

THE ASPECTUAL STRUCTURE OF THE ADJECTIVE: SPANISH *SER* AND *ESTAR*

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Abstract

This paper argues that the stage-level and individual-level distinctions for adjectival predicates, diagnosed in Spanish by the copulas *ser* and *estar*, can be derived by positing a sortal distinction in the temporal arguments in the syntax: the temporal argument of individual-level adjectives denotes time intervals, whereas the time argument of stage-level adjectives denotes time instants. We provide evidence from the (un-)acceptability of certain temporal modifiers, the progressive, and lifetime effects. We furthermore show how our account can also explain other instances of the *ser* and *estar* distribution beyond adjectives, such as verbal and adjectival passives and locative constructions with and without eventive subjects.

Keywords: *ser*, *estar*, copulas, adjectives, aspect, gradability, time arguments.

1. Introduction

The Spanish copula system is very well-studied. Predicative adjectives take either *ser* or *estar*, both translatable as ‘to be’ in English. Some adjectives such as *esquimal* ‘eskimo’ can only appear with *ser* (1a), others such as *lleno* ‘full’ can only appear with *estar* (1b), and yet others such as *alto* ‘tall’, *delgado* ‘thin’ and *alegre* ‘happy’ can appear with both the copulas (1c).

- (1) a. Pedro {es/ *está} esquimal.
Pedro i_{SER} i_{ESTAR} eskimo
‘Pedro is an eskimo.’
b. El restaurante {*es / está} lleno.
the restaurant i_{SER} i_{ESTAR} full
‘The restaurant is full.’
c. Juan {es / está} alto/ delgado/ alegre.
Juan i_{SER} i_{ESTAR} tall/ thin/ happy
‘Juan is tall/thin/happy.’

There have been different accounts to explain the copula alternation. These accounts can be broadly classified into two: aspectual analyses and gradability-based analyses. The most popular approaches to the *ser* and *estar* distinction are aspect-based (Luján 1981; Marín 2000; Arche 2006; Camacho 2012, a.o.). All analyses assume the temporal organization or contour of *ser* and *estar* predicates with adjectives is different in each case. These approaches have proposed that the alternation between *ser* and *estar* has to do with the Individual-Level (I-L) versus Stage-Level (S-L) distinction originally proposed by Carlson (1977) (Fernández-Leborans 1999; Arche 2006; Escandell and Leonetti 2012, a.o.). Adjectives that appear with *ser* are individual level predicates (I-L) as they predicate of the individual (they classify the individual), whereas those that take *estar*

are stage level predicates (S-L) as they predicate of a spatio-temporal slice of the individual (i.e. they talk about an episode, permanent or not, in an individual's life). On the contrary, gradability-based analyses propose that the *ser/ estar* alternation in Spanish is a reflex of the relative vs. absolute distinction for gradable adjectives (Gumiel, Moreno, and Pérez 2015).

This paper deals with this copular alternation in Spanish with the goal to answer this question: How can we capture the systematic distinction between *ser* and *estar*? We begin by assessing previous accounts, particularly the recent gradability-based approach by Gumiel, Moreno, and Pérez (2015) to *ser* and *estar*. We provide novel data which poses problems for gradability-based approaches. We instead show that the *ser* and *estar* distinction is best captured by an aspect-based approach. We will also present a new account for *ser* and *estar*, framed in the temporal syntax framework of Demirdache and Uribe-Etxebarria (2000 et seq.).

2. Gradability-based approaches

Recent theories have proposed a distinction between the copulas based on gradability, a tenet of adjectives. There are three types of gradable adjectives: relative adjectives, absolute adjectives with maximum standards, and absolute adjectives that only have minimum standards (Kennedy and McNally 2010, Kennedy 2007). All gradable adjectives have positive forms that reference a standard – a degree on the relevant scale – that has been reached or exceeded. For instance, to be long is to have length that is at least as much as some generally agreed-on standard (e.g., 2 pages for a poem, 300 pages for a thesis). The distinction among the different types of adjectives has to do with how the standard is determined. Relative adjectives (*wide, long, expensive, pretty*) have standards that are set purely contextually, while absolute adjectives (*wet, dry, full*) have default conventional standards that can be shifted contextually. The default standard can be the minimum degree on the scale (*wet*), or the maximum degree on the scale (*dry, full*), allowing for contextual modification (e.g., *full but not completely full*).

Gradability-based analyses propose that the *ser/ estar* alternation in Spanish is a reflex of the relative versus absolute distinction for gradable adjectives (Gumiel, Moreno, and Pérez 2015). Relative and non-gradable adjectives¹ introduce a between-individuals comparison class and select *ser* (eg. (2a)). Absolute adjectives introduce a within-individuals comparison class and select *estar* (eg. (2b)) (Toledo and Sassoon 2011). With an overt *for*-phrase indicating a between-individuals standard of comparison (basketball players, in this case), *ser* is selected, whereas (2b), which has a within-individuals standard of comparison (in different stages of its existence), *estar* is selected.

- (2) a. {Soy / #estoy} bajo para ser jugador de baloncesto. Between-individuals → *ser*
 am_{SER} am_{ESTAR} short for be player of basketball
 ‘I am short for being a basketball-player.’
- b. {*Soy / estoy} delgada para ser yo. Within-individuals → *estar*
 am_{SER} am_{ESTAR} thin for be I
 ‘I am/ look thin for being me.’
- (From Gumiel, Moreno, and Pérez: 980)

¹ Note that in Gumiel, Moreno, and Pérez's (2015) proposal, non-gradable adjectives are proposed to be nouns in disguise following Fábregas (2007).

For non-gradable, classificatory adjectives, they argue that these adjectives only appear with *ser* (eg. (3)), whereas perfective/participial adjectives only take *estar* (eg. (4)).

(3) Esta revista {es / *está} semanal.
 this magazine is_{SER} is_{ESTAR} weekly
 ‘This magazine is weekly.’

(4) La puerta {*es / está} cerrada.
 the door is_{SER} is_{ESTAR} closed
 ‘The door is closed.’

Thus, the alternation between the two copulas is explained as a result of the different comparison classes chosen by Spanish adjectives.

2.1 Merits and problems for the gradability account

In this section, we first summarize Gumiel, Moreno, and Pérez’s (2015) account of *ser/estar* based on gradability. We then proceed to identify the merits of the account, as well as point out some empirical issues with their account.

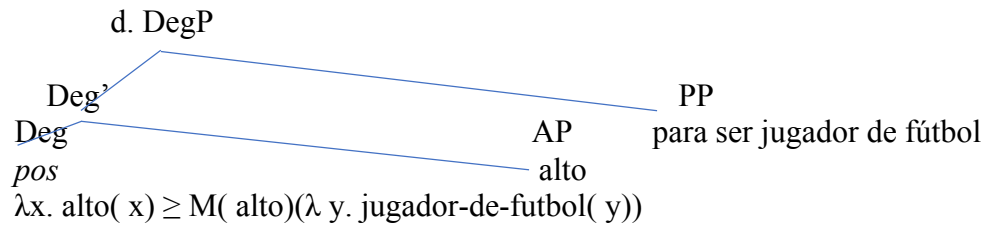
In classic gradability approaches to adjectives, the relative/absolute distinction is an inherent lexical property of the adjective, as discussed earlier in Section 2. Gumiel, Moreno, and Pérez diverge from this view by showing that adjectives can receive either a relative interpretation or an absolute interpretation on the basis of the comparison class in their structure. In their account, the degree morpheme *pos*, syntactically generated as the head of the DegP in the extended projection of the adjective and commonly assumed in degree-based accounts of adjectives, introduces the type of comparison class. The meaning of the degree morpheme is shown in (5).

(5) $[[_{\text{deg}}pos]] = \lambda g.\lambda P.\lambda x. g(x) \geq M(g)(P)$

Unlike standard accounts of comparison class (Kennedy 2007, Toledo and Sasson 2011), Gumiel, Moreno, and Pérez (2015), similar to Fults (2006), show that the comparison class does not act as a domain restrictor of the gradable property. Instead, the comparison class is the second argument of the *M* function, which sets the standard degree, introduced by the *pos*. The *for*-phrase in English or *para* in Spanish introduces the comparison class. This is illustrated from example (54) from Gumiel, Moreno, and Pérez (2015).

(6) a. Alto para ser jugador de fútbol
 tall for be player of soccer
 ‘tall for a soccer player’
 b. $\lambda x. \text{alto}(x) \geq M(\text{alto})(\lambda y. \text{jugador-de-futbol}(y))$

- c. The property of being tall to a degree equal to or greater than the standard degree of being tall in the class of soccer players.



The comparison class introduced by *pos* is a set of individuals. Thus, the height in (6a) is compared to the standard height for the members of the class of soccer players. When *pos* is intensionally defined, stages are counterparts and act as a within-individuals comparison class. In Gumiel, Moreno, and Pérez's account, *ser* and *estar* are analyzed as verbalizers of predications (PredP) that can attribute different properties to subjects. The difference between the two copulas is in the type of PredP they select as a complement. In the case of *ser*, the PredP does not contain stages of the subject, whereas in the case of *estar*, the PredP contains stages of the subject of predication.

A gradability-based account for *ser/estar* such as that put forth in Gumiel, Moreno, and Pérez's (2015) is appealing since it relies on independently well-studied properties of the adjective. The authors' generalization that *ser* does not have a within-individual comparison class is on the right track. The authors also argue that absolute adjectives introduce a within-individuals comparison class and select *estar* (cf. Toledo and Sassoon 2011), as illustrated earlier in (2). Upon closer inspection, however, this generalization does not seem tenable. First, it is not true that *estar* bars between-individual comparison readings (cf. (7)):

- (7) a. El niño está muy moreno para ser un niño albino.²

² An anonymous reviewer asks whether the sentence in (7a) introduces a between-individuals comparison, noting that it can also take *ser*, as in (i).

- (i) El niño es muy moreno para ser un niño albino.
 the kid _{IS_{SER}} very tanned for being a kid albino

While the reviewer is right in that both copulas are possible, we crucially claim that the availability of a between-individuals comparison reading is independent of copula choice. What sets apart the *estar* version from the *ser* version is that the former also introduces a within-individuals comparison reading, i.e. (7a) really means that the albino kid is very tan in comparison to how you would expect other albino kids to be in the same situation. Note that if we further modify the by-phrase in (7a) so that it forces a stage reading, i.e. a within-individual comparison, only *estar* is possible (e.g. (ii)).

- (ii) El niño {*es/ está} muy moreno para ser un niño albino que lleva dos días
 the kid _{IS_{SER} IS_{ESTAR}} very tanned for being a kid albino who spends two days
 al sol.
 at.the sun

'The kid is very tanned for being an albino kid who has been in the sun for two days.'

the kid *is_{ESTAR}* very tanned for being a kid albino

‘The kid is very tanned for being an Albino kid.’

Reading: This kid is very tanned right now compared to other kids who are albino.

NOT: This kid is very tanned compared to other times.

b. El restaurante *está* muy lleno para ser un restaurante de carretera.³

the restaurant is very full for being a restaurant of road

‘The restaurant is very full for being a roadside restaurant.’

Reading: This restaurant is very crowded right now compared to other restaurants of the same type.

NOT: This restaurant is very crowded compared to other times.

As these examples show, the *for*-phrase selects a between-individual comparison class. Furthermore, non-gradable classificatory adjectives may appear with *estar*, contra Gumiel, Moreno, and Pérez. In (8a), the adjective *rojo* ‘red’ classifies the light, rather than providing a gradable property for it, i.e. the light is either red or it is not, without shades of red in-between. Similarly, *negra* “black” in (8b) does not function as a gradable adjective (i.e. different shades of black), but as a classificatory adjective that describes a screen that is not working for some reason.

(8) a. El semáforo {**es* / *está*} rojo (under the relevant “red light” reading)⁴

the traffic-light *is_{SER}* *is_{ESTAR}* red

‘The traffic-light is red.’

b. La pantalla {**es* / *está*} negra (under the “dysfunctional screen” reading)

This shows, non-trivially, that both between-individuals and within-individuals comparison readings can co-occur with *estar*, whereas the latter are not possible with *ser*. This co-occurrence is predicted by our proposal in Section 3, but not by Gumiel, Moreno, and Pérez (2015).

³ Gumiel, Moreno, and Pérez (2015) suggest that so-called perfective adjectives like *lleno* “full”, *cerrado* “closed” and so on can only have a within-individuals reading because, since they are derived from verbs, their meaning is eventive, rather than scalar. Hence, they only take *estar*. However, (7b) shows that even adjectives that require *estar* can have a between-individuals comparison reading. An exception is a subset of perfective adjectives which are not gradable (e.g. (iii)), and hence they cannot have any comparison reading.

(iii) María *está* ya (*un poco/ *muy) electa.

María *is_{ESTAR}* already a little very elect

‘María is already (*a little/ *very) elect.’

⁴ An anonymous reviewer rightly points out that (8a) does not mean that all the traffic light is red (i.e. the whole structure of the traffic light), but only the light bulbs. Adscribing a property to the whole of an entity when only a salient part thereof possesses it is nonetheless a common phenomenon in natural language (e.g. we can talk about a *charred steak* even if parts of it are not charred or even undercooked). The reviewer also notes for (8a) that the preposition *en* “in” can optionally appear before the adjective (i.e. *El semáforo está en rojo*). We do not have an explanation for that at the moment and so we will leave the issue aside, but noting that the preposition *en* cannot be inserted in other contexts with non-gradable adjectives, such as in (8b) (i.e. *La pantalla está (*en) negro*).

the screen is_{SER} is_{ESTAR} black
‘The screen is black.’

Additional evidence that the comparison class of the adjective cannot tease apart the *ser/estar* distinction comes from gradable color adjectives. These types of adjectives do not always have comparison classes, because many entities are not associated with a particular color (Graff 2000). For instance, we have a notion of what it means for a book to be long or short, or big or small, because after having seen many books in our life we have an idea of what the typical length or size of a book is. However, books come in many different colors, so that we do not have a typical color (or shade of a color) associated with them. That is why the sentence in (9a) does not accept pragmatically a *for*-PP introducing a comparison class. Similarly, greyness is not a typical property of the sky, since it can acquire many different hues (black, blue, orange, yellow...), and so the *for*-PP is equally out in (9b). Crucially, (9a) takes *ser* and (9b) takes *estar*, which further weakens the claim that comparison classes play a determining role in the copular alternation.

- (9) a. Este libro es muy azul (#para ser un libro)
this book is_{SER} very blue for being a book
‘#This book is very blue for being a book.’
b. El cielo está muy gris (#para ser el cielo)
the sky is_{ESTAR}very gray for being the sky
‘#The sky is very gray for being the sky.’

These findings are summarized below in (10). The gradability account does not predict a between-individuals reading for *estar*, or the use of *estar* for non-gradable classificatory adjectives.

(10) Table 1. *Ser, estar* and the gradability properties of the adjective

	Within-individuals reading	Between-individuals reading	Non-gradable adjectives	No comparison class
<i>ser</i>	NO	YES	YES	YES
<i>estar</i>	YES	YES	YES	YES

To sum up, *ser* and *estar* seem to work in a manner that is independent of the gradability properties or the comparison class of the adjectives they select (the only restriction is the within-individuals reading for *ser*, which we discuss in Section 7).

In what follows, we will pursue an aspect-based analysis to *ser* and *estar*. We will show that not only can our account capture the facts in Table 1, but it can also capture other instances of the *ser/estar* alternation in other constructions that do not involve adjectival predicates, such as passives and locatives.

3. Analysis

In the previous section, we presented arguments that pose problems for a gradability account of *ser* and *estar*. We present a new account of the behavior of the copulas by appealing to their aspectual properties. In order to do so, we will begin by showing what the distinction is not about. First, the distinction is not that of transitory versus permanence, as shown by (11).

- (11) a. Juan es amistoso (pero no lo era en el pasado).
Juan is_{SER} friendly but not it was_{SER} in the past
'Juan is friendly, but he didn't use to be.'
b. Pedro está muerto.
Pedro is_{ESTAR} dead
'Pedro is dead.'

It has also been shown that the distinction between the copulas is not that of perfective aspect versus imperfective aspect (eg. Luján 1981, Roby 2009, see Arche 2006 for a critique).

- (12) a. Juan {era/ fue} muy simpático.
Juan was_{SER.imperf} was_{SER.perf} very nice
'Juan was very nice.'
b. Carlos {estaba/ estuvo} muy delgado.
Carlos was_{ESTAR.imperf} was_{ESTAR.perf} very thin
'Carlos was very thin.'

The behavior of the copulas also cannot be captured by appealing to a telic (bound) versus atelic (unbound) distinction (eg. Marín 2000). As shown in (13), both the copulas are allowed.

- (13) *Pedro {es/ está} moreno en una hora.
Pedro is_{SER} is_{ESTAR} tan in an hour
'Pedro is tanned in an hour.'

In x time phrases are possible, but they refer to the time that goes by before the state starts to hold, not to a process before a result state (i.e. the adjective does not lexicalize a telic structure). Crucially, they are possible with both *ser* and *estar*.

- (14) a. Pedro estará fuerte en dos meses.
Pedro will.be_{ESTAR} strong in two months
'Pedro will be strong in two month.'
b. Pedro será americano en un año.
Pedro will.be_{SER} American in one year
'Pedro will be American in one year.' (i.e. when he obtains the citizenship)

Note also that by (14) it is hard to maintain Camacho's (2012) claim that the *ser/estar* distinction stems from an [+INCH(OATIVE)] feature that *estar* has but *ser* lacks, given that both can be

inchoative (i.e. have a beginning point). Moreover, both *ser* and *estar* predicates are anchored in time, i.e. they can be spatio-temporally located by tense and aspect operators, as shown in all the previous examples (8-9, and 11-12). Thus, the distinction cannot be captured by the presence or the absence of an extra event argument (contra Kratzer, 1995).

The most promising line of research, in our view, is the one based on the Individual versus Stage-level distinction, which we discussed in the introductory section. We proceed to present a specific account that formalizes the aspectual intuitions behind such proposals, namely that *estar* predicates are stages in an individual's existence whereas *ser* predicates denote classificatory properties of the individual, transient or not.

We propose that the difference between *ser* and *estar* predicates stems from the nature of the time arguments of the predicates they appear with. Our proposal, in a nutshell, is as follows:

- a. *Ser* is selected when the time argument denotes an interval (of an event or a state).
- b. *Estar* is selected when the time argument denotes a moment, i.e. a point in time.

3.1. The technical implementation

We propose to derive *estar*-predicates morphosyntactically from *ser*-predicates, similar to Gallego and Uriagereka (2011, 2016) and Zagona (2010). We adopt the framework developed in Demirdache and Uribe-Etxebarria (2000 et seq) that views T^0 and Asp^0 as predicates that order syntactically projected arguments that denote time intervals (ZeitPs), much like DPs denote individuals.

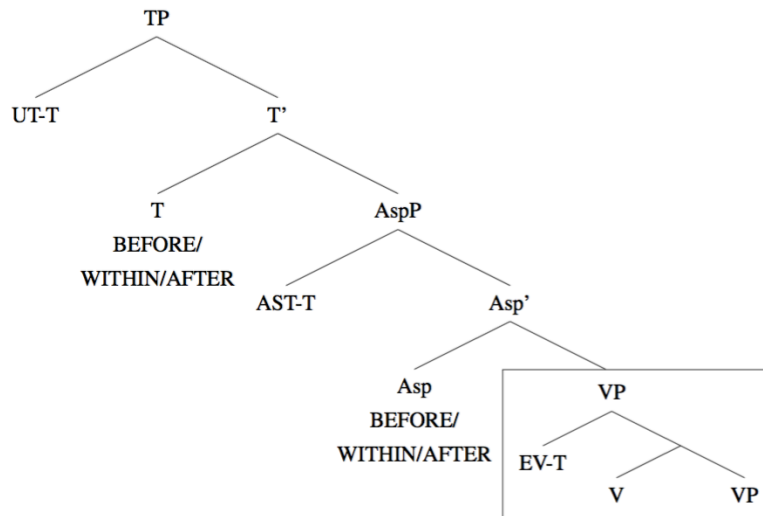
Demirdache and Uribe-Etxebarria (2000) assume three different event types. The first, Event Time (EV-T), is the time when the event occurs or holds. Assertion Time (AST-T), is the reference time for which the speaker makes an assertion with respect to the event, and the last event type, Utterance Time (UT-T), is the time when the sentence is uttered.

Tense and aspect order the ZeitPs as follows. Firstly, the tense orders the AST-T with respect to the UT-T. When UT-T is ordered *BEFORE* AST-T, we get *future* tense. When UT-T is ordered *WITHIN* AST-T (i.e. the AST-T contains the UT-T), the result is *present* tense and when UT-T is ordered *AFTER* AST-T, we get the *past* tense.

Aspect, in turn, orders the EV-T with respect to the AST-T with the same semantic primitives as Tense. When AST-T is *BEFORE* EV-T, the result is the *prospective* aspect. When AST-T is *WITHIN* EV-T, the result is the *progressive* aspect⁵. Lastly, when AST-T is ordered *AFTER* EV-T, we get the *retrospective* aspect. We provide a schema of their model in (14). The domain below Asp is highlighted since it is the one we will focus on.

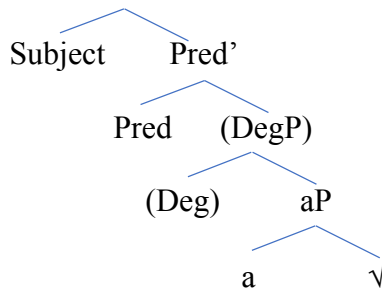
(15) T-Asp-V architecture in Demirdache and Uribe-Etxebarria

⁵ But see Section 4.1, where our analysis of the progressive differs from that of Demirdache and Uribe-Etxebarria (2000).



We follow Gumiel, Moreno, and Pérez (2015) and contra Toledo and Sassoon (2011) in assuming that gradable adjectives are not lexically treated as relative or absolute. This interpretation is built in the syntax. For adjectives, we assume a structure as in (16), consisting of an uncategorized root (Moltmann 2004, McNally 2011 a.o), an adjectivizer, aP, a DegP (when the adjective is gradable), and a PredP that introduces the subject of predication (cf. Baker 2003).

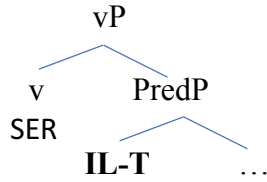
(16) PredP



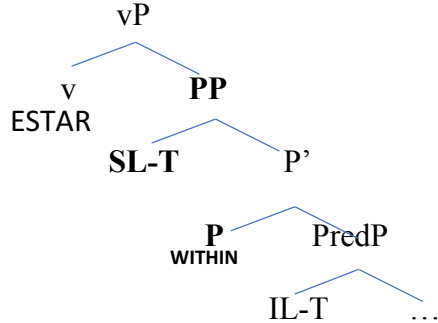
We argue that PredP introduces a ZeitP argument in their syntax, given that states are anchored in time. This is true both for *ser* and *estar* adjectives. *Estar*-adjectives, however, are selected for by an aspectual PP that introduces an extra Zeit-P (a Stage-Level time SL-T). This SL-T is not a time interval, but an instant or a moment in time (i.e. a point in time).⁶ Its head P has a WITHIN meaning, i.e. it locates the SL-T point as being part of the interval denoted by the ZeitP introduced by PredP, which we call IL-T (Individual-Level Time). This SL-T is later fed to T⁰ and Asp⁰, and this is what it means to be predicating of a stage in an individual's existence (understood as a moment in time) that is characterized by having a particular property. Having a SL-T argument is what makes a predicate Stage-Level. On the other hand, *ser*-adjectives only have a IL-T, which denotes the whole time interval in which the individual manifests a given property. The vP in copular sentences is meaningless, it only has a morpho-syntactic function. The different syntax is shown in (17a) and (17b).

⁶ This is partly inspired by Hallman (2015), who proposes that all states are predicates of moments in time, as opposed to intervals.

(17) a. *Ser* predicates



b. *Estar* predicates



This account, then, assumes that the temporal properties of the adjective are built syntactically, and in principle every adjective could take either predicate. However, we have seen examples in (1a) and (1b) that disconfirm this prediction. For adjectives that only take *ser* (e.g. *esquimal* “eskimo”), we assume that their lexical meaning disfavors a stage construction with *estar* (but see Section 5 for possible evidentiality-based coercion). Adjectives that only take *estar* are mostly perfective adjectives (e.g. *enfermo* “sick”, *cansado* “tired”), which denote a result state that is naturally conceptualized as a stage due to its complex eventive structure (Bosque 1990; Gumiel, Moreno and Pérez 2015).

4. Temporal evidence

In this section, we present the empirical evidence we adduce for our temporality-based proposal for *ser* and *estar*, and how it is captured by our analysis. We present evidence from the parallelism between the progressive and $\langle \textit{estar} + \textit{Adj} \rangle$ configurations as well as from the interpretational asymmetries with respect to lifetime effects.

4.1. The Progressive and $\langle \textit{estar} + \textit{Adj} \rangle$

The first piece of evidence we discuss is the progressive construction and its interaction with $\langle \textit{estar} + \textit{Adj} \rangle$. As is known, the progressive has been often analyzed as a stativizer (Vlach 1981, Parsons 1990, a.o.). Interestingly, the progressive in Spanish takes *estar*, not *ser*.

(18) Pedro {está/ *es} cantando.

Pedro is_{ESTAR} is_{SER} singing
'Pedro is singing.'

Inspired by our proposal in the preceding section, we could then think of the progressive as an operation that picks a point out of the time interval of an event, i.e. delivering a SL-T. We claim, in fact, that <estar + Adj> is the non-verbal predicate counterpart of <estar + V-ing>.⁷

There is empirical evidence that supports this view. For instance, <estar + Adj> and <estar + V-ing> pattern alike with respect to modification by the temporal adverbial *in this instant* 'right now' in the present, as (19a-b) show. Interestingly, although *ser* adjectives cannot take this modifier (e.g. (19c)), it becomes fine if the *ser* adjective appears in the progressive (e.g. (19c')).

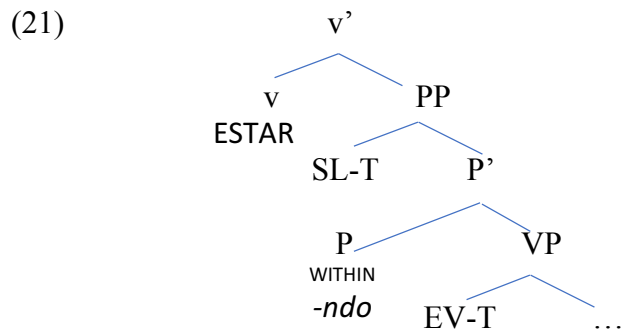
- (19) a. Pedro está enfermo en este instante
Pedro is_{ESTAR} sick right now
'Pedro is sick right now.'
b. Pedro está cantando ahora mismo
Pedro is_{ESTAR} singing right now
'Pedro is singing right now.'
c. ??Pedro es inteligente ahora mismo.
Pedro is_{SER} intelligent right now
'?? Pedro is intelligent right now.'
c'. Pedro está siendo inteligente ahora mismo.
Pedro is_{ESTAR} being intelligent right now
'Pedro is being intelligent right now.'

Furthermore, both *estar* adjectives and the progressive accept the Universal reading of the present perfect, i.e. with a *since*-adverbial denoting the beginning of the temporal span (the Perfect Time Span) which runs until reference time (Iatridou et al. 2001). This can be seen in (20a) and (20b), where *since this morning* denotes the beginning of the Perfect Time Span. As we can see in (20c), *ser* adjectives cannot yield Universal Perfects. Note that this is irrespective of whether the adjective denotes a permanent property of not: (20c) is out in the context where Carlos had a different nationality until this morning, when he became an American citizen.

- (20) a. Carlos ha estado nervioso desde esta mañana.
Carlos has been_{ESTAR} nervous since this morning
'Carlos has been nervous since this morning.'
b. Carlos ha estado cosiendo desde esta mañana.
Carlos has been_{ESTAR} sewing since this morning
'Carlos has been sewing since this morning.'
c. *Carlos ha sido americano desde esta mañana. (context: obtained citizenship)
Carlos has been_{SER} American since this morning
'Carlos has been American since this morning.'

⁷ See also Mateu (2002) for the claim that the progressive involves prepositional structure.

Our proposed structure for the progressive is thus as in (21).



4.2 Lifetime Effects

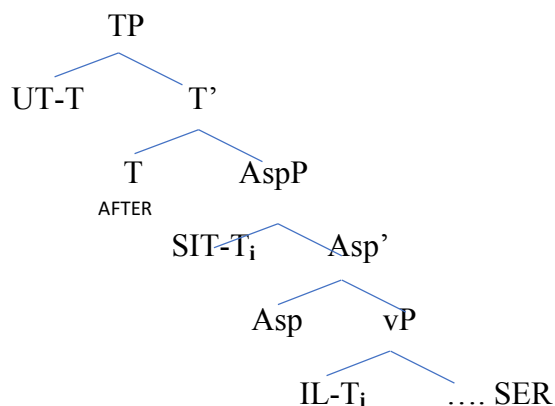
Another piece of evidence is the lifetime effects with *ser* and *estar*. Kratzer (1995) and others have observed that I-L predicates give rise to lifetime effects. In Spanish, these effects also arise when the copula is in the perfective past (also known as *pretérito* ‘preterite’ in traditional grammars). In (22a), with *ser*, there is the implication that María is no longer alive. However, in (22b) there is no such implication.

- (22) a. María fue española.
 María wa_{SER}.PERF Spanish
 ‘Maria was Spanish.’
 b. María estuvo delgada.
 María wa_{SER}. PERF thin
 ‘Maria was thin.’

The asymmetry in lifetime effects has an explanation in Demirdache & Uribe-Etxebarria’s system. They propose that in the perfective aspect, EV-T (for us, SL-T and IL-T) and SIT-T are coindexed, i.e. they denote the same time interval. The sentences in (22a) and (22b) have then the syntax in (23a) and (24a). Let us go over these one by one.

In (23a), perfect Asp coindexes the SIT-T with the IL-T. Therefore, when past T orders the SIT-T as being after the UT-T, it follows that the IL-T is also after the UT-T. In other words, the state denoted by the adjective temporally precedes the time of speech. If such state is understood as a permanent property of the individual (e.g. María being Spanish), then the implication is that the person no longer exists. This is how we derive the lifetime effect with *ser* predicates. We provide a schema of the temporal relations between the time arguments in (23b).

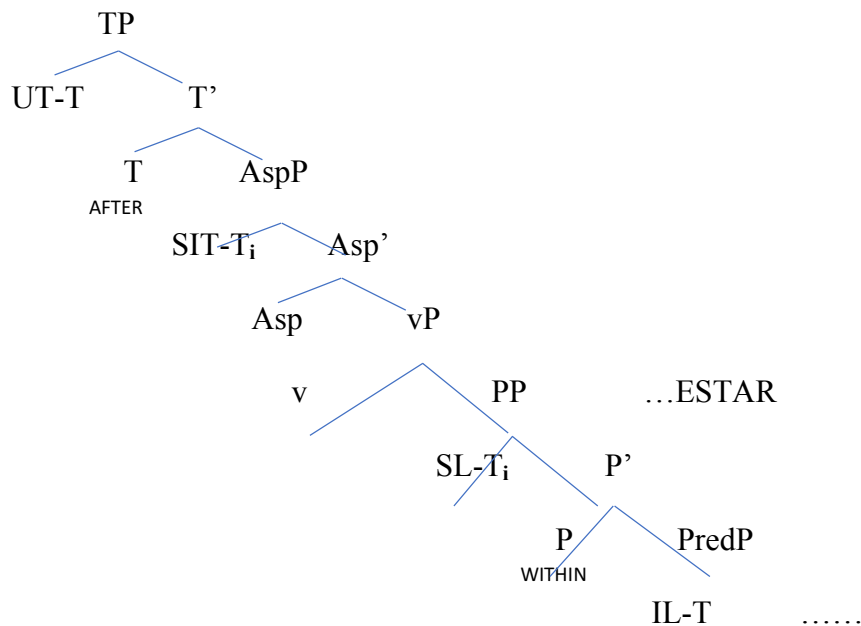
(23) a.



b. [-----IL-T=SIT-T-----][UT-T]

On the other hand, in (24a) it is not the IL-T that is coindexed with the SIT-T, but the SL-T, which, as we discussed, it is an instant retrieved from the IL-T. Hence, the SL-T is located by T as preceding the UT-T, but not the IL-T. Hence, it is not asserted that the IL-T takes place before the UT-T, but only a slice thereof (the SL-T). Therefore, it is possible that the IL-T continues during the UT-T. This is why lifetime effects do not arise with *estar* adjectives. Again, we provide the relevant temporal schema in (24b).

(24) a.



b. [-----IL-T-----[SL-T=SIT-T]-----]
→[UT-T]

5. Beyond adjectives: passives and locatives

Moving beyond adjectives, we can find at least two additional constructions that support our proposal that the *ser/estar* alternation is determined by the semantics of the time argument. We will see two contexts without adjectives in which *ser* takes time intervals (but in this case of dynamic events): passives and locatives.

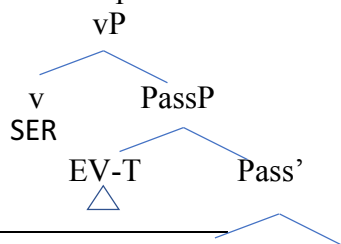
5.1. Stative and Eventive Passives

In Spanish, the so-called stative/adjectival passives take *estar* and eventive/verbal passives take *ser*, as shown in (25). The stative passive is said to focus on the result state of the eventuality, i.e. (25a) means that the city is in a state of destruction brought about by a previous event. The eventive passive, on the other hand, focuses on the process: (25b) denotes the action of destruction, rather than its result state.

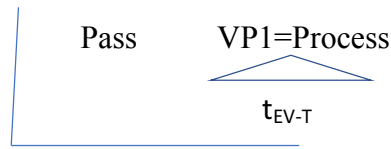
- | | | |
|------|--|--------------------|
| (25) | a. La ciudad está destruida.
the city is _{ESTAR} destroyed
'The city is destroyed.' | Adjectival passive |
| | b. La ciudad fue destruida.
the city was _{SER} destroyed
'The city was destroyed.' | Verbal passive |

Following our proposal in Section 4, we argue that *ser* appears with eventive passives because the verbal participle delivers the time interval of an event EV-T. That is, since eventive passives denote a process event, whose runtime is an interval, then *ser* must be selected. On the other hand, *estar* appears with stative passives because the participial adjective denotes a S-L adjective, and as such takes a SL-T argument.⁸ The structures in question are given in (26).

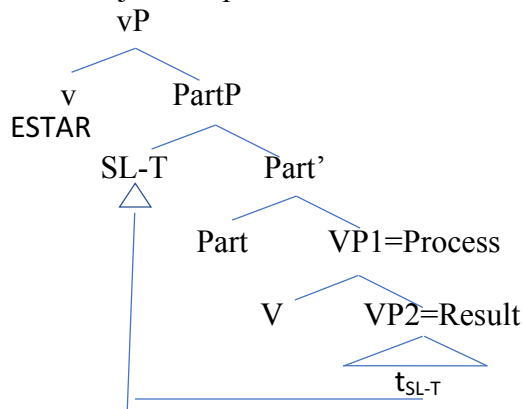
- (26) a. *Ser* Verbal passives



⁸ The question remains as to whether the time argument of the resultative state starts off as a SL-T or as an IL-T, and if so, where and how the operation of delivering a SL-T out of the basic IL-T takes place. We leave the issue open for future research.



b. *Estar* Adjectival passives



5.2. Ser + *Eventive Subjects in Locatives*

As is known, locative predicates in Spanish take *estar* as a general rule (e.g. (27)). Following our account, we propose that the locative PP contains a SL-T that locates the predication spatio-temporally and allows for *estar* selection, as in (27).

- (27) a. Pedro {está/ *es} en casa.
 Pedro _iESTAR _iSER in house (i.e. 'Pedro is at home.')
- b. París está/ *es} en Francia.
 París _iESTAR _iSER in France
 'Paris is in France.'

- (28)
-
- vP
- v PP
- ESTAR
- SL-T P'
- △
- Pedro en casa

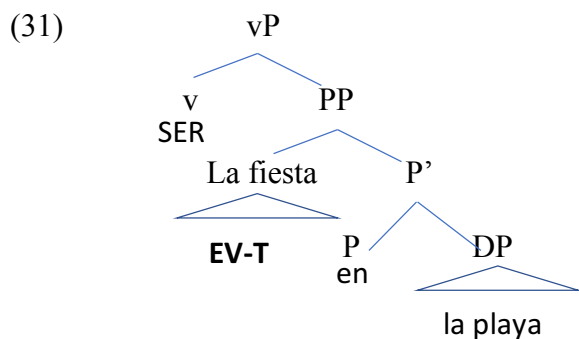
Crucially, when a locative predicate has an eventive subject, *ser* is chosen instead of *estar*, as we can see in (29).

- (29) a. La conferencia {es / *está} en la Universidad de Georgetown.
the conference *is*_{SER} *is*_{ESTAR} in the university of Georgetown
‘The conference is in the University of Georgetown.’
b. La fiesta {es / *está} en la playa.
the party *is*_{SER} *is*_{ESTAR} on the beach
‘The party is on the beach.’

We propose that eventive nominals such as *the conference* or *the party* also contain an EV-T argument. This is not only unsurprising, but indeed a necessity in a system that views temporal modification as modification of a covert time argument in the syntax, such as that of Demirdache & Uribe-Etxebarria that we adopt here. See the data in (30), which shows that eventive nominals can indeed be temporally modified, unlike non-eventive nominals.

- (30) {Una conferencia/ una fiesta/ *una silla} de dos horas.
a conference a party a chair of two hours
‘A conference/a party/ a chair of two hours.’

The spell-out of the copula is once again sensitive to the EV-T argument: *ser* is chosen, since the EV-T denotes a time interval. We illustrate this structure in (31), from example (29b).



In short, our claim that the choice of *ser* or *estar* is sensitive to the semantics of the temporal argument receives further support from contexts beyond adjectival predicates. *Ser* takes time intervals (of events or of states), whereas *estar* takes a moment in time.

6. The evidential reading of *estar*

Estar also has an evidential reading that we have not yet discussed, which we illustrate in (32). The sentences in (32) mean that the speaker finds the apartment to be very high and the wine delicious according to his or her preferences, i.e. they do not merely denote a spatio-temporal stage

of their subject. In fact, without the evidential reading, the adjectives in (32) would be construed with *ser*, i.e. as individual-level adjectives.

- (32) a. Este apartamento está muy alto.
this apartment is_{ESTAR} very high
'This apartment is very high.'
b. Este vino está delicioso.
this wine is_{ESTAR} delicious
'This wine is delicious.'

The evidential reading has been most notably studied by Escandell-Vidal and Leonetti (2002). These authors share the view that *ser*-predicates are individual-level and *estar*-predicates are stage-level. They claim that evidential *estar*-predicates are derived from individual-level predicates (i.e. as we do for *estar*-predicates in general) and make their interpretation dependent on a particular situation. Such a situation can be easily inferred as being presented from someone's subjective perception, hence the evidential reading.

Space reasons preclude us from discussing the evidential reading further, but we note that Escandell-Vidal and Leonetti’s (2002) proposal can be accommodated to our own. In our story, the stage-level predication is derived by an instant-denoting temporal argument. Such an instant, we propose, is the counterpart of Escandell-Vidal and Leonetti’s spatio-temporal situation, which can be inferred as being fixed by someone’s point of view.

7. Back to the gradability account

The reader will recall that in Section 2.1 we pointed out the problems that a gradability-based approach such as that of Gumiel, Moreno, and Pérez (2015) presents for an account of *ser* and *estar*. However, we agreed with these authors in that *ser* disallows the within-individual readings. We repeat the example from (2b) in (33), as well as Table 1, repeated in (34) for the reader's convenience.

- (33) { *Soy / estoy } delgada para ser yo. Within-individuals → *estar*
am_{SER} am_{ESTAR} thin for be I
'I am/ look thin for being me.' (From Gumiel, Moreno and Pérez: 980)

- (34) Table 1. *Ser*, *estar* and the gradability properties of the adjective

	Within-individuals reading	Between-individuals reading	Non-gradable adjectives	No comparison class
<i>ser</i>	NO	YES	YES	YES
<i>estar</i>	YES	YES	YES	YES

The question now is how our proposal accounts for the unavailability of within-individual readings with *ser*, given that it is the only gradability-related property to which *ser/estar* selection seems to be sensitive. As it turns out, our proposal is equipped to derive this asymmetry. Following our proposal, if *ser* were selected in (33), we would have the whole time interval of me being thin (the IL-T). Therefore, we could not compare this predicate with other instances of me being thin. With *estar* in (33), on the other hand, we pick a moment (the SL-T) out of the whole interval of me being thin, and so it is grammatical to compare it with other (potential) moments in that interval where I could be more or less thin.

Note that the reverse does not hold: *Estar* does not bar the between-individuals reading, as we showed empirically in Section 3 (see (35), repeated from (7)).

- (35) a. El niño está muy moreno para ser un niño albino.
 the kid _{isESTAR} very tanned for being a kid albino
 ‘The kid is very tanned for being an albino kid.’
 b. El restaurante está muy lleno para ser un restaurante de carretera.
 the restaurant _{isESTAR} very full for being a restaurant of road
 ‘The restaurant is very full for being a roadside restaurant.’

This is expected under our proposal: broadly speaking, for a particular gradable property to have a between-individuals standard of comparison, all you need is a set of subjects whose typical stages of that property show such property to a lesser or greater degree than the subject in question does in that particular instance. For instance, in (35b), given what we know about roadside restaurants not being typically very crowded, we can felicitously compare the degree of fullness of a particular restaurant to the typical degree of fullness restaurants of its type.

8. Conclusion

This paper has argued that the distinction between *ser* and *estar* is aspect-based, not gradability-based. We have modelled the *ser/estar* distinction in the temporal syntax framework of Demirdache & Uribe-Etxebarria, arguing that *ser* picks time intervals (of events or states), whereas *estar* picks moments in time. While our main empirical focus was *ser* and *estar* in combination with adjectives, we have shown how our proposal can also account for the occurrence of these verbs in other constructions, such as the progressive, passives and locatives. This is something that a gradability-based account is not equipped to do.

We have made two main contributions. For Hispanic linguistics, we have provided a novel aspect-based account of the alternation of *ser* and *estar* across different contexts, shedding light on why they alternate in so many constructions. For the general linguistic theory, we have put forth a neo-Carlsonian account of I-L and S-L predicates, modelled in a temporal syntax framework. The difference between I-L and S-L predicates, then, is reduced to a sortal difference between time arguments (intervals versus instants).

Note that this view of the I-L/S-L distinction is at odds with the common assumption that all non-stative verbs are S-L, whereas state verbs may be I-L or S-L (Carlson 1977; Kratzer 1995). The typology that is advanced in this work is that all predicates, eventive or stative, denote minimally a time interval: an IL-T in the case of states and an EV-T in the case of events. But neither states nor events, note well, need be a S-L. Being S-L is a property of the morphosyntactic structure (e.g. the progressive with events or the *estar*-configurations with stative adjectives).

As is the case with all research, there are questions that remain unanswered. The most immediate to us is why there are some adjectives that cannot be built with *estar*, i.e. that cannot appear with the PP that derives S-L predicates. Note that this is a problem not only for a morphosyntactic approach to the distinction such as the one that we put forth here, but also to a lexicalist one in which adjectives are specified as I-L or S-L in the lexicon. That is, why can't an adjective like *famoso* 'famous' take *estar*, if it can be easily conceived as a stage in an individual's life?⁹ The topic deserves more discussion than we can do justice here, but as we see it, it seems unavoidable to assume that some adjectives are specified in the lexicon with respect to whether they can appear in a S-L configuration. For further discussion of this issue, see Fernández-Leborans (1999), Marín (2000) and Fábregas (2012).

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⁹ Thanks to Carmelo Bazaco for pointing out that example to us.

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