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Prepositional Verbs and the Individual-/Stage-Level distinction

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Drawing on Catalan, we show how the aspectual classification of intransitive prepositional verbs is, partially, a predictor of their argument structure properties. Prepositional verbs qualifying as Stage-Level form a heterogeneous class, comprising both unergative and unaccusative verbs. By contrast, those prepositional verbs that qualify as Individual-Level predicates are homogenous as regards argument structure: their prepositional complement is robustly obligatory and their subject is not an external argument, suggesting that they involve a predicative configuration whose predicate is the prepositional complement. This result supports the more general Property Verbalization Constraint hypothesis (Acedo-Matellán 2019), which states that Individual-Level property predicates cannot be encoded as unergative verbs.

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1 Introduction

Intransitive Prepositional Verbs (IPVs) select a PP with argumental properties, the PP Complement (PPC) (Neeleman & Weerman 1999: 107–108).

- (1) a. L'Assumpta pensava en una universitat americana. [Catalan]
 the = Assumpta think.PST.IPFV.3SG in a university American
 'Assumpta was thinking of an American university.'
- b. L'estudi consta de set capítols.
 the = study consist.3SG of seven chapters
 'The study differs from your proposal.'

The PPCs in (1) carry a thematic interpretation with respect to the verb. Thus, in (1)a, an American university is the content of Assumpta's thoughts. Crucially, these "arguments" need a preposition, a circumstance that would bring them close to VP adjuncts. Unlike VP adjuncts, however, PPCs cannot be stranded under a verbal proform replacement. Thus, the PP *en una universitat americana* of (1a) cannot be stranded under replacement of the VP by *fer-ho* 'do so', as in (2). With the non-IPV *estudiar* (3a), this PP behaves as a VP adjunct, and, as such, survives under *fer-ho* substitution, as in (3b).

- (2) #L'Assumpta ho feia en una universitat americana. [cf. (1a)]
 the = Assumpta it do.PST.IPFV.3SG in a university American
 'Assumpta was doing so at an American university.'
- (3) a. L'Assumpta estudiava en una universitat americana.
 the = Assumpta study.PST.IPFV.3SG in a university American
 'Assumpta was studying at an American university.'
- b. L'Assumpta ho feia en una universitat americana.
 the = Assumpta it do.PST.IPFV.3SG in a university American

Also unlike adjuncts, the PPC of some IPVs cannot be dropped without producing severe ungrammaticality, (4).

- (4) *L'estudi consta. [cf. (1b)]
 the = study consist.3SG

English IPVs have been explored, to a certain extent, as regards case and theta-role assignment (e.g., Marantz 1984; Neeleman 1997; Castillo 2005), and the idiosyncratic relation between the root and the PPC (Merchant 2019). More literature has been devoted to the aspectual differences between an IPV and its transitive variant (Beavers 2006; MacDonald 2008). Concerning Romance, many studies deal with the proper characterization of the PPC as a grammatical relation —e.g., Rosselló (2008) for Catalan;¹ Kuhn & Mollica (2013) for Italian; Gonçalves & Raposo (2013) for

¹ See also the uses of individual verbs in Ginebra & Montserrat (2021).

Portuguese; Demonte (1991) and Cano Aguilar (1999) for Spanish. The aspectual dimension of IPVs in Romance, however, has not been dealt with in any detail.

In this paper we examine the class of IPVs in Catalan from an aspectual perspective. Specifically, we explore whether the Individual-Level (IL) / Stage-Level (SL) distinction can be mapped onto a deep grammatical (i.e., argument-structure) distinction within this type of verbs. Our investigation is framed within a more general one on the categorial encoding of property-concept predicates (Thompson 1988; Francez & Koontz-Garboden 2017), like ‘be tall’, and how the IL/SL difference affects that encoding. Partly in line with the typological literature on the expression of property predicates (Wetzer 1996; Stassen 1997), Acedo-Matellán (2019) formulates the hypothesis that at least in certain languages, IL property predicates cannot be lexicalized as simple intransitive verbs, the Property Verbalization Constraint (PVC). A subset of the *prima facie* counterexamples to the PVC corresponds to intransitive verbs expressing property concepts that are unquestionably understood as IL, like Cat. *diferir de* ‘differ from’ and *abundaren / de* ‘abound in’.

In fact, all IPVs testing out as IL in our study would be potential counterexamples to the PVC unless it is shown that they involve a nonverbal (primary) predicate. This is what we argue is the case, based on two facts. First, all IL IPVs sport a robustly non-droppable PPC. Second, the subject of IL IPVs does not behave as an external argument. By hypothesis, it is merged below the event-encoding head and is thus an internal subject. Thus, for IL IPVs, the PPC is the real predicate, directly predicated of the subject.

We show that IL IPVs such as *constar de* ‘consist of’, which we label Class A IPVs, are not counterexamples to the PVC, since, even if they surface as verbs, the primary predicate is nonverbal. In a way, sentences headed by IL IPVs are “flavoured” copular sentences. By contrast, SL IPVs form a heterogeneous set. They can be (i) unaccusative predicates, with a non-droppable PPC: Class B IPVs (*caure en* ‘fall into’); (ii) unergative predicates with a fully droppable PPC: Class C IPVs (*parlar de* ‘talk about’); or (iii) unergative predicate with a PPC that cannot be dropped in pure activity contexts: Class D IPVs (*al·ludir a* ‘allude to’, *col·laborar amb* ‘collaborate with’).²

As regards the theoretical tools that we use to approach the study of IPVs, we assume Kratzer’s (1995) theory of the SL/IL difference as a difference between eventive and non-eventive predicates. In the syntax, this difference is sustained by two eventuality heads (understanding *eventuality* in the abstract sense of Bach 1981): one for events and one for states, as in Arad (1999). More generally, we adopt Acedo-Matellán’s (2016) neoconstructionist theory of event and argument structure, where these notions are directly read off the syntactic configurations

² In §3.1.2 we argue that Class D must be split into two subclasses: D(i), represented by verbs like *col·laborar amb* ‘collaborate with’, which admit PPC drop in certain contexts like the habitual construction, and D(ii), represented by verbs like *al·ludir a* ‘allude to’, which disallow PPC drop in all contexts.

and where roots, as independent elements of the configurations, provide the conceptual content to linguistic expressions.

The paper is organized as follows. §2 scrutinizes the behaviour of the IPVs of our corpus as regards the IL/SL distinction. §3 explores the argument structure properties of the same IPV verbs: the grammatical status of the PPC and the status of their subject as an external or an internal argument. §4 discusses the results of §2 and §3, presents the theoretical tools that we use to analyze them, and provides morphosyntactic analyses of the four kinds of IPVs. §5 concludes and identifies challenges for further research. An appendix is attached that contains 1) our corpus of IPVs and 2) a table classifying IPVs based on the diagnostic tests of §2 and §3.

2 The IL/SL distinction in IPVs

The well-known IL/SL distinction (Carlson 1980 [1977]; Kratzer 1995; Chierchia 1995) distinguishes between predicates denoting properties of individuals (IL, *know Welsh*), and predicates denoting properties of stages (SL, *sit in the couch*). In this paper we follow the current assumption that the IL/SL difference does not correspond in nature to a difference between permanent vs. transient properties (Jäger 2001; Arche 2006; Camacho 2012; Silvagni 2017). Rather, it corresponds, quite simply, to the difference between states and events, understood as the difference between those eventualities that have a Davidsonian event argument and those that do not, as seminally proposed by Kratzer (1995) (also Hoekstra 1992; Silvagni 2017; for opposing views, see Maienborn 2005 and Jaque 2014).³

In this section we apply three established diagnostic tests of the IL/SL difference to our list of Catalan IPVs: embeddability under perception verbs (§2.1), compatibility with a locative modifier (§2.2), and embeddability under a temporal clause with a universal quantifier interpretation (§2.3).

2.1 Embeddability under perception verbs

In his seminal study, Milsark (1974: 101) first observed that predicates that can be embedded under perception verbs like *see* are SL predicates (his *state-descriptive predicates*), whereas those that cannot are IL predicates (his *property predicates*). We illustrate the IL/SL divide in IPVs with the next two verbs.

- (5) a. *He vist la teva tesi constar de tres capítols.
have.1SG see.PTCP the your thesis consist.INF of three chapters

³ There is still up to this day some terminological confusion about what a state is, which warrants the use of the labels IL/SL. Authors like Maienborn (2007) use the same label *state* to refer to predicates that come with a Davidsonian event argument, like *shine*, and to predicates that do not (Kimian states), while for authors like Silvagni (2017), states are strictly those predicates that do not have a Davidsonian eventuality.

- b. He vist la Maria parlar d'en Joan.
 have.1SG see.PTCP the Maria talk.INF about=the Joan
 'I have seen Maria talk about Joan.'

Other IPVs that cannot be embedded under a perception verb include *patir de* 'suffer from' (Class A). Together with *parlar de* 'talk about' (Class C), verbs like *caure en* 'fall into' (Class B) and *al·ludir a* 'allude to' (Class D) can be embedded under a perception verb.

2.2 Compatibility with locative modifiers

Kratzer (1995) points out that only SL predicates like *sing opera*, involving a Davidsonian event variable, are compatible with locative modification, while IL predicates like *weigh 65 kilos* are not. Before we apply this test to Catalan IPVs, an important qualification is in order. It has been noted that locatives and other modifiers do not constitute a homogenous class but can be subgrouped according to their interpretations and syntactic properties. Hernanz (1993) and Rigau (2008) have observed this for Catalan. Focusing on locatives, Maienborn (2001) observes the distinction between those related to the event and frame-setting locatives, illustrated in (6).⁴ The latter set "a frame for the proposition expressed by the rest of the sentence" (Maienborn 2001: 192) and have a conditional or temporal interpretation.⁵

- (6) a. Eva signed the contract in Argentina. (Maienborn 2001: 191)
 b. In Argentina, Eva is still very popular.

In conformity with Kratzer's expectations, frame-setting locatives, which are not event-related, are admitted by both SL and IL predicates.

- (7) In Argentina, Bill {sang opera/weighed 65 kilos}.
 = "When in Argentina, Bill {sang opera/weighed 65 kilos}."

It is, thus, event-related locatives that can tease apart IL and SL predicates and are thus relevant for this test. Interestingly, in Catalan the two kinds of locatives show a different behaviour as regards pronominalization. While event-related locatives can be represented by the clitic *hi* 'there', frame-setting locatives cannot (Rigau 2008; Todolí 2008). This is presumably due to the fact that frame-setting locatives are generated outside of the VP. Thus, when two different locatives are combined in the same sentence, a frame-setting one and an event-related one, *hi* can only pronominalize the event-related one, as in (8).

⁴ Actually, Maienborn (2001) distinguishes two kinds of event-related locatives. For the purposes of the IL/SL test used here, the distinction between event-related and frame-setting suffices.

⁵ See Gumiel-Molina, Moreno-Quibén & Pérez-Jiménez (2015) for the application of this test to the *ser/estar* alternation in Spanish.

- (8) a. A Barcelona hi_i sopem, al terrat_i.
 at Barcelona LOC dine.1PL at.the rooftop
 ‘In Barcelona we have dinner there, on the rooftop.’
- b. *A Barcelona_i hi_i sopem al terrat.
 at Barcelona LOC dine.1PL at.the rooftop

(8a) shows the event-related locative *al terrat* ‘on the rooftop’, which expresses where our dinners take place, and a frame-setting locative, *a Barcelona* ‘in Barcelona’, which is interpreted conditionally or temporally: it is when we are in Barcelona that we take our dinners on the rooftop. Note that *al terrat* is right-dislocated, as evidenced by the pause, represented via the comma. This goes hand in hand with the presence of the resumptive clitic *hi*. In (8b), by contrast, *al terrat* cannot be interpreted as dislocated. This makes *hi* impossible as coreferent with *al terrat*, since adjuncts do not admit clitic doubling (see §3.1.1). Consequently, we are forced to understand *hi* as coreferent with the frame-setting adverbial *a Barcelona*, which is not possible.⁶

As expected, only SL predicates can coappear with *hi* when the pronoun is understood as referring to a locative modifier.

- (9) a. La Cecília (hi) cantava òpera. [*hi* = ‘in Argentina’, ‘in the shower’, etc.]
 the Cecília LOC sing.PST.IPFV.3SG opera
 ‘Cecília sang opera there.’
- b. La Cecília (*hi) pesava 60 quilos.
 the Cecília LOC weigh.PST.IPFV.3SG 60 kilo
 ‘Cecília weighed 60 kilo (*there).’

Having the above discussion into account, we use the pronoun *hi*, coupled with a dislocated event-related locative, to distinguish IL from SL IPVs.

- (10) a. *Aquesta tesi hi consta de tres capítols, a la universitat
 this thesis LOC consist.3SG of three chapters at the university
- b. A l’habitació la canalla hi parlava de les seves coses.
 at the=room the children LOC talk.IPFV.1SG of the their things
 ‘In the room the children talked about their stuff.’

⁶ If (8b) is modified so that the dislocate is the event-related locative and the frame-setting locative appears in a non-dislocated position, the result is grammatical, as expected.

(i) Al terrat_i hi_i sopem a Barcelona, no a Castelló.
 at.the rooftop LOC dine.1PL at Barcelona not at Castelló
 ‘We have dinner on the rooftop when in Barcelona, not Castelló.’

Other IPVs shunning event-related locatives include *consistir en* ‘consist in’ (Class A). By contrast, verbs like *caure en* ‘fall into’ (Class B) and *al·ludir a* ‘allude to’ (Class D) pattern with *parlar de* ‘talk about’ (Class C).

2.3 Quantification of the eventuality

Kratzer (1995) notes that only SL predicates are felicitous in *when*-clauses with a universal interpretation.

- (11) a. When Mary speaks French, she speaks it well.
 b. *When Mary knows French, she knows it well. (Kratzer 1995: 129)

Kratzer (1995) argues that only SL predicates possess a Davidsonian event argument in their argument structure. Assuming that the semantics of the *when*-clause involves a covert universal quantifier (“always”), this quantifier is able to bind a variable, to wit, the Davidsonian event variable, in (11a), but not in (11b). The ungrammaticality of (11b) is due to the general ban on vacuous quantification.

The diagnostic test yields the same results if consisting of just a temporal clause headed by an overtly universally quantified expression, like the temporal expression *cada vegada que* ‘every time that’.

- (12) a. Cada vegada que la Maria {parla/*sap} francès...
 every time that the Mary {speak.3SG/*know.3SG} French...

The application of this test to our Catalan IPVs yields very sharp results.

- (13) a. *Cada vegada que “Remarks on nominalization” consta de quatre seccions, ...
 every time that “Remarks on nominalization” consist.3SG of four sections
 b. Cada vegada que en Marc i la Núria parlen de la feina...
 every time that the Marc and the Núria talk.3PL of the work
 ‘Every time that Marc and Núria talk about work...’

Like *constar de* ‘consist of’ pattern *dependre de* ‘depend on’ (Class A). Like *parlar de* ‘talk about’ (Class C) pattern verbs like *caure en* ‘fall into’ (Class B) and *al·ludir a* ‘allude to’ (Class D).

3 Argument structure properties of Intransitive Prepositional Verbs

After studying the aspectual classification of Catalan IPVs into IL IPVs (Class A) and SL IPVs (Classes B, C, D), this section examines their argument structure properties. In §3.1, we scrutinize the syntactic status of the PPC: whether it behaves as an argument or an adjunct and whether it behaves as a PP or as a nominal category. In §3.2, we examine the subject of IPVs as regards

its status as external or internal argument, thereby determining the unergative or unaccusative nature of the IPV.⁷

3.1 The nature of the Prepositional Phrase Complement

Most works in which the PPC has been dealt with for Catalan (Badia i Margarit 1994: 211ff; Fabra 1956: §77 and Appendix XVII; GIEC 2016: §13.5; Sanchis Guarner 1993: 271ff) have approached it as an argument of the IPV, rather than an adjunct. They have done so for good reasons. As shown in (2)-(3) above, PPCs behave unlike VP adjuncts regarding *do-so* substitution tests. However, things are more complex when we consider, on the one hand, PPC pronominalization, and, on the other, PPC omissibility. As regards the former, PPCs pattern differently from other arguments, namely, direct and indirect objects, and like adjuncts (see §3.1.1.). As for the latter, the PPC-drop tests allow us to further probe into the (non)argumenthood of the PPC, and make more fine-grained distinctions among IPVVs (see §3.1.2).

3.1.1 The pronominalization of the PPC and its grammatical category

A long-debated question refers to the syntactic category of the PPC, whether a DP with some sort of spurious preposition or a real PP. For Catalan, Bel (2008) emphasizes the parallelisms between PPCs and direct objects, on the basis of different kinds of evidence,⁸ and argues that PPCs are argumental NPs with a preposition, governed by the verb (see also Demonte 1991

⁷ We leave for further research the interesting issue of whether the IPV admits an alternation of its PPC with a direct object, commonly attested in the literature (Fabra 1956; Rosselló 2008).

- (i) Hem parlat (de) molts temes.
 have.1PL talked of many topics
 ‘We have {talked about/discussed} many topics.’

However, we cannot resist observing an interesting and pretty robust correlation: eventive IPVVs only admit this alternation if they are unprefixated.

- (ii) a. La Joana i en Pere han col·laborat *(amb) altres professors.
 the Joana and the Pere have.3PL collaborate.PTCP with other professors
 ‘Joana and Pere have collaborated *(with) other professors.’
 b. La Berta ha al·ludit *(a) la Maria.
 the Berta have.3SG allude.PTCP to the Maria
 ‘Berta has alluded *(to) Maria.’

This restriction could be explained under the assumption that prefixed IPVVs involve a non-adjunct vP-internal PP, whereas unprefixated IPVVs like *parlar* (Class C) are classical unergatives involving an eventive head and a nominal that can emerge as a DP (see §4.1.2, §4.3.2 and §4.3.3).

⁸ For instance, according to Bel (2008), PPCs, as direct objects, cannot be dropped (but see §3.1.2 for a detailed qualification), and neither can they be dislocated without pronominal resumption. Bel further observes that some verbs, like *pensar* ‘think’, allow the expression of their internal argument as either a PPC or a direct object.

for Spanish). PP pronominalization, however, reveals that PPCs are substantially different from argumental DPs. Rosselló (2008) uses this evidence to show how PPCs behave in a different way from indirect (and direct) objects (see also Kuhn & Mollica 2013 for Italian).

Consider, first, the class of clitic pronouns used as proforms for indirect objects and PPCs. Indirect objects, when denoting humans, are represented by dative clitics, *li* in (14).

- (14) *Li* he enviat el carnet, *a la* Maria.
 DAT.3SG have.1SG send.PTCP the ID to the Maria
 ‘I have sent her the ID, to Maria.’

PPCs headed by any preposition except *de* ‘of, from’ are represented by the locative clitic *hi*. Interestingly, even when a human indirect object and a PPC are headed by *a* ‘to’ (cf. (15)b), they pronominalize differently.

- (15) a. *Hi/*Li* he optat, *per la* Maria.
 LOC/DAT.3SG have.1SG opt.PTCP for the Maria
 ‘I have opted for her, for Maria.’
 b. *Hi/*Li* he renunciat, *a la* Maria.
 LOC/DAT.3SG have.1SG renounce.PTCP to the Maria
 ‘I have renounced to her, to Maria.’

Thus, PPCs pattern with bona fide adjunct PPs. As the adjunct PPs illustrated in (16), the PPCs in (17) appear as the partitive clitic *en* when headed by the preposition *de* ‘of, from’, and as *hi* elsewhere.

- (16) a. *En* queia lava, *del* volcà. [Adjuncts]
 PTVE fall.PST.IPFV.3SG lava from.the volcano
 ‘Lava flowed out from it, from the volcano.’
 b. *Amb la màquina nova* la Carla *hi* ha cosit el vestit de núvia.
 with the machine new the Carla LOC have.3SG sewn the dress of bride
 ‘With the new machine Carla has sewn up the wedding dress.’
- (17) a. *En* parlàvem, *del* volcà [PPCs]
 PTVE talk.PST.IPFV.1PL from.the volcano
 ‘We were talking about that, the volcano.’
 b. *Hi* he jugat amb en Joan, *als* escacs.
 LOC have.1SG play.PTCP with the Joan at.the chess
 ‘I have played with John, chess.’

That said, our study makes the novel empirical observation that a few IPVs reject the pronominal expression of their PPC: *abundat en / de* ‘abound in’, *constar de* ‘consist of’, and, for some speakers, *consistir en* ‘consist in’.

- (18) *El llibre *en* consta (, *de cinc capítols*).
 the book PTVE consist.3SG of five chapters
 ‘The book consists of five chapters.’

As also observed by Rosselló (2008), a second difference between DP arguments and PPCs relates to the fact that, while accusative and dative arguments, when pronominal, require clitic doubling (cf. (19)a, b), PPCs bluntly reject it (cf. (19)c).

- (19) a. En Pere **(l’)*ha vist a *ella*. [DO]
 the Pere ACC.F.3SG = have.3SG see.PTCP DOM F.3SG
 ‘Pere has seen her.’
- b. En Pere **(li)* va donar la revista a *ella*. [IO]
 the Pere DAT.3SG PST.3SG give.INF the journal to F.3SG
 ‘Pere gave her the journal.’
- c. En Jordi **(hi)* pensa *en ella*. (PPC; Rosselló 2008: 1937)
 the Jordi LOC think.3SG in F.3SG
 ‘Jordi thinks of her.’

Note that, in this respect, PPCs behave as VP adjuncts, again (a benefactive in (20)):

- (20) En Joan rarament **(hi)* cuina *per al seu pare*.
 the Joan rarely LOC cook.3SG for to.the his father
 ‘Joan rarely cooks for his father.’

Assuming the theory that takes doubling to emerge from a structure where the clitic is a D and it is in some basic relation with the surface DP argument (Torrego 1994; Uriagereka 2005; Gallego 2012), the exclusion of both PPCs and adjuncts from this kind of doubling reveals that they are PPs, not DPs.

From the above considerations, we can conclude that, despite not being VP adjuncts (as shown, again, by the VP-substitution test), PPCs—with the exception of those of *constar de* ‘consist of’ and *abundat en / de* ‘abound in’—retain the properties that are common to all PPs, including adjunct PPs.

3.1.2 Argument status of the PPC and its omissibility

As discussed in §1, PPCs do not survive the *fer-ho* ‘do so’ substitution test, clearly confirming that they are not VP adjuncts. The question still remains whether they are arguments or something else. Traditionally, it has been claimed that PPCs are argumental since they cannot be omitted (e.g., Fabra 1956 or Bel 2008 for Catalan; Neeleman 1997 for Dutch; Cano Aguilar 1999 for Spanish). However, Rosselló (2008) and GIEC (2016), for Catalan, and Martínez García (1986) and Demonte (1991) for Spanish, observe that there are IPVs that can drop their PPC, raising

back the question about its argument status. For instance, Demonte (1991) argues how a subclass of IPVs like *discrepar de* ‘disagree with’ and *alardear de* ‘boast about’ can drop their PPC both in referential and non-referential contexts, while another subclass containing verbs like *consistir en* ‘consist in’ and *prorrumpir en* ‘break out in’, cannot drop their PPC in any context.

When we take a look at the PPC drop facts from the perspective of Catalan, the resulting scenario is far more complex. This is due, again, to the fact that Catalan features PP pronominalization. We focus on two different non-anaphoric constructions featuring the omission of the PPC: (i) the sluicing construction and (ii) the stative habitual construction.⁹

The sluicing construction (Ross 1969; Merchant 2001; 2006), as implemented in (21)-(23), involves a contrastive coordination between a conjunct showing the IPV without its PPC, and the sluiced conjunct, with a *wh*-PPC. Any chance of interpreting the first conjunct as involving a contextually retrievable PPC is made impossible by the fact that the second conjunct asks, precisely, about the reference of the PPC. This forces a pure activity reading in the first conjunct, which is possible in (21) and impossible in (22) and (23).

(21) Ha parlat, però no sé de què.
 have.3SG talk.PTCP but not know.1SG of what
 ‘S/He has talked, but I don’t know about what.’

(22) *Ha col·laborat, però no sé amb qui.
 have.3SG collaborate.PTCP but not know.1SG with whom

(23) *Ha al·ludit, però no sé a què.
 have.3SG allude.PTCP but not know.1SG at what

Like *al·ludir a* ‘allude to’ (Class D) pattern *constar de* ‘consist of’ (Class A) and *caure en* ‘fall into’ (Class B). The two subclasses Di and Dii pattern identically with respect to this test.

A second test involves the use of the verbs in a stative, habitual construction without the PPC. In this construction, the verb identifies a property of the subject, rather than describing an activity. Interestingly, this test distinguishes Class Di verbs, (24a), from Class Dii verbs, (25a),

⁹ Importantly, in anaphoric contexts, both IPVs with PPCs (*pensar en una universitat* ‘think of a university’) and verbs with PP adjuncts (*estudiar en una universitat* ‘study at a university’) disallow omission.

(i) —L’Assumpta, pensava/ estudiava en una universitat?
 the = Assumpta think.IPFV.3SG study.IPFV.3SG in a university
 ‘Was Assumpta thinking of/studying at a university?’
 —No, no *(hi) pensava/ estudiava.
 no no LOC think.IPFV.3SG study.IPFV.3SG
 ‘No, she wasn’t.’

the former patterning, in this case, with Class C verbs, (24b), and the latter with Class A and Class B (25b) (*caure en* in the intended IPV interpretation).

- (24) a. El nen col·labora. = “he is cooperative”
 the child collaborate.3SG
 b. La Núria parla. = “she is talkative”
 the Núria talk.3SG
- (25) a. *La Berta al·ludeix.
 the Berta allude.3SG
 b. *La Berta consta/cau.
 the Berta consist/fall.3SG

A comparison of the two constructions just examined determines three classes of IPVs as far as PPC omissibility is concerned. Verbs of Class A, Class B, and Class Dii disallow PPC drop in both constructions. Class C verbs allow PPC drop in both constructions. Finally, Class Di verbs do not admit the sluicing construction, and accept the stative habitual construction. This fine-grained scenario is summarized in Table 1.

	<i>constar de</i> (A) <i>caure en</i> (B) <i>al·ludir a</i> (Dii)	<i>col·laborar amb</i> (Di)	<i>parlar de</i> (C)
Sluicing	*	*	✓
Habitual	*	✓	✓

Table 1: Different types of PPC-omissibility tests.

Going back to the argumenthood status of the PPC, in this paper we argue that the PPCs that turn out to be droppable in the habitual construction (Class C and Class Di verbs) are adjuncts. They cannot be VP adjuncts, however, since, as pointed out above, they do not survive the *fer-ho* ‘do so’ test. We propose, therefore, that they are low adjuncts, as suggested in Gallego (2010; 2012), but of different sorts. As for those PPCs that cannot be dropped in any context (Class A, Class B, Class Dii), they will be argued to be either predicates or what we will call *copredicates*, on the basis of other syntactic evidence. The result is a three-way syntactic distinction for the PPC: adjunct, predicate, or copredicate. The details of the analysis are in §4.2 and §4.3. One of the major contributions of this paper is thus to show that classifications like Demonte’s (1991), which involves a two-way predicate-argument distinction, developed as a predicate-adjunct distinction by Gallego (2010), are insufficient to account for all cases.

We end this subsection by observing an interesting correlation between the morphological format of the IPV and its (in)ability to drop the PPC in the sluicing construction: prefixed verbs

very generally do not accept PPC drop in this construction (cf. *a-lludir a* ‘allude to’, *co-laborar amb* ‘collaborate with’, etc.), whereas unprefixated verbs may or may not allow it (*parlar de* ‘talk about’, *optar per* ‘opt for’).

- (26) a. La Núria parla (de l’Andreu).
 the Núria talk.3SG of the = Andreu
 ‘Núria talks (about Andreu).’
 b. La Núria ha optat *(per medicina).
 the Núria have.3SG opt.PTCP for medicine
 ‘Núria has opted *(for Medicine).’

In §4.1.2 we offer an explanation of this correlation and also of the different behaviour of verbs like *collaborar amb* ‘collaborate with’ (Class Di) and verbs like *al·ludir a* ‘allude to’ (Class Dii) as regards PPC droppability in the habitual constructions.

3.2 The status of the subject of Intransitive Prepositional Verbs

In this section we inquire into the status of the subject of the IPVs of our corpus, specifically, whether it is an external or an internal argument. We first use Rosselló’s (2008) unergativity test consisting in the licensing of a “ V_{3SG} que V_{3SG} ” construction. Afterwards, we apply the well-known test involving the licensing of an arbitrary *pro* with existential reading in the 3rd person plural to distinguish between unaccusatives that select an internal argument and unergatives that select an external argument.

3.2.1 “ V_{3SG} que V_{3SG} ”

Rosselló (2008: 1920–1921) observes that unergative verbs in Catalan can be used in a reduplicative construction of the format “ V_{3SG} que V_{3SG} ”, with the interpretation of an unceasing eventuality, (27). Unaccusative verbs reject this construction, (28).¹⁰

¹⁰ To the best of our knowledge, the V_{3SG} que V_{3SG} construction has not been well described or analyzed at all in the literature. It seems to us that it is indeed a fixed grammatical construction or formal idiom in the sense of Fillmore, Kay & O’Connor (1988). In fact, it has evident constructional features. Most saliently, the requirements on the identity and shape of the VPs that appear before and after the complementizer *que* are very strict. First, that VP has to be a one-word verb. Thus, while unergative verbs like *feinejar* ‘work’ license the construction, their “analytic” synonyms (Hale & Keyser 1993), i.e., *fer feina*, “do work”, do not.

Moreover, the one-word condition prevents the verb to appear with any kind of dependent, clitic (iia) or not (iib).

- (ii) a. *La Rut, en neteja que en neteja.
 the Rut PTVE clean.3SG that PTVE clean.3SG
 b. *La Rut, neteja sabates que neteja sabates.
 the Rut clean.3SG shoes that clean.3SG shoes

In addition, the construction requires reduplication of exactly the same verb (iia), which has to appear in the present tense (iib) and the third person singular, regardless of the person of the preverbal constituent interpreted as subject (iic).

(27) La Marta, sempre plora que plora.
 the Marta always cry.3SG that cry.3SG
 ‘Marta, she is always crying.’

(28) *El mal temps, arriba que arriba.
 the bad weather arrive.3SG that arrive.3SG

The application of this test to our corpus clearly distinguishes two classes of IPVs.

(29) a. La mama, parla que parla (, dels seus amics).
 the mom talk.3SG that talk.3SG of.the her friends
 ‘Mom, she is always talking (about her friends).’
 b. *L’estudi, consta que consta (de set capítols).
 the =study consist.3SG that consist.3SG of seven chapters

The construction is licensed by Class C verbs (29a) and also Class Di verbs like *col·laborar amb* ‘collaborate with’ (30). This is expected, since these verbs allow their PPC to be dropped only in habitual contexts (see Table 1).

(30) Els estudiants, col·labora que col·labora.
 the students collaborate.3SG that collaborate.3SG
 ‘The students, they are always collaborative.’

By contrast, Class B and Class Dii verbs behave like Class A verbs (29b).

-
- (iii) a. *La Rut, menja que beu.
 the Rut eat.3SG that drink.3SG
 b. *La Rut, {menjava que menjava, menjarà que menjarà}.
 the Rut eat.PST.IPFV.3SG that eat.PST.IPFV.3SG eat.FUT.3SG that eat.FUT.3SG
 c. Els nens, {menja que menja / *mengen que mengen}.
 the children eat.3SG that eat.3SG eat.3PL that eat.3PL

Finally, the complementizer *que* is required between the two instances of the verb, with no evident semantic import associated.

(iv) La Rut, menja *(que) menja.
 the Rut eat.3SG that eat.3SG

While space reasons do not afford us to develop a definite analysis of the construction at hand, we interpret these properties as follows. Tense and agreement in this construction are fixed (iiib, c), from which we can gather that the subject is also fixed, as a 3rd person singular null pronoun. If the subject is fixed, it should not be dependent on the verb, that is, on whether the verb is unaccusative or not. The subject should depend on something else in the structure, that is, Voice, and, hence, it should be an external argument. In addition, we hypothesize that the construction involves the coordination, via *que*, of a reduplicated VP, with the additional prosodic condition that the reduplicated VP corresponds to a single word. The fact that the subject is a fixed external argument together with the prosodic condition explains why only unergative verbs may appear in the construction.

3.2.2. Arbitrary *pro* with an existential interpretation

On the basis of Italian, Belletti & Rizzi (1988) point out that unaccusative verbs, when set in the 3rd person plural and used with a null subject, do not license an arbitrary (and human) interpretation of such *pro* subject.¹¹ Similar observations are found in Jaeggli (1986) for Spanish, and Bartra Kaufmann (2008) and Rosselló (2008) for Catalan. Rosselló (2008: 1891) provides the following contrast between unergative *dormir* ‘sleep’ and unaccusative *entrar* ‘go in, enter’.

- (31) a. Calleu, que aquí dormen.
 shut.up.IMP.2PL that here sleep.3PL
 ‘Be quiet, there are people sleeping here.’
- b. #Calleu, que ara entren.
 shut.up.IMP.2PL that now enter.3PL
 ≠ ‘Be quiet, there are people entering now.’

However, neither Bartra Kaufmann nor Rosselló observe that a generic, rather than existential, interpretation of the null indefinite subject makes it acceptable with unaccusative verbs, as pointed out by Borer (2005: 118–119) for Hebrew, Italian, and Spanish. Catalan, we note, behaves in the same way as these languages.

- (32) (En aquest país/Aquí/etc.) moren en defensa de la democràcia.
 in this country/here/etc die.3PL in defense of the democracy
 ‘(In this country/Here/etc.) people die in defense of democracy.’

Bearing these qualifications in mind, we apply it to our list of Catalan IPVs. We illustrate the divide with *parlar de* ‘talk about’ (Class C) and *constar de* ‘consist of’ (Class A).¹²

¹¹ This is a well-established test, although there is still, to our knowledge, no satisfactory explanation of the unavailability of existential null subjects with unaccusative constructions, and developing one falls outside the scope of this paper. For relevant discussion, see Jaeggli (1986), Belletti & Rizzi (1988), Cinque (1988), and, far more recently, Borer (2005: 112–120).

¹² Demonte (1991) uses this test to establish a two-fold classification of IPVs in Spanish, but some of the sentences that she uses involve a generic, rather than existential interpretation of the null subject. For instance, she considers *abusar de* ‘abuse’ to have an underived subject on the basis of (i).

- (i) Aquí, *pro* abusan de los empleados. (Sp.; Demonte 1991: 75)
 here abuse.3PL of the employees
 ‘Here they abuse the employees.’

While *abusar de* ‘abuse’ does seem to us to have an underived subject, the example in (i), we note, is inconclusive, since its format is also licensed by verbs that Demonte herself qualifies as involving a derived subject, like *prorrumpir* ‘break out in’.

- (ii) En los teatros de Lima prorrumpen en aplausos nada más acabada la obra. (Sp.; our example)
 in the theatres of Lima break.out.3PL in applause nothing more finished the play
 ‘In the theatres in Lima they break out in applause as soon as the play has finished.’

- (33) a. Han parlat de la Maria.
 have.3PL talk.PTCP of the Maria
 ‘Somebody has talked about Maria.’
- b. *Consten de diferents parts.
 consist.3PL of different parts

Class C (33a) patterns with Class Di and Class Dii, whereas Class A (33b) patterns with Class B.

4 Aspect as a predictor of syntax: Classes of Intransitive Prepositional Verbs

In this section we make sense of the results of the last two sections, summarized in Table 3 in the Appendix for all the verbs in our corpus. We have found four main types of IPVs according to their aspectual and syntactic properties, with one of them being split in two subclasses regarding their ability to drop the PPC.

First, verbs testing out as IL, class A, also test out as unaccusative and as utterly unable to drop their PPC. As regards those IPVs that, according to our tests, test out as SL, they turn out to be quite heterogeneous, showing a previously unobserved variation. Class B is comprised of SL IPVs exhibiting no external argument and also not allowing PPC drop in any circumstance. Class C contains SL IPVs with an external argument that allow PPC drop.¹³ Finally, there are also SL IPVs with an external argument and not generally allowing PPC drop: our Class D. We distinguish here two subclasses: Class Di allow PPC drop in the habitual construction; and Class Dii do not admit PPC drop in any circumstance. To our knowledge, Class D has not been identified before. The properties that characterize these four classes of IPVs, each one represented by a single verb, are summarized in Table 2 below, an abbreviated version of Table 3 of the Appendix.

It should also be observed that several IPVs test out as both SL and as IL, since they license two interpretations: an eventive (agentive or not) one and a non-eventive one: *creure en* ‘put one’s

¹³ Three of these verbs, to wit, the ‘boast’ group: *fardar de*, *presumir de*, and the verb ‘enjoy’: *gaudir de* (SL version), do not pass the impersonal *pro* test. It could be relevant, we conjecture, that these verbs in fact select for a proposition involving a PRO and obligatory control, which could be meddling with the perception of the external/internal argument status of the subject.

- (i) L’Iu_i farda/presumeix de {bones notes / PRO_i tenir bones notes}.
 the=Iu boast.3SG of good marks / have.INF good marks
 ‘Iu boasts about {his good marks / having good marks}.’
- (ii) L’Iu_i gaudeix de {la pizza / PRO_i menjar la pizza}.
 the=Iu enjoy.3SG from the pizza eat.INF the pizza
 ‘Iu is enjoying {the pizza / eating the pizza}.’

	IL/SL DISTINCTION TESTS			ARGUMENT STRUCTURE TESTS				
	PERCEPTION VERBS [§2.1]	LOCATIVE MODIFIERS [§2.2]	TEMPORAL CLAUSE [§2.3]	PPC DROP IN SLUICING CONSTRUCTION [§3.1.2]	PPC DROP IN HABITUAL CONSTRUCTION [§3.1.2]	V QUE V [§3.2.1]	IMPERSONAL PRO + 3PL VERB [§3.2.2]	
A: INDIVIDUAL-LEVEL IPVS [§ 4.2]								
<i>constar de</i> ‘consist of’	*	*	*	*	*	*	*	
B: UNACCUSATIVE STAGE-LEVEL IPVS [§ 4.3.1]								
<i>caure en</i> ‘fall into’	✓	✓	✓	*	*	*	*	
C: UNERGATIVE STAGE-LEVEL IPVS ALLOWING PPC-DROP [§ 4.3.2]								
<i>parlar de</i> ‘talk about’	✓	✓	✓	✓	✓	✓	✓	
D: UNERGATIVE STAGE-LEVEL IPVS DISALLOWING PPC-DROP [§ 4.3.3]								
Di: <i>collaborar amb</i> ‘collaborate with’	✓	✓	✓	*	✓	✓	✓	
Dii: <i>alludir a</i> ‘allude to’	✓	✓	✓	*	*	*	✓	

Table 2: Classification of IPVs: a sample.

faith in' (Class C) / 'have the existence of someone/something as true' (Class A), *gaudir de* 'enjoy' (Class C) / 'have' (Class A), *disposar de* 'use' (Class Dii) / 'have at one's disposal' (Class A), *patir per* (Class C) / *patir de* (Class A) 'worry about (*per*)' / 'suffer from (*de*)', *recolzar sobre* 'lean against' (Class B) / 'depend on' (Class A), *respondre a* 'reply to' (Class C) / 'be due to' (Class A). In the interesting case of *patir*, each interpretation correlates with the use of a different preposition: *patir per* 'worry about' (SL: Class C) and *patir de* 'suffer from' (IL: Class A). To illustrate the ambivalence of this class of verbs, consider the behaviour of *patir* when embedded under a perception verb. Only *patir* in its SL, Class C 'worry about' interpretation admits the perception report (34b).

- (34) a. *Veig l'Ona patir de miopia.
 see.1SG the=Ona suffer.INF from myopia
- b. Veig l'Ona patir per la seva miopia.
 see.1SG the=Ona suffer.INF for the her myopia
 'I see Ona worry about her shortsightedness.'

After introducing our theoretical assumptions in §4.1, we provide a theoretical account of the above observations in §4.2 and §4.3.

4.1 The morphosyntax of argument and event structure. Theoretical assumptions

In this section we establish our assumptions about the syntax of argument and event structure, including our assumptions about the syntax of roots (§4.1.1) as well as the nature of prefixation and its relation to the underlying structure of verbs (§4.1.2).

4.1.1 Argument and event structure

We follow a theoretical tradition stemming from Hale & Keyser's (1993; 1998; 2002) proposals on argument structure and including Mateu (2002) and Acedo-Matellán (2016). Building, specifically, on Acedo-Matellán (2016), argument-event structure is directly represented in the syntax. Roots, the units encapsulating conceptual content and a phonological representation, are inserted in the structures, but they do not determine them (Borer 2005). This allows a natural treatment of the verbal elasticity exhibited by verbs like *patir per/de* 'worry about/ suffer from', as indicated above. Argument structure configurations are thus articulated on functional heads denoting the grammatically relevant aspects of the semantics of linguistic expressions.

First, the head ν expresses eventualities. In this study we assume ν to come in two varieties (as in Ramchand's 2008 two-fold ontology; see also Arad 1999): ν_e , expressing events, and ν_s , expressing states. The two heads correspond, respectively, to the two sorts that Maienborn (2007) proposes for events and Davidsonian states, on the one hand, and Kimian states, on the other hand. In this sense, we agree with Kratzer (1996) that SL predicates involve an eventive head and IL predicates do not, but we add, based on Maienborn's (2007) treatment of Kimian states

like *resemble*, that IL predicates must have some eventuality head that can be located in time and referred to with anaphora.¹⁴

Second, the head Voice (Kratzer 1996) introduces the external argument of an eventuality, as is standardly assumed.

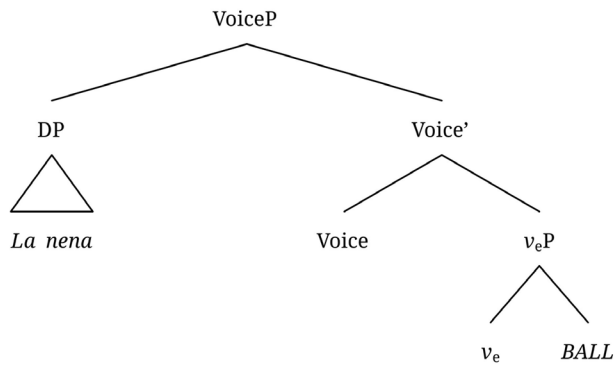
Finally, in the lower part of the configuration, we can find Place, a head articulating the predication of a property with respect to an entity. A further projection, Path, can merge on top of a PlaceP. In combination with Place, Path expresses a transition. Place and Path, encode the notions of Central and Terminal Coincidence relations, respectively (Hale 1986; Hale & Keyser 2002; Mateu 2002). We note that the relationship established by Place can be satisfied immediately, by Spec-PlaceP, or via “delayed gratification” (Hale & Keyser 2002: 227), that is, by a later merged specifier (for instance, Spec-VoiceP). For a more recent minimalist implementation of this idea, see Wood (2015: 176).

The eventive head v_e is able to take different configurations as complements: PathP, PlaceP, a nominal expression, or a mere root. Each selection impinges on the final interpretation of the eventive head. Thus, v_e taking a PlaceP as complement denotes an event where a predicative relation is maintained for an interval of time (Jaque 2014). In turn, when taking PathP, the event encoded by v_e is a change of location or state, whereas when taking a nominal expression or a bare root, it is an unergative or a transitive creation/consumption event (Dowty 1991; Ramchand 2008). In turn, v_s combines with PlaceP to denote states, VoiceP merged or not on top of v_s P.

We briefly illustrate this configurational model with a few intransitive examples (adapted from Acedo-Matellán 2016: 33). In the unergative structure in (35), the head Voice introduces the external argument and the root is selected as the argument of an eventive verbal head v_e .

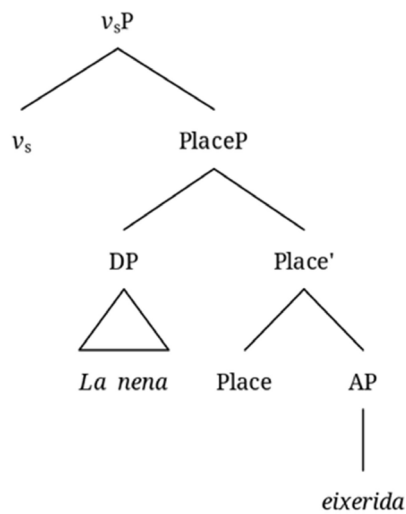
- (35) Unergative structure:
La nena balla.
 the girl dance.3SG
 ‘The girl dances.’

¹⁴ That said, we do not share Maienborn’s (2007) view of the IL/SL difference or of which predicates count as involving the eventive head or the stative head. Maienborn (2007: 2) conceives of the IL/SL difference in rather traditional terms, SL predicates denoting “a temporary property” and IL predicates denoting “a more or less permanent property”. Importantly, for Maienborn, a predicate can be a Kimian state independently of whether it is interpreted as IL or SL. For instance, all copular sentences are, for her, Kimian states, including IL *be Majorcan* and SL *be available*. We do not agree with this position. Rather, for us, IL/SL corresponds to the difference between a state (in Maienborn’s terms, a Kimian state) and an event (any event, including Maienborn’s Davidsonian states). We further think that SL copular sentences like *be available* (which, tellingly, are expressed with the “copula” *estar*, rather than *ser*, in languages like Portuguese or Spanish) do involve an event. See Silvagni 2017: § 2.2 for related discussion.



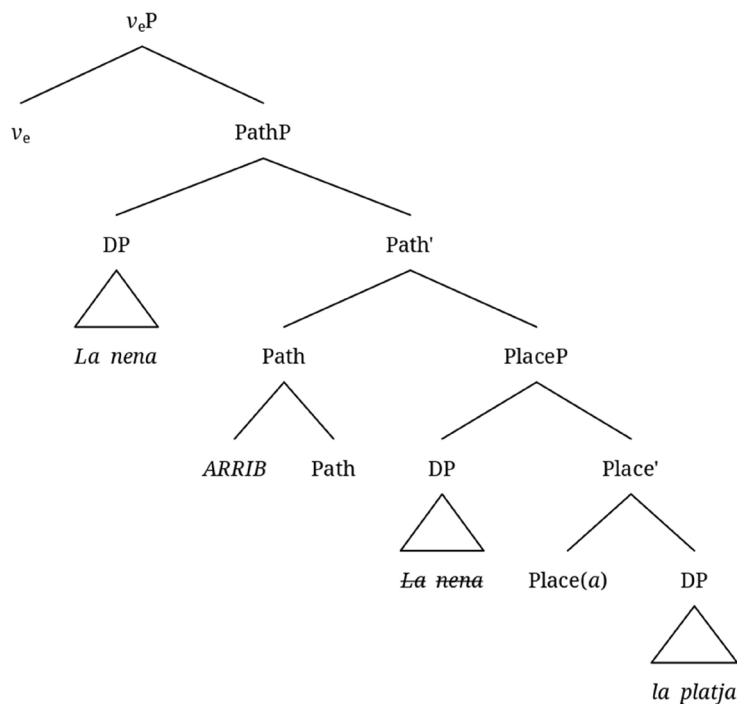
The stative unaccusative structure in (36) involves the projection of a stative verbal head v_s that takes a predicative relation PlaceP in the complement position.

- (36) Stative unaccusative structure:
La nena és eixerida.
 the girl be.3SG smart
 'The girl is smart.'



Finally, the structure in (37) projects an eventive v_e that combines with a Path-Place structure that represents the eventive change of state. In this case, the figure argument, *la nena*, undergoes a movement from Spec-PlaceP to Spec-PathP. As in Acedo-Matellán (2016), *la nena* is understood both as a figure with respect to the beach and also as a measurer of the transition introduced by Path (Verkuyl's Generalization; see Verkuyl 1972; Tenny 1987; Borer 2005).

- (37) Unaccusative event of change of state:
La nena arribà a la platja.
 the girl arrive.PST.3SG at the beach
 'The girl arrived at the beach.'



Turning to roots, we follow Marantz (1997), Borer (2005; 2013), and Embick & Noyer (2007), among others, that, even if they do not come with categorial features, they acquire them in syntax, by merging with functional heads as either complements or modifiers. With Acedo-Matellán (2010; 2014) and Acedo-Matellán & Mateu (2014), we assume that roots receive thematic interpretations by virtue of their syntactic position. For instance, a root like *FEIN* set-merged as the complement to the eventive head v_e becomes non-distinct from a nominal category, which we represent below with Borer’s (2013) “C=N” formalism. Thematically, it is interpreted as an incremental theme, in parallel to the interpretation of a fully fledged nominal (*feina* ‘work’) in the same position.

- (38) a. [$v_P v_e FEIN_{C=N}$]
 “do work”
 = *feinejar* ‘work’
- b. [$v_P v_e [_{NP} feina]$]
 “do work”

Being properly categorized by virtue of their embedment under functional structure, roots may be able to project. In particular, they may take phrasal adjuncts, and we will see an example of this in §4.3.2.¹⁵ Note that their ability to project does not entail that roots can take complements.

¹⁵ Evidence that roots project comes from primary compounds in languages like English (cf. Zhang 2007 for similar effects in Chinese root-root compounding). Borer (2013: 253ff., 298ff.) discusses the structure of compounds like

We think that they cannot, due to the independent fundamental assumption that they lack, of themselves, any proper semantic denotation, namely, that of an unsaturated proposition enabling them to take arguments (see Beavers & Koontz-Garboden 2020 and Ausensi 2021, among others, for a different view).

4.1.2 The morphosyntax of prefixation in Intransitive Prepositional Verbs

It has not gone unnoticed that many prepositional verbs in Romance display a (Latinate) prefix, such as *a-ludir a* ‘allude to’, which contrasts with *e-ludir* ‘avoid’. Gallego (2012), for instance, observes this for Spanish and argues, following Marantz’s (2001; 2005) syntactic approach to morphology, that the PPC of prefixed prepositional verbs is a *double* of the prefix, in the same way that DPs are doubles of clitic pronouns in clitic-doubling languages such as Rio de la Plata Spanish. In Gallego’s theory (which follows Torrego’s 1994, and Uriagereka’s 2005 approaches to the doubling of pronominal clitics), doubles originate as adjuncts of the head they “corefer with”. Thus, DPs in clitic-doubling structures would be adjuncts to the clitic, and PPCs would be adjuncts to the verbal prefix, the clitic or prefix eventually incorporating into an upper head. The problem with Gallego’s analysis is that PPCs of prefixed prepositional verbs do not always behave as doubles. Typically, doubles are optional. Thus, DPs doubling a pronominal clitic can be freely omitted.

- (39) Lo vi (a Juan). (Spanish; Torrego 1994: 199)
 him see.PST.1SG at Juan
 ‘I saw him (Juan).’

However, as we showed in §3.1.2, not all PPCs are optional, and, crucially, those of the Dii Class of prefixed prepositional verbs never are.

- (40) L’Ester al·ludeix *(als problemes de gestió).
 the = Ester allude.3SG at.the problems of management

By contrast, verbs that can drop their PPC unproblematically are typically unprefixated (Class C).

- (41) L’Ester ha somiat (amb la Berta).
 the = Ester have.3SG dream.PTCP with the Berta
 ‘Ester has dreamt (of Berta)’

arrowhead and *headarrow*. On the one hand, primary compounds must involve roots, rather than inherently categorized members, since they can be freely used as either N or V, depending on whether they are embedded within a nominal or a verbal extended projection: *an arrowhead*, *a headarrow*, *to arrowhead*, *to headarrow* (see also Borer 2013: 325–326). On the other hand, it is a plain truth gathered from a simple comparison of the interpretations of the members of the minimal pair *arrowhead* / *headarrow* that one of the two components, the right-hand one (Williams 1981), is the head, that is, projects, providing the basic semantic characterization of the compound. The conclusion is that roots can project.

Finally, prefixed verbs of Class Di, such as *col·laborar amb* ‘collaborate with’, allow PPC drop in contexts like the habitual construction or the *V que V* construction.

- (42) a. L’Ester col·labora (amb els companys, sempre).
 the = Ester collaborate.3SG with the peers always
 ‘Ester (always) collaborates (with her peers)’
 b. L’Ester, col·labora que col·labora
 the = Ester collaborate.3SG that collaborate.3SG
 ‘Ester, she is always collaborating.’

We explain the causal relation between the presence of a prefix and the obligatoriness of the PPC in verbs of Class Dii by hypothesizing that the prefix and the preposition heading the PPC originate as one and the same item in the underlying syntactic structure: the Place head. In verbs like *al·ludir a* ‘allude to’, Place heads a constituent that is a *complement* of the eventuality head, and head movement may bring a copy of this head to the upper verbal heads (*v* and Voice). We endorse the Distributed Morphology hypothesis of Late Insertion (Halle & Marantz 1993; 1994), by which syntactic structures are endowed with phonological content via Vocabulary Insertion at PF after Spell-Out. Thus, at Spell-Out, the higher copy of the Place head of *al·ludir* is spelled out as the prefix *a-*, and the lower one as the preposition *a* (see further discussion in §4.2, §4.3.1, and §4.3.3). The prefix and the preposition turn out to be, thus, contextual co-allomorphs, the particular phonology determined, at Vocabulary Insertion, by the structural environment (Embick 2010).

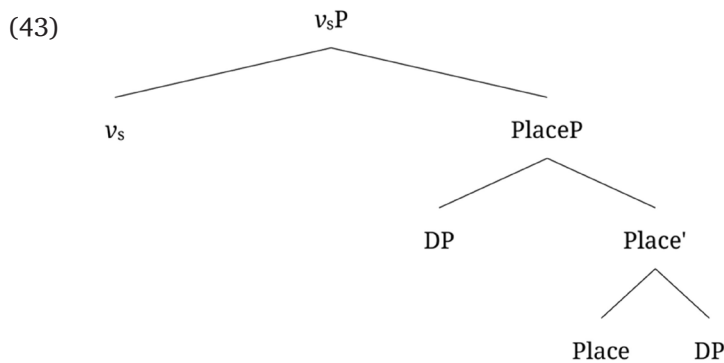
As will be shown in §4.3.2, for Class C verbs that admit PPC drop in all non-anaphoric contexts, like *somiar amb* ‘dream of’, we propose that the PPC is an adjunct to a nominalized verbal root. Under the common assumption that head movement cannot operate from adjunct position, we expect the preposition not to be able to head-move to the verbal head in these cases, and hence, we expect these verbs not to be prefixed—at least not with a prefix identifiable as cognate with the preposition heading the PPC, as in *a-l·ludir a* ‘allude to’.

Finally, as regards Class Di verbs, we assume the same structure as the one proposed for verbs of Class Dii, that is one involving an adpositional projection, whose head is the source of the prefix. The difference between the two subclasses lies, we claim, in the status of the PPC. While for Class Dii verbs the PPC itself corresponds to that adpositional configuration, for Class Di verbs the PPC is just an adjunct of the same *vP*-internal configuration. Thus, we claim that Gallego’s (2012) adjunct approach to the PPC of prefixed verbs can only be applied to Class Di verbs.

In the remainder of this section, we deal with each class of verbs in our typology of IPVs.

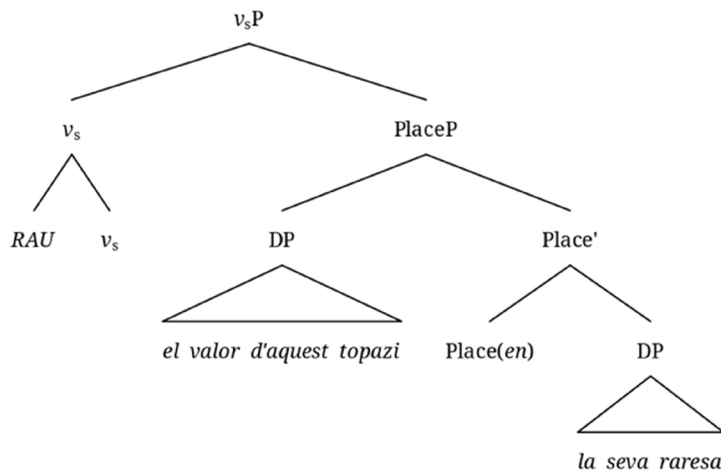
4.2 Intransitive Prepositional Verbs testing out as Individual-Level (Class A)

The basic structure that we propose for IPVs encoding IL predicates is as shown in (43).



We illustrate this configuration with an analysis of the verb *raure en* ‘lie in’ (we omit the A-movement responsible for bringing Spec-PlaceP to Spec-TP).¹⁶

- (44) El valor d’aquest topazi rau en la seva raresa.
 the value of=this topaz lie.3SG in the its rarity
 ‘The value of this topaz lies in its rarity.’



Place, exponed by the locative preposition *en*, articulates a predication relation between the two DPs, that is, it attributes a property, here the rarity of the topaz stone, to an entity, here the value of the topaz stone. Since v_s is interpreted as a stative eventuality, we derive the IL status of *raure*. The eventuality head has a root adjoined to it that provides it with a phonological interpretation.

The IL status of an IPV is a predictor of its argument structure properties. First, they disallow PPC drop. This is because the PPC is actually the real predicate: it articulates the lower portion of a PlaceP, encoding a property predicated of the subject. These verbs also do not license an impersonal null subject with existential semantics, since the surface subject actually originates

¹⁶ See the discussion below for the analysis of *constar de* ‘consist of’, which displays additional morphosyntactic complexities.

within the *vP*, i.e., as an internal argument. They are, thus, unaccusative verbs, and hence are correctly predicted to disallow the “ $V_{.3SG}$ que $V_{.3SG}$ ” construction.

While all IPVs in this group show a robust behaviour as regards aspectual interpretation and the status of the subject as an internal argument, two of them, i.e., *constar de* ‘consist of’ and *abundar en / de* ‘abound in’, resist pronominalization of their PPCs, as pointed out in §3.1.1. This is something that merits some exploration.

- (45) *Sí que en consta, la llista, de cognoms valencians.
yes that PTVE consist.3SG the list of last.names Valencian
- (46) a. *Sí que hi abunda, Catalunya, en esglésies romàniques.
yes that LOC abound.3SG Catalonia in churches Romanesque
b’ *Sí que n’abunda, Catalunya, d’esglésies romàniques.
yes that PTVE=abound.3SG Catalonia of= churches Romanesque

We relate this unexpected behaviour to the fact that these verbs are existential. Indeed, they involve a figure and a location such that what they predicate of the location is the existence of the figure (Hoekstra & Mulder 1990; Freeze 1992; Jaque 2014).¹⁷ Our point of departure is the observation that both verbs may also function as non-IPV, unaccusative verbs with the location overtly realized as a locative PP, yielding an interesting argument structure alternation.

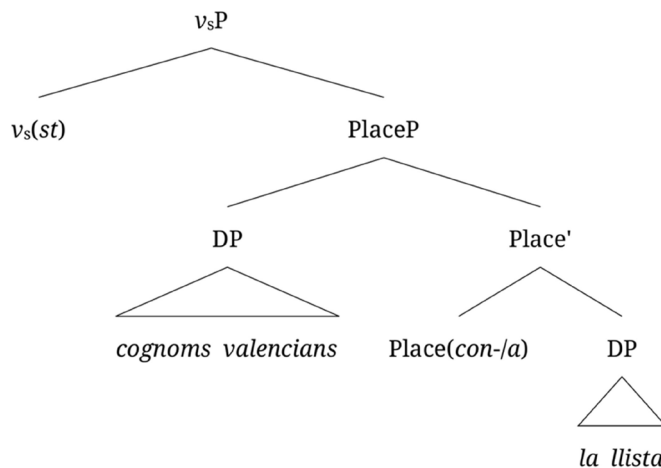
- (47) a. La llista consta de cognoms valencians.
the list consist.3SG of last.names Valencian
‘The list consists of Valencian last names.’
b. A la llista hi consten (els) cognoms valencians.
at the list LOC be.stated.3SG the last.names Valencian
‘On the list there are (the) Valencian last names.’
- (48) a. Catalunya abunda {en/d’}esglésies romàniques.
Catalonia abound.3SG {in/of=}churches Romanesque
‘Catalonia abounds in Romanesque churches.’
b. A Catalunya hi abunden (les) esglésies romàniques.
at Catalonia LOC abound.3PL the churches Romanesque
‘In Catalonia there abound Romanesque churches.’

¹⁷ The relation between existential and locative notions goes back to Bach (1967), Fillmore (1968), Freeze (1992) and Kayne (1993), as discussed for Catalan in Rigau (1997), in the context of the analysis of the verbs *ésser* ‘be’ and *haver* ‘have’. As stated in Rigau (1997: 395), “the predicate in locative sentences is a preposition, an abstract or covert preposition”. In our analysis, IPV *constar* ‘consist’ is formed out of a v_s that takes a (defective) adposition (a PlaceP).

The *a* examples illustrate the IPV uses of *constar* and *abundar*. The subject is interpreted as locative. The PPC denotes the theme, an entity whose existence somewhere is asserted, either neutrally (*constar*) or by way of indicating its abundance (*abundar*). The *b* sentences show the alternants where the locative is directly expressed as a spatial PP (together with the locative clitic *hi*) and the theme is an unaccusative subject. In the case of the IPV versions of these verbs, very noticeably with *constar*, we witness the often observed holistic effect on the interpretation of locative subjects in the locative-subject alternants of the locative alternation (Anderson 1971; Rosselló 2008). Indeed, in (47a), but not in (47b) we are to interpret that the whole list is made up of Valencian last names.

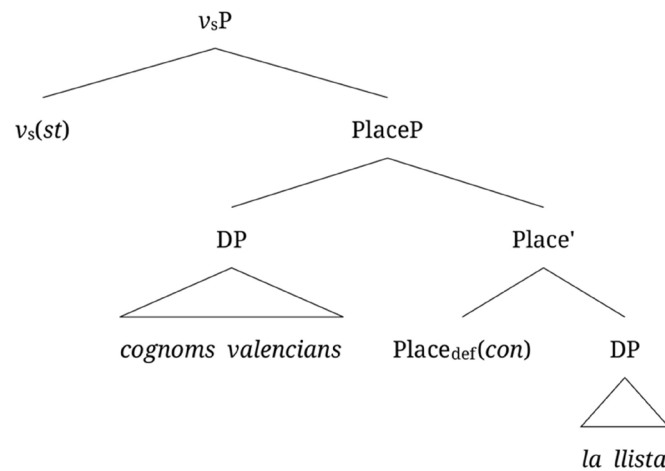
The existential character of these two verbs, coupled with the fact that they license two inverse ways of projecting their arguments, invites us to apply to them an analysis along the lines of the one proposed by Freeze (1992) for existential/locative/possessive sentences. Based on a survey of several languages, Freeze (1992) argues that these three kinds of sentences share a common underlying locative syntax, and that it is via syntactic displacement operations that the different surface orderings are obtained. Freeze's (1992) basic locative configuration can readily be implemented in our framework as one articulated around Place. We illustrate first with *constar*.¹⁸

- (49) a. A la llista hi consten cognoms valencians
 at the list LOC be.stated.3PL last.names Valencian
 'On the list there are Valencian last names.'



- b. La llista consta de cognoms valencians.
 the list consist.3SG of last.names Valencian
 'The list consists of Valencian last names.'

¹⁸ See Juarros-Daussà (2010) for a different approach to the underlying structure of verbs like *constar*. This author, however, does not take into consideration the alternation that we are referring to, nor the pronominalization facts.



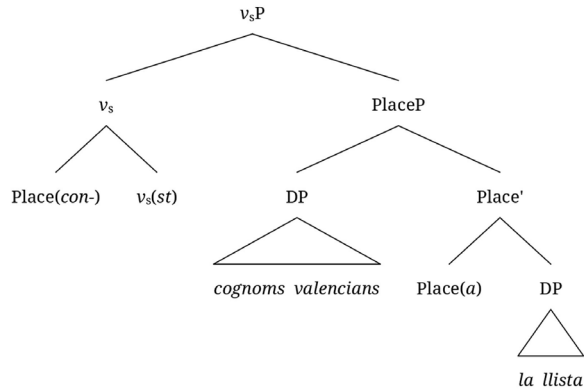
The theme-subject alternant of (49a) undergoes the derivation of a run-of-the-mill unaccusative, the internal argument *cognoms valencians* ‘Valencian last names’ entering into an agreeing relation with T. As far as case is concerned, and also in conformity with what can be observed with unaccusative subjects in general, it may receive partitive case (as shown by *ne*-extraction: (50a) if non-definite, and nominative case if definite (50b)).¹⁹

- (50) a. A la llista n’hi consten, de cognoms valencians.
 at the list PTVE=LOC be.stated.3PL the last.names Valencian
 ‘On the list there are some, of Valencian last names.’
- b. A la llista hi consten els cognoms valencians.
 at the list LOC be.stated.3PL the last.names Valencian
 ‘On the list there are the Valencian last names.’

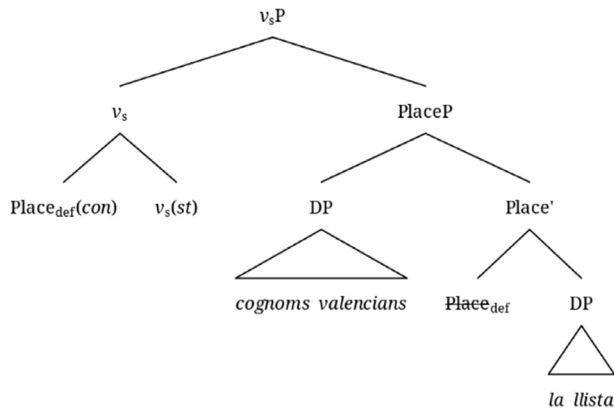
As observed in the tree of (49a), the morphological realization of the head *Place* involves a certain degree of allomorphy. We take the prefix *con-* to be the direct realization of the *Place* head in its final site as affixed to v_s . In turn, this eventuality head is directly realized as *st*, also by virtue of its adjacency to the prefixed *Place* head. Indeed, the verb *constar* does not seem to us to convey any conceptual content, and the representation of a verbal root is therefore not warranted in this case. The copy of the *Place* head stranded *in situ* is realized, by default, as a locative preposition: *a*, in this case. The movement of *Place* to v_s and its allomorphic realization in its original and final positions is illustrated in the trees below:

¹⁹ See Rigau (1997; 2013) and Mateu (2015) for relevant discussion on the merger site of locative expressions in existential constructions in Catalan.

(51) a. A la llista hi consten cognoms valencians. (49a)



b. La llista consta de cognoms valencians. (49b)

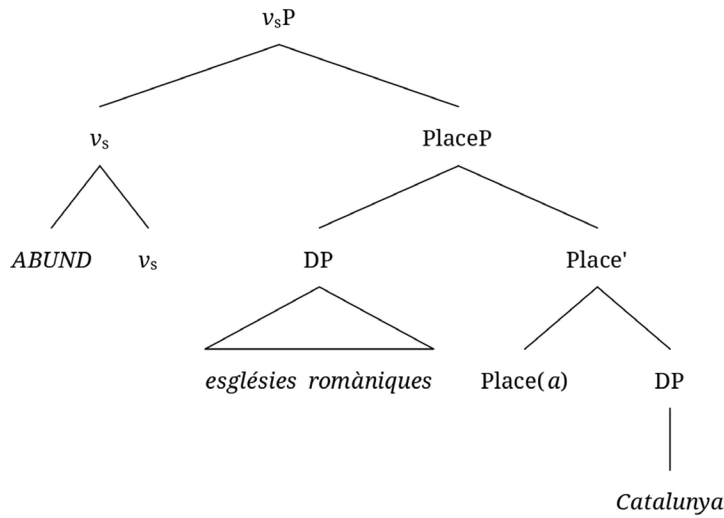


The analysis of the IPV, locative-subject alternant in (49b) largely coincides with Gallego's (2010: 167) first analysis of the Spanish cognate IPV *constar*, finally rejected in the last part of his study.²⁰ In particular, the PPC (*de cognoms valencians* 'of Valencian last names') is a spurious PP. In fact, it is a quirky subject of sorts, and the P *de* heading it, a case mark. We surmise that the theme in fact needs some exceptional licensing, since the other licenser in the structure, T, is in a case-agreement relationship with the locative argument (*la llista* 'the list'). This, in turn, is related to the fact, we presume, that Place is defective in this alternant. Indeed, Place is not realized as a preposition, unlike in the theme-subject alternant, and cannot case-license its complement. Relatedly, it cannot sustain a formally canonical figure, as noted, instantiating a sort of Burzio's generalization at the level of PlaceP.

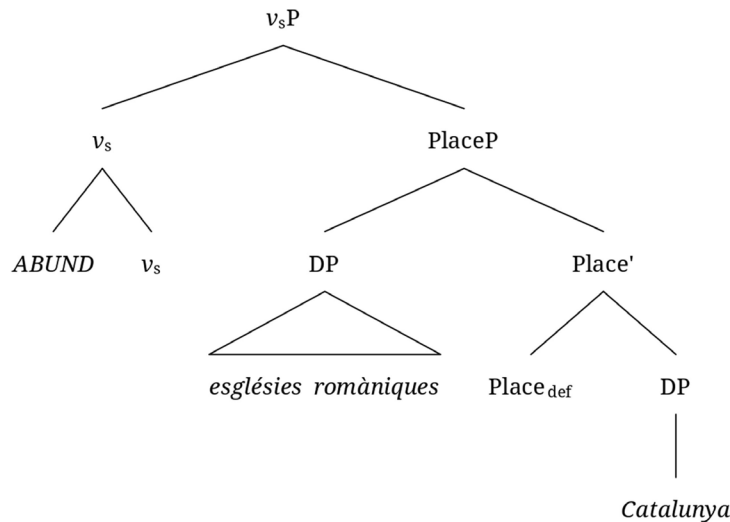
²⁰ Gallego (2010) does not mention or analyze the theme-subject alternant also licensed by Spanish *constar*.

The alternants licensed by *abundar* ‘abound’ receive a similar analysis, except for the fact that here a root is involved, both providing the phonological interpretation of the eventuality head and the conceptual content missing in *constar*:

- (52) a. *A Catalunya hi abunden esglésies romàniques.*
 at Catalonia LOC abound.3PL churches Romanesque
 ‘In Catalonia there abound Romanesque churches.’



- b. *Catalunya abunda {en/d'}esglésies romàniques.*²¹
 Catalonia abound.3SG {in/of=}churches Romanesque
 ‘Catalonia abounds in Romanesque churches.’



²¹ We still do not have a satisfying explanation why the IPV version of *abundar* admits two quirky case marks: *en* and *de*. We do note, however, that *en* is far more common than *de*, most speakers using only the former.

Turning back to the phenomenon that initiated this discussion on IPVs *constar de* ‘consist of’ and *abundar en / de* ‘abound in’, a prediction of the proposed analysis is that their PPC, being a spurious PP, should not be able to pronominalize with *en* or *hi*, as is indeed the case.²²

4.3 Intransitive Prepositional Verbs testing out as Stage-Level

Assuming Kratzer’s (1995) claim that SL predicates involve an event (see also Silvagni 2017), what unifies the verbs testing out as SL is the presence of a v_e , by hypothesis. Beyond this fact, it is not a natural class as far as the presence of Voice or the nature of Compl- v_e is concerned. According to our syntactic tests, we can distinguish three classes, B, C, and D, where Class D is further split into two.

- Class B: Unaccusative IPVs like *caure en* ‘fall into’. They cannot drop the PPC in any context.
- Class C: Non-unaccusative IPVs that can drop the PPC in non-anaphoric contexts, like *patir per* ‘think of’.
- Class D: Non-unaccusative IPVs that 1) can only drop the PPC in habitual contexts, like *col·laborar amb* ‘collaborate with’ (Class Di), or 2) cannot drop the PPC in any circumstance, like *al·ludir a* ‘allude to’ (Class Dii).

These results, together with our considerations in the last section, make us part ways with previous accounts. For instance, pace both Demonte (1991) and Gallego (2010) (for Spanish), not all unaccusative verbs pattern the same (cf. our Class A and Class B verbs). Also pace both authors, not all verbs with an external argument allow PPC drop (cf. our Class Dii).

²² For most of our informants, the non-existential IPV *consistir en* ‘consist in’ does not admit the pronominalization of its PPC either –but see Jané (2012).

- (i) a. El seu berenar consistia en una pasta?
the his snack consist.PST.IPFV.3SG in a pastry?
‘Did his afternoon snack consist of a pastry?’
- b. *–No, no hi consistia.
No not LOC consist.PST.IPFV.3SG

In this case, the PPC is not introduced by *de*, which makes the hypothesis that the preposition is a case mark not immediately evident. In addition, as a non-existential verb, *consistir* does not admit the construction with a locative PP, like the one licensed by *constar* and *abundar*.

- (ii) *Al seu berenar hi consistia una pasta.
at.the his snak LOC consist.PST.IPFV.3SG a pastry

We leave the exploration of the pronominalization facts of *consistir en* ‘consist in’ for future research.

From the point of view of their eventive-aktionsart properties, Classes B and D are heterogenous, as will be described below. Class C only contains atelic (activity) verbs. We deal with each of the three classes in the following subsections.

4.3.1 Unaccusative Stage-Level IPVs (Class B)

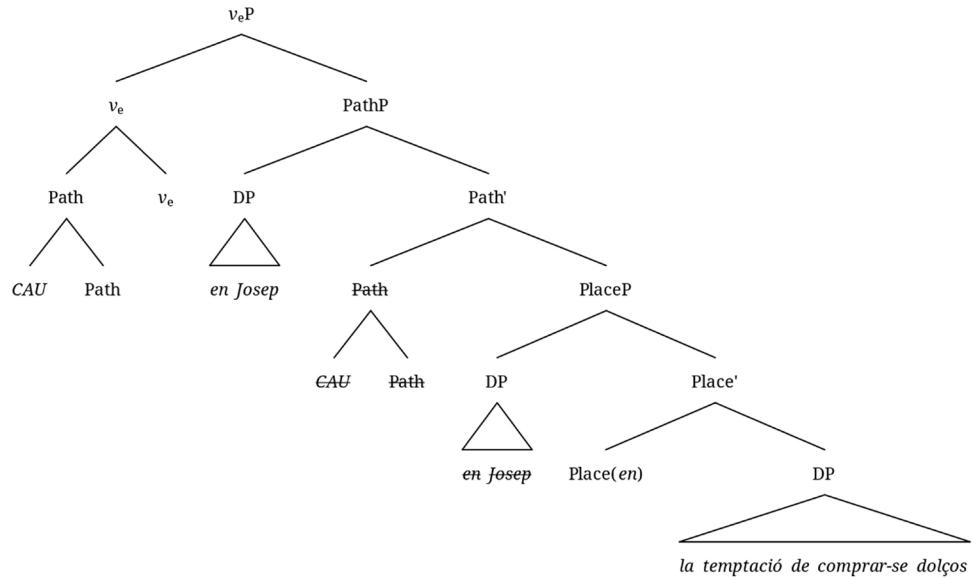
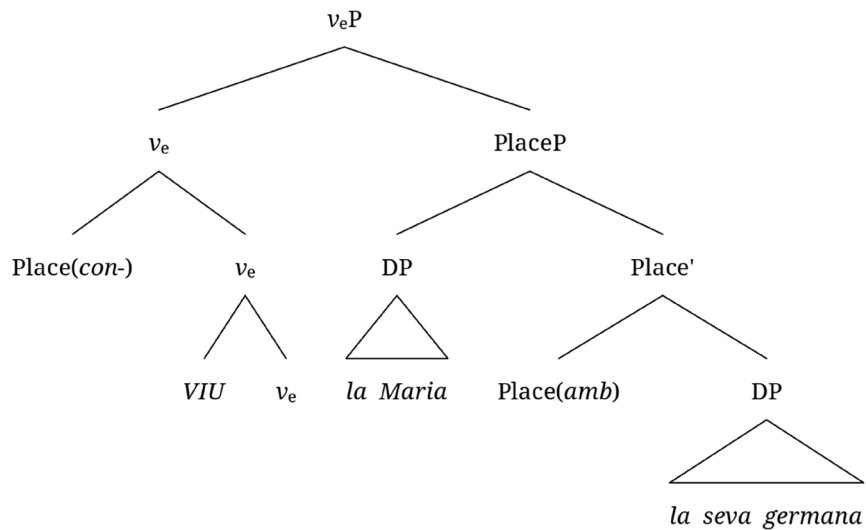
The SL IPVs of our corpus testing out as unaccusative, i.e., with an internal argument subject, are verbs like *caure en* ‘fall into’ and *conviure amb* ‘live together with’. Importantly, all these verbs strongly disallow PPC drop in any context.

- (53) a. En Josep mai no cau *(en la temptació de comprar-se dolços).
 the Josep never not fall.3SG in the temptation of buy.INF = REFL.3 sweets
- b. La Maria conviu *(amb la seva germana).
 the Maria live.together.3SG with the her sister

The disallowance of PPC drop is expected under a view of unaccusativity whereby the subject is an internal argument originating as a specifier of some vP -internal projection and the PPC is precisely what articulates the rest of the projection of which the subject is the specifier. We find two subtypes of unaccusative SL IPVs, according to their eventive-aktionsart properties: those that involve telicity, understood as a transition, like *caure en* ‘fall into’, and those that are atelic, like *conviure amb* ‘live together with’. These two verbs, for instance, show a different interpretation with a durative adverbial. Only the latter allows a non-repetitive reading.

- (54) a. En Josep va caure en la temptació de comprar-se dolços
 the Josep PST.3SG fall.INF in the temptation of buy.INF = REFL.3 sweets
 durant anys.
 during years
 ‘Josep succumbed to the temptation of buying sweets for years.’
- b. La Maria va conviure amb la seva germana durant anys.
 the Maria PST.3SG live.together.INF with the her sister during years
 ‘Maria lived together with her sister for years.’

IPVs like *caure en* involve a PathP encoding the transition traversed by the internal argument, i.e., the surface subject. Those like *conviure amb* ‘live together with’ involve a PlaceP, i.e., they establish some kind of predicative relation between two entities that is maintained during the interval in which the event introduced by v_e holds.

(55) a. Telic *caure en* ‘fall into’b. Atelic *convivre amb* ‘live together with’

An observation is in order with respect to these representations. We assume the verbal root to originate in different loci. In Path unaccusatives, we take it to be an adjunct to Path. It is well known that transition predicates in languages like Catalan, which belongs to the verb-framed class, cannot express the manner in which the event takes place (Talmy 2000; Mateu & Rigau 2002; Acedo-Matellán & Mateu 2015). In our terms, the root could not be adjoined

to the eventuality head, precisely because this clashes with the obligatory incorporation of the Path head into v in these languages. Thus, we take the root to originate as a modifier of Path, describing the type of transition involved (in this case, a metaphorical downward trajectory: *caure* ‘fall’).²³

As far as morphology is concerned, verbs of Class B are expected to allow the prefixation of the Place head, since the prepositional structure corresponding to their PPC is merged as a complement to the eventuality head. Thus, see *con-viure* ‘live with’, in (55b), where Place is realized as *con-* in the final position, as adjoined to v_e , and as the preposition *amb* ‘with’ in the tail position.

4.3.2 Non-unaccusative Stage-Level IPVs allowing PPC drop in non-anaphoric contexts (Class C)

The SL IPVs of our corpus testing out as non-unaccusative verbs that allow PPC drop in non-anaphoric contexts are verbs like *parlar de* ‘talk about’.

In §3.1.1, we have shown that PPCs of verbs like *parlar de* ‘talk about’ in Catalan pattern more like adjuncts than arguments. As a matter of fact, it proves quite difficult to determine the adjunct/argument-hood of the PPC on tests other than sheer droppability. It is well known (Den Dikken & Lahne 2013) that adjuncts are opaque to PP-extraction. This should produce a difference between those PPCs that can be dropped, if they are adjuncts, from those that cannot be dropped. However, PP-extraction from all sorts of PPCs, droppable (56a) or not (56b), is deviant.

- (56) a. *De quina llengua has pensat en la filiació?
of which language have.2SG think.PTCP in the filiation
- b. *De quin polític al·ludien a escàndols?
of which politician allude.PST.IPFV.3PL to scandals

Complementarily, for those verbs that admit a non-finite clausal PPC, DP-extraction seems quite fine. This is independent, again, of whether the verb is of the PPC-drop kind (57a) or not (57b).²⁴

- (57) a. Quin actor han jugat a imitar?
which actor have.3PL play.PTCP at mimic.INF
‘Which actor have they imitated, in play?’

²³ Folli & Harley (2020) also argue in favour of the idea that in verb-framed languages the verbal root can adjoin to Path.

²⁴ It should be noted that the infinitival tests could be changing the relationship between the matrix verb and the infinitive via preposition change (cf., e.g., *insistir* ‘insist’ {*en* + DP > *a* + INF}), obligatory in Catalan.

- b. Quin càrrec aspiraves a representar?
 which post aspire.PST.IPFV.2SG at represent.INF
 ‘Which post did you aspire to represent?’

Extraction facts are, thus, inconclusive as to whether droppable PPCs are adjuncts.

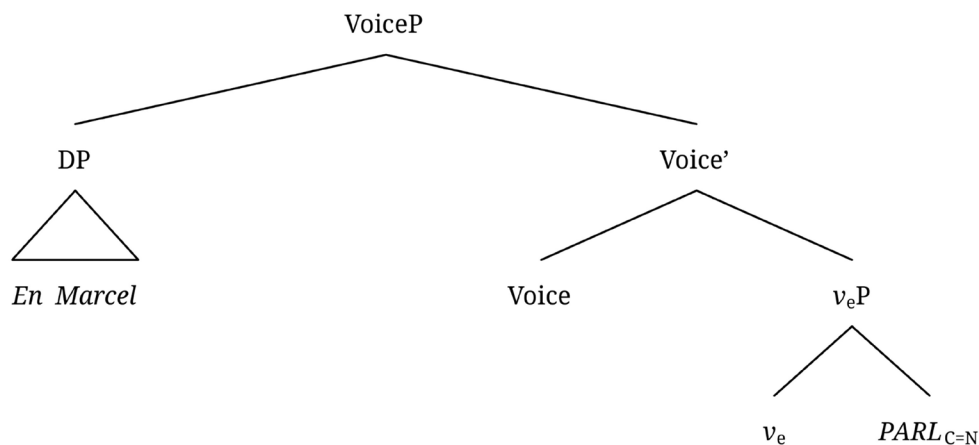
Demonte (1991), for Spanish, proposes that for IPVs belonging to her Class 2, like *discrepar de* ‘disagree with’, the PPC is a spurious PP and corresponds in fact to a direct argument, the preposition being a mark of structural case. The fact that the direct object of many transitive verbs can be dropped (58) would seem to support Demonte’s hypothesis that her Class 2 verbs are underlyingly transitive.

- (58) L’Elna i en Joan van empènyer (el cotxe).
 the =Elna and the Joan PST.3PL push.INF the car
 ‘Elna and Joan pushed (the car).’

However, the pronominalization facts examined in §3.1.1 cast doubt on the idea that the PPC is a direct object. Gallego (2010), who tries to accommodate Demonte’s (1991) two-fold classification of prepositional verbs to Hale & Keyser’s (2002) theory of lexical syntax, claims that verbs that drop their PPC are unergatives, the PPC being a low adjunct. We concur with this author, who, however, does not offer the syntactic representation of the PPC as an adjunct.

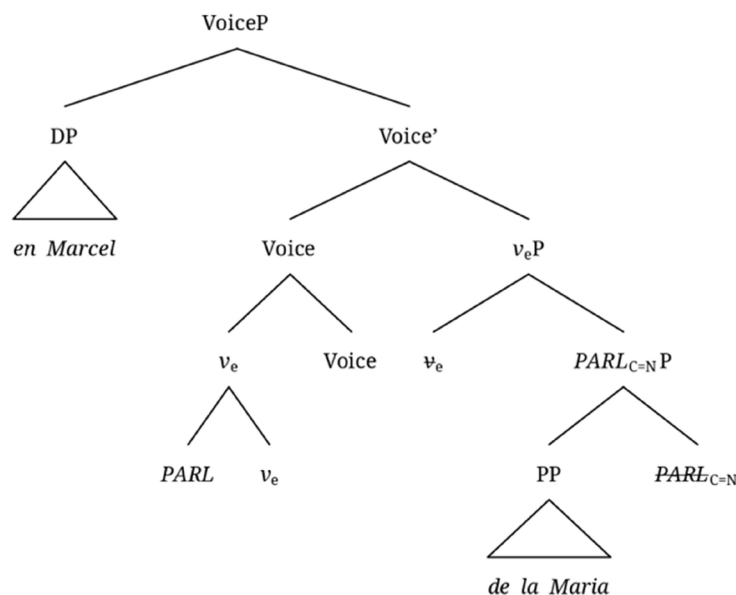
Recall that, much as it may be droppable, the PPC does not survive a context where the VP has been replaced by a proform (see example (2) in §1). Under our theoretical assumptions, unergative predicates involve the projection of v_e and of Voice, v_e taking the verbal root as argument, and the predicate having a creation/consumption semantics, (59).

- (59) En Marcel parlava.
 the Marcel talk.PST.IPFV.3SG
 ‘Marcel talked.’



The projection of v_e ensures that an event is interpreted to take place. In turn, this event consists in “making talk”, as related to the root merged at Compl- v_e P. By virtue of this merger, the root is interpreted as non-distinct from a nominal category, and as an incremental theme. The question is where the PPC attaches, when *parlar* is used with a PPC. We know that, being a PPC, and not a VP-adjunct, it cannot attach outside v_e P. The only site left is the very root of the verb. In fact, we take the PPC to be an adjunct to the nominalized root, further specifying its content (in this case, the subject of the talking).

- (60) En Marcel parlava de la Maria.
 the Marcel talk.PST.IPFV.3SG of the Maria
 ‘Marcel talked about Maria.’



The root *PARL* merges with the PP *de la Maria*, *PARL* projecting. When *PARLP* is merged with the eventive head, the root (and its projection) is automatically categorized as a nominal, with the interpretation of an incremental theme. The PP is interpreted as a modifier of such nominal: “Marcel made talk about Maria”. The root ends up incorporating into v_e , and the whole to Voice.

Since the PPC in this class of verbs is merged as an adjunct, it cannot constitute a source of the prefixation of the adpositional head, as in the other classes of verbs (see §4.2, §4.3.1, §4.3.3; see also §4.1.2). Thus, this class of verbs, allowing PPC drop in all non-anaphoric contexts, are predicted not to be prefixed. This prediction is born out, i.e. Class C contains mostly unprefixated verbs.²⁵

²⁵ The only counterexamples are *dis-cutir de* ‘have an argument about’ and *pre-sumir de* ‘boast’. However, we note that the Latin prefixes *dis-* and *pre-* do not add any identifiable meaning in these cases, and the Latinate roots *cut* and *sum* cannot be singled out as bearing any specific semantics to these forms, either. That is, no relationship can currently

4.3.3 Non-unaccusative IPVs disallowing PPC drop in activity contexts (Class D)

This class of verbs, to our knowledge, has not been previously identified as such (cf., for instance, Demonte’s 1991 and Gallego’s 2010 studies on Spanish). It contains verbs that take an external argument and embed an adpositional structure that is the source of the prefix, but with no direct object, like *al·ludir a* ‘allude to’ and *col·laborar amb* ‘collaborate with’.

IPVs of Class D in Catalan, we argue, are non-native verbs that are learned as associated with certain non-Romance traits. Starting with verbs of the Dii class like *al·ludir a* ‘allude to’, which do not allow PPC drop in any context, we contend that the PPC itself corresponds to an adpositional configuration that articulates the VP. Thus, we take these verbs to involve a Voice head, which accounts for the presence of an external argument, a v_p , and thus their eventive nature, and also a prepositional configuration, either PathP or PlaceP, where PlaceP does not contain a specifier. Since PlaceP in this case does not project a specifier, it does not function as a full predicate, but as a mere copredicate, forming a complex predicate with the eventive head.²⁶ Its requirement of establishing a relation with an entity is met by “delayed gratification” (Hale & Keyser 2002: 227), when the specifier of Voice is merged. The external argument of the event, the agent, is therefore also interpreted as a metaphorical figure (Wood 2015: 176). Importantly, we take the root to be an adjunct to the eventive head, unlike what is generally the case in verb-framed languages like Romance.

- (61) La Sandra va al·ludir *(a l’alcaldessa).
 the Sandra PST.3SG allude.INF to the = mayoress
 ‘Sandra alluded to the mayoress.’

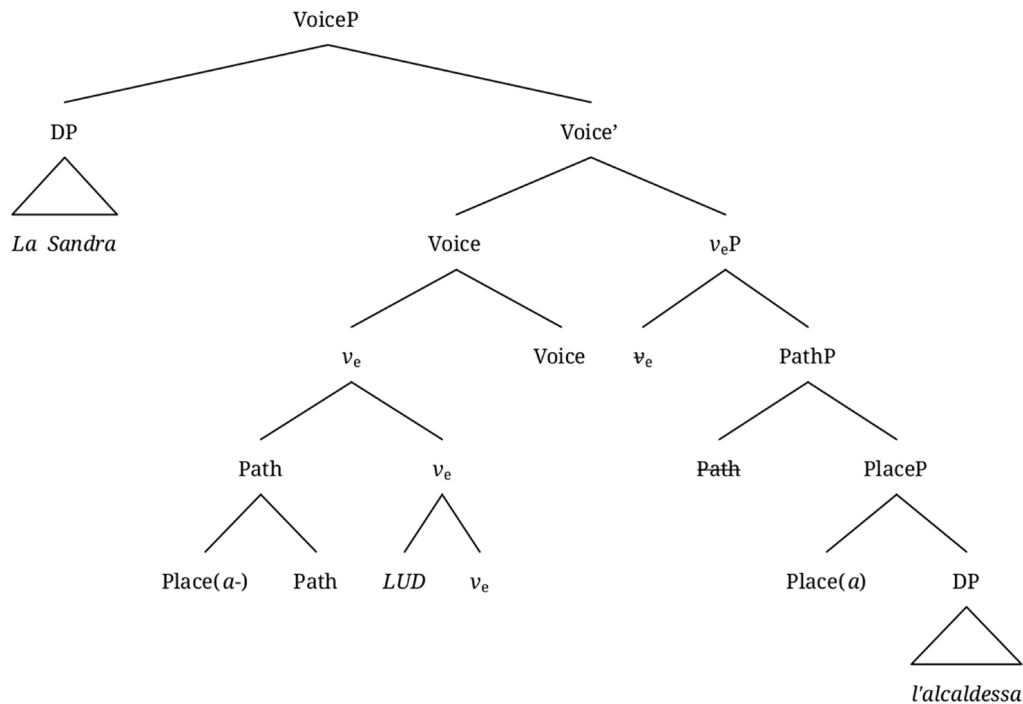
be established among the verbal root bases in Catalan, and there is no reason to analyze all these verbs as morphologically complex.

As pointed out by an anonymous reviewer, the verb *desconfiar de* ‘mistrust’ does seem to be a true counterexample to our analysis. Interestingly, the base form of this verb is itself a Class Di prefixed verb, *confiar en* ‘trust’, because of its different PPC drop and sluicing properties.

- (i) a. Desconfia, però no sé de qui.
 mistrust.3SG but not know.1SG of who
 ‘He is suspicious, but I don’t know of whom.’
 b. *Confia, però no sé en qui.
 trust.3SG but not know.1SG in who

Although we do not have a full analysis of *desconfiar de* ‘mistrust’, we believe that a full account of this verb depends on an understanding of the effect of the negative prefix *des-* (Gibert-Sotelo 2017; see also Fábregas 2005: 119 for negative prefixation in nominalized adjectives).

²⁶ We use the term copredicate as close to Ramchand’s (2008: 34) notion of rheme, that is, “part of the description of the predicate”, rather than in the seminal use in Gawron 1986.



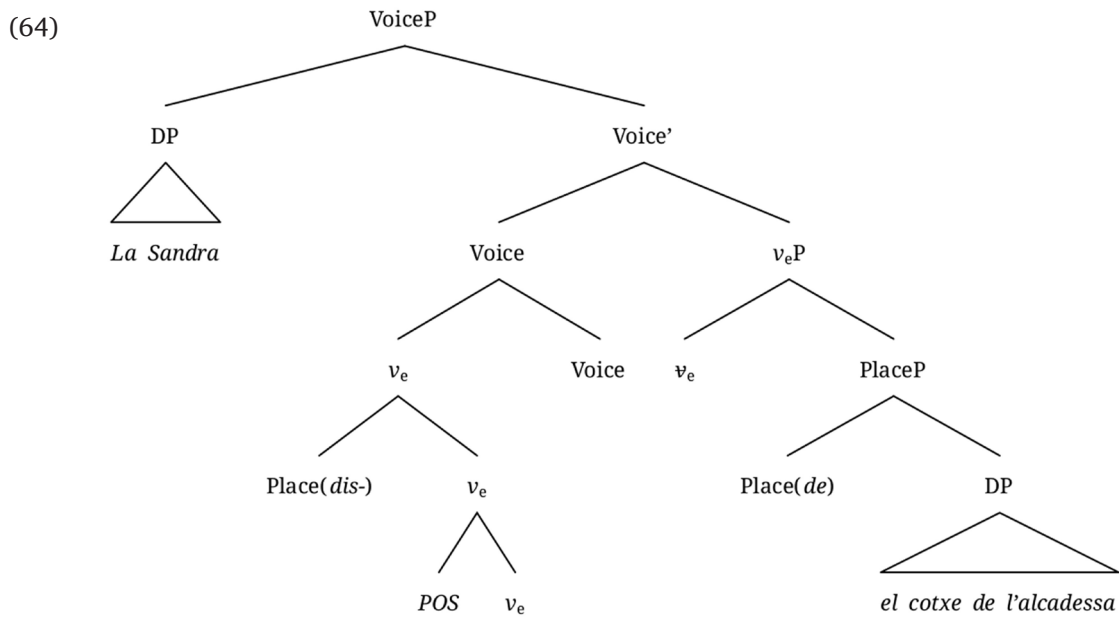
These verbs do not feature any nominal at Spec-PlaceP that could function as a measurer of the event via movement to Spec-PathP. In spite of that, our theory predicts that, if they feature a Path head, a transition is interpreted to take place. This, we note, is shown by the fact that verbs like *al·ludir a* 'allude to' license a repetitive reading in the presence of a durative adverbial.

- (62) Al debat, la Sandra va al·ludir a l'alcalde durant mitja hora.
 at=the debate the Sandra PST.3SG allude.INF to the=mayoress during half hour
 'In the debate, Sandra referred to the mayoress for half an hour.'

By contrast, one must conclude that other verbs of this class do not project PathP. For instance, *disposar de* 'use' is not forced to be interpreted repetitively in combination with a durative adverbial. Rather, it allows a single event reading.

- (63) La Sandra va disposar del cotxe de l'alcalde durant tres hores.
 the Sandra PST.IPFV.3SG use.INF of.the car of the=mayoress during three hours
 'Sandra had the mayoress's car at her disposal for three hours.'

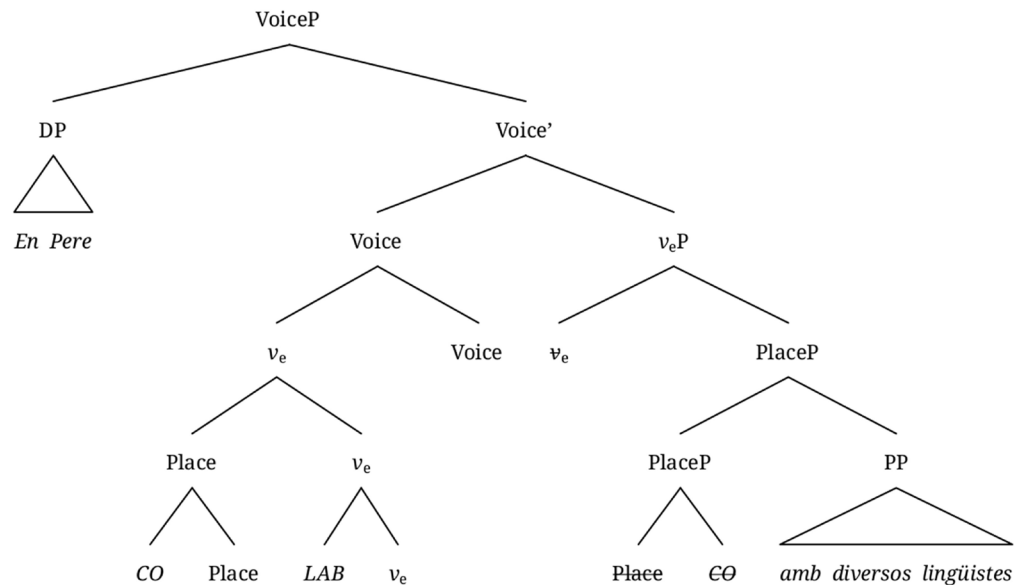
For verbs like *disposar de* 'use', therefore, we propose the same configuration as for *al·ludir a* minus the projection of PathP.



Verbs of Class Dii are predicted to allow prefixation. This is because they involve a non-adjunct vP -internal adpositional configuration whose head may successively raise to the eventive head, where it is interpreted as a prefix. The prefix and the preposition heading the PPC are different realizations—contextual co-allomorphs—of the same Place head: *a-* and *a* in the case of *alludir a* ‘allude to’, and *dis-* and *de* in the case of *disposar de* ‘use’.

Turning to verbs of Class Di, they do allow PPC drop in certain non-anaphoric contexts like the habitual construction. We take this to indicate that, as with verbs of Class C, the PPC is an adjunct. If that is the right analysis, two questions emerge: what portion of the structure is the PPC an adjunct to? And what then is the source of the prefix of, for instance, *co-laborar*? Here we would like to adopt Gallego’s (2012) general approach to prefixed prepositional verbs in Spanish: the PPC is an adjunct to the prefix itself, and functions as a kind of double, specifying the general meaning of the prefix (see §4.1.2). In our terms, we take the PPC of Class Di verbs to be an adjunct to the VP-internal adpositional projection. In turn, this VP-internal projection contains a root that corresponds to the prefix, which ends up adjoined to the verb, (65).

- (65) En Pere ha collaborat amb diversos lingüistes durant anys.
 the Pere have.3SG collaborate.PTCP with different linguists for years.
 ‘Pere has collaborated with different linguists for years.’



As mentioned, the adjunct *amb diversos lingüistes* ‘with different linguists’ further specifies the impoverished interpretation of the PlaceP whose complement is the very root of the prefix: *CO* ‘with’. Unlike with verbs of Class Dii, the PPC, as an adjunct, can be dropped, as in the habitual construction. This brings Class Di closer to Class C. The difference between these two classes lies in their underlying configuration. Class C verbs involve, by themselves, an unergative structure licensing an activity interpretation, and the PPC, as an adjunct to the root, just further specifies its content (see §4.3.2). By contrast, the absence of the PPC in Class Di verbs does not leave such a configuration, able to license an activity interpretation. This is the reason for the difference in grammaticality status of verbs of the two classes in the sluicing construction, where an activity interpretation is induced.

- (66) a. L’Antoni ha parlat però no sé de què.
 the=Antoni have.3SG talk.PTCP but not know.1SG of what
 ‘Antoni has talked but I don’t know about what.’
- b. *L’Antoni ha col·laborat però no sé amb qui.
 the=Antoni have.SG collaborate.PTCP but not know.1SG with who

By contrast, the habitual construction, being generic, is compatible with the lack of referential specification, and hence, with the drop of the PPC adjunct.

5 Conclusions

The main contribution of this paper is showing that the aspectual characterization of IPVs as IL predicates robustly predicts their argument structure properties (Class A: e.g., *constar de* ‘consist

of'). These are verbs without an external argument, but with a compulsory PPC that involves a predicative relation between the PPC and a theme-like subject. They thus involve a nonverbal predicate, which is consistent with the hypothesis that IL predicates cannot be encoded as unergative verbs (Property Verbalization Constraint; Acedo-Matellán 2019). By contrast, IPVs testing out as SL, build a heterogeneous class as regards their argument structure properties, comprising unaccusative (Class B: *caure en* 'fall into') and unergative verbs, where the latter may freely drop their PPC (Class C: *parlar de* 'talk about'), allow PPC-drop in certain environments (Class Di: *col·laborar amb* 'collaborate with') or categorically reject it (Class Dii: *al·ludir a* 'allude to').

An analysis of all these classes of verbs has been developed in terms of two eventuality heads, an eventive and a stative one, and two adpositional heads, a scalar one, Path, and a stative-locative one, Place. We have shown that neither all unaccusative verbs pattern the same (IL Class A vs. SL Class B) nor do all verbs with an external argument allow PPC drop to the same extent in non-anaphoric contexts (impossible in Class Dii, restricted in Class Di, and unrestricted in Class C). It has been argued that binary distinctions within PPCs are insufficient to account for the structural variation found across IPVs. Thus, while Demonte (1991) distinguishes between argument and predicate PPCs and Gallego (2010) analyses IPVs as either predicates or low adjuncts, the finer-grained analysis conducted on Catalan results in a three-way syntactic characterization of PPCs: predicates, what we have termed co-predicates, and low adjuncts. Specifically, from the perspective adopted in this work, the PPC of verbs of Class Dii and that of classes A and B is integrated within the *vP* in the same way, as a non-adjunct. However, this is read as a predicate when PlaceP takes a specifier (Classes A and B) and as a co-predicate when it does not (Class Dii). By contrast, for verbs of Classes C and Di, the PPC is a low adjunct: an adjunct to the root (Class C) or the PlaceP (Class Di).

Interestingly, our assumptions about head movement, late insertion, and allomorphy allow us to make novel predictions regarding the morphological makeup of IPVs. In particular, only those IPVs whose PPC is not droppable in absolute contexts expressing an activity, that is, the sluicing construction, may exhibit a prefix that can be said to be a cognate of the preposition heading the PPC (cf., e.g., *a-* in *al·ludir a* 'allude to' and *co-* in *col·laborar amb* 'collaborate with'), thus establishing a causal relation between the presence of the prefix and the obligatoriness of the PPC in this kind of context in Class D IPVs. This is because Class D verbs integrate a non-adjunct prepositional structure, which either corresponds to the whole PPC, as in Class Dii, or hosts the prefix, as in Class Di. In both cases, this integrated prepositional structure can serve as source for the prefix, as it does not prevent head movement. By contrast, verbs whose PPC is droppable in absolute contexts expressing an activity, that is, Class C, are predicted not to exhibit a prefix cognate with the preposition heading the PPC, i.e. co-allomorphy. This is because these verbs do not integrate a non-adjunct prepositional structure within the *vP* that may serve as the source of the prefix, the PPC being merged as an adjunct to the root.

Additional, more specific empirical contributions refer to the existence of IPVs that ban the expression of their PPC as pronouns (e.g., *constar de* ‘consist of’), for which an explanation has been provided based on their underlying syntactic structure.

Among the remaining questions and challenges to be explored in future research is the potential existence of other ambivalent verbs like SL *patir per* ‘worry about / IL *patir de* ‘suffer from’. An interesting question regarding these verbs refers to the specific contribution the preposition makes in licensing one or the other interpretation.

While our study shows a robust correlation between argument structure and aspectual structure taking Catalan as an empirical basis, it remains to be seen whether the results obtained here are replicable in other languages, particularly the heterogeneity of the SL class of IPVs.

An unexpected conclusion of our study is that what has been traditionally considered as an unergative verb may correspond to different structural classes of verbs displaying different properties (i.e., classes C, Di, and Dii). Further research into unergative verbs in other languages should be conducted to discuss the nature of unergativity.

Abbreviations

ACC	accusative
DAT	dative
DO	Direct Object
DOM	differential object marking
FUT	future
IL	Individual-Level
IMP	imperative
INF	infinitive
IO	Indirect Object
IPFV	imperfective
IPV	Intransitive Prepositional Verb
LOC	locative
PL	plural
PPC	Prepositional Phrase Complement
PST	past
PTCP	participle
PVC	Property Verbalization Constraint
PTVE	partitive
REFL	reflexive
SG	singular
SL	Stage-Level

Supplementary files

Supplementary file 1: Appendix. List of Catalan IPVs. Results of the IL/SL tests and argument structure tests, per IPV. DOI: <https://doi.org/10.16995/glossa.9976.s1>

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Competing interests

The authors have no competing interests to declare.

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