

## The internal structure of perfective adjectives: states and blocking

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ABSTRACT. The goal of this article is to discuss the nature of so-called perfective adjectives in Spanish (*desnudo* 'naked', *suelto* 'loose'). We do so through a discussion of the problem that participles are blocked by perfective adjectives in some contexts (*Dejó la habitación {limpia / \*limpiada}* 'He left the room {clean / \*cleaned}). We will argue that perfective adjectives contain in their internal structure a StateP that can contextually be interpreted as a result state; this head has morphological, syntactic and semantic effects, and makes the structure spelled out by the perfective adjective identical to the one associated to a small participle, with the result that a principle of lexical economy blocks the participial morphology in situations where only the small participle is allowed.

**Keywords:** participles, perfective adjectives, phrasal spell out, Spanish, periphrastic constructions

### 1. Introduction: the problem

This article discusses a possible account of the contrasts in (1)-(3). Under the light verbs *dejar* 'leave' and *quedarse* 'remain', the past participle of some verbs –to be specified immediately– is completely blocked, and an adjective must be used in its place.

- (1) a. Juan dejó la habitación limpia.  
Juan LEFT the room clean  
'Juan performed an action that resulted on the room being clean'  
b. \*Juan dejó la habitación **limpiada**.  
Juan LEFT the room **cleaned**  
Intended: 'Juan performed an action that resulted on the room being cleaned'
- (2) a. La habitación se quedó limpia.  
the room SE REMAINED clean  
'The room got clean'  
b. \*La habitación se quedó **limpiada**.  
the room SE REMAINED **cleaned**

With the copulative verb *estar* 'to be' –generally associated to stage level predicates (Carlson 1977, Leborans 1995, Arche 2006, Brucart 2010, Camacho 2012), the same roots must use an adjective instead of a past participle in the unmarked interpretation, but the participle is allowed under certain interpretations.

- (3) a. La habitación ya está limpia.  
The room already is clean  
'The room is already clean'  
b. #La habitación ya está **limpiada**.  
the room already is **cleaned**  
'(I report that) the room is cleaned after someone cleaned it'  
c. Ya *está limpiada* la playa de En Bossa (Diario Vasco, 26.08.2007)  
already is cleaned the beach of En Bossa

The literature has proposed a generalisation to explain the contrasts in (1)-(3), which we take as essentially correct, even though we will refine it in §4.3.: the past participles cannot occur in the contexts (1), (2) and (3a) whenever the same root is associated to a perfective adjective (Bosque 1990, 1999; Marín 1997; Pavón Lucero & Morimoto 2007, among others), that is, adjectives that denote states that are achieved as the result of some process (NGLE 2009: §13.2t). The assumption of this characterisation is that (non-perfective) adjectives denote properties, not states. The structure of this article is as follows: the next section discusses in some detail the properties of perfective adjectives, and makes a proposal about their internal composition. Then, §3 is devoted to the structure of the verbs in (1)-(2). These two pieces will give us the tools to propose an analysis in terms of spell out (§4). Finally, §5 extends the analysis to the pattern in (3), which, as we will see, involves additional factors. We close the article with some conclusions.

## 2. Perfective adjectives: the properties and internal structure

Perfective adjectives were first defined as a class in Bosque (1990: 185):

- (4) [Perfective adjectives] denote states reached by the entities they are predicated of.

In other words, perfective adjectives have the state denotation that is typically associated to some uses of the participle (5), but lack the morphology of participles and cannot be used in contexts such as the perfect aspect of a verb.

- (5) Juan se ha dormido.  
 Juan SE has fallen.asleep  
 'Juan has fallen asleep'

This definition makes adjectives such as those in (6) fall inside the class:

- (6) *lleno* 'full', *vacío* 'empty', *limpio* 'clean', *sucio* 'dirty', *vivo* 'alive', *desnudo* 'naked', *descalzo* 'barefoot', *suelto* 'loose', *harto* 'fed-up', *despierto* 'awake', *borracho* 'drunk', *contento* 'satisfied', *oculto* 'hidden', *junto* 'assembled', *enfermo* 'sick'

Bosque emphasises that these adjectives can be related to irregular participles diachronically, but in modern Spanish they cannot appear in combinations with the auxiliary *haber* 'have' in order to express perfect aspect.

- (7) \*(Se) ha {lleno / vacío / despierto / suelto / contento...}  
 SE has full empty awake loose satisfied

In Bosque's original characterisation, these adjectives differ from 'regular' adjectives in that they denote states, not properties; however, a formal analysis of the distinction between these two notions is missing from the proposal. Leaving aside for the time being (cf. §2.2) the characterisation of this distinction, let us start by providing the main empirical properties of perfective adjectives.

### 2.1. Properties of perfective adjectives

A first caveat is in order before we continue: Bosque's characterisation has a historical component (namely, the perfective adjective comes from a Latin participle). The historical criterion cannot guarantee that there has not been a process of reinterpretation of certain Latin-participle forms, in a way that despite their origin those cannot be considered perfective adjectives anymore. For this reason, here we will present the synchronic properties of perfective adjectives, and in what follows we will only consider perfective adjectives proper those that display all these properties. First of all, it is well-known that Spanish has two different copulae, *ser* and *estar* (Luján 1980, Leborans 1999, Arche 2006, Fábregas 2012, Camacho 2012, Brucart 2012). With some interesting exceptions (Roby 2009), *ser* is associated to individual level properties and *estar* goes with stage level properties (cf. Carlson 1977, Kratzer 1995, Chierchia 1995 for discussions about the distinction). Most adjectives in Spanish allow both copulae, associating each one of them to distinct readings.

- (8) a. Juan es guapo.  
       Juan is<sub>IL</sub> handsome  
       (Roughly) 'Juan is a handsome person'  
       b. Juan está guapo.  
       Juan is<sub>SL</sub> handsome  
       (Roughly) 'Juan looks handsome (now)'

Perfective adjectives, however, must always combine with the copula *estar* ( $\approx$  SL copula, always combines with **states**; cf. Leborans 1999, Arche 2006, Fábregas 2012, Camacho 2012, Brucart 2012).<sup>1</sup>

- (9) pro {está / \*es} {desnudo / vacío / suelto / contento / borracho...}.  
       pro be<sup>estar</sup> / \*be<sup>ser</sup> {naked / empty / loose / satisfied / drunk...}

Perfective adjectives are also associated to closed-scale adjectives (Kennedy & McNally 2005), that is, absolute adjectives (Unger 1975) whose highest or lowest degree value is taken as the standard of comparison by default.

- (10) a. Juan está {completamente / ligeramente} desnudo.  
       Juan is completely / slightly naked  
       b. Juan está ligeramente sucio.  
       Juan is slightly dirty

Interestingly, and this is a previously unnoticed property of perfective adjectives (to the best of our knowledge), perfective adjectives are morphologically related to verbs that satisfy two properties: first, they must have an internal argument always

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<sup>1</sup> This claim excludes causative-adjective uses (Pesetsky 1995) and demotivated / idiomatic readings. The existence of sentences like (i) does not contradict the characterisation of *vivo* 'alive' or *limpio* 'clean' as perfective adjectives because in such cases we can assume either that the causative morpheme determines the copula choice or that the adjective has lost its literal sense.

- i. a. Juan es limpio.  
       Juan be<sup>ser</sup> clean  
       'Juan has a behaviour that typically makes him clean things'  
       b. Juan es vivo.  
       Juan be<sup>ser</sup> alive  
       'Juan is cunning'

(unaccusative and / or causative); second, the associated verbs are derived without the help of verbalisers such as *ific* 'ify', *iz* 'ize', etc. The verbs are formed from the roots by adding just a theme vowel (Oltra-Massuet 1999), only occasionally in a parasynthetic pattern (11a).

- (11)
- |    |              |   |              |
|----|--------------|---|--------------|
| a. | suci-o       | ~ | en-suci-a    |
|    | dirty-Agr    |   | in-dirty-ThV |
| b. | limpi-o      | ~ | limpi-a      |
|    | clean-Agr    |   | clean-ThV    |
| c. | desnud-o     | ~ | desnud-a     |
|    | naked-Agr    |   | naked-ThV    |
| d. | llen-o       | ~ | llen-a       |
|    | full-Agr     |   | fill-ThV     |
| e. | junt-o       | ~ | junt-a       |
|    | together-Agr |   | together-ThV |
| f. | ocult-o      | ~ | ocult-a      |
|    | hidden-Agr   |   | hidden-ThV   |

Additionally, perfective adjectives (12a), like participles (12b), can be predicates inside absolute participle constructions, taking a subject, and crucially without any overt aspectual marker (Hernanz 1991, Marín 1997).

- (12)
- |    |   |
|----|---|
| a. | Limpia su habitación, Luis procedió a limpiar la cocina.      |
|    | Clean his room, Luis proceeded to clean the kitchen           |
|    | ‘Once his room was clean, Luis moved on to clean the kitchen’ |
| b. | Ordenada su habitación, Luis procedió a limpiar la cocina.    |
|    | Organised his room, Luis proceeded to clean the kitchen       |

Regular adjectives cannot do this, unless there are overt aspectual markers that license the construction.

- (13)
- |    |   |
|----|---|
| a. | *Blanca la habitación, Luis procedió a pintar la cocina.                |
|    | white the room, Luis proceeded to paint the kitchen                     |
| b. | ?{Una vez / ya} blanca la habitación, Luis procedió a pintar la cocina. |
|    | once / already white the room, Luis proceeded to paint the kitchen      |

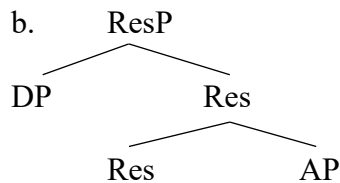
Note that none of these properties is exclusive of perfective adjectives: what makes something a perfective adjective is the coincidence of all these properties.

## 2.2. *The internal structure of perfective adjectives*

In this section we will argue that perfective adjectives are distinguished from regular adjectives by the head they use to introduce their external argument. In the case of a regular adjective, we assume that head to be PredP (14a); in contrast, in perfective adjectives we will argue in this section that the head is Ramchand's (2008) Res(ult) (14b).

- (14)
- |    |       |
|----|-------|
| a. | PredP |
|    |       |

Pred            AP



Ramchand (2008) proposes a decomposition of lexical verbs where each subevent within their Aktionsart corresponds to a designated head in the sequence, with each head licensing some specific arguments. In this system there are two kinds of heads: state (Init(iation) and Res(ult)) and process (Proc). The distinction between Init and Res is configurational, as they both denote stative subevents: the stative subevent that precedes the process is interpreted as the causation subevent, while the one that follows the process is interpreted as its result. Thus, (15) is the maximal expansion of a lexical verb according to Ramchand (2008):

(15) [InitP [ProcP [ResP]]]

Each head contains an event variable, and when more than one appears, an operation of event identification composes a single event within which each head is a subpart. Therefore, our claim that a perfective adjective corresponds to (14b) amounts to saying that the perfective adjective already defines part of the verbal sequence. This, as we have shown, is supported by the property that all perfective adjectives become verbs without the help of any overt verbaliser (cf. 11).

In neo-constructionist approaches to word formation (Halle & Marantz, Marantz 2001, Borer 2013, among others), the verbalisers in (16) are manifestations of the head that combines with a constituent in order to define it, categorically, as a verb.

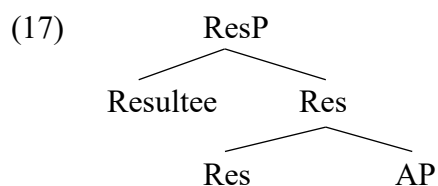
- (16) a. ific(a)        'ify'  
       b. iz(a)        'ize'  
       c. ec(e)  
       d. it(a)

All verbs related to perfective adjectives lack these morphemes,<sup>2</sup> and we argue this is no accident, but a reflection of their having already one verbal projection in their internal structure. A verb like *desnud-a* 'to get naked' does not need a verbaliser because the base, the adjective *desnud(o)*, is already headed by a verbal projection, ResP.

Second, our proposal makes the prediction that the verbs to which perfective adjectives are related will always have an internal argument that gets the interpretation of resultee (that is, holder of the result state) that Ramchand associates to the specifier of ResP.

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<sup>2</sup> A natural question at this point is what is the syntactic role of the theme vowel that does appear with perfective adjectives. Here we assume that Ultra-Massuet (1999) is essentially right in the sense that theme vowels (in the languages that have them) should be considered 'ornamental' morphology that does not mark any syntactically active head.



To the best of our knowledge, this is also correct:

- (18)
- a. llen-o 'full' > llen-ar la piscina  
fill the pool (the pool is full at the end)
  - b. vací-o 'empty' > vaci-ar la piscina  
empty the pool (the pool is empty at the end)
  - c. limpi-o 'clean' > limpi-ar una mesa  
clean a table (the table is clean at the end)
  - d. viv-o 'alive' > a-viv-ar un fuego 'to get a fire to life'
  - e. desnud-o 'naked' > desnud-ar una muñeca 'to get a doll naked'
  - f. descalz-o 'barefoot' > descalz-ar una muñeca 'to remove the shoes from a doll'
  - g. suelt-o 'loose' > solt-ar un león 'to let a lion loose'
  - h. hart-o 'fed-up' > hart-ar a una madre 'to get a mother fed up'
  - i. despiert-o 'awake' > despert-ar a un bebé 'to get a baby awake'
  - j. borrach-o 'drunk' > em-borrach-ar a un amigo 'to get a friend drunk'
  - k. content-o 'satisfied' > content-ar a un amigo 'to satisfy a friend'
  - l. ocult-o 'hidden' > ocult-ar un tesoro 'to get a treasure hidden'
  - m. junt-o 'assembled' > junt-ar un tesoro 'to gather a treasure'
  - n. enferm-o 'sick' > enferm-ar a alguien 'to get someone sick'
  - o. insert-o 'insert' > insert-ar un objeto 'to get an object inside'
  - p. sepult-o 'buried' > sepult-ar un tesoro 'to bury a treasure'
  - q. san-o 'healed' > san-ar a un paciente 'to make a patient healthy'
  - r. molest-o 'annoyed' > molest-ar a alguien 'to make someone annoyed'

Our proposal can also explain why perfective adjectives only combine with *estar*, the stage level copula. Note that with participles denoting states (19), *estar* is also compulsory.

- (19)
- a. Está quemado.  
is<sup>SL</sup> burnt
  - b. Está organizado.  
is<sup>SL</sup> organised
  - c. Está roto.  
is<sup>SL</sup> broken

The state-denoting progressive periphrasis in Spanish, involving a gerund, also forces the presence of this auxiliary.

- (20) Está comiendo.

is<sup>SL</sup> eating

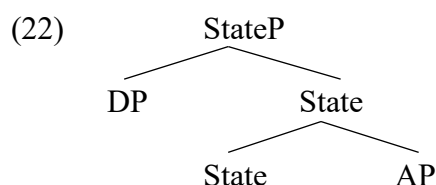
This suggests that being a state entails being stage level, to the extent that –following the classical characterisation of Carlson (1977)– a stage level predication is a predication about a particular spatiotemporal slice of the individual. (Result) states are particular spatiotemporal slices of individuals, and as such they are forcefully stage level predicates.

However, we want to avoid a classic problem that is typically associated to the claim that some adjectives necessarily have a ‘perfective’ value: we do not want to claim, counterfactually, that these adjectives necessarily presuppose or entail a previous event whose result they express. Consider the following examples:

- (21) Un coche nuevo siempre está limpio cuando sale de fábrica.  
a car new always is clean when comes.out of factory  
‘A new car is always clean when it comes out of the factory’

Clearly in (21) nobody has cleaned the car; the car, in fact, did not exist before it was put together. How can we avoid this problem?

It is crucial to note that Res in Ramchand (2008) is actually a label that summarises two properties: it denotes a state and it denotes a result of a previous event. The first property is inherent to the description of the head as stative (as opposed to processual), but the second property is derived from the configuration. As we discussed, in Ramchand (2008), the result interpretation of the state emerges from it being in the complement position of ProcP. Thus a better label for ResP when it is not in the configuration where it is the complement of Proc is the one in (22).



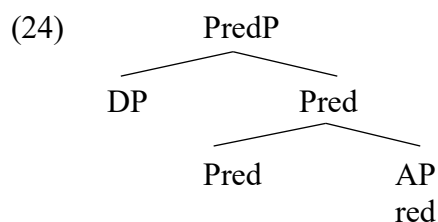
Thus, in isolation we do not expect perfective adjectives to necessarily express results from previous events: this property is derived from the syntactic configuration and will only be enforced when the StateP that heads the adjective is embedded under ProcP.

This explains the temporal interpretation of (23).

- (23) Cada vez que Juana viene a casa, el baño está limpio.  
whenever that Juana comes to hosue, the toilet is clean  
‘Whenever Juana comes home, the toilet is clean’

Note that Juana’s arrival does not coincide with an event of cleaning the toilet; it coincides with a state of the toilet being clean, either because it was cleaned by someone or because it did not get dirty. This is precisely the interpretation that the structure in (22) predicts.

We need at this point to be more specific about the difference between StateP and the standard Pred(ication)P that introduces the subject of a regular adjective (Bowers 1993, Baker 2002).



What is the difference? States are verbal projections that contain an event variable that can be identified with the event variable of Proc. As such, they have a temporal trace. In contrast, Pred just creates predications that are not linked to temporal properties in themselves. The corollary of this principle is that adjectives completely lack an event argument (as confirmed by Maienborn 2005).

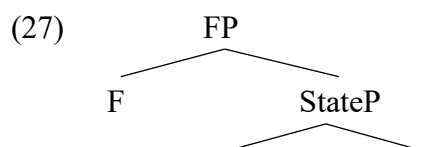
Thus the general distinction between the two classes of adjectives is that only perfective adjectives have an event variable, and if this is in the right track, we expect other empirical distinctions to follow from here. Specifically, we expect perfective adjectives to allow temporoaspectual modification that measures the running time of the state, unlike regular adjectives. This is confirmed:

- (25)
- a. Conocí a un hombre [vivo durante la Primera Guerra Mundial].  
I met a man alive during the I World War
  - b. Este aparato produce una piscina [llena en una hora]  
this machine produces a pool full in one hour
  - c. Este producto produce un suelo [limpio durante dos días]  
this product produces a floor clean during two days
  - d. Una pareja [junta durante toda su vida] se conoce mejor.  
a couple together for all their life SE know better  
'A couple that has been together for their entire life know each other better'

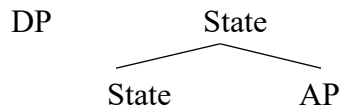
(26) is a reminder that regular adjectives do not accept such modifiers.

- (26)
- a. \*Conocí a un hombre [valiente durante la Primera Guerra Mundial]  
I met ACC a man [brave during the I world war]
  - b. \*Una pareja [cariñosa durante toda su vida] vive más feliz.  
a couple cuddly for all their life lives more happy
  - c. \*Estos cereales son para niños [fuertes durante todo el día].  
these cereals are for children strong for all the day

The proposal that perfective adjectives contain in themselves a head contributing aspectual information also explains why perfective adjectives produce absolute constructions without the help of overt aspectual markers: they already contain structure that contains aspectual information and licenses the subject.



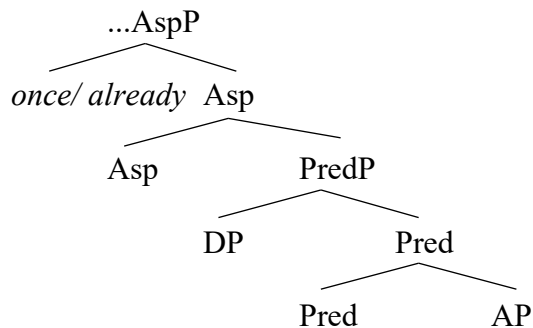




- a. Limpia la mesa, Juan procedió a barrer el suelo.  
Clean the table, Juan proceeded to sweep the floor
- b. \*Roja la cara, Juan se pintó los labios de negro.  
red the face, Juan SE painted the lips in black

Note that regular adjectives are available only once additional aspectual overt markers are presented; our claim is that these markers license an aspectual head that the adjectives do not incorporate in their structure:

- (28) Una vez roja la cara, Juan se pintó los labios.  
one time red the face, Juan SE painted the lips



With this, we end the initial discussion about the nature of perfective adjectives, and move to the discussion of the light verbs involved in the patterns in (1) and (2).

### 3. The properties of the light verbs in the construction: *dejar* and *quedarse*

#### 3.1. *Dejar*

*Dejar* 'to leave' is a causative-resultative auxiliary that is used mainly as an aspectual auxiliary. Let us first present the properties of the verb according to García Fernández et al. (2006).

First of all, it is a resultative auxiliary whose role is precisely to focalises the result state. As such it imposes result state interpretations to participles and perfective adjectives, and allows a regular adjective to be interpreted as a property obtained after culmination of a process.

- (29) a. Juan dejó barrida la casa.  
Juan LEFT swept the house  
'Juan acted and at the end of the event the house was swept'
- b. Juan dejó vacía la piscina.  
Juan LEFT empty the pool
- c. Juan dejó rojas las paredes.  
Juan left red the walls

As expected if a state interpretation presupposes a stage level interpretation, adjectives that must be interpreted as individual level predicates cannot participate in this construction.

- (30) \*Zeus dejó a Hércules mortal.  
 Zeus left DOM Hercules mortal  
 Intended: 'Zeus acted on Hercules, and at the end Hercules was mortal'

Also as a natural consequence of its resultative character, the verb can only combine with the participles of telic verbs (cf. 31a, with an atelic one) that have an internal argument (cf. 31b, with an unergative verb) and contain a result state that can be modified independently by temporospectual modifiers (31c, with a verb that lacks a result state).

- (31) a. \*Juan dejó empujado el carrito.  
 Juan LEFT pushed the cart  
 b. \*Juan dejó llorado al niño.  
 Juan LEFT cried the child  
 c. \*Juan dejó comida la paella.  
 Juan LEFT eaten the paella

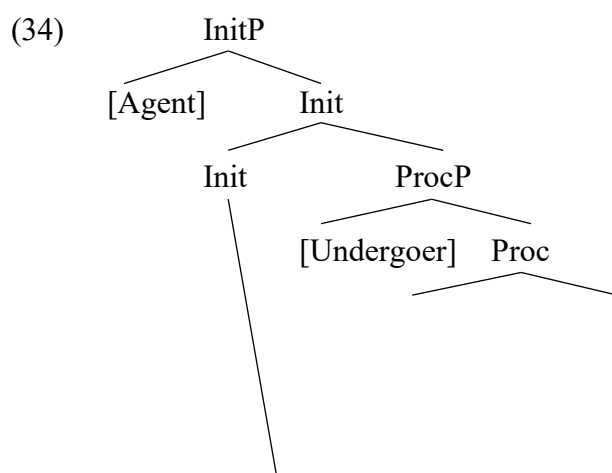
A second property of this verb is that the subject of the verb has to be interpreted as the agent that performs an event that leads to that result state. (32b) is deviant because the subject of *dejar* must be the one that brings to completion the event that results in the specific state.

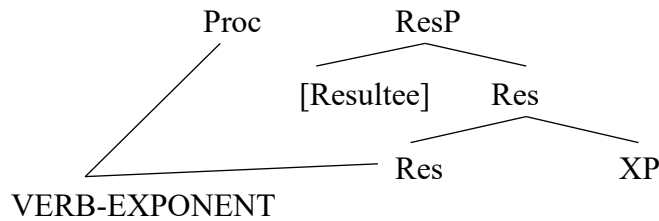
- (32) a. Juan dejó escrito el libro.  
 Juan LEFT written the book  
 'Juan acted and at the end of the event the book was written'  
 b. #Juan dejó escrito el libro que Luis escribió.  
 Juan LEFT written the book that Luis wrote

However, the subject does not need to be a conscious agent that controls the event. (33) is perfectly possible in an interpretation where Juan unknowingly pushed a lever that emptied the swimming pool.

- (33) Juan dejó vacía la piscina.  
 Juan left empty the pool

In order to explain this set of properties, we propose the following structure, using Ramchand's (2008) set of heads:

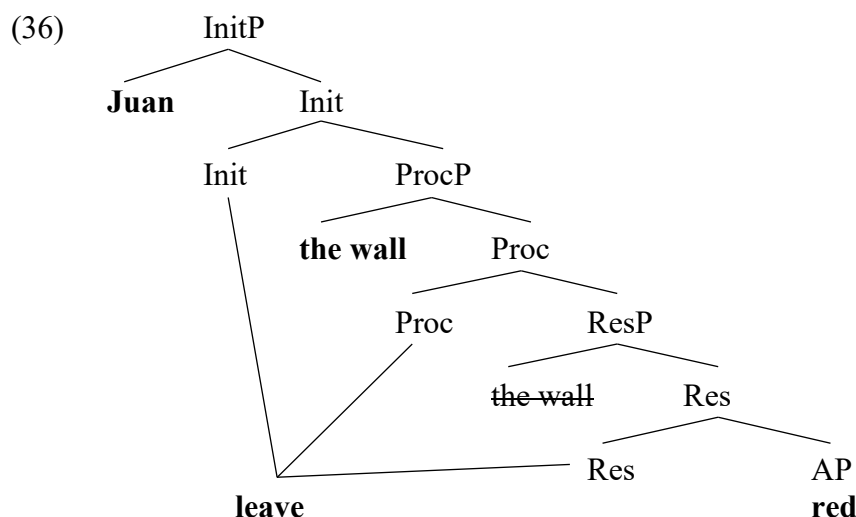




The verb stem *dejar* is the spell out of the series of heads Init-Proc-Res. In other words: given that the verb involves three syntactic heads, it follows that we have to treat *dejar* as the synthetic manifestation of a complex syntactic object. There are several technical devices that have been proposed in the literature to explain cumulative exponence (eg., conflation in Hale and Keyser 2002, fusion in Halle & Marantz 1993, phrasal spell out in Caha 2009). In what follows, we will assume that the technical procedure that spells out a series of heads with one single exponent is Multiple association (Ramchand 2008: 91-100), later on known as Spanning:

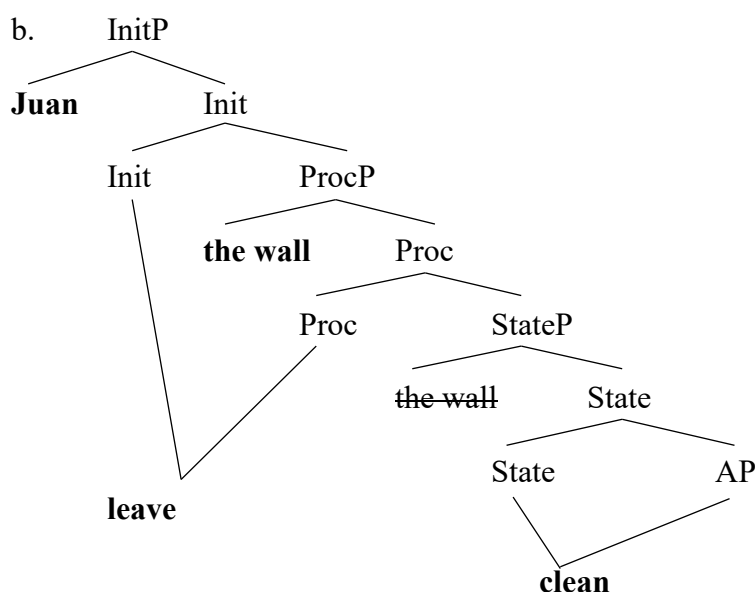
- (35) Spanning: in a tree structure, one single exponent can multiply spell out a sequence of heads that are in a head-complement relation.

Two notes are in order. First, the choice of InitP as the causative subevent is not accidental. We have seen that, crucially, the subject of *dejar* does not need to exert conscious control over the event. Ramchand (2008: 53-55) explicitly argues that her InitP does not impose the entailment that the causation is conscious. This motivates our technical choice of InitP over other alternatives (such as vP). Second, note that it is crucial that the verb *dejar* contains a Res head as part of the material that it spells out. If the verb itself did not impose a result state interpretation, it would be mysterious why a regular adjective, as in (29c), could be interpreted as a result state. (36) represents the structure of the verbal predicate in *Juan dejó la pared roja* 'Juan left the wall red'.



This means that when the verb combines with a perfective adjective, the ResP (labelled here as StateP for the sake of presentation) is spelled out by the adjectival stem, not the verb.

- (37) a. Juan dejó la pared limpia.  
 Juan left the wall clean



In such situations, the verbal exponent is said to underassociate (Ramchand 2008: 98):

(38) *Underassociation*

If a lexical item contains an underassociated category feature [here ResP]:

- a. that feature must be independently identified within the phase [here by the perfective adjective] and linked to the underassociated feature, by Agree.
- b. the two category features so-linked must unify their lexical-encyclopedic content.

The consequence of (38b) is very intuitive: in (37) it is necessarily the case that the result state that the verb *dejar* requires is identified with the state that the perfective adjective denotes, which corresponds to the interpretation of the sentence.

3.2. *Quedarse*

Let us now move to the properties of *quedar(se)* ‘to stay-(SE)’ according also to García Fernández et al. (2006). This verb is typically interpreted as the anticausative version of *dejar*. (39b) feels like a contradiction, and (39c) feels as redundant, as the meaning of the second sentence is entailed by the first.

- (39) a. Juan dejó el libro escrito, o sea, el libro quedó escrito.  
 Juan left the book written, that is, the book got written
- b. #Juan dejó el libro escrito, pero el libro no quedó escrito.  
 Juan left the book written, but the book not got written
  - c. #Juan dejó el libro escrito, y además el libro quedó escrito.

Juan left the book written, and also the book got written

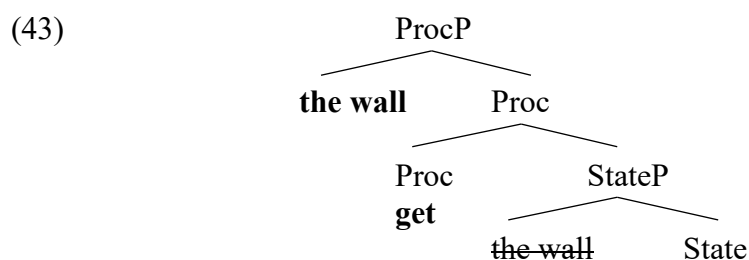
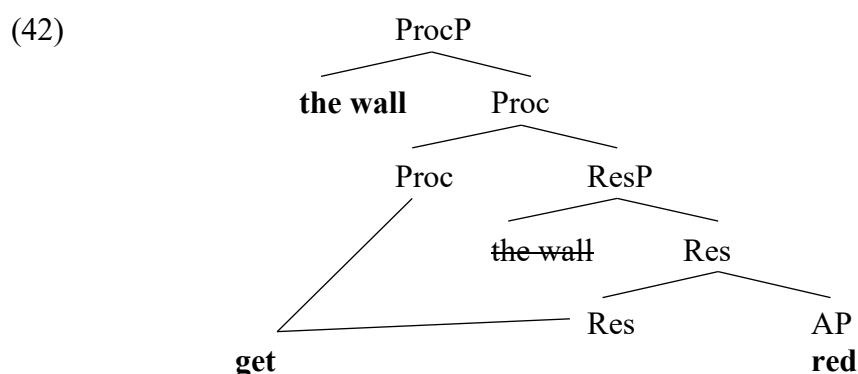
The subject of *quedar* is not the agent, but the entity that suffers a change that leads to a result state, expressed by the participle.

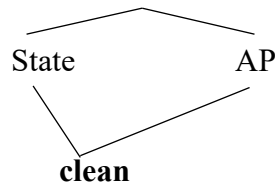
- (40) El libro quedó escrito.  
the book BECAME written

*Quedar* is not stative in the proper sense. Even if the verb is incompatible with the progressive periphrasis for many speakers (41a, but contrast with 41b), there is evidence that the structure is marking a dynamic transition (punctual) between two changes of state, as it is compatible with velocity-adverbs (41c) and has an interpretation of change in whenever-contexts (41d).

- (41) a. ??Está quedando escrito.  
is BECOMING written  
b. Felicidades por tu blog, está quedando organizado.  
congratulations for your blog, is BECOMING organised  
'Congratulations on your blog, it is getting organised' [Google]  
c. Quedó rápidamente escrito.  
BECAME quickly written  
d. Cada vez que viene, queda decidido un tema.  
whenever he comes, BECOMES decided an issue  
'Whenever he comes, an issue gets decided' (not 'Whenever he comes, an issue is already decided')

We propose the following structure for *quedar(se)*, which is essentially the structure of *dejar* minus the initiation subevent. The ResP has to be identified by the verb for the same reasons as in *dejar*, and in (43) underassociation is necessary for identical reasons –and results on the same identification between result state and state denoted by the perfective adjective–.

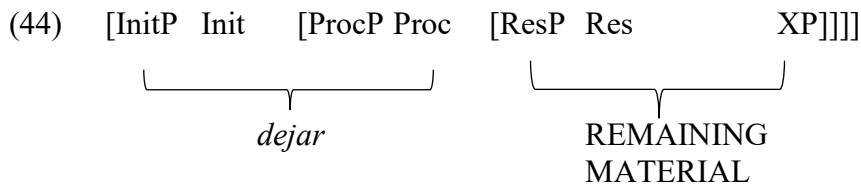




**4. Analysis**

With these ingredients in place, and before getting into the details, let us show the general shape of the argument:

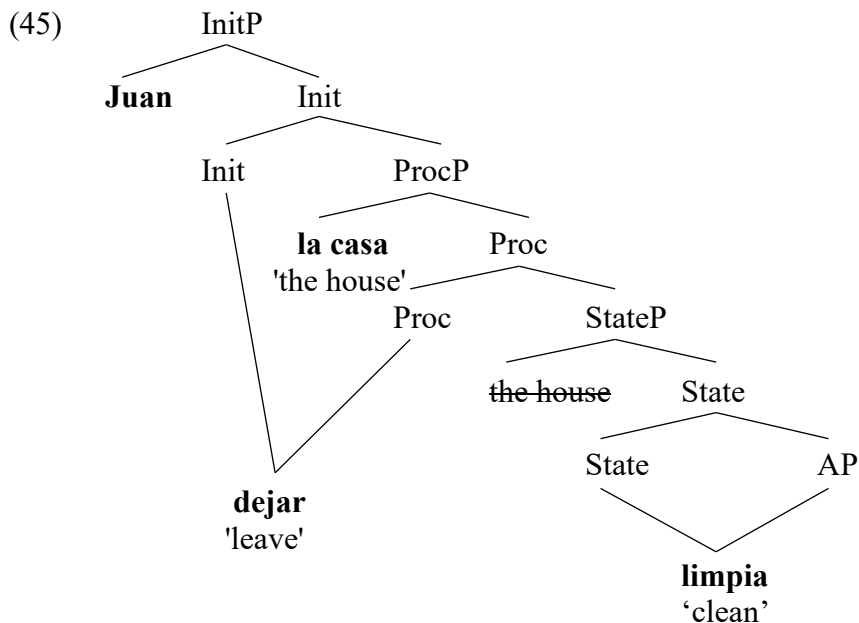
i. Given what we have said, in a sequence (Init-)Proc-Res the structure of *dejar* and *quedar* only leaves ResP for the perfective adjective or participle to fill:



- ii. Perfective adjectives are adjectives which spell out State(Res)+AP; that is, they always correspond to the lowest layer of a change of state verb.
- iii. Other verbs need to use a Participle to fit inside the lowest layer of the structure, in order to lexicalise State(Res)P, because the participle involves merging StateP with the verb.
- iv. When the perfective adjective is available for a particular root, the set State+Predicate is spelled out by the perfective adjective, and the participle does not emerge.

*4.1. The lexicalisation of the structure with the perfective adjective vs. the lexicalisation of the structure with a regular adjective*

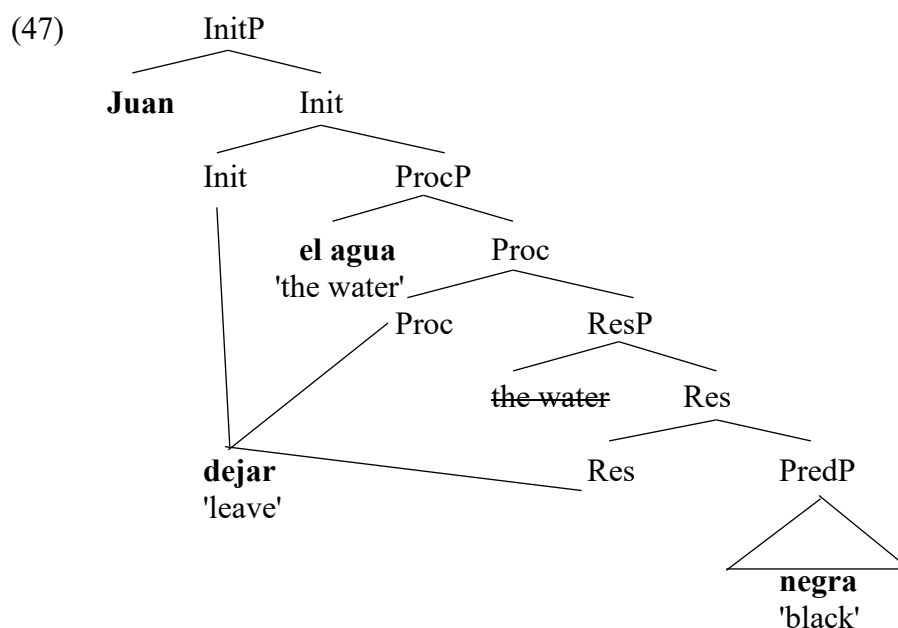
Let us first see the lexicalisation procedure with a perfective adjective and a regular adjective. (45) repeats the tree for a perfective adjective:



Essentially, this means letting the ResP layer in the verbal complex be spelled out by the perfective adjective, something that can be done given the material associated to such adjectives.

- (46) [Init [Proc UNDERGOER [Res [AP]]]]  
 [*dejó la casa [ limpia ]*]

A regular adjective is introduced as a PredP, as in (47).



As the adjective does not contain Res (=State), the verb is not underassociated.

#### 4.2. The participle

We are now in a position to explain why (48) is impossible if the root also has a perfective adjective associated to it.

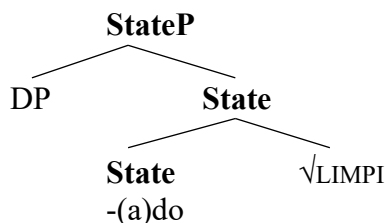
- (48) \*Juan dejó limpiada la habitación.  
 Juan left cleaned the room

At this point we must discuss the structure of the participle that appears under *dejar* and *quedarse*. The central claim here is the relatively uncontroversial proposal that the participle morphology (regularly *-do*, '-ed') is the spell out of StateP. Embick (2004) associates the participial morphology to an aspectual head, which in the absence of more specific information, is interpreted by default as a state; this is the same for Embick's resultative and stative participles, which are distinguished only by virtue of the material embedded under AspP. Kratzer (2000) also associates the identification of a state to the participial morphology, which is added to the base in the case of result participles and which is extracted from the verbal base in the case of

target states. The identification of a state is always possible as an interpretation of past participles in Spanish.

Our claim is that the relevant participle for the structures under *dejar* and *quedar* has the structure in (49). We will get back to other possible participial structures in §4.4., and to the problem of why other participial structures are impossible with these verbs in §5.2.

(49)

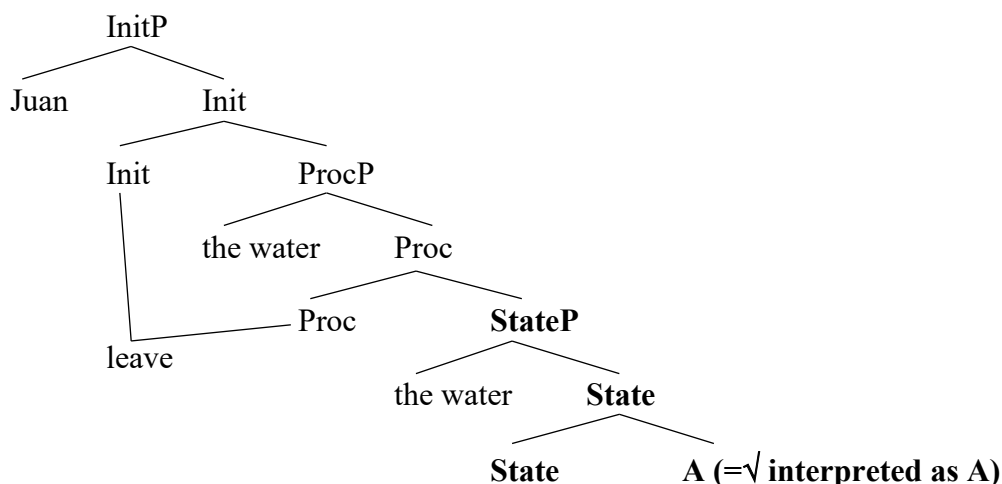


That is, we claim that in the relevant participles the state projection immediately selects a root. We take roots to be category-less objects that receive a semantic and categorial interpretation in the context of functional projections (Marantz 1997; Arad 2003; Borer 2013). Specifically, we claim that the StateP has the effect of forcing a property interpretation of the root, which therefore becomes contextually equivalent to an adjective A.

(50) State<sup>0</sup> is a lexical functor that forces the interpretation of a selected root as a set of properties.

With this background in mind, we have a direct explanation of why the perfective adjective makes the participle unavailable here. The idea is that both the participle and the perfective adjective spell out the same syntactic material. However, the perfective adjective does it using only one exponent, while the participle uses two. The point of conflict refers to the spell out of the material bolded in (51).

(51)



Our proposal, then, is that syntactically (51) could be filled by the participle, but during spell out, using one single exponent (*limpi(o)*, 'clean') beats using two exponents (*limpi(a)*, *-do*). This is, then, an instance of Lexical Economy as the one identified by Lundquist (2009: 70):



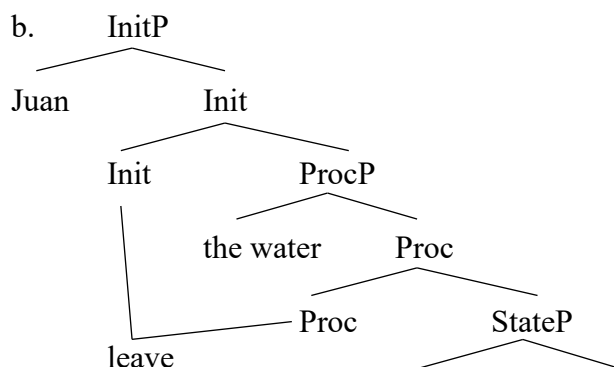
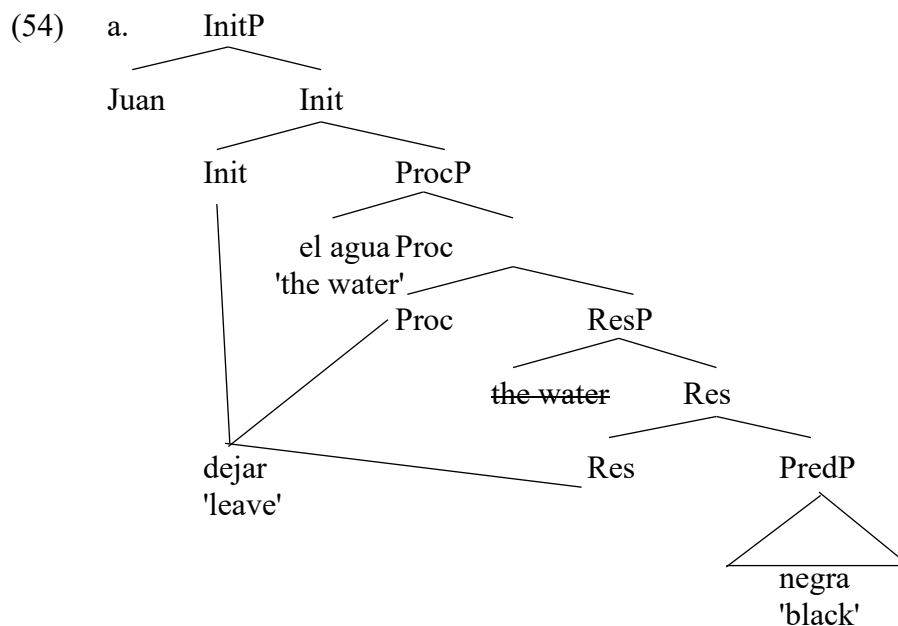
- (52) Lexical economy  
Do not insert a morpheme unless it is necessary

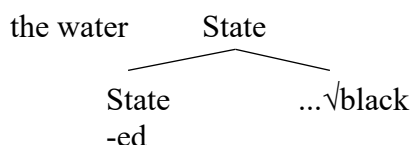
This leads to instances of 'phrasal blocking' where –as in (51)– when two sets of nodes are equivalent, a spell out procedure that introduces only one morpheme blocks a spell out procedure where at least two morphemes are required.

Let us now see why the existence of a regular adjective does not block the insertion of a participle derived from the same root.

- (53) a. Juan dejó el agua negra.  
Juan LEFT the water black  
b. Juan dejó el agua ennegrecida.  
Juan LEFT the water blackened

The reason is that in each one of these two cases we have different structures below ProcP, so the spell out involving the participle is not competing with the spell out involving the single exponent for the adjective. (54a) corresponds to (53a), and (54b), to (53b).





Additionally, the adjective below StateP in (54a) will contain at the very least a categorising verbal projection, spelled out overtly or as zero. This projection, which is unnecessary in the case of perfective adjectives because they already incorporate a verbal head, would be an additional difference with respect to the bare adjective structure. The competition would then be avoided also in this sense.

Our account makes, additionally, a very specific prediction. As the unavailability of the participle is due to a principle of Lexical Economy under structure identity, we predict that as soon as there is no complete morphological identity between the perfective adjective and the verb, Lundquist Blocking will not apply. The reason is that *limpio* prevents insertion of *limpiado* simply because both *limpio* and *limpiado* spell out the same subset of the structure associated to the verb *limpiar* 'to clean'. If the perfective adjective stem contains morphology that the verb does not contain, the competition dissolves, because then the participle and the adjective will not correspond to the same structure. This prediction is borne out: whenever the so-called perfective adjective involves the addition of a morpheme that is not present in the verb, there is no blocking effect. (55) shows that the perfective adjective (55a) contains at least one morpheme (-t-) which the verb lacks (55b), making the participle also lack it (55c); (56) illustrates the same for another verb.

- (55) a. absor-t-o 'absorbed'
- b. absorb-e 'absorb'
- c. absorb-i-d-o 'absorbed'
- (56) a. pre-s-o 'captive'
- b. prend-e 'captivate'
- c. prend-i-do 'captivated'

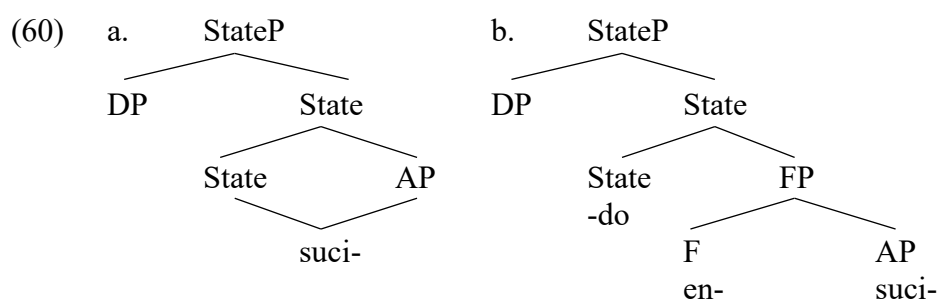
As we predict, in the relevant context the forms in (55a, 56a) do not block those in (55c, 56c).

- (57) a. Lo dejó absorto.  
         him left absorbed  
         'He left him in awe'
- b. La experiencia *lo dejó absorbido* en la estética dinámica y llena de vitalidad  
         the experience him left absorbed in the esthetic dynamic and full of life  
         de esta forma artística [Blog, 10.04.2010]  
         of this form artistic  
         'That experience left him in awe with the dynamic and full of vitality esthetic  
         of this artistic form'.
- (58) a. Juan dejó a Bárcenas preso.  
         Juan left ACC Bárcenas captive
- b. Juan dejó a Bárcenas prendido.  
         Juan left ACC Bárcenas captivated

When the complements of ProcP do not have identical internal structures, there is no blocking, even if their meaning is in principle identical. This applies also to cases where the established verb derived from the root adds prefixes or other material. Consider the following case:

- (59) a. suci-o ‘dirty’  
 b. en-suci-a ‘to make dirty’

Unlike the case with other perfective adjectives, the one in (59a) becomes a verb by addition of an additional morpheme, a prefix *en-*. While it is unclear what the function of this prefix is, any non-lexicalist approach that does not give up a direct communication between syntax and spell out must treat it as a separate node. The consequence is that, then, the internal structure of the participle and the perfective adjective would not be identical:



Then, the two forms in (60), exceptionally for perfective adjectives, should not block each other. This is confirmed:

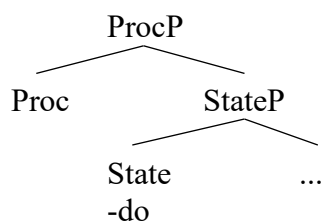
- (61) a. cuando fui a pagar, la mesera SE LIMPIÓ LAS MANOS CON MI PANTALÓN, me dejó *ensuciado* y cuando le reclamé simplemente se rió. *trouser, me.acc left dirty-ed and when her.dat I.demanded simply SE laughed* ‘When I was going to pay, the waitress cleaned her hands on my trousers, she left me dirty and when I demanded an explanation she just laughed’
- b. El sida es una enfermedad terrible y *dejó ensuciada* para siempre la imagen del varón homosexual como enfermo *image of-the man homosexual as sick* ‘AIDS is a terrible disease and it left dirty for ever the image of the homosexual man as a sick person’

#### 4.4. The height of StateP

The informed reader might have noticed that our proposal crucially claims that inside the *dejar/quedar* construction the participle is smaller than the whole verbal structure: it spells out a proper subconstituent of a verb, which is identical to the material that the perfective adjective, alone, spells out. We thus run the risk of falling in a well-known lexical paradox, the one of proposing that the verb is (semantico-syntactically) built from the participle at the same time that it seems that the participle is (morphologically) built from the verb. Can we escape this paradox?

Our proposal is to treat StateP as a head which can be placed in two different structural domains, giving slightly different interpretations that, however, share a common core. It can be placed in the event domain (First Phase), where it is interpreted, configurationally, as Init or Res (as Ramchand 2008 proposes). However, it can also be placed outside the verbal phrase, where external aspect, mood and tense are defined, in which case it builds a stative interpretation over the Aktionsart defined by the event domain.

(62) StateP inside the first phase (=ResP)

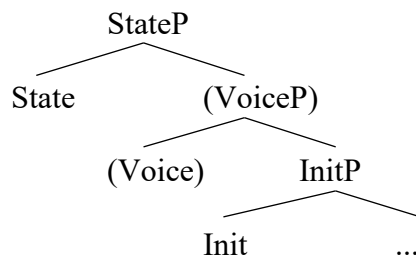


Inside the first phase, StateP contributes to the Aktionsart of the predicate, getting interpreted as a ResP. It is therefore, restricted to only telic verbs, as witnessed by (63):

- (63) a. \*Dejó a María odiada.  
 left ACC María hated  
 b. \*Dejó el coche conducido.  
 left the car driven

In contrast, (64) represents the situation where StateP is introduced outside the first phase:

(64) StateP outside the first phase:



In this configuration, State contributes to external aspect, and it is allowed by all kinds of predicates, even if its specific interpretation (continuous, perfective...) is sensitive to the Aktionsart:

- (65) a. Ha odiado  
 has hated

- b. Ha conducido  
has driven

If this is true, then we expect (correctly) to have multiple participles: the presence of one does not prevent the presence of another one inside the same predicate. In (66), the first participle is a manifestation of external aspect, outside the first phase, and the second participle is a manifestation of ResP.

- (66) Ha dejado **destrozada** la habitación.  
has left destroy-ed the room

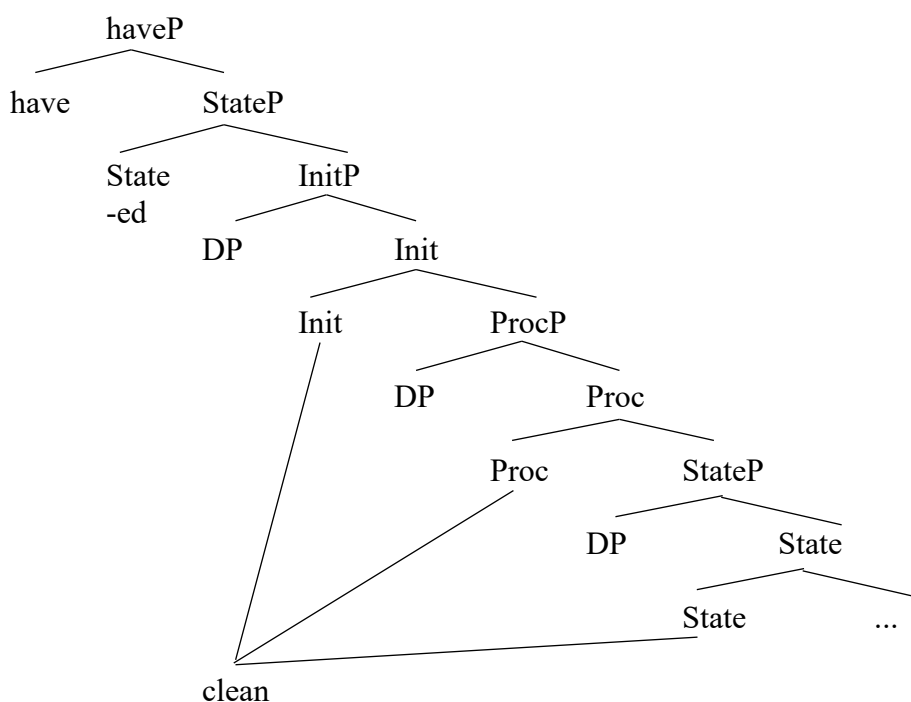
In a sense, what we are saying is a version of the (already old) idea that participial morphology can be introduced at different levels of the verbal structure (Alexiadou & Anagnostopoulou 2008, Emonds 2006, Embick 2004, Gehrke 2013, McIntyre 2013, Bruening 2014, Bosque 2014).

This automatically explains why the perfective adjectives cannot appear in auxiliary configurations such as (65):

- (67) \*Ha limpio.  
has clean

The reason is that the StateP they spell out is located within the first phase, while the perfect tense in (67) belongs to the domain of external aspect, and therefore must be merged above all the verbal projections (Init, Proc, Res). (67) involves a high participle, where first the whole verbal complex has been build, and then a second StateP has been merged above InitP (68); therefore, this structure is correctly predicted not to be blocked by the existence of a perfective adjective.

- (68) Ha limpiado  
has cleaned



## 5. *Estar* + participle

Given that we have the same projection, StateP (spelled out as participial morphology), that can appear in different positions, we are now able to explain why with *estar* the existence of a perfective adjective does not completely block a participle.

- (69) a. La mesa está limpia.  
the table is clean  
b. La mesa está limpi-a-da  
the table is clean-ThV-ed

### 5.1. A meaning difference that reflects a structural difference

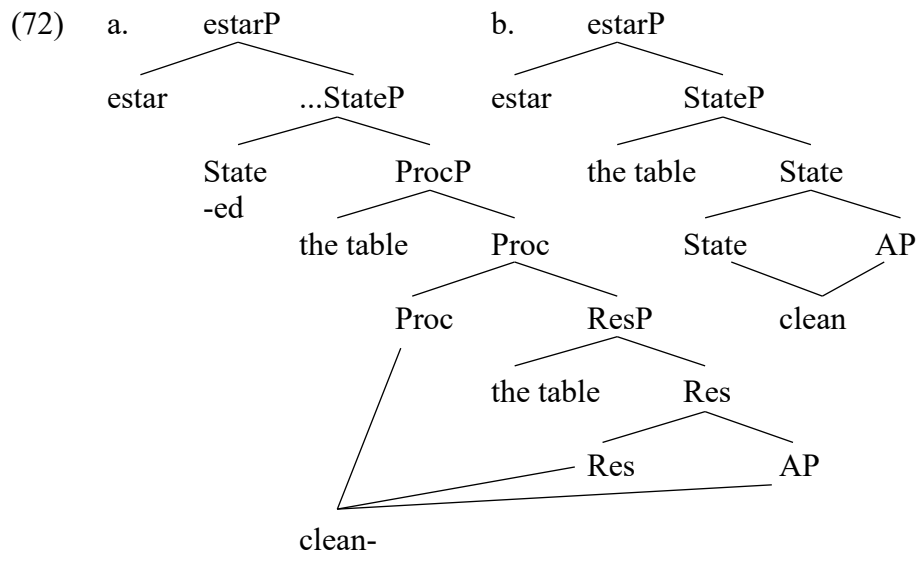
Necessarily (69b) involves a change of state: it entails an action of cleaning. In (69a) it is possible to infer that the table has never been dirty, and still is clean. There are many other examples that are not blocked by a perfective adjective, and they are all associated to the interpretation that the participle entails a previous action, not just a state.

- (70) a. Y mucho más cuando esa política, repito, *está vaciada* de ideología.  
and much more when that policy, I repeat, is emptied of ideology  
b. estos vacíos *están llenados* por las moléculas  
these gaps are filled by the molecules  
c. si usted no *está contentada* con el servicio que le han ofrecido puede  
*if you not are contented with the service that you have offered you can*  
inte[rp]oner una reclamación  
*present a complaint*  
'If you are not pleased with the service they offered you, you can present a complaint'  
d. es un inculto que no sabe escribir y *está molesto*  
he.is uncultivated that not know to write and he is annoyed

Necessarily involving that process, StateP must be above at least the head ProcP in such cases. It might even be that they include a layer where an external agent is introduced: in (71a) one can imagine that the person got naked himself, but in (71b) it is necessarily another person that has got him naked.

- (71) a. Pedro está desnudo.  
Pedro is naked  
b. Pedro está desnud-a-do  
Pedro is naked-ThV-ed

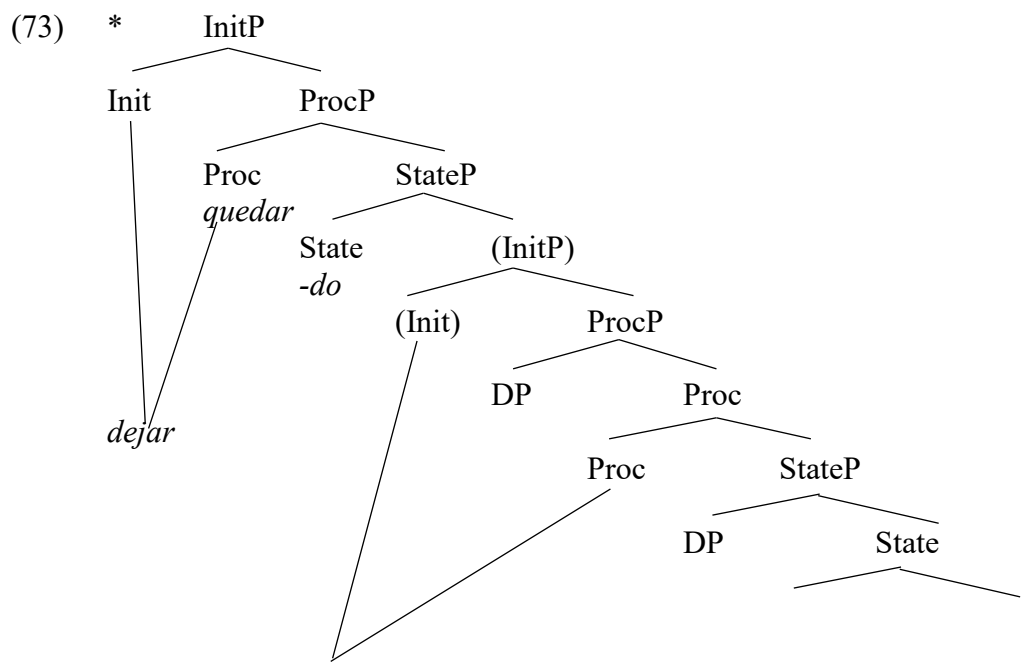
But with or without InitP, the structure embedded below the StateP goes beyond ResP. Thus, there is no blocking between the perfective adjective and the participle because the two structures are not identical.



5.2. Why high participles are impossible within *dejar* / *quedar*?

The question we have to answer now is why the structure embedded under *estar* in (72a) cannot appear below *dejar* / *quedar*. If that was the case, we should expect participles with a particular reading to be allowed there.

Our explanation for this has to do with the conditions that underassociation imposes on the main verb. Remember that in both participial and perfective adjective contexts, the layer interpreted as result is spelled out by the complement of the verb, which forces identification between the conceptual contents of complement and main verb. The relevant structure to consider is (73), which we claim to be ungrammatical.





Here there are two sequences Init-Proc-Res; the participle displays one, and the verb displays a second set. We contend that this makes conceptual identification impossible, because that forces the creation of a macro-event where the two events are identified with each other. The participial structure here does not simply denote a state, which could be identified with the result of the first verb, but a state resulting from second event. This makes it impossible, we argue, to identify both constituents, and consequently underassociation will not be licensed.

## 6. Conclusions

In this article we have explored the nature of perfective adjectives, providing a formal analysis of the intuition that they, unlike regular adjectives, denote states. Denoting states, we argued, means that they spell out as part of the adjectival root a StateP, which means that they (i) do not need a verbaliser to produce verbs; (ii) they are able to license temporoaspectual modifiers and absolute constructions and (iii) they block the spell out as a small participial form. Whenever the participial spell out is available with these roots, it corresponds to a big participial structure where StateP is merged outside the verbal phase, and it is therefore associated to distinct readings. This big participial structure is not available under *dejar / quedar*, because it makes identification in underassociation contexts impossible, leading to a complete rejection of participles in such contexts. *Estar* allows both structures, albeit with distinct interpretations.

This article, of course, has not examined all contexts where perfective adjectives interact with participles in Spanish; there are contexts such as those in (74) that have not been examined here, where the participle seems to block the perfective adjective.

- (74) a. Juan lleva tres casas limpiadas.  
       Juan carries three houses cleaned  
       'Juan has already cleaned three houses'  
       b. \*Juan lleva tres casas limpias.  
       Juan carries three houses clean  
       Intended: 'Juan has already three houses that are clean'

However, we hope to at least have argued convincingly for this particular approach to perfective adjectives and participles in the study of this fragment of the grammar of Spanish. Further research will tell whether the tools presented here can successfully be extended to the rest of empirical cases in Spanish and beyond.

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