixation and suffixation, implying ternary branching. Although this weakness could be solved by appealing to the non-productivity of the type *embolden*, HK still have to explain it. The type *embolden* was once an active process.

Denominal locative Vs present a similar scenario. The V will be bipartite in the case of Vs like *encase* and *encaixar* (<*caixa*<sub>N</sub> 'box'), and it will not be so in the case of *box* and *registrar* (<*registre*<sub>N</sub> 'register'). The same problem presented for deadjectival Vs is also present now. Again, HK need some account for the existence of Vs like *enlighten*, whose formation was once productive. In addition, HK suggest that the distinction between location and locatum Vs is not one of structure (which is what one would expect from their account) but derives from the semantic properties of the head. Apparently, their P (the prefix in my terminology) distinguishes terminal and central coincidence. If that is true, HK's claim that the properties of word meaning follow from syntactic constraints can no longer be observed. In addition, I assume HK would use some kind of semantics to derive denominal Vs expressing creation (e.g. *enslave*, *enraiar*) given that P can only express terminal and central coincidence and there is no other element available in their analysis to account for the correct reading.

Also, HK would probably resort to a semantic account to explain the fact that some Vs can be interpreted as a locative V and as a V of creation. For instance, the V *encoixinar* could be interpreted as 'putting cushions in a place' and as 'making a cushion'. In the former interpretation the P would be the element responsible for such reading, but in the latter there would be no source for such reading, unless they resort to some semantics.

An additional problem for their analysis is the origin of  $\Theta$ -roles. According to my approach, in the case of denominal Vs the [-c-m] features originate in the prefix in locative Vs, but in the N's reinterpreted R-role in Vs of creation. (Recall that this picture derives some English denominal Vs (the prefixed ones) and most Catalan denominal Vs). If my analysis is correct, then HK's approach cannot be on the right track. They cannot explain the non-uniform source of  $\Theta$ -roles given their adherence to the UTAH<sup>21</sup> (cf. Baker 1988), according to which there is direct mapping between thematic roles and syntactic structure. More specifically, each thematic role must be

<sup>21</sup> UTAH stands for Uniformity of Theta Assignment Hypothesis and is defined by Baker (1988) in the following terms: 'Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure'.

linked to a single position in D-structure. A related problem that is a consequence of HK's configurational model of thematic relations is that the lower thematic VP only allows two theta-roles (generally the [-c-m] (theme) role and [-m] (locational) role), with the result that other roles, such as [+c-m] (instrument), cannot be represented although they cannot be considered adjuncts. In addition, the role assigned to the subject cannot be represented either.

In short, I think enough problems have been found in HK's account to pursue their approach here (see e.g. Di Sciullo 1997, Kiparsky 1997, Stiebels 1998 for other criticisms). The conclusion is that a syntactic account has not proved sufficient to account for the data presented in the previous sections. Next a brief summary and the main conclusions of my study will be presented.

#### 4. Conclusions

In this paper, I considered a potential class of counterexamples to the RHR, namely the class of prefixes in English and Catalan. More specifically, I looked at how the prefix *en-* present in the two languages apparently converts As and Ns to Vs in a productive way. However, on the basis of A/N-to-V prefixations, I argued that complex words derived by *en-*prefixation are not really exceptions to the (Relativized) RHR.

I showed that a  $\emptyset$ -suffix is responsible for the conversion of Ns and As to Vs, a process which takes place before the prefix is attached, thus not incurring any violation to the RHR (see e.g. Neeleman & Schipper 1992, Gràcia 1995, Stiebels 1998 for similar views). The crucial argument for the postulation of the  $\emptyset$ -suffix comes from the  $\Theta$ -grid of the Vs. The  $\emptyset$ -suffix is responsible for the [+c] role, whose presence would be unaccounted for without the postulation of the conversion-suffix. The  $\emptyset$ -suffix also accounts for the observation that *en-X* words are always verbal.

As for the role of the prefix *en-*, we have seen that it is responsible for the [-c-m] role in the case of *en+N* Vs with a locative meaning. However, I have shown that the formation of locative *en+N* Vs is no longer productive in English. Although the presence of *en-* was once felt compulsory for the formation of locative denominal Vs both in English and Catalan, which according to my analysis follows from the fact that the prefix gives the locative reading to the V, there is now a contrast between speakers of the two languages. Catalan speakers still require the presence of the prefix to express both locatum and location N-based Vs suggesting that *en-*prefixation is still an active process. In contrast, English speakers prefer denominal locative V without prefix, which I explained by disassociation of the [-c-m] role from the prefix and re-associating it to the base N.

Although the Rel. RHR can still be maintained for English unprefixated Vs, because the N constitutes the rightmost element specified for those features, the fact that some Vs can have a locative interpretation and a creation reading becomes difficult to explain. Both interpretations depend on the [-c-m] role now present in the same node, the base N. To solve this problem, I make use of a relevance-theoretic account, according to which hearers evaluate interpretations in order of accessibility (e.g. context, disambiguation, etc.) and stop considering them when their expectation of relevance is satisfied. The result is that the first adequate interpretation

satisfying the hearer's expectation of relevance is the only possible one given a specific context. When a listener is presented with a V which can be interpreted with a locative and creation reading, they will readily pick out the interpretation intended by the speaker, the only satisfactory interpretation on a particular occasion. I also showed that RT can explain the distinction between the location and locatum interpretations of some Vs.

If the use of semantics and pragmatics is necessary to explain some basic contrasts which otherwise would remain a mystery, a syntactic theory of argument structure like that of HK's (1993, 1998, 2002) is not sufficient. In fact, HK themselves recognize the need for some semantics in their account. For instance, they admit that the prefix distinguishes terminal and central coincidence, clearly two semantic notions.

Another reason to reject HK's approach is their direct mapping between configurational positions and specific roles. As I have shown, semantics cannot be read off the structure. Recall that the [-c-m] features in Catalan denominal Vs can come from the prefix (when there is a locative reading) or the base N (when a creation reading is implied). This limitation shows that the framework adopted here, Reinhart's (2000, 2001), is superior to that of HK's at least in the sense just discussed.

Although the present study has adopted Reinhart's theta-system, her approach to reflexives has been rejected. On the basis of Catalan deadjectival and denominal Vs (e.g. *endolcir(-se)*, *encoratjar(-se)*), the approach of reflexives as unaccusatives (cf. Grimshaw 1990, Sportiche 1998) has proved to deal with the data more satisfactorily than the view which favours reflexives as unergative entries (cf. Reinhart & Siloni 1999). In most of the cases, the external argument is clearly reduced (i.e. the [+c] role undergoes reduction in Vs like *endolcir(-se)*). In other cases, it is hard to tell which argument has undergone reduction (e.g. *encaputxar(-se)*). Crucially, there are no cases of clear internal reduction. Hence, I proposed that it is the external argument that is always reduced.

Another question to which I intended to provide an answer in my study was whether a  $\Theta$ -role percolation approach to the inheritance of thematic information (cf. Booi 1988, Levin & Rappaport 1988, Gràcia 1992, 1995 and Neeleman & Schipper 1992) could be confirmed. I think the data have amply corroborated this question as well as Mateu's (2001a, 2002) view of complex denominal Vs in German, according to which the preverb (the prefix in my case) is part of the resulting thematic structure, thus also contributing to the  $\Theta$ -grid of the predicate.

As for the remark made by several authors (see e.g. Williams 1981a) that the prefix *en-* potentiates the affix *-ment* in English and Catalan because the former is a head, I argued that it is not the presence of *en-*, but simply the presence of any prefix which triggers the suffix *-ment*. For that fact I suggested that the suffix *-ment* has a certain feature [F] which needs to be satisfied, and that the prefix *en-* has the relevant feature [F] (cf. Fabb 1988). Obviously, this option needs to be further investigated to find the real feature behind the potentiation of the suffix *-ment*.

Other questions also need more study. One has to do with the existence of apparent synonyms with a locative reading in the English data (e.g. (*en*)*circle*). Do they show that the [-c-m] features of the prefix are still available and that the process of relinking these features to the base N has not died out completely? A further question which also needs to be addressed is whether the process of relinking the [-c-

m] role to the base N also takes place in Catalan? If it does, why is delinking more common in English than in Catalan? For the moment I leave all these questions for future research.

## Appendix A

This appendix classifies the *en*-prefixed Vs in English into three different groups depending on the base on which they are built: (a) a V, (b) an A, and (c) a N. The base from which the V is derived is given within parentheses after the prefixed V. The Vs in each group have been divided into semantic paraphrases. The Vs in (a) have not been classified due to the lack of semantic regularity. On the whole, all deadjectival Vs below follow the semantic pattern 'to make (something/somebody) A'. Regarding denominal Vs, they have been divided into four groups: location Vs (A), locatum Vs (B), Vs which can have the two interpretations (A/B), and Vs of creation (C). Each group includes subgroups where intermediate Vs have been listed. According to my analysis, in the formation of prefixed deadjectival and denominal Vs there is an intermediate stage in which the A and N have become a V, but the prefix is not present as yet. These intermediate forms have been grouped depending on whether they have the same meaning as that of the prefixed version or a related one. Note that in the group of locatum Vs, the locatum can either be a physical object (e.g. *venom* in *envenom*) or an abstract one (e.g. *danger* in *endanger*). Lexicalised prefixed forms have not been taken into account in the study.

$V \rightarrow [en+V]_V$

Enact (act), enchant (chant), enclose (close), engrave (grave), enjoin (join), enlist (liven) ensue (sue), and entreat (treat).

$A \rightarrow [en+A]_V$

*Trans* [+c] [-c-m] 'to make A'

Enable (able), endear (dear), enfeeble (feeble), enlarge (large), ennoble (noble), enrich (rich), and ensure (sure).

$N \rightarrow [en+N]_V$

A) *Trans* [+c] (usually [+c+m]) [-c-m] 'to put something around/in/onto/towards N'  
*Location Vs.*

Encapsulate (capsule), encase (case), encode (code), encyst (cyst), engorge (gorge), enlist (list), enmesh (mesh), enplane (plane), enrobe (robe), enshrine (shrine), enshroud (shroud), ensile (silo), ensnare (snare), enthrone (throne), entomb (tomb), entrain (train), entrance (trance), entrap (trap), entrench (trench), and enurn (urn).

- *Intermediate Vs which have meanings related to the prefixed Vs (A.1):* Engorge (gorge), enlist (list), enmesh (mesh), ensnare (snare), entrap (trap), entrain (train), and entrench (trench).
- *Intermediate Vs which have the same meaning as the prefixed Vs (A.2):* Encode (code), enrobe (robe), enshrine (shrine), enshroud (shroud), enthrone (throne), entrance (trance), and enurn (urn).

B) *Trans [+c]* (usually [+c+m]) [-c-m] 'to put N around/in/into/on something/somebody'  
*Locatum Vs.*

Encircle (circle), encompass (compass), encrust (crust), endanger (danger), enfold (fold), enforce (force), engirdle (girdle), engraft (graft), engulf (gulf), enlighten (light), enrage (rage), entrust (trust), and evenom (venom).

→ [+c] (usually [+c+m]) [-c-m] 'to give N' (= 'to put N in somebody')

Encourage (courage), enfeoff (fief), enfranchise (franchise), enrapture (rapture), and entitle (title).

➤ *Intermediate Vs which have meanings related to the prefixed Vs (B.1):*

Encompass (compass), encrust (crust), enfold (fold), enforce (force), engirdle (girdle), enlighten (light), enrage (rage), and entrust (trust).

➤ *Intermediate Vs which have the same meaning as the prefixed Vs (B.2):*

Encircle (circle), engraft (graft), enfranchise (franchise), and entitle (title).

*A/B) Some verbs fit into either group (A or B):*

Although all 'locative' verbs have been placed either in group (A) or (B), some could be argued to belong to both groups. For instance, consider the verbs *encrypt* (*crypt*), *encipher* (*cipher*), *entangle* (*tangle*), and *enwrap* (*wrap*).

➤ *Intermediate Vs which have meanings related to the prefixed Vs (A/B.1):*

Entangle (*tangle*).

➤ *Intermediate Vs which have the same meaning as the prefixed Vs (A/B.2):*

Encipher (*cipher*), and enwrap (*wrap*).

C) *N as a result 'to make N' Vs of creation*

Encamp (camp), encash (cash), enslave (slave), and envision (vision).

➤ *Intermediate Vs which have meanings related to the prefixed Vs (C.1):*

Envision (vision)

➤ *Intermediate Vs which have the same meaning as the prefixed Vs (C.2):*

Encamp (camp), encash (cash), and enslave (slave).

## Appendix B

Appendix B classifies the *en*-prefixed Vs in Catalan following the same criteria established in Appendix A. Complex words derived by *en*- have been divided into three groups, these being determined by the category of the base (V, A, N). Concerning the prefixed Vs whose source is a V, they have not been divided into different semantic groups due to its variability in meaning. The base V is included within parentheses after each prefixed V, and due to its reduced number, all *en*-prefixed Vs have been included on the first list. That is, the first list does not dis-



tinguish prefixed Vs with a lexicalized meaning. For instance, speakers do no longer associate the Vs *encantar* or *endreçar* with *cantar* and *dreçar* respectively. Also, there are a few pairs of Vs (i.e. with and without the prefix) of which the speaker only uses one form and not the other for different reasons: one of the two forms may belong to Old Catalan (e.g. *encercar*, *enseguir*) or to one specific dialect (*enfondre*, *engronsar*, *enxautar-se*) and these have also been included on the first list. Finally, there is a third group of Vs (i.e. with and without the prefix) of which speakers do not use any of the two forms and these have not been filtered out from the first list either (e.g. *enforollar* (*forollar*), *ensulsi(a)r-se* (*sulsir*)). However, the first list is followed by a second list from which all the previous forms have been removed. The reduced number of verbs on the second list shows that it is very difficult to find a systematic pattern similar to those found in deadjectival and denominal Vs.

In the classification of deadjectival Vs, the A from which the V is derived is given in the masculine form within parentheses after the V. The clitic *se* within parentheses ( ) indicates that the V can be either transitive (without *se*) or unaccusative (with *se*). The Vs with clitic can only be unaccusative and those without are mostly transitive. The clitic *se* within square brackets [ ] indicates that the V can be used transitively (without the clitic), and intransitively (as an unaccusative) either with the clitic or without. The same holds for denominal Vs.

On the whole, all deadjectival Vs below follow the semantic pattern 'to make (something/somebody) A' and '(something/somebody) becomes A', when used transitively and intransitively, respectively. If some Vs slightly differ from this pattern (one on this list), their behaviour can still be explained. For example, the V *enaltir* (*alt*) 'praise' 'tall' can be understood as 'making someone high/putting someone in a high position by prasing him'. Regarding denominal Vs, four groups can be distinguished: location Vs (A), locatum Vs (B), Vs which can have the two previous patterns (A/B), and Vs of creation (C). Each group includes subgroups where intermediate Vs have been listed. Recall that according to my analysis in the formation of prefixed deadjectival and denominal Vs there is a stage in which the A and N have become a V, but the prefix is still not present. These intermediate forms have been grouped depending on whether they have the same meaning as that of the prefixed V or a related one. Note that in the group of locatum Vs, the locatum can either be a physical object (e.g. *caputxa* 'hood' in *encaputxar*) or an abstract one (e.g. *amor* 'love' in *enamorar*).

Deadjectival Vs like *fosquejar*, *groguejar*, *lluentejar* and *rossejar* have not been taken into account, since they all contain the suffix *-ej-* between the adjectival base and the inflectional morpheme. The same applies to denominal Vs and prefixed Vs whose source is already verbal (i.e. verbs like *encamellar* (<*cama*<sub>N</sub>) and *endormiscar-se* (<*dormir*<sub>V</sub>) have also been avoided because they contain suffixes (*-ell-* and *-isc-* respectively) intervening between the nominal/verbal base and the inflectional element, although most of them do not seem to affect the resulting argument structure of the V).

Lexicalized deadjectival and denominal Vs have not been included in this survey. For instance, denominal Vs like *ensenyar*<*senya* and *enviar*<*via* have been disregarded.

$V \rightarrow [en+V]_V$

*List 1*

Encantar (cantar), encarregar (carregar), encercar (cercar), encavalcar (cavalcar), encarregar (carregar), encobrir (cobrir), encomanar (comanar), encórrer (córrer), endreçar (dreçar), endurar (durar), endur-se (dur), enfondre (fondre), enfonyar (fonyar), enforollar (forollar), enfugir-se (fugir), engronsar (gronxar), enlluir (lluir), ennavegar-se (navegar), enreveixinar (reveixinar), enretirar (retirar), enseguir (seguir), ensibornar (subornar), ensomniar (somnia), ensostrar (sostrar), ensulsi(a)r-se (sul-sir), entallar (tallar), entorcir (tòrcer), entravessar (travessar), envolar-se (volar), and enxautar-se (xautar-se).

*List 2*

Encarregar (carregar), encloure (cloure), encobrir (cobrir), endur-se (dur), enretirar (retirar), ensibornar (subornar), and entravessar (travessar).

$A \rightarrow [en+A]_V$

*Transitive [+c] [-c-m] 'to make A' / Reflexive 'to become A' [-c-m]*

Enagrir(-se) (agre), enaltir (alt), enardir(-se) (ardit), enasprar(-se)/enasprir(-se) (aspre), encalbir(-se) (calb), encalentir (calent), encalmar-se (calm), encanutir (canut), encarir[-se] (car), encegar (cec), encertir(-se) (cert), encoixir(-se) (coix), encrespar(-se) (cresp), encruar-se (cru), encruelir(-se) (cruel), encuriosir (curiós), endoblar (doble), endoblar-se (doble), endolcir(-se) (dolç), endolentir(-se) (dolent), endropir(-se) (dropo), endurir(-se) (dur), enfadeir(-se) (fat), enfellonir(-se) (felló), enfereir-se (fer), enferestir-se (ferest), enferotgir-se (ferotge), enfolir[-se] (foll), enfondir(-se) (fondo), enfortir(-se) (fort), enfoscar[-se] (fosc), enfosquir[-se] (fosc), enfranquir (franc), enfredar(-se) (fred), enfredolicar(-se) (fredolic<fred), engalanar (galà), engallardir(-se) (gallard), engallofir(-se) (gallof), engandulir(-se) (gandul), engegantir (gegant), engelosir(-se) (gelós), engolosir (golós), engordir(-se) (gord), engormandir(-se) (gormand), engrandir[-se] (gran), engrevir(-se) (greu), engroguir(-se) (groc), engrossir(-se) (gros), enguerxir(-se) (guerxo), enjogassar(-se) (jogasser<joc), enjovenir (jove), enllefernar(-se) (llefre), enllefiscar(-se) (llefiscós), enllepissar(-se) (llepissós<llepar), enllepolir(-se) (llepol), enllestir(-se) (llest), enlletgir(-se) (lleig), enllordar(-se) (llord), enlluentir (lluent), enllustrar-se (llustre), ennegrir(-se) (negre), ennoblir(-se) (noble), ennovar(-se) (nou), enrancir(-se) (ranci), enrarrir(-se) (rar), enrellentir(-se) (rellent), enrigidir(-se) (rígid), enriquir(-se) (ric), enrobustir(-se) (robust), enroguir(-se) (roig), enronquir(-se) (ronc), enrossir(-se) (ros), ensalvatgir(-se) (salvatge), enseriosir-se (seriós), ensordir(-se) (sord), ensuperbir(-se) (superb), ensutzar/ensutzir/ensutzir\* (sutze), entebeir(-se) (tebi), entebionar (tebió), entendre(-se) (tendre), enterbolir(-se) (tèrbol), entoixar (toix), entorpir (*Spanish* torpe), entossudir-se (tossut), entristar(-se)\* (trist), entristir(-se) (trist), entumir(-se) (túmid), envalentir(-se) (valent), envanir(-se) (va), envellir(-se) (vell), enverdir(-se) (verd), enverinosar (verinós), envermellir(-se) (vermell), envilanir(-se) (vilà), envilir(-se) (vil), and enxiquir (xic).

\*Note that the verbs *ensutzar/ensutzir/ensutzir* and *entristar(-se)* belong to Old Catalan.

➤ *Here is a list of some of the existing intermediate Vs:*

Agre → agrir(-se) → enagrir(-se)  
 Cec → cegar → encegar  
 Corb → corbar(-se) → encorbar(-se)  
 Cresp → crespar → encrespar(-se)  
 Doble → doblar(-se) → endoblar  
 Guerxo → guerxar(-se) → enguerxir(-se)  
 Rellent → rellestar → enrellestar(-se)

$N \rightarrow [en+N]_V$

A) *Trans [+c]* (usually [+c+m]) [-c-m] 'to put something around/in/onto/towards N'  
*Location Vs.*

enarbrar(-se) (arbre), encabassar (cabàs), encadellar (cadell), encaixar (caixa), encaixonar (caixó), encalaixonar (calaixó), encambrar(-se) (cambra), encaminar(-se) (camí), encanalar (canal), encanastrar (canastra), encanonar (canó), encanyonar (canyó) encapçalar (capçal), encapsar (capsa), encapsular(-se) (càpsula), encarcanyar (carcanyell), encarcerar (càrcer), encarrerar(-se) (carrera), encarrillar(-se) (carril), encartar (carta), encartutxar (cartutx), encasar (casa), encasellar (casella), encastellar(-se) (castell), encauar(-se) (cau), encelar-se (cel), encinglar-se (cingle), encistellar (cistell), enclaperar-se (clapera), enclaustrar(-se) (claustrer), enclotjar(-se) (clot), encoblar (cobla), encofinar (cofi), encofrar (cofre), encofurnar(-se) (cofurnar), encollar (coll), encorralar (corral), encossiar (cossi), encotxar-se (cotxe), encovar-se (cova), encovenar (cove), encubar (cup), encubellar (cubell), endollar (dolla), endossar(-se) (dors), enfilosar (filosa), enfonsar(-se) (fons), enforatar (forat), enfornar (forn), enfotjar (fotja), enfundar (funda), engabiar(-se) (gàbia), engaltar (galta), engalzar (galze), engargamellar (gargamella), engarjolar (garjola), engatjar (gatge), englotir(-se) (glotís), engolar(-se) (gola), engolir(-se) (gola), engorgar-se (gorg), engorjar(-se) (gorja), engraelar (graella), engranar (graner<gra), enguardiolar (guardiola), enguierar (guier), enjovar (jou), enllistar (llista), enllitar(-se) (llit), enllomar (lloç), enqueixalar (queixal), enquistar-se (quist), enregistrar (registre), enriuar (riu), enrocar(-se) (roca), enrodar (roda), enrolar(-se) (rol), ensacar (sac), ensarriar (sàrria), ensarrionar (sarrió), ensarronar (sarró), ensenderar (sender), ensitjar (sitja), ensobrar (sobre), ensolcar (solc), ensotar(-se) (sot), entaular (taula), entinar (tina), entrampar(-se) (trampa), entrapar (trapa), entrullar (trull), envaixellar (vaixell), envalisar (valisa), envasar (vas), and envergar (verga).

➤ *Intermediate Vs which have meanings related to the prefixed Vs (A.1):*

Arbre → arbrar(-se) → enarbrar(-se)  
 Camí → caminar → encaminar(-se)  
 Càpsula → capsular → encapsular(-se)  
 Clot → clotar → enclotar(-se)  
 Coll → collar → encollar  
 Llista → llistar → enllistar  
 Llit → llitar → enllitar(-se)  
 Queixal → queixalar → enqueixalar

Roda → rodar → enrodar  
 Solc → solcar → ensolcar  
 Trull → trullar → entrullar

➤ *Intermediate Vs which have the same meaning as the prefixed Vs (A.2):*

Registre → registrar → enregistrar

**B) Trans [+c] (usually [+c+m]) [-c-m] 'to put N around/in/into/on something/somebody'**  
*Locatum Vs*

enaiguar(-se) (aigua), enamorar(-se) (amor), enarçar (arç), enartar (art), enasprar(-se) (aspre), encabestrar (cabestre), encabironar (cabiró), encadarnar (cadarn), encadenar(-se) (cadena), encadirar (cadira), encaironar (cairó), encalcinar (calcina<calç), encalimar (calima), encalitzar(-se) (calitja), encalmar-se (calma), encamisar(-se) (camisa), encanyar (canya), encanyissar (canyís<canya), encaparrar(-se) (caparra<cap), encapellar(-se) (capell), encaperonar(-se) (caperó), encaperullar(-se) (caperull), encaperutxar(-se) (caperutxa), encapirotar(-se) (capirot), encapotar(-se) (capot), encapotar (capota), encapritxar(-se) (capritx), encapullar(-se) (capulla), encaputxar(-se) (caputxa), encaramel.lar (caramel), encarbonar(-se) (carbó), encarestiar (carestia), encasquetar (casquet), encatifar (catifa), encausar (causa), encendrar (cendra), encerar (cera), encerclar (cercle), encercolar (cèrcol), encimbellar(-se) (cimbell), encimolsar (cimolsa), encintar (cinta), enciriar (ciri), enclavar (clau), enclavillar (clavilla), encobertar (coberta), encobertorar (cobertora), encoblar (coble), encofiar (còfia), encoixinar (coixí), encolar (cola), encolerir-se (còlera), enconxar (conxa), encoratjar(-se) (coratge), encordar (corda), encordillar (cordill), encordonar (cordó), encortinar (cortina), encotillar (cotilla), encotonar (cotó), encrestar (cresta), encrococar (croca), encrostar(-se) (crosta), encrostimar(-se) (crostim), encuirar (cuir), encuirassar (cuirassa), enderiar-se (dèria), endeutar(-se) (deute), endiablir (diable), endimoniar (dimoni), endogalar (dogal), endolar (dol), endomassar (domàs), endosserar (dosser), endrapar (drap), enfaixar (faixa), enfardar (farda), enfarinar (farina), enfebrar-se (febre), enferrar (ferro), enferritjar-se (ferritja), enfervorir(-se) (fervor), enfeudar (feu), enfilat (fil), enflocar(-se) (floc), enflorar(-se) (flor), enfocar (focus), enfredorar(-se) (fredor<fred), enfredorir(-se) (fredor<fred), enfrenar (fre), enfuriar(-se) (fúria), enfurir (fúria), enfusellar (fusell), enfustar (fusta), engafar (gafa), engafetar (gafet), engalbar (galba), engallinar (gallina), engalonar(-se) (galó), engalvanir(-se) (galvana), engandallar (gandalla), enganxar (ganxo), engarlandar (garlanda), engarroter (garrot), engassar (gassa), engavatxinar (gavatxí), engelabrir-se (blend of *gel* + *gebre*), engolfar (golfo), engomar (goma), engranar (gra), engravar (grava), engredar (greda), engreixar (greix), engreixinar (greixina<greix), engrescar(-se) (gresca), engrillonar (grilló), engronyar (grony), engualdrapar (gualdrapa), enguantar(-se) (guant), enguixar (guix), enherbar(-se) (herba), enjardinar (jardí), enjoiellar (joiell), enjoncar (jonc), enjovar (jou), enjullar (jull), enjuncar (junc), enlacrar (lacre), enllagrimar-se (llàgrima), enllaminir (llamí), enllandar (llanda), enllangorir(-se) (llangor), enllardar(-se) (llard), enllardonar (llardó<llard), enllatar (llata), enlleganyar-se (lleganya), enlliçar (lliç), enllistonar (llostó), enllosar (llosa), enllotar(-se) (lлот), enllustrar(-se) (llustre), enneguitar-se (neguit), ennigular-se (nígul), ennuvolar(-se) (núvol), enorgullar(-se) (orgull), enorgullir(-se) (orgull), enquimerar(-se) (quimera), enquitrinar (qui-

trà), enrabiar(-se) (ràbia), enrajar (raig), enrajolar (rajola), enramar (ram), enramellar (ramell<ram), enrampar(-se) (rampa), enrandar (randa), enredoltar (redolta), enredortar (redorta), enreixar (reixa), enriallar(-se) (rialla), enrivetar (rivet), enrogallar-se (rogall), enrondar (ronda), enrosar(-se) (ros), enrovinar (rovina), enrubinar (rubina), ensabonar (sabó), ensafranar (safrà), ensaginar (sagí), ensagnar(-se) (sang), ensalivar(-se) (saliva), ensamarrar-se (samarra), ensellar (sella), ensementar (sement), enserrellar (serrell), ensetinar (setí), enseuar (sèu), ensivellar (sivella), ensucrar (sucre), ensulfatar (sulfat), ensutjar (sutja), entacar (taca), entapissar (tapís), entarimar (tarima), entatxar (tatxa), entaulellar (taulell<taula), entelar(-se) (tel), entelar (tela), entendre (tenda), entenebrar(-se) (tenebra), entenebrir(-se) (tenebra), enteranyinar-se (teranyina), enterrosar(-se) (terròs), entintar (tinta), entoïar (toïa), entovar (tova), entuixegar (túixec), enturar (turo), envelar (vel), envelar (vela), envellutar (vellut), enverdescar (verdesca), enverinar(-se) (verí), envermellonar (vermelló), envernissar (vernís), envescar(-se) (vesc), envetar (veta), envidrar (vidre), envidriar (vidre), envigorir(-se) (vigor), envinar (vi), envinyar (vinya), enviollar (violla), enviscar(-se) (visc), envitral·lar (vitral·l), enxarolar (xarol), and enxavetar (xaveta).

➤ *Intermediate Vs which have meanings related to the prefixed Vs (B.1):*

Calma → calmar(-se) → encalmar-se  
 Carbó → carbonar → encarbonar(-se)  
 Cendra → cendrar → encendrar  
 Clau → clavar → enclavar  
 Corda → cordar → encordar  
 Ferro → ferrar → enferrar  
 Fil → filar → enfilar  
 Fre → frenar → enfrenar  
 Garrot → garrotar → engarrotar  
 Gra → granar → engranar  
 Greix → greixar → engreixar  
 Guix → guixar → enguixar  
 Ros → rosar → enrosar(-se)  
 Sagí → saginar → ensaginar  
 Sang → sagnar → ensagnar(-se)  
 Saliva → salivar → ensalivar(-se)  
 Taca → tacar → entacar

➤ *Intermediate Vs which have the same meaning as the prefixed Vs (B.2):*

Aspre → asprar → enasprar(-se)  
 Cabestre → cabestrar → encabestrar  
 Cairó → caironar → encaironar  
 Cercle → cerclar → encerclar  
 Cèrcol → cercolar → encercolar  
 Cinta → cintar → encintar  
 Clavilla → clavillar → enclavillar  
 Cuirassa → cuirassar → encuirassar  
 Drap → drapar → endrapar

Faixa → faixar(-se) → enfaixar  
 Lacre → lacrar → enlacrar  
 Lustre → llustrar → enllustrar(-se)  
 Orgull → orgullar(-se) → enorgullir(-se)  
 Rivet → rivetar → enrivetar  
 Setí → setinar → ensetinar  
 Sulfat → sulfatar → ensulfatar  
 Tela → telar → entelar  
 Verí → verinar → enverinar(-se)  
 Xarol → xarolar → enxarolar

*A/B) Some verbs fit into either group A or B:*

Enastar (ast), encarar(-se) (cara), encarnar(-se) (carn), encartonar (cartó), encastellar(-se) (castell), encepar (cep), endentar(-se) (dent), enfangar(-se) (fang), enforçar (força), enforquillar (forquilla), enformar (forma), enfrontar(-se) (front), engarbullar (garbull), engrapar (grapa), enguerrrar (guerra), enjoiar(-se) (joia), enjudiciar (judici), enllaunar (llauna), enrastellar (rastell), enroscar (rosca), ensabar (saba), ensorrar (sorra), enterrar (terra), entonar (to), entubar (tub), envinagrar (vinagre), and enxarxar (xarxa).

➤ *Some intermediate Vs have related meanings to the prefixed Vs (A/B.1):*

Dent → dentar → endentar(-se)  
 Grapa → grapar → engrapar  
 Rastell → rastellar → enrastellar  
 Sorra → sorrar → ensorrar

➤ *Some intermediate Vs have the same meanings as the prefixed Vs (A/B.2):*

Forma → formar(-se) → enformar  
 Rosca → roscar → enroscar

**C) N as a result 'to make N' [+c] [-c-m] / Reflexive 'to become N' [-c-m]  
 Vs of creation**

Enarcar(-se) (arc), encadastrar (cadastre), encallir(-se) (call), encanallar-se (canalla), encarrellar (carrell), encartonar-se (cartó), encirar-se/enciriar-se (ciri), encistar(-se) (cist), encoixinar (coixí), enconcar(-se) (conca), encordonar (cordó), encrestar (cresta), endosserar (dosser), enfarcellar (farcell), enfardar (farda), enfardellar (fardell), enfardar (farda), enfeixar (feix), enfistular(-se) (fistula), enfolcar (folc), enforçar (forc), engallar-se/engallir-se (gall), engarbullar (garbull), engolfar-se (golf), engorgar-se (gorg), engraeallar (graella), engruixar (gruix), engruixir(-se) (gruix), enjardinar (jardí), enllacar (llac), enllaçar (llaç), enquadernar (quadern), enraiar (rai), enrastellerar (rastellera), enrinxolar(-se) (rinxol), enrotllar (rotlle), enrullar(-se) (rull), enrunar(-se) (runa), ensenyorir(-se) (senyor), entoïar (toia), entollar(-se) (toll), entortellar (tortell), entorxar (torxa), entrunyellar (trunyella), envesprir (vespre), envetar (veta), envidreir-se (vidre), envidriar-se (vidre), enviduar (vidu), and enviudar (viuda).

➤ *Some intermediate Vs have related meanings to the prefixed Vs (C.1):*

Feix → feixar → enfeixar

Rotlle → rotllar → enrotllar(-se)

➤ *Some intermediate Vs have the same meanings as the prefixed Vs (C.2):*

Arc → arcar-se → enarcar(-se)

Llaç → llaçar → enllaçar

Rínxol → rinxolar(-se) → enrinxolar(-se)

Rull → rullar → enrullar(-se)

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