

# Comparison classes and the relative/absolute distinction: a degree-based compositional account of the *ser/estar* alternation in Spanish

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**Abstract** The notion of *comparison class* has figured prominently in recent analyses of the gradability properties of adjectives. We assume that the comparison class is introduced by the degree morphology of the adjective and present a new proposal where comparison classes are crucial to explain the distribution of adjectives in Spanish copular sentences headed by the verbs *ser* ‘be<sub>SER</sub>’ and *estar* ‘be<sub>ESTAR</sub>’. The copula *estar* ‘be<sub>ESTAR</sub>’ appears whenever a gradable adjective merges with a *within-individual* comparison class, a modifier expressing a property of stages. The copular verb *ser* ‘be<sub>SER</sub>’ appears when a gradable adjective merges with a *between-individuals* comparison class, a modifier expressing a property of individuals. The distinction between *relative* and *absolute* adjectives can be reduced to the semantic properties of the modifier expressing the comparison class that is merged in the functional structure of the adjective.

**Keywords** Absolute · Adjective · Comparison class · Copula · Degree · Estar · Gradability · Relative · Ser

## 1 Introduction: comparison-based vs. aspectual-based analyses of copular sentences in Spanish

Spanish is a multiple-copula language, where copular sentences can be headed by the verbs *ser* ‘be<sub>SER</sub>’ and *estar* ‘be<sub>ESTAR</sub>’. In this article we explore the distributional pattern of adjectives in copular structures, in order to determine which property of adjectival predicates is at the basis of their co-occurrence with each of the copulas. As has been noted many times in the literature, there are adjectives that combine

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only with *ser*, (1a), adjectives that combine only with *estar*, (1b), and adjectives that combine with both copulas, (1c, c').

- (1) a. Mi hijo {es / \*está} vegetariano.  
 my son is<sub>{SER / \*ESTAR}</sub> vegetarian  
 'My son is vegetarian.'
- b. El vaso {\*es / está} lleno.  
 the glass is<sub>{\*SER / ESTAR}</sub> full  
 'The glass is full.'
- c. Mi hijo es {feliz, alto, delgado, nervioso, valiente}.  
 my son is<sub>SER</sub> {happy, tall, thin, excitable, courageous}  
 'My son is {happy, tall, thin, excitable, courageous}.'
- c'. Mi hijo está {feliz, alto, delgado, nervioso, valiente}.  
 my son is<sub>ESTAR</sub> {happy, tall, thin, excitable, courageous}  
 'My son is {happy, tall, thin, excitable, courageous}.'

The proposals trying to account for the paradigm in (1) differ with respect to the exact characterization of the difference between *ser*-predications and *estar*-predications (almost always directly or indirectly related to the individual/stage level distinction), and also as to the relative role attributed to the copula and the adjectival predicate in determining that difference.

With respect to the characterization of *ser*-predications vs. *estar*-predications, *comparison-based* and *aspectual-based* proposals can be found (see Arche 2006; Roby 2009 for recent overviews). On the one hand, many authors have claimed that this characterization is related to *different ways of attributing properties to subjects of predication*. This was the kind of explanation given by Carlson (1977) to account for the difference between the English counterparts of (1a, b), attributing their different interpretation (intuitively speaking, standing vs. non-standing / immutable vs. temporary / inherent vs. circumstantial properties) to a sortal distinction in the domain of individuals: accordingly, predicates of individuals and predicates of stages of individuals are proposed. Authors like Crespo (1946), Bolinger (1947), Roldán (1974), Falk (1979) and Franco and Steinmetz (1983, 1986) account for the paradigm in (1) and crucially for the alternation in (1c, c') on the basis of the notion of *implied comparison*, which connects with the Carlsonian approach to the individual/stage-level distinction.

Bolinger (1947) already claimed that *estar* may actually imply "self-comparison" which means comparison within a given genus: comparison of a thing with its archetype or with previous or succeeding stages of itself. According to Roldán (1974:70), a sentence like *El acero es duro* 'Steel is<sub>SER</sub> hard' expresses the intrinsic identification of the quality "hard" with the *class* of objects named steel; in contrast, *El acero está duro* 'The steel is<sub>ESTAR</sub> hard', refers to *one singular instance* of steel that possesses the property of being hard in contrast to other *instances* of that steel. Similarly, Falk (1979:285) hypothesized that *ser* draws a comparison in reference to the norm of members of a class or set ("class norm"), so that the entity is compared to other entities in that set, and *estar* draws a comparison in reference to an "individual norm", so that the entity is compared to what is considered normal to itself. Franco and Steinmetz (1983, 1986) also support the same idea that "*ser* is used to

express an implied comparison of the type X/Y, i.e. an entity X is compared with one or more entities Y which provide the standard by which a quality is attributed to X". For example, *Pedro es rico* 'Peter is<sub>SER</sub> rich' asserts that Peter is rich in the sense that his wealth is greater than that of some putative average person. By contrast, *estar* expresses an implied comparison of the type X/X, i.e. an entity X is compared with itself, as in the example *Pedro está rico* 'Peter is<sub>ESTAR</sub> rich' which asserts that Peter is rich "in the sense that his present wealth is greater than is known or thought usually to be" (p. 372). In these approaches, the differences between *ser* and *estar* predications are attributed to inherent lexical/semantic properties of adjectives (copulas are thus semantically empty), or to properties of the copulas *per se*. Franco and Steinmetz, for example, claim that the selection of either *ser* or *estar* 'imposes' a specific interpretation of the adjective in each case.

On a different basis, *aspectual approaches* claim that the characterization of *ser*-predications vs. *estar*-predications should be described in aspectual/aktionsart terms. *Ser*-predications—(1c)—express individual-level predications, understood as unbounded states (Marín 2010), imperfective states (Luján 1981), non-resultative states (Clements 1988), non-inchoative states (Camacho 2012), homogeneous states (Gumiel-Molina and Pérez-Jiménez 2012) or non-dense states (Roy 2013). *Estar*-predications—(1c')—express stage-level predications, understood as bounded states, perfective states, resultative states, quantized states or dense states. All these proposals (starting with Spanish traditional grammarian Gili Gaya 1961, based on Hanssen 1913) share the idea, implemented one way or another, that the presence of an event (in a broad sense that includes states) boundary or the divisiveness of the event/state are both aktionsart-related notions relevant to understanding the difference between *estar* and *ser*. These proposals try to explain the fact that *ser*-predications and *estar*-predications respectively show syntactic-semantic behaviors typically attributed to IL and SL predications. For example, IL predications cannot co-occur with temporal adverbials expressing a bounded interval, (2).

- (2) El perro {\*era / estaba} gordo la semana pasada.  
 the dog was{\*SER / ESTAR} fat the week last  
 'The dog was fat last week.'

Within *aspectual approaches*, different proposals attribute different relative roles to the copula and the adjective in determining the aspectual properties of the whole predication. A prevalent point of view is that copulas, *ser* and *estar*, have aspectual properties. *Ser* and *estar* have been characterized as *-nexus/+nexus copulas* (i.e. *estar* encodes a link to a previous situation, Clements 1988), as *IL/SL copulas* (*estar* has an extra event argument,<sup>1</sup> Fernández Leborans 1999), as *-perfective/+perfective copulas* (*estar* expresses that the property holds within a temporally bound interval, *ser* expresses a stative situation without boundaries, Luján 1981), as *-inchoative/+inchoative copulas* (*estar* expresses the inception of a state, Camacho 2012), etc. A matching relation is established between the copulas

<sup>1</sup>The characterization of *ser* and *estar* predications in these terms (following Kratzer 1988/1995; Diesing 1992) has been challenged by many authors (see Maienborn 2003, 2005; Arche 2006; Schmitt and Miller 2007; Roby 2009; Jiménez-Fernández 2012; Camacho 2012 and others).

and the adjectives, which also lexically encode aspectual properties, generally implemented as formal features. Adjectives can be thus  $-/+$ resultative (Clements 1988), IL or SL (Fernández Leborans 1999),  $-/+$ perfective (Luján 1981) or  $-/+$ inchoative (Camacho 2012), hence their combination with *ser* or *estar*. Adjectives that combine with both copulas, (1c, c'), are analyzed as aspectually neutral, unmarked or double-marked from the lexical point of view.

From a different perspective, in Brucart (2009), Gallego and Uriagereka (2009), Romero (2009), Zagona (2010), Gumiel-Molina and Pérez-Jiménez (2012) and Roy (2013), the aktionsart differences between *ser* and *estar* predications are acknowledged but they are conceived not as properties of the copulas *per se* but rather as reflexes of some adjectival property (no matching relation between copulas and adjectives is thus argued for). For Zagona (2010), the distribution of *ser* and *estar* is an aspectual one. The difference between *ser* and *estar* is the presence or absence of an uninterpretable feature  $uP$  that determines the complements they can merge with. Since *estar* is the copula that has this uninterpretable feature, it will merge with any predicate with the relevant syntactic feature able to check it; in this sense, *estar* is forced to merge with a prepositional element. Assuming the existence of a temporal preposition  $P_{ASP}$  with an interpretable feature, Zagona proposes that *estar* selects for  $[P_{ASP} AP]$ , whereas *ser* selects for  $[AP]$ . This contrast can explain the different interpretation of adjectives when combined with *ser* and with *estar*: when  $P_{ASP}$  merges with AP, "it specifies a time at which the state holds"; otherwise, AP is a property of the DP. In a similar line, Gallego and Uriagereka (2009) propose that *estar* is the spell-out of the incorporation of a covert prepositional element of terminal coincidence onto a copular verb expressing a state. In their approach, adjectives are Prepositional Phrases selecting for a root component. The nature of the P (central coincidence/path vs. terminal coincidence/endpoint) gives rise to bounded/stage-level or unbounded/individual-level adjectives. The preposition of terminal coincidence ( $P_T$ ) expresses in this context coincidence with one edge or terminus of a certain property holding of an individual at a certain time. Adjectives, in this proposal, are not lexically bounded/stage-level or unbounded/individual-level; instead, roots can be combined with  $P_T$  in the syntax so the existence of alternating adjectives like those in (1c, c') receives a straightforward explanation. Similarly, Roy (2013) claims that *ser/estar* are lexical items inserted as the spell-out of the tense features of copular sentences. Spell-out is sensitive to the categorial features of the postcopular predicate: *estar* is inserted in the context of a  $-N$  category, *ser* is inserted in the context of a  $+N$  category. Therefore, the postcopular predicate in sentences like (1c) is an NP (ClassifierPhrase) whose head is a *pro*, modified by an attributive AP. Similarly, the postcopular predicate in (1a) is a nominal projection. The aktionsart differences between *ser*- and *estar*-predications in sentences like (1c, c') arise from the syntax of the postcopular predicates (cf. Borer 2005), assuming a neo-Davidsonian approach to non-verbal predicates. The nominal projection (ClassifierPhrase) triggers the non-dense (cumulative and non-divisive) interpretation of the event argument of the adjective in (1c). The absence of nominal projections gives rise to the dense (cumulative and divisive) interpretation of the adjective, (1c').

On a different basis, Gumiel-Molina and Pérez-Jiménez (2012), assuming a degree-based semantics for adjectives, consider gradability-related properties of ad-

jectives crucial to account for the distribution of *As* in copular sentences in Spanish and the aktionsart differences between *ser* and *estar* predications. These authors claim that absolute adjectives surface with *estar* while relative (and non-gradable) adjectives surface with *ser*, assuming the existence of a strict correlation between being a relative adjective and encoding an open scale and being an absolute adjective and having a closed scale, in the line of Kennedy and McNally (2005), Kennedy (2007). Following the proposal developed in Husband (2010, 2012) to account for the aktionsart differences between sentences like *The Coke bottle is brown* (homogeneous state) vs. *The Coke bottle is full* (quantized state), Gumiel-Molina and Pérez-Jiménez claim that the differences between homogeneous stative predications with *ser* and quantized stative predications with *estar* arise in Spanish from the mapping of the scalar structure of the adjectival predicates, understood in quantificational terms. The homogeneous part-structure of open scale adjectives and the quantized scale of closed scale adjectives are mapped onto the event structure of a V node expressing a state. The copulas *ser* and *estar* are just the spell-out reflex of this mapping. To account for the behavior of those adjectives that co-occur with the two copulas, (1c, c'), these authors develop a compositional approach to scalar structure, whereby the scalar properties of adjectives are built up in the syntax via the content of the Degree node present in the syntactic structure of adjectives. The head of the Deg node is the *positive* morpheme in the case of adjectives in the positive degree. The scale structure of adjectives is thus superimposed on a root by the Deg node.

Within aspectual approaches to the *ser/estar* distinction, Gumiel-Molina and Pérez-Jiménez (2012) has as its main advantage the fact that adjectives need not be endowed with purely aspectual properties (features) to account for the paradigm in (1), since a core adjectival property (scalar structure) is responsible for the distribution of copular verbs. Similarly, no non-standard syntactic projections (e.g. PP) need to be argued for in the structure of adjectives. On the other hand, it is a proposal compatible with degree-based approaches to the semantics of adjectives where scale structure is not a lexical property of lexical items, naturally accounting for the data in (1c, c') without arguing for a double lexical characterization of adjectives like *tall*, *small*, etc. as relative/open-scale and absolute/closed scale. In addition, the proposal that *ser* and *estar* are not two different lexical items with different selection restrictions but just spell-out reflexes of the mapping of adjectival properties onto V allows them to account for aspectual differences in *be* predications in languages with only one copula (e.g. English *be*) in a straightforward fashion.

However, Gumiel-Molina and Pérez-Jiménez (2012) faces serious empirical problems. For example, there seem to be a few adjectives (e.g. *transparente* 'transparent'/'see-through') constructed as closed scale *As*, as diagnosed by the combination with degree modifiers (cf. Kennedy and McNally 2005), that co-occur with *ser*, (3a) (also with *estar*). By contrast, adjectives like those in (1c, c') (e.g. *alto* 'tall') seem to be open scale *As* even when combined with *estar*. The ungrammaticality of (3b) shows that they cannot be construed as closed scale *As* in this context.

- (3) a. La cortina {es / está} completamente transparente.  
 the curtain is<sub>{SER / ESTAR}</sub> completely transparent/see-through  
 'The curtain is completely transparent/see-through.'

- b. \*El niño está {ligeramente / completamente} alto.  
 the boy is<sub>ESTAR</sub> {slightly / completely} tall

Moreover, in this proposal, it is not clear how to capture in scalar-structure terms the crucial role of the subject in accounting for contrasts such as those illustrated in (4). These data in fact pose a problem for all aspectual approaches and also for any approach that attributes the co-occurrence of adjectives with *ser* and *estar* to inherent lexical properties of adjectives.

- (4) a. El niño {es / está} grande. – El ordenador {es / \*está} grande.  
 the boy is<sub>{SER / ESTAR}</sub> big – the computer is<sub>{SER / \*ESTAR}</sub> big  
 ‘The boy is big.’ – ‘The computer is big.’
- b. La línea {es / \*está} delgada.  
 the line is<sub>{SER / \*ESTAR}</sub> thin  
 ‘The line is thin.’
- c. La reunión {es / \*está} larga.  
 the meeting is<sub>{SER / \*ESTAR}</sub> long  
 ‘The meeting is long.’

In this context, the proposal argued for in this article is that gradability properties of adjectives are in fact crucial to account for the paradigm in (1) and (4); however, the key to fully understand all the aforementioned facts is to define the *relative/absolute* distinction not in terms of scalar structure (i.e. linking absoluteness to minimal/maximal degrees on a scale structure), but rather in terms of the notion of *comparison classes* (Toledo and Sassoon 2011; Sassoon and Toledo 2011).<sup>2</sup> Specifically, we claim that a copular VP headed by *estar* has a Predication Phrase (PredP) that includes stages of the subject as its complement while *ser* has as a complement a PredP that does not contain stages of the subject. Our proposal thus connects with the old characterization of *ser*-predications vs. *estar*-predications as *different ways of attributing properties to subjects of predication* presented above, and also with the IL/SL distinction in neo-Carlsonian terms.

Stages of the subject are introduced in the derivation through the comparison class formation needed to evaluate the truthful application of *all* gradable adjectives. We follow Toledo and Sassoon’s (2011) proposal that (a) all gradable adjectives are evaluated with respect to a comparison class, and (b) the way in which the class of comparison and the standard degree needed to evaluate the adjectival predication is established is crucial to distinguish between relative and absolute adjectives. Relative adjectives are evaluated with respect to a class of comparison comprised of individuals sharing some property with the subject of predication, which determines the standard value (*between-individuals* comparison class); absolute adjectives are evaluated with respect to a class of comparison comprised of *counterparts* of the adjective’s subject manifesting different degrees of the property in question; one of these degrees—that needs not be a maximal or minimal value in absolute scalar

<sup>2</sup>In Kubota (2015) *comparison class* is the crucial notion to account for the ‘manner reading’ vs. the ‘surface-subject oriented reading’ of adverbs like *stupidly*, *cleverly*.

terms—is considered the standard value (*within-individual* comparison class). However, contrary to Toledo and Sassoon (2011), we argue against the lexical character of the relative/absolute distinction and claim that the comparison class is introduced by a specific functional projection present in the syntactic architecture of adjectives (the topmost projection within the DegP) that establishes a relation between the subject of predication and the set out of which the standard degree necessary to evaluate the truthful applicability of the adjective is extracted (Kennedy 1999; Fults 2006, in contrast to Kennedy 2007). This approach to the relative/absolute distinction allows us to account for the variable behavior of most adjectives in copular structures, (1c, c'), and also for the crucial role of the subject in examples like (4), which, as far as we know, has not received a formal explanation in the literature.

By neglecting the role of absolute scalar properties and highlighting the role of the comparison class and the standard of comparison in our explanation of the distribution of adjectives in copular structures in Spanish, this paper connects with the current debate on the exact characterization of the relative/absolute distinction. Kennedy and McNally (2005) and Kennedy (2007) assign a central role to the abstract gradability properties of adjectives in the selection of the standard value that determines whether the property truthfully applies to the adjective's argument or not. Specifically, these authors claim that the standard value for the truthful applicability of a gradable adjective can be *relative*, that is, determined contextually with respect to a comparison class, or *absolute*, i.e. a standard insensitive to context, fixed at a particular salient value of the adjective's scale. On the basis of a strong correlation between scale type and standard value, open scale adjectives always have relative standards and (partially/totally) closed scale adjectives consistently have absolute standards (the standard value is the minimal or maximal value of the scale). However, recently, these strong correlations have been empirically challenged and, consequently, the characterization of the relative/absolute distinction has been revised (cf. Toledo and Sassoon 2011; McNally 2011). This paper, thus, besides accounting for the *ser/estar* alternation in Spanish and the variable behavior of adjectives in copular structures, contributes empirical support for the proposal that (a) adjectives are interpreted as relative/absolute independently of their scalar properties, i.e. the relative/absolute distinction should not be characterized in absolute scalar terms, and (b) all gradable adjectives are evaluated with respect to a comparison class.

The paper is organized as follows. In Sect. 2, we present the distribution of adjectives with the copular verbs *ser* and *estar* in Spanish, highlighting the crucial role of the subject of predication in the selection of the copular verb. Section 3 contains the theoretical background needed to develop our proposal, focusing on the gradability properties of adjectives and the arguments developed in Toledo and Sassoon (2011) and McNally (2011) against the characterization of the relative/absolute distinction in absolute scalar terms. In Sects. 4 and 5, we will present the formal proposal summarized in the previous paragraphs, and also offer some reflections about the connection between the relative/absolute distinction and the individual-level/stage-level distinction (Sect. 5.5). Finally, Sect. 6 concludes and summarizes some interesting open issues.

## 2 The data. The distribution of adjectives with copular verbs in Spanish

The distribution of copular verbs in Spanish is a widely studied phenomenon (see Arche 2006; Roby 2009; Camacho 2012; Fábregas 2012 for recent overviews).<sup>3</sup> On the one hand, *ser* and *estar* appear in many non-overlapping contexts: *ser* appears in combination with nouns and DPs in copular sentences (see Roy 2013 for a detailed description of the different interpretations of copular sentences with bare nouns and DPs as postcopular elements), and also as an auxiliary verb in the passive voice (action passive); *estar* combines as a progressive auxiliary verb with gerunds and also combines with past participles in adjectival passives (we will not deal with these structures in this paper; see Gehrke 2015). On the other hand, adjectives and PPs combine with both *ser* and *estar* in copular sentences. These uses are summarized and exemplified in (5) and (6).

- |                    | SER  | ESTAR |
|--------------------|------|-------|
| Nouns/DPs          | (6a) | –     |
| Passive voice      | (6b) | –     |
| Adjectival passive | –    | (6c)  |
| Progressive        | –    | (6d)  |
| PPs                | (6e) | (6e)  |
| Adjectives         | (6f) | (6f)  |
- (6) a. Antonio {es / \*está} (el / un) actor.  
Antonio is<sub>{SER / \*ESTAR}</sub> (the / an) actor  
'Antonio is (the / an) actor.'
- b. Esos árboles {fueron / \*estuvieron} plantados ayer.  
those trees were<sub>{SER / \*ESTAR}</sub> planted yesterday  
'Those trees were planted yesterday.'
- c. El camino {fue<sub>[passive voice]</sub> / estuvo<sub>[adjectival passive]</sub>} bloqueado por la  
the road was<sub>{SER / ESTAR}</sub> blocked by the  
policía.  
police  
'The road was blocked by the police.'
- d. Juan {\*es / está} cantando en la ducha.  
Juan is<sub>{\*SER / ESTAR}</sub> singing in the shower  
'Juan is singing in the shower.'
- e. La clase {es / está} en la primera planta.  
the class is<sub>{SER / ESTAR}</sub> on the first floor  
'The class is on the first floor.'
- f. Estos niños {son / están} muy altos.  
these children are<sub>{SER / ESTAR}</sub> very tall  
'These children are<sub>{SER / ESTAR}</sub> very tall.'

<sup>3</sup>Though the *ser/estar* alternation also exists in other Romance languages, we will restrict ourselves to Spanish data in this paper. Moreover, there is dialectal variation in Spanish regarding the combination of adjectives with the copulas *ser/estar*, which will likewise not be dealt with in this paper. The data described correspond to the dialect of Castilian Spanish spoken in Madrid, Spain.



With regard to the distribution of adjectives with copular verbs in Spanish, it has generally been noted in the literature that some adjectives combine only with *ser*, (7), or *estar*, (8), while many others naturally co-occur with the two copulas, (9):

- (7) a. El periódico {es / \*está} {semanal / internacional / político}.  
the newspaper is<sub>{SER / \*ESTAR}</sub> {weekly / international / political}  
'The newspaper appears weekly.', 'The newspaper is international / political.'
- b. Juan {es / \*está} {cauto / discreto / inteligente / capaz de  
Juan is<sub>{SER / \*ESTAR}</sub> {cautious / discreet / intelligent / capable of  
todo / descortés / leal}.  
anything / impolite / faithful}  
'Juan is {cautious / discreet / intelligent / capable of anything / impolite / faithful}.'
- (8) a. Juan {\*es / está} {cansado / exhausto / contento / maltrecho /  
Juan is<sub>{\*SER / ESTAR}</sub> {tired / exhausted / happy / beaten up /  
quieto}.  
still}  
'Juan is {tired / exhausted / happy / beaten up / still}.'
- b. El vaso {\*es / está} {lleno / roto}.  
the glass is<sub>{\*SER / ESTAR}</sub> {full / broken}  
'The glass is {full / broken}.'
- (9) a. El chico {es / está} {grande / alegre / delgado / nervioso / joven}.  
that guy is<sub>{SER / ESTAR}</sub> {big / happy / thin / excitable / young}  
'That guy is {big / happy / thin / excitable / young}.'
- b. La hoja {es / está} {verde / áspera / pegajosa}.  
the leaf is<sub>{SER / ESTAR}</sub> {green / rough / sticky}  
'The leaf is {green / rough / sticky}.'

However, many clarifications have been made with respect to this raw description of the facts. First, many adjectives compatible with *ser* and *estar* have different meanings depending on which copula they are combined with, (10): *listo* as *clever* ( $be_{SER}$ ) or *ready* ( $be_{ESTAR}$ ); *despierto* as *bright* ( $be_{SER}$ ) or *awake* ( $be_{ESTAR}$ ), etc.

- (10) a. Juan es listo. / Juan está listo.  
Juan is<sub>SER</sub> clever / Juan is<sub>ESTAR</sub> ready  
'Juan is clever.' / 'Juan is ready.'
- b. Ana es despierta. / Ana está despierta.  
Ana is<sub>SER</sub> alert / Ana is<sub>ESTAR</sub> awake  
'Ana is alert.' / 'Ana is awake.'
- c. El niño es vivo. / El niño está vivo.  
the boy is<sub>SER</sub> lively / the boy is<sub>ESTAR</sub> alive  
'The boy is lively.' / 'The boy is alive.'

Second, the role of the subject may also determine which copula is selected, as the contrast between (11) and (12) shows (see Romero 2009 on this kind of contrast; examples in (12c) from Camacho 2012).

- (11) a. La niña {es / está} grande.  
the girl is<sub>{SER / ESTAR}</sub> big  
'The girl is big.'
- b. María {es / está} delgada.  
María is<sub>{SER / ESTAR}</sub> thin  
'María is thin.'
- (12) a. La {casa / computadora} {es / \*está} pequeña.  
the {house / computer} is<sub>{SER / \*ESTAR}</sub> small  
'The {house / computer} is small.'
- b. La línea {es / \*está} delgada.  
the line is<sub>{SER / \*ESTAR}</sub> thin  
'The line is thin.'
- c. El polo Norte {es / \*está} frío.  
the North Pole is<sub>{SER / \*ESTAR}</sub> cold  
'The North Pole is cold.'
- / El cadáver {\*es / está} frío.  
the corpse is<sub>{\*SER / ESTAR}</sub> cold  
'The corpse is cold.'

Note also that many adjectives that are claimed to combine more readily with *ser* (cf. (7b)) can also combine with *estar* in certain syntactic environments, (13). To account for the intuition that speakers have with respect to the less natural use of adjectives like *inteligente* 'intelligent', *cauto* 'cautious' or *descortés* 'impolite' with *estar*, these cases have been explained in terms of *coercion*, defined as a "reinterpretation process set up to eliminate the conflicts between the semantic content of a constituent and the requirements of other elements in the same construction" (Escandell and Leonetti 2002). This explanation assumes that these adjectives have some property guiding their combination with the copula *ser* that is coerced in these contexts.

- (13) a. Últimamente los niños de esta clase están muy {inteligentes /  
recently the children of this class are<sub>ESTAR</sub> very {intelligent /  
cruels}.  
cruel}  
'Recently the children of this class have been acting very {intelligent /  
cruel}.'
- b. ¡Qué cauto está Juan!  
how cautious is<sub>ESTAR</sub> Juan  
'How cautious Juan has been acting!'
- c. En mi opinión, en la fiesta, Juan estuvo muy descortés.  
in my opinion, in the party, Juan was<sub>ESTAR</sub> very impolite  
'In my opinion, in the party, Juan was very impolite.'

It is also important to note that eventive subjects like *comportamiento* 'behavior', or *carácter* 'character' co-occur with *ser* (Brucart 2009). Similarly, adjectives that take a propositional argument combine with *ser* (*necesario* 'necessary', *obligatorio* 'obligatory', *evidente* 'evident') (Escandell and Leonetti 2002).

- (14) a. El conserje {era / estaba} solícito.  
the caretaker was<sub>{SER / ESTAR}</sub> solicitous  
'The caretaker was solicitous.'
- a'. El comportamiento del conserje {era / \*estaba} solícito.  
the behavior of the caretaker was<sub>{SER / \*ESTAR}</sub> solicitous  
'The caretaker's behavior was solicitous.'
- b. Mi sobrino {es / está} {irascible / agradable}.  
my nephew is<sub>{SER / ESTAR}</sub> {short-tempered / pleasant}  
'My nephew is {short-tempered / pleasant}.'
- b'. El carácter de mi sobrino {es / \*está} {irascible /  
the character of my nephew is<sub>{SER / \*ESTAR}</sub> {short-tempered /  
agradable}.  
pleasant}  
'My nephew's character is {short-tempered / pleasant}.'
- (15) a. Su marido {\*es / está} grave.  
her husband is<sub>{\*SER / ESTAR}</sub> serious  
'Her husband is seriously ill.'
- a'. La enfermedad de su marido {es / \*está} grave.  
the sickness of her husband is<sub>{SER / \*ESTAR}</sub> serious  
'Her husband's sickness is serious.'
- b. El gato {es / está} limpio.  
the cat is<sub>{SER / ESTAR}</sub> clean  
'The cat is clean.'
- b'. Esa operación militar no {es / \*está} limpia.  
this operation military not is<sub>{SER / \*ESTAR}</sub> clean  
'This military operation is not clean.'

Eventive subjects are only possible in *estar*-sentences if the sentence receives an *evidential reading*, (16), a fact not explained in the literature, to the best of our knowledge, and to which we will return in Sect. 5.5. These sentences are appropriate when the speaker has evidence present to make the statement. Escandell and Leonetti (2002) note that, in these cases, the evaluation of the predication depends on someone's perception of a situation ('personal evaluation').

- (16) a. La fiesta estuvo {fenomenal / divertida / aburrida}.  
the party was<sub>ESTAR</sub> {wonderful / fun / boring}  
'The party was {wonderful / fun / boring}.'

The *evidential* use of *estar* arises in other cases as well, as illustrated in (17) (Roby 2009:17).

- (17) a. Este jamón está {bueno / malo}.  
this ham is<sub>ESTAR</sub> {good / bad}  
'This ham is {good / bad}.'
- b. Tu trabajo está bastante flojo.  
your work is<sub>ESTAR</sub> pretty weak  
'Your work is pretty weak.'

Finally, it is important to note that *ser* also gives rise to what we consider a *classificative use*. Under this use, the subject is understood as pertaining to the class of objects characterized by having the property denoted by the adjective. This is the meaning observed when *ser* is combined with relational adjectives, (18). Roy (2013) analyzes these sentences as *defining* copular structures that express a defining property, i.e. a property salient enough to define an individual as a particular member of a class. Note, however, that this behavior is not restricted to relational adjectives. Virtually any adjective can appear in this context, showing a non-gradable behavior, (19).

- (18) Este caballo es (\* {muy / bastante / completamente}) francés.  
 this horse is<sub>SER</sub> {very / quite / completely} French
- (19) a. El mantel es (\* {muy / bastante / completamente}) limpio.  
 the tablecloth is<sub>SER</sub> {very / quite / completely} clean  
 b. Ese vino es (\* {muy / bastante / completamente}) tinto.  
 the wine is<sub>SER</sub> {very / quite / completely} red

Taking into account these clarifications, a new paradigm arises. Adjectives can be classified into three different groups with respect to their combination with the copulas *ser* and *estar*: first, relational adjectives (non-gradable) co-occur only with *ser*, (20). However, homophonous qualifying gradable adjectives can co-occur with *ser* and also with *estar* (*búlgaro* ‘Bulgarian’, *español* ‘Spanish’, *socialista* ‘socialist’, *oriental* ‘oriental’, *liberal* ‘liberal’, *criminal* ‘criminal’, etc.), (21a) vs. (21b).

- (20) *Adjectives that combine only with ser (Relational adjectives)*: auténtico (as in *billete auténtico* ‘authentic’), búlgaro ‘Bulgarian’, comunista ‘Communist’, culpable ‘guilty’, español ‘Spanish’, falso (as in *billete falso* ‘false’/‘forged’), semanal ‘weekly’, socialista ‘Socialist’, vegetarian ‘vegetarian’, etc.
- (21) a. Juan {es / \*está} español.  
 Juan is<sub>{SER / \*ESTAR}</sub> Spanish  
 ‘Juan is Spanish.’  
 b. Juan, aunque es alemán, {es/está} muy español.  
 Juan, although is German, is<sub>{SER / ESTAR}</sub> very Spanish  
 ‘Although Juan is German, he behaves like a Spaniard.’

With regard to gradable adjectives, on the one hand, we find adjectives that can only co-occur with *estar*, aside from the *classificative/defining* use of *ser*; these adjectives have generally been called *perfective adjectives* (Bosque 1990) or *cut-short adjectives* (Arche 2006), (22). These adjectives, as Bosque (1990) notes, are generally morphologically-related to verbal participles that have an internal argument and express the result state of a process.

- (22) *Adjectives that combine only with estar (Perfective adjectives)*: absorbo ‘absorbed’/‘captivated’, asombrado ‘astonished’, ausente ‘absent’/‘distracted’, contento ‘happy’, desnudo ‘naked’, descalzo ‘barefoot’, enfermo ‘ill’, enojado ‘angry’, harto ‘fed up’, lleno ‘full’, maltrecho ‘beaten up’, mojado

‘wet’, muerto ‘dead’, perplejo ‘perplexed’, presente ‘present’, quieto ‘still’, satisfecho ‘satisfied’, solo ‘alone’.<sup>4</sup>

These adjectives can appear in absolute nominative clauses, (23), and can be secondary depictive predicates in sentences with stative main predicates, (24). According to Bosque’s (1990) proposal, these properties derive from the fact that these adjectives inherit the eventive argument of the participles they derive from.

- (23) a. Lleno el vaso, ...  
 full the glass, ...  
 ‘(Once) the glass is full, ...’  
 b. Quietos los animales, ...  
 still the animals, ...  
 ‘(Once) the animals are still, ...’
- (24) a. María sabe francés borracha.  
 María knows French drunk  
 ‘María knows French [when] drunk’,  
 b. Pedro adora las matemáticas despierto.  
 Pedro loves the Maths awake  
 ‘Pedro loves Maths [when] awake’.

On the other hand, *non-perfective* gradable adjectives combine both with *ser* and with *estar*, (25). In other words, most adjectives show *variable behavior*, although for many of them the combination with one or the other of the copulas is felt to be more natural by speakers. Moreover, the subject is crucial in many cases to determine combination with *ser* or *estar*. Note that many adjectives can in principle be classified in (22) or (25) as showing different meanings, as the contrasts in (26) show (cf. (10), also *cerrado* ‘close-minded’, ‘timid’/‘closed’, ‘locked’, *listo* ‘clever’/‘ready’, *malo* ‘bad’/‘ill’, *vivo* ‘lively’/‘alive’):

- (25) *Adjectives that combine with both copulas*: auténtico (as in *Juan es auténtico*, ‘sincere’), alegre ‘happy’, alto ‘tall’, bajo ‘short’, cauto ‘cautious’, constante ‘constant’/‘persevering’, cuidadoso ‘careful’, feliz ‘happy’, falso (as in *Juan es falso*, ‘false’), feo ‘ugly’, delgado ‘thin’, flaco ‘thin’, gordo ‘fat’, grande ‘big’/‘tall’, hermoso ‘beautiful’, húmedo ‘humid’/‘damp’, inquieto ‘restless’/‘worried’/‘lively’, joven ‘young’, libre ‘free-spirited’/‘free’, nervioso ‘excitable’/‘nervous’, pequeño ‘small’, orgulloso ‘proud’, fiel ‘faithful’, (im)prudente ‘(im)prudent’, (in)discreto ‘(in)discreet’, (in)capaz

<sup>4</sup>Notice that some of these adjectives (e.g. *muerto* ‘dead’) have been argued to be non-gradable (Syrett 2007). Since adjectives like these appear in comparative constructions and can be modified by proportional modifiers like *medio* ‘half’, we consider them gradable, in the line of Kennedy and McNally (2005):

- (i) a. Esta planta está más muerta que aquella.  
 this plant <sub>ISESTAR</sub> more dead than that  
 ‘This plant is more dead than that one.’  
 b. Esta planta está medio muerta.  
 this plant <sub>ISESTAR</sub> half dead  
 ‘This plant is half-dead.’

‘(un)able’/‘(in)capable’, inteligente ‘intelligent’, presumido ‘arrogant’/ ‘vain’, tranquilo ‘calm’/‘quiet’, transparente ‘transparent’/‘see-through’, viejo ‘old’.

- (26) a. El bebé está despierto.  
the baby is<sub>ESTAR</sub> awake  
‘The baby is awake.’
- a’. Juan {es / está} despierto.  
Juan is<sub>{SER / ESTAR}</sub> alert  
‘Juan is alert.’
- b. La cuerda está tensa.  
the rope is<sub>ESTAR</sub> taut  
‘The rope is taut.’
- b’. La situación {es / está} tensa.  
the situation is<sub>{SER / ESTAR}</sub> tense  
‘The situation is tense.’

We defer the formal explanation of these descriptive generalizations until Sect. 5. We will derive the facts described in this section from a syntactic structure in which two different kinds of comparison classes are introduced above the AP as modifiers of a degree head (Fulfs 2006). In the following section, the formal notions related to adjectival gradability needed to develop our proposal are introduced.

### 3 Standards for adjectival predicates: the relative/absolute distinction

As stated in Sect. 1, we hypothesize that the *relative/absolute* character of adjectives is the relevant property underlying their distribution with the copular verbs *ser* and *estar* in Spanish. This section presents the current debate existing in the literature about the exact characterization of the relative/absolute dichotomy and provides the theoretical background necessary to develop our proposal.

Adjectives are generally divided into *scalar* (*alto* ‘tall’, *húmedo* ‘damp’, *cansado* ‘tired’) and *non-scalar* ones (*semanal* ‘weekly’). Within degree-based approaches to the semantics of adjectives, scalar adjectives are measure functions that express a *scale*,<sup>5</sup> that is, a set of degrees  $D$  linearly ordered (with an increasing or decreasing relation  $R$ ) with respect to a dimension ( $\langle D, R \Delta \rangle$ )<sup>6</sup>. Unlike non-scalar ones, these adjectives allow degree modification, as the following Spanish examples show (see Beltrama and Bochnak 2015 for the proposal that intensifiers like *A-ísimo*—superlative morpheme: ‘extremely’—can modify gradable as well as non-gradable predicates and should be distinguished from degree modifiers):

- (27) a. un chico más {alto / cansado} que tú  
a boy more {tall / tired} than you  
‘A boy {taller / more tired} than you.’

<sup>5</sup>In Fulfs (2006:157) a neo-Davidsonian approach to gradability is proposed in which the measuring function is removed from the adjective meaning and assigned to the degree morpheme.

<sup>6</sup>See Anderson and Morzycki (2015) for a different semantics of degrees.

- b. \*un periódico más semanal que otro  
 a newspaper more weekly than another

Scalar adjectives are further classified as *relative* or *absolute* depending on how the standard value necessary for the truthful applicability of the gradable predicate in its positive form is established. Kennedy and McNally (2005) and Kennedy (2007) argue for grounding this semantic distinction on context dependency, a proposal recently challenged by Toledo and Sassoon (2011) and Sassoon and Toledo (2011). These two different approaches will be presented in the following paragraphs.

### 3.1 Kennedy and McNally (2005) and Kennedy (2007)

In Kennedy and McNally's (2005) and Kennedy's (2007) influential approach, the relative/absolute dichotomy is characterized in terms of context-dependency and is ultimately linked to the absolute scalar properties of adjectives (scalar properties are conceived as part of the lexical entry of any particular adjective). Relative adjectives, like *alto* 'tall', have a context-dependent interpretation: in order to determine whether the property expressed by *tall* in (28a) truthfully applies to the individual, a *standard value* for the property relative to a *comparison class* (e.g. middle-aged European men, Pigmy men) must be established. The interpretation of absolute adjectives (*húmedo* 'damp', *mojado* 'wet', *seco* 'dry'), instead, is not context-dependent: the example in (28b) implies that the towel has a non-zero degree of wetness, so that the standard value required to interpret the predicate is the minimal degree value on the scale. In a similar way, (28c) means that the towel has the maximal value on the scale of the relevant property. Absolute adjectives, therefore, do not require a degree value relative to a contextually determined comparison class in order to be interpreted. The reference value needed to evaluate the predication is the minimal/maximal degree on the adjective's scale.

- (28) a. I saw a tall man. / Vi a un hombre alto.  
 b. una toalla {húmeda / mojada} / a {damp / wet} towel  
 c. una toalla seca / a dry towel

According to Kennedy and McNally (2005) and Kennedy (2007), there is a strong correlation between the kind of standard of comparison associated with an adjective and its scalar properties. Adjectives express a particular kind of scale structure as part of their lexical meaning: closed scales have maximal and/or minimal values (upper-closed scales, lower-closed scales, totally-closed scales) whereas open scales do not have such values. The scale structure is selectively accessed by degree modifiers: *totalmente* 'totally' and *completamente* 'completely' combine with adjectives with upper-closed scales, (29), while *ligeramente* 'slightly' combines with adjectives expressing lower-closed scales, (30) (Kennedy and McNally 2005; Kennedy 2007; Sánchez Masiá 2013 for Spanish).

- (29) Upper-closed A: a. una toalla {completamente / totalmente} seca  
 <math>\langle D\_{(0,1]}, R, \Delta \rangle</math>  
 ○-----●  
 a towel {completely / totally} dry  
 ‘a {completely / totally} dry towel’  
 b. un bolso completamente lleno  
 a bag completely full  
 ‘a completely full bag’
- (30) Lower-closed A: a. una toalla ligeramente húmeda  
 <math>\langle D\_{[0,1)}, R, \Delta \rangle</math>  
 ●-----○  
 a towel slightly damp  
 ‘a slightly damp towel’  
 b. un hombre ligeramente cansado  
 a man slightly tired  
 ‘a slightly tired man’

Adjectives with totally-closed scales can co-occur with both kinds of modifiers, (31). By contrast, open scale adjectives are not compatible with either of them, (32).<sup>7</sup>

- (31) Totally-closed A: un vaso {completamente / ligeramente} {lleno /  
 <math>\langle D\_{[0,1]}, R, \Delta \rangle</math>  
 ●-----●  
 a glass {completely / slightly} {full /  
 vacío}  
 empty}  
 ‘a {completely / slightly} {full / empty} glass’

<sup>7</sup>Combination with degree modifiers must be handled with care as a diagnostic of scalar structure. As Kennedy and McNally (2005) show, maximizers have an additional use in which they are roughly synonymous with *very*. (i). The true maximality use is distinguished because it entails that the end of a scale has been reached. Therefore, the examples in (ii) express contradictions, but the examples in (iii) are not contradictory (English examples from Kennedy and McNally 2005).

- (i) a. I am totally intrigued.  
 b. Es completamente tonto.  
 is<sub>SE</sub>R completely silly  
 ‘He is completely stupid.’
- (ii) a. #The line is totally straight, though you can make it straighter.  
 b. #Este vaso está completamente lleno, pero ese está más lleno.  
 this glass is<sub>ESTAR</sub> completely full, but that is more full  
 ‘This glass is completely full, but that one is even fuller.’
- (iii) a. I’m totally intrigued by bowling, and Kim is even more intrigued by it than I am.  
 b. Eres completamente tonto, pero tu hermano es todavía más tonto que tú.  
 are<sub>SE</sub>R completely silly, but your brother is<sub>SE</sub>R even more silly than you  
 ‘You are completely stupid, but your brother is even more stupid than you.’

Similarly, a degree modifier like *completamente* is compatible with adjectives lacking a maximal degree when it quantifies over entities other than degrees. As Toledo and Sassoon (2011:145, footnote 6) note, degree modifiers can quantify over different sort of entities: “For example, *completely different* can be interpreted as conveying ‘different in every respect’; hence, in this example, *completely* operates over a domain of ‘respects’, rather than over degrees”.

See Sánchez Masiá (2013) for an analysis of scalar sensitivity of degree modifiers in Spanish. In this paper we do not use combination with *muy* ‘very’ as a diagnostic of an open scale structure since, in Spanish, *muy* is perfectly compatible with both closed scale and open scale adjectives: *El vaso está muy lleno*, *Juan es muy alto*. A different approach to the semantic role of degree modifiers is developed in Toledo and Sassoon (2011), Solt (2012) and others.



- (32) Open scale A: \*un niño {totalmente / ligeramente} {alto / inteligente /  
 ( $D_{(0,1)}, R, \Delta$ ) a boy {totally / slightly} {tall / intelligent /  
 ○-----○ gordo... }  
 fat}  
 'a {totally / slightly} {tall / intelligent / fat} boy'

Although scale type and standard value are independent semantic parameters, Kennedy and McNally (2005) and Kennedy (2007) argue for a strong correlation between them. Open scale adjectives (*alto* 'tall') are systematically relative adjectives, with context-dependent standards, since their scale lacks minimal and maximal values. Totally- and partially-closed scale adjectives (*húmedo* 'damp', *mojado* 'wet', *seco* 'dry') could in principle be relative or absolute adjectives, but there is a strong tendency for them to have maximal or minimal absolute standards. In order to account for this strong tendency, Kennedy (2007) introduces a principle of Interpretive Economy which dictates that the standard value (in his terms, the degree that allows the object that the positive form of the adjective is true of to stand out) is chosen on the basis of the conventional meaning of the adjective:

- (33) Maximize the contribution of the conventional meanings of the elements of a sentence to the computation of its truth conditions.  
 (Kennedy 2007:36)

Since the scalar structure is part of the conventional meaning of the adjective, as noted by McNally (2011), insofar as it is derivable from the possible values of the measure function that the adjective denotes, this principle guarantees that when an adjective's scale is closed, its standard will be maximal or minimal. Adjectives with open scales do not provide a conventional degree that meets the requirement of making some individuals stand out with respect to others, and a contextual standard will be selected.

### 3.2 Toledo and Sassoon (2011) and Sassoon and Toledo (2011)

However, very recently, McNally (2011), Toledo and Sassoon (2011) and Sassoon and Toledo (2011) have challenged the grounding of the relative/absolute distinction on absolute scalar properties. Specifically, Toledo and Sassoon (2011) and Sassoon and Toledo (2011) even challenge the characterization of the relative/absolute dichotomy based on context dependency (see also Rotstein and Winter 2004).<sup>8</sup> As

<sup>8</sup>McNally (2011) provides examples of adjectives interpreted with absolute standards that are not scalar endpoints and also examples of adjectives which can be interpreted with non-endpoint standards despite having closed scales. Accordingly, she redefines the relative/absolute dichotomy without resorting to scalar structure and scalar boundaries: what differentiates relative and absolute standards is not the nature of the degree that marks the standard, but rather the applicability criteria for the property in question. Absolute adjectives contribute properties that are ascribed to the individual *via rule*. The property contributed by a relative adjective is ascribed to the individual *via similarity*. Absolute adjectives involve comparing a representation associated with a specific individual (for example one concerning the degree of fullness of a specific class) against a more abstract representation (for example, a degree of fullness for glasses in general). Relative adjectives require comparing a representation of a specific individual or property of that

these authors claim on the basis of examples like (34), the standard of membership of the adjectives depends on the object these properties are predicated of. They thus hypothesize that all gradable adjectives require a standard of comparison established in relation to a comparison class to be interpreted (examples from Toledo and Sassoon 2011:138, (9)).

- (34) a. This child's shirt is dirty.  
b. This tuxedo is dirty.

According to Toledo and Sassoon (2011) and Sassoon and Toledo (2011), the difference between relative and absolute adjectives is determined by the nature of the comparison class evoked to evaluate the truthful applicability of the adjective in each case. The comparison class of an adjective depends on the individual it is predicated of and can be established based on *variance between individuals* (relative adjectives, *The boy is tall*) or based on *variance within the same individual* (absolute adjectives, *The towel is wet*). Relative adjectives are decoded relative to an *extensional category*, generating a 'between-individuals interpretation' in which an individual is compared to other distinct individuals within the index of evaluation (which are also members of the category containing the individual the adjective is predicated of). Absolute adjectives are decoded relative to a *counterpart comparison class*, giving rise to a 'within-individual' interpretation, in which the adjective's argument is compared to its *counterparts* in different indices (world-time pairs): "the description of a shirt as dirty or clean is based on a visualization of that particular shirt in various degrees of grubbiness rather than on its juxtaposition with other concrete shirts" (Toledo and Sassoon 2011:141). That is, only one individual contributes values to the comparison class; *counterparts* are thus "possible temporal stages of the same individual in actual but not present circumstances (i.e. in the past) or in normal although not actual circumstances" (Toledo and Sassoon 2011:146). The role of the comparison class is to highlight a set of values on the lexically encoded adjectival scale which are relevant for assigning truth conditions in a given context.

With respect to the selection of the standard of comparison for each class of adjectives, an *economy principle* (following Kennedy 2007) dictates that an interpretation relative to a maximum or a minimum endpoint *within a comparison class* takes precedence over one relative to an arbitrary midpoint. This principle accounts for the *default* association of an extensional category (relative adjective) with a midpoint standard, on the one hand, and for the default association of a counterpart comparison class (absolute adjective) with an endpoint standard, on the other. As the authors claim, this is because a counterpart class tends to include a natural endpoint, since it is based on variance within a given individual and comprise its different temporal stages, which highly constrain both the make-up of the class and variability within it. Along with the *economy principle*, a grammaticalization principle creates conventions concerning default standard types for different adjectives based on generalizations over different contexts of use. These authors thus also assume a lexicalist approach to the relative/absolute distinction.

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individual against another representation of an equally specific individual or one (or more) of its properties. Thus only relative adjectives are context dependent in the strict sense, but absolute degrees need not be minimal or maximal degrees in absolute scalar terms.

Let us illustrate this proposal with some examples (taken from Toledo and Sassoon 2011:143–44): First, in *This glass is full*, the adjective generates an interpretation relative to a counterpart comparison class comprised of the same glass with different levels of water. This class naturally includes a counterpart that is perceived as maximally *full*. The economy principle thus dictates an interpretation relative to a maximal endpoint. Crucially, “this endpoint is not necessarily the maximum endpoint on the lexicalized scale of the adjective but rather the highest degree of a counterpart in the comparison class” (p. 144). It is not an absolute scale maximal but a comparison-class maximal. Furthermore, since *full* is usually predicated of individuals whose counterpart set has clear norm-based maximal elements, the grammaticalization principle forces the encoding of a convention for selecting a maximum standard for the adjective. *The cup is full* is thus true iff the cup is at least as full or fuller than any of its salient counterparts (so the cup’s degree is the maximum for that cup). Second, in *This towel is wet*, the comparison class associated with the adjective includes counterparts of the towel which manifest different levels of wetness. Thus, the class is highly restricted by what is conceived as normal for that particular individual, including a counterpart that is regarded as minimally wet. Based on the economy principle, the sentence receives an interpretation based on a minimum endpoint standard. In addition, the grammaticalization principle forces the encoding of a convention for selecting a minimum standard for *wet*. Finally, for adjectives like *This boy is tall*, which evoke an extensional-category comparison class, there are no individuals that can be regarded as maximally or minimally tall, so that a midpoint standard is selected (there does not exist a most prominent contextual minimum/maximum for the height of children at a given age), and the grammaticalization principle forces the encoding of this standard as the default convention for the adjective. *The child is tall* is true iff the height of the child is above some midpoint standard within a comparison class ranging over different individuals.

If these default correlations between relative/absolute standards and class-endpoints hold in most cases, based on the *economy principle*, relative adjectives will give rise to entailments of the kind in (35), already noted in Kennedy and McNally (2005) (additional diagnostics for the relative/absolute distinction will be introduced in Sect. 4). Since *tall* selects a contextual midpoint standard, the comparative means that the height of Juan exceeds the height of Pedro, but it does not entail that either of them is above or below the selected contextual standard.

- (35) Relative adjectives:  $X \text{ is more ADJ than } Y \rightarrow X/Y \text{ is (not) ADJ}$   
 Juan is taller than Pedro.  $\rightarrow \{ \text{Juan} / \text{Pedro} \} \text{ is (not) tall.}$

Absolute adjectives, on the other hand, give rise to the entailments in (36). If the standard for *wet* lies by default on a minimum endpoint (comparison-class minimum), the comparative entails that my towel’s wetness exceeds that standard and therefore my towel counts as wet. Similarly, if the standard of *full* lies by default on a maximum endpoint (i.e. a comparison-class maximum, not an absolute scale endpoint), the comparative entails that your bag’s fullness does not reach that maximum, and therefore it is not full (some clarifications about comparative readings of absolute adjectives will be offered in Sect. 4).

- (36) a. Absolute adjectives (Min. endpoint):  $X$  is more ADJ than  $Y \rightarrow X$  is ADJ  
 My towel is wetter than yours.  $\rightarrow$  My towel is wet.
- b. Absolute adjectives (Max. endpoint):  $X$  is more ADJ than  $Y \rightarrow Y$  is not ADJ  
 My bag is fuller than yours.  $\rightarrow$  Your bag is not full.

### 3.3 The relative/absolute distinction and the *ser/estar* alternation. Our proposal

Our proposal, which will be developed in detail in Sect. 5, is that the relative/absolute distinction, characterized in terms of comparison-class formation, is at the basis of the co-occurrence of gradable adjectives with the Spanish copulas *ser* and *estar*. Specifically, we offer a formal and explicit definition of *counterpart* and develop a hypothesis about how the two types of comparison classes argued for in Toledo and Sassoon (2011) are merged in the syntactic structure of adjectival predicates: *estar* co-occurs with absolute adjectives, whereas *ser* co-occurs with relative adjectives. *Ser* and *estar* have as complements predications expressing different ways of attributing properties to subjects. We depart from Toledo and Sassoon's (2011) proposal in two crucial points: (a) the consideration of comparison classes as sets out of which the standard degree necessary to evaluate the truthful applicability of the adjective is computed (and not as restrictors over the domain of application of the measure function, cf. Kennedy 2007), and (b) the consideration of the relative/absolute distinction as a syntactically built up property, and not as a lexical property of adjectives. The proposal that the relative/absolute distinction is not a lexical property of As but is built up in the syntax by functional structure (*pos*-DegP) will allow us to explain the fact that most gradable adjectives are variable-behavior adjectives—as that behave as relative or absolute adjectives, therefore combining with *ser* or with *estar*, (25)—as well as cases of non-variability (*perfective adjectives* combine with *estar*, (22), *relational adjectives* combine with *ser*, (20)). Accordingly, the grammaticalization principle proposed by Toledo and Sassoon (2011) will be regarded as a constraint on the interpretation of the syntactic structure in which adjectives are generated.

But before offering in Sect. 5 our formal account of the co-occurrence restrictions of adjectives in copular sentences, let us take up again in Sect. 4 the paradigm presented in Sect. 2 and show that, consistently, those gradable adjectives that appear in *ser*-sentences behave like relative adjectives with respect to a series of diagnostics, whereas those that appear in *estar*-sentences behave like absolute adjectives.

## 4 Relative and absolute adjectives in *ser/estar* copular structures

Our proposal, as advanced in the previous sections, is that the key distinction accounting for the distribution of gradable adjectives with the Spanish copulas *ser* and *estar* is the *relativelabsolute* distinction. If our hypothesis is on the right track, we expect the adjectives in postcopular position to behave as relative and absolute adjectives in copular sentences headed by *ser* and *estar* respectively.

Let us first explore the behavior of adjectives with respect to the entailment patterns described in Sect. 3.2. Consider first the sentences in (37), which include *perfective adjectives* (*cansado* ‘tired’, *enfermo* ‘ill’, *lleno* ‘full’, *vacío* ‘empty’, recall (22)), i.e. adjectives morphologically-related to verbal participles that have an internal argument and express the result state of a process.

- (37) Juan {está / \*es} {cansado / enfermo}; El vaso {está / \*es} {lleno / vacío}.  
 Juan is<sub>{ESTAR / \*SER}</sub> {tired / ill}; the glass is<sub>{ESTAR / \*SER}</sub> {full / empty}  
 ‘Juan is {tired / ill}.’; ‘The glass is {full / empty}.’

These adjectives show absolute behavior in copular structures, as shown by the entailment patterns in (38). The use of these entailment patterns as a diagnostic of the relative/absolute distinction, as explained in Sect. 3.2, is based on the existence of a default correlation between *between-individuals* comparison classes and mid-point standards and *within-individual* comparison classes and class-minimal/class-maximal standards. In Sect. 5, we will turn back to the interpretation of these default correlations within a syntactic approach to comparison-class formation. In (38a), if the standard of *cansado* ‘tired’ lies by default on a class-minimal endpoint, the comparative entails that Juan’s tiredness exceeds that standard and he therefore counts as tired. Similarly, in (38b), if the standard of *lleno* ‘full’ lies by default on a class-maximal endpoint, the comparative entails that the cup’s fullness does not reach that maximum, and therefore it is not full.<sup>9</sup>

- (38) a. class-minimal standard: X is more ADJ than Y → X is ADJ  
 Juan está más cansado que Pedro. → Juan está cansado.  
 Juan is<sub>ESTAR</sub> more tired than Pedro → Juan is<sub>ESTAR</sub> tired  
 ‘Juan is more tired than Pedro.’ → ‘Juan is tired.’  
 b. class-maximal standard: X is more ADJ than Y → Y is NOT ADJ  
 El vaso está más lleno que la taza. → La taza no está llena.  
 the glass is<sub>ESTAR</sub> more full than the cup → the cup not is<sub>ESTAR</sub> full  
 ‘The glass is fuller than the cup.’ → ‘The cup is not full.’

<sup>9</sup> Note that the comparative form of absolute adjectives has two readings, as noted by Toledo and Sassoon (2011). In one reading, a direct comparison of the degrees of x and y with respect to the property in question is established. In the other, an indirect comparison of the degrees of x and y relative to the degrees of their respective counterparts is established. This reading arises in examples like (i):

- (i) Un vaso completamente lleno está menos lleno que una botella medio llena.  
 a glass completely full is<sub>ESTAR</sub> less full than a bottle half full  
 ‘A completely full glass is less full than a half-full bottle.’

In the *direct comparison of degrees* reading, the amount of water in the glass is smaller than the amount of water in the bottle (the outcome of the measure functions seems to be at stake here, since degrees are directly compared). In the *indirect comparison* reading, each individual is compared to its counterparts: in this case, the glass is fuller than the bottle, although the amount of liquid it holds is smaller. The oddity of the example comes from the interaction of these two readings.

On the other hand, as claimed in Sect. 2, most gradable adjectives combine with both copulas (recall the examples in (25)). For some adjectives, the combination with *ser* seems to be “more natural”, and combination with *estar* has a *coercion flavor* (this is the case with *cauto* ‘cautious’, *discreto* ‘discreet’, *inteligente* ‘intelligent’). For most adjectives (*alto* ‘tall’, *alegre* ‘happy’, *delgado* ‘thin’, *áspero* ‘rough’, *inquieta* ‘restless’), however, the “natural” combination with *ser* and *estar* depends on the subject of the predication: recall the examples in (11), (12), (14) and (15); this is a crucial point to which we will return in Sect. 5. In all cases, these adjectives behave as relative when combined with *ser* with respect to the comparative entailments introduced in Sect. 3.2, as (39), (40) and (41) show. Consider for example (39b). This example means that the height of my daughter exceeds the height of your son, but it does not entail that either of them is above or below the selected contextual standard. This reading arises if the adjective *alto* is interpreted with respect to an extensional comparison class which defaults to a midpoint standard. These adjectives behave as absolute minimal-standard adjectives when combined with *estar*, as the entailments in (41) show.<sup>10</sup>

- (39) Relative adjectives: X is more ADJ than Y  $\rightarrow$  X/Y is (not) ADJ
- a. Juan es más cauto que Pedro.  $\rightarrow$  {Juan / Pedro} (no) es  
 Juan is<sub>SER</sub> more cautious than Pedro  $\rightarrow$  {Juan / Pedro} (not) is<sub>SER</sub>  
 cauto.  
 cautious  
 ‘Juan is more cautious than Pedro.’  $\rightarrow$  ‘{Juan / Pedro} is (not) cautious.’
- b. Mi hija es más alta que tu hijo, pero mi hija no  
 my daughter is<sub>SER</sub> more tall than your son, but my daughter not  
 es alta.  
 is<sub>SER</sub> tall  
 ‘My daughter is taller than your son, but my daughter is not tall.’
- (40) a. Juan es más cauto que Pedro, aunque los dos son  
 Juan is<sub>SER</sub> more cautious than Pedro, although the both are<sub>SER</sub>  
 incautos.  
 incautious  
 ‘Juan is more cautious than Pedro, although both of them are incautious.’

<sup>10</sup> With respect to the possible readings of the comparative in these cases, consider (i):

- (i) Diego está más alto que Alicia.  
 Diego is<sub>ESTAR</sub> more tall than Alicia  
 ‘Diego is taller than Alicia.’

In the direct comparison of degrees reading Alicia is taller than Diego (the degree of height assigned to Alicia is higher than the degree of height assigned to Diego). In the second reading, the height of Alicia relative to the counterpart determining the standard value (which is specifically a contextually salient counterpart) is smaller than the height of Diego relative to his contextually salient counterpart. Therefore, when each individual is compared to his/her counterparts, Diego is (“está”) taller than Alicia, although Alicia may be, in a direct comparison of degrees reading, taller than him.

- b. El gato es más inquieto que el perro, aunque ambos son tranquilos.  
 the cat is<sub>SER</sub> more restless than the dog, although both are<sub>SER</sub> calm  
 ‘The cat is more restless than the dog, although both of them are calm animals.’
- (41) a. \*Mi hija está más alta que tu hijo, pero mi hija no está alta.  
 my daughter is<sub>ESTAR</sub> more tall than your son, but my daughter not is<sub>ESTAR</sub> tall
- b. \*Mi gato está más inquieto que el tuyo, aunque los dos están tranquilos.  
 my cat is<sub>ESTAR</sub> more restless than the yours, although the both are<sub>ESTAR</sub> calm

Crucially, note that these correlations are not based on the absolute scalar structure of the adjective.<sup>11</sup> *Alto* behaves as an open scale adjective in absolute scalar terms in copular sentences (as diagnosed by the combination with degree modifiers like *completamente*, *ligeramente*: \*{*completamentelligeramente*} *alto* ‘completely/slightly tall’) but it can show relative or absolute behavior, (39b) vs. (41a) when combined with *ser* and *estar*. Similarly, adjectives that show closed scale behavior may have relative standards of comparison; an adjective like *transparente* ‘transparent’/‘see-through’ behaves as a closed scale adjective in (42). However, it behaves as a relative adjective, as shown by the entailment patterns in (43), (44) and (45a). When combined with *estar*, it shows absolute behavior, (45a) vs. (45b).

- (42) Ese vestido es completamente transparente.  
 that dress is<sub>SER</sub> completely see-through  
 (# pero podría ser más transparente).  
 but could be more see-through  
 ‘# That dress is completely see-through, but it could be more see-through.’
- (43) El vestido es más transparente que la falda.  
 the dress is<sub>SER</sub> more see-through than the skirt  
 ‘The dress is more see-through than the skirt.’  
 → El vestido es transparente.  
 the dress is<sub>SER</sub> see-through  
 ‘The dress is see-through.’  
 → La falda no es transparente.  
 the skirt not is<sub>SER</sub> see-through  
 ‘The skirt is not see-through.’

<sup>11</sup>These data constitute evidence that contradicts Gumiel-Molina and Pérez-Jiménez (2012). Moreover, the tight relation between scalar structure and the property of being a relative/absolute adjective assumed by these authors forces them to claim that in *La niña está alta* ‘The girl is<sub>ESTAR</sub> tall’ the adjective is interpreted as a lower-bounded adjective with a non-context-dependent standard value, which is a minimal value on the degree scale. However, the example intuitively does not mean that the girl exceeds an absolute minimum of height in a lower-bound scale.

- (44) El vestido es más transparente que la falda (pero los dos son bastante the dress is more see-through than the skirt but the both are quite tupiditos).  
closely-woven  
'The dress is more see-through than the skirt (but both are quite closely-woven).'
- (45) a. Esta camisa es más transparente que la falda, pero no es this shirt is<sub>SER</sub> more see-through than the skirt, but not is<sub>SER</sub> transparente.  
see-through  
'This shirt is more see-through than the skirt, but it is not see-through.'
- b. \*De tanto lavarla, esta camisa está más transparente que la of much clean-it, this shirt is<sub>ESTAR</sub> more see-through than the falda, pero no está transparente skirt, but not is<sub>ESTAR</sub> see-through  
Intended: 'Having been washed so often, this shirt is more see-through than the skirt, but it is not see-through.'

A similar example of an adjective with a (partially) closed scale behavior that may combine with *ser* is *alargado* 'elongated'.

- (46) Este sobre es ligeramente alargado.  
this envelope is slightly elongated  
'This envelope is slightly elongated.'

The same behavior is displayed by adjectives like those illustrated in (47), which refer to different dimensions when constructed with different kinds of subjects. The adjective *seco* 'dry' can mean 'curt' when combined with animate subjects; it means 'without water' otherwise (applied to air, atmosphere, plants). In both cases it may combine with both *ser* and *estar*, exhibiting relative or absolute behavior in each case, as (48) shows. Only when *seco* is interpreted as a perfective adjective (expressing the result of a drying event) is the combination with *ser* impossible, (49a); in this case, it shows absolute behavior, (49b).<sup>12</sup>

- (47) a. Juan es seco. / ¡Qué seco está Juan!  
Juan is<sub>SER</sub> curt / how curt is<sub>ESTAR</sub> Juan  
'Juan is curt.' / 'How curt Juan has been<sub>ESTAR</sub> acting!'

<sup>12</sup>Kennedy and McNally (2005) already noted that *dry* behaves as a relative (in (i)) or absolute adjective (in (ii)) depending on the kind of entity it is predicated of.

- (i) a. This region of the country is drier than that one (though both are dry).  
b. This region of the country is not dry (but it's not wet either).
- (ii) a. The glasses are drier than the plates (#though both are dry).  
b. The glasses are not dry (#though they're not wet either).



- b. El aire es seco. / El aire está seco.  
 the air  $i_{SER}$  dry / the air  $i_{ESTAR}$  dry  
 'The air is dry.'
- (48) a. Juan es más seco que Pedro aunque los dos son sociables.  
 Juan  $i_{SER}$  more curt than Pedro although the both  $are_{SER}$  sociable  
 'Juan is curter than Pedro although both are sociable.'  
 b. El aire de Lisboa es más seco que el de Barcelona, pero  
 the air of Lisbon  $i_{SER}$  more dry than the of Barcelona, but  
 ninguno de los dos es seco.  
 neither of the two  $i_{SER}$  dry  
 'The air in Lisbon is drier than the air in Barcelona, but neither of them  
 is really dry.'
- (49) a. La encimera está seca. / \*La encimera es seca.  
 the counter  $i_{ESTAR}$  dry / the counter  $i_{*SER}$  dry  
 'The counter is dry.'  
 b. El suelo está más seco que la encimera  
 the floor  $i_{ESTAR}$  more dry than the counter  
 → La encimera no está seca.  
 → the counter not  $i_{ESTAR}$  dry  
 'The floor is drier than the counter.' → 'The counter is not dry.'

Gradable adjectives combining with *estar*, specifically *variable behavior adjectives*, also behave as absolute adjectives with respect to other diagnostics. First, as Toledo and Sassoon (2011) claim, inferences can be drawn with absolute adjectives regarding the way a given individual can be, or normally is. These inferences arise, according to them, because adjectives interpreted as absolute have a comparison class comprised of counterparts: possible temporal stages of that same individual in actual but not present circumstances (namely, in the past), or in normal, although not actual, circumstances. A comparison of these counterparts validates inferences concerning how the individual can be. These inferences are obtained in *estar*-sentences, as shown in (50). We will return to this observation in (56) below.

- (50) a. María está alta: Está tan alta como puede estar.  
 María  $i_{ESTAR}$  tall:  $i_{ESTAR}$  as tall as can  $be_{ESTAR}$   
 'María is tall: She is as tall as she can be.'  
 b. María es alta: # Es tan alta como puede ser.  
 María  $i_{SER}$  tall:  $i_{SER}$  as tall as can  $be_{SER}$   
 'María is tall: She is as tall as she can be.'

Second, it is generally claimed in the literature that *for*-phrases are infelicitous with absolute adjectives (*tall for a basketball player*, *??full for a glass*). This is explained in Toledo and Sassoon (2011) because a counterpart comparison class is incompatible with the extensional category referenced by the *for*-phrase. Relative adjectives select an extensional category as a comparison class and are therefore compatible with *for*-phrases, which restrict the comparison class to objects that are members of the set defined by the nominal complement of the preposition *for*. As

shown in (51), an adjective like *short* or *tall* behaves in this respect as a relative adjective when it co-occurs with *ser* and as an absolute adjective when combined with *estar*. Note also that *for*-phrases do co-occur with adjectives interpreted as absolute if the *for*-phrase references counterparts of the individual of which the adjective is predicated, as in (52).

- (51) a. Soy bajo para ser jugador de baloncesto.  
 am<sub>SER</sub> short for be player of basketball  
 ‘I am short for being a basketball-player.’  
 b. #Estoy bajo para ser jugador de baloncesto.  
 am<sub>ESTAR</sub> short for be player of basketball
- (52) a. \*Soy delgada para ser yo.  
 am<sub>SER</sub> thin for be I  
 Intended: ‘I’m thin for being me.’  
 b. Estoy delgada para ser yo.  
 am<sub>ESTAR</sub> thin for be I  
 ‘I look thin for being me.’

In this section we have shown that gradable adjectives co-occurring with *estar* (perfective and non-perfective adjectives) behave like absolute adjectives, as opposed to gradable adjectives combining with *ser*. The following section is devoted to explaining, on the one hand, the variable behavior of most gradable adjectives with respect to the relative/absolute distinction, i.e. the fact that most gradable adjectives can be interpreted as relative or absolute, therefore co-occurring with *ser* or *estar* in copular sentences. On the other hand, we need to explain those cases where variable behavior is not observed, namely perfective adjectives, and also relational adjectives.

## 5 A formal explanation of co-occurrence patterns of adjectives in copular sentences

In this section, we develop the proposal, already sketched out in the preceding sections, that the relative/absolute distinction is at the core of the co-occurrence of gradable adjectives with the copulas *ser* and *estar* in Spanish. Assuming Toledo and Sassoon’s (2011) proposal, the crucial factor to distinguish relative vs. absolute adjectives has to do with the way in which the class of comparison and the standard degree needed to evaluate the adjectival predication is established. Relative adjectives are evaluated with respect to a comparison class comprised of individuals sharing some property (a *between-individuals* comparison class) which defaults to a midpoint standard value. Absolute adjectives are evaluated with respect to a comparison class comprised of counterparts of the stages of the adjective’s subject manifesting different degrees of the property in question (a *within-individual* comparison class); one of these degrees is considered the standard value, which is therefore conceived by default as a class-maximum/minimum value. We hypothesize that being absolute or relative is not a *lexical* property of adjectives. Taking as a point of departure the syntactic and semantic approach to adjectival phrases developed in Abney (1987), Corver (1991) and Kennedy (1999), among others, we claim that the property of being absolute or relative is syntactically linked to the degree

morpheme with which the adjective combines. The degree morpheme, *pos* in the positive form of the adjective, introduces the type of comparison class (Kennedy 1999; Fulst 2006), which is responsible for the categorization of adjectives as absolute or relative. *Ser* and *estar* are analyzed as verbalizers (V) of predications (PredP) expressing different ways of attributing properties to subjects. Both copulas allow the aspectual and tense clausal operators to access the set of events (in a broad sense, to include states) introduced by the PredP selected as complement by the copular verb. *Estar* has as a complement a Predication Phrase that includes stages of the subject of predication while *ser* has as a complement a PredP that does not contain stages of the subject.

This proposal accounts for the following facts:

- (a) The variable behavior of adjectives like *alto* ‘tall’, *delgado* ‘thin’, *alegre* ‘happy’, *nervioso* ‘excitable’/‘nervous’, etc., as seen in examples (1c, c’), (11) (recall the list of variable adjectives in (25)). These adjectives exhibit relative and absolute uses in *ser/estar* sentences, respectively. Section 5.1.
- (b) The ‘coercion flavor’ of adjectives like *cauto* ‘cautious’, *discreto* ‘discreet’, *descortés* ‘impolite’, etc., when combined with *estar*, as shown in (13). Section 5.2.
- (c) The existence of invariable adjectives: perfective adjectives (1b), (22), and relational adjectives, (1a), (20). Sections 5.3 and 5.4.
- (d) The fact that subjects and other arguments, as we will see, determine the combination of the adjective with one of the copulas. Section 5.5.
  - a. Cases like *La niña {es/está} pequeña* ‘The girl is small’, *La computadora {es/\*está} pequeña* ‘The computer is small’ (recall (4), (11), (12)), where the subject seems to play a crucial role in determining the comparison-class needed to evaluate the adjective.
  - b. Eventive subjects only appear in *ser* sentences (except for the evidential reading of *estar* sentences), (14), (15), (16).
  - c. Evidential uses with *estar*, crucially determined by the presence of an experiencer, as will be shown (recall (16), (17)).

Moreover, we will briefly discuss the connection between the relative/absolute distinction and the individual-level/stage-level distinction in Sect. 5.6.

### 5.1 Variable and invariable behavior of adjectives with respect to the relative/absolute distinction: comparison classes within the DegP

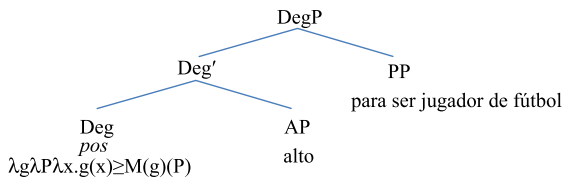
In previous sections, we have shown that gradable adjectives (except for perfective adjectives) exhibit variable behavior in copular structures with respect to their classification as relative or absolute adjectives, hence their co-occurrence with *ser* and *estar*. Our claim is that being a relative or absolute adjective is not an intrinsic lexical property (as also claimed in Park 2008; Husband 2010). The relative/absolute distinction, defined with respect to a comparison class, is introduced in the syntax by functional structure. Specifically, it is connected to the *pos* (i.e. *positive*) morpheme, syntactically generated as the head of the Deg node present in the extended projection of adjectives (Abney 1987; Corver 1991). Assuming a degree se-

mantics for adjectives, the meaning of *pos* is shown in (53).<sup>13</sup> Going back to an earlier proposal by Kennedy (1999), as developed more recently by Fults (2006), our claim is that the comparison class does not act as a restriction of the domain of entities to which the gradable property applies (as argued in Kennedy 2007; Toledo and Sassoon 2011) but instead acts as a (second) argument of the M function introduced by *pos*.<sup>14</sup> The function M sets the standard degree to which the reference degree (i.e. the degree assigned to the individual by the function) is compared, and can be regarded as a “function over gradable properties [g] and comparison class properties [P]” (Fults 2006:134). The comparison class is normally instantiated by a PP headed by *for* in English or *para* in Spanish (Ludlow 1989; Contreras 1993 and many others). This PP is in fact interpreted as a property and the preposition does not receive a semantic interpretation. When the comparison class is not phonetically realized we assume that it is realized as a null pronoun C (Stanley 2000; Kennedy 2007).

$$(53) \quad [[_{Deg}pos]] = \lambda g \lambda P \lambda x. g(x) \geq M(g)(P)$$

An illustrative example is offered in (54). Syntactically, *for*-PPs start out in the derivation below the subject of the AP (Fults 2006:Sect. 2.2.3). Evidence for this comes from the fact that pronouns must be c-commanded by quantifiers that bind them: a pronoun in the *for*-PP can be bound by a quantifier in the subject position in a sentence like *Every boy<sub>i</sub> in my class is smart for a student his<sub>i</sub> age* (see Fults 2006 for additional arguments that *for*-PPs are arguments and generate low in the AP structure; see also Ludlow 1989).

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



<sup>13</sup>We assume that the DegreePhrase is a functional extension of the projection of the lexical category AP (which encodes the dimension expressed by the adjective). The head of the DegP expresses grammatical meaning related, in traditional terms, to the positive/comparative/superlative degree of the adjective. From the point of view of lexical insertion, the abstract functional morpheme expressing positive degree has no phonological expression in Spanish. We remain neutral with respect to the consideration of scalar structure as consubstantial to the dimension expressed by the adjective, hence part of its lexical content, or as grammatical information severed from the adjective and introduced also syntactically by a functional node.

<sup>14</sup>See Solt (2011) and Bale (2011) for overviews of different approaches to comparison classes.

As noted by Fults (2006), this proposal implies that the comparison class of the adjective is severed from the AP. This proposal, together with the hypothesis that the relative-absolute distinction depends on the selection of a *between-individuals/within-individual* comparison class, amounts to the claim that the relative/absolute distinction is not lexically marked on the adjective (except in the case of perfective adjectives, as will be noted below).

We claim that the comparison class introduced by *pos* can be a set of individuals, if it is extensionally defined as the set of individuals  $y$  such that  $y$  is  $P$  or is related to  $P$  in the world of evaluation (this extensional-comparison class is equivalent to the *between-individuals* comparison class of Toledo and Sassoon 2011), (55a).<sup>15</sup> Turning back to the example in (54), since the comparison class for *alto/tall* is comprised of individuals, the function  $M$  applied to this comparison class and to the gradable property returns a midpoint standard as the value to which the reference degree is compared, (55b).

- (55) a. Comparison class =  $\{y : P(y)\} = \lambda y.P(y)$   
 b. Juan es alto para ser jugador de fútbol. ‘Juan is tall for a soccer player.’  
 [[Juan es alto para ser jugador de fútbol]]<sup>w,t</sup> = 1 iff the degree of Juan’s height is equal to or greater than the standard degree of height of members of the class of soccer players as given by function  $M$ .

On the other hand, the comparison class introduced by *pos* can be intensionally defined (this is equivalent to the *within-individual* comparison class by Toledo and Sassoon 2011) as in (56), where  $w'$  ranges over world-time pairs.  $A$  is an accessibility relation that, given a world  $w$ , relates  $w$  to worlds  $w'$  which are normal or where all the things that normally hold hold (Asher and Morreau 1995).

- (56) Comparison class =  $\lambda s.\forall w'[[w'Aw][x \text{ is } R(\text{ealized}) \text{ as } s \text{ at } w' \ \& \ P(x) \text{ or } x \text{ is related to } P \text{ at } s \text{ in } w']]$

Given a world, the function in (56) returns the set of stages such that for every accessible typical world  $w'$ , the individual  $x$  has a realization  $s$ , and  $x$  normally {manifests/is/is related to}  $P$  at  $s$  in  $w'$ . This comparison class is effectively within individuals, in particular within the individual  $x$ , the argument of the predicate. From this viewpoint, stages are counterparts, entities that are instantiated in worlds in which typicality holds and the comparison class is intensional. The normative component represented as the accessibility relation  $A$  present in the characterization of the set of stages that comprise the counterpart’s comparison class explains the pattern exemplified above in (50).

Let us illustrate with example (57). In the case of *lleno* ‘full’, the comparison class is comprised of different stages of the predicate argument, the restaurant in this particular case, as this argument is instantiated in different stages in every contextually salient typical world. It is therefore a *within-individual* comparison class. The

<sup>15</sup>The precision made in the text allows us to account for cases like *El calor es intenso para ser invierno* (lit. The heat is intense to be winter; ‘For winter, the heat is intense.’). The fact that in many cases the individual argument of the gradable adjective  $x$  is also  $P$  must be derived as an implicature (Fults 2006:176 and ff.).

function  $M$  will apply to this class and will return as its value one of the degrees of the gradable property as it is instantiated as a stage in those typical worlds. The fact that the degrees in question are manifested through stages has the consequence that the standard degree selected by  $M$  will count as maximal or minimal (within the comparison class). The adjective is thus interpreted as absolute.

- (57) a. El restaurante está lleno.  
the restaurant is<sub>ESTAR</sub> full  
'The restaurant is full.'
- b.  $C = \lambda s. \forall w' [[w'/Aw][x = \text{the restaurant is R(ealized) as } s \text{ at } w' \ \& \ P(x) \text{ or } x \text{ is related to } P \text{ at } s \text{ in } w']]$
- c.  $[[\text{El restaurante está lleno } C_{\text{PRO}}]]^{w,t} = 1$  iff the degree of fullness of the restaurant is equal to the standard (maximal) degree of fullness of the restaurant as it would be typically instantiated (realized) as a stage  $s$  included in every normal world  $w'$ .

As mentioned above (cf. (51), (52)), *for*-phrases can be combined with relative or absolute adjectives, contrary to what has generally been claimed in the literature. In our proposal, *for* phrases are possible with adjectives interpreted as absolute as long as they pick out different situations incorporating the object, therefore different stages of the object, (58) (Spanish example adapted from McNally 2011).

- (58) a. El restaurante está lleno para ser miércoles.  
the restaurant is<sub>ESTAR</sub> full for be Wednesday  
'The restaurant is<sub>ESTAR</sub> full for a Wednesday.'
- b.  $C = \lambda s. \forall w' [[w'/Aw][x = \text{the restaurant is R(ealized) as } s \text{ at } w' \ \& \ x = \text{the restaurant is at } s \text{ on Wednesday in } w']]$
- c.  $[[\text{El restaurante está lleno } [_{\text{PP}} \text{ para ser miércoles}]]]^{w,t} = 1$  iff the degree of fullness of the restaurant is equal to the standard (maximal) degree of fullness of the restaurant as it would be typically instantiated (realized) as a stage  $s$  in a Wednesday included in every normal world  $w'$ .

The selection of a *between-individuals* comparison class or a *within-individual* comparison class will give rise to the relative or absolute characterization of adjectives. The alternation between these two possible classes of comparison can be understood as a manipulation related to the PP node expressing the comparison class (following Klein's 1980:17 ideas). For example, in (59), the PP node allows the formation of a comparison class comprised of different stages incorporating the predicate argument. The factors conditioning the choice of a *between-individuals* or a *within-individual* comparison class will be analyzed in Sect. 5.6.

- (59) a. Juan está alto para su edad.  
Juan is<sub>ESTAR</sub> tall for his age  
'Juan seems tall for his age.'
- b.  $C = \lambda s. \forall w' [[w'/Aw][x = \text{Juan is R(ealized) as } s \text{ at } w' \ \& \ x = \text{Juan is at } s \text{ manifesting X-age in } w']]$
- c.  $[[\text{Juan está alto } [_{\text{PP}} \text{ para su edad}]]]^{w,t} = 1$  iff the degree of Juan's height is greater than the standard degree of Juan's height as it would be typically instantiated (realized) as a stage  $s$  for his age in every normal world  $w'$ .

In favor of the proposal developed in this paper and against the hypothesis that *ser* and *estar* impose a concrete reading on their adjectival complements is the fact that relative and absolute readings of adjectives also obtain when the adjective is a modifier within the DP, as (60) shows.<sup>16,17</sup> In these examples, the adjectives *despistada* ‘distracted’/‘clueless’ and *gorda* ‘fat’ receive an absolute interpretation (in fact, *despistada con el recorrido*, *gorda por el embarazo* could only appear in copular sentences headed by *estar*).

- (60) a. Una chica despistada sobre el recorrido  
 a girl distracted about the itinerary  
 ‘a girl clueless about the itinerary’  
 b. Una gata gorda por el embarazo  
 a cat fat because.of the pregnancy  
 ‘a cat that is fat because of pregnancy’

Postnominal modifiers have been generally analyzed in Romance languages as generated in a small-clause structure (Cinque 1994, 2010; Larson and Takahashi 2007; Demonte 1999, 2008 and Gutiérrez-Rexach and Mallén 2001, 2002—specifically for Spanish—among many others). Cinque (1994) claims that predicative adjectives are base-generated as predicates (Adjectival Phrases) inside a small clause structure. These APs are predicated of an empty argument subject, itself controlled by the host DP, (61a). For Demonte (1999), postnominal adjectives originate in a small clause that is a sister of the head of the NP. This N is empty and is coindexed with the NP that is the subject of the small clause, (61b). Sánchez (1996) and Mallén (2001) argue specifically for a PredP as the base structure of postnominal adjectives inside the DP (see Alexiadou et al. 2007; Demonte 2011 for overviews). If an analysis of this type is assumed for (60), the different readings of the adjectives receive a straightforward explanation according to our proposal, since the relative/absolute character of the adjective is triggered by the DegP.

- (61) a. [DP una [NP [NP madre]<sub>j</sub> [AGRP PRO<sub>j</sub> orgullosa de su hijo]]]  
 a mother proud of her son  
 ‘a mother proud of her son’  
 b. [NP e<sub>Ni</sub> [SC libro<sub>NPi</sub> interesante<sub>AP</sub>]]  
 book interesting  
 ‘interesting book’

Note that according to this proposal, any gradable adjective could, in principle, receive an interpretation as a relative or absolute adjective (crucially, independently of its scalar structure). Consequently, we expect that any adjective can co-occur with *ser* and *estar*. This is in fact what we found for adjectives like *alto* ‘tall’, *pequeño* ‘small’, *nervioso* ‘excitable’/‘nervous’, *alegre* ‘happy’, *transparente* ‘transparent’/‘see-through’, etc. Assuming a lexicalist approach to the relative/absolute distinction would lead us to claim that most gradable adjectives have

<sup>16</sup>Thanks to Katerine Santo for providing these examples.

<sup>17</sup>See, in the same line, Fábregas (2012). For a different line, see Demonte (1999) and Arche (2006).

a double lexical classification as relative and absolute. Our point of view is that this kind of regular polysemy is best explained in syntactic terms, especially if we consider the crucial role of the subject of predication in determining the relative or absolute reading of the adjective. Moreover, as will be shown in Sect. 5.5, dative experiencers play a role parallel to subjects, since their presence triggers an absolute reading of adjectives, giving rise to contrasts like *El bikini {es/??está} pequeño* ‘The bikini is<sub>{SER/??ESTAR}</sub> small’ vs. *El bikini me {está/\*es} pequeño* lit. The bikini is<sub>{ESTAR/\*SER}</sub> me<sub>DATIVE</sub> small, ‘The bikini is small for me’. The fact that subjects and dative experiencers share syntactic properties, both being structurally prominent arguments, also supports a syntactic approach to the relative/absolute distinction.

## 5.2 The ‘coercion flavor’ of lexical dispositional adjectives with *estar*. The role of the grammaticalization principle

Remember that, as mentioned above, the combination of adjectives like *discreto* ‘discreet’, *cauto* ‘cautious’, *cruel* ‘cruel’, *amable* ‘kind’, *inteligente* ‘intelligent’, etc. with the copula *estar* seems to be unnatural for many speakers. These adjectives share the property of being *lexical dispositional adjectives*, i.e. adjectives that express a generalization over situations (Krifka et al. 1995; see also Dixon 1982; Bierwisch 1989; Stowell 1991; Arche 2006, 2011). If a predicate like ‘be intelligent’ is attributed to a person, we would expect that this person typically shows a particular regular behavior: ‘intelligent behavior’. Dispositional non-verbal predicates have distinct properties: for example, they show dynamicity (they are possible in the progressive, (62)) and also agentivity (they are possible in the imperative, (63)).

- (62) a. Juan está siendo muy inteligente al responder a esas preguntas.  
 Juan is<sub>ESTAR</sub> being<sub>SER</sub> very intelligent to.the answer to these questions  
 ‘Juan is being very intelligent in answering these questions.’  
 b. Juan está siendo muy cruel con María.  
 Juan is<sub>ESTAR</sub> being<sub>SER</sub> very cruel with María  
 ‘Juan is being very cruel with María.’
- (63) a. Sé inteligente.  
 be<sub>SER</sub> intelligent  
 ‘Be intelligent.’  
 b. No seas cruel.  
 not be<sub>SER</sub> cruel  
 ‘Don’t be cruel.’

According to Krifka et al. (1995), these dispositional predicates have a generic operator (GEN) provided by the lexicon that binds a stage-level variable *s* (Wilkinson 1991; Carlson 2010). Therefore this variable is not available for those semantic composition operations that are needed to build a *within-individual* comparison class, since it cannot co-vary with within-individual changes.

- (64)  $\lambda x. \text{GEN}[s] (x \text{ in } s; x \text{ shows intelligent behavior in } s)$



The grammaticalization principle (65) proposed by Toledo and Sassoon (2011) can be understood in our proposal as a kind of default pragmatic principle constraining the interpretation of the syntactic structure in which adjectives are generated, virtually triggering the *between-individuals* comparison class reading as the default for dispositional adjectives.

- (65) Grammaticalization principle: the type of standard that is usually selected for an adjective is encoded as a default convention.

(Toledo and Sassoon 2011)

In those theories arguing for a selection restriction between copulas and adjectives, the combination of dispositional adjectives with *estar* has generally been accounted for in terms of *coercion*. Adjectives like those aforementioned are generally classified as individual-level adjectives that, when combined with *estar*, are coerced into a stage-level reading. As proposed by Escandell and Leonetti (2002:163), “coercion is a reinterpretation process set up to eliminate the conflicts between the semantic content of a constituent [the adjective] and the requirements of other elements in the same construction [the copula in this case]”. Within the proposal developed in this paper, the coercion flavor of sentences like (66) (recall (13)) can be interpreted as an effect of syntactically forcing the grammaticalization principle (65) to be overridden. In other words, the combination of some adjectives with *estar* will be more marked in those cases where the adjective expresses a property that is least likely to be conceived as predicated of stages of the subject. This is the case with dispositional properties.

- (66) a. Hoy estás realmente cauto.  
today are<sub>ESTAR</sub> really cautious  
‘Today you are being really cautious.’

### 5.3 Invariable adjectives: perfective adjectives

Let us consider now perfective adjectives such as *cerrado* ‘closed’ or *harto* ‘fed up’, which combine with the copula *estar* and exhibit invariably absolute behavior.

- (67) a. La puerta {está / \*es} cerrada.  
the door is<sub>{ESTAR / \*SER}</sub> closed  
‘The door is closed.’  
b. Juan {está / \*es} harto.  
Juan is<sub>{ESTAR / \*SER}</sub> fed up  
‘Juan is fed up.’

Within the approach to the relative/absolute distinction developed in this paper, we are forced to assume that *perfective adjectives* encode information that makes impossible the combination of the AP with an extensional comparison class. Intuitively, the fact that these adjectives have a lexical relation with participles/verbs seems to be crucial, as noted by Bosque (1990) and others for Spanish, and Kennedy and McNally (1999) and Kennedy (2007) for English. As Kennedy and McNally (2005) note, the scales of deverbal adjectives like *full*, *empty* depend on sub-stages of an event denoted

by the respective verbs, i.e. stages of filling or emptying of the objects the adjectives are predicated of. It could thus be argued that these adjectives codify as part of their lexical meaning a natural transition (i.e. they name the initiation or culmination point of an event) that cannot be overridden in the formation of the comparison class. In other words, the concepts evoked by perfective adjectives are unable to be modeled according to a *between-individuals* comparison class. Natural transitions could be thus regarded as different from scale limits or endpoints.<sup>18</sup>

Consider under this view the following contrast (inspired by Magri 2009; Thomas 2012) between *alto* ‘tall’ in (68a) with an absolute reading, and *cerrado* ‘closed’ (68b), a perfective adjective with a lexically encoded absolute reading. The readings induced by the temporal existential quantifier *a veces* ‘sometimes’ are quite different.

- (68) a. Juan está a veces alto.  
 Juan <sub>IS<sub>ESTAR</sub></sub> sometimes tall  
 ‘Sometimes, Juan is tall.’  
 b. La puerta está a veces cerrada.  
 the door <sub>IS<sub>ESTAR</sub></sub> sometimes closed  
 ‘The door is sometimes closed.’

In the case of (68a), the temporal quantifier *a veces/sometimes* triggers the inference that the degree of Juan’s height is subject to variation across short intervals of time in the world of evaluation as compared to stages across normal or typical worlds, and therefore the temporal adverbial contributes to form a *within-individual* comparison class with respect to height. The crucial point is that there is no quantification over events in this case, as shown by the fact that there are no events that can be anaphorically recovered in the discourse by a DP referring to events such *en esos momentos*: ...#*y en esos momentos Juan puede bloquear tiros de tres puntos*!...#*and in those moments, Juan can block three points shots*. However in (68b), we find quite the opposite. The temporal quantifier *a veces/sometimes* asserts the existence of at least one event of the door being closed. The temporal adverbial in this last example does not contribute to the formation of a comparison class but binds the event argument obligatorily introduced by the perfective adjective and existentially quantifies over it. The event can be anaphorically recovered: ...*y en esos momentos, nadie puede entrar*!...*and in those moments, nobody can get pass it*. We take this difference as an argument for the claim that perfective adjectives have a transparent (to some extent) eventive structure that forces them to have an absolute reading. They cannot be coerced into relative adjectives because of the presence of underlying event structure.

#### 5.4 Invariable adjectives: relational adjectives

Finally, let us consider the case of relational adjectives, which combine invariably with *ser*, (69) (recall the examples in (20)). These non-gradable adjectives express class membership (Fábregas 2007; Gil and Gutiérrez 2012; Roy 2013) (examples of

<sup>18</sup>Fábregas (2012) shows that some perfective adjectives like *atónito* ‘astonished’, *perplejo* ‘perplexed’ do not have equivalent verbs in contemporary Spanish, although they come from the participles of Latin verbs. This author concludes that the properties that determine the combination of perfective adjectives with *estar* cannot be attributed to a systematic relation with verbs.

non-relational gradable uses of these adjectives are given between brackets; note that the adjective in those cases can combine with both *ser* and *estar*).

- (69) a. Esta crema es protectora. [Su madre {es / está} muy protectora.]  
 this cream is sunscreen [his mother is<sub>{SER / ESTAR}</sub> very protective]  
 ‘This cream is a sunscreen cream.’ [‘His mother is very protective.’]  
 b. Este periódico es alemán. [Juan {es / está} muy alemán.]  
 this newspaper is German [Juan is<sub>{SER / ESTAR}</sub> very German]  
 ‘This newspaper is a German one.’ [‘Juan behaves like a German.’]

As argued in Fábregas (2007), relational adjectives show the semantic and formal behavior of nouns, because syntactically they contain a nominal projection within their structure, (70). They exhibit adjectival inflection because the nominal projection is combined with a matrix of features which are spelled-out as agreement morphemes; however, these adjectival features are semantically defective and therefore unable to project their label. The result is, to use a metaphor, “a noun in disguise”.

- (70) [nP a° n [n' n° √]

Roy (2013) also regards adjectives expressing affiliations to nationalities or social groups as nouns from the categorial point of view (Nom(A)). Accordingly, *estar* will never surface with these adjectives.<sup>19</sup> Alternatively, Boleda et al. (2012) and

<sup>19</sup> According to Roy (2013), as mentioned above, *ser* co-occurs with +N categories and *estar* co-occurs with –N categories. Therefore, the facts described in the text are related to the generalization that nouns always co-occur with *ser* in copular sentences:

- (i) a. Juan {es / \*está} presidente.  
 Juan is<sub>{SER / \*ESTAR}</sub> president  
 ‘Juan is the president.’  
 b. María {es / \*está} monja de clausura.  
 María is<sub>{SER / \*ESTAR}</sub> nun of enclosed-monastery  
 ‘María is a cloistered nun.’

Nouns can appear with *estar* if they are coerced into gradable entities. This is also the case with relational adjectives, as seen in the text.

- (ii) a. Estás muy monja últimamente.  
 are<sub>ESTAR}</sub> very nun lately  
 ‘You are acting like a nun lately.’  
 b. Él estuvo muy fiero en la negociación.  
 he was<sub>ESTAR}</sub> very beast in the negotiation  
 ‘Juan was acting like a beast during the negotiations.’

We would like also to suggest that the so-called classificative use of *ser* is the result of having a noun as the complement of PredP (see Roy 2013 for a parallel proposal). Therefore, in examples like (iii) (cf. (19)), the forms *limpio* and *frío* must be considered nouns, which is compatible with the kind of kind of syntactic approach taken in this paper.

- (iii) a. Este mantel es limpio.  
 this tablecloth is<sub>SER}</sub> clean  
 ‘This tablecloth is clean.’  
 b. ¿Esa leche es fría?  
 that milk is<sub>SER}</sub> cold  
 ‘Is that milk cold?’

Arsenijević et al. (in press) argue for an adjectival analysis of relational adjectives and analyze them as modifiers of kinds. In this case, we should get only a *between-individuals* comparison class with these adjectives, hence their co-occurrence with *ser*.

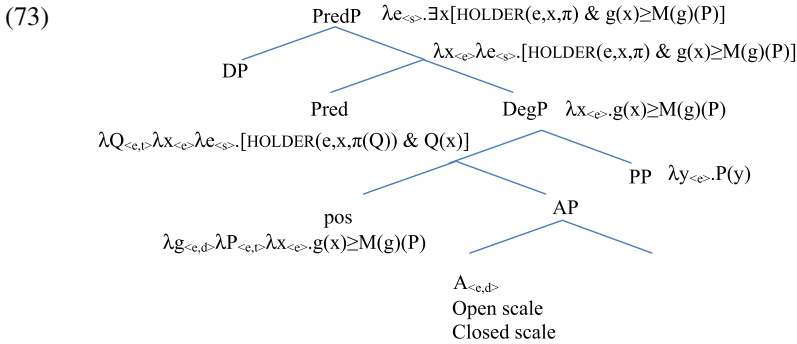
### 5.5 The role of subject and experiencers in adjectival variability. PredP and VP in copular sentences

Let us now specifically consider the crucial role of the subject of predication in the relative/absolute behavior of adjectives and, consequently, in co-occurrence with *ser/estar* in copular structures.

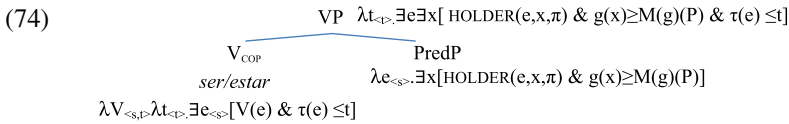
Following standard assumptions about the structure of copular sentences, we assume that copulas are verbs (V) selecting for a Predication Phrase as complement (Bowers 1993; Baker 2003; Mikkelsen 2005 and others). The PredP structure is not exclusive to copular sentences since it also arises in small clauses, (71), and has also been proposed for postnominal adjectives in Romance languages as noted above, (72). Consequently, copular verbs are not equated with the Pred node (Baker 2003; Adger and Ramchand 2003; Mikkelsen 2005).

- (71) a. Vi a Juan cansado.  
saw to Juan tired  
'I saw John tired.'; 'Juan appeared tired to me.'
- b. Considero a María inteligente.  
consider to María intelligent  
'I consider Mary intelligent.'
- (72) a. un niño cansado  
a boy tired  
'a tired boy'
- b. un niño alto  
a boy tall  
'a tall boy'

The PredP, which has the DegP as complement, introduces the argument to which the reference degree is assigned (the subject of predication) via functional application. Based on Brownlow (2011), we claim that the Pred head introduces a predicate of events and individuals by which the predicate argument receives the thematic role of holder of a property  $\pi$ , an abstract description of the property expressed by the degree phrase—in this and subsequent trees, tokens of symbol  $\pi$  above Pred abbreviate  $\pi(\lambda x_{(e)}.g(x) \geq M(g)(P))$ . The Pred head also introduces the individual argument of the gradable property. The result is a predicate of events (in the broader sense) that holds of an individual such that the degree in which this individual manifests the gradable property is equal to or greater than the standard degree that the gradable property is possessed by members of the comparison class.



Copular verbs are typical of languages in which Tense cannot select PredP directly (Adger and Ramchand 2003; Rothstein 2001). Spanish is a language where non-verbal predicates lack properties typically associated with the category Verb, specifically the ability to be directly compatible with Tense, Aspect and Mood. This information must be supported by a verbal element. In this sense, copulas are *verbalizers*<sup>20</sup> that allow aspectual and tense operators to get access to the set of events introduced by PredP. The copula projects a property of eventualities into a property of times, the result of which is a property of times *t* such that *t* is equal to or preceded by the temporal trace or running time of an event,  $\tau(e)$ , (Krifka 1989/1992), as represented in (74).



It must be noted that the proposal that  $V_{ESTAR}$  has as a complement a Predication Phrase (PredP) that includes stages of the subject of predication while  $V_{SER}$  has as a complement a PredP that does not contain stages of the subject is compatible with traditional approaches that claim that *ser/estar* have selection restrictions as part of their meaning which determine (in semantic and/or syntactic terms) the possible complements they may combine with; in this case, the semantics of each copula presented in (74) need to be enriched. It is also compatible with more recent approaches that claim that *ser/estar* are the spell-out reflexes of some semantic/syntactic property of their PredP complements (Gallego and Uriagereka 2009; Gumiel-Molina and Pérez-Jiménez 2012); in this case, the exact syntactic and/or semantic environment determining the lexical insertion of each of the copulas should need to be made explicit. We remain deliberately neutral on this aspect.

The structure in (74) accounts for the fact that the alternation between the two copulas is conditioned by the subject of predication, as was noted in Sect. 2. The DP in the specifier of the PredP provides the property *P* used to form the comparison class. Consider the contrast between (75) and (76)–(77) (cf. (11), (12) above).

<sup>20</sup>We take this term from Schmitt (2005), who claims that *ser* is a transparent verbalizer, whereas *estar* is a non-transparent verbalizer. For other authors, copulas are generated directly in T, to support tense morphemes (cf. Roy 2013).

- (75) a. La niña es {grande / pequeña}.  
the girl is<sub>SER</sub> {big / small}  
'The girl is {tall / short}.'
- b. La niña está {grande / pequeña}.  
the girl is<sub>ESTAR</sub> {big / small}  
'The girl is looking {tall / short}.'
- (76) a. La computadora es {grande / pequeña}.  
the computer is<sub>SER</sub> {big / small}  
'The computer is {big / small}.'
- b. ??La computadora está {grande / pequeña}.  
the computer is<sub>ESTAR</sub> {big / small}  
'The computer appears to be {big / small}.'
- (77) a. El bikini es {grande / pequeño}.  
the bikini is<sub>SER</sub> {big / small}  
'The bikini is {big / small}.'
- b. ??El bikini está {grande / pequeño}.  
the bikini is<sub>ESTAR</sub> {big / small}  
'The bikini appears to be {big / small}.'

In (75a), it is claimed that the girl is tall (lit. 'big') with respect to a *between-individuals* comparison class (e.g. little girls at school). Similar interpretations arise for (76a) and (77a): the computer and the bikini are evaluated as big/small with respect to a *between-individuals* comparison class. In (75b), on the other hand, the adjective is interpreted with respect to counterparts of the subject (different stages of the individual across typical worlds), and the sentence roughly means that the degree of the girl's height is equal to or greater than the standard degree of the girl's height as it would be typically instantiated in every contextually determined normal world. However, (76b) and (77b) are odd because such an interpretation is not possible. Since the size of the computer/bikini is not subject to variation in the normal worlds needed to build the *within-individual* comparison class based on stages, the absolute interpretation of the adjective with respect to this subject is not possible. The example becomes grammatical if a situation is built that makes it possible to take into account different (previous) stages of the computer/bikini as a class of comparison. This is in fact the case in the context shown in (78), which we dub "magic show context". In this particular context we are forced to consider previous stages of the individual providing the pool from which the "normal" worlds that comprises the *within-individual* comparison class are selected.

- (78) a. Cuenta 1, 2, 3 y la computadora estará grande.  
count 1, 2, 3 and the computer will.be<sub>ESTAR</sub> big  
'Count to three... and the computer will be big.'

As (79) shows, the presence of an explicit experiencer (EXP) argument *me/to me* makes the examples in (76b) and (77b) grammatical. The experiencer triggers an unexpected absolute reading of the adjectives, as noted by Romero (2009).

- (79) a. Este ordenador me<sub>EXP</sub> está pequeño.  
 this computer to-me is small  
 ‘This computer seems small for me.’  
 b. El bikini me<sub>EXP</sub> está pequeño.  
 the bikini to-me is small  
 ‘This bikini does not fit: it is too small for me.’

In this case, the comparison class seems to be formed on the basis of the experiencer, not on the basis of the subject of predication. By contributing counterparts of stages to the comparison class, the experiencer allows the construction of a *within-individual* comparison class. Here it is perfectly possible to conceive variance with respect to typical worlds in which the experiencer’s perception of the size of the computer is almost normative.

Let us consider now the *evidential* use of *estar* in examples like the following:

- (80) a. El pastel está {malo / bueno}.  
 the cake is<sub>ESTAR</sub> {good / bad}  
 ‘The cake is {good / bad}.’  
 b. El jamón serrano estaba delicioso.  
 the serrano-ham was<sub>ESTAR</sub> delicious  
 ‘This serrano-ham was<sub>ESTAR</sub> delicious.’

The evidential use of *estar* is generally reported in cases where the adjectival predicate is an evaluative adjective. These cases seem to be similar to those in (79) with respect to the fact that the property variance is evaluated with respect to an implicit experiencer<sup>21</sup> and to normal worlds in which the typical perceptions of the experiencer hold. The experiencer, again, allows the formation of a *within-individual* comparison class. This explanation follows Franco and Steinmetz’ (1983:31) intuition that the evidential use arises from the comparison between the speaker’s perceptual expectancy regarding the entity described and the speaker’s actual sensory perception of the entity at utterance moment. The comparison class is thus defined not with respect to the subject of predication *per se*. This is the crucial point to understand these cases. The fact that not only the subject but also explicit and implicit experiencers may trigger absolute readings of adjectives is an argument against the proposal by Toledo and Sassoon (2011) that the comparison class is a lexically encoded property of each adjective. What we have observed is that the *within-individual* comparison class needed to trigger the absolute reading cannot be formed until subjects or experiencers have been merged in the syntax.

Remember that, as stated in Sect. 2, the evidential use is the only context where eventive subjects combine with *estar*, (81a) (with an *evaluative adjective*) vs. (81b) (with a *lexical-dispositional adjective*). The reason is that, in the evidential reading, counterparts are related not to the subject, as just explained, but rather to an implicit experiencer introduced by the evaluative adjective (*divertida [para x]* ‘fun for x’). Eventive subjects are ungrammatical with *estar* because it is impossible to conceive counterparts (for example, previous stages) for an event given the fact that events are

<sup>21</sup> For more on implicit arguments of evaluatives, see Epstein (1984), Bhatt and Izvorsky (1998), Lasersohn (2005) and Pancheva (2006).

individuated by spatiotemporal regions and these do not exist transworldly (Lewis 1983; Landman and Morzycki 2003).<sup>22</sup>

- (81) a. La fiesta estuvo muy divertida.  
 the party was<sub>ESTAR</sub> very fun  
 ‘The party was a lot of fun.’  
 b. Su comportamiento {fue / \*estuvo} muy descortés.  
 his behavior was<sub>{SER / \*ESTAR}</sub> very impolite  
 ‘His behavior was very impolite.’

Subjects and experiencers thus have a privileged role in the construction of the comparison class of the adjective. Note that, in (82), if a pronoun appears inside the PP expressing the comparison class, it has to co-refer with the subject. In (83a), both the subject and the experiencer can co-refer with the subject of the *for*-PP (so that ‘size 40’ can refer both to the bikini and the person referred to by *her*). In (83b), only the bikini can be size 40.

- (82) a. Juan está alto para {su / \*mi} edad.  
 Juan is<sub>ESTAR</sub> tall for {his / \*my} age  
 ‘Juan is tall for {his / \*my} age.’  
 b. Soy alta para {mi / \*tu} edad.  
 am<sub>SER</sub> tall for {my / \*your} age  
 ‘I am tall for {my / \*your} age.’
- (83) a. El bikini<sub>i</sub> le<sub>m</sub> está pequeño para [PRO<sub>i/m</sub> tener una talla 40].  
 the bikini her<sub>DAT</sub> is<sub>ESTAR</sub> small to have a size forty  
 ‘The bikini is small for her, {because it is a size 40 / because she wears a size 40}.’  
 b. El bikini<sub>i</sub> es pequeño para [PRO<sub>i</sub> tener una talla 40].  
 the bikini is<sub>SER</sub> small to have a size forty  
 ‘The bikini is small for a size 40.’

There seems to exist, therefore, a locality relation between subjects/experiencers and the PP expressing the comparison class. This, together with the fact that preverbal dative experiencers can control the argument of adjunct clauses in copular structures, argues for a prominent syntactic position of dative experiencers inside the PredP. In (84a) the null subject of the purpose clause receives an arbitrary interpretation (it cannot co-refer with the subject *el bikini* for semantic reasons); in (84b), however, the subject is controlled by the dative experiencer.

- (84) a. El bikini es pequeño para PRO<sub>ARB</sub> nadar cómodamente.  
 the bikini is<sub>SER</sub> small to swim comfortably  
 ‘The bikini is too small to swim comfortably.’  
 b. El bikini me<sub>i</sub> está pequeño para PRO<sub>i</sub> nadar cómodamente.  
 the bikini me<sub>DAT</sub> is<sub>ESTAR</sub> small to swim comfortably  
 ‘The bikini is too small for me to swim comfortably.’

<sup>22</sup>We thank Manuel Leonetti for suggesting this line of reasoning.



Let us assume that this kind of experiencers are introduced in the derivation by a high applicative node that establishes a relation between the DP licensed in its Spec position and the event, introduced in our structures by the Pred head, (85) (Pylkkänen 2002, 2008; Cuervo 2008, 2010; Pujalte 2009). The individual expressed by the dative is interpreted as affected by the state of the object (possession of the object may also be derived as an implicature).

(85) [AppIP *me* [PredP Subject [Pred' Pred [DegP ... ]]]]

## 5.6 Relative/absolute adjectives and individual-level/stage-level adjectives

To conclude, let us address the following question: What determines the choice of a *within-individual* comparison class vs. a *between-individuals* comparison class? Two grammatical factors seem crucial. First, as we have made explicit above, there are interactions between the subject of predication and the comparison class available. The subject of predication must be subject to variation with respect to the property in question in the normal world in order to build a *within-individual* comparison class based on counterparts (therefore, examples like *La computadora está pequeña* 'The computer is<sub>ESTAR</sub> small' are only possible in a 'magic-show' context, cf. (78) above). Second, the concept evoked by the AP must be able to be modeled according to the semantics of each comparison class, hence the ungrammaticality of perfective adjectives with a *between-individuals* comparison class. Moreover, in other syntactic environments, e.g. depictive secondary predication, the comparison class of the adjective seems to be determined by the kind of entities made available in discourse (see Gumiel-Molina et al. 2013). Consider the contrast in (86).

- (86) a. María llegó alegre.  
 María arrived happy  
 'María arrived happy.'  
 b. \*María sabe francés feliz.  
 María knows French happy

In (86a), the adjective receives an absolute interpretation (i.e. is evaluated with respect to counterparts of the subject) which is not possible in (86b). In (86b), stages of the subject are not available to construct a *within-individual* comparison class because the discourse is populated with individuals, not with stages of an individual. This is so because the entities participating in stative predicates do so no matter what their spatio-temporal location happens to be (McNally 1998; Magri 2009). In (86a), stages of the subject are available in the discourse to construct a *within-individual* comparison class for the adjective which gives rise to its absolute interpretation.<sup>23,24</sup>

<sup>23</sup>Note also that perfective adjectives are possible as depictive secondary predicates with stative verbs: *María sabe francés borracha* 'María knows French drunk'. It seems that these adjectives, whose only possible grammatical interpretation is as absolute adjectives, force the reinterpretation of the context, giving rise to a coerced reading of the main predicate: "María only shows 'knowing French behavior' while drunk".

<sup>24</sup>We leave as a matter for further research the connection between comparison classes and the notion of topic, a connection already established by Klein (1980:12): "It is, I think, fairly uncontroversial that

This set of facts points to the connection between the relative/absolute distinction and the individual-level/stage-level distinction. Toledo and Sassoon (2011) claim that individual-level-ness or stage-level-ness of an adjective (defined in terms of the availability or absence of availability of property variance) is a good predictor of its relative or absolute characterization (remember that these authors develop their proposal within a lexicalist approach). Our claim is that things could be considered the other way round: if an adjective is evaluated with respect to a comparison class comprised of counterparts of an individual, the property manifested by the individual in different indices must be interpreted as subject to variation. Therefore, the inference of temporal persistence which seems to be at the basis of the individual-level character of predicates (McNally 1994; Percus 1997; Magri 2009; Husband 2010) does not arise (or is cancelled), giving rise to the stage-level interpretation. The individual-level/stage-level distinction is thus recast in the adjectival domain as a distinction related to the kind of elements that build up the comparison class needed to evaluate the adjectival property, together with the inference of temporal persistence that is or is not obtained in each case.

## 6 Conclusions

In this paper, we have claimed that *ser* and *estar* are verbalizers that express different ways of attributing properties to subjects of predication. Adopting a neo-Carlsonian approach, we claim that *estar* has as its complement a predication (PredP) that includes stages of the subject while *ser* has as its complement a predication that does not contain stages of the subject. With respect to copular sentences containing adjectival predicates, stages of the subject are introduced in the derivation through the comparison class formation needed to evaluate the truthful application of *all* gradable adjectives. Gradable adjectives evaluated with respect to a *within-individual* comparison class including stages, that is, *absolute adjectives*, will co-occur with *estar*. *Relative adjectives* evaluated with respect to a *between-individuals* comparison class will surface with *ser* in copular sentences. The relative/absolute distinction is thus somehow linked to the individual-level/stage-level distinction, as already noted by Toledo and Sassoon (2011), and cannot be defined in terms of absolute scalar properties of adjectives.

Moreover, we have claimed that the relative/absolute distinction is not an inherent lexical property of adjectives. Adjectives can receive a relative or absolute interpretation depending on the content of the functional node introducing the comparison class in the structure. Accordingly, all gradable adjectives are predicted to be variable-behavior adjectives in this sense; and all gradable adjectives should therefore be able to combine with *ser* and *estar* (for *dimensional adjectives*, we have claimed that the combination of the type of property evoked by the adjective with a *within-individual*

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something like a comparison class does figure in the background assumptions against which sentences containing vague predicates are evaluated. Presumably, it is related to the rather amorphous idea of a 'topic of conversation'; in many cases, the comparison class is just the set of things that the participants in a conversation happen to be talking about at a given time."

comparison class gives rise to a marked interpretation). *Perfective adjectives* and *relational adjectives*, however, show an invariable behavior. We have claimed that *perfective adjectives* do not surface with *ser* because they evoke concepts that are unable to be modeled according to a *between-individuals* comparison class. *Relational adjectives*, being syntactically nouns, always surface with *ser*.

Finally, let us point out that further research is needed with respect to (a) the extension of this proposal to copular sentences with PP complements (with both non-locative and locative meanings, cf. (6e)), which, at first sight, seem not to be evaluated with respect to a comparison class; and (b) the derivation of aktionsart differences between *ser* and *estar* predications (homogeneous/unbounded states vs. quantized/bounded states) from our proposal. The line of reasoning recently opened by McNally (2012), where telicity properties of degree achievement verbs are attributed not to the absolute scalar properties of base adjectives but rather to the different ways in which relative and absolute adjectives contribute to the satisfaction conditions for the event description introduced by the verb, seems promising in this respect.

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