

Lexically-Based Interlinguistic Influence at the Syntax-Semantic Interface: Copula Omission in the English Grammar of English-Spanish Bilinguals

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1. Introduction

The debate on whether the omission of subjects in child language should be accounted for syntactically (Hyams and Wexler 1993) or is the result of a processing deficit (Valian 1991, Valian and Eisenberg 1996) has been extrapolated to copula omission by Becker (2000, 2004). This author argues that the differences in the use of overt copula *be* versus null copula *be* in child English rather than being a product of sentence length are determined by the semantic nature of the predicate as in (1) versus (2).

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|--------|----------------------------------|---------------|-------------------------------------|
| (1) a. | <i>lady</i> _ <i>on that</i> | (Nina, 2;02) | |
| b. | <i>It's on my slipper</i> | (Naomi, 2;03) | [Becker 2004, 164; from Sachs 1983] |
| c. | <i>I</i> _ <i>in the kitchen</i> | (Nina, 2;01) | [Suppes 1974] |
| (2) a. | <i>this is lady</i> | (Naomi, 2;02) | |
| b. | <i>Patsy's a girl</i> | (Peter, 2;03) | [L. Bloom 1970] |
| c. | <i>that</i> _ <i>cuckoo fish</i> | (Naomi, 2;05) | [Becker 2004, 164; from Sachs 1983] |

Locative predicates, as the Prepositional Phrases in (1), are aspectual and it is their Aspectual Phrase that provides temporal anchoring to the sentence (Guéron and Hoekstra 1995). This results in the possibility of using null *be* with these types of predicates. However, since Nominal predicates like the Noun Phrases in (2) are not aspectual, they require an explicit copula *be* to ensure temporal anchoring.

Adjective predicates with copula *be* as in (3) and (4) can be considered Locative or Nominal respectively (Stage-Level or Individual-Level, following Carlson's 1977 and Schmitt and Miller's 2007 terminology) depending on the type of adjective and on the context, so that (3) would contain a Locative/Stage-Level predicate, while (4) a Nominal/Individual-Level one. According to Becker (2000, 2004), and even though the results were less clear-cut and individual differences occurred both quantitatively and qualitatively, the omission patterns in the Stage-Level predicates like (3) versus the Individual-Level predicates such as (4) parallel those of Locative/Nominal predicates in (1) and (2).

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|------------------------------|---------------|-------------------------|
| (3) <i>I</i> _ <i>hungry</i> | (Leo, 2;11) | [Ferfulice, in CHILDES] |
| (4) <i>Elmo is blue</i> | (Simon, 2;05) | [Ferfulice, in CHILDES] |

In languages such as Spanish these two types of semantic predicates have a different lexical realization. Namely, Stage-Level predicates such as (1) and (3) are realized as *estar* while Individual-Level predicates such as (2) and (4) are realized as *ser* as shown in (5) and (6) respectively.

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|--------|--------------------------------------|---------------|-------------------------|
| (5) a. | <i>la bolsa está dentro de bolsa</i> | (Leo, 2;04) | [Ferfulice, in CHILDES] |
| | the bag is inside the bag | | |
| b. | <i>no, (es)toy a(n)fadado</i> | (Simon, 2;05) | [Ferfulice, in CHILDES] |
| | no, I am upset | | |

- (6) a. *ésta es la vaca* (Simon, 2;04) [Ferfulice, in CHILDES]
 this one is the cow
 b. *éste es rojo* (Leo, 2;04) [Ferfulice, in CHILDES]
 this one is red

Given the fact that copula omission is far from being a robust phenomenon in monolingual (Sera 1992) and bilingual Spanish (Gaulin 2008; Silva-Corvalán and Montanari 2008, Licerias, Fernández Fuertes and Alba de la Fuente, to appear; Fernández Fuertes and Licerias, to appear), we set out to investigate whether and how the Spanish copula system might influence the realization of copula in the English developing grammar of two English/Spanish simultaneous bilinguals. While a substantial amount of research has pointed to the vulnerability of the syntax-pragmatic interface as being the locus of interlinguistic influence in simultaneous bilingual acquisition (Hulk and Müller 2000; Paradis and Navarro 2003, among others), the possibility that lexically-based linguistic influence could take place at the syntax-semantic interface has only recently been raised (Licerias, Fernández Fuertes and Alba de la Fuente, to appear; Fernández Fuertes and Licerias, to appear). Besides the fact that copula omission is very rare not only in Spanish but also in other languages such as Catalán (Bel 2001) where the *estar/ser* dichotomy also holds, the case for interlinguistic influence at the syntax-pragmatics interface needs further refinement. First of all, no attempts have been made to determine whether processing limitations could account for the occurrence of object drop in the French of the French/German bilinguals in Hulk and Müller's (2000) study or for the use of overt subject pronouns in the Spanish of the English/Spanish bilingual child Manuela (Paradis and Navarro 2003). Second, there is no conclusive evidence that Manuela's rate and usage of overt subject pronouns are actually different from those of monolingual Spanish children nor that, rather than influence from English, input from both her non-native mother and the Spanish Caribbean variety spoken by her father could influence her usage of subject pronouns. Third, it may be the case that interfaces are vulnerable (i.e. the use of overt subject pronouns in null subject languages) but that vulnerability is not directly linked to interlinguistic influence (i.e. the obligatoriness of overt subject pronouns in English). In other words, child monolingual Spanish may also evidence problems in terms of the pragmatic conditions which regulate the use of subject pronouns and of overt subjects.

Based on the above, in the next section of this paper we provide an account of the two types of predication described in (1) to (6). Section 3 contains a comparison of copula omission in monolingual English (Becker 2002, 2004) and copula omission in the data from two simultaneous bilingual twins in the Ferfulice corpus available in CHILDES (MacWhinney 2000/2010). The twins' longitudinal data which we have analyzed cover the same age and MLU counts as in the four children in Becker's (2004) study. We show that the two types of data are very different and attribute the low rate of copula omission displayed by the bilingual children to influence from Spanish, specifically to the lexical differentiation between Locative (*estar*) and Nominal (*ser*) which also determines the low rate of copula omission that characterizes child monolingual and bilingual Spanish (Licerias, Fernández Fuertes and Alba de la Fuente, to appear; Fernández Fuertes and Licerias, to appear). In section 4 we analyze the twins' copula omission/production patterns in relation to the length of the respective utterances and conclude that processing load measured in terms of the length of utterances does not allow us to conclude that copula omission in the twins' bilingual English is a reflection of a processing deficit. However, since we have attributed the low rate of copula omission in the twins' English data to their bilingual grammatical competence, it is possible that a more sophisticated measure of processing load could account for copula omission in bilingual English and for the internal variability of copula omission with Locative and Nominal predicates in monolingual English.

2. Predicate classification

In seminal work carried out by Carlson (1977), he provides a solution to the fact that the meaning of bare nominals (nominals without determiners) such as those in (7) has two different values depending on the linguistic context in which they occur.

- (7) a. *Lions* are dangerous
 b. *Good students* are always ready to write essays

Rather than proposing that null determiners have multiple meanings, he argues that all bare plural constructions have the same syntactic and semantic value. In his account, bare plurals function as the proper name of a kind of thing (i.e. *lions* names a type of feline as Garfield may name a particular cat). Thus, in a generic sentence, a property is attributed directly to the individual while in a non-generic sentence properties are not attributed to the individual but to a temporal part of an individual which he labels stage. This implies that the meaning of the sentence where the bare plural occurs will depend on the value (individual or stage) of a Verb Phrase operator, as in (8).

- (8) a. *Lions* are more dangerous than *deer*
 b. *Lions* are as hungry as *tigers* these days

In (8a), a sentence with a generic value, the property is attributed directly to the individuals while in (8b), a sentence with a non-generic value, the property is attributed to a temporal stage of the individuals. Note that the predicate in (8a) would translate as *ser* in Spanish while the predicate in (8b) would translate as *estar*.

Based on this distinction, Becker (2000, 2004) analyzes predicates with and without copula *be* as either Individual Level Predicates (IL)—the nominals in (2) and the adjectivals in (4)—, or as Stage Level Predicates (SL)—the locatives in (1) and the adjectivals in (3). Adjectival Predicates depicting colour, size, aesthetic properties, etc. such as *tall*, *pretty*, *ugly*, *hard*, *soft*, are considered IL predicates while Adjectival Predicates depicting temperature, physical sensations, emotions, etc. such as *tired*, *hungry*, *sick*, are considered SL predicates.¹

It has also been proposed that this semantic distinction correlates with a syntactic one (Luján 1981; Schmitt 1992; Kratzer 1995) in that IL predicates are non-aspectual while SL predicates are aspectual. This syntactic distinction leads Becker (2000, 2004) to propose that children's early grammars differ from adult grammars with respect to how Guéron and Hoekstra's (1995) "Temporal Anchoring Constraint" is satisfied. This constraint states that "a main clause is temporally anchored if a (particular) syntactic head is bound by the Temporal operator (T_{OP}) in C", as shown in (9).

- (9) CP ... T_{OP_i} ... Tense P_i ... VP

Becker (2000, 2004) proposes that, in child grammars, the requirement for (main clause) temporal anchoring is satisfied by either (a) or (b), as in (10).

- (10) CP ... T_{OP_i} ... Tense P_i ... Asp P_i ... VP
 (a) T_{OP} binds Asp
 (b) T_{OP} binds Tense [Becker (2004, 114)]

This allows her to account for the fact that children's grammars display explicit *be* with non-aspectual predicate (IL) as in (2) and (4) above and (11) below, and implicit *be* (*be* omission) with aspectual predicates (SL) as in (1) and (3) above and (12) below.

- (11) Mommy *is* a girl
 (12) My doggy \emptyset down there

The rationale behind the proposal is that SL predicates are aspectual, which implies that this AspP category provides temporal anchoring in the sentence, so that *be* (*estar*) in IP could be implicit, as

¹ As expected, when the Adjectival Predicates listed as IL appear with *ser* in Spanish (the unmarked case) they have an IL interpretation; however, when they appear with *estar* they have a SL interpretation. For instance, *Ana es muy guapa* would in fact translate as *Ana is very pretty* in English while *Ana está muy guapa* would translate as *Ana looks very pretty*. The adjectives listed as SL Adjectival Predicates by Becker take *estar* (*Ana está enferma, cansada y hambrienta* / *Ana is sick, tired and hungry*). In fact, these adjectives may only appear with *ser*, if at all, if a determiner is inserted so that it is ensured that the property is predicated of an individual, thus becoming an IL predicate (*Ana es una enferma* / *Ana is a sick person*).

shown in (13).

- (13) a. $[_{TP} \text{My doggy}_i [_T (\text{is}) [_{AspP} [_{EvP} [_{SC} t_i [_{PP} \text{down there}]]]]]]]$ ²
 b. $[_{TP} \text{Mi perrito}_i [_T \text{está} [_{AspP} [_{EvP} [_{SC} t_i [_{PP} \text{aquí debajo}]]]]]]]$

In the case of IL predicates, since they are non-aspectual, an AspP category is not present and, as a consequence, *be* (*ser*) in TP must provide the sentence temporal anchoring so that *be* cannot be implicit, as shown in (14).

- (14) a. $[_{TP} \text{Mommy}_i [_T \text{is} [_{SC} t_i [_{NP} \text{a girl}]]]]]$
 b. $[_{TP} \text{Mamá}_i [_T \text{es} [_{SC} t_i [_{NP} \text{una chica}]]]]]$

3. Copula omission in child simultaneous bilingualism: Monolingual versus bilingual English

The debate around whether the two languages of the bilingual children are differentiated from the early stages or whether they constitute a single system (Volterra & Taeschner 1978; Genesee 1986; Meisel 1989; De Houwer 1990; Genesee & Paradis 1997) seems to have been resolved in favor of the former position. However, this does not imply that interlinguistic influence between the two systems should be totally discarded. In fact, the issue of interlinguistic interference in simultaneous bilinguals has received a great deal of attention in the last decade (Müller, Hulk and Jakubowicz 1999; Hulk and Müller 2000; Müller and Hulk 2001; Müller, Cantone, Kupisch and Schmitz 2002; Paradis and Navarro 2003; Licerias, Fernández Fuertes and Pérez-Tattam 2008, among others). Researchers have attempted to predict and identify where, how and when interlinguistic influence occurs. For instance, the syntax-pragmatics interface has been identified as a potential area for interlinguistic influence when accounting for the rate of object omission in the French of French/German bilinguals (Hulk and Müller 2000). The availability of object drop in German, which happens to be regulated at the syntax-pragmatics interface, has been said to influence the French of these bilinguals. It has also been suggested that the rate and distribution of overt subject pronouns in the Spanish of an English/Spanish bilingual child, which is regulated at the syntax-pragmatics interface in adult Spanish, may be due to influence from English (Paradis and Navarro 2003). However, as we have pointed out (Licerias, Fernández Fuertes and Alba de la Fuente, to appear), these two proposals differ in terms of the directionality of influence. Namely, in the case of the German-French bilinguals, it is in the “influencing” language, German, where object drop is regulated at the syntax-pragmatic interface while, in the case of the overt subjects of the English-Spanish bilinguals, it is the “influenced” language, Spanish, where the distribution of overt subjects is regulated at the syntax-pragmatic interface. We have argued that in the latter case, English does not influence Spanish because the obligatory presence of subjects in English, the “influencing” language, is a core syntactic phenomenon.

What we investigate in this section of the paper is whether the lexical differentiation of the syntactic-semantic distinction between SL and IL predicates that occurs in Spanish may influence the English of English/Spanish bilinguals. In other words, we want to determine whether copula omission may be an area of potential interlinguistic influence, because the *ser* (IL predicates) and *estar* (SL predicates) differentiation may: (a) contribute to reinforcing the aspectual value of SL predicates and therefore, following Becker’s (2004) proposal, make them more redundant; and (b) act as a facilitator for the early implementation of the adult realization of the “Temporal Anchoring Constraint” where the operator in T binds TP as in (9) and (10b) above. The type of interlinguistic influence that we predict is based on our attempt to further characterize how directionality of influence takes place (Licerias, Fernández Fuertes and Alba de la Fuente, to appear). In other words, we propose that the lexical transparency which results in the realization of the two types of predicates (IL as *ser* and SL as

² EvP is an event argument while SC stands for small clause. A reviewer asks whether T should be excluded from the representation, since AspP is the binder. We follow Becker’s (2000, p. 112-113) tree structure in which Tense/Inflection is maintained in the representation since the subject is located in Spec TP/IP.

estar) in Spanish influences the English of the bilinguals by facilitating the lexical realization of copula *be*.³

As we have indicated above, Becker's (2004) proposal is meant to account for the different rate of copula omission which she found in the IL and SL predicates produced by four English monolingual children (Adam, Nina, Naomi and Peter) from the well-known Brown corpus in CHILDES (MacWhinney 2000/2010). The specific sessions, age and MLU of the children is shown in Table 1.

CHILD	SESSIONS	AGE	MEAN MLU
Nina	7 - 13	2;00 – 2;02	2.98
Peter	6 - 11	2;00 – 2;03	2.84
Naomi	35 - 68	2;00 – 2;07	3.09
Adam	10, 15, 18, 20, 25, 27, 28	2;07 – 3;04	3.38

In an attempt to determine whether similar patterns of omission occurred in bilingual English from English/Spanish bilinguals, we have analyzed data from a set of two bilingual twins (Simon and Leo) from the Ferfulice corpus in CHILDES (MacWhinney 2000/2010).⁴ The sessions, files, age and MLU of the twins are displayed in Table 2.

CHILD	SESSIONS	# FILES	AGE	MEAN MLU
Simon	15 - 33	60	2;00 – 3;04	2.955
Leo	15 - 33	60	2;00 – 3;04	3.586

As can be seen, overall, both the age and the MLU of the twins are comparable to the ages and MLUs of the monolingual children. We also tried to pair up the two types of data with similar numbers of utterances, although this did not guarantee that we could get similar numbers of *be* contexts.

The hypotheses formulated were as follows:

- Hypothesis #1. Spanish will not influence the bilingual patterns of omission of English copula *be*. Therefore, if there is no interlinguistic influence, copula omission patterns will be similar in English monolingual and English bilingual data.
- Hypothesis #2A. The Spanish realization of IL predicates as *ser* and SL predicates as *estar* will reinforce the patterns of omission found in the monolingual data. Therefore, SL predicate omission will be more obvious than in the monolingual data but it will go in the same direction (i.e. more instances of copula omission as in (1a), (1c) or (3)). In the case of IL predicates, and since temporal anchoring must take place, bilinguals' omission patterns should be similar to the monolinguals'.
- Hypothesis #2B. The Spanish realization of IL predicates as *ser* and SL predicates as *estar* will facilitate the adult-like means of satisfaction of the Temporal Anchoring Constraint, which means that copula omission will be significantly lower both in the case of IL and in the case of SL predicates.

Tables 3 and 4 display the percentages of explicit copula produced by the four English monolingual

³ A reviewer asks whether we are proposing that the influence from Spanish blocks the option in Becker's proposal (2004) according to which English-speaking children make use of AspP for temporal anchoring. In fact, we are not proposing that this option is blocked but that, even if it is probably universally available for child grammar and there may be a very early stage where the AspP is not lexicalized, it is systematically lexicalized in the case of child Spanish and bilingual Spanish (and all languages where the lexical distinction between the two types of predicates is realized).

⁴ The twins live with their parents in Spain. The father is a native speaker of Peninsular Spanish and the mother is a native speaker of American English. The father always speaks to the children in Spanish and the mother always addresses them in English. The parents generally speak Spanish with each other, except on summers when they travel to the United States for approximately two months or when a monolingual English speaker is present. (Fernández Fuertes and Licerias 2000-2005; Licerias *et al.* 2005; Licerias *et al.* 2008). This implies that we are dealing with bilingual English/Spanish first language acquisition in a monolingual-Spanish social context, a type of bilingualism which has been referred to in the literature as individual bilingualism (Bhatia and Ritchie 2004).

children and the twins with both IL and SL predicates.⁵ The types of statistical analyses used by Becker (2004) and the ones we have run are contrasts of proportions (z-value) and chi-square tests (χ -value), for which the corresponding *p*-values are shown.

	nominal predicate (IL) % overt total (number of cases)	locative predicates (SL) % overt total (number of cases)
Nina	74.1% (143)	13.0% (115)
Peter	86.4% (398)	18.9% (90)
Naomi	90.2% (122)	33.3% (30)
Adam	52.0% (302)	7.7% (26)
% of explicit <i>be</i>	76.3%	18.8%

Table 3 shows that the difference between the percentage of copula omission produced by the monolingual children with SL level predicates is significantly higher (Becker 2004) than the one produced with IL predicates (more than 80% versus less than 25%). This is not the pattern we see in Table 4, where the percentages of copula omission are around 10% with both types of predicates. In fact, and even though omission is a little higher in the case of the SL predicates, the difference is far from being significant (*p*-value Leo: 0.65; *p*-value Simon: 0.67).

	nominals (IL) % overt total (number of cases)	locatives (SL) % overt total (number of cases)
Leo	90.5% (115)	88% (22)
Simon	91.9% (125)	89.2% (25)
% of explicit <i>be</i>	91.2%	88.6%

A comparison of the individual results in tables 1 and 2 also shows that there are important differences in both the omission of copula *be* with both IL and SL predicates in the case of the monolingual data but not in the case of the bilingual data. Namely, and even though the differences between the IL and the SL predicates are always significant, Adam's production of copula is extremely low in both cases while Naomi's is significantly higher in both cases too. However, the twins production is always high and the differences between the two types of predicates and the two children irrelevant.

The clear-cut differentiation between the rate of omission with Nominal IL and Locative SL predicates which is present in the monolingual data is less straightforward in the case of the Adjectival predicates, as shown in Table 5. Here, the rate of omission is around 38% with IL predicates and 53% with SL predicates. While omission with SL predicates is still higher when the data from all four children are taken together, at the individual level, Peter and Adam treat both predicates in the same way.

	IL adjectives % overt total (number of cases)	SL adjectives % overt total (number of cases)
Nina	62.5% (24)	43.6% (39)
Peter	57.1% (28)	51.2% (86)
Naomi	93.5% (29)	52.3% (65)
Adam	37.1% (35)	41.0% (105)
% of explicit <i>be</i>	62.6%	47.0%

Interestingly enough, the twins omit copula with Adjectival predicates at almost the exact same rate as with the Nominal and Locative predicates (Tables 4 and 6), namely, at an extremely low rate (*p*-value 0.00001) and there are no significant differences between the IL and the SL adjectival predicates.

⁵ Becker's (2004) totals are different from those in the corresponding tables in Becker's (2000), which leads us to assume that, in the former paper, Van Kampen's (2001) review of Becker's (2000) was taken into consideration.

	IL adjectives		SL adjectives	
	% over total	(number of cases)	% over total	(number of cases)
Leo	91.4%	(32)	86.6%	(26)
Simon	95.8%	(46)	95.8%	(23)
% of explicit <i>be</i>	93.6%		91.2%	

Although data from more bilingual and also monolingual children are needed, the different patterns observed here are so obvious that we would like to argue that the lexical differentiation between the two types of predicates for which the twins receive plenty of evidence from Spanish contributes to spearhead the production of sentences with explicit copula in English. In other words, it facilitates the implementation of the binding of Tense by the Tense operator which is required to satisfy the “Temporal Anchoring Constraint” in the adult grammar.

4. Copula omission as a processing constraint

One of the main objectives of Becker’s (2004) analysis was to determine whether copula omission in child grammar was to be interpreted as a grammatical reflex or whether it evidenced a processing constraint. The significant differentiation of IL and SL predicates in terms of the rate of copula omission described in the previous section seemed to provide evidence that monolingual English children differentiate these two types of semantic predicates syntactically (i.e. by satisfying the “Temporal Anchoring Constraint” via the Aspectual Phrase with SL predicates). Evidence against considering copula omission as being the outcome of a processing deficit was provided by Becker’s (2004) comparison of the length of utterances involving copula omission and those with explicit copula.

Table 7 shows that the rate of copula omission was not dependent on the length of the structure since it occurred both in long structures (four-five words) as well as in short ones (two-three words).

Sentence Length (in Noncopula Words)	Nominal Predicate		Locative Predicate	
	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>
Two words	73.8	206	42.9	28
Three words	75.3	457	12.3	73
Four words	73.6	216	15.9	107
Five words	74.1	54	14.3	35
<i>M</i>	74.2		21.4	

[Adapted from TABLE 4, Becker 2004, 163] [*M*=mean; *N*=number]

Specifically, what Table 7 shows is that overt *be* with Nominal versus Locative predicates is significant: two words ($p < .01$), and three, four and five words ($p < .001$), but that long structures with no copula are not significantly longer than long structures with explicit copula.

When the individual patterns were compared (Table 8), the same results were obtained. In fact, Becker (2004) states that a statistical analysis carried out on the individual data showed no effect of copula overtness on utterance length (Wald $\chi^2(1) < 1, p = .35$).

Child	Nominal Predicate (IL)				Locative Predicate (SL)			
	Overt Copula		No Copula		Overt Copula		No Copula	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Nina	3.2	0.9	3.1	0.7	3.7	1.0	4.0	1.0
Peter	3.2	1.0	3.2	0.9	2.9	1.1	3.8	1.2
Naomi	3.3	1.0	2.8	0.9	3.6	0.8	3.5	0.8
Adam	3.5	1.2	3.4	1.3	4.5	0.7	3.9	0.8
<i>M</i>	3.3		3.1		3.7		3.8	

[Adapted from TABLE 3, Becker 2004, 162] [*M*=mean; *N*=number]

Since group and individual variability is still at stake, namely, overt *be* is not provided 100% of the time with IL predicates nor is it systematically omitted with SL predicates, we still need to explain why this is so, in other words, why the implementation of the “Temporal Anchoring Constraint” obtains in an adult-like way only sometimes. The answer provided by Becker goes along Yang’s (2002) Competing Grammars Hypothesis: when it comes to implementing the “Temporal Anchoring Constraint” children have two grammars, the adult and the child grammar. Thus, the T operator either binds Asp, as in (10a), or Tense, as in (10b). While this captures (though it does not explain) the variable production of copula with SL predicates, we are still left with the variable production of copula with IL predicates which, even if omission is much lower in the latter case, it is still rather substantial.

The bilingual data are rather different in that the rate of omission of copula *be* is very low. As a matter of fact, less than 10% would be considered “noise” by some researchers and therefore be discarded. However, we think that we should still investigate whether a processing deficit is responsible for the instances of copula omission, at least for those that cannot be given a grammatical explanation, not even one which resorts to a child grammar which differs from the adult grammar. Low percentages, as it has been made obvious for subject omission in Romance languages (Hyams 2001; Salustri and Hyams 2003, 2006; Schaeffer and Ben-Shalom 2004; Liceras, Bel and Perales 2006; Bar-Shalom and Snyder 1997), may not provide evidence for a lack of a Root Infinitival (RI) stage (Guasti 1994; Hyams 2001, Rizzi 2003/2004, Wexler 1994, among others), but rather show that the RI stage is shorter in Romance than in Germanic languages. In terms of copula omission, we have to ask ourselves at least two questions: the first one is whether there is a copula omission stage (Liceras, Fernández Fuertes and Alba de la Fuente, to appear; Fernández Fuertes and Liceras, to appear) in all languages and, second, even if the mechanism is optional—as in the case of the RI stage (also referred to as Optional Infinitival stage)—how we are going to account for that optionality.

Our tentative answer to the first question would be that, if there is a “grammatical” Copula Omission stage in child language, in languages such as Spanish it may be evidenced by the overextension of either *ser* and/or *estar*. The second question holds for both the monolingual and the bilingual English data. Becker (2004) has shown that a word counting of the length of utterances evidences that there is no correlation between copula omission and the length of utterances. Therefore, assuming that the competition between the adult and the child grammars accounts for the variable production of copula with SL predicates, we still don’t know what performance mechanisms are responsible for the variable occurrence of copula *be* with IL predicates (in this case the child grammar does not sanction omission).

But, what about the low percentage of copula omission in child bilingual English? If, as we have argued in the previous section, knowledge of Spanish has spearheaded the implementation of the adult English grammar by the twins, the low percentage of copula omission might have a performance basis. In order to find out whether this is the case, we have carried out an analysis of the twins data similar to the one carried out by Becker. Namely, we have calculated the mean number of words per copular utterance and by predicate type. However, and given the fact that the rate of omission is equally low when we divide up the twins data in two different stages (Liceras, Fernández Fuertes and Alba de la Fuente, to appear; Fernández Fuertes and Liceras, to appear), we have carried out this analysis taking the two stages into account, the rationale being that the Spanish influence was already at work in the first stage and, consequently, similar performance mechanisms may be responsible for copula omission in both stages. The results are depicted in Tables 9 and 10.

		<i>Nominal Predicate (IL)</i>				<i>Locative Predicate (SL)</i>			
		<i>Overt copula</i>		<i>No copula</i>		<i>Overt copula</i>		<i>No copula</i>	
<i>Stage</i>	<i>Child</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
STAGE 1	Leo	2.94	1.49	2.56	1.42	2.50	0.71	2.33	0.58
	Simon	4.16	2.10	2.20	0.84	3.25	1.36	5.20	1.10
STAGE 2	Leo	4.26	2.29	7.00	3.00	5.25	3.24		
	Simon	4.05	1.56	2.50	0.71	5.00	1.80	5.00	

Table 9 displays the mean number of words contained in the structures with overt copula and those with implicit copula in structures with nominal and with locative predicates, while Table 10

displays the results for the two types (IL and SL) of adjectival predicates.

		<i>Adjective predicate (IL)</i>				<i>Adjective predicate (SL)</i>			
		<i>Overt copula</i>		<i>No copula</i>		<i>Overt copula</i>		<i>No copula</i>	
<i>Stage</i>	<i>Child</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
STAGE 1	Leo	2.22	0.83	2.33	0.58	2.45	0.69	2.50	0.71
	Simon	2.57	1.51			2.58	1.00	2.00	1.15
STAGE 2	Leo	3.94	1.52	4.50	0.71	5.62	2.50		
	Simon	4.42	1.43	4.00		3.62	1.61		

A Fisher's LSD procedure shows that, in the case of Leo (stage 1 and 2) and Simon (stage 2), there are no statistically significant differences (all values are between 0 and 0.7), which means that null structures are not significantly longer than overt ones in none of the four types of structures (Pred-SL; Pred-IL; Loc, Adj-SL; Adj.-IL).

A Fisher's LSD procedure shows that, in the case of Simon and for Stage 1, there are statistically significant differences between the null/overt structures, as follows: (i) a comparison of the overt Nominal Predicates and the null Nominal Predicates shows that the overt Nominal Predicate structures are significantly longer than null ones (confidence level: 95%); and (ii) a comparison of the overt Locative Predicates and the null Locative Predicates shows that the null Locative Predicate structures are significantly longer than overt ones (confidence level: 95%). The latter results can be interpreted as evidence that Simon omits copula with Locative Predicate structures when there is a processing load (the cases of omission occur with significantly longer utterances). However, these results were obtained for the Nominal Predicate structure and, since they go in the opposite direction, they weaken the argument for a processing deficit which could operate at the early stages for some children. Nonetheless, we believe that a more sophisticated analysis of the null versus the overt copula structures, one which rather than counting words counts morphemes, differentiates between functional and lexical categories or even considers the phonological contexts where the overt and the null copula occurs, may shed light on why there is optional copula omission in child monolingual and child bilingual English.

5. Conclusions

We have shown that, unlike the English monolingual data analyzed by Becker (2004), the English bilingual data analyzed here (Ferfulice corpus in CHILDES) do not show a significant difference between the omission of copula *be* with IL predicates and SL predicates. Furthermore, the bilingual data are rather different in that the rate of omission of copula *be* is very low, and this pattern holds for both Nominal/Locative predicates and Adjectival Predicates⁶. In this respect, copula omission in bilingual English is closer to the status of copula omission in Spanish and Romance. This is the reason why we would like to conclude that our Hypothesis #2B is confirmed: interlinguistic influence from Spanish facilitates adult-like binding of the "Temporal Anchoring Constraint" in bilingual English.

We have also shown that, overall, the length of utterances does not determine the patterns of copula omission in the English bilingual data in the second stage for none of the two bilingual children. In the first stage, Leo's data is contradictory in that they show the expected significant difference with SL predicates (higher rate of copula omission with longer utterances) but the opposite

⁶ Gavrusseva and Meisterheim (2003) found a similar pattern in their study of child L2 English using longitudinal data from four children with Russian, Japanese and Azerbaijani as L1s. They account for the few cases of omission under Gavrusseva's (2003) proposal which treats copula *be* as a spell-out of tense/agreement features. In particular, they suggest that *be* omission may imply either a missing T (both in SL and IL predicates) or an early lexical deficiency in the morphological component. In this latter case, the syntactic features are mapped onto a null morpheme. Although the pattern these authors report is similar to ours in that omission rates are very low and no significant difference appears between IL and SL predicates, there are important differences between their data and ours which makes these two sets of data not quite comparable. In the first place, the cognitive and linguistic development of our L1 bilinguals is different from the child L2 English in Gavrusseva and Meisterheim's (2003) study. Second, the overall number of *be* contexts in the data from these L2 bilinguals is rather low, which is also linked to the short age range covered, if compared to the L1 bilingual data we analyze here.

rate with IL predicates (higher rate of explicit copula with longer utterances). One could speculate that only SL predicates are sensitive to processing load because their aspectual nature facilitates the activation of child-like binding activation of the “Temporal Anchoring Constraint” and disregard the rate with IL predicates (i.e. take it as an artifact of the specific utterances). However, it is not obvious that such an argument could hold, mainly because the total number of copula contexts is always low (note that in terms of omission it would be less than 10 utterances in all cases—see tables 4 and 6—). Thus, no conclusions can be reached before more data divided into stages are analyzed and a more sophisticated approach to measuring the length differences between utterances with implicit and explicit copula (i.e. in terms of functional versus lexical categories or number of morphemes) is taken.

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