

QUALIA STRUCTURE IN SPANISH PREPOSITIONAL VERBS: WHEN THE VERB RESORTS TO A PREPOSITION*

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ABSTRACT. In generative grammar it is generally assumed that argument prepositional phrases (PPs) can have two syntactic functions: argument and complement. Contrary to this assumption, I propose a unified syntactic treatment for all argument PPs, which, I suggest, is more appropriate to account for the main problems they pose. Focusing on Spanish, I will try to explain how the meaning of prepositional verbs is compositionally built by means of a lexical mechanism of coercion. My claim is based on Pustejovsky's Generative Lexicon theory, a sophisticated lexicist and generative model of combination of words.

Keywords. prepositional verbs, lexical features, coercion, Generative Lexicon.

RESUMEN. En la gramática generativa se suele aceptar que los sintagmas preposicionales (SP) argumentales pueden desempeñar dos funciones sintácticas: argumentos y complementos. Como alternativa a este supuesto, propongo un tratamiento unificado de la sintaxis de dichos SP argumentales, el cual me parece más adecuado para dar cuenta de los principales problemas que plantean. Centrándome en ejemplos en español, trataré de explicar cómo el significado de los verbos preposicionales se construye composicionalmente a través de un mecanismo léxico de coacción. Mi propuesta se basa en la teoría del Lexicón Generativo de Pustejovsky, un modelo lexicista y generativo de combinación de palabras.

Palabras clave. verbos preposicionales, rasgos léxicos, coacción, Lexicón Generativo.

1. Lexical versus functional prepositions

Literature on prepositions has proliferated in recent years and linguists continue to discuss whether prepositions have lexical properties, functional properties or both. In this regard, the three main meaning-based classifications of prepositions in generative grammar should be mentioned: the classical hypothesis (Jackendoff 1973, 1977; Chomsky 1981), whereby there are lexical prepositions, which have notional meaning and assign thematic role (θ -role), and functional prepositions, with only grammatical meaning and without thematic structure (like the English genitive *of* or the Spanish *a* 'to' in direct objects, DOs). A second group of authors classifies them as a functional category (Baker 2003; Grimshaw 2005; Svenonius 2007), because of the nature of the properties they encode. Finally, some authors consider prepositions as a semi-lexical category (Zwarts 1997; Corver & Van Riemsdijk 2001; Mardale 2009, 2011), since, in their opinion, prepositions have both lexical and functional properties.

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In addition, some authors believe that lexical prepositions constitute predicates denoting an event (Bosque 1989; Horno 2002; Ramchand & Svenonius 2004; Folli & Ramchand 2005). This is not the place to discuss all the properties attributed to prepositions. As in Zato (2011, in press), I will assume a hypothesis similar to the classical one, according to which there are lexical and functional prepositions. The former have notional meaning and constitute events, while the latter only have grammatical meaning and do not constitute events. As far as the semantic properties are concerned, the English *until* or the Spanish *durante* ‘for, during’, for example, obviously have notional meaning: the former denotes a boundary, while the latter indicates simultaneity. On the other hand, the English *of* or the Spanish *a* ‘to’ in DOs have grammatical meaning only: in the former case, the preposition is a case marker (for example in *the Lord of the Rings* the preposition *of* signals that the participant *the Rings* receives genitive case); in the latter case, Spanish animate DOs preceded by *a* bear the [+specificity] feature (Torrego 1999; see also Fábregas 2013 for an exhaustive state of the art).

As event predicates, lexical prepositions express a relationship between two participants in terms of *figure* and *ground*, in the sense of Talmy (2000).¹ For instance, in *John studies in the garden*, *John* is the figure and *the garden* is the ground.² Another argument is that lexical prepositions can introduce small clauses (SCs). Consider the following examples:

- (1) a. Piensa en tu tesis terminada.
thinks at your thesis finished
 Lit. ‘S/he thinks about your thesis finished’
 b. María soñaba con su novio ahogado.³
María dreamt with her boyfriend drowned
 Lit. ‘María dreamt about her boyfriend drowned’
 c. El general cuenta con el centinela despierto toda la noche.
the general counts with the guard awake all the night
 Lit. ‘The general counts on the guard awake all night’
 d. Me acuerdo de mi abuela sentada en la mecedora.
remember from my grandmother sat at the rocking chair
 Lit. ‘I remembered (from) my grandmother sitting on the rocking chair’

In (1) the constituents *tu tesis terminada*, *su novio ahogado*, *el centinela despierto toda la noche* y *mi abuela sentada en la mecedora* can be replaced by *ello* ‘it’, not by a personal pronoun: *Piensa en ello* ‘S/he thinks about it’, *María soñaba con ello* ‘María dreamt about it’, *El general cuenta con ello* ‘The general counts on it’ and *Me acuerdo de ello* ‘I remembered (from) it’. This confirms that they establish constituents that are within the prepositional phrase (PP), SCs in this case. So the sentences in (1) mean ‘S/he thinks about the situation in which the thesis is finished’, ‘María dreams about the situation in which her boyfriend is drowned’, and so on. In my opinion, a secondary predication can appear within a PP because its head, the

¹ According to Talmy, the *figure* is the entity whose location or movement is defined and the *ground* is the frame with respect to which the location or movement of the figure is defined.

² I assume that spatial relations, such as location in *John IN the garden*, are a kind of eventuality. Not all authors agree with this; for example, Svenonius (2007) argues that verbs have an event variable *e*, whereas prepositions have a spatial variable *s*, and they have to be accurately differentiated because this is the reason why verbs can bind temporal and aspectual operators and prepositions cannot.

³ Examples (1a) and (1b) belong to Bosque (1989: 101).

preposition, has an event nature, in the same way that a secondary predication can appear within a verbal phrase (VP) because its head, the verb, is an event predicate too.

By contrast, the English genitive *of* or the Spanish accusative case marker *a* in DOs neither establish the kind of relationship expressed in terms of figure and ground nor can introduce a SC.⁴ Other differences between lexical and functional prepositions associated with aspect, features percolation and secondary predication can be found in Neeleman (1997). In sum, I assume that there are two types of prepositions: lexical, having notional meaning and event nature, and functional, only having grammatical meaning.

2. Adjuncts, arguments and complements

In generative grammar it is generally assumed that PPs can play three syntactic roles: adjuncts, arguments and complements, an observation made explicit in Neeleman (1995, 1997), for instance. Let us observe the following sentences:

- (2) a. Illo y Guillén juegan en el parque.
Illo and Guillén play at the park
 ‘Illo and Guillén are playing in the park’
 b. María lee un libro en su habitación.
María reads a book at her bedroom
 ‘María is reading a book in her bedroom’
- (3) a. Juan puso las flores sobre la mesa.
Juan put the flowers on the table
 ‘Juan put the flowers on the table’
 b. María sacó los libros del baúl.
María took out the books from+the chest
 ‘María took the books out of the chest’
- (4) a. Juan cuenta con sus amigos.
Juan counts with his friends
 ‘Juan counts on his friends’
 b. María depende de su familia.
María depends from her family
 ‘María depends on her family’

On the one hand, there is no doubt that the PPs in (2) are adjuncts, since they are constituents not selected by the verb, only expressing the circumstance that the actions of playing and reading a book take place in the park and in the bedroom, respectively. On the other hand, the PPs in (3) and (4) are examples of selected constituents. The main difference between the PPs in (3) and the PPs in (4) is that the former have spatial meaning, whereas the latter have abstract meaning. Other semantic and syntactic properties have been attributed to them in generative grammar, and will be discussed in section 4.

⁴ An anonymous reader suggests that in *Vieron a Juan enfadado* ‘They saw John angry’ the preposition *a* introduces a SC in the same way as *en* in *Piensa en tu tesis terminada* ‘(lit.) S/he thinks about your thesis finished’. However, there is a crucial difference: *a* does not introduce a SC; rather *a Juan enfadado* is the whole SC, where *a Juan* is a DO and *enfadado* is a depictive. By contrast, in *Piensa en tu tesis terminada* the preposition *en* does not belong to the SC, which is formed by *tu tesis* plus *terminada* (cf. *Piensa en ello* ‘Think about it’ vs. **Vieron a ello* ‘(lit.) They saw to it’).

However, now I want to focus on another issue. Given that these three kinds of functions (adjunct, argument and complement) have a syntactic nature, we have to account for them from a syntactic point of view. The first question is whether it is syntactically relevant to distinguish between PPs not required by the verb and PPs which are required by the verb. I propose that it is relevant. Let us examine the following sentences:

- (5) a. Gonzalo guardó los libros en el armario en la habitación de sus padres.
Gonzalo kept the books at the wardrobe at the room of his parents
 ‘Gonzalo kept the books in the wardrobe in his parent’s room’
- b. El nene piensa en su mamá en el internado.
the child thinks at his mum at the boarding school
 ‘The child thinks about his mum at the boarding school’
- (6) a. Rodrigo apiló los cromos en el cochecito.
Rodrigo stacked the trading cards at the stroller
 ‘Rodrigo put his trading cards into the stroller’ or ‘Being in the stroller
 Rodrigo stacked his trading cards’
- b. En la conferencia Juan habló con María.
at the conference Juan talked with María
 ‘In the conference Juan talked with María’ or ‘In the conference Juan and
 María talked together’

If both PPs from each sentence in (5) occupied the same configurational position, it would be compulsory to coordinate them by using *y* ‘and’: *en el armario y en la habitación de sus padres* ‘in the wardrobe and in his parent’s room’, *en su mamá y en el internado* ‘about her mum and at the boarding school’. However, the grammaticality of (5), where the PPs are not coordinated, suggests that these PPs occupy different configurational positions. The examples in (6) bear out this analysis: the ambiguity of (6a), whereby *en el cochecito* could be either the final location of the trading cards or the place in which Rodrigo stacks the trading cards, has a structural nature; the ambiguity of (6b), whereby Juan talked with María or they talked together, has the same nature. Therefore, the distinction between selected and non-selected PPs is syntactically relevant and, thus, justified.

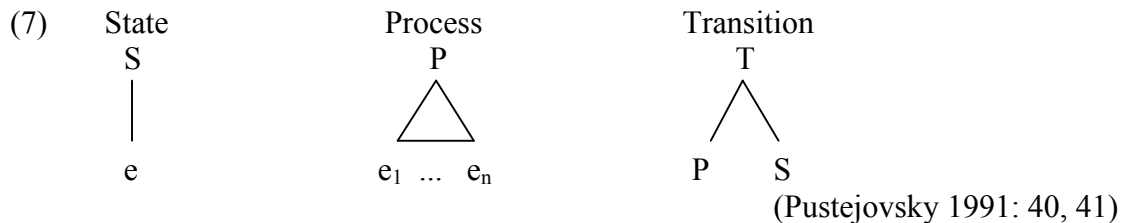
So, the pending question is whether the distinction between PP-arguments (PP-As) and PP-complements (PP-Cs),⁵ instantiated in (3) and (4) respectively, is syntactically relevant. In this paper I will review the main studies which defend this distinction and I will try to counter them, by proposing that a unified syntactic analysis of both types of argument PPs can account for the main syntactic and semantic problems they pose. The rest of the paper is organized as follows: section 3 presents the theoretical framework; section 4 reviews some of the previous accounts regarding the PP-As and PP-Cs distinction; my proposal will be laid out in section 5 and applied to the analysis in section 6; section 7 presents the main conclusions.

⁵ This is Neeleman’s terminology. For him, PP-As are true verbal arguments: *live [on the third floor]_{PP}*, hence the term *argument*. On the contrary, PP-Cs are not verbal arguments, because the preposition is incorporated into the verb; rather, the prepositional object is the argument of the resulting complex verb: *[believe in_i] [t_i Bill’s promises]_{PP}*. Thus, Neeleman calls these PPs *complements* because they are constituents syntactically selected by the verb, but they are not (semantic) arguments of the verb. I do not assume Neeleman’s claim, but I will follow his terminology for convenience sake.

3. Theoretical framework: The Generative Lexicon

I will argue that Pustejovsky’s Generative Lexicon (GL) theory (Pustejovsky 1991, 1993, 1995, 1998, 2000, 2001, 2006, 2011, 2012), developed, amplified and applied to Spanish by De Miguel (2004, 2006, 2007, 2008, 2009, 2011, 2012), is appropriate to explain the behavior of argument PPs. According to the latter, Pustejovsky’s model is *lexicist*, because it presupposes that the syntax of words is determined by their meaning; *generative*, because it tries to account for language creativity by means of a limited number of universal principles and mechanisms of word combination; and *compositional*, because it postulates that the different senses a word can acquire hinge on its syntactic context. According to the GL, the lexicon is a dynamic, structured and coherent system of knowledge based on universal principles that provide an explanation for how the minimal lexical entries acquire different senses depending on the context. The assumption that words have only partially specified definitions which become specific when combined with other words is called *underspecification*. In addition, Pustejovsky emphasizes that his theory tries to study word meaning, not world knowledge: for instance, we are not interested in studying the action of *saltar* ‘jump’ as it occurs in the world, but the word meaning that the Spanish encodes.

The GL is supported by the following three tenets: the Event Structure (ES), the Qualia Structure (QS) and the Lexical Typing Structure (LTS). The ES is associated with aspect; for Pustejovsky (1991) events can be decomposed into subevents or phases, and he distinguishes three classes: states (*be sick, love, know*), events evaluated relative to no other events; processes (*run, push, drag*), sequences of events identifying the same semantic expression; and transitions (*give, open, build, destroy*), events identifying a semantic expression evaluated relative to its opposition. Processes are equivalent to Vendler’s (1967) activities and transitions are equivalent to accomplishments and achievements. A transition is composed of two phases, a process and a change of state:



The QS encodes word meaning in four qualia roles: the agentive quale refers to factors involved in its origin or “coming into being”; the constitutive quale encodes information about its constituent parts; the formal quale distinguishes it within a larger domain; and the telic quale alludes to its purpose or function. Below I reproduce several examples, from De Miguel (2009: 348), in which we can observe how the complements of the name *pista* ‘floor’ can refer to the information encoded in those four qualia:

- (8)
- | | |
|--|----------------------|
| a. una pista {artificial, municipal, de diseño...} | [agentive quale] |
| ‘a(n) {artificial/municipal/designer...} floor’ | |
| b. una pista {de hierba, de cemento, de hielo...} | [constitutive quale] |
| ‘a(n) {grass/cement/ice...} floor’ | |
| c. una pista {rojiza, cubierta, rectangular...} | [formal quale] |
| ‘a(n) {reddish/indoor/rectangular...} floor’ | |

- d. una pista {de baile, de tenis, de patinaje...} [telic quale]
 ‘a {dancing/tennis/skating} floor’

Finally, the LTS provides a structured description of lexical-semantic types, based on multiple inheritance. There are natural types, i.e. entities existing in nature, whose meaning is defined in the constitutive and formal qualia: *rock*, *water*, *tree*, etc.; functional types, i.e. artificially created entities that have a function: *knife*, *teacher*, *beer*, etc.; and complex types, i.e. entities composed of at least two types, which are systematically polysemic: *book* (object, information), *conference* (object, event), *lunch* (food, event), etc. To differentiate between natural and functional kinds, Pustejovsky (1995, 2001, 2006) offers some diagnostics. For example, natural kinds are not compatible with verbs of creation, such as *begin*, because their agentive quale is underspecified: #*I began the tree* is only interpretable if the tree is a drawing, for example, which is not a natural type. On the other hand, functional types are compatible with *begin*: *I began my thesis*. Given that a natural kind does not have a function, it cannot combine with a verb requiring a functional object, such as *enjoy*: #*I enjoyed the rock*, only interpretable if we give it a function (see the mechanism *coercion by introduction* below). By contrast, a functional object can combine with *enjoy*: *I enjoyed the beer*. Finally, in order to recognize complex types, we can check if they have properties of two or more types at the same time. For example, *book*, like natural kinds, can be identified as a physical object, as in *The book is red*, where *red* is a physical property. Like functional types, it can combine with *begin* and *enjoy*: *I {began/enjoyed} the book*. In addition, if *book* is modified by the adjective *good*, as in *a good book*, it can refer either to physical object properties, e.g. *It is a resistant book*, or to information properties, e.g. *It is an interesting book*. So *book* is a complex type composed of two types: object, a natural type, and information, a functional type.

The GL includes generative mechanisms of word combination, namely: (pure) selection, accommodation, coercion by exploitation and coercion by introduction. (Pure) selection is type-matching: a predicate is directly satisfied by the type of the argument; in this case, there is no type adjustment. For example, the verb *spoil* selects a functional type, so in the sentence *The beer spoiled*, where *beer* is a functional type, there is type matching between *beer* and *spoil*. Accommodation is the mechanism whereby the type a predicate requires is inherited through the type of the argument. For example, *listen* requires an argument denoting a sound; in the sentence *He listened to music*, accommodation operates to assign the type [+sound] to *music*, which is possible because music is a kind of sound. Coercion by exploitation operates when the predicate imposes the type by taking a part of the argument’s lexical entry. For example, the verb *fall* requires a natural type, such as *rock*. Nevertheless, it can combine with a complex type, such as *book*, as in *The book fell*, because the predicate can coerce the complex type into referring only to the physical aspect of the book. Lastly, coercion by introduction operates when the predicate imposes the type by wrapping the argument. For example, the verb *spoil* requires a functional type, so in *The water spoiled*, where *water* is a natural type, the predicate *spoil* wraps the type of *water* giving it a function (to be drunk) and, thus, turning it into a functional type.⁶

These are the four generative mechanisms expressed in formal terms:

⁶ Another generative mechanism is explicitly mentioned in Pustejovsky (1995): *co-composition*. It operates when the argument shifts the type of the predicate. For instance, in *The bottle floated into the cave*, the PP *into the cave* changes the event nature of *float* from a process to a transition.

- (9) a. PURE SELECTION: The type a function requires of its argument, A , is directly satisfied by that argument's typing: $[A_\alpha]_\alpha F$
 b. ACCOMMODATION: The type a function requires is inherited through the type of the argument: $[A_\beta]_\alpha F, \alpha \sqcap \beta \neq \perp$
 c. COERCION: The type a function requires is imposed on the argument type. This is accomplished by either (where \odot represents the disjunction of the two constructors, \otimes and \bullet):
 i. *Exploitation*: selecting part of the argument's type structure to satisfy the function's typing: $[A_{\alpha\odot\tau}]_\beta F, \alpha \sqsubseteq \beta$
 ii. *Introduction*: wrapping the argument with the type the function requires: $[A_\alpha]_{\beta\odot\sigma} F, \alpha \sqsubseteq \beta$
- (Pustejovsky 2006: 30)

In line with this proposal, De Miguel has developed, in the course of many studies, the concept of '(sub)lexical feature agreement processes', which subsumes the generative mechanisms of the GL and accounts for word combination in a sense I assume in this paper, as shown in sections 5 and 6. Due to space limitations, I will not be able to describe the GL in detail here; see De Miguel (2009) for a summary or Pustejovsky's references to study the model in more depth.

4. Previous accounts

4.1. PP-As versus PP-Cs

Having presented the theoretical framework, I will review the main proposals defending the split between PP-As and PP-Cs. As pointed out in section 2, PP-As provide spatial information, as in *Juan vive en Madrid* 'Juan lives in Madrid', while PP-Cs provide abstract information, as in *Juan cree en sí mismo* 'Juan believes in himself' (see again examples (3) and (4)). Other syntactic and semantic properties are provided in order to confirm this split, which we will examine below.

4.1.1. Case assignment

For Hestvik (1991), the preposition in PP-Cs, unlike the preposition in PP-As, does not assign a θ -role (see section 4.1.4.) and it is only a case marker. According to Hestvik, prepositional verbs do not have the capacity to assign the accusative case. However, he does not explain why there are verbs which can assign the accusative case and why there are others which cannot. As argued in section 5, not only unaccusative verbs select a PP, but also some unergative verbs (which do have the little verb projection *sv*), such as *rely (on)* or *believe (in)*, which rules out the hypothesis that a verb selects a preposition due to its incapacity to assign the accusative case. Moreover, Hestvik's hypothesis does not explain why prepositional verbs assign many different cases or, in other words, why prepositional verbs select many different prepositions: *rely on, look at, deal with, vote for, invest in*, etc.

Botwinik-Rotem (2004, 2011) notes that the Russian case assignment system does provide evidence in favor of the split between PP-As and PP-Cs. For Botwinik-Rotem, the preposition *na* 'on' bears the locative case in the first case, but the accusative case in the second one, which reveals that in PP-As the case assignment is crucially different from PP-Cs. The same holds for the preposition *v* 'in' in (11):

- (10) a. On našol konfet-u na stol-e.
he found candy-ACC on table-LOC
 ‘He found the candy on the table’
 b. On pologayetsa na {Saš-u / yevo intu’ici-yu}.
he relies on Sacha-ACC his intuition-ACC
 ‘He relies on {Sacha/his intuition}’
- (11) a. On našol konfet-u v karman-e.
he found candy-ACC in the pocket-LOC
 ‘He found the candy in the pocket’
 b. On verit v {Saš-u / etu teori-yu}.
he believes in Sacha-ACC his theory-ACC
 ‘He believes in {Sacha/his theory}’

However, when the PP-A has directional meaning rather than locative, it also bears the accusative case, as in the next examples (other authors have observed a similar phenomenon in German (Gehrke 2007a, 2007b; Abraham 2010)):

- (12) a. Maria sela na divan.
Maria sat on sofa-ACC
 ‘Maria sat on the sofa’
 b. Maria vošla v komnat-u.
Maria entered in the room-ACC
 ‘Maria entered the room’

In conclusion, sentences (10), (11) and (12) demonstrate that in Russian there are no differences as far as case assignment is concerned between PP-As and PP-Cs.

4.1.2. Binding

Hestvik (1991), Botwinik-Rotem (2004, 2011) and Abraham (2010) point out that PP-As and PP-Cs behave differently with respect to binding. For example, Botwinik-Rotem claims that the subject of PP-As can bind pronouns contained in the PPs but cannot bind anaphors, as in (13a); PP-Cs show reverse behavior, cf. (13b). Abraham shows similar examples, reproduced in (14):

- (13) a. Dan_i put the book near {him_i/??himself_i}.
 b. Dan_i talked about {*him_i/himself_i}.
- (14) a. The group_i sat under a big rain shelter above {them_i/*themselves_i}.
 b. The group_i laughed about {*them_i/themselves_i}.

However, other binding data pose problems for the distinction between PP-As and PP-Cs:

- (15) John_i put the picture behind {him_i/himself_i}.
 (Hestvik 1991: 463)
- (16) I_i believe in {me_i/myself_i}.

The contrast in acceptability between (13a) and (14a), on the one hand, and (15), on the other, can be explained in two ways: either Botwinik-Rotem and Hestvik disagree on the grammaticality judgments or judgments change depending on the preposition, which would imply that there are two different syntactic analysis for the

same verb (*put*). Furthermore, there are cases in which the subject of a PP-C can bind a pronoun—see (16)—.

As for Spanish language, there is no contrast between PP-As and PP-Cs, given that subjects can bind both kinds of PPs in an appropriate syntactic environment:

- (17) a. Juan_i puso los libros delante de {él_i/sí mismo_i}.
Juan put the books in front of him himself
 ‘Juan put the books in front of {him/himself}’
 b. Juan_i solo piensa en {él_i/sí mismo_i}.
Juan only thinks at him himself
 ‘Juan only thinks about {him/himself}’

In sum, I believe that the binding test is not very conclusive.

4.1.3. Commutation

Some authors, such as Botwinik-Rotem (2004, 2011) and Abraham (2010), make use of the commutation test: only PP-As can be replaced with spatial adverbs:

- (18) a. Dan sleeps {in the garden/here}.
 b. Where does Dan sleep?
 (19) a. Dan believes in {love/*here}.
 b. *Where does Dan believe?
 (20) a. My place of birth lies on this hill and I still live there.
 b. *I relied on his promise and she relied there as well.
 (21) *Juan se identifica con María y ella allí también.
Juan identifies with María and she there too
 ‘Juan identifies with María and she there too’

However, the ungrammaticality of the above sentences resides in the fact that English, like Spanish, lacks adverbs or pronouns which replace non-spatial PPs. There are other languages, such as French or Catalan, in which substitution is homogeneous in both classes of argument PPs, with pronouns *y* and *en* in French—(22), (23)—, *hi* and *en* in Catalan—(24), (25)—:

- (22) a. Il va à Paris → Il y va.
he goes to Paris he there goes
 ‘He is going to Paris → He is going there’
 b. Il pense à Paris → Il y pense.
he thinks to Paris he there thinks
 ‘He is thinking about Paris → He is thinking about it’
 (23) a. Il vient de Paris → Il en vient.
he comes from Paris he from there comes
 ‘He is coming from Paris → He is coming from there’
 b. Il parle de Paris → Il en parle.
he speaks from Paris he from there speaks
 ‘He is speaking about Paris → He is speaking about it’
 (24) a. Ell va a Barcelona → Ell hi va.
he goes to Barcelona he there goes
 ‘He is going to Barcelona → He is going there’

- b. Ell pensa en Barcelona → Ell hi pensa.
he thinks at Barcelona he there thinks
 ‘He is thinking about Barcelona → He is thinking about it’
- (25) a. Ell torna de Barcelona → Ell en torna.
he comes back from Barcelona he from there comes back
 ‘He is coming back from Barcelona → He is coming back from there’
- b. Ell parla de Barcelona → Ell en parla.
he speaks from Barcelona he from there speaks
 ‘He is speaking about Barcelona → He is speaking about it’

In view of the above data, commutation of argument PPs in French and Catalan is yet more proof confirming that PP-As and PP-Cs do not differ syntactically.

4.1.4. θ -role assignment

This is perhaps the most controversial aspect of the PP-A/PP-C distinction. Botwinik-Rotem (2004, 2011) believes that, although in PP-As it might be the case that the preposition assigns θ -role, in PP-Cs the preposition cannot be a θ -assigner; rather, the whole PP is assigned the θ -role by the verb. For Botwinik-Rotem verbs and not prepositions are canonical θ -assigners and there is no reason to think that the former need the assistance of the latter. Moreover, it is difficult to identify the minimal meaning of the preposition *in* in *John believes in ghosts*, for example. I do not agree with Botwinik-Rotem’s proposal, because I consider that the preposition participates in the θ -role assignment and that it contributes notional (spatial) meaning (see below).

For Hestvik (1991) and Abraham (2010), the preposition in PP-As assigns its specific θ -role to its complement. For example, in *John put the flowers on the table*, *on* assigns its own θ -role to *the table*. On the other hand, the preposition in PP-Cs does not have this capacity, and it is the verb which directly discharges its θ -role to the complement of the PP. For example, the verb *rely* in *John relies on his friends* discharges its θ -role to *his friends*. However, as Neeleman (1995, 1997) points out, we cannot assume that the preposition in PP-Cs does not participate in the θ -role assignment:

- (26) a. John always believes Bill.
 b. John always believes in Bill.

(26a) means that John believes what Bill says, whereas (26b) means approximately that John trusts Bill. Therefore, the preposition *in* contributes notional meaning.⁷

⁷ Botwinik-Rotem (2004, 2011) explains the contrast between *believe* and *believe in* in another fashion. She argues that the preposition is devoid of meaning and that the semantic differences between the two constructions are due to the verb: the verb assigns two different θ -roles in the transitive construction and in the prepositional one. For example, when the Hebrew verb *ba’at* ‘kick’ selects a theme, it realizes it as a DP, as in *dan ba’at et ha-even* ‘Dan kicked the stone’; by contrast, when the same verb selects a goal, it realizes it as a PP, as in *dan ba’at ba-even* ‘Dan kicked at the stone’, where *ba-* is a preposition. Botwinik-Rotem considers that this happens because the so-called underspecified roles, i.e. targets and goals, must be realized as PPs (following Reinhart’s (2002) theta theory). However, although this hypothesis might account for the meaning differences displayed by verbs alternating between a transitive and an oblique government, such as *believe (in)*, it does not account for the meaning differences in verbs allowing prepositional alternation, such as *convertir {en/a}* ‘turn into, convert {at/to}’ or *belong {to/on/in}*, which undoubtedly are due to the preposition. I will return to this question in section 4.1.5.

Neeleman claims that in PP-As the preposition assigns its own θ -role—as do Hestvik and Abraham—, whereas in PP-Cs the verb and the preposition assign θ -role jointly to the complement of the preposition. Neeleman considers that the preposition is incorporated into the verb in the Logical Form—that is: the incorporation is not syntactic, but covert or semantic—, which explains how the verb plus the preposition assign the θ -role jointly. However, the problem with this proposal is analogous to the problems pointed out in previous sections: it presupposes that θ -role assignment in PP-As is different from θ -role assignment in PP-Cs. We can observe this in the following sentences:

- (27) a. El cazador cayó {en la trampa para osos/en los mismos errores}.
the hunter fell at the bear trap at the same mistakes
 ‘The hunter fell into {the bear trap/the same mistakes}’
 b. El cazador incurrió {*en la trampa para osos/en los mismos errores}.
the hunter fell at the bear trap at the same mistakes
 ‘The hunter fell into {the bear trap/the same mistakes}’
- (28) Metió los libros {en/*sobre} el cajón.
kept the books at on the drawer
 ‘S/he kept the books {in/on} the drawer’

The problem of accepting two ways of assigning the θ -role is that it would be performed in one fashion in the case of *caer* ‘fall’—(27a)—, while it would be performed in another fashion in the case of a verb with similar meaning but in figurative sense, like *incurrir*—(27b)—. The verb *caer* itself would be analyzed in two ways, because it can express spatial and abstract meaning.

In addition, there is empirical evidence that the verb also selects the preposition in PP-As, as shown in (28). The preposition *sobre* ‘on’ is compatible with the determiner phrase (DP) *el cajón* ‘the drawer’, as confirmed by the grammaticality of *Puso el libro sobre el cajón* ‘S/he put the book on the drawer’. However, this preposition cannot be used in (28) because it is incompatible with the verb *meter* ‘keep, put into’. Finally, there are prepositional verbs which can be used without their PP-C, as in *Juan está siempre alardeando (de...)* ‘Juan is always bragging (about...)', which proves that the meaning of the verb is independent from the PP-C, and this is the main reason why I think that the preposition is not incorporated into the verb.

In sum, if in both PP-As and PP-Cs the preposition provides notional meaning, the verb selects the preposition and the meaning of the verb is independent from the PP, then I believe that there is no reason to suppose that θ -role assignment in PP-As is different from θ -role assignment in PP-Cs.

4.1.5. Prepositional selection

Botwinik-Rotem (2004, 2011) argues that in PP-Cs the selection of the preposition by the verb is idiosyncratic and rigid. In light of what has been argued in the previous subsection, we can confirm that the selection is motivated, since the preposition provides some underspecified but relevant meaning components which impact on the meaning of the whole sentence, and this meaning has to be compatible with the meaning of the verb. As for the assumption of rigidity, a full-fledged spatial verb such as *provenir* ‘come’ only selects one preposition, *de* ‘from’, but there is no doubt that this preposition has the notional meaning required by the verb. In addition, many other prepositional verbs allow prepositional alternations which change the meaning of the sentence:

- (29) a. La bruja convirtió al príncipe {en/*a} sapo.
the witch turned to+the prince at to toad
 ‘The witch turned the prince into a toad’
 b. El extranjero se convirtió {*en/a} el cristianismo.
the foreigner converted at to the Christianity
 ‘The foreigner converted to Christianity’
 c. Convirtieron los euros {en/a} dólares.
turned the euros at to dollars
 ‘They turned the euros into dollars’ or ‘They converted the euros to dollars’
- (30) a. The book belongs to Mary.
 b. The plates belong on the table.
 c. This page belongs in that book.

In the example (29a) we understand that the entity *the prince* undergoes a physical change, whereas in (29b) the foreigner changes one of his/her properties: his/her religion. The interpretation of (29c) depends on the preposition: with *en* the euros are either physically transformed into dollars or replaced with dollars, whereas with *a* we understand that someone calculated the equivalence in dollars from an amount in euros—I will analyze the verb *convertir* in depth in section 6.2.—. In (30a) there is a relationship of possession—Mary is the owner of the book. In (30b) there is a locative relationship, whereby the appropriate place of the plates is the table. Finally, in (30c) a whole/part relationship is encoded, whereby the page is a part of the book. In both (29) and (30) the role of the preposition is crucial to encode the different meanings displayed by the sentences; in other words, the meaning of *convertir* {en/a} and *belong* {to/in/on} is compositionally construed by the verb and the PP.

4.1.6. PP-subjects

For Neeleman (1995, 1997) the existence of PP-subjects derived from PP-As, as in *Under the bed is a good hiding place*, proves that in these cases the preposition maintains its independence. By contrast, it is not usual to find a PP-subject derived from a PP-C, because in PP-Cs the preposition is incorporated into the verb (in the Logical Form) and, as a consequence, the preposition loses its independence.⁸ I do not agree with this analysis because, as argued above, there are some prepositional verbs that can appear without their PP-C, like *brag*, which indicates that the verb and the preposition do not form a semantic unit. In addition, it is doubtful that the meaning of a verb such as *believe* ‘think something is true’ plus the meaning of the preposition *in* give rise to the meaning of *believe in* ‘trust’. This is the reason why Chang (2011) argues that the verb plus the preposition form a unit built not in the syntax, but in the lexicon, as in the case of idioms, where the sum of the meaning of their constituent parts is bigger than the meaning of each part separately. In addition, for Chang these verb-preposition lexical units are divided into two types: a frozen type, such as *decide on*, which has associated a particular idiomatic meaning (‘choose’), and a productive template, such as *(look)-at*, which has a slot (marked by the brackets) for the verbs sharing the basic meaning of ‘looking’, like *look, stare, gaze, gape*... However, his proposal poses an important problem: the units built in the lexicon do not have correspondence in the syntax; for example, assuming that the alleged lexical units *decide on* and *(look)-at* do not form a constituent in the syntax seems rather counterintuitive. I conclude that the verb plus the preposition do not form a unit even

⁸ Indeed, the explanation is more complex; details in Neeleman (1997).

in the lexicon. In my view, the meaning of prepositional verbs is construed compositionally by both the verb and the PP through a lexical mechanism of coercion, and there is no need to resort to either a covert syntactic incorporation⁹ or to a lexical one.

So how can we explain the existence of PP-subjects derived from PP-As and not from PP-Cs? In my opinion, the oddity of a sentence such as *??On John is better than on Mary* (derived from *S/he relies on John*) is due to semantic factors. When the preposition appears alone, it is the only predicate that imposes semantic constraints to its object. If we assume that *on* lexicalizes locative meaning, a locative reading is the only possibility in the case of this PP-subject. As a consequence, entities that do not represent locations, such as humans, cannot combine with the preposition *on*, which accounts for the unacceptability of the sentence in question. In sections 5 and 6 I will explain how a non-locative verb like *rely* can combine with a locative preposition like *on* through the mechanism of coercion by introduction. The idea is that prepositions have spatial meaning by default and, only when they are required by an abstract verb, they express abstract meaning too.

4.1.7. Spatial versus abstract meaning

Indeed, the only difference that might justify the split between PP-As and PP-Cs is that they express different kinds of meanings. The former denote spatial relations, as in *John put the books on the table*, whereas the latter denote abstract relations, as in *John relies on Mary*. However, as pointed out in section 2, we have to account for the division between adjuncts, arguments and complements from a syntactic point of view. In other words, I think there is no reason to suggest one syntactic function for the PP in *John resides in Madrid* and a different one for the PP in *Sovereignty resides in the people*, even if the former denotes spatial meaning and the latter does not, just as there is no reason to suggest a different syntactic function for the DP in *I crossed the street* and in *I broke the glass*, although the former has spatial meaning

⁹ Of course, I do not consider either that pure syntactic incorporation exists. There is empirical evidence which demonstrates that the verb plus the preposition do not form a constituent: firstly, PP-Cs, unlike particles, can be coordinated, as in (i); secondly, the preposition of the PP-Cs, unlike particles, can be pied-piped, as in (ii):

- (i) a. Bart relies on Lisa and on Homer.
b. *Bart gave up Lisa and up Homer.
- (ii) a. On whom does he rely?
b. *Up what did he give?

(Botwinik-Rotem 2011: 21)

As for preposition stranding, as in *Who are you talking to?*, I do not agree that it proves that the verb plus the preposition form a constituent: firstly, stranding is also possible with the preposition of adjuncts, as in *Who are you playing with?*; secondly, what this phenomenon really proves is that it is possible to extract a DP from a PP, as in *Who_i are you talking [to t_i]_{PP}?*, in the same way that it is possible to extract a DP from a VP, as in *What_i did you [buy t_i]_{VP}?* These facts of English language reinforce the idea that prepositions resemble verbs, in the sense that they are predicates whose complements can be extracted.

As for pseudopassives, like *John was relied on*, some authors have proposed a verb-preposition reanalysis (Chomsky 1965; Hornstein & Weinberg 1981; Van Riemsdijk & Williams 1986; among others). I believe that this analysis presents similar shortcomings: the raised subject can be the original prepositional object of an adjunct: *These dolls have been played with* (Ramchand & Svenonius 2004), and the extraction of a DP from a PP does not imply that the verb plus the preposition form a constituent: *John_i was relied [on t_i]_{PP}*. More arguments against the verb-preposition reanalysis in pseudopassives are found in Takami (1992) and Klingvall (2012).

and the latter does not. Personally, I think that both types of PPs are placed in the same syntactic position—the syntactic position of PP-As, given that both are argument PPs.

As a consequence, I do not agree with Baker's (2003) proposal namely that PP-Cs are obligatory adjuncts, that is, PPs which are located in the syntactic position of adjuncts which necessary appear in order to guarantee the grammaticality of the sentence (for example, for Baker the PP *on the checks* in *Chris depends on the checks* is situated in the position of adjuncts). As argued in section 2, the distinction between adjuncts and arguments is syntactically relevant; so if we regarded PP-Cs as adjuncts, we could not account for the data in (5) and (6). I conclude that any argument PP has to be placed in the same syntactic position.

To sum up, we have seen that the main properties usually ascribed to PP-As and PP-Cs in generative literature are shared by both types of argument PPs, therefore the split is not justified syntactically. The main conclusions are summarized in the following table:

	PP-arguments (PP-As)	PP-complements (PP-Cs)
Case assignment	The existence of prepositional verbs is not due to the verb's incapacity to assign accusative case	
	In Russian, the prepositions <i>na</i> 'on' and <i>v</i> 'in' assign the accusative case when they denote directional meaning	In Russian, the prepositions <i>na</i> 'on' and <i>v</i> 'in' assign the accusative case
Binding	Inconclusive	
Commutation	Homogeneous with French and Catalan pronouns (<i>y, en</i> and <i>hi, en</i>)	
Θ-role assignment	Homogeneous: The verb and the preposition provide conceptual meaning, the verb selects the preposition and the verb plus the preposition do not form a semantic unit	
Prepositional selection	Homogeneous: The verb selects a preposition which contributes conceptual meaning	
PP-subjects	Possible	Odd. If the PP occupies a specifier position, there is no verb coercing it into denoting abstract meaning
Kind of meaning	Spatial	Abstract

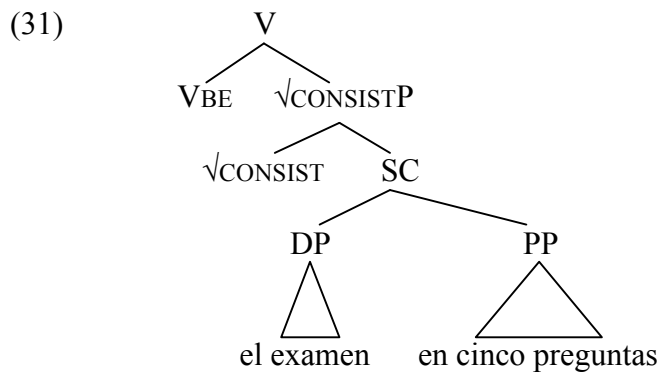
4.2. Two groups of prepositional verbs: proposals by Demonte (1989, 1991) and Gallego (2011)

Demonte (1989, 1991) distinguishes two groups of prepositional verbs: unaccusative (*constar de* 'consist of', *consistir en* 'consist of, in', *versar sobre* 'deal with', etc.) and transitive (*pensar en* 'think about', *prescindir de* 'dispense with', *renunciar a* 'renounce', etc.). Prepositions of the former are lexical, while prepositions of the latter are semantically empty¹⁰ and their function is only to change the aspect of the transitive construction, whenever there is such a construction; for Demonte the sole difference between *pensar una palabra* 'think a word' and *pensar*

¹⁰ This is the main reason why Demonte treats these verbs as canonical transitives, like *build* or *destroy*.

en una palabra ‘think about a word’ is that the former is a transition and the latter is a process. However, *pensar una palabra* means one thing, ‘make an effort to get a word to come to mind’, whereas *pensar en una palabra* means something else, ‘put thought into it’. As we have seen in section 4.1.4., in English *believe Bill* means that someone thinks Bill says the truth, while *believe in Bill* roughly means that someone trusts him. The same holds for its Spanish equivalent *creer (en)*. An additional counterargument, as pointed out in Simoni (2005), is that in some cases the preposition does not change the aspect, as in *Crejó (en) la historia de su familia {durante años/*en dos años}* ‘S/he believed (in) her/his family’s story {for years/in two years}’, where both *creer* and *creer en* are states. In sum, the presence of a preposition always causes meaning variation and does not always affect the aspect. Gallego (2011) refines Demonte’s hypothesis and talks about unaccusative versus unergative prepositional verbs, implying that the preposition of the latter group can also be considered lexical.

However, the main aspect of Demonte’s analysis, essentially accepted by Gallego, is that there is a crucial syntactic difference between the two groups. According to Demonte, the argument PP in transitive prepositional verbs is generated in the position of DOs; for Gallego, who claims that these verbs are not transitive but unergative (see above), the PP is generated in the adjunct position. Owing to its syntactic independence, the PP can be omitted in certain contexts, as in *Las personas tímidas siempre alardean (de...)* ‘Shy people always brag (about...)’. On the other hand, according to both authors, the subject of unaccusative verbs and the argument PP are generated in the position of DOs, forming a SC:



(Gallego 2011: 11)

Due to the syntactic interdependence between the subject and the PP, the latter cannot be omitted, as in *El examen consistió *(en cinco preguntas)* ‘The exam consisted *(of five questions)’. However, although this hypothesis may account for the fact that unaccusative verbs do not generally omit their PP, it poses serious problems for the analysis of unergative verbs, because some of them do not permit their PP to be omitted:

- (32) a. La empresa prescindió *(de los empleados).
the company dispensed from the workers
 ‘The company dispensed (with the workers)’
 b. El enemigo optó *(por la retirada).
the enemy opted for the withdrawal
 ‘The enemy opted (for the withdrawal)’

- c. El pirata cuidó *(del tesoro).
the pirate took care of+the treasure
 ‘The pirate took care (of the treasure)’

We can say that the verbs in (32) are unergative, according to the usual unergative tests. They can be used in impersonal clauses with the existential particle *se*: *Se prescindió de los empleados* ‘The workers were dispensed with’, *Se optó por la retirada* ‘The withdrawal was opted for’, *Se cuidó del tesoro* ‘The treasure was taken care of’. They are shown in third person plural in impersonal clauses with arbitrary reading: *Prescindieron de los empleados* ‘They dispensed with the workers’, *Optaron por la retirada* ‘They opted for the withdrawal’, *Cuidaron del tesoro* ‘They took care of the treasure’. The subjects are not shown in absolute participle constructions: **Prescindida la empresa* ‘Dispensed the company’, **Optado el enemigo* ‘Opted the enemy’, **Cuidado el pirata* ‘Taken care the pirate’. Finally, these verbs are compatible with adverbs of purpose: *La empresa prescindió de los empleados deliberadamente* ‘The company dispensed with the workers deliberately’, *El enemigo optó por la retirada intencionadamente* ‘The enemy opted for the withdrawal intentionally’, *El pirata cuidó del tesoro voluntariamente* ‘The pirate took care of the treasure voluntarily’.¹¹

However, contrary to Demonte and Gallego’s proposal, in (32) the argument PP cannot be omitted. Thus, there is no directed link between the possibility of omitting the PP and the fact that a verb is unaccusative or unergative. I do not think either that the possibility of omitting the argument PP is determined by extralinguistic factors, as Tornel (2006) suggests, because the data have to be explained on the basis of the properties of words. For instance, the sentence **El examen consistió* ‘The exam consisted’ is ungrammatical in Spanish due to the properties of the words that make it up, and not to our world knowledge about *exams* or the real event of *consist*. This phenomenon is determined by semantic factors and, more specifically, by the verb’s capacity to predicate something by itself.¹² The sentence **El examen consistió* ‘The exam consisted’ is ungrammatical because the verb *consistir* by itself does not add any additional meaning to the semantics of *examen*; we could say that any exam has to consist of something, i.e. the exam does not acquire the property defined as *consistente* ‘consisting’. By contrast, *Ese lingüista discrepa (de...)* ‘That linguist disagrees (with...)', for instance, is a grammatical sentence because the verb alone predicates a new property of the subject; as a consequence, the linguist can be considered *discrepante* ‘dissenting’.

In conclusion, if the possibility of omitting argument PPs is determined by the semantic factors rather than by the syntactic ones, I do not think that it is a valid

¹¹ This test has to be specially refined. As it is pointed out in Cifuentes (1999), unaccusative verbs of movement sometimes co-occur with adverbs of purpose, as in *Llegó tarde deliberadamente* ‘He arrived late deliberately’. Besides, we should add that non-human subjects cannot co-occur with this kind of adverbs even with unergative verbs, as in **El papel voló por los aires deliberadamente* ‘The paper flew through the air deliberately’. As a consequence, what this test seems to prove exactly is the agentivity of the subject. Nevertheless, I think that in the case of (32) it is valid as an unergative test. *Dispense*, *opt* and *take care* are actions that need an agentive subject, so they do not accept a non-agentive one: **El paro prescindió de los trabajadores* ‘The unemployment dispensed with the workers’, **El tanque optó por la retirada* ‘The tank opted for the withdrawal’, **La isla cuidó del tesoro* ‘The island took care of the treasure’. I conclude that these verbs require an external cause argument and can be considered unergative.

¹² See De Miguel (2004) for a similar explanation with respect to the possibility of omitting the *by*-complement in Spanish passives.

argument to justify a different syntactic analysis of unaccusative and unergative prepositional verbs, as Demonte and Gallego defend; instead I believe that we must adopt a unified syntactic treatment and look for an explanation in the heart of the word, specifically in the QS.

5. The proposal

This section presents the original contribution of this paper, focused on Spanish. As pointed out in semantic-generative and cognitive literature (Jackendoff 1983, 1990; Moreno 2002; Talmy 2000; Croft & Cruse 2004; among others), languages often lexicalize abstract relations by means of spatial expressions. Given that prepositions lexicalize spatial relations (Jackendoff 1983, 1990; Svenonius 2007, 2010; Kracht 2008; Zwarts 2010; Pantcheva 2011; among others), they will play a crucial role in the case of prepositional verbs. If we recall section 4.1.4., the verb *caer* ‘fall’ lexicalizes, in principle, a spatial relation, as in *El cazador cayó en la trampa para osos* ‘The hunter fell into the bear trap’, but it can also express an abstract relation, as in *El cazador cayó en los mismos errores* ‘The hunter fell into the same mistakes’. On the other hand, the verb *incurrir* has a meaning similar to *caer*, but it only expresses an abstract relation, as in *El cazador incurrió en los mismos errores* ‘The hunter fell into the same mistakes’. The crucial fact is that both verbs select the same preposition, *en* ‘at’, which indicates that the abstract relation of *incurrir* is lexicalized by means of a spatial expression: *en sus propios errores* is an abstract field the hunter falls into. In order for this combination to be possible, it is required the lexical mechanism of coercion by introduction, whose definition is repeated in (33):

- (33) COERCION BY INTRODUCTION: The type a function requires is imposed on the argument type. This is accomplished by wrapping the argument with the type the function requires: $[A_\alpha]_{\beta \circ \sigma} F, \alpha \sqsubseteq \beta$

Thus, the verb coerces the PP by introduction into denoting an abstract field, which accounts for the fact that the meaning of the PP is only understandable in combination with the meaning of the verb; in other words, the meaning of the verb is independent from the meaning of the PP, but not vice versa.¹³ This hypothesis also accounts for the fact that prepositional verbs select a wide range of prepositions, as in *rely on*, *look at*, *deal with*, *vote for*, *invest in*, etc., because each verb lexicalizes its meaning through a particular spatial expression and, as a consequence, through a particular preposition. Even so, verbs sharing a basic meaning tend to select the same preposition: *{rely/depend/count/lean...}* on, *{laugh/scoff/smile/grin...}* at,

¹³ Hence, regarding their meaning, prepositional verbs are halfway between spatial constructions and idioms. First, in spatial constructions, like *put the book on the table*, both the verb and the PP have the same meaning as they have separately. Second, in prepositional verb constructions, like *believe in ghosts*, the verb keeps its meaning, but the meaning of the PP is *run* (coerced) by the meaning of the verb. Finally, in the case of idioms, like *jump on the bandwagon*, neither the verb nor the PP keeps the meaning each of them has separately; rather, the whole construction has associated a particular meaning.

As for prefixation, it is assumed that many verbs are formed through the incorporation of a preposition into the verb, such as *de* ‘from’ + *pendēre* ‘hang’ > *dependere* ‘depend’ or *con* ‘with’ + *fundēre* ‘melt’ > *confundir* ‘mix up’. So there is a crucial distinction between prefixation and prepositional verbs: in prefixation the preposition and the verb are inseparable; in other words, *dependere* and *confundir* are lexical items. By contrast, in prepositional verbs, such as *creer en* ‘believe in’, the preposition is not incorporated into the verb; in other words, *creer en* does not constitute a lexical item. The same holds for particles and prepositions in English: as argued in footnote 9, *give up* and *rely on* have different status, in the sense that *give up* is a lexical item and *rely on* is not.

{*invite/force/lead/encourage...*} *to*, etc., which indicates that languages tend to lexicalize abstract relations through similar spatial expressions. Finally, this hypothesis captures the fact that abstract PPs do not usually appear in a specifier position, as mentioned before in section 4.1.6. For example, ??*On John is better than on Mary* is an odd sentence because there is no verb coercing the PP into denoting abstract meaning, and the spatial reading is not possible because a human entity cannot be a location; if the verb appears, the sentence becomes acceptable, as in *Relying on John is better than on Mary*. Spatial PPs can appear in specifier positions because they do not need a verb coercing them: in *On the table is a good place for the flowers*, the PP *on the table* denotes spatial meaning because its head, the preposition *on*, denotes spatial meaning by default. The sentence *On the Liber Iudiciorum is better than on the Code of Hammurabi* is only grammatical in a spatial reading, where *on* means ‘on top of’. It does not have the abstract reading derived, for example, from *Relying on the Liber Iudiciorum is better than on the Code of Hammurabi*, because there is no verb coercing the PP.

The main idea is that a verb only resorts to a preposition when it needs to express a slightly different meaning.¹⁴ So, a verb requires, in principle, a noun phrase or a DP. If the QS of the verb and the QS of the DP are compatible, the result will be a transitive verb, like *construir* ‘build’ or *romper* ‘break’. If the verb does not find any DP with compatible semantic features, it will need a preposition, and this is the case of prepositional verbs, like *abusar de* ‘abuse’ or *versar sobre* ‘deal with’. Finally, some verbs allow both a transitive and an oblique construction, like *pensar (en)* ‘think (about)’ or *cumplir (con)* ‘comply (with), carry out’, depending on the compatibility of the QS of certain nouns with the QS of the verb. The verb takes a preposition because it is an event category, as the verb itself, and it is very underspecified. This is why it allows the verb to express a slightly different meaning. In general, the impact of the preposition on the verb consists in decreasing its intension and increasing its extension; for instance, the verb *hablar* ‘talk’ combines with just a few DPs, such as *un tema* ‘an issue’, *un asunto* ‘a subject’, *un problema* ‘a problem’, *un idioma* ‘a language’ and some more, whereas *hablar de* ‘talk about’ is almost unrestricted: *de una piedra* ‘about a stone’, *de un informe* ‘about a report’, *de un tema* ‘about an issue’, *de un problema* ‘about a problem’, and so on. Thus, we can find three different situations involving prepositional verbs. Firstly, there are verbs expressing one meaning in the transitive construction and a different meaning in the oblique one, like *pensar (en)* ‘think (about)’. Secondly, there are verbs expressing different meanings when used with different prepositions, like *convertir {en/a}* ‘turn into, convert’. Finally, there are prepositional verbs not allowing for alternation either in the construction or in the selected preposition, like *abusar de* ‘(lit.) abuse from’, because they only express one particular meaning. These verbs sometimes display prepositional alternation in non-formal varieties, which are very useful because they allow checking the hypothesis I argue for (see section 6.2.).

Beavers (2010) argues that the alternation between a transitive and an oblique construction, the so-called conative alternation, can be explained in terms of the strength of truth conditions. For Beavers, *John ate the pizza* entails *John ate at the pizza*, but not the other way around, because the transitive construction has the same or stronger truth conditions than the oblique one. Specifically, this author claims that the degree of affectedness of the internal argument in the transitive construction is

¹⁴ This hypothesis does not preclude that the oblique construction might be aspectually and/or syntactically different from the transitive one.

generally higher than the degree of affectedness of the internal argument in the oblique one: *John ate the pizza* expresses a quantized change, wherein the pizza undergoes a change of state (*eaten*); by contrast, *John ate at the pizza* expresses a non-quantized change, that is, a non-specific change for the pizza. This means that Beavers attributes these meaning differences to the constructions themselves, not to the preposition, as I am claiming in this paper. Assuming that Beaver's hypothesis can be applied to prepositional verbs, it presents an important shortcoming: although it can account for the transitive-oblique alternation, it does not account for the prepositional one, as in *convertir {en/a}* 'turn into, convert {at/to}' or *belong {to/on/in}*, where the construction is always oblique but the meaning changes depending on the preposition.

The transitive construction usually entails the oblique one, as in *Pintó la pared* 'S/he painted the wall', which entails *Pintó en la pared* 'S/he painted on the wall', and not vice versa. However, it is not always the case: neither *Juan contó a sus amigos* 'Juan counted his friends' (recall DOs in Spanish are often preceded by the functional preposition *a*) entails *Juan contó con sus amigos* 'Juan counted on his friends' nor *Juan contó con sus amigos* entails *Juan contó a sus amigos*, which implies that the truth conditions of the two constructions are simply different. The reason is that the two constructions have different meaning, which is due to the impact of the preposition. In sum, the hypothesis defended in this paper accounts, on the one hand, for both the oblique and the prepositional alternation and, on the other hand, explains the fact that the transitive construction and the oblique one have different truth conditions, which subsumes cases where the truth conditions of the transitive construction are stronger than the truth conditions of the oblique one, as in the case of *pintar (en)* 'paint (on)'.

The main question is why in a certain language, for example Spanish, a verb lexicalizes an abstract relation through a spatial one, as in *abusar de* 'from', whereas in English the equivalent verb, *abuse*, does not. To explain this contrast, it is useful to look at other verbs which work in a similar fashion; these verbs optionally lexicalize their meaning through a spatial expression. I want to focus on two groups. First, there is a group of consumption verbs, such as *comer* 'eat', *beber* 'drink' or *fumar* 'smoke', which resort to the preposition *de* 'from' in order to express the place from which the subject takes the substance to consume. Since this place is the same as the substance itself, the consequence is a partitive reading: the internal argument is partially consumed. In addition, the conative alternation produces aspectual changes: the transitive construction denotes a transition, in which the DO is gradually consumed, whereas the oblique one denotes a process, in which the PP is partially consumed:

- (34) a. (Se) comió la tarta {*durante/en} cinco minutos.
 ate the cake for in five minutes
 'S/he ate the cake {for/in} five minutes'
 a'. Comió de la tarta {durante/*en} cinco minutos.
 ate from the cake for in five minutes
 'S/he ate at the cake {for/in} minutes'
 b. (Se) bebió la cerveza {*durante/en} cinco minutos.
 drank the beer for in five minutes
 'S/he drank the beer {for/in} five minutes'
 b'. Bebió de la cerveza {durante/*en} cinco minutos.
 drank from the beer for in five minutes
 'S/he drank from the beer {for/in} five minutes'

- c. (Se) fumó el cigarro {*durante/en} cinco minutos.
smoked the cigarette for in five minutes
 ‘S/he smoked the cigarette {for/in} five minutes’
- c’. Fumó del cigarro {durante/*en} cinco minutos.
smoked from+the cigarette for in five minutes
 ‘S/he smoked from the cigarette {for/in} five minutes’

There is a second group of verbs, such as *saber* ‘know’, *disfrutar* ‘enjoy’ or *necesitar* ‘need’, which resort to the preposition *de* ‘from’ in order to express the place from which their subjects get an information or benefit. However, in contrast with the first group, the internal argument is not consumed and the conative alternation does not produce aspectual changes. In the following cases, the verbs are always states:

- (35) a. Supo la respuesta {durante/*en} cinco años.
knew the answer for in five years
 ‘S/he knew the answer {for/in} five years’
- a’. Supo de la respuesta {durante/*en} cinco años.
knew from the answer for in five years
 Lit. ‘S/he knew from the answer {for/in} five years’
- b. Disfrutó el verano en Valencia {durante/*en} cinco años.
enjoyed the summer at Valencia for in five years
 ‘S/he enjoyed the summer in Valencia {for/in} five years’
- b’. Disfrutó del verano en Valencia {durante/*en} cinco años.
enjoyed from+the summer at Valencia for in five years
 Lit. ‘S/he enjoyed from the summer in Valencia {for/in} five years’
- c. Necesitó un amigo {durante/*en} cinco años.
needed a friend for in five years
 ‘S/he needed a friend {for/in} five years’
- c’. Necesitó de un amigo {durante/*en} cinco años.
needed from the friend for in five years
 Lit. ‘S/he needed from a friend {for/in} five years’

Although there is no aspectual change, the conative alternation produces meaning differences: (35a) means that someone knew the answer, while (35a’) means that someone had some knowledge about the answer; (35b) means that someone spent the summer in Valencia enjoying himself/herself (so the enjoyment need not come from the summer), while (35b’) means that someone got enjoyment from the summer in Valencia (so the enjoyment does come from the summer); finally, (35c) means that someone needed the entity *a friend*, while (35c’) means that someone needed something from a friend (e.g. his/her computer skills, his/her help, etc.), which does not imply the necessity of the entity itself.

Lastly, as for *abusar* ‘abuse’, whose internal argument denotes an entity not ‘consumed’, but ‘misused’ or ‘used excessively’, it constitutes a process lexicalized through a spatial expression; specifically, *abusar* lexicalizes the [+retrospective orientation] feature:¹⁵ *Juan abusó *(de)l alcohol de la alacena {durante/*en} cinco*

¹⁵ As claimed in Zato (2011), the prepositions *de* ‘from’ and *a* ‘to’ are endowed with ‘orientation’. The difference between them is that *de* is oriented backwards or towards the beginning of the event, hence the feature [+retrospective orientation]: *Viene de Madrid* ‘He is coming from Madrid’, while *a* is

días (lit. ‘John abused (from) the alcohol of the cupboard {for/in} five days’). So, *abusar* lexicalizes that the misuse is taken out from the alcohol. In other words, if the verb *abusar* tries to combine with the DP *el alcohol de la alacena* ‘the alcohol of the cupboard’ in **Juan abusó el alcohol de la alacena* ‘John abused the alcohol of the cupboard’, the resulting sentence is ungrammatical, because the DP lacks the lexical-semantic feature [+retrospective orientation] required by the verb; so it resorts to the preposition *de*, and, in turn, the preposition selects the DP, forming a constituent (a PP). Finally, the verb coerces the PP into denoting an abstract source and the result is the well-formed sentence *Juan abusó del alcohol de la alacena*. On the contrary, the English verb *abuse* can combine directly with the selected DP, as in *John abused the alcohol of the cupboard*, because the verb does not encode its meaning through a spatial expression; rather, *abuse* denotes a transition wherein the alcohol is gradually abused, resulting in a change of state: *the abused alcohol*. So, *abuse* encodes that there is a point in the event from which the alcohol gets ‘misused’ or ‘used excessively’ and, consequently, it must be a transitive verb.

An anonymous reader asks why verbs with similar meanings can encode different features. The fact that *abusar* in Spanish, unlike English *abuse*, lexicalizes the [+retrospective orientation] feature, which captures the preceding contrasts, is idiosyncratic, that is, it depends on how each language lexicalizes the meaning of the verb (see also section 6.3. in this respect). Nevertheless, the possibilities are restricted: for example, a verb like *kill*, which lexicalizes the component RESULT according to Levin & Rappaport (2011),¹⁶ does not participate in the oblique construction: **John killed at Mary*, because this verb focus on the result, so it has a point in which the internal argument gets *killed* and, as a consequence, it must be transitive. Hence, it is very improbable that this verb can lexicalize its meaning through a spatial expression; the same holds for its Spanish equivalent *matar*. By contrast, if we assume that *abuse* and *abusar* share the basic meaning ‘misuse’ or ‘use excessively’, it is logically possible that one of them lexicalizes that the internal argument reaches a point in which it gets misused or used excessively and the other one does not. In conclusion, the encoding of certain features is not predictable, but neither is it unrestricted.

Before getting into the details of the analysis, I want to clarify how prepositional government works depending on the syntactic verbal class. If the verb is transitive, as *convertir algo* ‘turn into, convert’, it has two internal arguments and, as a consequence, it is mandatory that the second one is realized as a PP, since the verb needs another predicate to express a different meaning with respect to the PP. That is, in the sentence *La bruja convirtió los euros en dólares* ‘The witch turned the euros into dollars’, the DO expresses the entity that undergoes the change of state, *the euros*, and the PP expresses the final state of the DO, which is to be dollars.¹⁷ To express this contrast, a preposition is required.

oriented forwards or towards the end of the event, hence the feature [+prospective orientation]: *Va a Madrid* ‘He is going to Madrid’. See also section 6 in this respect.

¹⁶ According to these authors, there are two relevant ontological categories of verbs: manner verbs, which lexicalize the MANNER component, such as *stab*, *smear* or *pour*, and result verbs, which lexicalize the RESULT component, such as *kill*, *cover* or *fill*. More details in Levin & Rappaport (2011).

¹⁷ There are languages, like English, in which the verb can select two DOs, as in *John sent Mary the book*. Levin & Rappaport (2011) argue that this structure expresses ‘caused possession’, in contrast with the *to* construction, e.g. *John sent the book to Mary*, which expresses ‘caused motion’. Under the hypothesis of this paper, in the double object construction the verb does not need any preposition to differentiate the meaning of its two internal arguments. So, we have to suppose that there must be a

If the verb is unaccusative, like *depender* ‘depend’, it does not have a cause argument, but two internal arguments. Therefore, it is expected that the second one, which denotes the entity the theme depends on, is realized as a PP. In other words, since *depender* does not have a cause argument, as seen in **Juan depende a María del dinero* ‘John depends Mary on money’ (recall again DOs in Spanish are often preceded by the functional preposition *a*)—or, in terms of the Minimalist Program (Chomsky 1995), *depender* lacks the little verb projection *sv*, dominating the VP, in which it is checked and deleted the accusative case—, the theme is realized as a subject, resulting in *María_i depende h_i del dinero* ‘María_i depends t_i on money’. This explains why unaccusative prepositional verbs select a preposition. Observe the following examples:

- (36) a. Un soneto consta de dos cuartetos y dos tercetos.
a sonnet consists of two quatrains and two tercets
 ‘A sonnet consists of two quatrains and two tercets’
 b. Un soneto equivale a dos cuartetos y dos tercetos.
a sonnet is equivalent to two quatrains and two tercets
 ‘A sonnet is equivalent to two quatrains and two tercets’
 c. Un soneto tiene dos cuartetos y dos tercetos.
a sonnet has two quatrains and two tercets
 ‘A sonnet has two quatrains and two tercets’

As expected, unaccusative verbs such as *constar* ‘consist’ and *equivaler* ‘be equivalent to’ realize their second argument as a PP. Apparently, (36c) is an exception, but if we follow De Miguel (2008)’s hypothesis, we could say that *x tener y* ‘x have y’ is equivalent to ‘y is in x’. So the subject of *tener* is not a theme but a locative and, as a consequence, *tener* is not an unaccusative verb, which explains why it can select a DO—see Jackendoff (1983) and Hale & Keyser (2002) for a similar explanation for English *have*—. Equivalent unaccusative verbs can present cross-linguistic variation in the preposition selected, but their government will be always oblique: *depender de*, *depend on*, *dépendre de* (in French), *zavisit’ ot* ‘from’ + genitive (in Russian), *menpeko izan* + genitive (in Basque), etc.

Finally, unergative prepositional verbs do not select a DO, but a PP. So the main question they pose is why their only internal argument is not realized as a DP (having ruled out the hypothesis of the verbal case deficiency, cf. section 4.1.1.). As argued above in the case of *abusar*, these verbs encode a feature in their QS that no DP encodes and, thus, they have to resort to a preposition in order to be able to agree with the DP. The QS features lexicalized by verbs in different languages may differ significantly and for this reason in a certain language a verb can be unergative, whereas its equivalent verb in another language can be transitive: *abusar de* ‘from’ vs. *abuse*, *escuchar* vs. *listen to*, *phone* vs. *téléphoner à* ‘to’ (in French), *betray* vs. *izmenit’* + dative (in Russian), etc. In sum, the hypothesis of this paper, namely that a verb resorts to a preposition in order to express a slightly different meaning, explains why unaccusative, transitive and unergative prepositional verbs select a preposition: unaccusatives and transitives select two internal arguments, so the verb needs another predicate to express a different meaning with respect to the second internal argument;

different mechanism (perhaps syntactic) which legitimates this construction. It is an interesting topic for a future research.

and unergatives select a preposition to express a different meaning from the meaning they would express by themselves.

6. The analysis

This section analyzes the behavior of Spanish prepositional verbs following the tenets of the GL, focusing on Spanish. The section is divided into three subsections: 6.1. examines verbs alternating between a transitive and an oblique government, like *pensar (en)* ‘think (about)’; 6.2. examines verbs allowing prepositional alternation, like *convertir {en/a}* ‘turn into, convert {at/to}’; and 6.3. addresses the study of prepositional verbs not allowing prepositional alternation, like *depender de* ‘depend on’.

6.1. Verbs alternating between a transitive and an oblique government

Let us consider the following examples:

- (37) a. El profesor pensó (en) el examen.
the teacher thought at the exam
 Lit. ‘The teacher thought (about) the exam’
 b. El profesor pensó *(en) su dinero.
the teacher thought (at) his/her money
 Lit. ‘The teacher thought (about) his/her money’
- (38) a. Los soldados cumplieron (con) la orden.
the soldiers complied with the order
 Lit. ‘The soldiers complied (with) the order’
 b. Los alumnos cumplieron *(con) el profesor.
the students complied with the teacher
 Lit. ‘The students complied (with) the teacher’

In (37), the verb *pensar* ‘think’, which is a functional predicate,¹⁸ can select directly the noun *examen* ‘exam’, but not *dinero* ‘money’. To explain this contrast we have to look into their QS. *Examen* is a complex type, in whose formal quale it is encoded that it can be either information, as in *El examen fue difícil* ‘The exam was difficult’, or an event, as in *El examen duró dos horas* ‘The exam lasted two hours’ (see Pustejovsky 1998 for the analysis of English *exam*).¹⁹ The agentive quale of the information type refers to the origin of the exam, which is brought about by a mental process, while telic quale contains the information that its function is to be solved. The fact that an exam is created by a mental process explains why (37a) can mean ‘The teacher designed the exam’: *examen* is an incremental theme gradually generated by the process of thinking, and *pensar el examen* jointly denotes a transition. Given that *examen* is a complex type whose QS contains information about how it is created, it is directly compatible with the verb *pensar*, and the agreement is done by the mechanism of coercion by exploitation.

Dinero ‘money’ is a functional type, in whose telic quale it is lexicalized that money is used to pay. However, the agentive quale does not refer to any kind of thought-related activity, so *dinero* cannot combine directly with *pensar*. Nevertheless, the presence of a very underspecified predicate like the preposition *en* ‘at’, only

¹⁸ Because it selects entities *created* by the mind.

¹⁹ *Examen* ‘exam’ could be also a document, as in *El profesor rompió el examen* ‘The teacher broke the exam’. However, as Pustejovsky (1998) claims regarding *exam*, it does not imply a physical manifestation, for instance if it is an oral exam.

encoding a [+location] feature in its constitutive quale (Zato 2011), legitimates this combination jointly with the verb: *pensar* coerces the PP in question by introduction into denoting an abstract location. In this case, *El profesor pensó en el dinero* ‘The teacher thought about the money’ means ‘The teacher put his/her thought into the money’. In the same fashion, in *El profesor pensó en el examen* ‘The teacher thought about the exam’ the effect of an underspecified preposition on the verb is that the sentence does not entail that the teacher designs the exam: *Pensó en el examen para distraerse* ‘S/he thought about the exam to have fun’.

In (38), the noun *orden* ‘order’ is a functional type, in whose formal quale it is encoded that it is information.²⁰ In addition, its telic quale encodes that its function is to realize the action that the content of the order indicates (e.g. attack the enemy, seal off the scene of the crime, arrest the suspect, etc.). The functional predicate *cumplir* ‘carry out, fulfill’ can combine with nouns denoting information and whose telic quale alludes to a potential action that the subject can or must realize, like *promesa* ‘promise’, *compromiso* ‘commitment’, *condena* ‘sentence’ or *orden* ‘order’ itself.²¹ Since *cumplir* is a functional predicate and *orden* a functional type, the agreement is plenty and it is done by the mechanism of selection. On the other hand, *the teacher*, which is a functional type, is incompatible with *cumplir* because it is not information, but a human entity whose function is to teach. However, if the verb resorts to the preposition *con* ‘with’, defined as [+concomitance] in the constitutive quale (Zato 2011), it can be combined with *cumplir*. The verb coerces the PP by introduction into denoting an entity with which the subject become concomitant. *Los alumnos cumplieron con el profesor* means ‘Students fulfilled their obligations to the teacher (e.g. passing an exam, remembering his/her birthday, giving him/her a gift...). Similarly, in *Los soldados cumplieron con la orden* (lit. ‘The soldiers complied with the order’), the effect of an underspecified predicate such as *con* on the verb amplifies its extension, and it means ‘The soldiers fulfilled their obligations to the order’, which is generally done by carrying it out.

The analysis of (37) and (38) confirms that the meaning of the verb plus the preposition is slightly different from the meaning of the verb when used by itself, since prepositions are very underspecified predicates. Specifically, the verb imposes a number of semantic restrictions which get reduced when combined with a preposition. Thus, *pensar en* and *cumplir con* are more polysemic than *pensar* and *cumplir*, respectively, which explains why the former can occur in more syntactic contexts. In other words, the verb *pensar* is a functional predicate which does not combine with a natural kind, as in *#Pensó el árbol* ‘S/he thought the tree’, where the only possible reading is that the tree is, for example, a drawing, so not a natural type; by contrast, *pensar en* does not impose any typing restrictions on the argument. As much *cumplir* as *cumplir con* select a functional type, so the difference is not in the typing restrictions, but in the fact that *cumplir* is more restrictive than *cumplir con* when combined with functional types.

²⁰ *Orden* could have a physical manifestation, as in *La orden de arresto desapareció* ‘The arrest order disappeared’, but it is not implied in its meaning.

²¹ According to Bosque (2004), *cumplir* can also combine with nouns denoting the result of an agreement, as in *cumplir un requisito* ‘fulfill a requirement’ or *cumplir una condición* ‘fulfill a condition’; with temporal nouns, as in *cumplir veinte años* ‘turn twenty years’; and with many other words, which shows that the combinatory of *cumplir* is very complex. An explanation is needed which would subsume the whole combinatory of *cumplir*, but it exceeds the scope of this paper. I defer it for a future research.

Many more verbs show the transitive-oblique alternation. I want to focus on *confiar*, *repercutir* and *experimentar*:

- (39) a. Juan confió en María.
Juan trusted at María
 ‘Juan trusted María’
 b. Juan confió su dinero a María.
Juan trusted his money to María
 ‘Juan entrusted his money to María’
- (40) a. La subida de impuestos repercutió en los consumidores.
the increasing of taxes had an effect at the consumers
 ‘The increasing of taxes had an effect on consumers’
 b. Los comercios repercutieron el IVA a los consumidores.
the shops had an effect the VAT to the consumers
 ‘Shops transferred the VAT to consumers’
- (41) a. El científico experimentó con ratas.
the scientist experimented with rats
 ‘The scientist experimented with rats’
 b. Las ratas experimentaron una muerte dolorosa.
the rats experimented a death painful
 ‘The rats experienced a painful death’

In (a) sentences the verbs appear in an oblique construction, while in (b) the same verbs appear in a transitive one. What these sentences indicate is that the DO does not express the same meaning as the PP; thus, the verb resorts to a preposition because it needs to express a different meaning. In (39) the verb *confiar* selects a person the subject trusts when it is unergative and an object entrusted when it is transitive; in (40) *repercutir* selects an entity on which the subject impacts when it is unaccusative, while it selects another one transferred when it is transitive; lastly, in (41) *experimentar* selects an entity which undergoes an experiment when it is unergative and a process undergone by the subject when it is transitive. It is interesting to note that the English translations are different when the construction changes, so *confiar* can be equivalent to *trust* or *entrust*, *repercutir* to *have an effect* or *transfer* and *experimentar* to *experiment* or *experience*. We can conclude that the transitive construction has a certain meaning, while the oblique construction has another one, which confirms that the role of the preposition is crucial to build the meaning of prepositional verbs.

6.2. Prepositional verbs allowing prepositional alternation

If we recall the analysis of examples in (29), now repeated in (42), we concluded that *convertir en* means that an entity undergoes a change of state, as in (42a), while *convertir a* means that an entity changes one of its properties, as in (42b):

- (42) a. La bruja convirtió al príncipe {en/*a} sapo.
the witch turned the prince at/to toad
 ‘The witch turned the prince into a toad’
 b. El extranjero se convirtió {*en/a} el cristianismo.
the foreigner converted at/to the Christianity
 ‘The foreigner converted to Christianity’

- c. *Convirtieron los euros {en/a} dólares.*
turned the euros at/in dollars
 ‘They turned the euros into dollars’ or ‘They converted the euros to dollars’

If we look into the QS of the preposition, *en* encodes in its constitutive role the feature [+locative], while *a* encodes the feature [+prospective orientation] (Zato 2011), i.e. orientation forwards or towards the end of the verbal event. *Convertir en* in (42a) implies that the toad is an abstract field which the DO enters, whereas in (42b) Christianity is an abstract field the subject is oriented to; in other words, in the last case the final state of the subject is not become Christianity, instead Christianity is a newly acquired property. (42c) illustrates that sometimes both readings are possible: on the one hand, if someone has the ability to turn euros into dollars, for instance a witch, we will use *en*; there is another reading in which someone changes euros for dollars, also with *en* because the euros are conceptualized as an entity that turn into dollars due to them being replaced with the dollars. In both cases, what changes is the value of the formal quale. On the other hand, if someone establishes an equivalence between a certain amount of euros and dollars, we will use *a*, because there is no physical change from euros to dollars, instead the abstract property of being in euros changes to the abstract property of being in dollars.

Many more verbs illustrate the prepositional alternation, such as *optar*, *escapar* and *luchar*. These verbs express a remarkably different meaning depending on the preposition they select:

- (43) a. *Optaron por el empleo.*
opted for the job
 ‘They opted for the job’
 b. *Optaron al empleo.*
opted to+the job
 ‘They aspired to the job’
 (44) a. *Escaparon de la cárcel.*
escaped from the prison
 ‘They escaped from prison’
 b. *Escaparon a la cárcel.*
escaped to the prison
 ‘They avoided prison’
 (45) a. *Luchan por la libertad.*
fight for the freedom
 ‘They fight for freedom’ (→ ‘They want freedom’)
 b. *Luchan contra la libertad.*
fight against the freedom
 ‘They fight against freedom’ (→ ‘They do not want freedom’)

Thanks to the prepositional alternation, we are able to conclude that the verb and the preposition compositionally build the whole event meaning encoded in the sentence. In other cases, as with the verbs *renunciar* ‘renounce’ or *interferir* ‘interfere’, allowing one preposition in formal Spanish, alternations attested in non-normative Spanish are very useful:

- (46) a. *Algunos han optado por renunciar de la Selección.* (CREA 1997)
 ‘Some people opted for giving up the national team’

- b. Dos importantes funcionarios del Órgano Judicial *renunciaron de* sus cargos. (CREA 2000)
 ‘Two important civil servants of the judicial body resigned from their posts’
- (47) a. No permitas que el trabajo *interfiera con* tu vida personal. (CREA 1997)
 ‘Do not let your job interfere with your personal life’
- b. Frei rehusó *interferir con* el proceso constitucional. (CREA 2004)
 ‘Frei refused to interfere with the constitutional process’
- (48) a. Renunció {a/de} el trabajo.
renounced to from the job
 ‘S/he turned down the job’ or ‘S/he resigned from her/his post’
- b. Juan interfirió {en/con} la relación de María.
Juan interfered at with the relationship of María
 ‘Juan meddled in María’s relationship’ or ‘Juan was an obstacle for María’s relationship’

In standard Spanish the verb *renunciar* only combines with the preposition *a* ‘to’. However, it sometimes co-occurs with *de* ‘from’, as in *Renunció del trabajo*, an example that is not well-considered in formal Spanish. The change of the preposition produces a change in the meaning of the sentence: while *Renunció al trabajo* can mean either ‘S/he turned down the job’ or ‘S/he resigned from her/his post’, *Renunció del trabajo* only means ‘S/he resigned from her/his post’. This difference has to do with the meaning of both prepositions: *a* means [+prospective orientation], i.e. orientation forwards or towards the end of the event, whereas *de* means [+retrospective orientation], i.e. orientation backwards or towards the beginning of the event (Zato 2011). If the job is placed at the end of the event, with *a*, one can consider that in the end the person does not work, either because s/he has turned down her/his job or because s/he has resigned from it. This means that with *a* the DP *the job* receives a non-factual interpretation: it can exist or not. On the contrary, if the job is placed at the beginning of the event, with *de*, one only can suppose that the person had a job and resigned from it. This means that with *de* the DP *the job* receives a factual interpretation: it is mandatory that it exists.

Regarding the sentence in (48b), in formal Spanish the verb *interferir* only combines with *en* ‘at’. But if the preposition *con* ‘with’ is used, the meaning is different: whereas *interferir en* can mean ‘meddle’ or ‘be an obstacle for’, *interferir con* only means ‘be an obstacle for’. As a consequence, the sentence *Juan interfirió en la relación de María* can mean ‘Juan meddled in María’s relationship’ or ‘Juan was an obstacle for María’s relationship’; on the other hand, *Juan interfirió con la relación de María* only has the latter meaning. As above, the explanation resides in the QS of the prepositions: *en* encodes the feature [+location], while *con* encodes the feature [+concomitance]. *En la relación de María* constitutes an abstract field, so one can either meddle in it or be an obstacle for it because, due to the locative meaning of the preposition, María’s relationship is the field Juan gets into interfering. By contrast, in the case of *con la relación de María*, Juan cannot meddle in it because the preposition introduces María’s relationship as an entity which is concomitant with Juan, rather than the field he gets into.

To sum up, these alternations out of formal Spanish also provide evidence that the preposition plays a crucial role in building the meaning of prepositional verbs.

6.3. Prepositional verbs not allowing prepositional alternation

Lastly, we will study prepositional verbs always requiring the same preposition and will examine their relation with their deverbal nouns. Let us observe the following examples:

- (49) a. Liberarse de la dependencia *hacia* el otro. (*El País*, 2009)
 ‘Getting rid of the dependency on (lit. *towards*) the other one’
 b. La Bolsa de Fráncfort continúa anclada en esta fase de estrecha dependencia *con* el mercado de obligaciones. (CREA, *La Vanguardia*, 1994)
 ‘Frankfurt’s market remains anchored to this phase of narrow dependency on (lit. *with*) the bond market’
 c. Los bancos de Europa reducen su dependencia *respecto al* BCE. (*Cinco Días*, 2009)
 ‘European banks reduce their dependency on (lit. *with respect to*) the ECB’
- (50) a. Un 47 por ciento muestra mucha o algo de confianza *hacia* Alemania. (CREA, *El Mundo*, 1994)
 ‘47 per cent shows much or a bit of trust in (lit. *towards*) Germany’
 b. {*Puso/depositó*} su confianza en ella.
 ‘S/he put her/his trust in her’

Based on the data in (49) and (50), I argue that the nouns and the base verbs establish a spatial relation between two entities connected by a preposition, with the difference that the nouns can combine with more prepositions than the verbs.²² For instance, the verb *depender* ‘depend’ only selects *de* ‘from’, but the noun *dependencia* ‘dependency’ accepts other prepositions, such as *hacia* ‘towards’, *con* ‘with’ or *respecto a* ‘with respect to’ (of course, *dependencia* can combine with *de* too, as in *la dependencia de los bancos* ‘the dependency on banks’). What happens with the verb *depender* is that it lexicalizes the dependency relation in only one way: it selects the preposition *de*, meaning [+retrospective orientation], which indicates that the depended on entity precedes the dependent one; by contrast, the noun *dependencia* can lexicalize this relation in more ways.

On the other hand, when the verb *confiar* is unergative—see section 6.1. for the transitive use—, it only selects *en* ‘at’; however, the noun *confianza* ‘trust’ can combine with other prepositions, such as *hacia* ‘towards’ (and, of course, it can combine with *en*, as in *la confianza en Alemania* ‘the trust in Germany’). Moreover, *confianza* can be selected by location verbs, as in (50b), corroborating that the trust is also a relationship lexicalized by a spatial expression. The verb *confiar* lexicalizes that this relationship is expressed only in one way, by the preposition *en* ‘[+location]’, which means that the trusted entity is conceived as an abstract field in which the trusting person puts his/her trust.

Cross-linguistically, the fact that in English the verb *depend* selects *on*, not *from*, as *depender* (*de*) in Spanish, only points out that in that language the dependency relation is encoded differently—the entity one depends on is a support for the dependent. Therefore, the prepositional selection in a particular language hinges on

²² Nevertheless, as pointed out in RAE & ASALE (2009: 2738), the reverse is also true: a verb can select more than one preposition, like *corresponder* in *Esta decisión corresponde {a/con} lo pactado* ‘(lit.) This decision corresponds {to/with} the agreed terms’, while the derived noun only accepts one preposition, like *correspondencia* in *La correspondencia de esta decisión {*a/con} lo pactado* ‘(lit.) The correspondence of this decision {to/with} the agreed terms’. The explanation of this phenomenon falls outside the scope of this paper.

how this language lexicalizes the meaning of the preposition and the meaning of the verb that requires it. In spatial relations, it is possible that two languages select equivalent prepositions, because we usually conceptualize spatial relations in a similar way: compare the English and Spanish in *put the flowers on the table* and *poner las flores sobre la mesa*, where *sobre* means ‘on’. Regardless of the language we speak, we are able to see that some object, the flowers in this case, is placed in a higher position with respect to another object, the table, and languages usually express this relation with equivalent prepositions. However, it does not always happen this way: for example, in Spanish the verb *acercarse* ‘get close’ selects *a* ‘to’, while its equivalent in French *s’approcher* selects *de* ‘from’. In other words, although Spanish and French people have similar world knowledge about the action of getting close, their respective languages encode it differently. Similar differences are attested within the same language, with the same verb, as in the Spanish word *agarrarse* ‘hold on’, which can combine either with *a* ‘to’ or with *de* ‘from’. This question deserves to be addressed greater in depth, but for the moment I can suspect that *agarrarse* has an underspecified meaning that allows expressing the place to which someone holds on in two ways.

Finally, there are more differences in the encoding of abstract relations, such as the dependency relation, because, unlike spatial relations, we cannot see it; consequently, languages often differ in their lexicalization.

7. Conclusions

In this paper I have argued for a unified syntactic treatment of argument PPs; if this assumption is correct, the puzzle of prepositional verbs is reduced to determining how their meaning is construed. I have defended that the verb, which has abstract meaning, coerces the PP by introduction into denoting abstract meaning too.

The GL is very useful to account for the verb-preposition combination in particular and for word combination in general, because it presupposes that words have a structured and underspecified meaning which allows them to combine through generative mechanisms. The QS of prepositional verbs encodes a feature that makes the verb resort to a preposition in order to agree with the selected DP; so the preposition satisfies the portion of event meaning which the verb does not have and which it needs. Prepositional variation always produces semantic changes, bearing out that the preposition plays a crucial role in building the meaning of prepositional verbs.

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