ON THE ASPECTUALITY OF THE INDIVIDUAL-LEVEL/ STAGE-LEVEL DICHOTOMY

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ABSTRACT. This paper addresses how the contrast known as Individual-Level/Stage-Level (IL/SL) is implemented in the grammar. More specifically, the paper is a critical assessment of the view that the IL/SL distinction is an aspectual distinction. The empirical data I will be using to probe into the IL/SL dichotomy is the contrast between the copular verbs in Spanish *ser/estar*. I will argue that the Spanish copular contrast reflexes the IL/SL dichotomy and that this dichotomy cannot be reduced to an aspectual difference in the ways it has been proposed in previous literature. Concurring with other authors I will argue that IL/SL-ness ensues from a different syntactic composition, very likely from different heads of prepositional nature, which can be argued to carry aspectual value. Crucially, however, I argue that these aspectual heads do not seem to translate into differences at the level of viewpoint or situation aspect in any relevant sense, as has been proposed in the literature.

Keywords. copulas; viewpoint aspect; situation aspect; prepositions; scales.

RESUMEN. Este artículo discute cómo está implementado en la gramática el contraste entre Predicados de Individuo/Predicados de Estadio (PI/PE). Más concretamente, este artículo es una evaluación crítica de la idea de que la diferencia PI/PE es una diferencia aspectual. La base empírica que usaré para diagnosticar el contraste PI/PE es el contraste existente entre los verbos copulativos del español *ser/estar*. Defenderé que el contraste copulativo del español refleja la dicotomía PI/PE y que esta dicotomía no se puede reducir a una diferencia aspectual de la manera en que ha sido propuesta en la literatura anterior. De acuerdo con otros autores, argumentaré que el contraste PI/PE resulta de una diferencia sintáctica, muy probablemente proveniente de núcleos de naturaleza preposicional, los cuales son portadores de valores aspectuales. Sin embargo, defiendo que las propiedades de dichos núcleos aspectuales no de traducen en diferencias aspectuales en el nivel del aspecto de situación o de punto de vista de ninguna manera relevante, como se ha propuesto en la literatura anterior repetidamente.

Palabras clave. cópulas; aspecto de punto de vista; aspecto de situación; preposiciones; escalas.

1. Introduction

This paper revisits the issue of the nature of the contrast proposed by Carlson (1977) known as Individual-Level (IL)/ Stage-Level (SL) and the question of its implementation in the grammar. Although the relevance of the dichotomy has been recognized to underlie a wide variety of grammar facts, its precise nature and whether it is a matter that belongs to the syntax, the semantics or the pragmatics realm is still waiting to be fully identified. This works puts under scrutiny a vision that has become widespread in the past few years, namely, that the IL/SL is reducible to an aspectual difference. Such a perspective is certainly appealing as it reduces the contrast to an independently motivated and clearly identifiable area of the grammar. My aim in this article is to assess this idea by analyzing the contrast existing between the two Spanish copular verbs, *ser* and *estar*, which have been argued to be the lexical representation of the IL/SL dichotomy (e.g. Fernandez Leborans 1995, Arche 2006

among many others) and will use it as an analytical tool. In particular, I will deal with the combination of the copulas with adjectival attributes and will make two points; i) IL/SL can be considered as a by-product of the combination of the copulas and the attributes. In this respect, this work alights with the perspective about grammar architecture defended by authors such as Borer (2005) for situation aspect and in Arche (2012) for viewpoint aspect. In the case of SL, any predicate combined with copular verb *estar* will be interpreted as a SL predicate. This idea goes in a similar direction than the proposal by other authors that the SL copula has the ability to "coerce" the interpretation of IL predicates into SL. Crucially, however, the construction of SL-ness is not understood as a pragmatic process of reinterpretation here, but as a result of the composition of syntactic heads. In this paper I introduce the novel idea that the same can be true for the IL copula, namely, that the IL Spanish copula "*ser*" can also make an adjectival predicate be interpreted as IL. This can be clearly seen in the case of those adjectives that behave as SL predicates consistently in many structures other than the copular clauses (e.g. absolute constructions, as secondary predicates) but are still all right with the IL copula, as Marín (2010) shows. If we understand the interpretation as IL or SL as a result of the combination of the copula and the adjective, there is no impediment in principle for the IL copula to contribute to the final meaning. That is, the interpretation of both copular clauses in Spanish is a result of the combination in the syntax of adjectives and the copulas. This idea provides uniformity to the conception of the copulas, as *ser* had always been considered neutral. ii) The *ser/estar* dichotomy cannot be equated to a distinction of situation aspect, as Zagona (2010), Brucart (2010), Camacho (2012) and Gallego & Uriagereka (2009, 2012) argue. Although I concur with Brucart that the copulas contain an extra syntactic head (plausibly of a prepositional nature), I differ from them in considering that it represents a situation aspect head. I argue that the extra head that makes the copula IL/SL occupies a lower syntactic position than the one where situation aspect is decided. This is supported by the fact that both IL and SL copular clauses can be shown to behave alike in typical situation aspect tests as well as in more recently proposed tests relating to the scales of the adjectives combining with the copula.

This paper does not include any exhaustive discussion of all the proposals made thus far about the distinction *ser/estar*, for which I refer the reader to Arche (2006) and Fábregas (this volume). I concentrate here on the implementation of the dichotomy, and especially in the temporal implementation. The work is organized as follows. In section two I establish the copular distinction in Spanish as an analytical tool to probe into the IL/SL dichotomy. In section three I introduce the fist formalizations of the interpretive dichotomy and its shortcomings. Section four is the core of the paper, where I discuss the classical and recent accounts where the distinction is formalized in aspectual terms. Section five discusses the elements proposed to be part of the copulas. A brief summary closes the paper in section 6.

2. Spanish copulas and the IL/SL distinction

Copular verbs are commonly described as verbs with no lexical meaning (i.e. with no encyclopedic content associated) that just serve as linkers to ascribe a property to an individual (e.g. recently den Dikken 2006). These semantically light items are null in some languages, especially in the present tense (e.g. Russian; Hebrew). Many languages have only one copular verb (e.g. English *be*; French *être*); others, however, have more than one. Spanish is well known for its 2 copulas (*ser* and *estar*), which are not interchangeable.

(1)   Pedro {es   /*está}   bombero.
        Pedro ser-present.3ps/ estar-present.3ps fireman
        'Pedro is a fireman'
(2)   Pedro {*es   / está}   en el cine.
        Pedro ser-present.3ps/ estar-present.3ps in the cinema
        'Pedro is in the cinema'
(3)   Pedro {*es   / está}   descalzo.
        Pedro ser-present.3ps/ estar-present.3ps barefoot
        'Pedro is barefoot'

This suggests that Spanish copulas may not be semantically as empty as copulas are supposed to be. Following common practice in linguistics throughout the article I will work with minimal pairs. Specifically I will work with pairs containing adjectives. The contrasts observed with adjectives are helpful because, since they produce equally natural sentences, they are promising in allowing us to identify the property underlying the contrast. The contrast exemplified below in (4) and (5) is clear-cut for natives of Spanish: with the copular verb *ser* (4), the property is understood to be a property that the person Juan possess; with *estar* (5), the property is understood as predicated of the individual but in a circumstance. That is to say, importantly, (5) is not contradictory with Juan not being handsome, the same way than the negative counterpart of (5), (6), is not contradictory with Juan being handsome as a person.

(4)   Juan es   guapo.
        Juan be-ser.pres.3ps   handsome
        'Juan is handsome'; 'Juan is a handsome person'
(5)   Juan está   guapo.
        Juan be.estar-pres. 3ps   handsome
        'Juan looks handsome'
(6)   Juan no está   guapo.
        Juan not be.estar-pres. 3ps   handsome
        'Juan does not look handsome'

I assume that whatever it is that we find gives the key for the contrast in these cases may be involved in explaining the distribution of the copulas in all the cases. In this sense the purpose of this paper is quite restricted, as I will not try to provide a comprehensive study of all the possible combinations of the copula. While the interpretive contrast is very sharp for natives, the precise nature of the grammatical elements involved in its implementation has proven more difficult to pinpoint. Many authors, such as Bosque (1993), Fernández Leborans (1995, 1999), Demonte (1999), Escandell and Leonetti (2002), Arche (2006), Brucart (2010), a.o., have analysed the *ser/estar* opposition as an instantiation of the IL/SL dichotomy argued for by Milsark (1974) and Carlson (1977). Within the discussion about transformations in the field, in his study about there-sentences in English, Milsark argued that the expletive *there* was directly inserted where it appears. A proof that the associated NP does not move from preverbal position to the rightward position was, he argued, that, while any NP can appear preverbally, not any NP can do so as an associate of the expletive.

(7)   There are some people Eskimo
(8)   There are some people in the corner

According to Milsark (1974:211), the predicates that are excluded from *there*-sentences are those that can be characterized as "properties"; the type of those allowed in them can be characterized as "states." He defines properties as those facts about entities that are, in some sense, possessed by the entity, whereas states are conditions whose removal does not cause any change in the essential qualities of the entity. Carlson (1977) elaborated these insights on the basis of an ontological distinction: stages and individuals. According to this author (1977:115), a stage is defined as "a spatially and temporally bounded manifestation of something." An individual, in turn, is defined as "that whatever-it-is that ties a series of stages together to make them stages of the same thing." Types of properties differ, then, in what they are predicated of. Whereas, according to Carlson, IL predicates apply to their subject directly, SL predicates need an extra semantic operation (the realization function R). Compare these two sentences. M stands for *man*, j for *John*.

(9)   John is a man   M (j)
(10)   John is in London   ∃y [R (y, j) & in (London) (y)]

For Carlson, *a man* (M) is a property that applies to the individual *John* (j). However, the relation between *in London* and *John* is indirect. *John is in London* means that there is a stage *in London* that realizes the individual *John*. *In London* is not predicated of the individual *John* but of a slice of him. This differentiation between predicating of a whole individual versus predicating of an instantiation of the individual, part of the individual, is what made this distinction appealing to be applied for the Spanish *ser*/*estar* dichotomy. With *estar* attributes are understood to hold of the individual by virtue of an external and particular circumstance. Such a particular circumstance producing the SL interpretive effect has been tried to be formalized in two main fashions: (i) as discourse dependence (Raposo & Uriagereka 1995; Higginbotham & Ramchand 1996; Maienborn 2005); (ii) as a result of being bounded in time. In this paper I scrutinize the second line of thought.

3. The grammatical implementation of the IL / SL contrast as a consequence of argument structure

To say that the *ser*/*estar* distinction is an IL/SL distinction does little but recast the question rather than solve it. The crucial question keeps being how exactly the IL/SL contrast is implemented in the grammar.

One of the best-acknowledged proposals about the grammatical source of the interpretive contrast is the one given by Kratzer (1988/ 1995). Kratzer (op. cit.) argued that the interpretation dichotomy of stage vs. individual correlated with the presence vs. absence of an eventive davidsonian argument.

(11)   a. Stage-level predicates   b. Individual-level predicates

This difference was argued to explain some fundamental facts such the availability of temporal and spatial restriction. Temporal restriction is disallowed with IL predicates (12), (17), and the same is true for spatial restriction (15). SL predicates, however, are okay in these scenarios.

(12)   *When Mary knows French, she knows it well.
(13)   When Mary speaks French, she speaks it well.
(14)   Mary is at your disposal in the office.
(15)   *Mary is a mammal in the office.
(16)   Mary will be at your disposal next week.
(17)   *Mary will be a mammal next week.

For the Spanish *ser/estar* dichotomy, Kratzer proposal would mean (i) that *estar*-clauses are more complex, as they involve an extra argument, and (ii) that only *estar*-clauses are expected to bear temporal and spatial restrictors[1]. In principle, this seems borne out:

(18)   Cuando Pedro {está/ *es} guapo, {está/ *es}   guapo de verdad.
        When Pedro estar.3ps/ ser.3ps, estar.3ps/ ser. 3ps handsome really
        'When Pedro is handsome he is really handsome'
(19)   Pedro {estaba/*era}   guapo en la foto.
        Pedro estar-impf.3ps/ ser-impf.3ps handsome in the picture
(20)   Pedro {estaba   / ??era}   guapo a las 3.
        Pedro estar-impf.3ps / ser-impf.3ps handsome at three

These initial contrasts seem to show that *ser/estar* –clauses behave as expected, taking *ser* as IL and *estar* as SL. However, this description does not seem to work in all cases. *Ser*-clauses are compatible with predicates that denote the cease of the property or with temporal restricting phrases as shown below.

(21)   *Pablo ha dejado de ser {esquimal / gitano / africano / de familia ilustre /de baja
        Pablo has given up being Eskimo / gypsy / African / from an illustrious family
        estofa / del grupo sanguíneo O+ / daltónico}.
        from poor class / from O+ blood group/ colour blind}
(22)   *En su juventud, Pablo era {esquimal / gitano / africano / de familia ilustre
          In his youth Pablo ser-IMPF.3SG Eskimo /gypsy / African / from an illustrious
        de baja estofa / del grupo sanguíneo O+/ daltónico} .
        family /from poor class/from O+ blood group/ colour blind
(23)   Juan dejó de ser {rubio / muy guapo / muy dulce / accesible / de fácil trato /
        Juan stopped being blond / very handsome / very sweet / easygoing /
        generoso / altruista / egoísta / atrevido / miedica / valiente / criticón /
        generous / altruistic / egoistical / daring / fearful / brave / faultfinding /
        retorcido / sensible / soberbio / envidioso / pesado /servicial} cuando se hizo
        twisted / sensitive / arrogant / envious / tedious / helpful   when he became
        mayor.
        older

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[1] For further discussion about temporal and spatial restrictors and the IL/SL distinction see Maienborn 2005.

(24)   Cuando era pequeño, Juan era rubio / muy guapo / muy dulce / accesible / de fácil
        When he was little, Juan ser. 3SG blond / very handsome / very sweet / easygoing
        trato / generoso / altruista / egoísta / atrevido / miedica / valiente / criticón /
        / generous / altruistic / egoistical / daring / fearful / brave / faultfinding / twisted /
        retorcido / sensible/ soberbio / envidioso / pesado / servicial}.
        sensitive / arrogant / envious / tedious / helpful.

(25)   Juan fue profesor hasta que lo contrató una editorial.
        'Juan was a teacher until a publishing company hired him'

The *ser*/*estar* contrast in these scenarios reveal an interesting outcome: *estar*-clauses combine with restricting temporal modifiers yielding properly formed sentences, as expected, but *ser*-clauses are not excluded from appearing with temporal restricting modifiers. These cases suggest that the idea that developed as a consequence of Kratzer's conceptualization of the IL/SL dichotomy linked to temporal restriction, namely, that ILPs refer to permanent properties while SLPs denote transient or temporary properties cannot be the whole story or a story that derives from having or not a davidsonian argument[2].

4. The grammatical implementation of the IL/SL contrast as a temporal difference

The line of research that has attracted more adepts throughout the years is the one according to which the link to a specific circumstance, or situation, proper of SL predication derives from temporal properties. In particular, the intuition that has tried to be formalized is the intuition that with SL predications the property is understood to hold of the individual for a limited period of time. That is, because the property is not interpreted as applying to the individual herself but to the individual in a particular circumstance, the property is understood as restricted in time. Because temporal restriction is something that happens independently in language, it has looked like a promising way of packaging SL-ness. The subsequent question regards the precise temporal category that restricts the temporal interval the property applies for. Since the general aim has always been to capture "temporal boundedness", one of the first known attempts, offered by Luján (1981), was to equate SL-ness with 'perfectivity'. However, the boundary between perfectivity (which is usually understood as a viewpoint aspect value) and telicity (a situation aspect description) was not clearly drawn in her account. In the next section I critically discuss the temporal level where IL/SL dichotomy has been located.

4.1. SL and IL as Perfective/ imperfective

As just mentioned, the intuition that with *ser* cases the property is predicated of the individual as such was conceptualized in terms of properties of the intervals the property held. In particular, *ser* cases were conceived as those where there are no limits to the interval the property holds for. One of the best-known early attempts in this regard is the conceptualization of the *ser/ estar* contrast in aspectual terms, specifically as imperfective/ perfective, as argued by Luján (1981). As such, the

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[2] For further critical examination of the proposal including a davidsonian argument the reader is referred to Maienborn 2005, Arche 2006.

imperfective/ perfective difference is a viewpoint aspect difference that regards how the situation is portrayed by the speaker: in its development or once it is finished (Comrie 1976; Smith 1991; Klein 1994). When the situation is presented as finished it is given boundaries; when in its development it is understood that it is not given any. For this reason situations in the perfective are interpreted as bounded and imperfective ones as unbounded. (26) below is the interpretation of these notions as appear in Luján (1981).

(26)   Perfective predicate
        A(x) at time tj
        Imperfective predicate
        A(x) at times tj… tj+k

Viewpoint aspect is currently formalized in terms of interval-ordering (Klein 1994; Demirdache & Uribe-Etxebarria 2000, 2007). In principle, then, as pointed out by Arche (2006) it is not obvious why or how a bounded/unbounded (perfective/ imperfective) contrast can give us the interpretive contrast found in the *ser*/*estar* copulas. If the distinction were imperfective/perfective, a correlation with the contrastive inflection would be expected. However, both *ser* and *estar* can appear in both imperfective and perfective and this viewpoint difference does not correlate with the interpretive difference IL/SL:

(27)   Marta {era   / fue} guapa.
        Marta {ser-past.impf.3ps / ser-past.pfve.3ps} pretty
(28)   Marta {estaba   / estuvo}   guapa
        Marta estar-past.impf.3ps/ estar-past.pfve. 3ps pretty

With *ser* in the perfective, the property is understood as restricted in time, but not necessarily due to an external circumstance, as we understand it is the case with *estar*. Some authors have argued that when *ser* appears in the perfective its properties change to those proper of *estar* predicates (Leborans 1999). In a sense, this idea may be considered to fall within a traditional line of thought according to which viewpoint aspect has coercion power and can alter the internal properties of predicates. See Kamp & Rohrer's (1983), Hinrichs (1986), or de Swart (1998), where aspectual forms were assumed to describe specific types of predicates (e.g. French *Imparfait* for states; *Passe Simple* for events). However, it can be shown that ordering of intervals (i.e. viewpoint aspect) cannot effectively affect the properties of predicates:

(29)   *Marta nadó en una hora.
        Marta swim-past.pfve. 3ps in an hour
(30)   *Marta nadaba en una hora.
        Marta swim-past.impf. 3ps in an hour

Following Marín and McNally (2005), Marín (2010) proposes a description of IL/SL distinction based on the boundedness of the period of time the state predicate applies to:

(31)   *Estar* (SL): Stage: bounded period of time
        Ser (IL): unbounded period of time (inference of temporal persistence)

Although not directly asserted by the author, this distinction is understood to belong to the realm of inner aspect, which makes it similar to Luján's (1981) proposal. In addition to the distinction between imperfective vs. perfective predicates, Luján (op. cit.) establishes a parallelism between *estar* and predicates like *write a letter*, a delimited process. In turn, *ser* expresses that a predicate applies to an individual during a stretch of time with no beginning or end assumed. *Ser* is conceived as a predicate parallel to *write* or *admire*, both un-delimited predicates.

I agree with these descriptions and intuitions; because *estar*-predicates are understood as linked to an external circumstance, they can be bounded in time. Or, because they are temporally bounded, the link to a circumstance is understood. However, I still believe that being a bounded/ unbounded predicate must be the consequence of a grammatical element still to be identified. That is, what category exactly is causing the boundedness effect? Viewpoint aspect has already been discarded. Situation aspect is the next candidate I am going to re-examine; as a matter of fact, several authors have proposed it as the realm where the IL/SL should be articulated.

4.2. Ser/estar as a situation aspect distinction (e.g. atelic/telic)

The distinction that has often been associated with *ser/estar* is the atelicity/telicity distinction, or, in other terms, the homogeneous/ heterogeneous distinction. I argue that if the *ser/estar* contrast is a matter of situation aspect contrast, they should behave contrastively in usual situation aspect tests. However, *ser* and *estar* cases seem to behave alike, more specifically, as homogeneous predicates and stative. This is observed in the classical *in*-time and *for*-time tests used to diagnose heterogeneity and homogeneity (32)—(34). Examples (35) and (36) illustrate the stativity proper of these verbs, as the inability to combine with agent oriented adverbials suggest.

(32) Pedro estuvo   guapo   {ese día en la fiesta/ *en una hora}
      Pedro estar-PAST-PFVE-3SG   *handsome*   *that day at the party/ in an hour*
      'Pedro was handsome'

(33) Pedro fue   guapo   {en su juventud/ *en una hora}
      Pedro ser-PAST-PFVE-3SG   *handsome*   *in his youth   / in an hour*
      'Pedro was handsome'

(34) Juan estuvo   guapo   {*en un minuto/ durante un minuto}[3]
      Juan estar-PAST-PFVE-3SG   *handsome*   *{in a minute/ during a minute}*

(35) Juan es   guapo   (*a propósito).
      Juan ser-pres.3ps   *handsome*   *on purpose*

(36) Juan está   guapo   (*a propósito).
      Juan estar-pres.3ps   *handsome*   *on purpose*

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[3] Sentence (34) deserves a quick word. It is good only under the reading 'it took him one minute to look handsome'. As noted in Arche (2006), there is a reading under which the sentence is grammatical: that in which the verb *estar* is understood as similar to "became". That is, for example, after one hour he ended up looking handsome. The difference between (34) and a typical telic predicate such as (i) below, is that after that minute there is no eventuality of reading the paper going on. However, with (34), the eventuality of looking handsome continues. That is, it took him a minute to reach the state of looking handsome but he continued looking handsome after that minute.

(i)   Juan leyó el artículo en un minuto → le llevó un minuto leer el artículo;
        Juan read the paper in a minute→   It took him a minute to read the paper.

It seems that at some level of analysis of situation aspect, at least, both *ser* and *estar* predicates are alike. In line with most recent work in the field of syntax-semantics interface (Ritter & Rosen 2000, Borer 2005, Ramchand 2008) I will take it that the homogeneous/ heterogeneous distinction is decided in the syntax. Following Borer (2005) for concreteness, I assume that (verbal) predicates enter the derivation as roots and obtain the fundamental properties regarding situation aspect by combining with the relevant syntactic projections. I furthermore contend that the fundamental difference in the realm of situation aspect is that of homogeneity vs. heterogeneity. With Borer (2005), I assume that predicates are homogeneous by default and become heterogeneous by virtue of their combination with a projection that makes the predicate divisive (e.g. by a projection such as Quantity). Thus, predicates are heterogeneous (or quantity) if they are not homogeneous.

(37) $Asp^{Quantity}P$ (=telicity)

      Asp^Q VP

           V   …
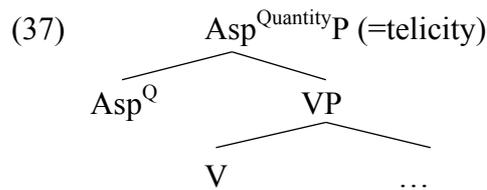
Predicates are homogeneous iff they are both cumulative and divisive, as defined in (38) and (39). Heterogeneity is used by the vast majority of authors as equivalent to telicity.

(38) <u>Cumulative</u>

P is cumulative iff $\forall x, y[P(x) \& P(y) \rightarrow P(x \cup y)]$

P is cumulative iff for all x and y with property P, the union of x and y also has property P.

(39) <u>Divisive</u>

P is divisive iff $\forall x[P(x) \rightarrow \exists y[P(y) \& y < x] \& \forall x, y[P(x) \& P(y) \& y < x \rightarrow P(x-y)]]$

P is divisive iff for all x with property P there is a proper part y of x which also has property P, and for all x and y with property P if y is a proper part of x then the subtraction of y from x also has property P.

In recent accounts, it has been suggested that SL-ness correlate with being heterogeneous (quantized) and IL-hood with being homogeneous. In what follows I will scrutinize this idea. Husband (2010, 2012) argues that quantity properties can be established in the domain of adjectives by including in the analysis the element of degree. With Hay, Kennedy and Levin (1999), Kennedy and McNally (2005) and Kennedy and Levin (2000, 2008) he assumes that the semantics of (gradable) adjectives includes a measure function. These works establish a correlation between scalar structure and telicity.[4] More precisely, between the existence of a maximal point in a scale and quantization. According to these authors, the scalar structure of the *degree* of change determines the telicity of the predicate.

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[4] In the accounts from these authors quantization (telicity) derives directly from the properties of the lexical items, which amounts to a lexical approach to situation aspect, which has been debated in the literature since Tenny (1994).

(40)   a. If ∂ is quantized (has a maximal value) an endpoint for the event can be
        identified, and the predicate should be telic.
        b. If ∂ is not quantized (does not have a maximal value), an endpoint of the
        event cannot be identified (based on the semantics of the predicate), and the
        predicate should be atelic.

Husband takes this further and proposes that quantization yields SL-ness, while absence of quantization yields IL-hood. Restricting ourselves to the cases under study, that is, adjectives, the elements and correlations that Husband (2010) makes in his analysis are the following:[5]

> • Open scale → no max value → no Q → IL
> • Closed scale → max value → Q → SL

As suggested by the table above, scales are of two classes: open, with no maximal value; and closed, with a maximal value. Close scales are proposed to be quantized and quantization amounts to SL-ness. In turn, open scales are not quantized and amount to IL-hood. In sum, Husband proposal amounts to (i) adjectival scales correlate with quantization; (ii) that IL/SL can be reduced to a matter of situation aspect. These correlations would follow if:

- A maximal point is proved to be grammatically relevant
- SL-ness could not be found with open scales
- SL-ness could only be found with closed scale adjectives (quantized adjectives).

This is so because:

- Open/ closed scales are defined according to the existence (or not) of a maximal point.
- SL-ness is made correlate with closed scales
- SL-ness is made correlate with quantization

I will address these correlations in turns in what follows.

4.2.1. *Criterion to establish kinds of scales*

The grammatical property where all the others are founded is that of "maximal point". In the accounts of Hay, Kennedy and Levin (1999), Kennedy and McNally (2005) and Kennedy and Levin (2000, 2008) a maximal point is what establishes different kinds of scales. Along the same lines of other works such as Borer (2005) and Arche, Marín and Fábregas (in prep.), I am going to argue that a maximal value is not a necessary to establish quantization or telicity. What makes an eventuality quantized is, as described above, failure to be both divisive and cumulative, which obtains by reaching a significant point at which the eventuality is instantiated. This may or may not coincide with the maximal point conceptually possible. The example brought up by Borer is the one below:

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[5] Note that this account makes no prediction for predicates that cannot be put on a scale (e.g. PPs).

(41)   John filled the room with smoke.

An event of filling the room with smoke can be considered as instantiated before a maximal point of smoke in the room is reached. In other words, a maximal point as such is not relevant (i.e. does not play any role) in the definition of telicity. Consider in this sense the test based on *gradually* (Piñón 2000), which draws the difference between scalar/ non-scalar predicates:

Gradually
(42)   *Marta gradually walked/ swam.
(43)   Marta gradually wrote the paper.
(44)   Marta gradually emptied the pool.   *empty*; closed scale
(45)   Marta gradually got the guy drunk.   *drunk*; closed scale
(46)   Marta gradually shortened the essay.   *short*; open scale
(47)   Marta gradually cheapened the price of her car.   *cheap*; open scale

As can be seen, both verbs derived from open as well as closed scales behave alike with *gradually*, which suggests that gradually diagnoses the existence of a scale, whatever the type. Generally speaking, we can say that what defines a scale is the property of having degrees; rather than having a maximal point or not. Interestingly, all these predicates are able to produce telic sentences, as can be seen with the *in*-time test:

In-time tests

(48)   Marta wrote the paper in the blink of an eye.
(49)   Marta emptied the pool in the blink of an eye.   *empty*; closed scale
(50)   Marta got the guy drunk in the blink of an eye.   *drunk*; closed scale
(51)   Marta shortened the essay in the blink of an eye.   *short*; open scale
(52)   Marta cheapened the price of her car in the blink of an eye. *cheap*; open scale

4.2.2. SL-ness and kinds of scales/ quantization
I turn my attention now to the scrutiny of whether in the realm under study here (that of adjectives), the quality of the scale, as claimed by Husband (2010), is the relevant property that yields the effects associated with SL-ness. I argue that this would be so if

- SL-ness could not be found with open scales.
- SL-ness could only be found with closed scale adjectives (quantized adjectives).

Husband (op. cit.) adapts cumulativity and divisiveness tests from Borer (2005) to scalar adjectives by arguing that the relevant units of analysis are degrees. That is, by substituting the "x" and the "y" by "∂" for degree. He tests cumulativity and divisibility by examining the relation existing between degrees of the property at hand. Husband proposes to demonstrate divisibility via tests based on comparative sentences, involving two individuals. He argues that the addition of, for example, degrees of tallness gives another degree of tallness, which is taken as proof that the adjective *tall* is cumulative. Likewise, he argues, tallness is divisive since the difference between degrees of tallness is another degree of tallness. On the contrary,

Husband says, closed scale adjectives fail to be divisive. He associates closed scales with a maximum value; for this reason, there cannot be an intermediate maximum value.

(53) a. Anthony is tall.   Tall (a)
      b. Cleopatra is tall.   Tall (c)
      c. Anthony is taller than Cleopatra
(54) a. The bottle is full   full(max) (bottle)
      b. The cup is full   full(max) (cup)

In what follows I am going to put forward two ideas: a) the association with a maximum value is not correct; b) the difference between kinds of adjectives regarding their scalar properties does not correlate with the semantic difference between copulas. I am going to apply the same tests to the minimal pair representing the contrast under study here and show that with both *ser* and *estar* predicates are equally homogeneous. Below the properties of cumulativity and divisiveness are applied to copular clauses with ser and estar, following the same scheme proposed by Husband (i.e. with comparative clauses).

(55) Juan es guapo.
      Juan ser-pres handsome
      'Juan is handsome'   Homogeneous
(56) Antonio es guapo.
      Antonio ser-pres handsome
      'Antonio is handsome'
(57) Antonio es más guapo que Juan.
      'Antonio is more handsome than Juan'
(58) Cumulative
      The union of the degree of Juan's being handsome and the degree of Antonio's being handsome is a degree of being handsome.
(59) Divisive
      For a degree of being handsome there can be another degree, which is also a degree of being handsome. The difference between the degree of handsomeness of Antonio (that Antonio possesses) and that of Juan's is a degree of handsomeness.
(60) Antonio está guapo.
      Antonio estar-pres handsome
       'Antonio looks handsome'   Homogeneous
(61) Juan está guapo.
      Juan estar-pres handsome
      'Juan looks handsome'
(62) Antonio está más guapo que Juan.
      'Antonio looks more handsome than Juan'
(63) Cumulative
      The union of the degree of Juan's looking handsome and the degree of Antonio's looking handsome is a degree of looking handsome.
(64) Divisive
      The subtraction of a degree of looking handsome from another degree of looking handsome is also a degree of looking handsome.

If we apply the same test to adjectives that only combine with *estar* (e.g. *borracho, 'drunk')*, that is, that produce SL predications, what we obtain is the following:

(65) Antonio está borracho.
      Antonio estar-pres.3ps. drunk
(66) Juan está borracho.
      Juan estar-pres.3ps. drunk
(67) Antonio está más borracho que Juan.
      Antonio estar-pres.3ps.more drunk than Juan
(68) Cumulative
      The union of the degree of Antonio's drunkenness and the degree of Juan's drunkenness is a degree of drunkenness.
(69) Divisive
      The subtraction of a degree of drunkenness (e.g. Antonio's) from another degree of drunkenness (e.g. that of Juan's) is also a degree of drunkenness.
(70) Antonio estaba tres décimas más borracho que Juan
      Antonio estar-pres.3ps. three tenths more drunk than Juan

It seems that a sentence such as (65) with the copula *estar* and an attribute of a closed scale and that can never be IL gives the same results than open and IL predication. Thus, we can conclude that the copulas trigger no relevant distinction in the above tests. If this is so, then, the homogeneous/heterogeneous contrast cannot give us the IL/SL contrast. That is, the IL/SL contrast is not implemented by the categories that implement quantization. If these results are on the right track, then, it seems that the following aspects need further exploration: (i) the relevance of a maximal point and its role in closed scales: (ii) the alleged property of divisibility of closed scales.[6]

Gumiel and Pérez-Jiménez (2012) have taken the proposals by Husband (2010, 2012) and argued that properties of the scales can account for the distribution of the copulas in Spanish. More specifically, they argue that the copulas are the reflex of the scales, *ser* being the reflex of an open scale and *estar* the one of a closed scale. However, modifiers used to diagnose closed scales (e.g. *completely, half*) are all right in combination with both copulas, which raises questions about the scope of the account. Under Husband's – Gumiel-Pérez-Jiménez proposal, according to which closed scales yield SL predications, the right combination of modified APs by *completely* with the IL copula *ser* , in principle, unexpected.

(71) Juan estaba   {completamente / medio} {rubio / bobo / estúpido}.
      Juan be-estar.past.3ps   completely /   half   bold / silly / stupid
(72) Juan era   {completamente / medio} {rubio / bobo / estúpido}.
      Juan be-ser.past.3ps   completely/   half   bold / silly / stupid

---

[6] This is also related to other assumed properties such as being context dependent or not. Usually, closed scales are considered non-context dependent (Hay et al 1999; Kennedy & Levin 2008). However, this can be proved not to be the case either. In the case of *empty* or *full* the properties of the container play a role.
      (i)   The box is empty → not content in it
      (ii)   The theater was empty → it can have some content

(73) Juan era   completamente abierto.
      Juan be-ser.past.3ps   completely open
(74) Juan estaba   completamente abierto (conmigo esa noche).
      Juan be-estar.past.3ps   completely   open   with me that evening

By the same token, if the copulas in Spanish were the spell-out of the scale properties of the adjectives, everything combining with *estar* would be expected to be compatible with closed scales modifiers, as they would be the sign of a closed scale. However, this does not seem to be borne out:

(75) */??Juan estaba   completamente {guapo / feo}
      Juan be-estar.past.3ps completely   handsome / ugly

Other modifiers, such as *extremadamente* 'extremely', have been argued to combine only with so-called open scale adjectives (González Rodríguez 2010):

(76) a. Juana es   extremadamente {bella/ lista}   open-scale
         Juana is-ser extremely   pretty / clever
      b. ??La piscina está   extremadamente llena   closed-scale
          the pool   is-estar extremely   full

González Rodríguez (op. cit.) argues that *extremely* gives a maximum value to the adjective and re-categorizes the adjective from open scale into close scale. In the spirit of the proposal developed here, however, I interpret these data slightly differently. I understand them as evidence that casts more doubt on the idea that a maximum value comes associated with scales. Modifiers such as *extremely* show that "closedness" of scales can be conceived as a syntactic phenomenon rather than a lexical one. Also, this evidence speaks in the same direction than the data examined above where verbs derived from both so-called open and closed scales showed that both could be made telic (49)-(52). That is, all this kind of evidence suggests that the property relevant in grammatical terms is being scalar vs. non-scalar. Likewise, if *extremely* closes the scale (acting as a sort of telicity nominal marker) and if the copulas are the reflex of the scale properties, as Gumiel and Pérez-Jiménez (2012) propose, the adjectives are expected to combine with *estar* only when in combination with *extremely*. However, this is not borne out, as we have seen in the last example. All this seems to suggest that a criterion based on scalar properties does not cover the whole range of facts and, also and more importantly, it does not seem to tackle the interpretive distinction that we pursue to capture since the beginning. Such a contrast survives regardless the scale properties and can still be described as a IL/SL contrast in the sense that while in the former one, the property is predicated of the individual as such, in the latter, the property is contingent of a circumstance.

(77) Juan estaba   {completamente/medio} {rubio/bobo/estúpido}
      Juan be-estar.past.3ps completely/   half   bold/silly/stupid
(78) Juan era   {completamente/medio} {rubio/bobo/estúpido}
      Juan be-ser.past.3ps   completely/   half   bold/silly/stupid

Thus, it seems that IL/SL contrast cannot be said to derive from a homogeneous/ quantized contrast in a clear way. That is, it is not a situation aspect issue.

5. The construction IL/SL-ness. The prepositional account

The last issue I would like to comment on here is the precise locus of that whatever-it-is that draws the line between IL/SL interpretation. The question has been in the field for years, formulated in different ways: is the element that triggers the SL/IL interpretation in the copulas or in the predicates that follow? Do the copulas make any contribution to the resulting meaning? Predicates that combine with both copulas make us incline towards a positive answer for the last question; predicates compatible only with one of them leads us to think that there must be some compatibility between the copula and the predicate. However, if we want to stick to the idea that *ser* and *estar* are the same in all cases, whatever we find involved in the cases that offer a contrast should in principle be involved in the cases where no optionality is available. If contrasts such as the one we have been working with are those that give us the IL/SL interpretive contrast, I am going to assume that the account of this contrast should be able to account for all the cases where the two copulas appear. Given that cases like these show that the same adjective can appear with both copulas, I am going to take it that it is the copulas that contribute the sense of IL/SL-ness.

(79)   Juan {es   / está}   guapo.
        Juan ser-pres.3ps/ estar-pres.3ps   handsome

The idea that has been recently more debated in the literature is the idea that copulas involve a light verbal kind component plus a preposition. The rationale to propose a preposition comes from the fact that prepositions have been shown to convey aspectual content (Hale 1984) and several authors share the intuition that the dichotomy between *ser/estar* is aspectual in nature. In the following I will discuss the prepositional account.

Within accounts where prepositions are part of the (lexical-)syntactic composition of the copulas, two main lines can be distinguished: those according to which *estar*, the SL copula, consists of a light verbal element plus a preposition (Gallego & Uriagereka 2009, 2012; Zagona 2010, 2012) and those according to which both copulas, *ser* and *estar*, involve a preposition in their make-up, the difference being the preposition involved (Brucart 2010).

In a number of works (e.g. Hale 1984; Hale & Keyser 2002) Hale and Keyser have argued that the kind of semantic content conveyed by prepositions underlie most semantic and syntactic relations. In particular, these authors argue that the spatial opposition of central vs. non-central coincidence is a universal semantic opposition underlying the predicational, the aspectual, the modal, or the complementizer system[7]. Just as prepositions establish relations Aspect, for instance, can be analysed as a head that establish relations between intervals, as Klein (1994) and Demirdache & Uribe-Etxebarria (2000) have argued in detail. The table below summarizes the kinds of prepositions and their corresponding temporal meaning within the Tense and Aspect realm.

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[7] See also Talmy (1978); Bybee, Perkins and Pagliuca (1994).

Table 1. *Temporal semantics of prepositions*

Preposition kind	Example	Temporal meaning
Central coincidence	*in, on, at, with, within, by*	Present/ imperfective
Non-central coincidence Centripetal (allative)	*to, up to, onto, into*	Future/ Prospective
Non-central coincidence Centrifugal (ellative)	*from, out of, of*	Past/ perfective

Just as figures are located with respect to a figure (80), intervals can be related the same way (81), as argued by Stowell (1993, 2007) and Demirdache & Uribe-Etxebarria (2000, 2007):

(80)   a. Central coincidence   ◉   cat in the box

```
                 PP
              /      \
          cat          P
                    /     \
                 P          DP
                 in        the box
```
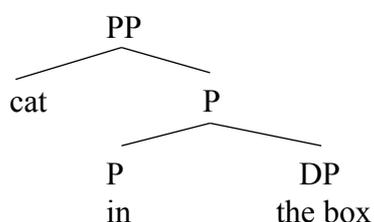
        b. Non-central coincidence   ■○   *cat from the box*

```
                 PP
              /      \
          cat          P
                    /     \
                 P          DP
               from        the box
```

(81)

```
                TP
             /      \
      ZP(RefT)        T'
                   /      \
                  T        AspP
            (before/within/   /    \
             overlap/after) ZP(AT)   AspP
                               /    \
                            Asp       VP
                       (before/within/  /   \
                        overlap/after) ZP(EvT)  VP
```
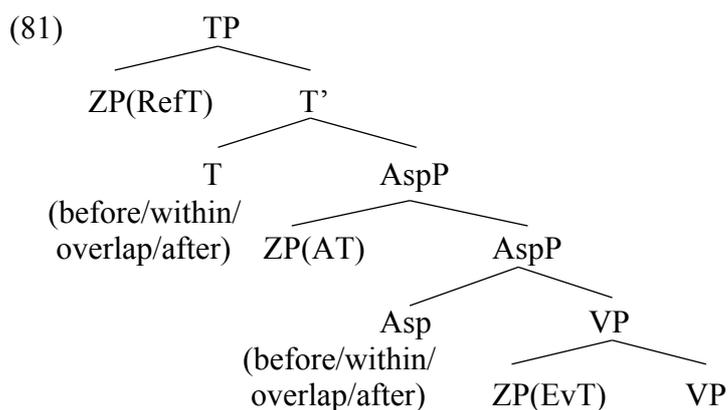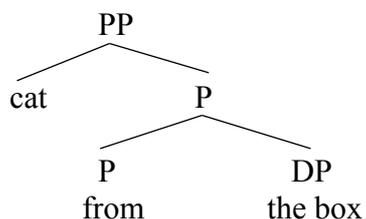
In (81) Tense and Aspect order time-denoting arguments (Zeit-Times, ZPs – Stowell 1996). Tense orders the reference time (Speech time in main clauses) with respect to the so-called Assertion Time (AT) (also known as Topic Time –Klein 1994), that is, the time the sentence makes an assertion about, refers to. Aspect orders the Assertion Time with respect to the Event-Time, that is, the interval that the whole event extends over. Different ordering relations give different tenses and aspect

forms. Cases such as the ones below are taken as evidence to show that prepositions can be observed to be at play in providing different aspectual meanings. Ellative prepositions of non-central coincidence are understood to underlie perfective aspect.

(82)   Je viens d'être malade
       I   come from be sick
       'I have just been sick' / 'I have been sick'

With the traditional idea in mind that *estar* predications are perfective, Gallego & Uriagereka argue that *estar* is *ser*+preposition of non-central coincidence (ellative supposedly). Thus, *estar* would be *ser*+*from*. These authors establish a correlation among central coincidence, stativity and IL-hood, on the one hand and among non-central coincidence, perfectivity and SL-ness on the other. They put is like this:

(83)   Stativity (IL) = central-coincidence
       Perfectivity (SL) = terminal-coincidence

The first issue that strikes us as unusual is the opposition between stativity and perfectivity. As discussed at length in Arche (2006), perfectivity is a point of view of aspect and it is possible with any kind of predicate (stative and non stative). The second one is that, as shown above, both IL and SL copular predicates are equally stative in the grammatical relevant sense. If, as Hale and Keyser (2002: 218) say, "central coincidence consistently corresponds to stativity", both copulas, strictly speaking, would be predicted to have a central-coincidence preposition in their syntactic-morphological make up. For these authors, the extra prepositional layer indicates perfectivity or telicity. As discussed above, neither perfectivity nor telicity seem to be the realm where these relations take place. This, I argue, may not necessarily undermine the proposal that *estar* includes an extra (or a different) preposition in its constitution. It may just indicate that this aspectual composition takes place at a different (arguably lower) level than the one where situation aspect (i.e. (a)/telicity) or viewpoint aspect (i.e. (im)/perfectivity) are solved. Just as situation and viewpoint aspect are independent and different situation aspect predicates (telic, atelic) can occur with different viewpoint aspect values (imperfective/ perfective), the aspectual layer deciding IL/SL-ness does not have to translate into situation aspect; that is, it does not have to translate into stativity or atelicity or telicity or (im)perfectivity. This level can be aspectual and work as an(other) independent level.
   Brucart (2010) also works with the idea that what underlies the IL/SL distinction is the prepositional material that merges with the copulas. Differing from Gallego and Uriagereka (2009, 2012) and Zagona (2010, 2012), this author argues that the difference between *ser* and *estar* lies on the preposition involved. That is, the dichotomy ensues not due to a contrast based on absence/presence of preposition but based on the kind of preposition involved. More in particular, he argues that IL-hood derives from the presence of a central coincidence preposition and SL-ness from a non-central coincidence preposition.

(84)   a. [vP *estar* [.... non-central P....]]
        b. [vP *ser*   [.... central P....]]

This means that both copulas involve some semantic content; that is, that none of them are purely empty heads or mere linkers (den Dikken 2006) in Spanish. This

perspective suggests that both IL and SL-ness are construed, since both can be said to have been built up due to the content of the copulas. If this is the case, we should be able to find cases where the combination with *ser* yields IL-hood contrary to prediction if we look at the behavior of the adjective in other contexts. It turns out that such evidence seems to exist. Marín (2010) notes that there are other contexts where the IL/SL contrast is relevant and shows that there is a group of adjectives (e.g. *nervioso*) that behaves in SL fashion in all contexts. However, they still combine with *ser* yielding the canonical IL interpretation whereby the property is understood to hold of the individual as a whole, by nature, rather than of the individual and a specific circumstance. Likewise, adjectives such as *viejo* are excluded in all typical SL contexts but combine with *estar*.

Table 2. *Adjective types apud Marín (2010)*

	viejo-type	*nervioso*-type
Restrictive pseudo-copular verb *Andar; permanecer* Walk remain	no	yes
Adjunct predicate *Llegar 'arrive'*	no	yes
Tener; dejar 'have'; 'leave'	no	yes
Absolute constructions	no	yes
Con construction With -construction	no	yes
Ser	yes	yes
Estar	yes	yes

That is, the questions that this classification raises are two: (i) if adjectives such as *viejo* are excluded from all SL structures, how is it that they are allowed with *estar*?; and, conversely, (ii) if adjectives such as *nervioso* are allowed in all SL structures, how is it that they are allowed with *ser*?

The answer to the first question has been suggested in different ways in the literature. For example *estar* has been argued to be a coercive mechanism able to trigger SL-ness (e.g. Escandell-Vidal & Leonetti 2002); or to construe SL-ness by virtue of its prepositional extra content (Gallego & Uriagereka 2009) etc. Both of these views are consistent with the view of *estar* as containing some extra element triggering SL-ness. These views, however, leave unaccounted for the second question. If *ser* is not considered as a mere linker but as a predicational base plus some sort of semantic component triggering IL-hood, question number two becomes explained. IL-hood, is also "constructed" syntactically.

Much more delicate and less obvious, to my view, is to decide on the kind of preposition underlying each copula. While regarding tense and viewpoint aspect, for example, it is clear what the arguments the preposition is ordering, it becomes a bit fuzzier when it comes to the copulas. Authors who follow Hale and Keyser (2002) consider that the arguments of the prepositional heads are the DP and the attribute. The example below, of an IL predication, is from Hale and Keyser (2002):

(85)   Central coincidence   ◉   *Leecil is a calf roper*

```
                  ∂
               /     \
           Leecil      ∂
                    /     \
                  ∂      a calf roper
```
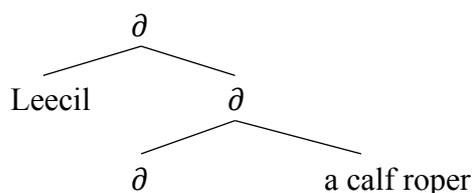
In the case of Spanish copulas, this would be the case of copula *ser*:

(86)   Central coincidence   ◉   *Pedro es guapo*

```
                      VP
                   /      \
            copula V        PP
                         /      \
                      Pedro       P
                                /     \
                              P       guapo
```
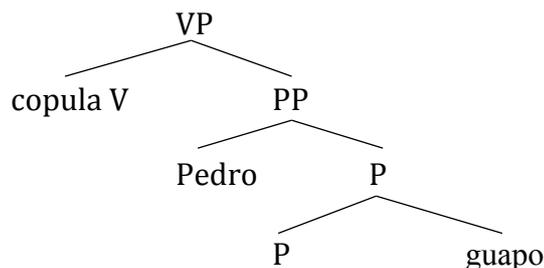
The corresponding version for *estar* would involve a head of ellative non-central coincidence, which would order the DP with respect to the property the following way:

(87)   Non-central coincidence   ■ ∘   *Pedro está guapo*

```
                      VP
                   /      \
            copula V        PP
                         /      \
                      Pedro       P
                                /     \
                              P       guapo
```
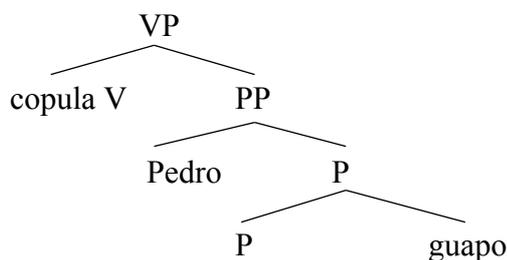
At first it would seem that the property no longer holds of the subject. However, when native speakers say *Pedro está guapo* they are attributing the property to the subject as well. That is, the property is supposed to coincide with the individual. Also, the copula *estar* typically combines with PPs headed by prepositions of central coincidence whose representation would seem to require a central coincidence preposition. As Sánchez-Marco and Marín (2012) show, the first contexts where the copula *estar* was historically used were locative sentences with prepositions of central coincidence such as *en* 'in'.

(88) Pedro está   en el jardín.
      Pedro estar-pres.3ps   in the garden

On the other hand, the structure in (87) could be said to capture the intuition that when a property holds of an individual with *estar* is as a result or consequence of some previous eventuality. If we say of Pedro *Pedro está guapo* usually it is because of or as a consequence of something else. To the extent that consequences are posterior to the cause, it can be reasonably argued that the preposition involved in the

SL copula is an ellative preposition.

At this point, unfortunately, I believe that more research needs to be done in this respect and I cannot offer a finer-grained analysis. Maybe the intuition that also with *estar* the property is understood to hold of the individual is just the result of the predication operation (Bowers 1993; Svenonius 1994; Adger and Ramchand 2003; Roy 2010). For Roy (2010), Pred introduces a conjunction operator (^), source of intersective predication, precisely proper of those adjectives that can appear in copular scenarios (as opposed to those adjectives that are classificational and cannot appear in copular clauses, such as *presidential*, see Schmidt 1972, Bache 1978).

(89)

```
            PredP
           /     \
         DP       Pred'
                 /     \
               Pred     AP
```
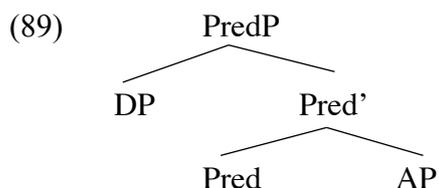
6. Summary and conclusions

In this note I have argued that the IL/SL dichotomy as described by Carlson (1977) is instantiated in the Spanish copular contrast *ser*/*estar*, along the lines with other authors Bosque (1993), Fernández Leborans (1995, 1999), Demonte (1999), Escandell and Leonetti (2002), Arche (2006) and Brucart (2010). I wanted to show that the IL/SL interpretive distinction cannot derive from a situation or viewpoint aspectual distinction. I have cast doubts on recent analysis on situation aspect that establish correlations between homogeneity/heterogeneity with scales of adjectives and IL/SL (Husband 2010, 2012) since it does not seem to yield the interpretive distinction behind IL/SL predication. I have argued that the grammatical implementation of the IL/SL can be of the aspectual-like character argued by authors such as Gallego and Uriagereka (2009, 2012) but, crucially, it does not translate to any property related to (a)telicity. It can be analysed as another aspectual level crucially lower than the one where situation aspect properties are decided. IL/SL predicates can be distinguished by the head combining with the predicational base: central coincidence or non-central coincidence. This level should be considered as independent from the one of situation aspect as situation aspect is from viewpoint aspect. In the last section I have largely argued in favor of a prepositional (or equivalent heads of central/non-central coincidence) analysis of the copulas; however I have expressed some reservations about the kind of preposition underlying each copula, which needs further investigation.

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