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# The distribution of copulas *ser* and *estar* in Spanish/Catalan bilinguals

**Abstract:** The present study investigates the distribution of copula verbs *ser* and *estar* in Spanish and Catalan among nineteen (n=19) adult bilinguals born and raised in Palma de Mallorca, Spain. An elicited production task tested the participants' patterns of use of both copula verbs in three contexts: with adverbial locatives, stage-level adjectives and event locatives. Catalan and Spanish diverge in copular use with adverbial locatives and adjectives but behave similarly in their exclusive use of *ser* with event locatives. As predicted, results showed a marked overextension of *estar* in Catalan locatives and adjectival predicates, supporting previous work. Although some participants alternated both copulas with locatives in Catalan, the use of *estar* was clearly preferred at the individual level. In regard to event locatives, the participants behaved target-like in their restrictive use of *ser*. There were no difficulties in Spanish, where *estar* is obligatory with adverbial locatives and adjectives and *ser* with event locatives. We argue that the overextension of *estar* in Catalan stems from crosslinguistic influence from Spanish and structural overlap. Spanish copular *estar* appears to be substituting the semantic scope of *ser* use in Catalan but only in areas where the two languages diverge.

## 1 Introduction

The present study examines the knowledge of the distribution of copula verbs *ser* and *estar* in Spanish and *éssere* and *estar* in Catalan ('to be' in English) among Catalan/Spanish adult bilinguals. Although copula distribution in Spanish has been extensively examined among English-speaking L2 learners of Spanish (Bruhn de Garavito & Valenzuela 2008; Geeslin 2002, 2003; Geeslin & Guijarro Fuentes 2006, 2007; VanPatten 1985), the acquisition of copulas *ser* and *estar*

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in Catalan/Spanish bilinguals remains underexplored (Perpiñán 2015; Sanz & González 1995). We aim to fill this gap in the literature by examining the bidirectional distribution of these two copula verbs in Spanish/Catalan adult bilinguals born and raised in Palma de Mallorca, Spain. Specifically, we examine the development of copula distinctions in the following contexts: locative adverbs with animate (1a–1b) and inanimate (2a, 2b) subjects, stage level adjectives (3a–3b) and event locatives (4a–4b):

(1) animate locatives

- a. SPAN: El perro **está**/**\*es** debajo del escritorio.
- b. CATA: El gos **és/està** sota la l'escriptori.  
"The dog is under the desk."

(2) inanimate locatives

- a. SPAN: La peluquería **está**/**\*es** detrás del hotel.
- b. CATA: La perruqueria **és/està** darrera de l'hotel.  
"The hair salon is behind the hotel."

(3) stage-level adjectives

- a. SPAN: El café **está** /**\*es** frío.
- b. CATA: El café **és/està** fred.  
"The coffee is cold."

(4) event locatives

- a. SPAN: El festival **es**/**\*está** en la Plaza Mayor
- b. CATA: El festival **és**/**\*està** en la Plaça Major.  
"The festival is at the Plaza Mayor"

Copula distribution in Catalan is interesting to examine for two main reasons. First, although Spanish and Catalan are typologically similar, the distribution of copulas *éssere/ser* and *estar* is similar in some contexts but quite different in others (Brucart 2012; Camacho 2012; Solà 1987). For example, both *éssere* and *estar* are possible in Catalan with adverbial locatives (1b, 2b) and stage level predicates (3b), while Spanish usually allows only *estar* in these contexts (1a, 2a, 3a). However, both languages behave similarly in their required use of *éssere* with event locatives (4a and 4b). The structural overlap in the use of *estar* with locatives and adjectives as in (1) to (3) above might favor an overextension of *estar* in Catalan, as we will discuss shortly. On the other hand, both languages require copular *ser* with event locatives, which might mitigate any processing constraints the learner faces with copular distribution in this context. The learner

must process both the semantic properties of the eventive subject [-animate] as well as the semantic extensions of the locative predicate. Thus, it is interesting to examine the extent to which bilingual speakers of these two languages are affected by bilingualism effects. Following existing literature in bilingual development (Pérez-Leroux, Pirvulescu & Roberge 2009; Meisel 2007), we consider the notion of bilingualism effects as a type of language interdependence evidenced by crosslinguistic influence from one grammar into the other due to several inter-related internal and external factors, including structural overlap (Müller & Hulk 2001), language dominance (Argiri & Sorace 2007; Montrul & Ionin 2012; Silva-Corvalán & Treffers-Daller 2015; Unsworth 2015; Montrul 2015), and language exposure and use (Montrul 2008; Unsworth 2013). Structural overlap refers to those instances where one language (Language A) allows more than one option for a specific structure, and the other language (Language B) overlaps with one of those options leading to unidirectional transfer from Language B into Language A (Hulk & Müller 2000). This is relevant to our study in the case of adjectival or locative contexts where Catalan (Language A) allows both *ser* and *estar* but Spanish (Language B) only allows *estar*. Therefore, we would expect unidirectional transfer from Spanish into Catalan evidenced in an overextension of copula *estar*.<sup>1</sup> We define language dominance as the language in which the bilingual speaker feels more comfortable with in his day-to-day interactions in a bilingual context.<sup>2</sup> Research with early and late bilingual development has demonstrated a significant role for language dominance in bilingual development reflected in unidirectional transfer from the stronger language to the weaker language (Montrul & Ionin 2012; Paradis & Genesee 1996). However, this has not always been the case, and internal factors like structural overlap seem to play a more decisive role in the selectivity of transfer.

Second, this language pair is interesting to examine because most of bilingualism research has been conducted in contexts where one language is a minority or heritage language, as is the case of Spanish in the U.S. (Cuza & Pérez-Tattam 2016; Montrul 2004; Montrul & Sánchez Walker 2013; Polinsky 2011; Sorace 2005; Putnam & Sánchez 2013; Silva-Corvalán 1986, 1994). However, the Spanish/Catalan bilingual situation is different in Mallorca as both languages have

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1 For Hulk & Müller (2000), in addition to structural overlap considerations, the structure in question must be part of the syntax/pragmatics interface (C-Domain) for crosslinguistic influence to occur. However, we believe that structural overlap considerations represent an optimal explanation even for cases where the syntax interfaces with other domains like semantics.

2 This concept involves other essential dimensions including linguistic proficiency, processing ability, fluency, frequency of language exposure and use, as well as identity and cultural identification issues (see Gertken, Amengual, & Birsong for recent analysis 2014).

equal official status in the Balearic Islands (Blass-Arroyo 2007). However, attitudes towards language and bilingualism are not always positive (Pieras-Guasp 2002). Research in this bilingual community adds to current research in assessing important issues including the role of cross-linguistic influence, patterns of language exposure and use and community characteristics. As argued by Baker (1996) and others, bilingualism is a social phenomenon that exists and develops not only in the mind of the speaker but also in the context in which he lives. In this respect, both Catalan and Spanish are part of the fabric of the bilingual community of Palma de Mallorca, and both languages have a high degree of ethnolinguistic vitality (Pieras-Guasp 2002). Ethnolinguistic vitality refers to the beliefs that a community has towards any specific language that cause a specific ethnolinguistic group to remain distinct, and to behave as an active collective entity in intergroup relations (e.g., Bourhis Giles & Rosenthal 1981; Pérez-Leroux, Cuza & Thomas 2011). As we will discuss shortly, Pieras-Guasp (2002) found that young Spanish/Catalan adults living in Palma de Mallorca value Catalan for instrumental purposes; however, Spanish is the language that they value the most for social interactions and peer relationships. In addition to these two main contributions, our study also adds to current research by examining copula use with event locatives among Spanish/Catalan bilinguals, an area of research so far underexplored.

In what follows, we provide a background on the existing distinctions between Catalan and Spanish in regard to copula use and distribution, followed by previous research in the acquisition of *ser* and *estar* in adult bilinguals. We then present our experiment, the participants and the results of the study. The discussion and conclusions appear in section 5.

## 2 Copula distribution in Spanish and Catalan

The use of copula verbs *ser* and *estar* in Spanish has often been discussed in relation to individual-level vs. stage-level predicates, reflecting permanent (e.g., *Rosa es estudiante* ‘Rose is a student’), and circumstantial properties of the subject (e.g., *Miguel está cansado* ‘Michael is tired’) respectively (e.g., Camacho 2012; Demonte & Masullo 1999; Diesing 1992; Fernández-Leborans 1995, 1999). For Spanish-English bilinguals, the acquisition of these distinctions has been found to be problematic given the fact that English does not make this distinction (e.g., Geeslin 2002, 2003; Geeslin & Guijarro Fuentes 2006, 2007; Pérez-Leroux, Álvarez & Battersby 2010; Silva-Corvalán 1986; VanPatten 1985). In English, both aspectual meanings are expressed by the verb ‘to be’. Furthermore, acquisitional delays are also motivated by frequency effects, and variability in the input with respect to the *ser* and *estar* alternation in Spanish. For example, there are cases

where copular *estar* is used to refer to an irreversible characterization of the subject (e.g., Napoleón Bonaparte está muerto “Napoleon Bonaparte is dead”). It is also possible for circumstantial characterizations to occur with copula *ser* (Juan es muy popular “John is very popular”) (Zagona 2013). In the latter example, John might be very popular at the moment but this is likely to change. The interval in which the categorization occurs is temporally delimited, but *ser* is still required. This variability in *ser* and *estar* alternation with adjectival predicates in Spanish creates fuzziness in the input, leading to learnability issues, including *ser* overextension to contexts where *estar* is required or vice versa.

Previous research combines the strengths of a stage-level vs. individual-level analysis with the view that copula distinctions are aspectual in nature (e.g., Camacho 2012; Fernández-Leborans 1995, 1999; Gallego & Uriagereka 2009; Schmitt, Holtheuer & Miller 2004). This approach accounts for *ser* and *estar* alternation with adjectives (*Juan es alto* vs. *Juan está alto* “John is tall”), the use of *estar* with adverbial locatives (e.g., *La Biblioteca Nacional está/\*es en Madrid* “The National Library is in Madrid”)<sup>3</sup> and the categorical use of *ser* with event locatives (*El concierto es/\*está en la plaza* “The concert is at the plaza”).

In this regard, Zagona (2013) argues that *ser* and *estar* alternation stems from the presence of an uninterpretable feature [*uP*] (perfective/imperfective aspect) regulating the complements of *estar* but not those of *ser*. Within this approach, copula selection is determined by the syntactic properties of the predicate (p. 305). The formal feature [*uP*] determines the complements of copula *estar* (*estar*: [v [*uP*]...]). With adjectives, the complements of *estar* would include a beginning and an endpoint, while the complements of *ser* do not, as represented (5a) and (5b):

- |        |  |                                |
|--------|--|--------------------------------|
| (5) a. | Mi mamá <i>está</i> joven<br>“My mom is young” | ( <i>estar</i> , + <i>uP</i> ) |
| b.     | Mi mamá <i>es</i> joven<br>“My mom is young”   | ( <i>ser</i> , - <i>uP</i> )   |

In (5a), the sentence can be interpreted as either ‘My mother looks young’ or ‘My mother is young’. However, in (5b) only a more permanent interpretation is possible (‘My mother is young’) since the complement of the copula does not take an *uP*.

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<sup>3</sup> The use of copular *ser* in this context can be grammatical in Colombian Spanish; the subject might be unique in the discourse and perhaps have a topic interpretation (José Camacho, personal communication).

For locative constructions, Zagana argues that the stative *uP* of *estar* has to be checked by a stative preposition (e.g., *en* ‘in’) expressing a single location (6a). If the copula *estar* takes a preposition denoting direction or path (e.g., *a* ‘to’, *hacia* ‘toward’), which does not have a stative interpretation, the derivation crashes (6b):

- (6) a. Dora [<sub>v</sub> [<sub>uP</sub> *está* [<sub>P location</sub> *en* [<sub>DP</sub> la playa]]]]  
 “Dora is at the beach.”  
 b. \*Dora [<sub>v</sub> [<sub>uP</sub> *está* [<sub>P path</sub> *a* [<sub>DP</sub> la playa]]]]  
 “Dora is at the beach.”

The reason why the derivation crashes in (6b) is because the verb and its complement (PP) do not share the same aspectual properties (stative for the copula and path for the PP).<sup>4</sup> This proposal also accounts for the ungrammaticality of *estar* with an event locatives as a complement, as in (7) below:

- (7) \*La fiesta [<sub>v</sub> [<sub>uP</sub> *está* [<sub>P path</sub> *en* [<sub>DP</sub> el rancho]]]  
 “The party is at the farm”

The prepositional phrase in this case has an eventive aspectual meaning (+Theme) provided by the determiner phrase, which contains a path component. This causes a clash with the stative interpretable features intrinsic to the copula *estar* (Zagana 2013: 317). The stative *uP* of *estar* has to be checked with those of its complement or the derivation crashes.

In regard to Catalan, copulas *ser* and *estar* have also been analyzed in terms of permanent vs. circumstantial properties of the subject (e.g., Brucart 2012; Falk 1979). However, in contrast with Spanish, Catalan is quite variable, as native speakers often use either copula indiscriminately with stage-level adjectives (8a) and locatives (8b):

- (8) a. *L'aigua és/està bruta* (adjectival predicate)  
 “The water is dirty”  
 b. *Les sabates estan/són sota el llit* (adverbial locative)  
 “The shoes are under the bed”

<sup>4</sup> Although Zagana’s proposal is quite optimal in accounting for *ser* and *estar* alternation in Spanish, it does not completely capture cases where *estar* can have a stative interpretation with a preposition that usually encodes *path* or *direction*. For example, in Cuban Spanish, it is not completely ungrammatical to say *Ellos están hacia la playa*, meaning that they are at the beach. Although this can also mean path/direction (They are on their way to the beach), a stative meaning is also available.

Researchers have argued that the selection of one copula over the other with adverbial locatives as in (8b) is somehow constrained by the animacy features of the subject (e.g., Brucart 2012; Perpiñán 2015; Sanz & Gonzáles 1995). This, however, has not been completely demonstrated. Others have argued that in standard Catalan, only *ser* is allowed in locative constructions, and that the use of *estar* is the result of contact with Spanish and internal language change (e.g., Sanz & González 1995; Solà 1987). This prescriptive argument has not been supported empirically, as Catalan has always been in contact with Spanish, and both languages have co-official status.<sup>5</sup> Therefore, the existence of a standard variety (non-contact variety for many) is difficult to determine. However, it is the case that the Eastern Catalan variety spoken in Catalonia (provinces of Barcelona, Tarragona, Girona and Lleida) is considered more formal than other varieties (e.g., Balearic, Valencian), and is the variety often used in written registers, TV and radio. In what follows, we discuss previous work on the acquisition of copula distribution in Spanish and Catalan and pose the research questions and hypotheses that guide the present study.

### 3 Previous research with Catalan/Spanish bilinguals

There is no doubt that the acquisition of the *ser* and *estar* distribution in Spanish is a challenging process, just like the acquisition of the subjunctive mood or past tense aspectual interpretations in Spanish. Difficulties and delays have been amply observed in different populations and with different language pairs, including Spanish monolingual children (e.g., Holtheuer 2011; Schmitt et al. 2004; Schmitt & Miller 2007; Sera 1992), Catalan/Spanish bilingual children (Cuza & Guijarro-Fuentes 2017; Arnaus-Gil & Müller 2015), Spanish-English bilingual children (e.g., Cuza, Reyes & Lustres 2017; Licerias, Fernández Fuertes & Alba de la Fuente 2012; Silva-Corvalán 1994; Silva-Corvalán & Montanari 2008), and in English-speaking L2 learners (Bruhn de Garavito & Valenzuela 2008; Geeslin 2002, 2006; Pérez-Leroux, Álvarez & Battersby 2010). However, research on the patterns of *ser* and *estar* use in Catalan/Spanish bilinguals remains underexplored, except

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<sup>5</sup> We acknowledge that there are some communities in Catalonia and in the Balearic Islands where Catalan is the stronger/dominant language. However, this does not mean that Spanish is not spoken or that a contact situation does not exist. It is safe to say that, overall, this is not the linguistic reality of Catalonia or the Balearic Islands. Both regions are extremely bilingual, and both languages enjoy co-official status.

for a few studies (e.g., Geeslin & Guijarro Fuentes 2008; Perpiñán 2015; Sanz & González 1995).

In regard to Spanish monolingual children, Sera (1992) found *estar* overextension to contexts where *ser* should be used, including event locatives. The author argues that the use of *estar* with event locatives stems from the incorrect interpretation of the event as an object by the child, given the extended use of *estar* with spatial locations in the input (Sera 2008). Cuza, Reyes & Lustres (2017), however, counter this view by documenting *estar* overextension with event locatives in Spanish/English bilingual children born and raised in the US, even though they seem to distinguish events from spatial locations in comprehension. The authors argue that rather than interpreting events as objects, difficulties with this domain are better explained in terms of frequency effects associated with this particular “subclass” of copula use in Spanish, which lead to inevitable developmental delays. In their seminal study with a Spanish/English bilingual child, Silva-Corvalán and Montenari (2008) found only one instance of event locatives out of 696 tokens produced by a Spanish-English bilingual child (e.g., *Mi cumpleaños está en mayo* “My birthday is in May”), and three instances out of 510 tokens produced by the adult caregiver. This supports the view that the use of copulas *ser* and *estar* with event locatives is less frequent in the input. In addition to low frequency effects, Spanish allows for other competing forms to express the same eventive meaning (e.g., *tendrá lugar* “it will take place”), which further increases the ambiguity of the input. These competing forms for *ser* in eventive locatives are also available in Catalan and other Romance languages (*tindrà lloc* “it will take place”).

In regard to adult Catalan/Spanish bilinguals, research has documented overextension of *estar* in Catalan (Sanz & González 1995) as well *estar* underuse in Spanish (Perpiñán 2015; Geeslin & Guijarro-Fuentes 2008). In their investigation with Catalan/Spanish bilinguals from the region of Tortosí in Catalonia, Sanz & González (1995) found *estar* overuse, crucially with animate subject references and with adjectives denoting physical conditions. Inanimate subjects were affected in a lesser degree. However, some adjectives appeared in contrast or in free variation with *ser* (e.g., *gord* “fat”). The authors argue that it is in these particular cases where individual differences like age play a role in the degree of *estar* overextension. For example, they found that younger speakers showed a clear preference towards *estar* over *ser*, and used *estar* in their speech in cases that the older informants considered ungrammatical (*La revista està molt bonica* “The magazine is very pretty”) (Sanz & González 1995 : 5). The authors conclude that the internal change in progress taking place in Catalan towards a preference to *estar* is accelerated by contact with Spanish, where *estar* is required with locatives and adjectives (e.g., Gutiérrez 1992; Silva-Corvalán 1994).



The idea of an acceleration of language change in a language contact situation was examined by Geeslin & Guijarro-Fuentes' (2008) study. They investigated *estar* and *ser* distribution in Spanish among bilingual speakers in contact with Galician, Catalan and Basque. The authors compared the frequency of copula use between and within groups and aimed to identify factors that favored the use of one copula over the other. Crucially, they investigated whether contact with another language necessarily leads to more frequent selection of *estar* in Spanish. Geeslin & Guijarro-Fuentes found that the degree of *estar* selection diverged across bilingual groups, and that some predictors for *estar* use were actually common to all groups. Results showed that all groups behaved significantly differently from monolinguals and demonstrated significant variation in copula selection. However, the direction of the differences diverged across groups. While Spanish/Catalan and Spanish/Valencian bilinguals showed lower rates of *estar* selection, the Basque/Spanish and the Galician/Spanish speakers showed higher rates of *estar* use compared to Spanish monolingual speakers. Therefore, bilingualism by itself is not deterministically related to *estar* selection or the simplification of the copular system in Spanish. This is the case among languages in contact with similar copular systems (Spanish and Catalan) but also among languages in contact where the copular systems diverge (Spanish and Basque). In contrast to Silva-Corvalán's (1994) proposal, the overextension of *estar* was not directly related to contact with other languages or the lack of access to a formal written variety of Spanish.

Perpiñán (2015) investigated the distribution of copulas *ser* and *estar* as well as indefinite *haber* in the L2 Spanish grammar of Catalan speakers via an acceptability judgement task and an oral production task. Results from the production task showed underuse of *estar* with locatives in Spanish among the Catalan speakers. This suggests transfer effects from Catalan L1, where *estar* is restricted to locate objects (Solà 1987: 126). However, in contrast with previous work, Perpiñán did not find overproduction of *ser* in Spanish but rather higher use of *haber* ("to have") and *llevar* ("to carry"). Regarding intuition, the author found that the Catalan speakers accepted *ser* to locate objects in Spanish, in contrast to the Spanish monolinguals. It appears then as if the familiarity with Catalan leads to *estar* reduction in Spanish locative constructions. Perpiñán also found that all participants recognized that *ser* must be used with events (*La reunión es en el hotel* "The meeting is at the hotel"), and correctly rejected *estar* in those contexts. The author argues that the reduced use of *estar* with locatives in Spanish might stem from the frequent use of *ser* in Catalan, which instead could activate the necessary uninterpretable feature needed in Spanish to yield a locative interpretation for *ser* (Perpiñán 2015: 127). Although this is a possibility, the nature of the production task could have also conflated the

results, leading to *estar* underuse in production. The participants might have underused *estar* not because it is underspecified in their L2 system but simply because they had other lexical options they could have used (*El libro está en la mesa* vs. *Hay un libro en la mesa* “There is a book on the table”). The lower rate of *estar* production could have been a task effect, not necessarily a developmental issue; this is also conflated in the monolingual norm, where the use of *estar* vs. *haber* in this context might be constrained by dialectal issues. As for the acceptance of *ser* with locative constructions in Spanish (AJT), this is something that calls for an item analysis. The use of *estar* with adverbial locatives in Spanish is not categorical; the input does provide ambiguous evidence (*El baño está/es a la izquierda* “The bathroom is to the left”) (See Camacho 2012 for discussion).

Following previous work as well as the existing differences between Spanish and Catalan as far as copular distribution is concerned, examine the following research questions:

- RQ1:** Do Spanish/Catalan adult bilinguals show target distribution of copular *ser* and *estar* in both languages? If not,
- RQ2:** Are the difficulties with copular distribution more pronounced in the use of *estar* with adjectives and locatives in Catalan than in Spanish stemming from structural overlap effects?
- RQ3:** What is the role of language dominance in this process? That is, is the degree of target behavior in copula distribution in each language correlated with language dominance?

We follow Hulk & Müller’s (2000) structural overlap hypothesis in predicting unidirectional transfer from Spanish into Catalan as evidenced in a higher use of copular *estar*. Catalan (Language A) allows both *ser* and *estar* with locatives and adjectives; Spanish (Language B) overlaps with Catalan in allowing only *estar*. Therefore, we expect overextension of *estar* in Catalan stemming from crosslinguistic influence from Spanish. However, we do not expect transfer effects from Catalan into Spanish evidenced by an overextension of *ser* with Spanish locatives or adjectives since that option is not available in Spanish (as far as the contexts under investigation are concerned). As mentioned earlier, Hulk & Müller’s (2000) proposal for crosslinguistic influence implies (1) that there is a structural overlap between the two languages, and (2) that the structure under consideration lies at the syntax-pragmatics interface. However, we argue that structural overlap as a condition for transfer can also be applied

to syntax-semantics interface structures or even the narrow syntax. This is in light of research documenting transfer effects in contexts where the two languages overlap in a specific structure (e.g., clitic climbing in Spanish but not in English) with no pragmatic extensions (Pérez-Leroux, Cuza & Thomas 2011).<sup>6</sup> Furthermore, we don't expect overextension of copula *estar* with event locatives in either language; this option is ungrammatical in both Spanish and Catalan. We also don't predict overextension of *ser* to stage-level predicates or locatives in Spanish where *estar* is required. The use of *estar* in locatives and with stage-level predicates is very categorical in Spanish and quite salient in the input. All of the participants have native-like proficiency in Spanish and therefore we would not expect this type of error (e.g., \**El agua es sucia* "The water is dirty" or \**Dora es en la playa* "Dora is at the beach"). We hypothesize the following:

- H1:** The bilingual speakers will overextend copular *estar* to (a) Catalan locatives (e.g., *El gos està sota la l'escriptori* "The dog is under the desk.") and (b) in Catalan adjectival contexts (e.g., *La sopa està calenta* "The soup is hot"). In these two contexts copula *ser* is also possible in Catalan, leaving one overlapping structure with Spanish (*estar*).
- H2:** The participants will not overextend copular *estar* to event locatives in Catalan where *ser* is required. Both languages behave the same way in this context (e.g., *El festival és a la Plaça Major*; *El festival es en la Plaza Mayor* "The festival is at the Plaza Mayor").
- H3:** The participants will not show (a) overextension of *ser* in contexts where *estar* is required in Spanish (adverbial locatives or stage-level predicates) or (b) overextension of *estar* with event locatives where *ser* is obligatory (e.g., *La fiesta es en casa de María* "The house is at Mary's house.").

In what follows we present the experiment and the results.

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<sup>6</sup> Pérez-Leroux et al. (2011) found that Spanish/English bilingual children prefer post-verbal clitic placement in reconstruction environments in Spanish (*Mara quiere verlo*), an option not attested in monolingual children, who prefer preverbal placement (*Maria lo quiere ver*). The authors argue for crosslinguistic effects from English despite no pragmatic extensions in Spanish reconstruction contexts.

## 4 The experiment

### Community characteristics

The present study took place in Palma de Mallorca, the capital city of the Autonomous Community of Balearic Islands in Spain. Catalan and Spanish are the co-official languages of the Balearic Islands, as per the Linguistic Normalization Law of 1986, and both languages are widely spoken in Mallorca (Blass-Arroyo 2007). The specific dialect of the Catalan spoken in Mallorca is *Mallorquín*, which goes back to the thirteenth century, but nowadays most people refer to it as simply Catalan. *Mallorquin* is often used as the ethnic identification, and is independent of language use or competence in Catalan (Melià 1997; Siguan 1999).<sup>7</sup>

Catalan is compulsory in Mallorca's public-school system, and most residents (around 73%) speak Catalan with different degrees of bilingual ability. In Palma, specifically, most of its residents have native-like linguistic competence in Spanish, crucially the younger generation. Spanish is preferred over Catalan among the younger generation for peer-interaction, as they do not relate language dominance with ethnic identity (Melià 1997). Although Mallorcan residents are schooled almost entirely in Catalan depending on the type of school (public vs. private) and region, Spanish remains the main language for social interaction and intergroup relationships among the youth. In this regard, Pieras-Guasp (2002) argues that Spanish has a higher instrumental value than Catalan in Palma, and it is the language preferred by the younger generation for social mobility and power. Thus, it is safe to argue that in Palma, Spanish is the dominant language for most of its residents. This is also emphasized by the large number of non-Catalan residents who have immigrated to Palma from other regions of Spain, and the region's massive tourist industry. However, both Spanish and Catalan have equal official status, and neither of the two languages can be considered as a minority/heritage language at the individual or societal level. This is a situation similar to the current linguistic diversity of Montreal (Quebec, Canada), where both English and French are widely spoken. This linguistic integration is optimal for bilingual development, although the patterns of use of one language vs. the other do diverge, as is common in most bilingual communities. English is also widely spoken as *lingua franca* due the enormous impact of the tourist industry

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<sup>7</sup> Despite several morphosyntactic and lexical dialectal differences between Balearic and Mainland Catalan dialects, there are no reported dialectal differences to our knowledge in the use of *ser* and *estar*.

in the Bay of Palma and the large number of business and commerce between the Balearic Islands and the UK (Bruyèl-Olmedo & Juan-Garau 2010; 2015).

## Participants

Nineteen ( $n=19$ ) Catalan-Spanish sequential bilinguals, born and raised in Palma de Mallorca, were recruited for the study via word of mouth. Their age range was 18–27 years of age ( $M=22$ ;  $SD=3.1$ ). The participants were exposed to Spanish and/or Catalan at home before the age of 5;0 in different degrees depending on the linguistic background of their parents. However, all of them were exposed to Catalan at the time of school immersion. All of the participants except one were university students at a major research university in Palma de Mallorca. They completed a detailed language background questionnaire (adapted from Cuza 2013) which elicited information regarding age, formal education, employment, parents' primary languages, patterns of language use and exposure in different contexts as well as a self-proficiency measure.

In regard to their language background, 50% of the participants indicated having Catalan as their home language during early childhood, 22% indicated having Spanish, and 27% indicated having both. In regard to their patterns language use at school, 59% indicated that they spoke mostly Catalan or a little more Catalan than Spanish; 12% indicated that they spoke mostly Spanish and 29% that they spoke both. Similar patterns of use were reported at home where 61% of the participants indicated that they spoke either only Catalan or mostly Catalan. In social situations, their patterns of language used changed drastically: 39% reported speaking a little more Spanish than Catalan or only Spanish; 33% indicated speaking both, and only 27% indicated speaking only Catalan. This reflects the bilingual situation in Palma where Spanish is highly spoken in social situations, even though most young bilinguals have been educated and raised primarily in Catalan. When we asked the participants which language they felt more comfortable with, 44% indicated Catalan, 22% indicated Spanish and 33% indicated both. It is clear from this information that most of the participants were Catalan dominant, but they all had excellent knowledge of Spanish as well, and used it more than Catalan in social situation with friends. Table 1 summarizes this information:

## Structures under analysis and tasks

As discussed earlier, the goal of our study was to examine the distribution of copula verbs *ser* and *estar* in Catalan and Spanish in four contexts: animate and inanimate locatives where *estar* is obligatory in Spanish but not in Catalan, stage-level adjectives

**Table 1:** Participants' linguistic background.

	Adult Bilinguals (n=19)
Mean age at testing	22 (range=18–27; SD=3.1)
Place of Birth and Residence	Spain, Palma de Mallorca
Language background	Primary Language: CAT: 55%; SPAN: 33%; BOTH: 11% Home lang. as child: CAT: 50%; SPAN 22%; BOTH 27% Most comfortable lang.: CAT: 44%; SPAN:22%; BOTH: 33%
Language spoken at:	
Home:	CAT: 61%; SPAN: 27%; BOTH: 11%
School:	CAT: 59%; SPAN: 12%; BOTH: 29%
Social Situations:	CAT: 27%; SPAN: 39%; BOTH: 33%
Self-proficiency (1=poor; 4=excellent)	
CAT:	Reading (3.7); Writing (3.7); Speaking (3.6); Comprehension (3/9)
SPAN:	Reading (3.9); Writing (3.8); Speaking (3.7); Comprehension (3/9)

where *estar* is required in Spanish but optional in Catalan, and event locatives where *ser* is required in both languages.<sup>8</sup> We expected the participants to show more use of *estar* with locatives and adjectives in Catalan but no difficulties with their use of *ser* with event locatives as both languages behave the same in this context (*ser* required).

To elicit the use of *ser* and *estar* in both languages, we implemented an elicited production task with the aid of PowerPoint and a laptop computer (Cuza 2016; Crain & Thornton 1998). The participants were presented with a preamble followed by a question. The response had to be consistent with the preamble and a photo provided. Examples (9)–(10) show a sample of the task in Spanish:

(9) *Locative adverb – animate (ESTAR required)*

**Preamble:** *Bart quiere jugar con Dora y Diego pero no los encuentra y te pregunta.* “Bart wants to play with Dora and Diego but he can’t find them and he asks you...”

(here a photo of Dora and Diego on top of a tree)

<sup>8</sup> Event locatives included the following: *La boda es en la iglesia* (“The wedding is at the church”), *La clase es en la biblioteca* (*The class is at the library*), *La fiesta es en casa de los Simpsons* (“The party is at the Simpsons”), *El festival es en la Plaza Mayor* (“The festival is at the Plaza Mayor”), *La competencia de barcos es en el puerto* (“The regatta is at the port”).

**Prompt:** *Dile a Bart dónde. “Tell Bart where...”*

**Expected response:** *Dora y Diego están encima del árbol. “Dora and Diego are on top of a tree.”*

(10) *Adjectival Predicate (ESTAR required)*

**Preamble:** *Lisa no tiene mucho tiempo para cenar pues ya tiene que salir con sus amigos. Ella quiere tomarse la sopa que su mamá le preparó rápidamente pero no puede. “Lisa does not have too much time to have dinner because she is going out with her friends. She wants to eat the soup her mother prepared for her but she can’t.*

*(here a photo of a steaming soup)*

**Prompt:** *¿Por qué Lisa no puede tomarse la sopa rápido “Why can’t Lisa eat the soup quickly?*

**Expected response:** *Porque está caliente. “Because it is hot.”*

(11) *Event locatives (SER required)*

**Preamble:** *Hoy hay una carrera de barcos en Palma y Dora quiere ir pero no sabe dónde tendrá lugar y te pregunta. “Today there is a regatta in Palma and Dora wants to go but she does not know where it is, and she asks you...”*

*(here a photo of a regatta in Palma de Mallorca’s port)*

**Prompt:** *Dile a Dora dónde... “Tell Dora where...”*

**Expected response:** *La competencia de barcos es en el puerto. “The regatta is at the port.”*

The same task was implemented in Catalan. The Spanish task was conducted first and the Catalan after in one sitting. For each task, there were a total of 25 test tokens plus 4 distractors and 2 practice items. The participants were interviewed at the participants’ school or at a public place. The tasks were counterbalanced and randomized. Responses were audio-recorded for later analysis.

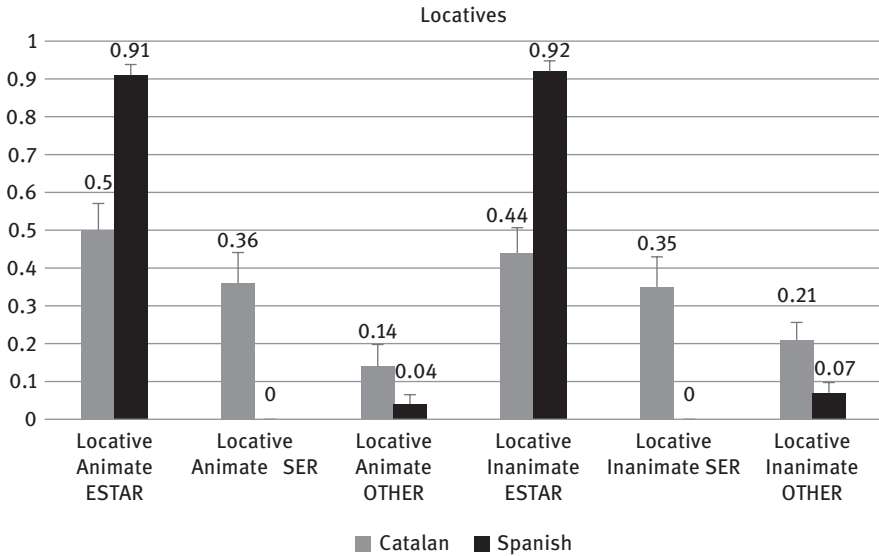
## 5 Results

In what follows we discuss our results. We present the group results by condition and then discuss the individual data to have a better understanding of any existing variation within each language. Furthermore, we explore any potential

correlations with external variables such as patterns of language exposure and use, and proficiency, among others.<sup>9</sup>

## Locatives

Regarding locative constructions in Catalan, results showed much higher proportions of copular *estar* use vs. *ser* with both animate (*estar*=50%; *ser*=36%) and inanimate subjects (*estar*=44%; *ser*=35%). In Spanish, the participants used *estar* about 90% of the time, with no cases of copula *ser*. This is represented in Figure 1:



**Figure 1:** Proportion of copula verbs and other constructions used in locative constructions in Catalan and Spanish.

In addition to copulas *ser* and *estar*, the participants also showed some cases of ‘other’ responses, crucially with inanimate locatives in Catalan (21%). The category ‘other’ included other verbal forms expressing similar meanings. For example, some participants used the verb *es troba* in Catalan or *se encuentra* in Spanish (“it is located”) instead of the copula *estar*. There were also a few cases

<sup>9</sup> One of the participants did not complete the task in Spanish. Therefore, we ran the quantitative analysis on the basis of 18 participants for both languages.



of ‘other’ responses in Spanish with animate (4%) and inanimate subjects (7%), where some participants used the verbal form *se encuentra* (“it is located”).

An overall repeated measures ANOVA on animate locatives with language (Spanish, Catalan) and condition (proportion of *ser* and *estar*) as the within-subject factors and group (bilinguals) as the between subject factor showed no significant effects by language ( $F(1,48) = 1.74, p = 0.19$ ) but significant interaction by condition ( $F(1,48) = 69.01, p < .001$ ). In order to find out where the differences lie, we conducted a series of post-hoc pairwise comparisons using the Bonferroni type I error rate adjustment procedure. Regarding Catalan, the results showed no significant differences in the distribution of *estar* and *ser* ( $p = 0.22$ ). Although the participants used *estar* much more than *ser*, this difference was not significant. In regard to Spanish, the participants used *estar* almost categorically. There was not one single instance of *ser* use. Furthermore, the results showed that the participants distinguished between the two languages as far as copula use was concerned. They used *estar* significantly more in Spanish compared to Catalan ( $F(1,48) = 4.35, p < .001$ ), and they used *ser* significantly more in Catalan compared to Spanish ( $F(1, 48) = 3.60, p < .001$ ). A repeated measures ANOVA with inanimate locatives showed no significant effects by language ( $F(1,32) = 1.97, p = 0.17$ ) but significant interaction by condition ( $F(1,32) = 98.15, p < .001$ ), as in the case of animate locatives. Post-hoc comparisons showed no significant differences in the distribution of *estar* and *ser* in Catalan ( $p = 0.20$ ). In regard to Spanish, the participants behaved target-like in the selection of copula *estar* vs. *ser*. In fact, they did not use *ser* ungrammatically. The proportion of *estar* use in Spanish was significantly higher than in Catalan ( $p < .001$ ), and so was the proportion of copula *ser* use in Catalan ( $p < .001$ ). This means that although both languages tended to use *estar* more than *ser* with locatives, the rates of *estar* and *ser* use between the two of them was not the same. Each language behaved quite differently from the other, which counters a previous proposal of the existence of “an attrited” non-standard Catalan-variety in contact with Spanish.

In order to observe if the group differences were supported at the individual level, we conducted an individual analysis on the use of locatives with animate and inanimate subjects in Catalan and Spanish. As represented in the group results, the majority of the participants preferred *estar* over *ser* with animate and inanimate subjects in Catalan and Spanish. This is represented in Table 2 below.

With animate locatives in Catalan, 10/18 participants were either in the high range (22%) or in the medium range (33%) of *estar* realization, with 3 to 4 *estar* items realized. This contrasts with the use of *ser*, where most of the participants were either in the low range (27%) or produced no instances of *ser* (39%) of *ser*. With inanimate contexts, the participants behaved much the same, with a marked preference towards *estar*. Furthermore, in both contexts, 39% of the participants showed no realization of *ser*. These results provide support for *estar* overextension

**Table 2:** Individual results: Ser and estar use with animate and inanimate locatives per language.

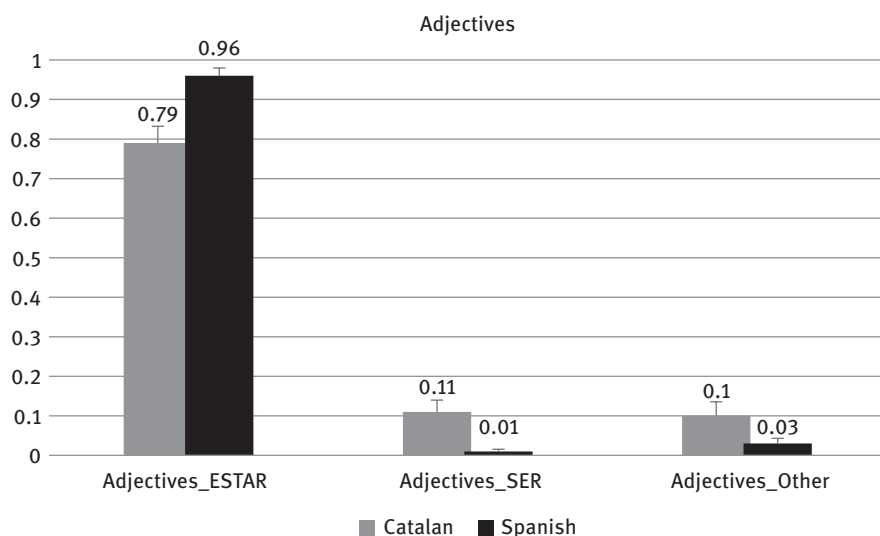
<i>Language</i>		# of items	Locatives Animate		Locatives Inanimate	
			Estar	ser	estar	ser
Catalan	<i>high use</i>	4–5	<b>4/18 (22%)</b>	3/18 (17%)	<b>4/18 (22%)</b>	4/18 (22%)
	<i>medium use</i>	3	<b>6/18 (33%)</b>	3/18 (17%)	<b>3/18 (17%)</b>	2/18 (11%)
	<i>low use</i>	1–2	5/18 (27%)	<b>5/18 (27%)</b>	9/18 (50%)	5/18 (27%)
	<i>zero use</i>	0	3/18 (17%)	<b>7/18 (39%)</b>	2/18 (11%)	<b>7/18 (39%)</b>
Spanish	<i>high use</i>	4–5	<b>17/18 (94%)</b>	0/18 (0%)	17/18 (94%)	0/18 (0%)
	<i>medium use</i>	3	1/18 (5%)	0/18 (0%)	1/18 (5%)	0/18 (0%)
	<i>low use</i>	1–2	0/18 (0%)	0/18 (0%)	0/18 (0%)	0/18 (0%)
	<i>zero use</i>	0	0/18 (0%)	0/18 (0%)	0/18 (0%)	0/18 (0%)

in Catalan, even though the differences are not statistically different, and confirm previous research (Sanz & González, 1995). As far as *estar* overextension with locative constructions in Catalan, Hypothesis 1a is confirmed. However, in Spanish, the results were drastically different, with most participants (17/18) using *estar* across the board with locatives, confirming Hypothesis 3a. As discussed earlier, it is clear that copula alternation works differently in the two languages. Although the participants use *estar* more than *ser* in Catalan with locatives, they still use *ser* in some instances, which is not the case at all in Spanish.

We found a small correlation between the use of *estar* in these contexts and patterns of language use in Catalan. For example, there were four participants who consistently used *estar* in animate and inanimate contexts, and showed almost no use of *ser*. Interestingly, these participants indicated that they spoke more Spanish than Catalan at home, at work and in social situations. They all had Spanish-speaking parents, 3/4 of them indicated that they felt more comfortable speaking Spanish, and 1/4 were equally comfortable in both languages. However, this correlation was less strong with the use of *ser* among participants who indicated that they spoke Catalan at home. In contrast to what one would expect if *ser* was the preferred option in standard Catalan, only 4/11 participants who claimed to speak Catalan at home showed a preference for *ser*. The rest, used both copulas interchangeably or preferred *estar*. This pattern of preference towards *estar* use suggests two possibilities: (1) that there is crosslinguistic influence from Spanish into Catalan that is independent of language dominance, or (2) that the Catalan acquired by these speakers is indeed different from other “standard” varieties of Catalan where *estar* is more restricted, and it has incorporated the use of both copulas as possible alternatives for locative constructions (Sanz & González, 1995). Although not completely clear, it seems as if the semantic scope initially reserved for copula *ser* with locatives has expanded to include *estar*.

## Adjectives

Regarding stage-level predicates, results showed a preference for *estar* over *ser* in both Catalan and Spanish (79% vs. 96% respectively).<sup>10</sup> The participants selected *ser* in a few cases in Catalan (11%) but almost none did so in Spanish (1%). This is represented in Figure 2:



**Figure 2:** Proportion of copula use with stage-level adjectival predicates in Catalan and Spanish.

As is normally the case with elicited production tasks (Cuza, 2016; Crain & Thornton, 1998), the adults also showed a few instances of ‘other’ structures. A repeated measures ANOVA with condition (proportion of *ser* and *estar* in Catalan) as the within-subjects factor and group as the between-subjects factor showed significant effects by condition ( $F(1,17) = 103.46$ ,  $p < .001$ ). The participants used *estar* significantly more than *ser* in Catalan, even though either copula is acceptable. A subsequent repeated measures ANOVA with condition (proportion of *ser* and *estar* in Spanish) as the within-subjects factor and group as the between-subjects factor also showed significant effects by condition ( $F(1,17) = 1742.82$ ,  $p < .001$ ). As in the case of Catalan, participants used *estar* significantly more than *ser*, as is required in Spanish. Although the participants used *estar* significantly more than

<sup>10</sup> Stage-level adjectives (*estar* required) included *caliente* (hot), *frio* (cold), *abiertas* (open), *cerradas* (closed), *encendidas* (turn on), *apagadas* (turned off), *limpia* (clean), and *sucia* (dirty).

*ser* in both languages, the rate of *estar* use in Catalan (79%) was significantly lower than in Spanish (96%) ( $F(1,17)=12.80, p<.002$ ).

A look at the individual data confirms the group results. Most of the participants (12/18) selected *estar* over *ser* in 70% of the cases or more in Catalan. Given the homogenous distribution of the data, there were no correlations with patterns of language use. A few participants selected *ser*, but this was limited, primarily, to two specific items: *L'aigua és/està neta* “The water is clean” and *El cafè és/està fred* “The coffee is cold”. This item effect is interesting as it does not support the notion of transfer from Spanish as the leading underlying source for *estar* overextension. It is possible that *ser* and *estar* are in free variation with these two adjectives. As far as Spanish was concerned, all of the participants preferred *estar*, as expected. These results confirm hypothesis 1b for Catalan (overextension of *estar* with adjectives) as well as hypothesis 3a for Spanish.

## Event locatives

With event locatives, the participants preferred copular *ser* over *estar* in both Catalan (61%) and Spanish (68%), corroborating our expectations. In addition to copula verbs, the participants also used “other” verbs in Catalan (28%) and in Spanish (24%) that convey the same meaning of ‘will take place’ (*tindrà lloc*). These results are represented in Figure 3:

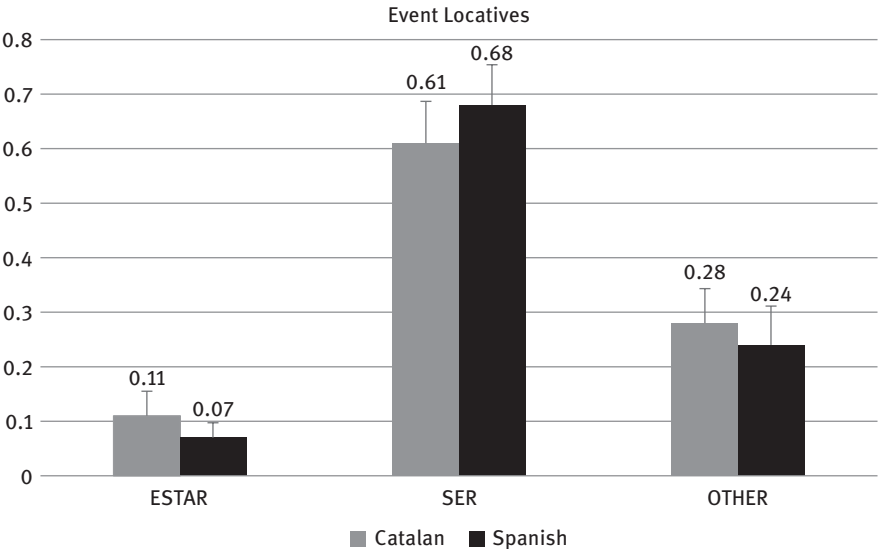


Figure 3: Proportion of copula use with event locatives in Catalan and Spanish.

To measure whether the proportions of *ser* and *estar* in each language were significantly different we conducted two separate repeated measures ANOVA with condition (proportion of *ser* and *estar*) as the within-subjects factor and group as the between-subjects factor showing significant effects by condition. In regard to Spanish, results showed significant differences in the proportion of *ser* vs. *estar* use ( $F(1, 17) = 46.87, p < .001$ ). As predicted, the participants behaved target-like in their use of copular *ser*. In Catalan, the participants also behaved target-like in the use of copula *ser* compared to *estar* ( $F(1, 17) = 20.23, p < .001$ ). The proportion of *ser* use in Catalan and Spanish was not significantly different ( $p = .653$ ), nor was the proportion of *estar* use ( $p = .496$ ). A look at the individual data confirms the group results (Table 3). The participants behaved target-like at the individual level using *ser* over *estar* almost categorically in Catalan and Spanish. Copula *estar* was not used much among the participants in either of the two languages. This confirms hypotheses 2 and 3:

**Table 3:** Individual results: *ser* and *estar* use with event locatives per language.

Language		# of items	Event Locatives		
			Estar	Ser	other
Catalan	high use	4–5	0/18 (0%)	8/18 (44%)	1/18 (5%)
	medium use	3	1/18 (5%)	3/18 (16%)	0/18 (0%)
	low use	1–2	4/18 (22%)	3/18 (16%)	12/18 (67%)
	zero use	0	13/18 (72%)	2/18 (11%)	5/18 (28%)
Spanish	high use	4–5	0/18 (0%)	11/18 (61%)	3/18 (16%)
	medium use	3	0/18 (0%)	1/18 (5%)	1/18 (5%)
	low use	1–2	5/18 (28%)	6/18 (33%)	5/18 (28%)
	zero use	0	13/18 (72%)	0/18 (0%)	9/18 (50%)

In contrast with adjectives and adverbial locatives, 3/18 participants used ‘other’ structures much more than copula *ser* in Spanish. In Catalan, 12/18 participants also used ‘other’ structures in one or two cases. This is because ‘other’ structures (i.e. *tendrá lugar* ‘it’s going to take place’) are in complementary distribution with copula *ser* in both languages. As mentioned earlier, other verbal forms compete with the copular *ser* to express the same meaning, which is the reason why the use of *ser* is not categorical in this particular context.

## 6 Discussion and conclusions

The goal of our study was to examine the status of copulas *ser* and *estar* in the grammars of Spanish and Catalan bilinguals. Regarding Catalan, we expected the

participants to show a bias toward *estar* with locative adverbs and adjectives due to transfer from Spanish, where *estar* is obligatory. However, we did not predict difficulties with the use of *ser* with event locatives, as this is the required copula in both languages. Furthermore, we did not predict *estar* overextension with locatives and adjectives in Spanish or with the use of *ser* with event locatives. As discussed earlier, most residents of Palma have native-like competence in Spanish and the use of *estar* with locatives and stage-level adjectives is very salient in the input.<sup>11</sup> More variation, however, was expected with events due to the use of other verbs expressing the same meaning.

As far as locatives and adjectives in Catalan are concerned, our results suggest cross-linguistic influence effects from Spanish. In regard to locatives, specifically, the participants used *estar* more than *ser* in animate and inanimate contexts. Although the differences were not significant at the group level, individual results (Table 2) do show a much higher preference for the use of *estar* than *ser*. As discussed earlier, copula *ser* was not used by almost 40% of the participants (7/18). These results support previous work arguing a gradual substitution of *ser* by *estar* with locative constructions in Catalan (Sanz & González 1995; Solà 1985).

With regard to adjectives, the participants used *estar* almost 80% of the cases in Catalan. This was significant at the group level in comparison to the use of *ser*, and it was also corroborated by the individual analysis. The use of *ser* with adjectives was very restricted. As in the case of locatives, it seems as if *estar* was being substituted by *ser*. However, these results must be taken with caution; the rate of *estar* use in Catalan was significantly different from the rate of *estar* use in Spanish. This suggests that the participants were not using *estar* across the board in Catalan, as was the case in Spanish. Most Catalan-dominant speakers, preferred *estar* with adjectives in both Spanish and Catalan, but also used *ser* and *estar* in a statistically significant way with locatives in Catalan.

The question that arises then is why do the participants overextend *estar* with adjectives more than with locatives in Catalan. We argue that this might be related to the type of adjective that we tested. The adjectives we tested unanimously select *estar* in Spanish. Therefore, it is possible that this trend is also being introduced

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<sup>11</sup> A quick search for the adjective *caliente* “hot” in the Corpus of Spanish by Mark Davies resulted in 747 entries with *estar* vs. 330 with *ser*. Although the use of *ser* is possible in certain individual-level contexts in Spanish (e.g., *El agua del Lago Ontario es muy fría para bañarse durante el verano* “The water in Lake Ontario is too cold to swim in during the summer”), the stage-level contexts examined in the current study were clearly a circumstantial characterization where *estar* was required (*El café está frío* “The coffee is cold”). With locatives, *estar* is almost always required in Spanish, crucially with animate subjects (*Rosa está en la bodega* “Rosa is at the food store”).

into Catalan, and that the distinction in this specific context is becoming much more neutralized than with locatives. Future research would benefit from examining adjectives that unanimously select for *estar* in Spanish as well as those where both *estar* and *ser* are possible depending on the context. This type of analysis would allow us to tease apart the extent to which *estar* has been extended in Catalan adjectival predicates due to crosslinguistic influence from Spanish.

From a theoretical perspective, the results suggest that copula selection with locatives and stage-level predicates in Catalan cannot be accounted for by the same theoretical approach. If, as argued by Zagana (2013), *ser* and *estar* alternation is regulated by an uninterpretable aspectual feature ([uP]) that determines the complements of copular *estar* but not those of *ser*, then this is not supported by Catalan locatives, as the participants did not categorically preferred *estar* over *ser*. As far as Catalan locatives are concerned, it does not seem that there must be aspectual agreement between the stative uP of copular *estar* and a stative preposition expressing a single location. However, an interpretable aspectual feature [+uP] does seem to determine the selection of *estar* with stage-level predicates, as this was the preferred choice among the participants.

Regarding event locatives, the results confirmed what we predicted. The participants behaved target-like in their use of *ser* in both Catalan (*ser*=61%; *estar*=11%) and Spanish (*ser*=68%; *estar*= 7%). However, our task was limited in the sense that the participants also had the option of using other structures with the same “eventive” meaning provided by the copula *ser* (e.g., to take place). This is the reason why none of the participants behaved at ceiling (Figure 3). There were only six instances of *estar* use in Spanish, crucially with the items \**La boda está en la iglesia* “The wedding is at the church” (x2) and \**La clase está en la biblioteca* “The class is in the library” (x2). In the case of the latter item, it is possible that the participants interpreted *la clase de dibujo* “the drawing class” as a physical location, and not as an event locative, in which case the use of *estar* is grammatical. This was also the case in Catalan, where three participants used *estar* with this item, and with the test token *El festival está a la Plaça Major* “The festival is at the Plaza Mayor”. In both cases, the subject (*class*, *festival*) could have been interpreted as a physical entity, not necessarily as an event. Despite these minor instances of ungrammatical *estar* use explained above, the results do confirm Zagana’s (2013) aspectual approach as most participants selected copular *ser*. The copula verb *estar* is ungrammatical in this case since the PP has an eventive aspectual meaning (+Theme), given by the subject DP, which clashes with the stative uP of *estar*.

Regarding locatives and adjectives in Spanish, the participants overwhelmingly used copula *estar*, as required. These results counter previous research arguing for structural influences from Catalan into Spanish, and morphosyntactic

reinterpretation (Blass-Arroyo 2011; Perpiñán, 2015; Serrano, 1996). The restructuring found by Serrano (1996) with *ser* overextension with inanimate locatives in Spanish (*El pan es a la mesa* “The bread is on the table”) is not supported by our data, confirming recent research (Perpiñán 2015). This does not mean, however, that a Catalan-dominant speaker with much less competence in Spanish could not make these errors; this is simply not a common occurrence among balanced Spanish/Catalan bilinguals in Palma. Furthermore, our data support Perpiñán’s (2015) findings of target use of *ser* with event locatives in Spanish. From a theoretical perspective, the Spanish data support Zagana’s (2013) aspectual approach to copula selection in the three contexts under analysis.

To summarize, the results of the current study support previous work in documenting *estar* overextension to stage-level adjectives and adverbial locatives in Catalan (Sanz & González 1995) but no difficulties with the use of copula *ser* with event locatives. The use of *ser* was particularly restricted with adjectives in Catalan, but not with adverbial locatives or event locatives. These results are relevant to current proposals on vulnerable domains and structural overlap as key constraints on cross-linguistic influence/transfer effects (Hulk & Müller 2000; Müller & Hulk 2001). The lack of transfer from Catalan into Spanish is not surprising. As discussed earlier, Spanish is the dominant language in Palma de Mallorca, especially for social interactions among the youth, and the use of *estar* or *ser* in the contexts examined is very categorical. Thus, it is not surprising that the participants showed target behavior in these contexts.

Future research would benefit by investigating more closely adjectival predicates where the use of one copula vs. the other depends on the preceding context in Spanish, as well as contexts where only *estar* is required. Furthermore, it would be interesting to triangulate the current production data with the participants’ intuition and comprehension in order to have a better understanding of the extent to which these types of bilinguals are able to tease apart the relevant distinctions.

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