

Lexicalization patterns and the locative alternation*

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1. Introduction. The lexical-semantic approach

In this paper I provide a lexical-syntactic account of the so-called ‘locative alternation’, which is exemplified for Spanish in (1). As pointed out by Levin (1993: 50), among many others, the locative alternation applies to a set of verbs that involve putting substances on surfaces or things in containers, or removing substances from surfaces or things from containers.¹

- (1) a. Juan cargó heno en el carro. (Spanish)
Juan loaded hay on the cart
b. Juan cargó el carro {con/de} heno.
Juan loaded the cart {with/of} hay

For example, in (1a), the locatum argument (*heno* ‘hay’) has been said to be associated to the direct internal argument, the location argument (*carro* ‘cart’) being associated to the indirect internal argument. Alternatively, in (1b), the location argument has been said to be associated to the direct internal argument, the locatum argument being associated to a non-argumental (i.e., adjunct) position (see Rappaport & Levin (1988)).

As Anderson (1971) first observed, the so-called ‘holistic effect’ arises in the variant in (1b), but not in that in (1a). The location is only completely affected when it

* I would like to thank the audience at the *2000 Going Romance* for their comments and suggestions. I have also benefited from helpful discussion with my colleagues of the ‘Grup de Gramàtica Teòrica’ at the Universitat Autònoma de Barcelona. Special thanks go to Laia Amadas and Gemma Rigau for their constant support. Needless to say, all remaining errors are my own. Research for this paper has been supported by the Ministerio de Ciencia y Tecnología BFF2000-0403-C02-01, and the Generalitat de Catalunya through projects 1999SGR00113 and 2000XT 00032.

¹ Cf. Ackerman (1992), Anderson (1971), Baker (1997), Boons (1974), Brinkmann (1997), Croft (1998), Demonte (1991), Dowty (1991), Emonds (1991), Farrell (1994), Fillmore (1968), Fraser (1971), Fukui et al. (1985), Herslund (1995), Goldberg (1995), Gropen et al. (1991), Hall (1965), Hoekstra & Mulder (1990), Jackendoff (1990), Juffs (1996), Larson (1990), Levin (1993), Levin & Rappaport Hovav (1991), Levin & Rappaport Hovav (1998), Markantonatou & Sadler (1997), Mulder (1992), Munaro (1994), Nwachukwu (1987), Pinker (1989), Rappaport & Levin (1988), Rosen (1996), Sadler & Spencer (1998), Tenny (1994), Tremblay (1991), Van Valin (1993), among many others.

appears in object position: i.e., (1b) involves that the cart is full, while (1a) need not. Quite correctly, Rappaport & Levin (1988) and Pinker (1989) argue that the holistic effect is actually an epiphenomenon of the fact that the verb in (1b) specifies a change of state.

Although the locative alternation has been analyzed by means of a derivational process (e.g., cf. Hall (1965) or Larson (1990) for a transformational approach and Brinkmann (1997) for a lexicalist approach), however I will argue that the non-derivational approach is the correct one. That is to say, it is not the case that the change of state variant (i.e., that corresponding to (1b)) is to be derived from the change of location variant (i.e., that corresponding to (1a)). There are many non-derivational approaches to the locative alternation in the literature: e.g., Rappaport & Levin's (1988), or Pinker's (1989) lexical-semantic approaches, Jackendoff's (1990) conceptual approach, Tenny's (1994) lexical-aspectual approach, Mulder's (1992) syntactic-aspectual approach, Rosen's (1996) event-structure based syntactic approach, Munaro's (1994) syntactic approach, or Goldberg's (1995) constructionalist approach, among others.

An important insight found in the lexical-semantic approach is that the locative alternation exemplified in (2) involves two different semantic *construals* of an essentially identical conceptual scene. According to Levin & Rappaport Hovav (1998: 261), “the locative alternation involves two distinct L<exical> C<onceptual> S<tructures> related by a shared constant”, those depicted in (3):²

² Levin & Rappaport Hovav (1998: 270, fn. 16) point out that “in these representations <(3a-b): JM> we have not associated the constant <(i.e., *LOAD*): JM> with a specific predicate, because *it has proved difficult to determine the exact representation for locative alternation verbs* <(emphasis added: JM)> (See Pinker (1989) and Rappaport & Levin (1988) for two suggestions)”.

It may then be instructive to compare those LCSs in (3) with those postulated by Rappaport & Levin (1988: 26): cf. (i)-(ii). According to the latter analysis, the change of state variant depicted in (ii) was argued to involve a ‘lexical subordination process’. Notice that such a hypothesis has been abandoned in their recent LCS analysis in (3b). Although they are not explicit in showing the necessity of such a modification, in section 3 I will show that there is empirical evidence that justifies the legitimacy of their revision. As shown in section 3, the ‘lexical subordination process’ will be argued to be better reserved only for those locative alternation cases that are missing in ‘verb-framed languages’ like Romance.

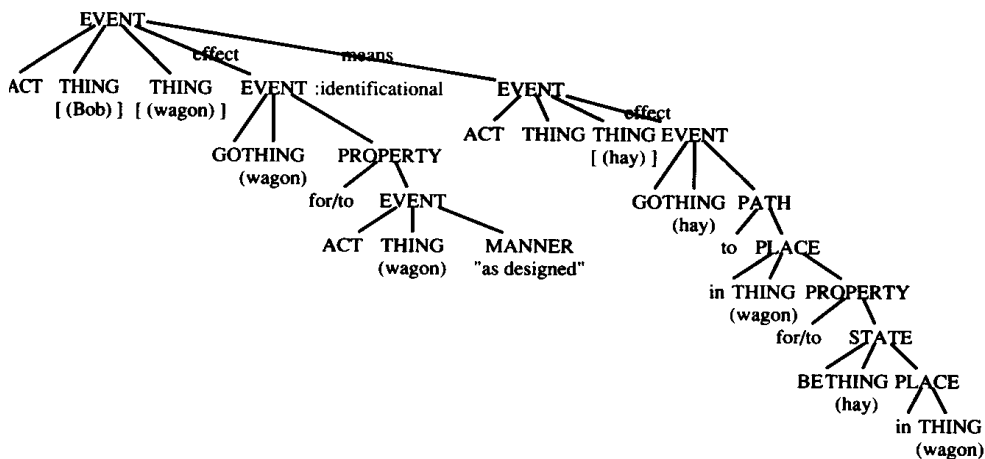
- | | | |
|------|--|------------|
| (i) | [x cause [y to come to be at z] /LOAD] | (cf. (3a)) |
| (ii) | [[x cause [z to come to be in STATE]] BY MEANS OF [x cause [y to come to be at z]]/LOAD] | (cf. (3b)) |

- (2) a. The farmer loaded hay on the truck.
 b. The farmer loaded the truck with hay.
- (3) a. [[x ACT] CAUSE [y BECOME P_{loc} z] [LOAD]_{MANNER}]
 b. [[x ACT] CAUSE [z BECOME []_{STATE} WITH-RESPECT-TO y]
 [LOAD]_{MANNER}]

Levin & Rappaport Hovav (1998: 260-261).

Although lexical-semantic accounts have proved successful to a certain extent when describing the particular semantic restrictions associated to the present alternation (for example, see Pinker (1989) or Levin (1993) for descriptive lists of alternating and nonalternating locative subclasses), they have proved elusive when constraining the structural part of the relevant semantic representations.³ For example, consider the more sophisticated analysis of the change of state variant put forward by Pinker (1989: 235), which is depicted in (4).⁴

- (4) Bob loaded the wagon with hay.



Pinker (1989: 235)

³ For example, this can be checked out if one compares the LCS corresponding to the change of state variant given by Rappaport & Levin (1988) (cf. (ii) in footnote (2)) with that given by Levin & Rappaport Hovav (1998) in (3b).

⁴ Pinker (1989: 235) noted that *Bob loaded the wagon with hay* can be glossed as “Bob acted on the wagon, causing the wagon to go into the state of being able to act as it was designed to act, by means of Bob acting on the hay, causing it to go to a place in the wagon intended for hay to be in it”.

According to Pinker (1989: 126), the ‘container verb’ *load* pertains to the following alternating class, which is defined as follows: “A mass of a size, shape, or type defined by the intended use of a container is put into the container, enabling it to accomplish its function”.

Although the structural representation of semantic restrictions given in (4) is descriptively adequate, it is not clear where the constraints of the relevant lexical-semantic decomposition are to be sought. Unlike Rosen (1996), I do not want to deny the cognitive reality of linguistically relevant semantic representations such as that depicted in (4), but I've found myself quite sympathetic with Rosen's (1996: 193-4) remarks emphasized in (5).

- (5) “Because the verb-class approach neither describes the syntactic facts adequately nor solves the learning problem, I conclude that verb classes do not exist as a cognitive or linguistic organizing mechanism but are instead an epiphenomenon of descriptive work on lexical semantics, argument structure, and verbal alternations. Verb classes are inventions of linguists that describe (in some cases incorrectly) the behavior of verbs. Because work on verb semantics provides us with a descriptive tool that helps us understand the mechanisms that govern verbal behavior, the work on verb classes has been invaluable. However, *verb classes have no explanatory power, and therefore they do not help us understand the computational system* <(emphasis added: JM)>”.

Rosen (1996: 193-194).

Given the lack of restrictiveness of lexical-semantic approaches, we appear to be forced to pursue another research trend. In particular, following Hale & Keyser (1993, ff.) and Baker (1997), I assume their claim that syntax can tell us a lot with respect to how to constrain the possible thematic structures.⁵

The purpose of the present paper is twofold: In section 2 I will show that the *aktionsart* effects involved in the locative alternation (cf. Demonte (1991), Dowty (1991)) can be argued to be associated to the relational semantics associated to the so-called ‘L(exical) R(elational) S(tructures)’ (cf. Hale & Keyser (1993, ff.)). More importantly, in section 3 I will provide a syntactic explanation of why Romance languages do not present certain productive cases of locative alternation that are

⁵ See also Mateu (2000) for arguments in favor of a syntactically based lexical decomposition approach.

typically found in Germanic languages: Such a difference in productivity will be shown to be related to the *systematic* typological differences concerning those ‘lexicalization patterns’ described by Talmy (1985, 1991). Finally, section 4 summarizes the two main conclusions worth being drawn from this paper.

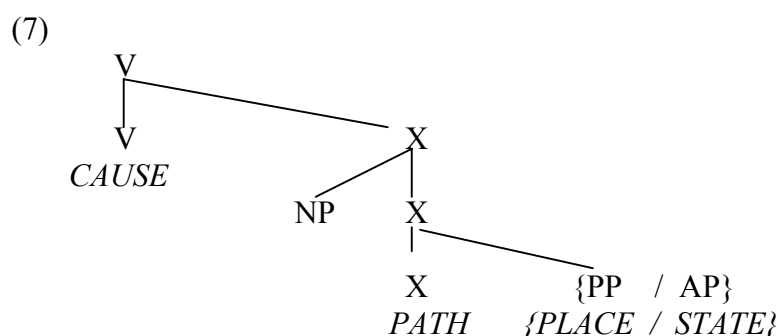
2. A lexical-syntactic analysis

Hoekstra & Mulder’s (1990) and Mulder’s (1992) syntactic approach to the locative alternation hit the nail on the head when they claim that “the locative alternation itself is an optical illusion” (Mulder (1992: 198)). “The verbs involved typically have S<mall> C<large> complements, the internal make-up of which, coupled with the semantics of the embedded predicate, determines which ‘alternant’ is realized” (Mulder (1992: 177)). According to them, the two relevant structures corresponding to the change of location variant and the change of state variant are those depicted in (6a) and (6b), respectively, which are in turn to be regarded as realizations of the same syntactic pattern, that depicted in (6c).⁶

- (6) a.Verb [_{SC} NP_{material} PP_{locative}]
 b.Verb [_{SC} NP_{locative} A] (PP_{material})
 c.Verb [_{SC} NP Pred]

Mulder (1992: 178)

In this paper, I will also concentrate on giving arguments in favor of positing a directional/Path relation as the head of the SC in (6c): See (7).⁷



⁶ A in (6b) stands for a SC predicate whose meaning is that of expressing ‘total affectedness’. See Mulder (1992: 193ff) for arguments that the *with*-phrase in (6b) is an adjunct.

⁷ The external argument is to be introduced by the relevant functional projection (e.g., cf. Hale &

In section 3, I will argue that my positing a birelational Path head (X) in (7) can be related to the following descriptive fact: There appears to be an important difference in productivity with regard to the locative alternation between so-called ‘satellite-framed languages’ (e.g., English, Dutch, German, Russian, etc.) and ‘verb-framed languages’ (e.g., Spanish, Catalan, French, etc.):⁸ In particular, the former languages present some cases of locative alternation that are missing in the latter languages. For example, both types of languages have “simple” cases of locative alternation (cf. (1) and (2)), but only satellite-framed languages have “complex” cases of locative alternation involving a conflation process of a subordinate activity verb into a main causative construction. In particular, Romance languages do not have complex {PP/AP} resultative constructions like those in (8a-b) (see Mateu (2001a)).

- (8) a. John rubbed the fingerprints off the crystal ball.
 b. John rubbed the crystal ball clean of fingerprints.
 c. *Juan frotó las huellas de la bola de cristal. (Spanish)
 Juan rubbed the fingerprints off the ball of crystal
 d. *Juan frotó la bola de cristal limpia de huellas.
 Juan rubbed the ball of crystal clean of fingerprints

Before presenting and explaining these typological differences with respect to the locative alternation, which is one of the main concerns of this paper, it will be interesting to show how the lexical-syntactic structure in (7) can account for the so-called *aktionsart* effects which have been said to be crucially involved in the locative alternation (see Demonte (1991) or Dowty (1991)). As will be shown immediately, my claim is that these effects can be argued to be associated to the relevant relational semantics (Mateu (1999)) corresponding to the lexical-syntactic structure in (7).

As pointed out by Demonte (1991: 64, ff.), the possibility for certain verbs to enter into the locative alternation is not only dependent on their linguistically relevant

Keyser (1993, ff.); Kratzer (1996)).

⁸ As pointed out by Snyder (1995), Klipple (1997), Mateu & Rigau (1999, 2000) or Mateu (2001a), there is a morphosyntactic explanation underlying Talmy’s (1985, 1991) original distinction between satellite-framed vs. verb-framed languages (see section 3). Crucially for the purposes of the present paper, such an explanation has to do with the different morphosyntactic properties of the Path

conceptual composition, but crucially hangs on their *aktionsart* properties as well. According to Demonte (1991: 68), verbs focusing on the *process* enter into the locative alternation (see the examples in (1), repeated in (9)). By contrast, those verbs focusing on the *beginning* (see the verbs *echar* in (10), *verter* in (11), or *derramar* in (12)) cannot partake of the alternation. Moreover, those verbs expressing the pure *effect* (see the verbs *llenar* in (13) and *adornar* in (14)) do not enter into the alternation either.

- (9) a. Juan cargó heno en el carro. (Spanish)
 Juan loaded hay on the cart
 b. Juan cargó el carro {con/de} heno.
 Juan loaded the cart {with/of} hay
- (10) a. Juan echó las colillas en el suelo.
 Juan threw-out the stubs on the floor
 b. *Juan echó el suelo {con/de} colillas.
 Juan threw-out the floor {with/of} stubs
- (11) a. Juan vertió agua en la jarra.
 Juan poured-out water in the jar
 b. *Juan vertió la jarra {con/de} agua.
 Juan poured-out the jar {with/of} water
- (12) a. Juan derramó café sobre la mesa.
 Juan spilled coffee over the table
 b. *Juan derramó la mesa {con/de} café.
 Juan spilled the table {with/de} coffee
- (13) a. *Juan llenó agua en el depósito.
 Juan filled water in the tank
 b. Juan llenó el depósito {con/de} agua.
 Juan filled the tank {with/de} water
- (14) a. *Juan adornó cuadros en la habitación.

relation in both types of languages.

- Juan adorned pictures in the room
- b. Juan adornó la habitación {con/?de} cuadros.
 Juan adorned the room {with/of} pictures

Quite interestingly, Demonte’s descriptive insights can be argued to receive an adequate structurally-based explanation within Hale & Keyser’s (1993) configurational theory of thematic structure. As noted above, let us assume that the lexical-syntactic structure involved in transitive locative alternation verbs is that depicted in (7).⁹ It is the case that in (7), a causative verb subcategorizes for a birelational Path element relating a Figure NP to a Place PP {or alternatively to a State AP}. The ungrammaticality of (10b)-(11b)-(12b) can then be attributed to the fact that the lexical-syntactic structures corresponding to ‘beginning verbs’ like *echar*, *verter*, or *derramar* does not contain an AP expressing a result state, but a PP expressing Place. On the other hand, the ungrammaticality of (13a) or (14a) can be attributed to the fact that both a legitimate AP and an illegitimate PP compete for the same syntactic position, i.e., the complement position of the directional/Path element *X* in (7). However, it is the case that those verbs expressing a pure effect like *llenar* ‘fill’ are “change of state verbs”: To put it in the present terms, their lexical-syntactic structure contains an AP expressing State, but not a PP expressing Place, which occupies the complement position of the Path relation in (7).

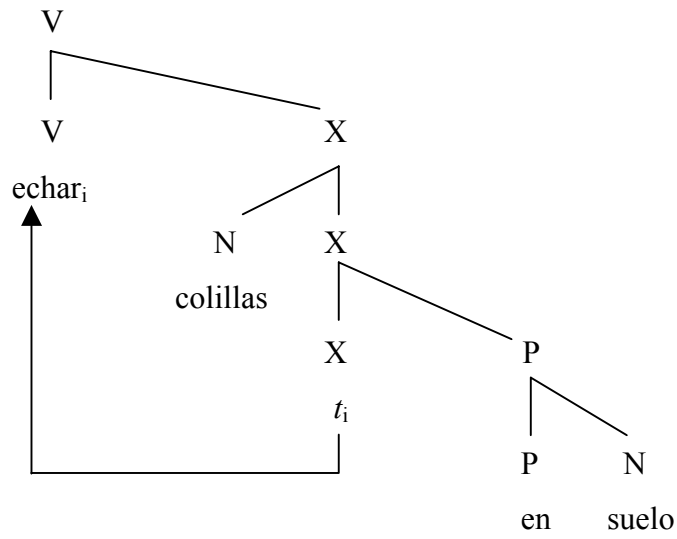
Concerning ‘beginning verbs’, the lexical-syntactic structure corresponding to (10a) is that corresponding to (15): The formation of the verb *echar* ‘throw-out’ involves the incorporation of the Path relation into a causative verb. In (15), there is a complex spatial relation relating a Figure *colillas* (i.e., the specifier of the Path relation *X*) to a Ground *suelo* (i.e., the complement of the Place relation *en*). The semantic interpretation corresponding to (15) would be something like ‘(Juan) caused the stubs to go onto the floor’.¹⁰

⁹ Here I will put aside the intransitive variant of locative alternation cases; see Mulder (1992) for a very accurate analysis of so-called ‘swarm-constructions’ (e.g., “Bees are swarming in the garden” // “The garden is swarming with bees”).

¹⁰ With Harley (1995) and Hale & Keyser (1998), I assume that the motion predicate (*GO*) is not 1-syntactically represented in transitive structures like that in (10a). Presumably, both the causative verb *plus* the directional element *X* could be argued to provoke such an interpretive effect. But see Hale & Keyser (1993), where two verbal layers are posited for transitive verbs expressing a caused change of location. Such a hypothesis has been abandoned in Hale & Keyser (1998).

On the other hand, I will also omit the functional category D(eterminer) in my *lexical-syntactic* structures (vs. cf. (16)).

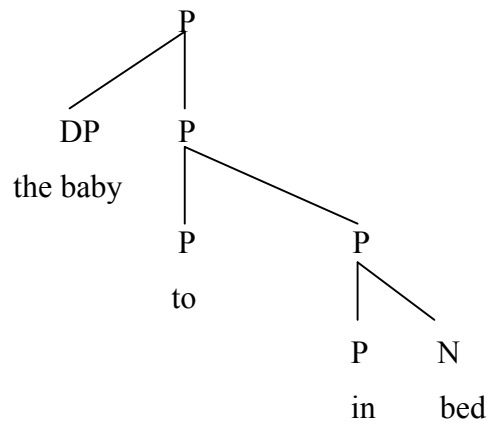
(15)



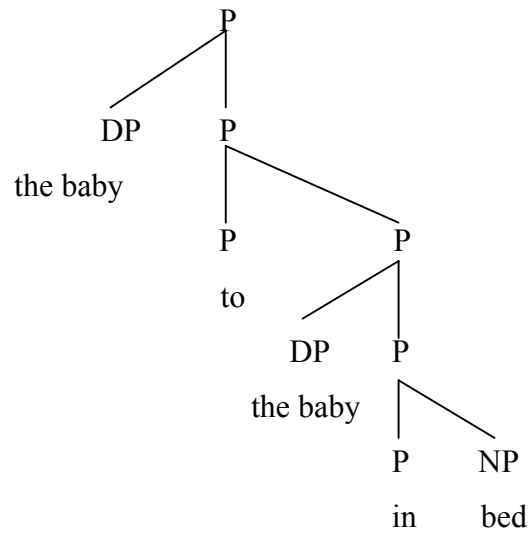
Following Hale & Keyser's (1999) analysis of the complex preposition *into* in (16a) as a pruned version of the recursive dyadic P-based structure in (16b), we can also assume that the lexical-syntactic structure in (15) is the pruned version of that depicted in (17).

(16) Getting [the baby *into* bed] is hard.

a.

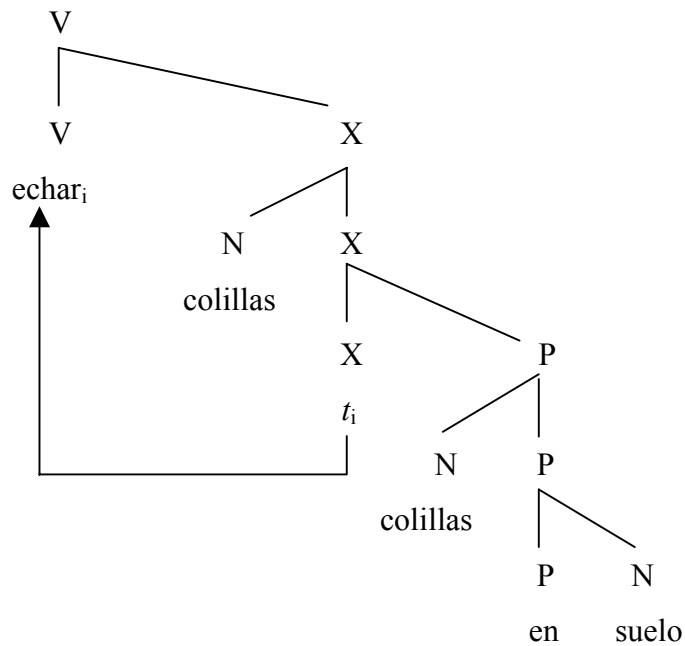


b.



ex. taken from Hale & Keyser (1999: 22-23)

(17)



Being inspired by Hale & Keyser, I want to argue that the recursive structure in (17) is the basic one, the reduced one in (15) being derived from (17). Hale & Keyser's (1999: 23) statements quoted in (18), are then literally assumed here:

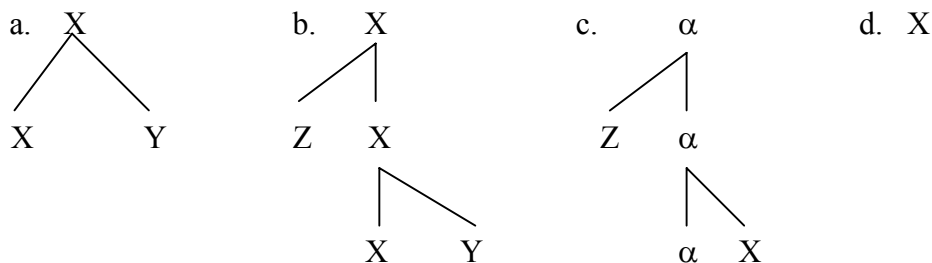
(18) "The repeated specifier results, in part, from the general principle according to which the heads involved are inherently dyadic, projecting both a complement and a specifier. The identity of the two specifiers

seems to be the effect of a general lexical principle in complex syntactic projections limiting V-internal specifiers to a single chain (...) the specifiers are mutually independent arguments, being projected by distinct prepositions. In any event, only the higher specifier may be overtly realized, and the pair functions as if it were a single argument in the lexical argument structures of verbs built on these projections, e.g., *keep (the baby in bed)*, with a single P-projection specifier, beside *get (the baby into bed)*, with two P-projection specifiers”

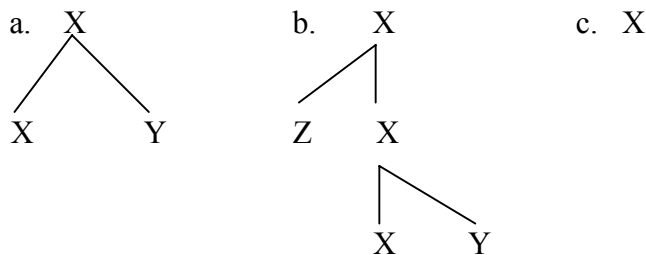
Hale & Keyser (1999: 23)

Let us now deal with the lexical-syntactic analysis of the change of state variant exemplified in (9b), (13b), or (14b). Before doing so, some previous theoretical remarks are in order here. In other works (e.g., see Mateu (2001b)), I have argued that the four basic argument structure types in (19) can be reduced to those three types in (20).¹¹

- (19) Basic Types of Argument Structure (Hale & Keyser (1998))
 Head (*X*); complement (*Y* of *X*); predicate (*X* of *Z*)



- (20) Head (*X*); complement (*Y* of *X*); predicate (*X* of *Z*)



¹¹ According to Hale & Keyser (1998), the prototypical or unmarked morphosyntactic realizations in English of the syntactic heads in (19) (i.e., the *X*'s) are the following ones: *V* in (19a), *P* in (19b), *A* in (19c), and *N* in (19d).

In particular, Mateu's (2001b) proposal is that the lexical head *X* in (19c) is not to be taken as a primitive element of the syntactic argument structure theory, as in Hale & Keyser's approach, but as a composite unit. That is to say, the secondary lexical category *A*(djective), which semantically expresses *State*, can be argued to be decomposed into two elements: a non-relational element (similar to that instantiated by *N*) *plus* a relational element (similar to that instantiated by *P*), the former being incorporated into the latter. That is, the structural combination in (19b) can be argued to account for the argument structure properties of *As* as well. Accordingly, the argument structure of the 'Small Clause' involved in two sentences like those in (21a) and (21b), turns out to be the same, that in (21c). Interestingly, the incorporation of *Y* into *X* in (21b) can be argued to account for both the 'relational' nature of *As*, which they share with *P*, and their 'nominal' properties in languages like Latin, where they are marked with morphological case.

- (21) a. is [the cat [in the room]]
 b. is [the cat [happy]]
 c. is [_XZ [_X X Y]]

Besides these morphosyntactic facts, the decomposition of *As* into two elements appears to be quite natural from a conceptual perspective as well. For example, the Conceptual Structure assigned to (22a) could be argued to be that in (22b), where a relational element introducing an abstract *Place* (*AT*) can be postulated in quite a natural way. In fact, this extension is clearly expected under the so-called 'Thematic Relations Hypothesis' (see Gruber (1965) and Jackendoff (1990)), according to which the same conceptual functions we use when dealing with 'physical space' (e.g., *BE*, *AT*, etc.) can also be applied to our conception of 'abstract space'.

- (22) a. The door is open.
 b. [_{State} *BE* [_{Thing} *DOOR*], [_{Place} *AT* [_{Property} *OPEN*]]]

This said,¹² assuming that States can be regarded as abstract locative relations incorporating an abstract Ground, the lexical-syntactic structure corresponding to the change of state variant exemplified in (13b), could be argued to be that depicted in (23), the pruned version being represented in (24).¹³ In (23)-(24), X_1 encodes an abstract Path relation, X_2 an abstract Place relation, and Y is the non-relational element expressing an abstract Ground. Accordingly, States like that encoded by *lleno* ‘full’ lack primitive status in argument structure theory: They are argued to involve incorporation of a non-relational element (i.e., an abstract Ground Y) into an abstract locative relation X_2 .

Furthermore, the specifier of the complex abstract spatial relation (*depósito* ‘tank’) is to be interpreted as Figure/Theme, while the external argument is not to be introduced by the eventive relation (i.e., V), but by the relevant functional projection (see footnote 7). The semantic interpretation corresponding to (23) would be something like ‘(Juan) caused the tank to go into the state of *full*’.

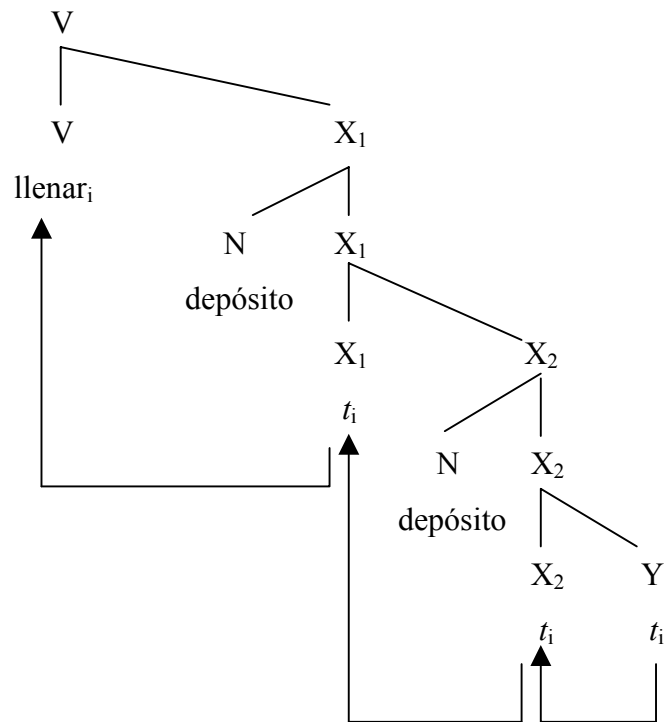
¹² In this footnote I summarize an important point discussed in Mateu (2001b). Quite probably, Hale & Keyser would not accept the present modification or reduction of their ‘argument structure types’ (cf. (20)), since the causative/inchoative alternation is presented by them as an important point that forces them to maintain the “structural” distinction between transitive denominal verbs like *shelve*, which involve merge of (19b) into (19a) and transitive deadjectival verbs like *clear*, which involve merge of (19c) into (19a). According to them, this structural distinction explains why the former are always transitive, while the latter can have an intransitive variant (the α verbal head in (19c) being then inflected with Tense).

However, as Kiparsky (1997) has shown, such a generalization is not well-grounded. According to him, denominal verbs *can* participate in the causative/inchoative alternation if they denote events that can proceed without an explicit animate agent: e.g., cf. *pile (up)*, *land*, *carbonize*, *oxidize*, etc. On the other hand, there are deadjectival verbs that can *not* participate in such an alternation: e.g., cf. *legalize*, *visualize*, etc.

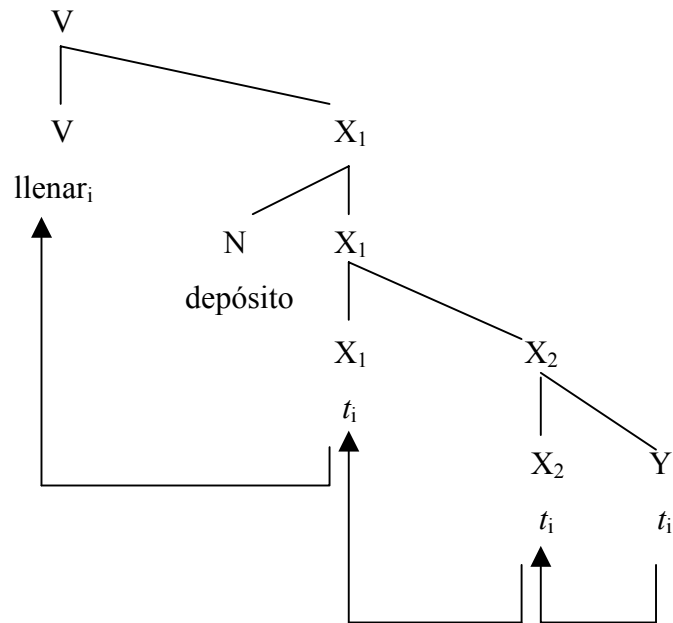
That is to say, the relevant conclusion appears to be the following: The fact that denominal verbs do not usually enter into the causative/inchoative alternation is not due to a purely structural source, as Hale & Keyser propose, but to the fact that they often involve an animate agent. *Rebus sic stantibus*, the main objection that Hale & Keyser could entertain with respect to our eliminating the apparently basic combination of (19c) vanishes.

¹³ The same lexical argument structure holds for the examples in (9b) and (14b).

(23)



(24)



Given (23) or (24), notice that I am assuming that the so-called *with*-phrase is an adjunct, i.e., it does not appear in the basic lexical argument structure of the change of state variant. Mulder (1992: 193, ff.) provides some relevant arguments in favor of the adjunct status of the *with*-phrase. For example, he shows that this phrase can be

Furthermore, the semantic difference between those two prepositions also explains why (28a) is ambiguous, while (28b) is not: (28a) can be associated to two readings, (i) the ergative one (i.e., that corresponding to *The tank filled with water*) and (ii) the agentive one (i.e., that corresponding to *The tank was filled with water*), while (28b) can only be associated to the latter interpretation.¹⁴

- (28) a. El dipòsit s’omplí d’aigua. (Catalan)
the tank filled of water
b. El dipòsit s’omplí amb aigua.
the tank filled with water

Once presented the lexical-syntactic analysis of the locative alternation, let us now deal with the interesting question of why this alternation turns out to be more productive in so-called ‘satellite-framed languages’ like those included in the Germanic family (e.g., English, German, Dutch, etc.), rather than in so-called ‘verb-framed languages’ like those included in the Romance family (e.g., Catalan, Spanish, French, etc.).

3. Lexicalization patterns and the locative alternation

A cursory look at Levin (1993: 50, ff.), Mulder (1992: 166, ff.) or Brinkmann (1997) suffices for one to realize that the locative alternation is much more productive in the Germanic languages rather than in the Romance ones. My claim is that this difference in productivity is to be explained on the basis of their different setting of those ‘lexicalization patterns’ that involve two “syntactically relevant components of meaning”, namely, {*manner/means*} and {*directionality/result*}: cf. (29).¹⁵

- (29) *Lexicalization patterns* (Talmy (1985, 1991))¹⁶

¹⁴ The agentive reading corresponds to the so-called “pronominal passive” in traditional grammars of the Catalan language.

¹⁵ See Talmy (1985, 1991). See also Pinker (1989), Levin & Rappaport Hovav (1991), Rappaport Hovav & Levin (1998) for discussion of so-called “syntactically relevant aspects of meaning”.

¹⁶ Some qualifications to Talmy’s typology can be found in the literature: e.g., see Aske (1989), Slobin (1996), Juffs (1996), Fong & Poulin (1998), Narasimhan (1998), Folli (2000), Mateu (2000), or Mateu & Rigau (2000).

Due to the lack of formalization of Talmy’s typology, the lexicalization pattern attributed by Talmy to English (i.e., conflation of V with Manner) has been (mis)understood in many ways. For example, consider the contrast between *Joe climbed* vs. *Joe climbed to the top*. Indeed, from an informal/intuitive... perspective, we can speak of “conflation of V with Manner” in both examples.

- a. Germanic languages (e.g., English): conflation of V with Manner
- b. Romance languages (e.g., Spanish): conflation of V with Path/Directionality.

As noted by Talmy (1985, 1991), one of the most visible differences between satellite-framed languages like English, and verb-framed languages like Spanish, is that only the former languages allow the Path component to be expressed as a satellite around the verb, while the Manner component being encoded into the verb.¹⁷ Quite interestingly for the purposes of the present paper, his proposal can be exemplified with a productive class of locative alternation cases that can be found in satellite-framed languages like English, but not in verb-framed languages like Spanish. For example, consider again the relevant contrast between the English examples in (30) and their Spanish counterparts in (31).

- (30) a. John rubbed the crystal ball.
 b. John rubbed the fingerprints off the crystal ball.
- (31) a. Juan frotó la bola de cristal. (Spanish)
 Juan rubbed the ball of crystal
 b. *Juan frotó las huellas fuera de la bola de cristal.
 Juan rubbed the fingerprints out of the ball of crystal
 b'. Juan quitó las huellas (de la bola_i) (frotándola_i)
 Juan got+out the fingerprints from the ball rubbing-it

Before presenting my lexical-syntactic analysis of the contrast concerning (30) vs. (31), it will be useful to review briefly Rappaport Hovav & Levin's (1998: 114-123)

However, the typological relevance of Talmy's lexicalization pattern in (29a) should only hold for the second case *stricto sensu*: 'John went to the top climbing'. It is the conflation process involved in the second example what is missing in verb-framed languages. See Mateu (2000) for further discussion of this non-trivial point.

¹⁷ According to Talmy's (1985, 1991) original distinction, verb-framed languages are those languages conflating the Path element into the verb. For example, consider the Spanish verbs *entrar* 'go in(to)', *salir* 'go out', *subir* 'go up', etc. By contrast, satellite-framed languages like English do not conflate the Path into the verb but leave it stranded, i.e., as a satellite around the verb. When the Path remains as a satellite, one option becomes available: the Manner component can be conflated into the verb: e.g., *John danced into the room* (i.e., 'John went into the room dancing'); see footnote 16.

One caveat is in order here. As noted by Talmy, English verbs like *enter*, *exit*, *introduce*... should not be taken as real counterexamples for they can be said to be motivated by the verb-framed nature that English inherited from the lexicalization pattern corresponding to Romance.

‘projectionist’ analysis account of the alternation in (30). They account for the elasticity of verb meaning via so-called ‘Template Augmentation’. For example, the basic activity template corresponding to the verb *rub* (see (32a)), which is exemplified in (30a), is said to be extended to a derived accomplishment template (see (32b)), which is exemplified in (30b). Rappaport Hovav & Levin (1998) do not address the crosslinguistic variation involved. Such an issue is addressed by their followers Fong & Poulin (1998: 30), who limit themselves to pointing out what is literally quoted in (33).¹⁸

(32) *Template augmentation*

- a. [x ACT <RUBBING> on y]
 b. [[x ACT <RUBBING> on y] CAUSE [BECOME [z <PLACE>]]]

(33) “The difference between French and English is that English allows template augmentation, but French does not”.

Fong & Poulin (1998: 30)

This notwithstanding, as pointed out by Mateu & Rigau (1999, 2000), it should be clear that there is a *morphosyntactic* reason that prevents French (and other verb-framed languages like Spanish or Catalan) from generating (30b) and other kinds of

¹⁸ At first glance, there appear to be counterexamples to the well-established generalization that Romance languages do not allow template augmentation. For example, consider the Spanish verb *barrer* (‘to sweep’), which enters into the following alternation in (i)-(ii) (other Spanish verbs that also partake of this alternation are *fregar* (‘to wipe’) or *limpiar* (‘to clean’)). One could in principle suppose that (i) be assigned a basic activity template like that in (32a)), while (ii) a derived accomplishment template like that in (32b).

- (i) Juan barrió el suelo. (Spanish)
 John swept the floor
 (ii) Juan barrió las migas restantes del suelo.
 John swept the crumbs remaining from-the floor

However, a closer look at contrasts like that in (i)-(ii) reveals that this alternation is not to be equated with the English one depicted in (30). It is important to notice that the location can be omitted in the Spanish example in (ii), such an omission being fully impossible in English: **John swept the crumbs*. Quite interestingly, I think that the *raison d’être* of this contrast is to be found once again in Talmy’s (1985, 1991) typological distinction: It is the case that in (ii) the verb *barrer* is interpreted as a Path verb like that in (31b’): i.e., *Juan quitó las migas (del suelo)* (lit. ‘Juan got+out the crumbs of the floor’). In English such an interpretation is not possible, since in this satellite-framed language the Path is not conflated into the verb. As a result, unlike its Spanish counterpart *barrer*, *sweep* can never be interpreted as a ‘Path verb’.

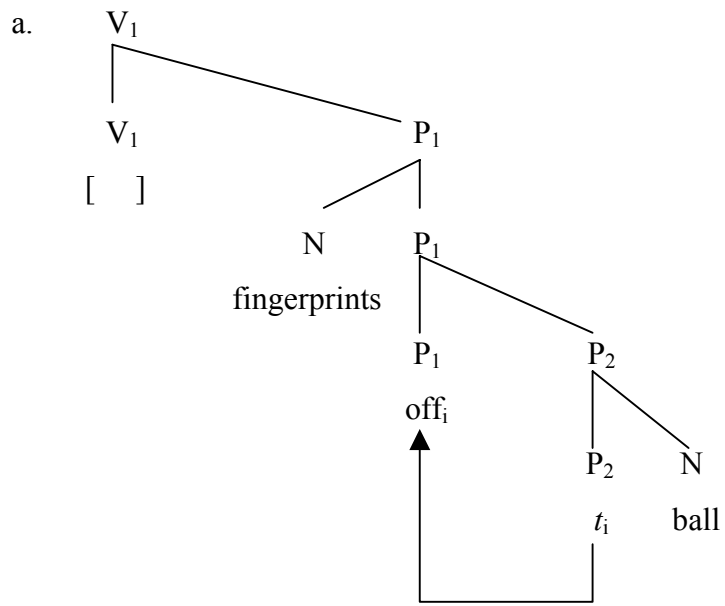
complex resultative constructions like *John rubbed the crystal ball clean (of fingerprints)*. Our main criticism of semanticocentric analyses is that they cannot account for this “gap” in a *principled* way.

Given this, let us deal with the lexical-syntactic analysis of the relevant contrast. First, I will analyze the l(exical)-syntax of (30b) and (31b’), and then that of (30a) or (31a), the latter examples being provided with the same lexical argument structure.

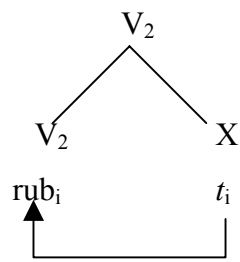
The basic or main transitive lexical-syntactic structure associated to (30b) is that depicted in (34a).¹⁹ In accordance with the satellite nature of the Path relation in English, the directional element *off* does not saturate the phonologically null matrix of the verb. In order for such an empty matrix not to provoke legibility problems at PF, two previous steps are required: Firstly, we must select an independent verbal l(exical)-syntactic object (for example, that represented in (34b), i.e., [*DO RUB*]); secondly, we must conflate it into the null matrix of the main verb. Following Hale & Keyser’s (1997b) and Mateu & Rigau’s (1999) analysis of conflated structures like *John danced into the room* (i.e., ‘John went into the room dancing’), I claim that the subordinate verbal object encoded by *rub*, which expresses Talmy’s ‘Manner component’, turns out to be conflated into the main causative verb of (34a) via a ‘generalized transformation’: in (35) is depicted the resulting derivation, where this syntactic operation has been represented by making use of an adjunction process of (34b) into the null verb of (34a). Its corresponding semantic interpretation would be something like *lit.* ‘(John) caused-_[Do-rub] the fingerprints to get out of the ball’, i.e., ‘(John) caused the fingerprints to get out of the ball by doing rubbing’.

¹⁹ For the sake of exposition, notice that (34a) represents a pruned version (see the discussion above in section 2). V_1 is to be interpreted as a causative verb, P_1 expresses a Path relation, and P_2 a Place relation.

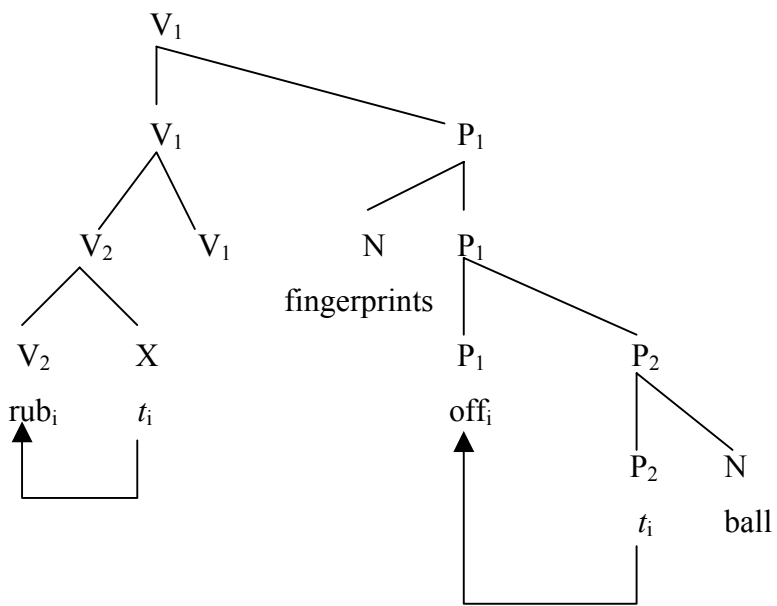
(34)



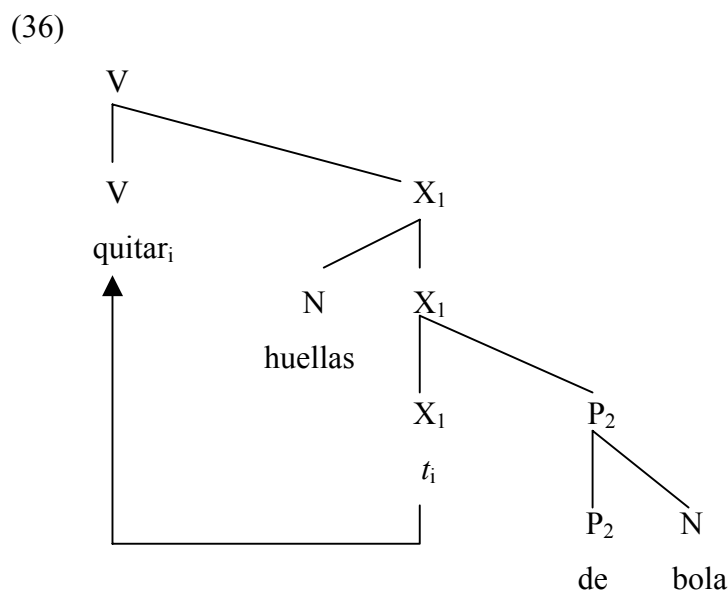
b.



(35)



By contrast, in verb-framed languages like Spanish the directional/Path element appears to be lexically conflated into the causative verb (see (36)); notice that *quitar* ‘to get out’ is an atom as far its morphophonological status is concerned: That is to say, what corresponds to the verb and what corresponds to the directional relation cannot be distinguished any longer. As a result of this lexical saturation, if we are willing to express the relevant Manner component, this must appear in an adjunct position, as noted by Talmy (1985): see (31b’).



Let us now analyze the lexical-syntax of (30a) or (31a), both of which can be said to share the same argument structure. Being inspired by Hale & Keyser’s (1997a) analysis of ‘contact/impact verbs’ like *kick*, I want to argue that the lexical-syntactic structure of (30a) is that depicted in (37): *to rub the ball* as ‘to give the ball a rub’, i.e., ‘to provide the ball with a rub’. Accordingly, the birelational element *X* in (37) is to be regarded as a spatial relation expressing what Hale & Keyser (1993) refer to as ‘central coincidence’.

- d. *hij behangt de muur vol met foto's.
 he BE-hangs the wall full with photos
- e. hij hangt [_{SC} de muur {be-/vol}]

Examples taken from Mulder (1992)

- (39) a. Die Vandalen spritzen Farbe auf das Auto. (German)
 the vandals sprayed paint onto the car
- b. Die Vandalen bespritzten das Auto mit Farbe.
 the vandals BE-sprayed the car with paint

Examples taken from Brinkmann (1997)

On the other hand, an interesting problem is that concerning the apparent optionality of the perfectivizing prefix in the change of state variant of some locative verbs (see (40b) and (41b)).²⁰ My provisional proposal is that the unprefixated variant is to be analyzed as their Romance counterpart in (1b), while the prefixed variant being analyzed as involving a lexical-syntactic subordination process similar to that represented in (35). To put it in descriptive words, the unprefixated variant in (40b) could be roughly paraphrased as 'He caused the wagon to go into the state of loaded', while its corresponding prefixed variant could be roughly paraphrased as 'He caused the wagon to become totally affected by doing the activity of loading'.²¹

- (40) a. hij laadde het hooi op de wagen. (Dutch)
 he loaded the hay on the wagon
- b. hij (be-)laadde de wagen met hooi.²²
 he BE-loaded the wagon with hay
- (41) a. Sie luden Heu auf den Wagen. (German)
 they loaded hay onto the wagon
- b. Sie (be-)luden den Wagen mit Heu.
 they (BE-)loaded the wagon with hay

²⁰ See Mulder (1992: 180,ff.) and Brinkmann (1997: 68, ff.) for the alleged optionality of the prefix *be-*.

²¹ Following Mulder's (1992) semantic analysis of the prefix *be-* in (38e), I assume that its (indeed, coarse) meaning is something like that of "being totally affected".

²² Cf. *hij laadde de wagen (vol) met hooi*.

Finally, I would like to conclude this paper with an important caveat: It should be clear that typologies cannot be stated across-the-board. Put it differently: ‘Typologies leak’.²³ For example, Italian could also be argued to behave as a satellite-framed language in the following (b) examples drawn from Munaro (1994): As in the change of state variants of (38b) and (39b), what corresponds to the prefix and what corresponds to the verb can be easily distinguished in (42b), (43b), and (44b); given this, the satellite element, i.e., the prefix, could be argued to encode the result component, this accounting for Munaro’s ‘funzione perfettivizante’ (‘perfectivizing function’; see (45)), whereas the verb can be said to encode the Manner component.

- (42) a. Gianni ha fornito merce avariata a Paolo. (Italian)
 Gianni has provided merchandise damaged to Paolo
 b. Gianni ha rifornito Paolo di merce avariata.
 Gianni has RI-provided Paolo of merchandise damaged

- (43) a. spargere sale sul tavolo
 spread salt on-the table
 b. cospargere il tavolo di sale
 CO-spread the table of salt

- (44) a. seminare cartacce sul prato
 spread gravel on-the field
 b. disseminare il prato di cartacce
 DIS-seminate the field of gravel

(45)

In the (42b-43b-44b) examples, “il verbo compare con un prefisso che possiamo supporre abbia, anche qui, una funzione perfettivizante (...) solo gli esempi (b) implicano una certa intenzionalità-causalità da parte del soggetto nel compiere l’azione e soprattutto la completezza del processo di trasferimento”

Munaro (1994: 367-368)

²³ See footnote 16.

4. Conclusions

Two main conclusions can be drawn from the present paper:

-The *aktionsart* effects involved in the locative alternation (cf. Demonte (1991) and Dowty (1991)) can be argued to be derived from the relational semantics associated to the relevant lexical-syntactic structures.

-There is a l(exical)-syntactic explanation of why Romance languages do not present certain cases of locative alternation that are typically found in Germanic languages: Such a difference in productivity has been argued to be related to Talmy's (1985, 1991) typological distinction between 'verb-framed languages' and 'satellite-framed languages'.

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