Location and locatum verbs revisited: Evidence from aspect and quantification

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Abstract: In this paper we claim that location and locatum verbs are grammatically different, contrary to some recent analyses (Mateu 2001; 2008; Harley 2005). While aspectual tests are known to distinguish both classes, we adduce new evidence from degree quantification tests pointing in the same direction. In particular, location verbs seem to be change-of-state verbs, and locatum verbs behave rather like degree achievements and unergative verbs of variable telicity. We claim that these differences must be accounted for in the syntactic representation of locative verbs. While location verbs involve an abstract bounded path, articulated through the combination of a Path preposition and a Place preposition, locatum verbs involve an abstract predicative preposition that allows for degree quantification of the root and contextually determined (a)telicity.

Keywords: locative verbs; inner aspect; verbal quantification; argument structure; event structure

1. Introduction

This work proposes an analysis of denominal locative verbs, which involve the location of an entity with respect to another entity. Locative verbs are usually divided into two classes, location and locatum verbs, depending on their semantic interpretation: as shown in (1), while location verbs like Catalan *embotellar* 'bottle' denote the location where the direct object has moved onto, locatum verbs like Catalan *ensellar* 'saddle', denote the element that has been moved onto the location expressed by the direct object:[1]

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[1] Observe that both *embotellar* and *ensellar* feature a prefix of prepositional origin (*en-/em-* < Latin *in-*). As the present discussion will show, the presence of this pre-

(1)   a.   En Jan ha em-botellat   l'aigua.   (cf. *botella* 'bottle')
            the Jan has in-bottle.PTCP the=water
            'Jan has bottled the water.'

      b.   L'Elna   ha en-sellat   el   cavall.   (cf. *sella* 'saddle')
            the=Elna has in-saddle.PTCP the horse
            'Elna has saddled the horse.'

Location and locatum verbs have been treated either as two fundamentally
different classes of verbs (Labelle 2000; Hale & Keyser 1997, and subse-
quent works) or as grammatically non-distinct (Mateu 2001; 2002; 2008;
Harley 2005). In this work, we propose that they are grammatically distinct
classes, attending to their aspectual and quantificational properties.

    With respect to the aspectual properties of locative verbs, we show
that location verbs are always change-of-state verbs, irrespective of the
root that they embed. This means that these verbs license a telic reading
of the predicate, provided that the direct internal argument possesses the
relevant boundedness properties (Verkuyl 1972; Krifka 1992; 1989; Borer
2005; MacDonald 2008). By contrast, locatum verbs are ambiguous be-
tween a telic and an atelic reading even when their internal argument is
bounded. With respect to their quantificational properties, we show that
locatum and location verbs show different interpretations when combined
with degree modifiers. Building on these considerations, we claim that lo-
cation verbs involve an abstract bounded path preposition and locatum
verbs involve an abstract predicative preposition. Finally, we show that
some locative verbs are ambiguous between a location and a locatum read-
ing. We attribute this fact to the possibility of associating the same root
to two different structures, which is possible within a neoconstructionist
framework, as the one adopted here.

    The paper is organized as follows. In section 2 we revise the most in-
fluential previous accounts of location and locatum verbs. In sections 3 and
4 we focus on the aspectual and quantificational properties of these verbs,
respectively. In section 5 we propose to analyse the predicates headed by
these verbs as involving different syntactic configurations. We draw con-
clusions in section 6.

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fix seems orthogonal to the location/locatum distinction. For discussion on prefixed
location and locatum verbs in Catalan, see Acedo-Matellán (2006). For discussions
on the same issue in other Romance languages see, among others, di Sciullo (1996,
and subsequent works) on French and Italian, Kopecka (2006) on French and Bassani
(2012) on Portuguese.

2. Review of previous proposals

Locative verbs have attracted the attention of researchers from Clark & Clark's (1979) seminal descriptive work on denominal verbs. In Pinker's (1989) and Jackendoff's (1990) approaches these verbs involve a semantic representation of caused motion containing an abstract noun which gives name to the verb. This noun is the located figure in the case of locatum verbs and the ground of the locative relation in the case of location verbs, as shown in the next representation of locatum *butter* and location *pocket* by Jackendoff (1990, 170):

(2) a. CAUSE ($[_{\text{Thing}}$ α], $[_{\text{Event}}$ INCH [BE ($[_{\text{Thing}}$ BUTTER], $[_{\text{Place}}$ ([ON ($[_{\text{Thing}}$ β])])])])]

  b. CAUSE ($[_{\text{Thing}}$ α], $[_{\text{Event}}$ GO ([($[_{\text{Thing}}$ β], $[_{\text{Path}}$ TO ($[_{\text{Place}}$ IN ($[_{\text{Thing}}$ POCKET])])])])])]

Labelle (2000) proposes to simplify these accounts by positing that in both location and locatum verbs the affected argument is the overt direct object, while the one encoded by the verbal root represents the final state undergone by the entity denoted by the object. The difference between locatum and location verbs is not structural, but resides in the type of preposition featured by either type of verb in their conceptual representation. Thus, while location verbs feature a locative, AT-type preposition, locatum verbs feature a WITH-type preposition. This is shown in the next semantic representations of the French locatum *fleurir* 'cover with flowers' and location *entreposer* 'store' in Labelle (1992):

(3) a. CAUSE (x, [INCH (WITH fleur(s) (y))])

  b. CAUSE (x, [INCH (AT entrepot (y))])

Thus, the mapping between theta-roles and grammatical functions becomes homomorphic in Labelle's (1992) account.[2] However, as pointed out by Mateu (2001), there is no morphological evidence that these verbs involve so many different semantic operators as proposed by Labelle. This analysis is closely paralleled by the l(exical)-syntactic one proposed by Hale and Keyser (1997, and subsequent works). For these authors, the l-syntactic configuration of both types of verbs is exactly the same. It involves a prepositional projection that takes the surface direct object as its specifier and the nominal root as its complement. In turn, this prepositional projection is the complement of a verbal head that verbalizes the whole structure (Hale & Keyser 2002, 18):

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[2] See Kiparsky (1997) for an analysis similar to that of Labelle's (1992).

(4)   a.   [$_V$ V [$_P$ [$_{DP}$ the horse] [P (= central coincidence relation) saddle]]]

       b.   [$_V$ V [$_P$ [$_{DP}$ the book] [P (= terminal coincidence relation) shelve]]]

For these authors, the semantic difference between locatum and location
verbs is non-configurational. It emerges from the fact that they involve
different prepositions: a preposition of **terminal coincidence** in the case
of location verbs and a preposition of **central coincidence** in the case of
locatum verbs. In a nutshell, a central coincidence is that between a figure
and a ground whose centres coincide, while a terminal coincidence is that
between a figure and a ground whose edges coincide (Hale 1986). Unlike
in Labelle's (1992) semantic approach, a number of diagnostic tests like
participation in the middle construction and unavailability of the causative
alternation are shown to derive from the configurational properties of the
l-syntactic representations. Notably, however, neither Labelle's nor Hale
and Keyser's analysis discusses the inner-aspectual and quantificational
properties of these verbs.

Mateu (2001; 2002; 2008) does take the inner-aspectual properties of
locative verbs into account. In particular, Mateu (2001; 2002) claims that
both location and locatum verbs are change-of-state verbs and that they
respond in the same way to grammatical diagnostics assumed to detect
the lexical encoding of a telicity-inducing transition (a **terminus**): mid-
dle formation, adjectival passive formation and allowance of object-hosted
depictive secondary predicates. Thus, in contrast with Hale and Keyser's
(1997) analysis, Mateu (2001; 2002) proposes that location and locatum
verbs not only share the same structure, but they also feature the same
preposition, namely, one of terminal coincidence, which is claimed to yield
the change-of-state semantics characteristic of these predicates. Thus, loca-
tion and locatum verbs would be undistinguishable, the difference becom-
ing strictly non-grammatical, as shown in the next l-syntactic analysis of
French locatum *fleurir* 'cover with flowers' and location *entreposer* 'store'
(Mateu 2001, 18):

(5)   [$_V$ V [$_X$ [$_{DP}$ la tombe/la marchandise] [X fleur/entrepot]]]
       (X = terminal coincidence relation)

Crucially, a different position is adopted in Mateu (2008). In this work he
acknowledges the existence of atelic predicates headed by locative verbs
like *water*. He proposes that location and locatum verbs that may head
telic predicates, such as *shelve* or *saddle*, involve a preposition of terminal
coincidence, while locatum verbs that are interpreted as atelic, such as
water, involve a preposition of central coincidence:

(6) a. [$_V$ V [$_P$ [$_{DP}$ the book/the horse] [P (= terminal coincidence) shelve/saddle]]]

b. [$_V$ V [$_P$ [$_{DP}$ the plants] [P (= central coincidence relation) water]]]

Mateu (2008) assumes therefore a grammatical, non-configurational difference that, however, does not coincide exactly with the location/locatum difference. This new position constitutes, therefore, a partial return to Labelle's (1992) and Hale and Keyser's (1997) types of analysis.

Harley (2005) adopts Mateu's (2001; 2002) proposal that locatum and location verbs are grammatically undistinguishable, since they involve exactly the same configuration with an abstract semantically inert preposition. Harley proposes that the differences in (a)telicity in locative verbs depend exclusively on the (un)boundedness of the nominal root that the verb is built on, the abstract preposition making no contribution to the computation of inner aspect. Thus, a bounded root like √CORRAL yields *corral*, which may head telic predicates, while an unbounded root like √PAINT yields atelic *paint* (Harley 2005, 58):

(7) [$_{vP}$ [$_{DP}$ Jill/Bill] [$_{v'}$ v [$_{SC}$ [$_{DP}$ the horse/the wall] [$_{PP}$ P [$_{\sqrt{P}}$ √CORRAL/√PAINT]]]]]

Finally, MacDonald (2008, 95–96) shows that the aktionsart of location and locatum verbs is different. Specifically, while location verbs are uniformly interpreted as achievements, which this author derives within an l-syntactic theory of verb formation, some locatum verbs license an activity interpretation. Thus, the durative adverbial in the next example involving the locatum verb *powder* is compatible with a single event interpretation (*op.cit.*, 109):

(8) Mary powdered her nose for ten minutes.

MacDonald proposes that location verbs enter the syntax with a feature able to induce telicity (his ⟨fe⟩ feature), while locatum verbs such as *powder*, do not. We concur with the idea that locatum verbs are not structurally determined as involving a definite transition able to induce telicity. However, we will show in section 3 that locatum verbs such as *powder* or *water* may head telic or atelic predicates, which has to do, in our opinion, with the contextual construal of the root that they embed.

In this work we adopt an analysis where locatum and location verbs are grammatically distinct, in the spirit of Labelle (1992) and Hale & Keyser (1997, and subsequent works). We base our analysis on the aspectual behaviour of these verbs, as done by other authors such as MacDonald (2008). However, we provide new evidence based on how these verbs respond to quantification.

3. The aspectual interpretation of locative verbs

The empirical claim in this section is that locatum and location verbs are event-structurally different. Location verbs are grammatically specified as involving a definite transition. Thus, in MacDonald's (2008) terms they possess the relevant E(vent) S(tructure) property to be interpreted as telic predicates. Locatum verbs, on the other hand, are not grammatically specified as involving a definite transition. Whether they may head telic or atelic predicates depends on how their root is construed with respect to boundedness – and, of course, on the (un)boundedness of the direct internal argument. Since in this work we are not interested in this latter factor, let us first distinguish it more explicitly from the ES property.

We assume, following MacDonald (2008), that two essential factors must be differentiated in discussions of telicity (as grammatically represented, see section 5.1), at least for languages like English or Catalan: the abovementioned ES property and the O(bject) T(o) E(vent) mapping. The former is a property of the vP independent of the nature of the internal argument. It emerges from how the event is structured, i.e., if it has an endpoint or not. The latter is a property that depends on the nature of the internal argument (Verkuyl 1972; Krifka 1989). The OTE mapping is effective with predicates that posses the ES property of having an endpoint, like those headed by *trencar* 'break'. With these predicates, in languages like English or Catalan, a bounded (or *quantity*, in Borer's 2005 terms) internal argument NP induces a telic interpretation, while an unbounded internal argument NP induces an atelic interpretation, as shown, respectively, in the next examples:

(9)   a. La Jana ha trencat l'ampolla   en/$^{\#}$durant dos segons.
          the Jana has broken the=bottle in/for   two seconds
          'Jana has broken the bottle in two seconds.'

      b. La Jana ha trencat vidre durant/$^{\#}$en dos minuts.
          the Jana has broken glass for/in   two minutes
          'Jana has broken glass for two minutes.'

With predicates that do not possess the relevant ES property, like those headed by *empènyer* 'push', the OTE mapping is not effective. With these predicates, therefore, the nature of the internal argument, i.e., whether it is bounded or not, does not bear on the inner aspect of the predicate, which is invariably atelic:

(10) a. L'Elna   ha empès la mula durant/$^{\#}$en deu minuts.
      the=Elna has pushed the mule for/in   ten minutes
      'Elna has pushed the mule for ten minutes.'

    b. L'Elna   ha empès bestiar durant/$^{\#}$en deu minuts.
      the=Elna has pushed livestock for/in   ten minutes
      'Elna has pushed livestock for ten minutes.'

As pointed out above, in this work we are not concerned with the OTE mapping. Rather, we are concerned with the ES property of locative verbs. In the examples provided in the remainder of the paper we will use bounded internal arguments, so that a predicate with the relevant telicity-inducing ES property will show as telic. At the same time, we will refer to such predicates as telic, tacitly assuming that their telicity depends also on the OTE mapping.

A second preliminary observation concerns the test involving durative adverbials such as *for five minutes*, probably the most widely used in detecting atelicity. We recall that predicates licensing a durative adverbial can be claimed to be atelic only if they are interpreted as involving a single event, specifically, a process temporally bounded by the durative adverbial itself (MacDonald 2008):

(11) Sue drank beer for hours.

Crucially, however, durative adverbials are licensed by telic predicates under three main interpretations. In the first interpretation, there is also a single event but the durative adverbial does not measure the span of any process, but that of a result state yielded by a telic eventuality (Binnick 1969, cited by Dowty 1979, 58; Kratzer 2000; MacDonald 2008):

(12) John caught a bear for ten minutes.

The sentence above is interpretable as 'the bear remained caught for ten minutes'. Accordingly, the adverbial *for ten minutes* can be claimed to be measuring the result state. The other two telic readings admitting a durative adverbial are what MacDonald (2008, 41–46) calls **Sequence of Identical Events** (SIE) interpretation and **Sequence of Similar Events interpretation**. As for the former, it involves examples such as the following one, with a singular bounded internal argument (*op.cit.*, 41):

(13) The farmer dragged a log into the barn for an hour.

In this example we understand that the farmer engaged in successive events of dragging the same log into the barn for an hour straight. As for the SSE reading, it emerges in telic predicates with a bare plural internal argument (*ibid.*, 46):

(14) The girl ate cookies for an hour.

Here we can interpret a sequence of events consisting in the eating of each of an unbounded number of cookies.

Having made clear these readings, let us deal with the aspectual properties of location verbs. Mateu (2001; 2002; 2008) claims that these verbs are telic. We note that this telicity is independent of whether a root is interpreted as bounded or unbounded, contrary to Harley's (2005) position. Thus, a verb such as Catalan *engabiar* 'cage', built on bounded *gàbia* 'cage' is fine with delimiting adverbials and does not admit a process interpretation when combined with a durative adverbial. It only allows a result state interpretation and a SIE interpretation (examples from Mateu 2001, 8):

(15) a. Ell en-gabià el   seu ocell preferit   en un minut.
          he in-caged the his bird favourite in one minute
          'He caged his favourite bird in one minute.'

      b. Ell en-gabià el   seu ocell preferit   durant un minut.
          he in-caged the his bird favourite for   one minute
          'He caged his favourite bird for one minute.'

          Process, single-event interpretation: ☒
          Result state interpretation: ☑
          SIE interpretation: ☑

Identical results are obtained for *encapsar* 'box', *enlleixar* 'shelve', *embotellar* 'bottle', *empresonar* 'imprison', *acorralar* 'corral', etc. Crucially, and against Harley (2005), the situation is the same with location verbs involving a root that could be considered mass-denoting, like *enterrar* 'bury', built on *terra* 'earth':

(16) Els pirates en-terraren   el   tresor   durant tres dies.
      the pirates in-earth.PST.3SG the treasure for   three days
      'The pirates buried the treasure for three days.'

      Process, single-event interpretation: ☒
      Result state interpretation: ☑
      SIE interpretation: ☑

There are less location verbs based on mass roots than based on roots referring to bounded objects, but the ones we find behave in the same way: *envinagrar* 'put in vinegar' (which also licenses the locatum reading 'put vinegar on'), *emmarar-se* 'get into the sea', *emboscar-se* 'place in the woods'.

In contrast with the above scenario, the aspectual behaviour of locatum verbs seems to depend on how the root is construed: if it is construed as bounded, then the locatum verb behaves as telic. If it is construed as unbounded, the locatum verb behaves as atelic. For instance, the verb *enfarinar* 'put flour on' licenses an atelic process interpretation in the following example:[3]

(17) En Joan en-farinà el   pastís durant deu segons.
      the Joan in-floured the cake   for   ten seconds
      'Joan floured the cake for ten seconds.'

      Process, single-event interpretation: ☑

However, the same predicate is compatible with a reading in which there is a definite amount of flour being put onto the cake. In that case, the SIE interpretation – a series of events of putting a bounded amount of flour into the cake – and the interpretation in which the durative adverbial measures the final state of being covered with flour are possible, if pragmatically quite odd. Other verbs such as *salar* 'put salt onto', *embetumar* 'put shoe polish onto' or *emmelar* 'put honey onto' behave alike.

The situation is identical with locatum verbs involving roots related to bounded objects. So for instance *minar* 'lay mines on a field', related to bounded *mina* 'mine', admits an atelic, single-event interpretation if the amount of mines laid is unbounded:

(18) Els soldats minaren el   camp durant un dia.
      the soldiers mined   the field for   one day
      'The soldiers mined the field for one day.'

      Process, single-event interpretation: ☑

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[3] An anonymous reviewer claims that in this example with *enfarinar* 'flour' we get atelic behaviour because the extent of the cake can be construed as unbounded. We do not agree with this claim. Note that, according to all standard tests, the DP the cake counts as denoting a bounded entity. Thus, it is not cumulative (Krifka 1992; 1998; Kiparsky 1998), since any addition made to the cake impedes the denotation of *the cake* to apply, and it is also not divisive (Kiparsky 1998), since no fraction of *the cake* can be denoted by the cake (see also Borer 2005).

And, again, in case a bounded quantity of mines is understood to be laid, the predicate may be telic. Identical behaviour to that of *minar* is shown by *abalisar* 'put buoys on' or *embanderar* 'put flags on'.

We note that the case of telic *enfarinar*, built on unbounded *farina* 'flour' and the case of atelic *minar*, built on bounded *mina* 'mine', are in contradiction with Harley's (2005) assumption that unbounded roots yield atelic predicates and bounded roots yield telic predicates. Although we agree with Harley (2005) that the telicity or atelicity of locatum verbs does not depend on their grammatical configuration, we disagree in her classifying roots as ontologically bounded or unbounded. Rather, the root is pretty free to be understood either as a bounded entity or an unbounded entity.

Finally, we point out a problem with Mateu's (2008) perspective on the aspectual properties of locative verbs that has to do with the status of location and telic locatum verbs. Mateu (2008) proposes that the only division within the locative class concerns the telic/atelic division, which clashes with the claim that locatum verbs may have an atelic interpretation and location verbs cannot – cf., in this sense, Harley's (1999) observation that location verbs seem to be telic, since "locations are bounded". The idea could be entertained that it is precisely the fact that the predicate is lexically bounded (by the presence of a preposition of terminal coincidence, for instance) what provides the verb with the location flavour. From this perspective, so-called telic locatum verbs like *saddle* would receive their locatum interpretation by virtue of encyclopaedic knowledge, their grammatical representation being exactly identical to telic verbs interpreted as location. However, this does not explain the fact that some telic locative verbs such as *envinagrar*, based on *vinagre* 'vinegar' or *ensorrar*, based on *sorra* 'sand', are ambiguous between a locatum and a location reading:

(19) La Jana en-vinagrà   els cogombres en cinc minuts.
      the Jana in-vinegar.PST.3SG the cucumbers in five minutes
      'Jana {seasoned the cucumbers with vinegar/put the cucumbers in vinegar} in five minutes.'

This example has two telic readings: in the locatum reading Jana has seasoned the cucumbers with a bounded amount of vinegar, and that has taken her five minutes; in the location reading, Jana has put the cucumbers into some container full of vinegar, and that has taken her five minutes. Importantly, the difference between the location and the locatum reading can be brought to surface with the addition of adjuncts further specifying the locatum and location: while *de*-PPs may specify locatums, PPs based on locative prepositions may only specify locations:

(20) a. La Jana en-vinagrà   els cogombres **de   vinagre de poma**.
         the Jana in-vinegar.PST.3SG the cucumbers with vinegar of apple
         'Jana seasoned the cucumbers with apple vinegar.'

         Location reading: ☒
         Locatum reading: ☑

    b.   La Jana en-vinagrà   els cogombres en pots de vidre.
         the Jana in-vinegar.PST.3SG the cucumbers in jars of glass
         'Jana put the cucumbers in vinegar, within glass jars.'

         Location reading: ☑
         Locatum reading: ☒

This means that telicity does not determine the exclusion of the locatum
reading, and that the locatum/location division is, after all, worth consid-
ering as grammatically real, as had been proposed by Labelle (1992) and
Hale and Keyser (1997).

To sum up the results of this section, we have seen that while location
verbs are uniformly telic, locatum verbs are telic or atelic depending on
whether the root is construed as a bounded or an unbounded entity.

4. Quantificational properties of locative verbs

In this section we explore the quantificational properties of locative verbs.
First, we review Bosque & Masullo's (1998) approach to verbal quantifica-
tion and propose an explicit account. Then we show the different readings
of i-quantification with locative verbs and how they shed light on the struc-
tural properties of these predicates. Finally, we point out data that relate
the inherent quantification and the aspectual properties of locative verbs.

Bosque and Masullo (1998) claim that there are five different types
of verbal quantification, which are illustrated below with examples from
Catalan (21a, b, d, e) and Spanish (21c). The different types of verbal
quantification are obtained according to the different variable over which
the quantifier can scope: quantification over an event variable (**e-quantifi-
cation**), over a variable of time (**d-quantification**), over a covert argument
(**a-quantification**), over any element within the VP (**Unselective Binder
quantification**) and over the internal verbal predicate (**inherent quantifi-
cation**):

(21) a. En Jan ha cantat molt aquesta cançó.   e(ventive)-quantification
         the Jan has sung   a_lot this   song
         'Jan has sung this song very often.'

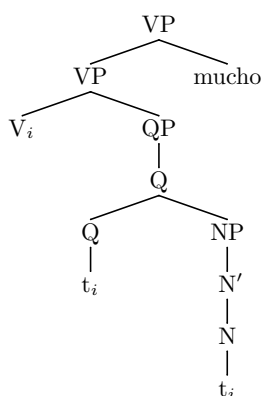b. L'Elna   ha dormit una mica.   d(urative)-quantification
    the=Elna has slept   a   little
    'Elna has slept a little.'

c. Juan ha bebido mucho.   (Spanish) a(rgumental)-quantification
    Juan has drunk a_lot
    'Juan has drunk a lot.'

d. La gent ha   vist molt aquesta exposíció.   U(nslective) B(inder)-quant.
    people   have seen a_lot this   exhibition
    'Many people have seen this exhibition.'

e. L'Elna   estima molt   el   seu gat.   i(nherent)-quantification
    the=Elna loves   a_lot her cat
    'Elna loves her cat a lot.'

In this paper we focus on i-quantification readings, defined by Bosque
and Massullo (1998, 19–20) as follows: the quantificational reading of a
modifier that quantifies "over a component of the sub-lexical structure of
the predicate, more specifically, the lowest predicate available in a lexical
relational structure, in the sense of Hale & Keyser (1991; 1993a; 1994a;b)".
This type of reading is illustrated in the a-examples below; the b-examples
are analytic counterparts:

(22) a. La ferida **sagn**ava molt.
         the wound bled   a_lot

     b. La ferida treia   molta **sang**.
         the wound produced lots_of blood
         'The wound was bleeding a lot.'

(23) a. En Jan ha **tard**at molt.
         the Jan has delayed a_lot

     b. En Jan ha fet   molt **tard**.
         the Jan has made very late
         'Jan is very late.'

Specifically, Bosque and Masullo (1998) propose that some denominal
verbs allow for a quantificational open variable projected over the embed-
ded noun. A degree modifier can bind this variable, producing the effect
that the embedded noun is quantified. The next example illustrates their
analysis of inherent-quantification (from *op.cit.*, 34, ex. 42):

(24) Sangrar bastante.
    bleed.INF a_lot
    'To bleed quite a lot.'

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                    VP
                  /    \
              VP        mucho
            /    \
        V_i       QP
                   |
                   Q
                 /    \
             Q          NP
             |          |
            t_i         N′
                        |
                        N
                        |
                       t_i
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The five types of quantification defined in (21) can arguably be reduced to two: e-quantification and i-quantification. In this respect, we follow Gallego & Irurtzun (2010), who show that a-quantification and i-quantification can be unified through the assumption that in both cases the quantifier has scope over an internal argument position. In addition, d-quantification and e-quantification can also be collapsed. In both cases, the degree quantifier scopes over an eventive variable, and d-quantification obtains if the event is aspectually durative and non-delimited, that is, in the case of activities and states. The case of UB-quantification illustrated in (21d) can be shown to boil down to a particular pragmatic interpretation of an e-quantification reading. The sentence in this example licenses the implicature that a lot of people have seen an exhibition on the basis of the assertion that people have very often seen that exhibition. Actually the UB-quantification interpretation can be cancelled without a contradiction, (25a), contrary to the interpretation licensed by properly quantified nominal expressions, (25b), or in other cases of verbal quantification (25c):

(25) a. La gent   ha   vist molt aquesta exposíció
         the people have seen a_lot this   exhibition

         però l'ha   vista poca gent.
         but it=have seen few   people
         'People have seen this exhibition very often, but few people have seen it.'

b. Molta gent   ha   vist aquesta exposício
   many people have seen this   exhibition

   #però l'   ha   vista poca gent.
   but it= have seen few   people
   'Many people have seen this exhibition, #but few people have seen it.'

c. Sangró mucho, #pero perdió poca sangre.
   bled   a   lot but   lost few blood
   'He bled a lot, but he lost few blood.'

In conclusion, following Gallego & Irurtzun (2010), we propose that all these five cases of verbal quantification boil down to scopal differences that are obtained when a modifier quantifies the vP: the modifier can take scope over and below v. These cases of verbal quantification, then, can be unified with other approaches to vP modification, as von Stechow's (1995; 1996) account of the different readings that arise with adverbs like English *again* or German *wieder*. In all these cases, the modifier can have scope over the inner structure of the verbal predicate. The analysis therefore accounts for different readings of degree modifiers in the verbal domain in purely structural terms. The degree quantifier is a modifier that can be adjoined above v, where an eventive variable is introduced, and below v. In this respect we differ from Bosque & Masullo (1998) and Gallego & Irurtzun (2010), who claim that the semantic properties of the root always license the i-quantification reading. In our account, the root only affects i-quantification when it is immediately under the scope of the degree modifier.

Let us now review how locative verbs differ as to their behaviour regarding i-quantification. Locatum verbs that contain a root that denotes an entity interpretable as unbounded allow i-quantification. This is the case with both verbs denoting a mass entity, such as *enfarinar* 'flour' or *salar* 'salt', and verbs that denote a bounded entity usually used in an unbounded plurality, like *minar* 'lay mines onto':

(26) a. L'Elna   ha en-farinat   massa   les mandonguilles.
        the=Elna has in-flour.PTCP too_much the meatballs
        'Elna has put too much flour on the meatballs.'

    b. L'Elna   ha salat   poc el rostit.
       the=Elna has salt.PTCP little the roast
       'Elna has put too little salt on the roast.'

c. Els soldats minaren massa el camp.
   the soldiers mine.PST.3PL too_much the field
   'The soldiers have put too many mines in the field.'

In these examples the adverb is interpreted as quantifying the amount of flour, salt and mines, respectively, being employed in the course of the event.

Locatum verbs such as *encaputxar* 'hood', *ensellar* 'saddle' and *emmanillar* 'handcuff', do not allow i-quantification, since the roots they embed denote things that are usually used in a bounded fashion. Indeed, it is usually one hood, one saddle and a pair of handcuffs that are involved:

(27) a. #L'Elna ha en-caputxat massa la nena.
     the=Elna has in-hood.PTCP too_much the girl
     'Elna has hooded the girl too much.'

b. #L'Elna ha en-sellat massa el cavall.
     the=Elna has in-saddle.PTCP too_much the horse
     'Elna has saddled the horse too much.'

c. #L'Elna ha em-manillat massa en Jan.
     the=Elna has in-handcuff.PTCP too_much the Jan
     'Elna has handcuffed Jan too much.'

Location verbs show a different pattern with respect to i-quantification. When the root denotes a bounded entity, disallowance of i-quantification is very clear, as can be observed in these examples containing the roots √BOTELL 'bottle' and √CAPS 'box':

(28) a. #En Jan ha em-botellat massa l'aigua.
     the Jan has in-bottle.PTCP too_much the=water
     'Jan has bottled the water too much.'

b. #En Jan ha en-capsat massa els llibres.
     the Jan has in-box.PTCP too_much the books
     'Jan has boxed the books too much.'

With respect to location verbs embedding an unbounded root, there are some that disallow the i-quantification reading of the degree quantifier:

(29) #En Jan ha envinagrat massa els cogombres.
   the Jan has in-vinegar.PTCP too_much the cucumbers

Even though in the example in (29) the root √VINAGR 'vinegar' can be construed as denoting a mass, *envinagrar* in the location sense does not

allow an inherent quantification reading. We claim that i-quantification
is not possible in this case because even if the root can be construed as
an unbounded entity, the root is interpreted as a location and not as a
quantity of mass. Thus, the degree quantifier is not modifying the root
but a location.

From these considerations one might conclude that locations are al-
ways bounded, and therefore, non i-quantifiable. However there seem to be
some apparent exceptions. Thus, some location verbs embedding an un-
bounded root allow i-quantification readings. Verbs such as *enterrar* 'bury',
emboscar-se 'go into the forest' or *emmarar-se* 'go into the sea', which con-
tain roots related to mass entities such as *terra* 'earth', *bosc* 'forest' or *mar*
'sea', do allow i-quantification readings of the degree quantifier:

(30) a. En Jan ha enterrat   molt el tresor.
         the Jan has in-earth.PTCP a_lot the treasure
         'Jan has buried the treasure very deep.'

     b. En Jan s'ha   em-boscat   molt.
         the Jan REFL=has in-wood.PTCP a_lot
         'Jan has gone deep into the forest.'

     c. La nau s'ha   em-marat   molt.
         the ship REFL=has in-sea.PTCP a_lot
         'The ship has gone far into the sea.'

Even if these roots are usually interpreted as unbounded entities, it can
be argued that they are quantifiable not because they are mass, but be-
cause they are construed as **unbounded locations**. If this is correct, the
interpretation of the quantifier with location verbs is different from that
with locatum verbs: while the adverbial quantifier takes scope over the
entity denoted by the root in the latter case, it takes scope over an un-
bounded location in the former case. To justify this claim, we now adduce
evidence from the realm of overt prepositions and their interaction with
degree quantification.

Quantification of location verbs works similarly to quantification of
prepositions like *in* or *inside*. These prepositions are usually treated as
not allowing quantification by degree modifiers (Zwarts 1997). However,
there are two counterexamples to this claim: adverbial modification such
as in *deep in the forest* and measure phrase modification of *inside* when
the ground denotes an unbounded location. Thus, when this preposition
combines with grounds that are understood as not having limits, i.e., un-
bounded grounds, it can be understood as quantifiable. More precisely,
according to Zwarts & Winter (2000, 191), the possibility of modification

of the preposition *inside* depends on whether the reference object itself is upward vector monotonic or not, in other words, if the reference object (the ground, in our terms) has an unbounded denotation. (Un)boundedness in this case does not refer to the mass/count distinction but to the existence or non-existence of limits in the conception of the object as a location. For instance, while DPs such as *the house* and *the wall* license a salient count interpretation, they behave as bounded and unbounded locations, respectively, in combination with *inside*. Accordingly, they behave differently with respect to degree modification (Zwarts & Winter 2000):

(31)   a. *10 cm inside the house
       b. 10 cm inside the wall

Applying this reasoning to location verbs, quantification is possible if the root can denote an unbounded ground, such as *terra* 'earth', and impossible when it denotes a bounded ground, such as *capsa* 'box' (see 28b). As in the case of *inside*, the adverb quantifies over the location, not directly over the root. For example, the interpretation in (32) is that Jan buried the treasure too deep, too much inside the earth. Thus, in (32) the adverb is not quantifying the quantity of earth that has been used to bury the treasure. Quantification of the root understood as a mass is not obtained:

(32) En Jan ha en-terrat   molt el tresor.
     the Jan has in-earth.PTCP a_lot the treasure
     'Jan has buried the treasure very deep.'

In sum, i-quantification in locatum and location verbs shows different scope properties. This conclusion goes against Bosque and Masullo's (1998, 50) claim that locatum and location verbs contrast with respect to i-quantification because the former always contain an unbounded nominal and the latter a bounded one. In the next section, we will clarify this statement when we propose our analysis of locative verbs. The different i-quantification readings of the degree modifier will depend on the nature of the complement of v as stated above.

Finally, we discuss the relationship between i-quantification and the facts related to aspectual interpretation that were presented in section 3. This relation is different in location and locatum verbs. Thus, i-quantifiable locatum verbs like *enfarinar* 'flour' or *minar* 'mine' can receive a telic or an atelic reading, while non-i-quantifiable locatum verbs like *ensellar* 'saddle' can only be interpreted as telic:

(33) a. L'Elna   ha en-farinat   les mandonguilles en/durant un   minuts.
        the=Elna has in-flour.PTCP the meatballs   in/for   some minutes
        'Elna has floured the meatballs in/for some minutes.'

    b. L'Elna   ha en-sellat   el cavall en/#durant uns minuts.
        the=Elna has in-saddle.PTCP the horse in/for   some minutes
        'Elna has saddled the horse in/for some minutes.'

In the case of location verbs, on the contrary, (a)telicity does not depend on
the construal of the root. Both i-quantifiable and non-i-quantifiable loca-
tion verbs induce a telic interpretation of the event. Therefore, the bounded
or unbounded construal of the location does not affect the boundedness of
the event in the case of location verbs:

(34) a. En Jan ha en-terrat   el   tresor   en/#durant cinc minuts.
        the Jan has in-earth.PTCP the treasure in/for   five minutes
        'Jan has buried the treasure in/for five minutes.'

    b. En Jan ha en-vinagrat   els cogombres en/#durant cinc minuts.
        the Jan has in-vinegar.PTCP the cucumbers in/for   five minutes
        'Jan has put the cucumbers in vinegar in/#for five minutes.'

    c. En Jan ha em-paquetat el   material in/#durant cinc minuts.
        the Jan has in-pack.PTCP the material in/for   five minutes
        'Jan has packed the material in/#for five minutes.'

In conclusion, while locatum verbs can give rise to telic or atelic interpre-
tations and the (un)bounded construal of the root is relevant for aspectual
interpretation, location verbs can only give rise to telic interpretations, ir-
respective of the (un)bounded construal of location that they express. The
question that remains is then: why does the construal of the root not affect
the aspectual interpretation of the predicate in the case of location verbs?
What is the relation between i-quantification and aspect? We answer these
questions in the next section.

5. An analysis of locative verbs

In this section we propose an analysis of locatum and location verbs that
aims at accounting for their aspectual and quantificational properties. We
propose that location and locatum verbs are grammatically different: al-
though they both embed a configuration of prepositional nature, the prepo-
sitions involved are different. The analysis is couched within a syntactic
approach to argument structure and word-formation. Thus, with Hale &

Keyser (1993; 2002) and the Distributed Morphology Framework (Halle & Marantz 1993; Harley & Noyer 1999; Marantz 2013; among others) we propose that the structural semantics and syntactic behaviour of words must be accounted for through the same syntactic mechanisms as those underlying the behaviour of phrases. Abstract hierarchical representations yielded by syntax are interpreted by the idiosyncratic morphophonology of each language to produce (prosodic) words.[4] Importantly, we also endorse the fundamental idea of neo-constructionist frameworks (Marantz 1997; 2013; Borer 2005) that roots, as items containing exclusively conceptual information, can appear in different structures. The limit to this freedom is set by the compatibility between the descriptive content of the root and the structural semantics of the construction in which it is inserted.

5.1. Two types of telicity

In order to analyse the inner-aspectual properties of locative verbs, we must first make clearer our position with respect to the nature of telicity, expanding on what was pointed out at the beginning of section 3. We propose that there are two possible sources for telicity: one that is of grammatical nature and one that is of non-grammatical (contextual) nature. Within a localist approach to aspect (Acedo-Matellán 2010), we claim that the former is implemented through the presence of a complex spatial prepositional projection, PathP, articulated through the abstract prepositions Path and Place. Place establishes a static relation between a figure and a ground. Path, merged on top, introduces the semantics of transition. This higher preposition pulls up the nearest DP in its c-command domain onto its specifier. If this DP is bounded, the entity denoted by the DP is interpreted as the measurer of the event (Tenny 1989; 1994), and by virtue of the OTE mapping gives rise to telicity:[5]

(35) [$_{vP}$ v [$_{PathP}$ DP$_{\text{FIGURE/MEASURER}}$ [$_{Path}$ Path [$_{PlaceP}$ ~~DP$_{\text{FIGURE}}$~~ [$_{Place}$ Place DP/Root$_{\text{GROUND}}$]]]]]

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[4] In this work we are not concerned with these morphophonological mechanisms. For relevant discussion, see Hale and Keyser (2002); Acedo-Matellán (2010) or Real-Puigdollers (2013).

[5] Here and in the rest of the syntactic representations we do not represent movement operations orthogonal to our purposes, such as the movement of the direct object to Spec-v or v-to-T movement.

As for the non-grammatical source of telicity, we claim that when the Path-Place articulation is absent, contextual factors and world knowledge can induce a particular construal of the root in terms of boundedness, so that a root construed as bounded may induce telicity. One case of non-grammatically represented telicity is that allowed by unergative birthing verbs like *foal*:

(36) The mare foaled in two hours.   (Harley 2005, 46)
      [$_{vP}$ v √FOAL]

In this example, the most felicitous way to construe the meaning of the root √FOAL is as one bounded individual (one foal). This is due to world-knowledge: mares usually give birth to one foal. By hypothesis, however, there is nothing in the structure of this predicate forcing a transition interpretation, that is, in our terms, no Path-Place configuration. Rather, these predicates involve, as proposed by Harley (2005) or Hale and Keyser (1993), a verbal head taking a non-relational element – a root, in our terminology, and that of Harley's. This is shown in the representation of (36). That the telicity of birthing verbs is not grammatically represented is suggested by the behaviour of these verbs in languages like Italian. In Italian, telic intransitive predicates usually take the BE auxiliary in the perfect tense. Thus, as shown in the next examples from Folli & Harley (2006, 135), a verb like *correre*, which selects the HAVE auxiliary in the atelic unergative, interpretation, takes the BE auxiliary in telic unaccusative predicates:

(37) a. Gianni ha corso nel   bosco{per ore/$^{\#}$in un minuto}.
          John   has run   in=the woods for hours/in one minute
          'John has run in the woods for hours.'

      b. Gianni é corso nel   bosco{in un minuto/$^{\#}$per ore}.
          John   is run   in=the woods in one minute/for   hours
          'John has run into the woods in one minute.'

Crucially, as pointed out by Mateu (2008), birthing verbs like *figliare* 'foal' take the HAVE auxiliary in the perfect, in spite of their telicity:

(38) La giumenta {ha figliato/*è   figliata}   in due ore.   (Mateu 2008)
      the mare   has foaled.M.SG/is foaled.F.SG in two hours
      'The mare has foaled in two hours.'

Importantly, it should be recalled that, as was pointed out in section 3, we are not claiming that roots are ontologically bounded or not, as does Harley (2005). Rather, roots can be construed as bounded or unbounded as

dictated by world-knowledge and contextual reasons. In the case of *foal*, an atelic reading is grammatically possible, if aberrant for world-knowledge reasons: it would involve a mare giving birth to an unbounded plurality of foals.

5.2. Location verbs as involving Path–Place configurations

With this theoretical background in mind, let us first deal with the analysis of location verbs. As has been shown, location verbs involving a bounded internal argument are telic irrespectively of the kind of root that they contain (*pace* Harley 2005). In the present framework, this means that location verbs involve a Path–Place articulation giving rise to a definite transition interpretation. We illustrate with the verb *enterrar* 'bury':

(39) En-terrar   els bulbs.
      in-earth.INF the bulbs
      'Bury the bulbs.'

      [$_{vP}$ v [$_{DP}$ els bulbs] [$_{PathP}$ Path [$_{PlaceP}$ [$_{DP}$ els bulbs][$_{Place'}$ Place (= INSIDE) $\sqrt{\text{TERR}}$]]]]

An abstract Place preposition articulates the figure-ground relation between the direct internal argument (*els bulbs* 'the bulbs') and the root ($\sqrt{\text{TERR}}$). The higher Path head introduces a transition, and effects the raising of the internal argument DP onto its specifier. Since this DP is bounded, the OTE mapping induces telicity.

With respect to the quantificational properties of location verbs, note that in the representation of (39) the Place is identified with an abstract INSIDE preposition. We showed in section 4 that prepositions like *inside* (in contrast with prepositions like *in*) allow degree modification with certain ground complements. Under the assumption, pointed out in section 4, that degree modifiers can take scope immediately over elements at the sub-word level (von Stechow 1995; 1996; Bosque & Masullo 1998), the analysis in (39) predicts that a degree modifier merged on top of Place can exert degree quantification over an *inside*-type location:

(40) En-terrar   massa   els bulbs.
      in-earth.INF too_much the bulbs
      'Bury the bulbs too deep.'

      [$_{vP}$ v [$_{DP}$ els bulbs] [$_{PathP}$ Path [$_{PlaceP}$ [$_{QP}$ massa] [$_{PlaceP}$ [$_{DP}$ els bulbs]
                                                   [$_{Place'}$ Place (= INSIDE) $\sqrt{\text{TERR}}$]]]]]

5.3. Locatum verbs as involving a predicative *of* preposition

In section 3 it was shown that locatum verbs could be either telic or atelic, the inner-aspectual interpretation depending pretty much on the construal of the embedded root as a bounded entity or an unbounded substance or plurality of entities. This means that the structure involved in these predicates does not determine telicity, and, specifically within the current framework, that it does not correspond to a Path-Place configuration as that proposed for location verbs. Still, we believe that these verbs do involve a prepositional projection. Theory-internal reasons compel us to reach this conclusion. Indeed, within a halekeyserian approach to argument structure, only direct objects denoting effected objects and, according to Volpe's (2004) extension, consumed objects, are considered to be directly selected as complements by the verbal head (see also Mateu 2002):

(41) a. She slept the sleep of the just.

b. He laughed his last laugh.

c. He danced a jig.   (Hale & Keyser 2002, 71)

d. I eat sashimi.   (Volpe 2004, 12)

[V N (= dream/laugh/jig/sashimi)]

In the case of locatum verbs, it is clearly not the case that the direct object is interpreted as one of the above. Having this into account, we claim that locatum verbs involve a preposition of predicative nature, akin to *of*. This is shown in the next analysis of the locatum verb *envinagrar* 'season with vinegar':

(42) En-vinagrar   l'amanida.   (locatum interpretation)
in-vinegar.INF the=salad
'To season the salad with vinegar.'

$[_{vP}$ v $[_{ofP}$ $[_{DP}$ l'amanida]$[_{OF'}$ OF √VINAGR]]]
≈ 'To cause the salad to be vinegar-like.'

There is overt evidence that an *of*-like preposition is involved in locatum verbs. First, these verbs appear with PPs headed by *de* 'of' specifying the kind of substance or object involved in the event and subspecified by the verbal root:[6]

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[6] See similar facts in French in Labelle (2000).

(43) La Jana ha em-polvorat   els pastissos **de sucre fi**.
     the Jana has in-powder.PTCP the cakes   of sugar fine
     'Jana has sprinkled caster sugar on the cakes.'

(44) El camp ha quedat   minat **de mines antipersones**.
     the field has remained mined of mines antipersonnel
     'The field has been seeded with antipersonnel mines.'

(45) L'Elna   s'ha   em-pastifat   la cara **de maquillatge**.
     the=Elna REFL=has in-paste.PTCP the face of makeup
     'Elna has smeared her face with makeup.'

This *de*-PP is reminiscent of the one emerging in the change-of-state variant of the locative alternation (Rosselló 2008):[7]

(46) a. La Maria ha carregat el   camió **de pomes**.
        the Maria has loaded   the truck of apples
        'Maria has loaded the truck with apples.'

     b. La Maria ha carregat pomes al   camió.
        the Maria has loaded   apples at=the truck
        'Maria has loaded apples into the truck.'

Interestingly, outside of Catalan but within Romance, north-western dialects of European Spanish offer overt evidence of the use of the *de* preposition in the expression of the specification of the substance involved in a change-of-location event with a light verb like *poner(se)* 'put' (47). This *de*-PP also appears in non-dynamic predicates headed by the light verbs *tener* 'have' (48) or *estar* 'be in a the state' (49):

(47) Haciendo las magdalenas, Rebeca se   ha puesto
     making   the muffins   Rebeca REFL has put

     las manos **de aceite**.
     the hands of oil
     'While baking the muffins, Rebeca has got her hands smeared with oil.'

(48) Rebeca tiene las manos **de aceite**.
     Rebeca has   the hands of oil
     'Rebeca's hands are smeared with oil.'

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[7] In fact, Labelle (1992, 29) considers an alternating verb like *charger* 'load' as being a denominal, locatum verb involving an abstract noun *charge* 'load'.

(49) Sus manos están **de aceite**.
　　her hands are　　of oil
　　'Her hands are smeared with oil.'

Since locatum verbs are not endowed with a Path-Place configuration, they are not specified to be telic. In fact, the predicative preposition involved in these predicates is claimed to be orthogonal to telicity. Thus, a locatum verb like *minar* can be compatible with both readings, depending on the construal of the root as denoting a bounded or an unbounded entity. In the telic reading we interpret that the field has ended up being completely mined. In the atelic reading there is no concrete amount of mines implied:

(50) Els soldats minaren el　camp en/durant una hora.
　　the soldiers mined　the field in/for　　one hour

The presence of a preposition of predicative, and not locative nature, in locatum verbs makes predictions also with respect of the interpretation of verbal quantification. In particular, a quantificational adjunct merged on top of the projection of the predicative preposition quantifies the degree of the property attained by the entity denoted by the direct internal argument:

(51) En-vinagrar　molt　l'amanida.
　　in-vinegar.INF a_lot the=salad
　　'To season the salad with a lot of vinegar.'
　　[$_{vP}$ v [$_{OFP}$ [$_{QP}$ molt] [$_{OFP}$ [$_{DP}$ l'amanida][$_{OF'}$ OF √VINAGR]]]]

The difference in the abstract prepositions involved in location and locatum verbs explains the contrast in the interpretation of degree modifiers. This contrast is also manifested with overt predicative and locative prepositions:

(52) a. Ser　　molt del　　poble.
　　　be.INF a_lot of=the village
　　　'To behave like a typical person of the village.'

　　b. Ser　　molt endins del　poble.
　　　be.INF a_lot into　of=the village
　　　'To be deep into the village.'

In the first example, *de* enables a predicative interpretation of the nominal *el poble* 'the village' and the degree modifier quantifies over this predicate. The predicate can be applied, for example, to a person that has attitudes typical of this particular village. In the second example, *molt* quantifies over

the projective preposition *endins de* 'into', so it measures the extension of an unbounded path leading into the village.

Locatum verbs behave, as far as inner aspect and quantification is concerned, in a way similar to unergative verbs and degree achievements (DAs). This is expected under the assumption that these verbs also do not involve a Path-Place configuration imposing the semantics of a transition. Rather, they can be claimed to involve a configuration that is *vague* as far as inner aspect and degree quantification is concerned. In section 5.1 we have already made reference to unergative verbs within a discussion of birthing verbs like *foal*. In predicates headed by these verbs telicity emerges not from properties of the configuration, but of the contextual construal of the root. This explains why certain unergative verbs, like verbs of emission of substance, are inner-aspectually bivalent (see Harley 2005, 48, footnote 3):

(53) Bill peed in/for 3 minutes.

The telicity and atelicity of this predicate arguably depends on the fact that the amount of urine is construed as bounded or unbounded, as the context might require. As locatum verbs, unergative verbs also admit i-quantification:

(54) La Jana ha pixat molt.
      the Jana has peed a_lot

With respect to DAs, such as *darken*, *lengthen*, *cool*, etc., these verbs have two interpretations, one that is telic and can be paraphrased as 'become A' (A being the base adjectival root) and one that is atelic and that can be paraphrased as 'become A-er'.[8] Thus, *to cool* can be interpreted as a bounded change of state ('become cool') or as a gradual and unbounded change of state ('become cooler'). This is shown in the classical example by Dowty (1979):

(55) The soup cooled in/for an hour.

Hay et al. (1999) claim that DAs are in fact lexically unambiguous, contrary to the classical theory of gradable deadjectival verbs (Abusch 1986; Declerck 1979; Bertinetto & Squartini 1995), which proposes that the two

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[8] As a matter of fact, Dowty (1979) qualified as degree achievements only a subset of the group of verbs standardly identified with this label. See qualifications and relevant discussion in Kearns (2007).

different interpretations of DAs correspond to two different lexical representations, one that yields a bounded change-of-state interpretation or an interpretation of unbounded change. Hay et al. (1999) criticize this proposal and claim that these verbs simply provide an unbounded scale the end-point of which is determined through contextual factors. Their erratic telic/atelic character is derived from how the degree of change implicit in the semantics of the verb is pragmatically construed: as either unbounded, yielding an atelic predicate, or bounded, yielding a telic predicate.

We find an interesting similarity between DAs, as envisioned by Hay et al. (1999), and locatum verbs, as analysed here. In both cases the representation of the verb is claimed to be vague as to boundedness, and the corresponding telic or atelic interpretation depends on contextual factors. A further similarity between DAs and locatum verbs is the licensing of i-quantification. Thus, Bosque & Masullo (1998, 21) provide evidence that a DA like *ensanchar* 'widen' readily accepts this kind of degree modification:

(56) Hay   que ensanchar más la   sala.
     there_is that widen.INF more the room
     'The room must be made wider.'

The different readings that locative verbs show with respect to i-quantification depend on the inner structure of these predicates. While location verbs involve a Path-Place structure below v, locatum verbs involve a predicative structure. As shown before, degree modification of a predicate is affected by the (un)bounded construal of the root: in this sense degree modification of locatum verbs is alike to degree modification of degree achievements. For location verbs, a Path-Place configuration is under the scope of the degree modifier. Thus, i-quantification can only modify locations. The i-quantification and aspectual interpretation are related in locatum verbs because both depend on the (un)bounded interpretation of the embedded predicate. By contrast, i-quantification and aspectual interpretation are orthogonal in location verbs because aspect is structurally determined by the embedded Path-Place configuration, and does not depend on the (un)bounded interpretation of the embedded root.

Let us finally deal with the fact, pointed out in section 3, that some verbs like *envinagrar* show an ambiguous interpretation: they can be understood as location verbs or as locatum verbs. As a matter of fact, from a neo-constructionist perspective we expect roots to associate freely with different structures. In the case of *envinagrar*, for instance, the root √VINAGR

may appear in a structure yielding a locatum interpretation, as in (42), or in a structure yielding a location interpretation, as in the next example:

(57) En-vinagrar   els cogombres.   (location interpretation)
     in-vinegar.INF the cucumbers
     'To put the cucumbers in vinegar.'
     [$_{vP}$ v [$_{PathP}$ [$_{DP}$ els cogombres] [$_{Path'}$ Path [$_{PlaceP}$ ~~[$_{DP}$ els cogombres]~~
                                         [$_{Place'}$ Place √VINAGR]]]]]

6. Conclusions

This work has provided arguments in favour of a non-uniform analysis of locative verbs. Thus, we have supported the idea that under the label of locative verbs we find two verbal classes, location and locatum verbs, that have different syntactic and semantic properties (Labelle 1992; Hale & Keyser 1997 and subsequent work; MacDonald 2008).

Location verbs are always telic predicates irrespective of the (un-) bounded interpretation of the embedded root. On the contrary, the aspectual interpretation of locatum verbs is calculated contextually, from the (un)bounded construal of the embedded root. This empirical finding has provided arguments to distinguish (at least) two different sources for telicity: one configurational and one that arises from world-knowledge and context. Our claim thus weakens Harley's (2005) generalization that aspect in denominal verbs is always affected by the (un)boundedness of the root. In our approach this is true only if telicity is not structural, supporting the distinction endorsed by Mateu (2002) or Borer (2005), among many others, between configurational and encyclopaedic/conceptual semantics.

We have also provided new evidence for the location/locatum distinction based on their behaviour with respect to i-quantification. While locatum verbs admit i-quantification taking scope over a predicative head, location verbs allow a type of i-quantification which is understood as modifying an embedded location of projective semantics.

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