

Deriving aspect-alternating verbs without θ -roles*

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1. Introduction

This paper focuses on a set of Spanish verbs that denote a spatial relationship between two entities (eg. *rodear* ‘to surround’, *cubrir* ‘to cover’, *obstruir* ‘to obstruct’, etc.), which I call locative verbs. As is known, these verbs show an aspectual alternation between an eventive, change-of-location reading (cf. (1)) and a stative locative reading (cf. (2)).

- (1) Los soldados rodearon la ciudad (en cuestión de minutos).
the soldiers surrounded the city (in matter of minutes)
‘The soldiers surrounded the city (in a matter of minutes).’
- (2) Las murallas rodean la ciudad.
the walls surround the city
‘The walls surround the city.’

These verbs have been analyzed as stative causative verbs (Kratzer 2000, Rothmayr 2009), by analogy with the better-studied class of object experiencer psychological verbs, which have also been shown to alternate aspectually and have a CAUSE component in both versions of the alternation (Pesetsky 1995, Pykkänen 2000, Arad 2002).

The received view regarding stative causative verbs is that the aspectual alternation imposes different readings for their subjects: eventive versions require agent subjects whereas stative versions have causer (i.e. non-agentive) subjects. Thus, *los soldados* ‘the soldiers’ in (1) should be agents by virtue of being subjects of an eventive predicate, whereas *las murallas* ‘the walls’ in (2) are non-agentive causers by virtue of being subjects of a stative predicate. The generalized view, tacitly assumed or explicitly argued for in the works dealing with this topic, is that agentivity and eventivity must be concomitant.

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The main goal of this paper is precisely to argue against this view. I show that, at least for locative verbs, both agents and causers are equally acceptable as subjects of both aspectual versions of location verbs, which raises the question of whether agents and causers are grammatically real, or merely world knowledge. The view I adopt here aligns with previous proposals that defend a broader role for the external argument, underspecified with respect to agentivity (Hale & Keyser 2002, Borer 2005, Ramchand 2008). The second goal is to propose a syntactic model for these verbs that accounts for their core properties (i.e. aspectual alternation and subject interpretation). For this task, I adopt Hale and Keyser's (2002) L-syntax model.

This paper is structured as follows: Section 2 discusses previous accounts of location verbs. Section 3 presents Spanish data that challenges existing accounts. In Section 4 I present my syntactic model for location verbs, and Section 5 concludes the paper. A final point: the Spanish data presented in this paper, unless otherwise noted, comes from my own native speaker judgments (Castilian variety).

2. Previous accounts

This section gives a short overview of the main literature on stative causatives. As I anticipated in the introduction, the common view is that the aspectual make-up of the verb phrase imposes a distinct interpretation for the external argument: eventive versions take agents (understood as animate, volitional originators of the event) and stative versions take causers (understood as inanimate, non-volitional originators).

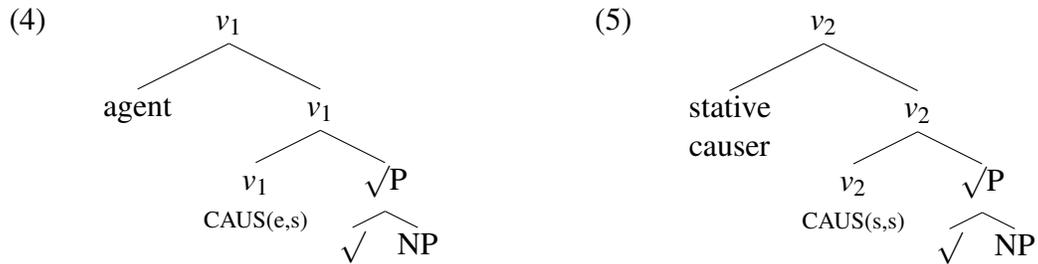
2.1 Arad (2002)

Arad focuses on object-experiencer psychological verbs (eg. *frighten*, *worry*). She emphasizes that verbs like *frighten* may have two aspectual readings: the eventive one, exemplified in (3a), where a subject brings about a change in the mental state of the experiencer object, and the stative one (cf. (3b)), where the subject is stative causer/ stimulus which 'triggers a state whose existence is co-extensive with that of the stimulus' (Arad 2002: 21).

- (3) a. Mary frightened John (suddenly/ by turning off the lights).
b. Darkness frightens me.

In her Distributed Morphology approach, she assumes that verbs start off in the derivation as an uncategorized root (eg. $\sqrt{\text{FRIGHT}}$). She posits two verbalizers v , one eventive and one stative. The eventive one denotes a causal relation between an event and a state (represented as CAUS(e,s)), whereas the stative v introduces a causal relation between two states (CAUS(s,s)). These v heads, in turn, also introduce an external argument in their specifier. Arad stipulates that the eventive one introduces agents, whereas the stative one introduces causers. Her structures are given below for the eventive version (cf. (4)) and the stative version (cf. (5)).

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2.2 Rothmayr (2009)

Rothmayr also discusses stative causatives, extending her scope to location verbs. She provides the following list of German location verbs (2009:38).

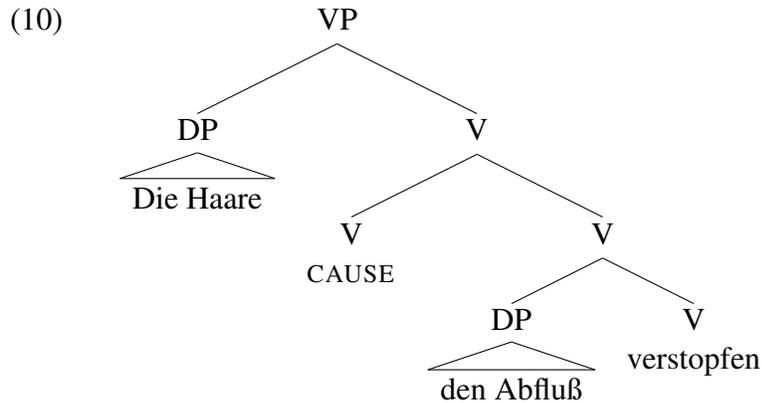
(6) *füllen* (fill), *schmücken* (decorate), *überdachen* (roof), *bedecken* (cover), *verbinden* (connect), *stören* (disturb), *versperren* (lock), *blockieren* (block)

(7) Die Irmi füllt die Vase mit Wasser.
 the Irmi fills the vase with water
 ‘Irmi is filling the vase with water.’

(8) Wasser füllt die Vase.
 water fills the vase
 ‘Water is filling the vase.’

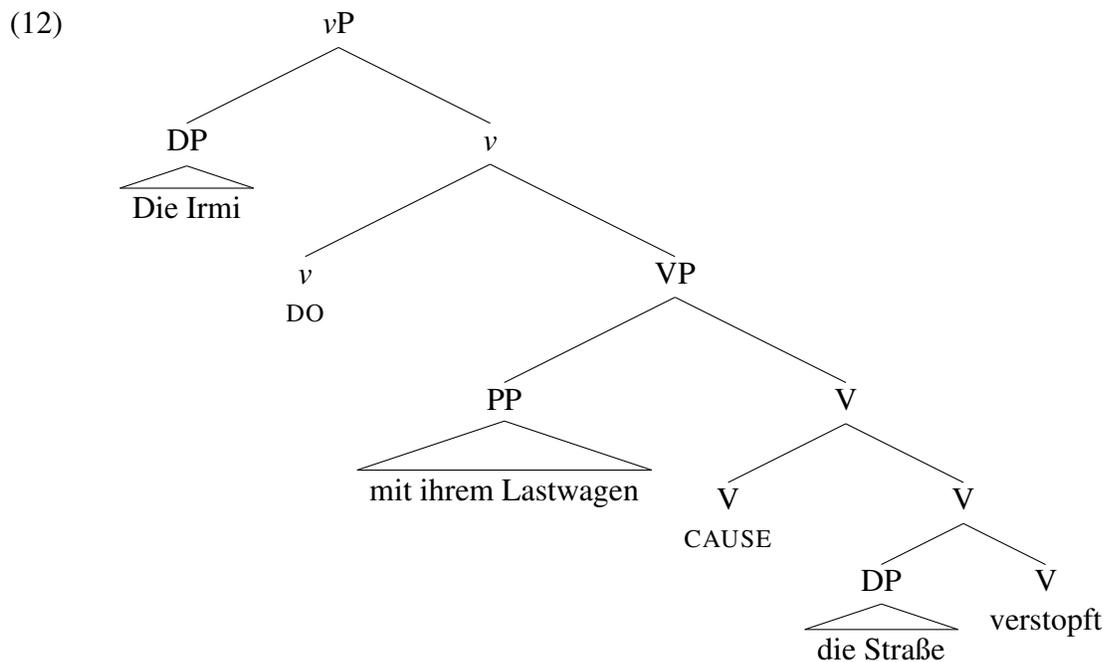
Her proposal regarding the syntactic structure of *surround*-type verbs is as follows. She argues, inspired by Dowty (1979), that there are different aspectual operators hosted in verbal heads, which build event structure compositionally. Common to all causative predicates is the presence of a CAUSE operator, which expresses a result state. The simplest structure is that of stative causatives (i.e. the stative version of location verbs), which lacks any activity or transition operators and is thus strictly stative. An example is given in (9) and its corresponding structure in (10) (2009:48).

(9) Die Haare verstopfen den Abfluß.
 the hair obstruct the sink
 Hair obstruct the sink.’



For the eventive version of location verbs, Rothmayr proposes that there is an agentive DO operator that introduces an agent and acts as a dynamicity inductor, since agentivity and eventivity are concomitant in her story. I provide her example in ((11)) and its structure in ((12)) (2009:49).¹

- (11) Die Irmi verstopft die Straße mit ihrem Lastwagen.
 the Irmi obstructs the street with her truck
 'Irmi is obstructing the street with her truck.'

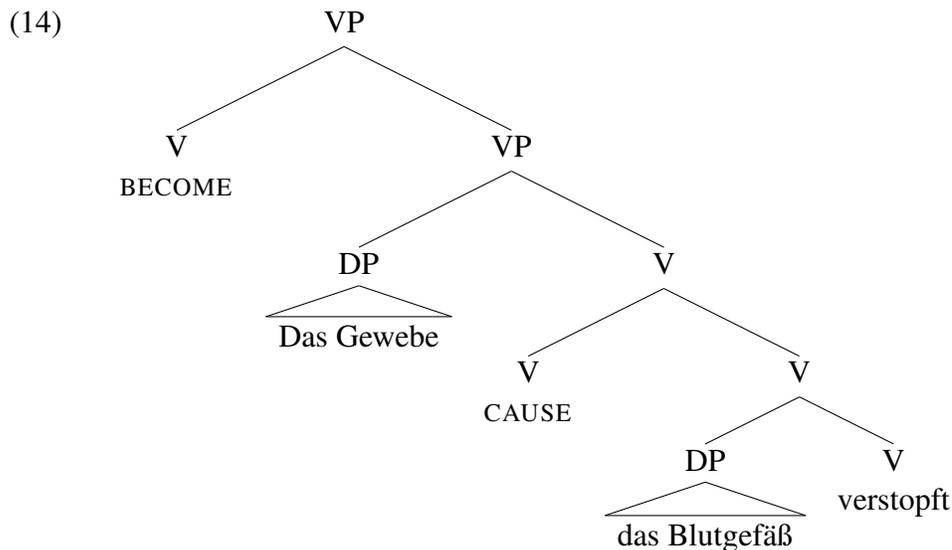


¹In her structure in (12), she proposes that instrumentals such as *mit ihrem Lastwagen* 'with her truck' would occupy the same syntactic position as the subject of the stative counterpart. This is her way of deriving the instrument-subject alternation (cf. *The truck obstructs the street*).

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Rothmayr nonetheless notes that an eventive reading is possible with a non-agentive subject if the subject is undergoing a gradual change, as diagnosed by the possibility of having an adverbial such as *nach und nach* ‘bit by bit’ (cf. ((13))). For these cases, the author proposes a BECOME operator that states that the result state in the causative VP is obtained gradually. An example is provided in ((13)) and the corresponding structure in ((14)) (2009: 51).

- (13) Das Gewebe hat nach und nach das Blutgefäß verstopft.
the tissue has bit by bit the blood-vessel obstructed
‘The tissue obstructed the blood vessel bit by bit.’



2.3 Summary

In a nutshell, the core idea of the previous literature on aspect-alternating verbs is that eventivity is a necessary ingredient for agentivity. Thus, although eventive predicates may have non-agentive versions, the received view is that stative predicates cannot derive agentive subjects.

3. The Spanish data

The received view on location verbs discussed above, however, faces serious problems when confronted with the Spanish data. Spanish also has locative verbs, as we can see in (15).

- (15) *rodear* ‘surround’, *cubrir* ‘cover’, *conectar* ‘connect’, *decorar* ‘decorate’, *bloquear* ‘block’, *obstruir* ‘obstruct’, *iluminar* ‘illuminate’ ...

In Spanish, the aspectual alternation exists as well, with the same reading for the subjects as identified in the previous literature: we can have agentive subjects with eventive read-

ings (cf. (16)) and causer subjects with stative readings (cf. (17)) as well as with eventive readings (cf. (18)).

- (16) La policía obstruyó la carretera.
the police obstructed the road
'The police obstructed the road.' (Agentive subject, eventive predicate)
- (17) El crater obstruía la carretera.
the crater obstructed the road
'The crater obstructed the road.' (Causer subject, stative predicate)
- (18) La avalancha obstruyó la carretera.
the avalanche obstructed the road
'The avalanche obstructed the road.' (Causer subject, eventive predicate)

I observe, crucially, that Spanish also has the fourth logical possibility available: agentive subjects with stative predicates. I exemplify this in (19), where there is the possible reading that the bandits are currently obstructing the road (i.e. keeping the road in a state of obstruction) and yet the agentive reading is perfectly possible and, indeed, the most salient one.

- (19) Los bandidos obstruían la carretera.
the bandits obstructed the road
'The bandits obstructed the road.'

This state of affairs, I note, should not be surprising. The standard definition of agent is an animate, volitional entity that acts willingly in bringing about an eventuality. Stativity, on its part, is generally defined as a non-dynamic eventuality. As far as I can tell, both definitions are not mutually exclusive.² The confusion on this point, I believe, goes at least as far as Lakoff (1970), who proposed a battery of tests to diagnose eventivity that were in fact later shown to be probing for agentivity, not eventivity (cf. Dowty (1979), Verkuyl (1989), Filip (1999)).³

If correct, we expect that the classic tests for eventivity and stativity should indeed be able to co-occur in the same clause (i.e. that they could be applied to the same predicate at the same time). The tests for agentivity are the following: the possibility to appear in the imperative, appear as infinitival complements of *decide*, take agent-oriented adverbs, form pseudo-clefts and take infinitival purpose clauses (cf. Lakoff 1970, Dowty 1979, Verkuyl 1989, Filip 1999). The tests for stativity are the lack of a habitual reading in the present

²This observation has precedents. For instance, Dowty (1979) studied a class of intransitive English verbs (*sit, stand, lie...*) that he labeled 'agentive states'. Also, Levin & Rappaport-Hovav observe that agentivity seems 'orthogonal to aspectual classification, with agentive and nonagentive predicates being found in every aspectual class' (2005:89).

³Verkuyl and Filip's issue with this correlation, however, was not that stative predicates could indeed have agent subjects, but rather, that eventive predicates could have nonagentive subjects, such as unaccusatives.

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tense (Kenny 1963), the universal reading in the perfect (Iatridou et al. 2001, Portner 2003) and the lack of dynamic adverbials such as *quickly* or *slowly* (Dowty 1979).⁴

I observe that these tests can indeed co-occur. In (20), we have a purpose clause (agentivity test) and a non-habitual present tense (stativity test) forming a perfectly grammatical sentence. In a similar fashion, (21) illustrates an agent-oriented adverb (agentivity test) along with a universal reading of the perfect (stativity test), forming a grammatical sentence once again.

(20) En estos momentos, los bandidos flanquean el camino para poder asaltar a
in these moments the bandits flank the path to can assault ACC
los viajeros.
the travellers
'The bandits currently flank the path to be able to assault the travellers.'

(21) Los manifestantes han obstruido el acceso al banco a propósito desde
the demonstrators have obstructed the access to.the bank on purpose since
las seis de la tarde.
the six of the evening
'The demonstrators have obstructed the access to the bank on purpose since 6 pm.'

Also, we expect that agentivity tests should not be enough to disambiguate between an eventive and a stative reading, all things being equal. This is the case in (22): the sentence retains its aspectual ambiguity regardless of whether it appears with agentivity tests such as an agent-oriented adverb or a purpose clause.⁵

(22) La policía está rodeando el edificio {intencionadamente/ para atrapar
the police is surrounding the building intentionally to catch
al asesino}.
ACC.the killer
(‘The police surround/ are surrounding the building {intentionally/to catch the
killer}.’)

i) Eventive reading: The police are in the process of gathering around the building.

ii) Stative reading: The police are currently around the building.

I therefore conclude that Spanish allows both agentive and non-agentive/causer subjects in both stative versions. This means that a theoretical analysis for locative verbs that links

⁴The progressive is also generally taken to be an eventivity test. However, this is incorrect. As Levin & Rappaport-Hovav put it, "the ability to be used in the present progressive is not a test for nonstativity, but rather is a test for a non momentary predicate" (1995:170). Interestingly, the progressive is possible in both aspectual versions of Spanish locative verbs, as shown in the example (22).

⁵Note that the verb in (22) is in the progressive, which is generally taken to be a stativity test. The fact is that, at least in Spanish, the progressive is possible with both aspectual readings of these verbs (see also footnote 4, for further discussion on the status of the progressive as an eventivity test).

aspectual meaning with a particular interpretation for the subject is not only unnecessary but also incorrect (at least for Spanish).

This state of affairs leave us with two possible options: we either assume that aspectually ambiguous verbs can assign both agent and causer θ -roles in both their eventive and stative version, or we can reject the view that agents and causers have a grammatical reality and accept, instead, that there is one single θ -role of originator: a subject may pass agentivity tests, but those tests merely show that the subject can be interpreted as acting volitionally and intentionally in that particular context, but not that the notion of agent (or causer, for that matter) is grammaticalized in any way whatsoever. This paper will pursue the latter path in the following section.

4. The proposal

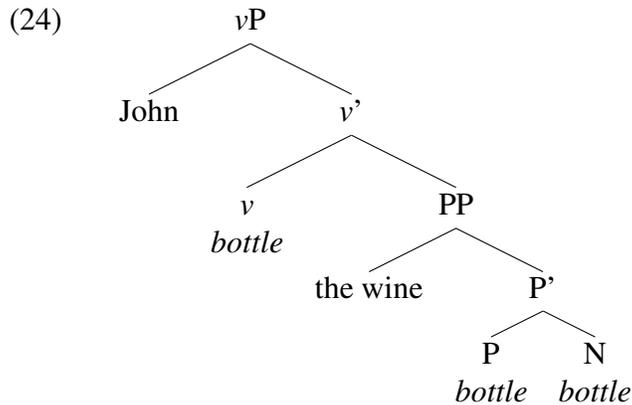
This section presents the syntactic model I propose for location verbs described above. I adopt a decompositional approach to the syntax and semantics of the VP in the lines of Hale & Keyser (2002). I assume, along the lines of these authors, that the VP can be syntactically complex, with each syntactic projection denoting a separate subevent. These subevents are interpreted semantically as causally related solely from their syntactic contiguity, such that the eventuality denoted by a higher projection is interpreted as causing or bringing about the eventuality denoted by its complement (see also Ramchand 2008).

Verbal arguments, in turn, are interpreted as aspectual entailments from their syntactic position in the structure, i.e. θ -roles are not grammatical primitives, but entailments from aspectually meaningful structure. I further adopt a syntactic approach to derivational morphology for the verbal domain, in the lines of Hale & Keyser: morphologically derived verbs are built syntactically, by incorporation of nominal or adjectival categories into verbal heads.

Turning to location verbs, I propose that their argument structure is articulated by prepositional structure. PPs are birrelational: they introduce a dyadic argument structure where the two arguments are interpreted as being spatially related: a Figure (or Locatum) argument in (Spec,PP) and a Ground (or Location) argument complement of P^o. This is essentially the L-syntax configuration proposed by Hale & Keyser (2002) for denominal verbs such as *to bottle* (cf. (23)), where we have a Figure argument (*the wine*), which undergoes displacement to a Ground location (*bottle*, which becomes a verb by its incorporation to v^o) (cf. (24)).

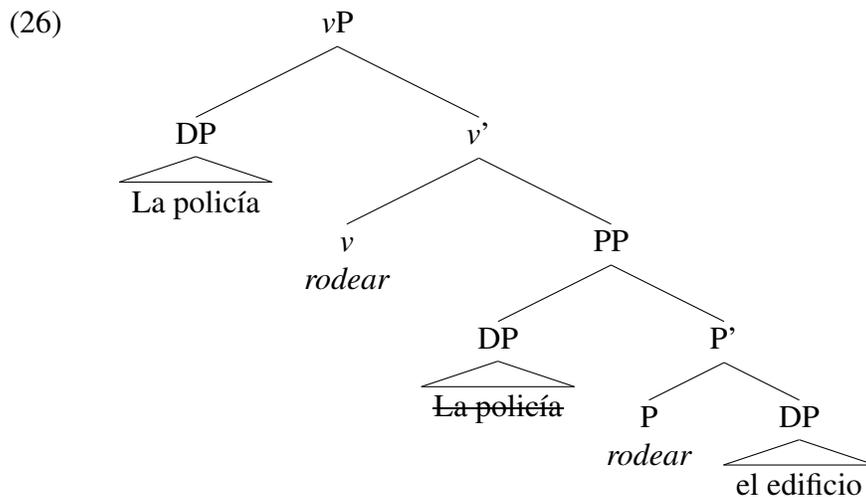
(23) John bottled the wine.

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Location verbs like *surround*, however, differ crucially in that both arguments are realized as full DPs, neither one undergoing verbalization. Given that location verbs inherently denote a spatial relation between two entities, I argue that the root is in fact prepositional in nature, i.e. that it starts off by lexicalizing the birrelational P° head, and it later becomes a verb by incorporation to v° . The subject of location verbs, moreover, is also the Figure within the prepositional structure. I assume it raises to (Spec, vP) from its base position in (Spec,PP). I provide an example in (25) and the corresponding structure in (26).

- (25) La policía rodeó el edificio.
 the police surrounded the building.
 'The police surrounded the building.'

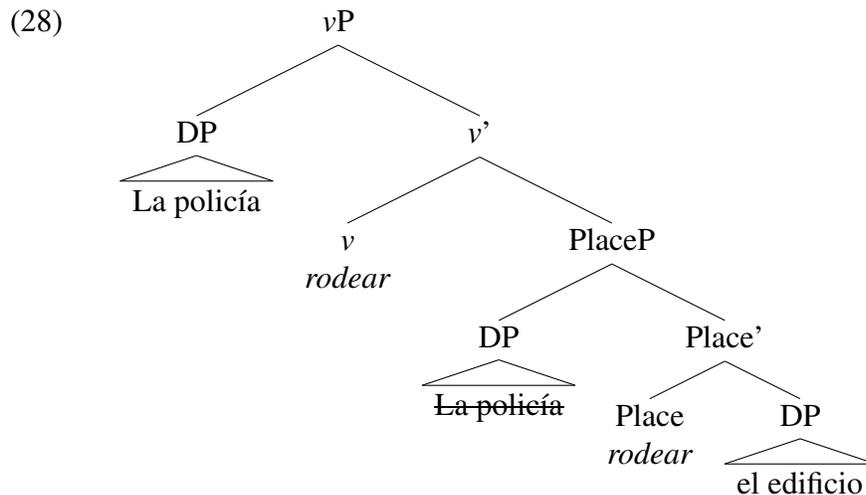
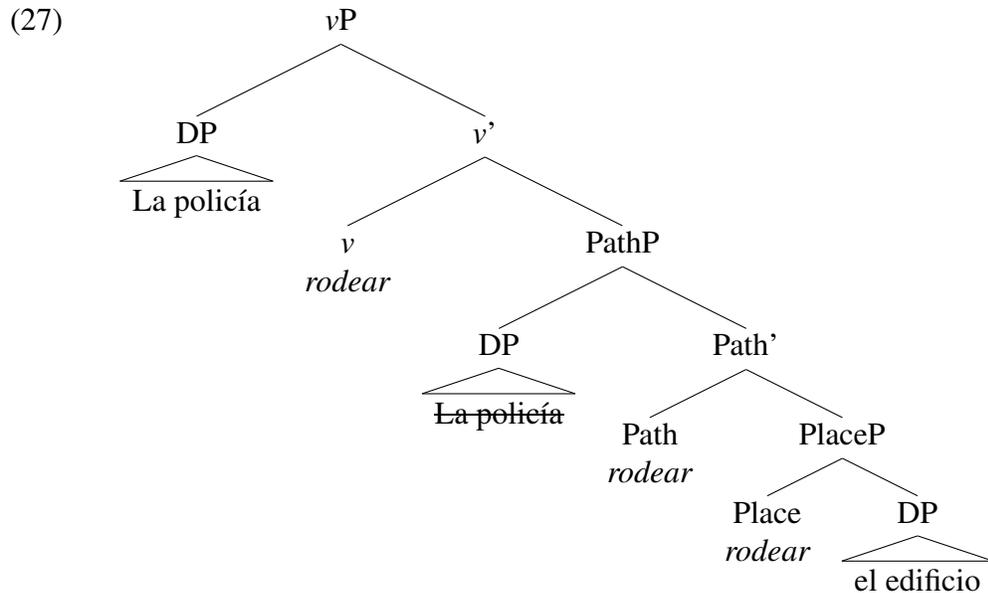


The aspectual alternation is derived as follows. Following Hale & Keyser (2002), I take PPs to be of two types depending on their syntactic complexity and subsequent semantic import: (i) Terminal coincidence: they are formed by two prepositional heads, $Path^{\circ}$ and $Place^{\circ}$. The whole PP denotes a displacement of the Figure in (Spec,PathP) to a location (complement of Place). (ii) Central coincidence: they are built with a single prepositional head, $Place^{\circ}$.

The simple PP/PlaceP denotes a stative location, i.e. the Figure in (Spec,PlaceP) is at the location denoted by the complement of Place°.

Location verbs, then, start off as roots lexicalizing the prepositional head Place°. The stative version will only contain PlaceP and the verbalizer *v*P, whereas the eventive, change-of-location version will also project PathP, with the root also incorporating to its head Path°.

I provide the structure of the eventive version of (25) in (27), and of the stative version in (28).



My proposed structure, crucially, forces no particular interpretation for the subject: the aspectual import of the predicate (stative or eventive) is calculated in the articulated PP below *v*P, and it in no way dictates whether the subject in (Spec,*v*P) should be an agent or

causer of the eventuality denoted by the PP.⁶ In both cases it is interpreted as an "originator" (to use the terminology of Borer 2005). Given that ν P introduces an eventuality and its prepositional complement (PathP or PlaceP) introduces another, the subevent introduced by ν P is interpreted as bringing about the subevent denoted by PP and, by entailment, the subject of the causing subevent is interpreted as an originator (Hale & Keyser 1993, 2002, Ramchand 2008). I illustrate this idea in (29).

$$(29) \quad \left[\nu P \text{ La policía} \quad \left[\nu' \nu \quad \left[\text{PathP/PlaceP...} \right] \right] \right]$$

$$\text{ORIGINATOR} \quad e_1 \quad \longrightarrow \quad e_2$$

My proposal makes a distinct prediction regarding anti-causativization. Given that location verbs are articulated by prepositional structure, and prepositional structures are inherently dyadic, we expect that location verbs should not be able to participate in the transitive-unaccusative alternation: the subject is not an external argument, but rather an internal one, in the relevant sense. The prediction is indeed borne out, as illustrated by the ungrammatical sentences (30), from the transitive (25), and (31), from the transitive (20).

- | | |
|---|--|
| <p>(30) *El edificio rodeó.
 the building surrounded
 *‘The building surrounded.’</p> | <p>(31) *El camino flanqueó.
 the path flanked
 *‘The path flanked.’</p> |
|---|--|

As far as I can tell, this point was neither made nor predicted by previous accounts, which treated the subject as a true external argument.⁷

5. Conclusions

This paper has taken a closer look at aspect-alternating location verbs (*surround, cover...*) and has argued, drawing from Spanish data, that the received view that agent subjects can only appear with eventive readings is mistaken. I have shown that agentive and non-agentive subjects are equally acceptable in both eventive and stative readings. I have proposed a novel syntactic account of location verbs that derives the aspectual alternation and the interpretation of subjects solely from the structural configuration of the VP.

⁶That is not to say, of course, that the subjects of the eventive and stative versions have the same interpretations: given that they both start off as Figures, eventive subjects will be interpreted as undergoing displacement towards the Ground, whereas stative subjects will be interpreted as simply being in some spatial relation with respect to the Ground, no change involved.

⁷Interestingly, Hale & Keyser (1993: 84) observed the same situation for English denominal location verbs: they lack an unaccusative counterpart, as shown in (i).

- (i) a. I shelved the books.
 b. *The books shelved.

The difference here with respect to my location verbs is that the subject of denominal verbs truly is an external argument. The reason behind the impossibility of denominal verbs to anticausativize is morphological: the causative ν^o is needed to verbalize the nominal root.

As a theoretical contribution, my study of location verbs has provided support for a constructivist approach to aspect and argument structure, namely, that it is syntax which creates aspectually-meaningful argument structure configurations which, in turn, are the sole input for the semantic interpretation of the VP. If we commit to this view, we are forced to conclude that lexicalist notions such as "agents" and "causers" have no grammatical reality, since they cannot be shown to be derived from syntactico-semantic principles: this is exactly what this paper has shown for the case of location verbs in Spanish.

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