Semantic approaches to the study of denominal parasynthetic verbs in Spanish

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Abstract

This paper puts forward an analysis of Spanish denominal parasynthetic verbs based on the assumption that these formations express an event of change (either of state or of location), and that their meaning depends on three elements: the type of noun they incorporate, the directionality encoded by the prefix, and the kind of internal argument they select. In order to carry out such an analysis, two semantic theories of lexical decomposition have been used: Jackendoff's (1983, 1990) model of Conceptual Semantics and Pustejovsky's (1995) theory of the Generative Lexicon. The first model allows us to classify the verbs under study from the standpoint of their lexical-conceptual structure, which makes evident the structural parallelisms existing in their meaning. On the other hand, the model developed by Pustejovsky gives us the opportunity to explore some additional aspects related to the compositional meaning of these formations, enabling us to demonstrate the relevance of the internal argument in relation to the (regular and irregular) polysemy of these constructions.

Keywords

Denominal parasynthetic verbs. Prefixation. Verbalization. Events of change. Lexical-conceptual structure. Compositional meaning. *Qualia* structure.

1. INTRODUCTION

Providing an account of the way speakers build up and understand the words in their own language is one of the main goals of Lexical Morphology. In this paper we will show that the combination of different models of Lexical Semantics can shed new light on the analysis of the processes involved in word formation.

This study focuses on the description and analysis of Spanish denominal parasynthetic verbs and, more particularly, on those prefixed with *a-*, *en-* or *des-*, which are the most productive prefixes in the formation of verbs by parasynthesis. The main characteristic of denominal parasynthetic verbs is that they are created by the simultaneous adjunction of a verbalizing suffix and a prefix to a nominal base, which produces the morphological structure [prefix-base-verbalizing suffix] and entails the non-existence of the intermediate forms [prefix-base] and [base-verbalizing suffix]. Verbs such as *acuchillar* 'to knife', *embotellar* 'to bottle' or *descabezar* 'to behead' are examples of this formal schema: given the lack of the prefixed nouns **acuchillo*, **embotella* and **descabeza*, and the non-existence of denominal verbs **cuchillar*, **botellar* and **cabezar*, one must assume these verbs are built directly upon the noun bases *cuchillo* 'knife', *botella* 'bottle' and *cabeza* 'head', respectively.

The aim of this paper is to analyze both the structural meaning and the polysemy of denominal parasynthetic verbs. The hypothesis put forward is that the different types of denominal parasynthetic verbs are related to the same semantic structure, and that these verbs can essentially be classified by taking into account the semantic features of both the prefix and the noun base. On the other hand, it is argued that the polysemy existing inside each class of these verbs depends on the combination of the semantic features of every particular verb with those of its internal argument.

The analysis proposed follows lexical decompositional theories from a semantic perspective: that is, the Conceptual Semantics theory, posed by Jackendoff (1983, 1990), and the Generative Lexicon theory, put forward by Pustejovsky (1995). The empirical basis of this analysis is a corpus of 150 verbs documented throughout the history of Spanish according to various textual corpora (*CORDE*, *CE*, *CDH* and *CREA*).

The paper is structured as follows. Section 2 offers a brief presentation of previous research into Spanish denominal parasynthetic verbs and establishes the basic criteria used to analyze these formations, criteria which are based on the detailed study of their contextual uses. The structural meaning of these formations is studied in section 3, where the proposed classification provides evidence for the parallelism of their lexical-conceptual structures. Section 4 examines the sub-lexical features involved in both their regular polysemy and in the different meanings that these verbs can adopt in context (i.e., their irregular polysemy). Overall conclusions are given in section 5.

2. PRESENTATION OF THE DATA
2.1. Introducing denominal parasynthetic verbs in Spanish

As pointed out in the introduction, the present paper deals with the semantic study of Spanish denominal parasynthetic verbs displaying the structure [*a*-N-*ar*], [*en*-N-*ar*] and [*des*-N-*ar*][1], which show the most productive pattern in verbal parasynthesis.[2]

Previous studies have often noted that these verbs display a range of different meanings, a fact that has made their classification difficult (see Reinheimer-Ripeanu 1974; Rainer 1993; Serrano-Dolader 1995, 1999; Rifón 1996, 1997; the *NGLE* 2009; and Lavale 2013; among others). The proposed semantic classifications of parasynthetic verbs are usually based on the syntagmatic paraphrase of these verbs, taking into account the syntactic and semantic function of the nominal base in such a paraphrase. Hence, Rainer (1993) classifies denominal parasynthetic verbs prefixed with *a-* into:

a) *ornative*: 'to provide with N' (*abovedar* 'to cover with a vault')
b) *causative*: 'to lead to the state of N' (*abochornar* 'to embarrass')
c) *resultative*: 'to make into N' (*avasallar* 'to make into a vassal', 'to dominate')

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[1] In these structures "N" stands for "nominal base".

[2] Traditional studies usually interpret parasynthetic verbs as ternary structures where a prefix and a verbalizing suffix are simultaneously adjoined to a lexical base (see Reinheimer-Ripeaneau 1973; Serrano-Dolader 1995, 1999). Other authors have suggested the existence of a discontinuous affix which involves both the prefix and the verbalizing suffix (Bosque 1983). Theory-based approaches, concerned with the *Binary Branching Hypothesis* postulated by Aronoff (1976), claim that parasynthetic verbs are not created by the simultaneous adjunction of the prefix and the suffix, but that they involve an intermediate stadium [prefix-base] (Alcoba 1987) or [base-verbalizing suffix] (Scalise 1984:204). Corbin (1980, 1987) argues for the transcategorial power of the prefix and denies the existence of a proper parasynthetic process. Since it is not our intention to discuss the problems involved in the notion of parasynthesis, we will assume the traditional perspective, understanding parasynthetic verbs as ternary structures. For an exhaustive review of the concept of parasynthesis, see Heyna (2012) and Serrano-Dolader (In press).

d)   *instrumental*: 'to do something with N' (*apuñalar* 'to stab')
e)   *locative*: 'to put in N' (*acuartelar* 'to quarter')
f)   *intransitive*: no homogeneous paraphrase (*anidar* 'to nest')[3]

In the case of denominal parasynthetic verbs prefixed with *en-* the same author distinguishes between:

a)   *ornative*: 'to provide with N' (*empapelar* 'to paper', 'to wallpaper')
b)   *resultative*: 'to make into N' (*enredar* 'to tangle up')
c)   *locative*: 'to put in N' (*encarcelar* 'to imprison', 'to jail')

The works concerned with the study of denominal parasynthetic verbs prefixed with *des-* (Vañó-Cerdá 1990; Serrano-Dolader 1995; Martín García 2007) usually classify these verbs into:

a)   *privative*: 'to remove N' (*descortezar* 'to strip the bark from')
b)   *ablative*: 'to move away from N' (*desterrar* 'to banish')
c)   *effective* or resultative: 'to make into N' (*despedazar* 'to tear to pieces')
d)   *instrumental*: 'to remove with N' (*despinzar* 'to remove by using tweezers')[4]

In the existing literature, while *a-* and *en-* are usually treated with similar criteria, *des-* is accounted for separately, which neglects the study of the connections that may be established between all these verbs.[5] Moreover, some studies do not acknowledge the semantic differences between prefixes *a-* and *en-*, assuming that these prefixes are superfluous and do not contribute any particular meaning to the derived verb (see Serrano-Dolader 1995, 1999; Rifón 1996, 1997). Nevertheless, Serrano-Dolader (1995: 122-123) notices certain tendencies in the values of *a-* and *en-* denominal parasynthetic verbs and points out that the structure [*en-*N-*ar*] usually displays a locative value (e.g. *envinar* 'to add wine to', *embaular* 'to put in a trunk'), while the structure [*a-*N-*ar*] tends to express those values which are typically encoded by deadjectival verbs: 'to (make) acquire the qualities related to the noun base' (e.g. *asedar* 'to make smooth like silk').

Theory-based approaches try to offer a global analysis of these formations. Some of them focus on the behaviour of their prefixes (Gràcia et *al*. 2000). Others provide a regular structure which can account for the different classes of parasynthetic verbs (Alcoba 1987; Fernández-Alcalde 2010). Acedo-Matellán's (2006) study of Catalan verbs prefixed with *a-*, *en-* and *es-* (the last of these prefixes linked to the value of Spanish *des-*) deserves special attention. Acedo-Matellán states that denominal verbs establish a relation of predication between the nominal base and the internal argument of the derived verb. In his work prefixes are considered to be abstract prepositions: *a-* and *en-* are distinguished from *es-* on the grounds that the former express entry into a state and the latter denotes exit from a state (an idea on which descriptive study by Grossmann 1994 is based). However, unlike the other approaches examined, Acedo-

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[3] This classification does not always follow homogeneous criteria, since the label *intransitive*, used to define the class f), is not based on semantic factors, but only on syntactic ones.
[4] Our classification, which will be presented in section 3 and further deployed in section 4, will not take into account effective and instrumental verbs headed by *des-* since their parasynthetic status is not altogether clear (cf. Gibert Sotelo 2015a, In press b).
[5] The parasynthetic status of denominal verbs headed by *des-* is not always accepted. Grossmann (1994), in a fine-grained study of Catalan derived verbs, takes *des-* denominal verbs as cases of prefixation to a non-existing but possible verb.

Matellán (2006: 51-52 and 58-59) does explicitly distinguish the prefix *a-*, used predominantly to express a "pure change of state", from the prefix *en-*, a prefix with a greater semantic weight used to encode locative values. Such a distinction is illustrated with co-radical formations (*avinagrar* 'to sour' vs. *envinagrar* 'to add vinegar to' or 'to put into vinegar'; *acanyar-se* 'to become thinner (like a cane)' vs. *encanyar* 'to support with a cane') and takes into account the Latin antecedents of these prefixes (*ad* 'at', 'to'; and *in* 'in', 'into'). However, this study does not consider all the existing verbs headed by the above-mentioned prefixes, and the structure of denominal parasynthetic verbs pertaining to the class *instrumental* is not provided.

Therefore, while descriptive studies offer wide semantic descriptions and usually fail to establish the structural connections existing between the different classes of denominal parasynthetic verbs, theoretically-based papers explore their morphosyntactic structure in depth but do not propose a semantic classification of these verbs.

Unlike previous approaches to denominal parasynthetic verbs, the present paper offers a semantic classification of these formations that focuses on their regularities (see section 3) and shows that, despite the heterogeneity of their semantics (heterogeneity that is explored in section 4), all of them share certain structural properties: a) they are causative (and some of them show causative alternation); b) they express a telic event of change (change of place or change of state); and c) they need an internal argument to complete their meaning.

Causative alternation is deployed by those causative verbs whose internal argument can emerge in the syntax as a direct object —which implies a transitive use of the verb (the causative alternate)— or as a subject —which implies an unaccusative use of the verb (the anticausative alternate). Examples included in (1), (2) and (3) show that some denominal parasynthetic verbs prefixed with *a-*, *en-* and *des-*, respectively, can show causative alternation. The sentences in (1a), (2a) and (3a) are causative and have an external argument (EA) acting as an agentive subject, and an internal argument (IA) which is the object of the clause. (1b), (2b) and (3b) are the anticausative counterparts of these sentences, where there is no agentive subject and the internal argument emerges as the subject of the clause:[6]

(1) a. El incendio$_{EA}$ *abrasó* todos sus libros$_{IA}$.
   'The fire burnt all his/her books'
 b. Todos sus libros$_{IA}$ *se abrasaron* con el incendio.
   'All his/her books burnt because of the fire'

(2) a. La inundación$_{EA}$ *ha enfangado* la ciudad$_{IA}$ [*Clave* Dictionary, s.v. *enfangar*]
   'The flood has covered the city in mud'
 b. La ciudad$_{IA}$ *se ha enfangado* con la inundación.
   'The city has got covered in mud because of the flood'

(3) a. María$_{EA}$ *desasnó* a Pedro$_{IA}$.
   'María has civilized Pedro'
 b. Pedro$_{IA}$ *se desasnó* gracias a María.
   'Pedro has become civilized thanks to María'

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[6] In Spanish, externally caused verbs that show causative alternation usually involve the addition of *se* in the anticausative constructions. For a detailed account of the different uses of *se* in Spanish, see Mendikoetxea (1999).

The telicity of denominal parasynthetic verbs is illustrated in (4). Since these verbs express a transition with a final (verbs prefixed with *a-* and *en-*) or an initial (verbs prefixed with *des-*) boundary, they admit a temporal modifier introduced by *en* 'in' but not introduced by *durante* 'during/for', which shows that these verbs do not encode atelic processes but delimited events of change:

(4)   a. El incendio *abrasó* todos sus libros en pocas horas/ *durante pocas horas.
          'The fire burnt all his/her books in a few hours/ *for a few hours'
       b. La inundación *ha enfangado* la ciudad en dos horas/ ?durante dos horas.[7]
          'The flood has covered the city in mud in two hours/ ?for two hours'
       c. María *desasnó* a Pedro en pocos meses/ *durante pocos meses.
          'María has civilized Pedro in a few months/ *for a few months'

Finally, the necessity of the internal argument in order to complete the meaning of denominal parasynthetic verbs is shown with the ungrammaticality of the examples included in (5) when this argument is suppressed:

(5)   a. El incendio *abrasó* *(todos sus libros)
          'The fire burnt *(all his/her books)'
       b. La inundación *ha enfangado* *(la ciudad)
          'The flood has covered *(the city) in mud'
       c. María *desasnó* *(a Pedro)
          'María has civilized *(Pedro)

2.2. Methodology and empirical basis

The present study seeks to offer an overall analysis of Spanish parasynthetic verbs that demonstrates the connections and divergences existing among the most productive patterns of these formations: [*a*-N-*ar*], [*en*-N-*ar*] and [*des*-N-*ar*]. This analysis is based on a corpus of 150 contemporary verbs (see the Appendix), and takes into account:

a) the information contained in grammars and works of reference: the *NGLE* (2009), Rainer (1993), Serrano-Dolader (1995, 1999), Gràcia et *al*. (2000);
b) previous studies which analyze the semantics of these formations from a diachronic point of view: Batllori Dillet & Pujol Payet (2012); Pujol Payet (2012a, 2012b, 2012c, 2014); Gibert Sotelo (2015a, 2015b, In press a); Pharies & Pujol Payet (In press);
c) the use of these verbs in context according to diachronic and synchronic textual corpora (*CORDE*, *CE*, *CDH* and *CREA*)

With respect to point a), the most relevant literature providing an account of denominal parasynthetic verbs has been addressed in section 2.1.

Regarding point b), the data analyzed by previous diachronic studies show that a large number of denominal parasynthetic verbs have been present in Spanish from the very origins of the language (e.g. *acuchillar* 'to knife' [1275], *afilar* 'to sharpen' [1423], *ensillar* 'to saddle' [1140], *encarcelar* 'to jail' [1230], *descabezar* 'to behead'

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[7] The use of *durante* ('during/for') is acceptable if we interpret that the resulting state is one which persists over time. Nevertheless, the grammaticality of the clause with the temporal modifier introduced by *en* ('in') demonstrates the telicity of the predicate.

[1140], *desviar* 'to deviate' [1215]). Even though the present paper does not aim to explain the historical evolution of these formations in Spanish, it is supported by diachronic data because a historical perspective provides relevant information about the polysemy exhibited by this type of verbs. First of all, if we assume that verbal derivation (and, hence, parasynthesis) is a process arising from morphological, syntactic and semantic regularities, then we must assume that when a parasynthetic verb is created it possesses a compositional meaning. Thus, if we explore the first attestations of a given verb, we can access directly the primary sense of this verb and guess the linguistic motivations for its creation. Secondly, the diachronic examination of the use(s) of a particular verb allows us to understand how its semantic extensions originate. A historical standpoint thus allows us to better comprehend the present behaviour of denominal parasynthetic verbs.

In relation to point c), our analysis takes into account the different uses of these verbs according to their documentation in the textual corpora *CORDE*, *CE*, *CDH* and *CREA*. The textual corpora consulted are representative corpora of the Spanish language. *CORDE*, *CREA* and *CDH* have been created by the *Real Academia Española* (*RAE*) and are available at its website: http://www.rae.es. The *Corpus Diacrónico del Español* (*CORDE*) comprises documents from the origins of the language (12th century) to the year 1974, and includes 250 million words. The *Corpus de Referencia del Español Actual* (*CREA*) encompasses documents from the year 1975 to the year 2004, and includes 160 million words. The *Corpus del Nuevo Diccionario Histórico del Español* (*CDH*) contains documents from the origins (12th century) to the year 2000, and includes 355 million words. The *Corpus del Español* (*CE*) has been created by Mark Davies (Brigham Young University) and sponsored by the *NEH* (*National Endowment for the Humanities*). This corpus embraces documents from the 13th century to the 20th century, and includes 100 million words. It can be accessed at http://www.corpusdelespanol.org. Although some of the corpora contain the same documents, each one offers different search possibilities: *CDH* and *CE* are lemmatized corpora, unlike *CORDE* and *CREA*. The lemmatization of the former allows all the inflected forms of a given verb to be obtained from the search for its infinitive form, which greatly facilitates the process. Nevertheless, the *CE* corpus is not as reliable as *CORDE*, so we always compare the results obtained in *CE* with those provided by *CORDE*.

This methodology of analysis differs from that used in most of the works dealing with the study of denominal parasynthetic verbs, which only take heed of the information provided by dictionaries of contemporary Spanish and offer classifications based on the most prototypical meaning of these verbs. Although dictionaries account for the different senses of words, they usually provide few examples and, in addition, do not show the links between these different meanings.[8] The advantage of consulting textual corpora is the possibility of obtaining the contextual uses of these verbs, a necessary premise in order to offer a detailed analysis of their polysemy.

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[8] Batiukova (In press) makes the same observation concerning the definitions of *-izar* verbs provided by dictionaries.

3. THE STRUCTURAL MEANING OF DENOMINAL PARASYNTHETIC VERBS

This section is devoted to the classification and analysis of Spanish denominal parasynthetic verbs. To analyze the structural meaning of these formations in depth we have used the theory of Conceptual Semantics proposed by Jackendoff (1983, 1990). This framework is especially useful in the study of verbal derivation because it develops a formal representation of the semantic structure of words, the lexical-conceptual structure (LCS), which allows one to determine the semantic contribution of each morphological constituent to the whole meaning of a word.[9]

In the particular case of denominal parasynthetic verb analysis, Conceptual Semantics is a good tool to determine their regularities as a class because, as will be seen, all these verbs are semantically related to each other via parallel LCSs that can be reduced to a single, underspecified LCS. Despite their regularities, these verbs display a range of different meanings depending on the semantic type of the noun base they incorporate and on their prefix, a fact that will be used in this article to classify denominal parasynthetic verbs into semantic subclasses (semantic subclasses which will be further examined from the viewpoint of the Generative Lexicon framework in section 4).

3.1. Conceptual Semantics

Conceptual Semantics is a theory developed by Jackendoff (1983, 1990, 2002, 2007, 2010), which explores the relations existing between (lexical) meaning and syntax from a semantic perspective. The fundamental assumption of such a theory is to consider the semantic component of the language as a mental representation, the *conceptual structure*, which is common to all natural languages and consists of the combination of a closed series of semantic primitives. Among these semantic primitives there are major ontological categories (the "conceptual parts of speech") such as Thing, Event, State, Action, Place, Path, Property and Amount (Jackendoff 1990: 22). These conceptual categories can be decomposed into Function-Argument structures where the function is a primitive predicate (e.g. GO or CAUSE in Events, IN or AT in Places, FROM or TO in Paths, etc.), and the argument(s) of the function refer to other conceptual categories. Consequently, a conceptual structure is able to contain other conceptual structures, which allows one to obtain an infinite number of linguistic meanings from the combination of a limited set of conceptual primitives. In (6) we have included the semantic decomposition of the category Path, which can be expressed in a structure with a Path-function indicating a specific direction (TO, FROM, TOWARD, AWAY-FROM or VIA) and an argument belonging to the category Thing or Place that is the reference point. (7a) and (7b) are examples of different types of Path and their corresponding conceptual structures: the former is a Path with a reference Thing, *the school*; while the latter is a Path with a reference Place, *in the box*.

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[9] Indeed, previous studies in verbal derivation have adopted this framework: see Lieber (1998) and Plag (1999) for English; Lieber & Baayen (1993) for Dutch; and Gràcia et *al*. (2000) for Catalan, Spanish and Basque; among others.

(6)

$$[\text{Path}] \rightarrow \left[_{\text{Path}} \left\{ \begin{array}{l} \text{TO} \\ \text{FROM} \\ \text{TOWARD} \\ \text{AWAY-FROM} \\ \text{VIA} \end{array} \right\} (\text{[\{ Thing/ Place \}]}) \right]$$

<div align="right">(Jackendoff 1990: 43, example 1)</div>

(7)   a. From the school
          [Path FROM ([Thing SCHOOL])]
        b. Into the box
          [Path TO ([Place IN ([Thing BOX])])]

A crucial distinction made by Jackendoff (1990: 125) in the conceptual structure of Events is between the *thematic tier* and the *action tier*.

The thematic tier specifies the thematic relations established between the arguments of the verb. From the standpoint of Conceptual Semantics, thematic roles are not semantic primitives, but particular argument positions inside the conceptual structure. For example, the thematic role Theme, defined by Gruber (1965) as "the object in motion or being located", is structurally defined by Jackendoff (1990: 46) as the first argument of those Event-functions referring to motion or location (e.g. GO, BE, etc.), as is shown in (8a). The other thematic relations are defined in the same way: Agent corresponds to the first argument of the Event-function CAUSE (example (8b)); Source is the argument of the Path-function FROM (example (8c)), and so on:[10]

(8)   a. Theme: [State BE (**[Thing]**, [Place])]
                   [Event GO (**[Thing]**, [Path])]
        b. Agent: [Event CAUSE (**[Object]**, [Event])]
        c. Source: [Path FROM (**[Object/Place]**)]

<div align="right">(Morimoto 2001: 28, example 3. Our translation)</div>

The action tier (called *macrorole tier* in Jackendoff 2007:197, a term adopted from the work of Van Valin & LaPolla 1997) deals with the relations between Actor (the "doer of the action"), and Patient (the entity affected by the action). The role Actor corresponds to the first argument of the function AFF ('affect'), and the role Patient corresponds to the second argument of this function. Therefore, as illustrated in (9), a complete conceptual structure of Events is organized in a thematic tier involving basic thematic relations, and an action tier concerned with Actor-Patient affection:

(9)   [EVENT] → $\left[\begin{array}{l} … \\ \text{AFF } (<[\text{THING}]>, <[\text{THING}]>) \end{array} \right]$ → thematic tier
                                                              → action tier

<div align="right">(Jackendoff 1990: 127, example 9)</div>

When conceptual structure is used to determine the compositional meaning of lexical units it is called *lexical conceptual structure* (LCS), i.e., LCS is the conceptual structure of words. Since this study is concerned with the analysis of the compositional meaning

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[10] Following the notation used by Morimoto (2001: 28, 3) we have marked the position of the relevant thematic role in bold.

of a class of words, denominal parasynthetic verbs, we will deal with LCSs rather than conceptual structures.

3.2. Classification and LCS of denominal parasynthetic verbs

With the help of LCS formalization, we will show that, despite the heterogeneous semantics of parasynthetic verbs, they are related to parallel LCSs, which demonstrates that the verbs being studied share certain structural properties.

Gràcia et *al.* (2000) have also used the LCS formalization to account for the structural meaning of denominal parasynthetic verbs in Spanish. Nevertheless, their analysis does not focus on the regularities presented by these verbs, proposing LCSs with different functions to account for the same basic structural meaning. Thus, for example, to account for the ornative meaning of denominal parasynthetic verbs headed by *en-* (whose basic paraphrase is 'to put N' or 'to cover/provide with N'), they propose the LCS reproduced in (10), where the underline signals that the function CAUSE and its first argument are optional (which means that these verbs can show causative alternation):

(10)   [_{Event} CAUSE ([_{Thing} x], [_{Event} GO ([_{Thing} base], [_{Path} TO ([_{Thing} y])])])]

(Gràcia et *al.* 2000: 309. Our translation)

On the other hand, to account for the privative value of *des-* parasynthetic verbs, which are the egressive counterpart of ornative verbs (and whose basic paraphrase is 'to remove N' or 'to deprive of N'), they propose an LCS like the one in (11), which fails to show the connections between these two types of verbs:

(11)   [_{Event} CAUSE ([_{Thing} x], [_{Event} BEGIN ([_{Thing} y], [_{State} BE ([_{Thing} y],
         [_{Property/Manner} WITHOUT ([_{Thing} base])])])])]

(Gràcia et *al.* 2000: 300. Our translation)

In order to avoid the contradictions of previous analyses, we will classify and analyze denominal parasynthetic verbs prefixed with *a-*, *en-* and *des-* with homogeneous criteria.

Our central hypothesis is that the basic meaning of denominal parasynthetic verbs is built up compositionally from the meaning of the prefix, the meaning of the noun base and the meaning of the internal argument of the verb. We have distinguished four semantic types among the nouns these forms incorporate:

i)   nouns that denote a *property*: we understand as properties those nouns that in the verbalization are metonymically taken for their prototypical property (e.g. *vinegar* for its sourness).[11] Property-based verbs express the change of state of the internal argument, which acquires or loses the property related to the nominal base;

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[11] The metonymic interpretation of this type of bases is better captured by using the Generative Lexicon approach. See section 4.2 for a fine-grained account of the semantics of denominal parasynthetic verbs bases.

ii)   nouns that denote a *located object* (or *locatum*[12]): we consider located objects those nouns referring to objects or entities that are (or cease to be) parts of another entity (e.g. *leaf*, which is part of a tree). Verbs derived from that type of base express the change of place of the entity denoted by the base, but also the change of state of the entity denoted by the internal argument, which ends up having or losing the base;

iii)   nouns that denote a *location*: we interpret as locations nouns denoting places (e.g. *jail*) as well as nouns denoting entities which can be understood as containers (e.g. *bottle*). Verbs derived from that type of base convey a change of location of the internal argument;

iv)   nouns that denote an *instrument*: we take as instruments those nouns describing utensils destined for a specific use (e.g. *knife*, used to cut or to stab). The parts of the body can also be interpreted as instruments (e.g. *elbow*, used to lean on; see Pujol Payet 2012 b: 444-5, and Pujol Payet 2014). Verbs derived from this type of base encode an event in which the internal argument undergoes a change of state determined by the use of the entity encoded in the noun base.

The type of base and its role will depend on its position inside the LCS of the verb. In this sense, we differ from the lexical-conceptual analysis proposed by Plag (1999) to account for the structural meaning of *-ize* verbs (which in many respects behave like parasynthetic verbs). While Plag (1999: 127-128) considers that the meaning of the base and its position inside the LCS determine the meaning of the derived verb, we argue that the meaning of the base (and, thus, its position inside the LCS of the derived verb) greatly depends on the internal argument with which the derived verb is constructed. Since our approach (largely influenced by the postulates of the Generative Lexicon) gives considerable importance to the use of verbs in context, we assume that the meaning of denominal parasynthetic verbs (and, hence, the interpretation of their bases) can only be stated by attending to the context of use. As an example, the *RAE Dictionary* (*DRAE* 2001) registers two meanings of the verb *abovedar*: 1) 'to cover with a vault', and 2) 'to give the shape of a vault'. *Abovedar* adopts the first meaning (where the base *bóveda* 'vault' is understood as a located object) when constructed with an internal argument whose referent is a building (e.g. a church); and adopts the second meaning (where the base *bóveda* 'vault' is understood as a property) when constructed with an internal argument whose referent is not a building, but an entity able to adopt the shape of a vault (see section 4.3 for a detailed account of the polysemy of this and other denominal parasynthetic verbs in terms of the Generative Lexicon framework).

      With regard to the prefixes, we posit that they are meaningful and that they encode the meaning of path: the prefix *a-* encodes a Goal-Path expressing 'approach to', and its LCS is that shown in (12); the prefix *en-* encodes a Goal-Path with a Localization IN/ON that expresses 'entrance into' or 'covering', and is related to the LCS of (13); and the prefix *des-* encodes a Source-Path related to the idea of 'detachment from', and its LCS is that shown in (14). In most cases, the path encoded by prefixes must be understood as an abstract path of change of state.[13]

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[12] Denomination taken from the fruitful article by Clark & Clark (1979).

[13]Following Gruber (1965), Lyons (1977), Jackendoff (1983,1990) and Talmy (2000), among others, we adopt a localistic perspective and understand that there is a parallel semantic relationship between going from one place to another (which implies a physical movement), on the one hand, and the transition from one state to another (which implies an abstract movement), on the other hand.

(12)   LCS of prefix *a-* (goal-path)
         [Path TO ([Thing/Property/State   ])]

(13)   LCS of prefix *en-* (goal-path+ localization)
         [Path TO ([Place IN/ON ([Thing/Property/State   ])])]

(14)   LCS of prefix *des-* (source-path)
         [Path FROM ([Thing/Property/State   ])]

In view of the above, we classify denominal parasynthetic verbs into four basic types taking into account the semantic type of their bases. Within each class it is also possible to distinguish further subclasses with parallel LCSs differing in the type of path lexicalized in the prefix.

3.2.1. *Verbs whose base denotes a property*

When the base denotes a property, the semantic relationship established between the base and the internal argument is one of identification. In these cases, the internal argument is understood to undergo a change of state in which it acquires or loses the prototypical property of the referent of the nominal base. Therefore, in those verbs with a goal-oriented prefix (*a-* and *en-*), the internal argument will be understood to become identified with the referent of the nominal base. On the other hand, verbs headed with a source-oriented prefix (*des-*) will express a transition by means of which the internal argument ceases to be identified with the referent of the nominal base.

      Verbs prefixed with *a-*, which are the most productive in this pattern, are related to the LCS shown in (15), which expresses an event in which the external argument (α) causes the shift of the internal argument (β) to the property denoted by the base, this property being understood as a Goal in the thematic tier. In addition, the action tier shows that when these verbs have an external argument it is the Actor of the action, while the internal argument is always the Patient affected by such an action.[14] For example, in a verb like *afilar* 'to sharpen', the internal argument is understood to undergo a change that leads such an argument to be identified with the prototypical property of *filo* 'sharp edge', which is "to be sharp". Therefore, it is deduced that the internal argument ends up being like the *filo*, that is, "sharp".

(15) Verbs prefixed with *a-*

$$\left[\begin{array}{l} \underline{\text{CAUSE}} \ (\underline{[\text{Thing} \ \ \alpha\ ]}, [\text{Event} \ \text{GO} \ ([\text{Thing} \ \ \beta\ ], [\text{Path} \ \text{TO} \ ([\text{Property} <\text{base}>])])]) \\ \text{Event} \quad \text{AFF} \ (\underline{[\text{Thing} \quad \quad]}^{\alpha}_{\ i}, [\text{Thing} \quad \quad]^{\beta}_{\ j}) \end{array}\right]$$

Examples: *afilar* 'to sharpen' (base: *filo* 'sharp edge'), *acartonar(se)* 'to grow stiff' (base: *cartón* 'cardboard'), *avinagrar(se)* 'to sour' (base: *vinagre* 'vinegar').

In a similar way, in verbs prefixed with *en-*, whose LCS is that shown in (16), the property lexicalized in the base is the Goal of the abstract path followed by the internal argument. The difference between these formations and those prefixed with *a-* is that

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[14] As some of these verbs undergo causative alternation (see section 2.1), we have underlined the function CAUSE and its argument and the first argument of the function AFF, a notation used by Jackendoff (1990) to mark the optionality of functions and arguments. This convention will be adopted in the remaining LCSs, although not all the verbs of each class show causative alternation.

the prefix *en-* implies a localization IN. From an abstract point of view, this idea of localization must be understood as the complete adoption of the property encoded by the noun base (e.g. *enrollar(se)* 'to roll', is not 'to become like a roll', but 'to become a roll').[15] Hence, despite the fact that these verbs do not encode a change of place, they tend to imply a locative value (which is shown in the paraphrase of a verb such as *enroscar* 'to put in a round form') and, therefore, to be constructed with a complement expressing location (see examples in (17)):[16]

(16) Verbs prefixed with *en-*

$$\left[_{\text{Event}} \begin{array}{l} \underline{\text{CAUSE}} ([_{\text{Thing}}\ \underline{\alpha}\,], [_{\text{Event}} \text{GO} ([_{\text{Thing}}\ \beta\,], [_{\text{Path}} \text{TO} ([_{\text{Place}} \text{IN} ([_{\text{Property}} <\text{base}>])])])]) \\ \text{AFF} ([_{\text{Thing}}\ \underline{\ \ \ }]^{\alpha}{}_i, [_{\text{Thing}}\qquad\ ]^{\beta}{}_j) \end{array}\right]$$

Examples: *enrollar(se)* 'to roll' (base: *rollo* 'roll'), *enroscar(se)* 'to put in a round form' (base: *rosca* 'round thing').

(17)   a. Andrés, Quique y yo nos comunicábamos con pedacitos de papel que *enrollábamos* **en los lápices** y nos pasábamos uno a otro. [CREA: 1986, Magali García Ramis, *Felices días tío Sergio*, Puerto Rico]
'Andrés, Quique and I communicated with bits of paper that we rolled round pencils and passed to each other.'

b. el desarrollo de la curva se asemeja a una serpiente que repta el terreno y *se enrosca* sensualmente **alrededor del edificio existente**. [CREA: 2000, *Trama. Revista de Arquitectura y Diseño*, nº 71, 03/04/2000 : Mauricio Luzuriaga, Ecuador]
'the development of the curve resembles a snake that crawls along the ground and winds sensually around the existing building.'

On the other hand, verbs prefixed with *des-*, which encode a Source-path, are related to the LCS shown in (18), which expresses an event in which the internal argument moves away from the property denoted by the base, and, hence, stops being like the base. In these cases, the base is related to the Source:

(18) Verbs prefixed with *des-*

$$\left[_{\text{Event}} \begin{array}{l} \underline{\text{CAUSE}} ([_{\text{Thing}}\ \underline{\alpha}\,], [_{\text{Event}} \text{GO} ([_{\text{Thing}}\ \beta\,], [_{\text{Path}} \text{FROM} ([_{\text{Property}} <\text{base}>])])]) \\ \text{AFF} ([_{\text{Thing}}\ \underline{\ \ \ }]^{\alpha}{}_i, [_{\text{Thing}}\qquad\ ]^{\beta}{}_j) \end{array}\right]$$

Examples: *desasnar(se)* 'to (make) become less stupid' (base: *asno* 'donkey').

---

[15] An anonymous reviewer wonders if the distinction we propose between *en-* prefixed verbs and *a-* prefixed ones is that the first are achievements whereas the latter are accomplishments. It is not our aim to discuss this slippery distinction, since we consider that the context greatly influences the reading of these verbs as achievements or as accomplishments. What we acknowledge in this paper is that both these types of verb and also *des-* prefixed verbs are telic events of change (in fact, Pustejovsky 1995 does not distinguish achievements from accomplishments, stating that both types of event must be considered transitions. See section 4.1).

[16] For a sub-lexical account of the tendency of *en-* verbs to encode locative values and the preference of *a-* verbs to express "pure change of state" (in the words of Acedo-Matellán 2006), see section 4.2.

Comparing the LCSs of *a-*, *en-* and *des-* denominal parasynthetic verbs with a property-denoting base, it is clear that in all of them the internal argument is the Theme of an abstract displacement or change of state in the thematic tier, and corresponds to the Patient (affected entity) in the action tier. The property denoted by the base is only included in the thematic tier, and must be understood as an abstract reference object.

3.2.2. Verbs whose base denotes a located object

When the base denotes a located object, the semantic relationship established between the base and the internal argument is one of possession. In these cases, the base is understood to be a possession (abstractly) located in the internal argument, which is the possessor of the base. Verbs of this type express the transference of the base, which is acquired by (verbs prefixed with *a-* and *en-*) or removed from (verbs prefixed with *des-*) the internal argument.

Verbs prefixed with *a-*, whose LCS is included in (19), are the least productive in this pattern. They encode an event whereby a relationship of possession between the internal argument (the possessor) and the base (the possessum) is established. In these cases, the internal argument is related to the Goal in the thematic tier, since it is identified with the final localization of the entity denoted by the base, but it is also related to the Patient role in the action tier because it is the argument affected by the event: [17]

(19) Verbs prefixed with *a-*

$$
\left[\begin{array}{l} \text{CAUSE } ([_{\text{Thing}} \ \ \alpha \ ], [_{\text{Event}} \text{ GO } ([_{\text{Thing}} \text{ <base>}], [_{\text{Path}} \text{ TO } ([_{\text{Thing}} \ \ \beta \ ])])]) \\ {}_{\text{Event}} \quad \text{AFF } ([_{\text{Thing}} \qquad \ ]^{\alpha}{}_{i}, [_{\text{Thing}} \ ]^{\beta}{}_{j}) \end{array} \right]
$$

Examples: *amurallar* 'to wall/fortify' (base: *muralla* 'wall')

Verbs prefixed with *en-* usually express an event whereby the referent of the noun base ends up covering the referent of the internal argument (and, hence, "being ON" the internal argument). These formations select an internal argument which is identified with the Goal of this transfer, as is shown in the LCS of (20), but also with an entity undergoing a change (i.e. a Patient), since at the end of the event it possesses the entity referred to by the base. Since the base is identified with a transferred object, it occupies the position of a Theme in the thematic tier:

(20) Verbs prefixed with *en-*

$$
\left[\begin{array}{l} \text{CAUSE } ([_{\text{Thing}} \ \alpha \ ], [_{\text{Event}} \text{ GO } ([_{\text{Thing}} \text{ <base>}], [_{\text{Path}} \text{ TO } [_{\text{Place}} \text{ ON } ([_{\text{Thing}} \ \ \beta \ ])])])]) \\ {}_{\text{Event}} \quad \text{AFF } ([_{\text{Thing}} \quad \ ]^{\alpha}{}_{i}, [_{\text{Thing}} \qquad \ ]^{\beta}{}_{j}) \end{array} \right]
$$

Examples: *ensillar* 'to saddle' (base: *silla* 'saddle'), *engrasar* 'to grease/oil' (base: *grasa* 'grease'), *enfangar(se)* 'to cover with mud', 'to get covered with mud' (base: *fango* 'mud').

---

[17]Another possibility for analyzing the meaning of these types of verb is to adopt a specific function HAVE in order to encode the relationship of possession established between the internal argument (the possessor) and the nominal base (the possessum). This is the solution adopted by Hernández Paricio (1992), Val Álvaro (1994) and Kiparsky (1997), among others.

On the other hand, verbs prefixed with *des-*, which are the most productive in this pattern, are related to the LCS shown in (21), which denotes an event whereby the relationship of possession between the internal argument and the base is broken. For example, in a verb like *descabezar*, 'to behead', the internal argument is understood as not having *cabeza* 'head' any more, which means that it is the Source from which the head is removed (a fact that is reflected in the thematic tier), but also the Patient affected by the verbal action (a fact that is reflected in the action tier):

(21) Verbs prefixed with *des-*

$$\begin{bmatrix} & \underline{\text{CAUSE}} \ ([_{\text{Thing}} \quad \alpha \ ], [_{\text{Event}} \ \text{GO} \ ([_{\text{Thing}} <\text{base}>], [_{\text{Path}} \ \text{FROM} \ ([_{\text{Thing}} \quad \beta \ ])])]) \\ _{\text{Event}} & \text{AFF} \ ([_{\text{Thing}} \quad]^{\alpha}_{i}, [_{\text{Thing}} \qquad]^{\beta}_{j}) \end{bmatrix}$$

Examples: *descabezar* 'to behead' (base: *cabeza* 'head'), *deshojar(se)* 'to strip the leaves off', 'to lose the leaves' (base: *hoja* 'leaf'), *desnatar* 'to skim' (base: *nata* 'cream').

Therefore, in verbs whose base denotes a located object, the internal argument is understood to be the Reference Object in the thematic tier and the Patient in the action tier, because it is the entity that undergoes a change of state. In contrast, the base displays the role of an incorporated Theme on the thematic tier.

3.2.3. Verbs whose base denotes a location

When the base denotes a location, the semantic relationship established between the base and the internal argument is one of localization. These verbs express the change of location of the internal argument, which goes to/into (verbs prefixed with *a-* and *en-*) or detaches from (verbs prefixed with *des-*) the referent of the nominal base.

Verbs prefixed with *a-*, linked to the LCS included in (22), express an event where the subject causes the internal argument to go to the entity denoted by the base, the base being identified with the Goal in the thematic tier.

(22) Verbs prefixed with *a-*

$$\begin{bmatrix} & \underline{\text{CAUSE}} \ ([_{\text{Thing}} \quad \alpha \ ], [_{\text{Event}} \ \text{GO} \ ([_{\text{Thing}} \ \beta \ ], [_{\text{Path}} \ \text{TO} \ ([_{\text{Thing}} <\text{base}>])])]) \\ _{\text{Event}} & \text{AFF} \ ([_{\text{Thing}} \quad]^{\alpha}_{i}, [_{\text{Thing}} \qquad]^{\beta}_{j}) \end{bmatrix}$$

Examples: *aventar* 'to leave or to expose to the wind' (base: *viento* 'wind'), *acuartelar(se)* 'to quarter' (base: *cuartel* 'quarter').

Verbs prefixed with *en-* are the most productive in this pattern. Their LCS is shown in (23), and encodes an event where the subject causes the internal argument to enter into the entity denoted by the base. For example, a verb like *encarcelar*, 'to jail', expresses the entry of the internal argument —the Theme in the thematic tier and the Patient in the action tier— into the base *cárcel* 'jail', the Goal of the transfer.

(23) Verbs prefixed with *en-*

$$\begin{bmatrix} & \underline{\text{CAUSE}} \ ([_{\text{Thing}} \quad \alpha \ ], [_{\text{Event}} \ \text{GO} \ ([_{\text{Thing}} \ \beta \ ], [_{\text{Path}} \ \text{TO} \ ([_{\text{Place}} \ \text{IN} \ ([_{\text{Thing}} <\text{base}>])])])]) \\ _{\text{Event}} & \text{AFF} \ ([_{\text{Thing}} \quad]^{\alpha}_{i}, [_{\text{Thing}} \qquad]^{\beta}_{j}) \end{bmatrix}$$

Examples: *encarcelar* 'to imprison, to jail' (base: *cárcel* 'jail'), *embotellar* 'to bottle' (base: *botella* 'bottle'), *embarcar(se)* 'to embark' (base: *barco* 'ship').

Finally, verbs prefixed with *des-*, related to the LCS shown in (24), express the exit or the separation of the internal argument from the place that is denoted by the base, the base being linked to the Source position in the thematic tier.

(24) Verbs prefixed with *des-*

$$\left[_{Event} \begin{array}{l} \underline{\text{CAUSE}}\ ([_{Thing}\ \underline{\ \alpha\ }],\ [_{Event}\ GO\ ([_{Thing}\ \beta\ ],\ [_{Path}\ FROM\ ([_{Thing}\ <base>])])]) \\ \underline{\text{AFF}}\ ([_{Thing}\ \underline{\ \ }]^{\alpha}{}_{i},\ [_{Thing}\ \ ]^{\beta}{}_{j}) \end{array} \right]$$

Examples: *desviar(se)* 'to deviate, to turn aside' (base: *via* 'path'), *desterrar* 'to send into exile' (base: *tierra* 'land').

In all these types of verbs, the internal argument denotes an entity that changes its position, so that it is identified with the Theme role in the thematic tier and with the Patient in the action tier. The nominal base is the Reference Object whereby the position of the internal argument is determined.[18]

3.2.4. Verbs whose base denotes an instrument

When the base denotes an instrument, the verb expresses the change of state of the internal argument by means of the use of the instrument referred to by the base. Previous studies of this type of verbs have considered them activities or processes and not telic events of change (see Schroten 1997; Gràcia et *al.* 2000). However, we consider that denominal parasynthetic verbs involving a noun base referring to an instrument are verbs of change of state, as shown in the LCS we propose for them.[19]

The LCS for these verbs has been designed taking into account the *Qualia* Structure of the nominal base, which is deployed in section 4.2.4 (see section 4.1 for an introduction to *Qualia* Structure formalization). Since instruments are elements used with a particular purpose, when a noun denoting an instrument is incorporated into a parasynthetic structure expressing change of state, the resulting state is determined by the purpose or the function of the instrument-denoting base. Therefore, the noun base is metonymically taken for its purpose or function, and it is represented as an abstract Goal (the resulting state) in the thematic tier:

---

[18]Kiparsky (1997:484) claims that "the difference between locatum verbs and location verbs cannot simply be a matter of reversing the located thing with the location in argument structure". Accordingly, this author distinguishes two relations of location: a) BE-ON/IN/AT, which expresses pure location and is encoded by location verbs (which basically correspond to the verbs examined in the present section); and b) HAVE-ON/IN, which expresses possession and is encoded by locatum verbs (which basically correspond to the verbs examined in 3.2.2; see footnote 17). In our approach, this distinction follows from the different correspondences established between the thematic tier and the action tier of these verbs. Moroever, from the standpoint of the Generative Lexicon, these differences are better captured by means of the links established between the *Qualia* Structure of the base and the *Qualia* Structure of the internal argument of the derived verb (see section 4.2).

[19] Mateu & Acedo-Matellán (2012) and Koontz-Garboden & Beavers (2012) also analyze instrumental verbs such as *guillotine* as verbs of change of state. Note that Spanish verbs such as *martillear* 'hit repeatedly with a hammer', created by means of the suffix *-ear* and not by parasynthesis, express a repeated activity, and they are not considered to be telic. The differences between these two types of instrumental verbs will be studied in forthcoming research.

(25) LCS of denominal parasynthetic verbs whose base denotes an instrument

$$
\left[
\begin{array}{l}
\text{CAUSE } ([_{\text{Thing}}\ \alpha]\,, [_{\text{Event}}\text{GO } ([_{\text{Thing}}\ \beta\ ], [_{\text{Path}}\text{TO } ([_{\text{Property/State}}\ \text{<base>}])])])\\
_{\text{Event}}\quad\text{AFF } ([_{\text{Thing}}\quad]^{\alpha}{}_{i}, [_{\text{Thing}}\quad]^{\beta}{}_{j}\ )
\end{array}
\right]
$$

Examples: *acuchillar* 'to knife' (base: *cuchillo* 'knife'), *abotonar* 'to button up' (base: *botón* 'button'), *ahorcar* 'to execute by hanging' (base: *horca* 'gallows').[20]

For example, in a verb like *acuchillar* 'to knife', whose LCS is shown in (26), an agentive subject (which corresponds to the Agent in the thematic tier and to the Actor in the action tier), acting on the internal argument (the Theme in the thematic tier and the Patient in the action tier), causes the internal argument to go to a state of "being knifed" (i.e., cut or damaged if a thing, hurt or dead if a person or an animal). The nominal root is included as a Goal in the thematic tier because the state achieved by the internal argument is metonymically inferred from its meaning, which is that of 'an instrument used to cut, hurt or kill'.

(26) LCS of *acuchillar*

$$
\left[
\begin{array}{l}
\text{CAUSE } ([_{\text{Thing}}\ \alpha]\,, [_{\text{Event}}\text{GO } ([_{\text{Thing}}\ \beta\ ], [_{\text{Path}}\text{TO } ([_{\text{Property/State}}\ \text{KNIFE}])])])\\
_{\text{Event}}\quad\text{AFF } ([_{\text{Thing}}\quad]^{\alpha}{}_{i}, [_{\text{Thing}}\quad]^{\beta}{}_{j}\ )
\end{array}
\right]
$$

It should be noted that only verbs prefixed with *a-* can incorporate a base that clearly denotes an instrument. Verbs prefixed with *en-* and *des-* whose base can be interpreted as an instrument can also be understood as verbs of the three types examined. Such an example is the verb *enhorcar*, whose base *horca* 'gallows' could be interpreted as an instrument, but which in most cases is understood as a location and the verb read as 'to put into the gallows' because of the tendency of the prefix *en-* to express change of place.[21]

3.3. Basic LCS of denominal parasynthetic verbs

The classification proposed highlights the regularities in the meaning of the verbs being studied, a classification we have summarized in Table I:

	Properties	Located objects	Locations	Instruments
a-	'*y* makes *x* become (like) <base>'	'*y* makes <base> go to *x*'	'*y* makes *x* go to <base>'	'*y* affects *x* with <base>'
en-	'*y* makes *x* become (like) <base>'	'*y* makes <base> cover *x*'	'*y* makes *x* enter into <base>'	
des-	'*y* makes *x* stop being (like) <base>'	'*y* removes <base> from *x*'	'*y* makes *x* go away from <base>'	

Table I: Regular polysemy of denominal parasynthetic verbs

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[20] Verbs of this type do not usually undergo causative alternation because they always require the presence of an agentive subject to perform the action.
[21] Compare this verb with *ahorcar* 'to execute by hanging', whose base is the same but prefixed with *a-* and not with *en-*.

As has previously been seen, parasynthetic verbs are semantically related to each other via parallel LCSs and express a caused event where the internal argument is always a Patient undergoing a change. Taking into account that all these verbs imply a change to the internal argument, it is possible to reduce the previous LCSs to a single, underspecified LCS like that shown in (27).

(27) Basic LCS of denominal parasynthetic verbs

$$[_{Event} \text{CAUSE} ([_{Thing} \alpha]_i, [_{Event} \text{GO}([_{Thing} \beta]_j, [_{Path} \{\text{TO/INTO/FROM}\} ([_{State} <\text{base}>])])])]$$

This LCS only specifies the thematic tier and should be read as follows: denominal parasynthetic verbs express the change of state of the internal argument (argument that occupies the position of the first argument of the function GO because it is a Theme moving through an abstract path of change of state), and the kind of change experimented by the internal argument is determined by the base, which enables us to consider that the base can be related to an abstract Reference Object whereby the state of the internal argument is determined[22]. In addition, the direction of this change of state will be determined by the prefix: when the prefix is *a-*, the internal argument changes from an unspecified state to the state determined by the noun base; when the prefix is *en-*, the internal argument abandons an unspecified state and enters the state determined by the noun base; and when the prefix is *des-*, the internal argument changes from the state determined by the noun base to another state.[23]

We will exemplify this formalization with one verb of each class. The verb *afilar* 'to sharpen' (which belongs to the class of verbs whose base denotes a property), expresses an event where the internal argument goes to a state in which it is identified with the base *filo* 'sharp edge'. In a verb like *descabezar* 'to behead' (a member of the class of verbs whose base denotes a located object), the internal argument leaves a state in which it possessed the base *cabeza* 'head'. A verb such as *encarcelar* 'to jail' (belonging to the class of verbs whose base denotes a location), specifies a situation where the internal argument enters into a state in which it is placed inside the base *cárcel* 'jail'. Finally, in a verb such as *acuchillar* 'to knife' (whose base denotes an instrument), the internal argument goes to a state in which it becomes hurt or killed by the base noun referent: *cuchillo* 'knife'.

As will be shown in the next section, the Generative Lexicon framework provides crucial information to elucidate the nature of the state encoded by the noun base.

4. SUB-LEXICAL ANALYSIS OF DENOMINAL PARASYNTHETIC VERBS

In this section the analysis we propose for denominal parasynthetic verbs will be refined using a lexical-semantic theory which explores the sub-lexical features involved in the compositional meaning of words: the Generative Lexicon framework (Pustejovsky 1995).

One of the main differences between Jackendoff's Conceptual Semantics and Pustejovsky's Generative Lexicon is the *Qualia* Structure (QS) developed by the latter

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[22] This is the approach followed by Grossmann (1994), Labelle (2000), Mateu (2001, 2002) and Acedo-Matellán (2006).

[23] See Gibert Sotelo (In press b) for a very similar approach in the analysis of Spanish *des-* parasynthetic verbs.

model, which has been considered to be its most innovative proposal (see Batiukova 2009; De Miguel 2009, 2012). QS codifies essential aspects of words' meanings linked to our world knowledge: the composition of a given object, its location, its properties, its function, its origin, etc. Each of these "pieces" of information contained in lexical items, which are considered to be internal or sub-lexical, are highly relevant to building or understanding the meaning adopted by words when inserted in a syntactic context, because it is in the context that the sum of "pieces" of meaning emerges. Therefore, the aim of the present section is to complete the structural analysis of denominal parasynthetic verbs presented in section 3 with the sub-lexical information we can obtain by using the tools provided by the Generative Lexicon framework.

4.1. Lexical information within the Generative Lexicon

The Generative Lexicon framework seeks to give an account of the following features of lexical semantics (Pustejovsky 1995: 39):

> "(1) THE CREATIVE USE OF WORDS: words assume new senses in novel contexts.
>
> (2) THE PERMEABILITY OF WORD SENSES: Word senses are not atomic definitions but overlap and make reference to other senses of the word.
>
> (3) THE EXPRESSION OF MULTIPLE SYNTACTIC FORMS: A single word sense can have multiple syntactic realization."

The basic assumption of the Generative Lexicon is that the mental lexicon is not a list of words and meanings (i.e. a *Sense Enumerative Lexicon*), but a dynamic and generative system where lexical items are semantically *underspecified* (that is, they have definitions with short specifications). The underspecification of word definitions in the mental lexicon allows them to acquire more precise meanings in combination with other words, which leads us to another fundamental assumption of the Generative Lexicon: the compositional nature of lexical meaning.

According to Pustejovsky (1995: 61), semantic information concerning a lexical item can be defined at four levels of representation in its lexical entry:

I. ARGUMENT STRUCTURE (AS), which specifies the number of logical arguments of a lexical item, their semantic type, and how they are syntactically realized.[24]

II. EVENT STRUCTURE (ES), which identifies the event type of a predicate (STATE, PROCESS, or TRANSITION), and details its internal (or *subeventual*) structure.[25]

III. QUALIA STRUCTURE (QS), which contains the most elemental values of a lexical item organized into four roles (or *qualia*): FORMAL, CONSTITUTIVE, TELIC and AGENTIVE.

---

[24] Pustejovsky (1995: 63-64) distinguishes four types of argument: TRUE ARGUMENTS, which are necessarily realized in the syntax; DEFAULT ARGUMENTS, which are not necessarily expressed in the syntax; SHADOW ARGUMENTS, which are semantically incorporated into the lexical item; and TRUE ADJUNCTS, which are optional and modify the logical expression spatially or temporally.

[25] Pustejovsky's STATES and PROCESSES correspond respectively to *states* and *activities* in Vendler's (1967) classification. However, Pustejovsky encompasses Vendlerian *accomplishments* and *achievements* in a complex event he labels TRANSITION and which consists of two subevents: a process (the first subevent) and a state (the second subevent).

IV.   LEXICAL INHERITANCE STRUCTURE (called *Lexical Typing Structure* in most recent works; cf. Pustejovsky 2006, 2011), which identifies how a lexical structure is related to other structures in the mental lexicon.

We will describe QS in more detail because it is relevant to our analysis. QS relates the elements of AS to information from ES and organizes the most relevant information associated to a lexical item in four roles (CONSTITUTIVE, FORMAL, TELIC and AGENTIVE). The CONSTITUTIVE role encodes the relationship between an object and its constituent parts as well as the relationship between an object and the complex entity of which this object is part (e.g. information about material, weight, parts, location, etc.). The FORMAL role encodes properties of an entity that distinguish it from other entities within a larger domain (e.g. size, shape, colour, etc.). The TELIC role encodes the purpose or function of an entity or an event. Finally, the AGENT role encodes factors involved in the origin or creation of an entity or event:

(28)   QUALIA STRUCTURE   =   [CONSTITUTIVE = what x is made of
                                 FORMAL = what x is
                                 TELIC = function of x
                                 AGENTIVE = how x came into being]

(Pustejovsky 1998: 295, example 6)

In the particular case of verbs, it is usually assumed that the CONSTITUTIVE role encodes information related to the constitutive parts of the event (duration, iterativity, etc. See De Miguel 2004: 199; and Batiukova 2009: 251) and, hence, it is related to the information provided in the ES. Cano Cambronero (2010: 55-56), in its analysis of motion verbs, encodes the information of "motion", "path" and "manner of motion" in the CONSTITUTIVE role because this information predetermines the aspectual behaviour of the verb. As pointed out by Batiukova (2009: 251), the FORMAL role of verbs encodes information about the resulting state, while the agentive role encodes information about the causative subevent (i.e., how the event came into being).[26]

To explain the different meanings that words can assume in context, but also to restrict the number of these meanings, Pustejovsky proposes a set of generative mechanisms which operate in the sub-lexical structure of words. These mechanisms are divided into those where the predicate imposes its semantic requirements on its arguments, and that which allows the argument to modify the meaning of the predicate. Among the former there are *Pure Selection*, *Accommodation* and *Coercion*; and the latter is *Co-composition* (see Pustejovsky 1995, 2006, 2011). In this paper it is necessary to take into account one kind of *Coercion* mechanism, referred to as *selective binding* in Pustejovsky 1995 (and labelled *exploitation* in most recent works). This mechanism has been used to describe the relationship established between a noun modified by an adjective and the adjective modifying this noun (see Demonte 1999, Pustejovsky 2000). In these cases, the adjective, which operates as an argument of the modified noun, selects specific semantic features ("pieces" of meaning) of the noun it modifies. As an example, Batiukova (2008) explains that in the case of *opinión pública* 'public opinion', the adjective *pública* 'public' selects the information contained in the AGENTIVE role of the noun *opinión* 'opinion' (i.e., its origin), so the phrase is interpreted as "opinion generated by the people". In contrast, when the same adjective is used to

---

[26] The TELIC role is not taken into account in the QS of verbs, as is shown in the studies of Batiukova (2006, 2008, 2009, In press); Cano Cambronero (2010); and Gibert Sotelo (In press a).

modify the noun *servicio* 'service', as in *servicio público* 'public service', the adjective selects the information from the TELIC role of the noun (i.e., its function), and the meaning of the phrase is that of "a service with the aim of serving the people" Following the proposal of Batiukova (2008, In press) in the analysis of Spanish derived verbs with suffix *-izar*, we will assume that the relationship existing between a noun and the adjective modifying this noun is the same as that existing between the internal argument of denominal verbs and the noun base, respectively, and that such a relationship is established by means of selective binding (see section 4.2).

4.2. Denominal parasynthetic verbs from the standpoint of the Generative Lexicon

In this section we maintain that denominal verbs are verbs of change (of state or location) that have a compositional meaning which depends on the agreement of sub-lexical features between the prefix, the noun base and the internal argument of the verb. Thus, we assume that denominal verbs present a sub-lexical structure which is displayed in combination with the sub-lexical structure of their internal argument. In this way, the meaning of the verb is *underspecified* in the mental lexicon and therefore it is contextually specified in combination with information provided by the internal argument (the object affected by the change), giving rise to the polysemy of these verbs.

Concerning the semantics of the noun base, the use of the QS formalization allows us to achieve a more fine-grained account of its semantics. Following the template deployed in (28), the QS of a lexical item such as *cuchillo* 'knife' should be that proposed in (29):[27]

(29) **cuchillo** 'knife'

$$
QS = \begin{bmatrix} \text{CONSTITUTIVE} = handle,\ blade,\ edge... \\ \text{FORMAL} = physical\ object \\ \text{TELIC} = cut,\ hurt,\ kill \\ \text{AGENTIVE} = produce \end{bmatrix}
$$

The examples provided in (30) show how the use of the noun *cuchillo* 'knife' in context can activate different sub-lexical contents of its QS: in (30a) the CONSTITUTIVE role of *cuchillo* 'knife' is focalized (*el mango* 'the handle' is a constitutive part of *cuchillo* 'knife'); in (30b) it is its FORMAL role which is focalized (*cuchillo* 'knife' is taken as a physical object able to be bought); in (30c) its TELIC role is focalized (it is seen as an instrument used to hurt); and in (30d) its AGENTIVE role is focalized (it is an object that comes into being by means of a *fabricación* 'producing/making' process):

(30)   a. Abrió el grifo del agua caliente y se llenó una taza; echó dos cucharadas de café instantáneo, removió cuidadosamente con *el mango de un cuchillo* y se bebió el brebaje [CREA: 1988, Rosa Montero, *Amado Amo*]
'(He) turned on the hot water and filled a cup; (he) put in two spoonfuls of instant coffee, stirred gently with the handle of a knife and drank the concoction'

b. He comprado un *cuchillo*.
'I have bought a knife.'

---

[27] For a detailed lexical entry of the noun *knife* from the standpoint of the Generative Lexicon, see Johnston & Busa (1999).

c. Falleció en el incidente Carlos Enrique Quiñónez (33), en tanto que su socio Luis Ramón Céspedes Ferreira (26) acusó *heridas de cuchillo*. [CREA: 2000, *ABC Color* 31/10/2000, prensa]
'Carlos Enrique Quiñónez (33) died in the incident, while his partner Luis Ramón Céspedes Freira (26) showed knife wounds.'

d. Un amigo, muy hábil en la *fabricación de cuchillos*, nos hizo cuatro. [CREA: 1985, Armando Valladares, *Contra toda esperanza*]
'A friend, very skilled in making knives, made us four of them'

In this study we propose that the syntactic context allows the correct interpretation of the sub-lexical information encoded in the noun base of denominal parasynthetic verbs. The noun *cuchillo* 'knife' is interpreted as an instrument in the verb *acuchillar* 'to knife' because this verb selects internal arguments denoting entities which have been cut, hurt or killed (i.e., the internal argument of this verb focalizes the TELIC role of the noun base); and the noun *silla* 'saddle' is interpreted as a located object in the verb *ensillar*, since this verb selects internal arguments referring to entities typically containing this object (e.g. a horse, a camel, etc.). Therefore, the classification of the semantics of the noun bases proposed in 3.2 in *properties*, *located objects*, *locations* and *instruments*, is supported by the QS of these nouns and by the links established between them and the internal argument of the derived verb.

Schroten (1997) applies Pustejovsky's QS to the study of denominal parasynthetic verbs prefixed with *a-* and *en-* in Spanish. This author, who acknowledges that in these constructions "the meaning of the prefix is difficult to pin down" (Schroten 1997: 195), concludes that the contribution of prefixes in these verbs is to act as "focalizers" of certain aspects of the meaning of the noun base. From his standpoint, the difference between prefix *a-* and prefix *en-* is that the first selects nouns implying activities (e.g. *afusilar* 'to shoot with a rifle', whose nominal base *fusil* 'rifle' implies "killing"), and the latter selects nouns implying states (e.g. *embotellar* 'to bottle', whose nominal base botella 'bottle' implies "containing"). Nonetheless, this author does not analyze *a-* prefixed verbs with a property-denoting base (which we consider to be the most productive pattern of denominal parasynthetic verbs headed with *a-*), conjecturing that these formations are first created as adjectives and later reanalyzed as past participles. In addition, Schroten's study does not account for denominal parasynthetic verbs with prefix *des-*.[28]

As pointed out in section 3.2, we defend the position that prefixes of denominal parasynthetic verbs encode the meaning of path, and that this path specifies the direction of the change of state encoded by these verbs (*a-* 'to', *en-* 'into'/ 'onto'; *des-* 'from'). Batiukova (2006) and Cano Cambronero (2010) represent the information of path in the constitutive role of verbs of motion and accordingly we propose encoding the meaning of parasynthetic verb prefixes (which is that of path) in the constitutive role of these verbs.

Following Batiukova (In press), who proposes a meta-entry for verbs in *-izar*, we propose a meta-entry of denominal parasynthetic verbs that must be taken as the basic and underspecified structure we have in the lexicon in order to create denominal parasynthetic verbs:

---

[28] Adelstein (2012) has analyzed prefixes in nominal derivation using the Generative Lexicon framework. However, her proposal does not apply to our study, since we do not deal with nominal derivation, but with verbal derivation.

(31) Meta-entry for denominal parasynthetic verbs

$$[\text{Pref} + \text{Base} + \text{Verbalizer}]_v \begin{bmatrix} \text{AS} = \begin{bmatrix} \text{ARG1} = x \text{ ----------- QS} \\ \text{ARG2} = y \text{ ---------- QS} = \begin{bmatrix} \text{AGENTIVE} \\ \text{FORMAL} \\ \text{CONSTITUTIVE} \\ \text{TELIC} \end{bmatrix} \\ \text{S-ARG} = z \text{ ---------- QS} \end{bmatrix} \\ \text{ES} = \begin{bmatrix} e1 = \text{causing event: process} \\ e2 = \text{resulting event: state} \\ \text{RESTR} = e1 > e2 \end{bmatrix} \\ \text{QS} = \begin{bmatrix} \text{AGENTIVE} = \text{cause\_action } (e1, x, y) \\ \text{FORMAL} = \text{ be\_result } (e2, y, z) \\ \text{CONSTITUTIVE} = [+ \text{path}] (e2, y, z) \end{bmatrix} \end{bmatrix}$$

This meta-entry specifies that the AS of parasynthetic verbs can display up to 3 arguments: the external argument (ARG1 = x), the internal argument (ARG2 = y) and a shadow argument which is lexicalized in the base (S-ARG = z). Each argument of the verb can specify some information in its QS. Regarding the ES of parasynthetic verbs, verbs of change are considered Transitions, that is, complex events (dynamic and telic) made up of two phases: a process (e1) that gives way to a new state (e2).With respect to the QS, as noted in section 4.1, in the case of verbs it is generally assumed that the AGENTIVE role is associated with the causative sub-event (e1), the FORMAL role is associated with the resulting state (e2) and the CONSTITUTIVE role encodes other features of the complex event. The information provided by the prefix, which is [+ path], is specified in the CONSTITUTIVE role because it is considered to be a part of the transition event linked to the resulting state (e2), since the resulting state is also concerned with the kind of path expressed by the prefix.

In the process of verbalization the noun base operates on certain elements of the substructure of the derived verb and, crucially, on the QS of the internal argument. As justified in Batiukova (2008, In press) in her study of verbs in *-izar* and developed in section 4.1 of the present study, the nature of the semantic relationship between the base and the internal argument of the derived verb is not arbitrary but determined by a generative mechanism called *selective binding* (or *exploitation*): through selective binding parasynthetic verbs focalize one of the roles of the QS of their internal argument.

4.2.1. Verbs whose base denotes a property

As has been pointed out in section 3.2.1, verbs with a property-denoting base express a change of state in which the internal argument of the verb ends up being identified with (prefixes *a-* and *en-*) or stops being identified with (prefix *des-*) the referent of the noun base; e.g. *acartonar(se)* 'to grow stiff', *enrollar(se)* 'to roll', *desasnar(se)* 'to (make) become less stupid'. In these cases the noun base is metonymically understood as its prototypical property.

Following the meta-entry deployed in (31), in (32) we propose a lexical entry for one verb of this class: *acartonar* 'to grow stiff' (base: *cartón* 'cardboard'):

(32) **[a- {carton}ₙ -ar]ᵥ** 'to grow stiff'

$$
\begin{aligned}
\text{AS} = &\begin{bmatrix}
\text{ARG1} = x \\
\text{ARG2} = y: \text{[person or clothing]} \; \text{---- QS} = \text{[FORMAL: stiff]} \\
\text{S-ARG} = z \; (\textit{cartón} \; \text{'cardboard'}) \; \text{---- QS} = \begin{bmatrix} \text{FORMAL:} \begin{bmatrix} \text{[Entity]} \; \textit{cartón} \\ \text{[Property] stiff} \end{bmatrix} \end{bmatrix}
\end{bmatrix} \\[2em]
\text{ES} = &\begin{bmatrix}
\text{e1} = \text{causing event: process} \\
\text{e2} = \text{resulting event: state} \\
\text{RESTR} = \text{e1} > \text{e2}
\end{bmatrix} \\[2em]
\text{QS} = &\begin{bmatrix}
\text{AGENTIVE} = \text{cause\_action (e1, x, y)} \\
\text{FORMAL} = \quad \text{be\_result: stiff (as } \textit{cartón}) \text{ (e2, y, z)} \\
\text{CONSTITUTIVE} = \text{path TO (e2, y, z)}
\end{bmatrix}
\end{aligned}
$$

This lexical entry[29] should be read as follows: the AS of *acartonar* 'to grow stiff' counts three arguments: the external argument causing the event (ARG1 = x), the internal argument affected by the event (ARG2 = y), and the noun base (S-ARG = z). The noun base *cartón* 'cardboard' (z) has a property, which is to be stiff, encoded in its QS. The entry we propose explicitly states that the QS of the internal argument (y) is affected by the QS of the noun base: the FORMAL role of the internal argument is saturated by the FORMAL role of the noun base. The identification of the FORMAL role of the internal argument with the FORMAL role of the base takes place in the verbalization and is due to the mechanism of selective binding.

The ES of this verb shows that *acartonar* is a transition with a first subevent (e1) that is a causing event, and a second subevent (e2) that is the resulting state. As shown in the QS of the verb, the first subevent is linked to the AGENTIVE role of the verb, the second subevent is linked to the FORMAL role of the verb, and the directionality of the transition event, which is goal-oriented, is specified in the CONSTITUTIVE role of the verb: path TO. That the kind of path lexicalized in the prefix determines the second subevent is evidenced by the fact that the resulting state is that of "stiff (as *cartón*)", which means that the internal argument has acquired the property encoded by the base *cartón* (and not, for instance, that the internal argument has lost this property).

The prefix *a-* is the most productive in the creation of verbs with a property-denoting base, which leads us to think that this prefix shows a preference for selecting bases that operate on the FORMAL role of the internal argument.

4.2.2. Verbs whose base denotes a located object

In section 3.2.2 it has been argued that verbs whose base denotes a located object encode an event of change that implies the acquisition (prefixes *a-* and *en-*) or loss (prefix *des-*) of the referent of the nominal base, which is understood to be a possession of the internal argument of the verb; e.g. *amurallar* 'to wall/fortify', *ensillar* 'to saddle', *descabezar* 'to behead'.

---

[29] Batiukova (In press) proposes a very similar entry for verbs in *-izar* with a base denoting a property (a class of verbs she labels *causative-resultative*; e.g. *caramelizar* 'caramelize'). However, the entry she proposes, which encompasses nominal and adjectival bases, does not reflect the prototypical property of the noun base that is focalized in the verbalization. Moreover, since *-izar* verbs are not prefixed verbs, she does not account for the constitutive role of these formations.

The Generative Lexicon approach allows us to show that the possessive relationship established between the noun base and the internal argument of these verbs is due to the fact that the base operates in the sub-lexical structure of the internal argument of the verb by selective binding. The entry for *ensillar* 'to saddle' (base: *silla* 'saddle') we propose in (33) illustrates this:

(33)   [*en-* {*sill(a)*}$_N$ *-ar*]$_V$ 'to saddle'

$$
AS = \begin{bmatrix} ARG1 = x: [person] \\ ARG2 = y: [four\text{-}footed\ animal] \ \text{-------} \ QS = [CONST\ [contain] = silla] \\ S\text{-}ARG = z\ (silla\ \text{'saddle'}) \ \text{-------} \ QS = \begin{bmatrix} CONSTITUTIVE: [part\text{-}of]\ y \\ FORMAL: [Physical\ object] = silla \end{bmatrix} \end{bmatrix}
$$

$$
ES = \begin{bmatrix} e1 = causing\ event:\ process \\ e2 = resulting\ event:\ state \\ \text{RESTR} = e1 > e2 \end{bmatrix}
$$

$$
QS = \begin{bmatrix} AGENTIVE = cause\_action\ (e1, x, y) \\ FORMAL = \ be\_result:\ contain\ silla\ (e2, y, z) \\ CONSTITUTIVE = path\ \text{TO ON}\ (e2, y, z) \end{bmatrix}
$$

The proposed entry shows that *ensillar* 'to saddle' has a possessive reading because the noun base (z) is interpreted as a constitutive part of the internal argument (y). In this particular case, although the noun *silla* 'saddle' is not an inalienable possession of the internal argument (whose referent must be a four-footed animal like a horse or a camel), it is interpreted as such, since, after the transition event encoded by the verb, the noun *silla* is understood to be a constitutive part of the internal argument, which is reflected in the QS of the internal argument and in the FORMAL role of the verb.

As pointed out previously in section 3.2.2, the prefix *des-* is especially productive in the creation of denominal parasynthetic verbs with a base denoting a located object. This prefix is extremely productive with noun bases denoting an inalienable possession (e.g. *descabezar* 'to behead', *descolar* 'to cut the tail off'), but it can also display a noun base encoding an alienable possession that in the process of verbalization is understood as a constitutive part of the resulting verb's internal argument (e.g. *descamisar(se)* 'to strip the shirt off'). In (34) we propose a lexical entry for the verb *descabezar* 'to behead' (base: *cabeza* 'head'):

(34)　**[*des-* {*cabez(a)*}$_N$ *-ar*]$_V$** 'to behead'

$$
\begin{aligned}
AS = &\begin{bmatrix} ARG1 = x: [person] \\ ARG2 = y: [person\ or\ animal] \text{ ------ } QS = [CONST\ [contain] = cabeza] \\ S\text{-}ARG = z\ (cabeza\ 'head') \text{ ------ } QS = \begin{bmatrix} CONSTITUTIVE: [part\ of]\ y \\ FORMAL: [Physical\ object] = cabeza \end{bmatrix} \end{bmatrix} \\
ES = &\begin{bmatrix} e1 = causing\ event:\ process \\ e2 = resulting\ event:\ state \\ \text{RESTR} = e1 > e2 \end{bmatrix} \\
QS = &\begin{bmatrix} AGENTIVE = cause\_action\ (e1,\ x,\ y) \\ FORMAL = \quad be\_result:\ not\ contain\ cabeza\ (e2,\ y,\ z) \\ CONSTITUTIVE = path\ \text{FROM}\ (e2,\ y,\ z) \end{bmatrix}
\end{aligned}
$$

As can be observed in the comparison of (33) and (34), the main difference between *ensillar* and *descabezar* is the direction encoded by the prefix, which is reflected in the CONSTITUTIVE role of the QS of the verb. In *ensillar* 'to saddle' the direction is TO ON, which explains that the resulting state (expressed in the FORMAL role of the QS of the verb) will be that of the internal argument containing the base *silla* 'saddle'. On the other hand, in *descabezar* 'to behead' the direction is FROM, and the resulting state is that of the internal argument not containing the base *cabeza* 'head'.

Since *en-* and *des-* are the most productive in this pattern, we infer that these prefixes tend to select bases that operate on the CONSTITUTIVE role of the internal argument.

4.2.3. Verbs whose base denotes a location

Denominal parasynthetic verbs displaying a noun base referring to a location express an event of change in which the internal argument changes its position with respect to the nominal base, the latter understood as a Goal in verbs prefixed with *a-* and *en-*, and taken as a Source in verbs prefixed with *des-*; e.g. *acuartelar* 'to quarter', *encarcelar* 'to jail', *desviar* 'to deviate' (see section 3.2.3 for an LCS of this type of verbs).

The relationship of localization established between the base (the location) and the internal argument of the verb (the locatum) can be accounted for by selective binding. Hence, in a verb such as *encarcelar* 'to jail' (base: *cárcel* 'jail), whose lexical entry is represented in (35), the constitutive role of the internal argument (y) is saturated by the noun base (z):

(35)　　**[*en-* {*carcel*}_N *-ar*]_V** 'to jail'

$$
\left(
\begin{array}{l}
\text{AS} = \left[
\begin{array}{l}
\text{ARG1} = x: \text{[person]} \\
\text{ARG2} = y: \text{[person]} \quad \text{---------- QS = [CONST [be in] = } \textit{cárcel}] \\
\text{S-ARG} = z \ (\textit{cárcel} \ \text{'jail'}) \ \text{----- QS = [FORMAL: [Location] } \textit{cárcel}]
\end{array}
\right] \\[3em]
\text{ES} = \left[
\begin{array}{l}
\text{e1} = \text{causing event: process} \\
\text{e2} = \text{resulting event: state} \\
\text{R{\scriptsize ESTR}} = \text{e1} > \text{e2}
\end{array}
\right] \\[3em]
\text{QS} = \left[
\begin{array}{l}
\text{AGENTIVE} = \text{cause\_action (e1, x, y)} \\
\text{FORMAL} = \quad \text{be\_result: be in } \textit{cárcel} \text{ (e2, y, z)} \\
\text{CONSTITUTIVE} = \text{path {\scriptsize TO IN} (e2, y, z)}
\end{array}
\right]
\end{array}
\right)
$$

The noun base *cárcel* 'jail' is a location which typically contains prisoners, so the verb *encarcelar* 'to jail' usually selects an internal argument denoting a prisoner (i.e., a person who is typically located in the base *cárcel* 'jail'; see the QS of the internal argument in (35)). In the verbalization process the adjunction of the prefix *en-*, whose basic meaning is that of direction TO IN (encoded in the CONSTITUTIVE role of the derived verb), to the noun *cárcel* 'jail' gives rise to a verb denoting a transition event whose resulting state is that of the internal argument being located in the base (information encoded in the FORMAL role of the verb).

　　Since in these verbs the noun base operates on the constitutive role of the internal argument, they usually display the prefix *en-* and, to a lesser extent, the prefix *des-*, but hardly ever the prefix *a-* (which is seen to be the least productive in this pattern).

4.2.4. Verbs whose base denotes an instrument

In this study we consider denominal parasynthetic verbs with an instrument-denoting base as verbs of change of state. These verbs express the change of state of their internal argument, which undergoes a change determined by the function of the instrument denoted by the nominal base; e.g. *acuchillar* 'to knife', *abotonar* 'to button up'. As advanced in section 3.2.4, our position is based on the QS of the noun base, which is an object with a specific function and, hence, provides information regarding its TELIC role. In (36) we have included the lexical entry of a verb of this class: *acuchillar* 'to knife':

(36)   [*a-* {*cuchillo*}$_N$ *-ar*]$_V$ 'to knife'

$$
AS = \left[
\begin{array}{l}
\begin{array}{l}
ARG1 = x: [person] \\
ARG2 = y: [phy\_object/\ person/\ animal]\ \text{---}\ QS = [FORMAL = cut, hurt, killed] \\
S\text{-}ARG = z\ (cuchillo)\ \text{---------}\ QS = \left[\begin{array}{l} FORMAL = [phys\_object] = cuchillo \\ TELIC = cut, hurt, kill\ (e, x, y, z)] \end{array}\right]
\end{array} \\[2em]
ES = \left[\begin{array}{l} e1 = causing\ event: process \\ e2 = resulting\ event: state \\ \text{RESTR} = e1 > e2 \end{array}\right] \\[2em]
QS = \left[\begin{array}{l} AGENTIVE = cause\_action\ (e1, x, y, z) \\ FORMAL =\ \ be\_result: cut, hurt, killed\ (with\ a\ cuchillo)\ (e2, y, z) \\ CONSTITUTIVE = direction\ \text{TO}\ (e2, y, z) \end{array}\right]
\end{array}
\right]
$$

In denominal parasynthetic verbs with an instrumental base the TELIC role of the noun base saturates the FORMAL role of the internal argument. Therefore, the transition expressed by these verbs has a resulting state which is inferred from the TELIC role of the noun base. The entry we propose for *acuchillar* 'to knife' shows the connections established between the TELIC role of the noun base (z), the FORMAL role of the internal argument (y), and the FORMAL role of the verb (i.e., the resulting state).

Once again, the prefix *a-* shows its preference for selecting bases which operate on the formal role of the internal argument.

4.3. Motivations of denominal parasynthetic verb polysemy

As has been pointed out, one of the characteristics of denominal parasynthetic verbs is their polysemy. The Generative Lexicon allows us to explain the different meanings that these verbs can adopt in context under the semantic restrictions imposed by the semantic type of their internal argument. We can see an example of this in the verb *acodar* [*a* + *codo* 'elbow' + *ar*]. This verb belongs to the class of verbs of change of state and it can adopt two different meanings depending on the semantic type of its internal argument: 'to lean on one's elbow(s)' and 'to bend something into an angular shape', see (37) and (38) respectively.[30]

(37)   a. "volvió a sentarse al borde de la cama (…), cruzó las piernas, *acodó* el brazo derecho sobre ellas" [CDH: 1935, Rómulo Gallegos, *Canaima*, Venezuela]
'She sat down again on the edge of the bed, crossed her legs, leaned her right arm on them'.

   b. "Ella (…) *se acoda* al filo de la mesa (…)" [CE: 1972, Salvador Garmendia, *Los pies de barro*, Venezuela]
'She leans on the edge of the table'.

---

[30] In Nebrija's *Vocabulario* (1495), the author distinguished between these two meanings: "Acodar estribar sobre el codo. innitor cubito" and "Acodar vides o plantas. geniculo.as". Curiously, Nebrija translated the second meaning of *acodar* into Latin with the verb *geniculo < geniculum, -i* 'knee', in which the knee is interpreted as having the same prototypical property as the elbow: its angular shape.

(38)   a. "No traigo herramientas para *acodar* <u>la cañería</u>" [WordReference English-
        Spanish Dictionary, 2014]
        'I haven't brought any tools to bend the pipes'.

        b. "No todas las plantas permiten *acodar* <u>sus tallos</u>" [*Clave* Dictionary]
        'Not all plants allow their stems to be bent'.

In the first meaning, 'to lean on one's elbow(s)', *acodar* can be used as a transitive verb
(see (37a)) or as a pronominal reflexive verb (see (37b)), and selects an internal
argument which refers to an entity with elbow(s). In these cases the noun base *codo*
'elbow' is interpreted as an instrument: the referent of the syntactic subject uses the
elbow(s) to lean. In this meaning of *acodar*, the information about the function of the
noun base, contained in its TELIC role, saturates the FORMAL role of the QS of the
internal argument, as we saw in (36).

In the second meaning, 'to bend something into an angular shape', *acodar* is a
transitive verb that selects an internal argument which refers to an entity without
elbow(s), especially plants (see examples in (38)). In this case, the noun base *codo*
'elbow' is interpreted as a prototypical property of the elbow: its angular shape,
information that saturates the FORMAL role of the QS of the internal argument, as we
saw in (32).

It must be noted that both meanings of the verb *acodar* agree with the
preferences shown by verbs prefixed with *a-*, which usually display bases denoting an
instrument or a property.

Another example of the relevance of the internal argument in the meaning of
denominal parasynthetic verbs is the polysemy of the verb *abovedar* [a + *bóveda* 'vault'
+ ar]. This verb can present two meanings: 'to cover with a vault', exemplified in (39),
and 'to give the shape of a vault', exemplified in (40):

(39)   Si Francia había creado un nuevo estilo, el gótico, que no es solamente un nuevo
        sistema de construir y de *abovedar* <u>iglesias</u>, (…) Italia tenía que aportar a este
        movimiento la fuerza de su tradición artística y la vocación de sus genios
        creadores. [CORDE: 1946-1953, Enrique Lafuente Ferrari, *Breve historia de la
        pintura española*]
        'If France had created a new style, the Gothic, which is not only a new system
        for building and vaulting churches, (...) Italy was to bring to this movement the
        strength of its artistic tradition and the vocation of its creative geniuses'

(40)   Con el sombrero calado, (…) *abovedó* <u>el cuerpo</u> y comenzó a desplazarse a
        cuatro patas por encima del clamor de la corriente. [CREA: 1981, Juan Pedro
        Aparicio, *Lo que es del César*, Novela]
        'With his hat pulled (...) [he] bent his body and began to move on all fours above
        the roar of the current'

The meaning that *abovedar* has in (39), 'to cover with a vault', is deployed when its
internal argument designates a building (*iglesias* 'churches' in the example; other
possibilities could be: a basilica, a palace, etc.) or a part of a building (a room, a dining
room, a ceiling, etc.) in which the noun base bóveda 'vault' is a constitutive part.

The second meaning of this verb 'to give the shape of a vault', exemplified in
(40), arises when the internal argument does not denote a building or one of its parts,
but an object able to be bent (*el cuerpo* 'the body' in the example; other possibilities

could be: the back, a cover, a conduit, etc.). In this case the noun base is metonymically taken as its curved shape, and hence understood as a property.

5. CONCLUSIONS

In this paper we have tried to show that the combination of different models of Lexical Semantics allows a better understanding of the processes involved in the formation of denominal parasynthetic verbs in Spanish.

Our study, which deals with a group of verbs that have usually been described without homogeneous criteria, solves some of the incongruities of previous approaches and highlights the regularities exhibited by these formations.

We propose a classification of Spanish denominal parasynthetic verbs based on the meaning encoded by their nominal bases, the relationship existing between the nominal base and the internal argument of the verb, and the type of path expressed by the prefix. By using the LCSs proposed by Jackendoff's Conceptual Semantics, we show that all parasynthetic verbs display certain regularities in their structural meaning: a) all of them are causative (and some of them show causative alternation); b) all of them denote a telic event of change (even those displaying a noun base whose referent is an instrument, traditionally considered to be atelic activities or processes; e.g. *acuchillar* 'to knife'); c) all of them encode a path into the prefix; and d) all of them select internal arguments referring to the entity affected by the verbal action (and therefore related to the role Patient). In view of this, it is argued that the different types of parasynthetic verbs can be related to a unique and underspecified LCS.

This lexical-conceptual analysis is completed with the use of the Generative Lexicon framework, which allows a more refined account of the relationship between the noun base and the internal argument of denominal parasynthetic verbs. We show that when the sub-lexical information contained in the lexical entry of these formations has been determined, the ability to relate the QS of the noun base to the QS of the internal argument provides more information regarding the semantic nature of these verbs, enabling us to explain not only their regular polysemy, but also their irregular one.

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APPENDIX

This section contains a list of the 150 Spanish denominal parasynthetic verbs examined in the textual corpora *CORDE, CE, CDH* and *CREA*.

1. Spanish denominal parasynthetic verbs with prefix *a-*: [*a-* N -*ar*]

abanderar, abarquillar, abocinar, abocar, abochornar, abolsar, abombar, abotonar, abovedar, abrasar, abrazar, abrochar, abuhardillar, acalambrar, acalorar, acanalar, acaracolar, acaramelar, acartonar, acodar, acordonar, acristalar, acuartelar, acuchillar, aculturar, adehesar, afantasmar, afilar, aflautar, agarrar, agavillar, ahijar, ahorcar, ahumar, aislar, alistar, alumbrar, amasar, amojonar, amontonar, amurallar, aojar, apolillar, aprovechar, apuñalar, arrodillar, arropar, asombrar, atenazar, asedar, asesar, aterciopelar, aterrazar, atezar, avasallar, aventar, avinagrar

2. Spanish denominal parasynthetic verbs with prefix *en-*: [*en-* N -*ar*]

embaular, embocar, embotellar, empapelar, emplazar, enarenar, encabestrar, encabezar, encadenar, encajonar, encamar, encaminar, encamisar, encañonar, encapuchar, encapsular, encarcelar, encarpetar, encarrilar, encasillar, encauzar, encebollar, encerar, enclaustrar, encolar, encorchar, encortinar, encuadernar, encuevar, encumbrar, encunetar, encharcar, enfajar, enfangar, enfrascar, enfundar, engomar, engominar, engrasar, enharinar, enhorcar, enlazar, enlodar, enmarcar, enredar, enrollar, enroscar, ensillar, enterrar, enviar, envinar

3. Spanish denominal parasynthetic verbs with prefix *des-*: [*des-* N -*ar*]

desaguar, desalmar, desasnar, desbocar, desbrozar, descabezar, descafeinar, descamisar, descarnar, descarrilar, descascarar, descerebrar, descerrajar, descogollar, descolar, descorazonar, descorchar, descornar, descortezar, descremar, desdentar, desflorar, desgranar, deshojar, deshuesar, deslomar, desmembrar, desnatar, desorejar, despeñar, despiojar, despistar, desplazar, desplumar, despuntar, desquiciar, desterrar, destetar, destronar, desvenar, desviar, desvirgar