

EVIDENCE OF CROSS-LINGUISTIC INFLUENCE IN GENERIC NOUN PHRASES IN THE SPEECH OF AN ENGLISH-SPANISH SIMULTANEOUS BILINGUAL CHILD: A COMPARATIVE STUDY WITH MONOLINGUAL CHILDREN

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RESUMEN

El estudio examina frases nominales genéricas agramaticales en el lenguaje de un niño bilingüe entre edades 2;3 y 5;6, al compararlas con frases genéricas producidas por 25 niños(as) monolingües del inglés y del español de la misma edad. No se encontraron ejemplos de frases genéricas agramaticales en el lenguaje de los y las niñas monolingües del inglés, pues todas las frases genéricas aparecieron sin pronombre (Ej., *'I love apples'*). Los datos de los niños y niñas monolingües del español tampoco revelaron construcciones agramaticales a pesar de que en español los nombres genéricos pueden aparecer con o sin artículo (Ej., me encantan **las** manzanas / me gusta comer manzanas); el segundo ejemplo se restringe a ciertos contextos pragmáticos. Por el contrario, mientras que el niño bilingüe nunca produjo genéricos agramaticales en inglés, en español el 40% de sus construcciones con genéricos fueron agramaticales por no tener el artículo requerido (Ej., por qué iguanas tienen eso? *'why do iguanas have that?'*); tales construcciones se produjeron junto con construcciones gramaticales. Las construcciones agramaticales en el español del niño bilingüe sugieren la aplicación de la forma gramatical de frase nominal genérica del inglés (i.e., genéricos sin artículo definido) en frases genéricas del español en contextos incorrectos; esto parece indicar influencia cross-lingüística del inglés sobre el español.

Palabras claves: nombres genéricos, influencia cross-lingüística, bilingüismo simultáneo, bilingüismo inglés-español, lenguaje de niños.

ABSTRACT

This study examines non-target-like generic nouns in data by an English-Spanish simultaneous bilingual child aged 2;3 to 5;6, as compared to data by 25 English and Spanish monolingual children of the same age. The child English monolingual data did not reveal non-target-like generics; these were always bare (e.g., *'I love apples'*). Similarly, the child Spanish data revealed no instances of non-target-like generics despite the fact that Spanish has both bare generics and generics with a definite determiner (e.g., *me encantan las manzanas / me gusta comer manzanas*); the latter realization is pragmatically restricted. In contrast, although in English the simultaneous bilingual child always used target-like generics, in Spanish he produced non-target-like bare generics (e.g., *por qué iguanas tienen eso?* *'why do iguanas have that?'*) 40% of the time; these occurred along side target-like generics. Such ungrammatical constructions suggest the use of the English grammatical form, namely the bare form, in Spanish Generic Noun Phrases in pragmatically inappropriate contexts. This seems to suggest influence of English onto Spanish.

Key words: generic nouns, cross-linguistic influence, simultaneous bilingualism, English-Spanish bilingualism, child language.

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1. Introduction

Recent studies in simultaneous bilingualism have focused on a phenomenon referred to as *cross-linguistic influence*; that is, examining non-target-like constructions in the bilingual child's speech that reflect the structural properties of one language onto the other (as defined in Genesee, Paradis, & Crago, 2004). Various studies have argued for or against evidence of this phenomenon in a variety of language pairs (Refer to Vásquez Carranza, 2008 for details on those studies).

In a previous article, I argued for cross-linguistic influence in extraction constructions involving the object of a preposition in the speech of a simultaneous bilingual boy between ages 2;3 and 5;6 (Vásquez Carranza, 2008). That study reported non-target-like constructions involving pied-piping and preposition stranding in the child's two languages (e.g., *qué es eso para?* 'what is that for? / 'in which box is it papi?'), which were interpreted as reflecting influence of Spanish onto English as well as of English onto Spanish. This bi-directionality in cross-linguistic influence had not been reported in previous studies. In another study that relied on the same data (Vásquez Carranza, 2009), I argue for cross-linguistic influence in possessive phrases, given that the English-Spanish bilingual child produced pre-nominal possessives in Spanish (e.g., *vamos a abuelita casa* 'let's go to grandma house'), which are never a grammatical option.

This article provides further evidence of cross-linguistic influence by examining Generic Noun Phrase constructions in data from an English-Spanish simultaneous bilingual child between ages 2;3 and 5;6 (the same data base used in Vásquez Carranza (2008, 2009). The analysis thoroughly compares the bilingual child's non-target-like constructions regarding Generic Nouns to parallel constructions in monolingual English and Spanish child data and to the bilingual child's parental input. The analysis shows a high percentage of non-target-like Generic Noun Phrases in the child's Spanish but not in his English speech; such constructions

are interpreted as evidence of influence from English.

2. Overlap across English and Spanish: the case of Generic Nouns

By and large, evidence of cross-linguistic influence has been reported in constructions that overlap across the bilingual children's two languages (e.g., Dopke, 1998, 2000; Gavarró, 1998, 2003; Hulk, 2000; Kupisch, 2003; Müller, 1998; Müller et al. 1999; Müller & Hulk, 2001; Nicoladis, 2002; Paradis & Navarro, 2003; Serratrice & Sorace, 2003; Yip & Mathews, 2000). That is, one of the child's two languages, language A, allows for more than one grammatical analysis from the child's perspective, and language B contains a lot of positive evidence for one (or more) of those possible analyses (Refer to Appendix A for a figure to illustrate this concept). The child is faced with more than one grammatical analysis compatible with the same semantic target (i.e., this is interpreted in Müller & Hulk, 2001 as evidence of *ambiguity* in the child's input).

Extraction constructions involving the object of a preposition are one example of possible overlap across English and Spanish. Specifically, whereas English has two ways of syntactically realizing these constructions, namely, pied-piping (e.g., 'to whom did you send the letter?') and preposition stranding (e.g., 'who did you give the package to?'), in Spanish only pied-piping is grammatical (*a quién le entregaste el paquete* 'who did you give the package to?').

Similarly, regarding Possessive constructions, whereas in English possession may be realized pre-nominally with the 's marker (e.g., 'John's house') as well as post-nominally through prepositional possessives (e.g., 'the father of the bride'), in Spanish only the post-nominal possessive form is grammatical (e.g., *el padre de la novia* 'the father of the bride').

A third syntactic domain where English and Spanish overlap is in Generic Noun Phrases (NPs). Generic nouns are nouns used to refer to a kind or class of individuals (say animals; e.g., 'lions') or items (e.g., 'tables') while allowing for exceptions within that class (Carlson, 1977). These

constructions overlap across English and Spanish because generic nouns are normally bare in adult English (e.g., ‘Siberian tigers are dangerous animals’), although they may also appear with a definite determiner (e.g., ‘the Siberian tiger is a dangerous animal’). The second syntactic realization is optional (Carlson, 1977; Carlson & Pelletier, 1995; Chierchia, 1998; Pérez-Leroux, Munn, Schmitt, and DeIrish, 2003; Shipley, 1993), constrained by pragmatic rules (i.e., it is normally limited to contexts such as television shows about nature such as Animal Planet). In contrast, generic nouns normally require a definite determiner in adult Spanish (e.g., *el tigre siberiano es un animal muy peligroso* ‘the Siberian tiger is a very dangerous animal’), although in certain semantic contexts they obligatorily appear bare (e.g., *Juan compra tigres siberianos* ‘Juan buys Siberian tigers’; Mackenzie, 2003; Pérez-Leroux et al., 2003). Generic nouns overlap across English and Spanish in that both languages allow bare generics as well as generics with a definite determiner. Overall, bare plurals and bare mass nouns (i.e., determinerless noun phrases) in argument position are grammatical in Germanic languages, whereas in Romance languages these are either ungrammatical or have a much more limited distribution (Carlson, 1977; Carlson & Pelletier, 1995; Chierchia, 1998; Pérez-Leroux et al. 2003; Shipley, 1993).

In English, bare plurals and bare mass nouns can be indefinite (e.g., ‘I saw **bats** in the cave’) or they can be generic (e.g., ‘**bats** live in **caves**’). Although sometimes a generic noun *may* appear with a definite determiner (e.g., ‘**the bat** is a smart creature’), plural nouns with a definite determiner normally cannot be interpreted as generic (e.g., in ‘the zebras have stripes’ the noun ‘zebras’ cannot refer to the kind ‘zebras’).²

In contrast, in Spanish bare plurals and bare mass nouns are normally disallowed, while indefinite nouns often appear as bare (e.g., *bebimos leche y comimos galletas* ‘we drank milk and ate cookies’). Generic nouns obligatorily appear with a definite determiner, except in two semantic contexts (Mackenzie, 2003): in disposition sentences, that is, sentences that report a characteristic of the subject (e.g., *Pedro repara piscinas* ‘Peter fixes swimming

pools’, *Pedro cena en restaurantes caros* ‘Peter eats at expensive restaurants’), and in sentences that describe a subject’s attitude towards a given activity or item³ (e.g., *a Pedro le gusta salir con chicas elegantes* ‘Peter likes to go out with elegant women’, *Pedro odia entrevistas con políticos* ‘Peter hates interviews with politicians’). Furthermore, the definite determiner used with generic nouns is normally plural and marked for gender (e.g., *los tigres son animales muy peligrosos* ‘the.masc tigers are very dangerous animals.masc’), although the singular form is occasionally used in specific contexts such as television programs about nature, just as in English (e.g., *el tigre es un animal muy peligroso* ‘the.masc tiger is a very dangerous animal’).

Chierchia (1998) proposes that the existence of bare plurals in English blocks a generic interpretation for definite plurals, whereas the absence of bare plurals in Romance languages allows the definite to take on a wider range of interpretations, including the generic interpretation. This analysis is based on the generalization that bare plurals cannot receive a generic interpretation in Romance languages; yet, as we saw in the examples above, this generalization has exceptions because bare generics are sometimes allowed in Spanish. The existence of these exceptions remains in need of an explanation yet.

2.1 Generic nouns in child English and child Spanish

Bare generics are common in adult English monolingual speech, though as far as I know, the rate of generic nouns with a definite determiner in adult speech has not been explored thus far. Similarly, in adult Spanish generic nouns with a definite determiner are widely used, as are the exceptional bare generics; nonetheless, no studies to date have established the rate of bare generics in adult Spanish. In other words, the rate of overlap regarding Generic NPs to which monolingual English and Spanish children are exposed is not clear.

In this study, the hypothesis that overlap regarding generic Nouns in both English and

Spanish may result in non-target-like forms in child monolingual speech is entertained. This is possible because at a certain stage in language acquisition, the children might have difficulty determining when a generic noun is obligatorily bare and when it requires a definite determiner. This hypothesis emerges because of two sources of evidence. First, studies on simultaneous bilingualism show that ambiguity across a child's two languages leads to erroneous hypotheses on the child's part, evidenced in non-target-like forms (e.g., Dopke, 1998, 2000; Gavarró, 1998, 2003; Hulk, 2000; Kupisch, 2003; Müller, 1998; Müller et al. 1999; Müller & Hulk, 2001; Nicoladis, 2002; Paradis & Navarro, 2003; Serratrice & Sorace, 2003; Yip & Mathews, 2000). Second, the results reported in Hollander and Gelman (2002) and Pérez-Leroux et al. (2003) regarding Spanish and English monolingual acquisition of Generic NPs further suggest that ambiguity may account for monolingual children's non-target-like generic nouns.

A small number of studies have looked at the *use* of generic nouns in child English and in child Spanish. In a series of studies that involved one-hundred-twelve English monolingual children between ages 2;0 and 4;0, Gelman and Raman (2003) showed that these children distinguished between generics and non-generics from very early on. However, in a production study that included forty-eight 4- to 6-year old English-speaking monolingual children and thirty-seven monolingual adults, Hollander and Gelman (2002) showed that although both the children and the adults differentiated generics (e.g., 'what can you tell Zorg about **dogs**?') from 'some' (e.g., 'what can you tell Zorg about **some dogs**?'), the children incorrectly treated generics as having a wider domain of reference than 'all' (e.g., 'what can you tell Zorg about **all dogs**?'). Similarly, in a study that included twenty 4- to 6-year old English monolingual children and thirteen 3- to 5-year-old Spanish monolingual children, Pérez-Leroux et al. (2003) found that the English monolingual children often incorrectly interpreted definite nouns as generic, and that the Spanish monolingual children occasionally incorrectly interpreted generic nouns as non-generic.

These studies on English and Spanish monolingual children's use of generics suggest that both groups are sometimes unsuccessful in assigning the correct interpretation to generic and definite nouns. Nonetheless, none of these studies elicited production of generics, and hence we do not know what the possible non-target-like generic forms would look like in either monolingual group.

This study examines the distribution of bare generics and generics with a definite determiner in adult English and Spanish monolingual data. It additionally examines non-target-like Generics in child Spanish and English monolingual data in order to explore the possibility that ambiguity in the input results in ungrammaticality. Furthermore, and given that a simultaneous English-Spanish bilingual child is exposed to ambiguity across his/her two languages regarding Generics (i.e., English contains mostly bare generics whereas Spanish contains mostly generics with a definite determiner, but in English generics may occur with a definite determiner whereas in Spanish bare generics are grammatical in certain pragmatic contexts), this study focuses its analysis on naturalistic data by a simultaneous English-Spanish bilingual child, as it compares to the data by monolingual children from the two languages regarding their production of Generic NPs. Specifically, the main questions answered in the analysis are twofold:

1. To what extent do monolingual English and Spanish-speaking children between ages 2 and 5 produce non-target-like Generics as a result of ambiguity in their parental input?
2. How do the patterns in the monolingual child data compare to those in the bilingual child data?
3. The study

3.1 Participants and Procedures

This study relies on longitudinal audio-recordings of the naturalistic development of English and Spanish in a simultaneous bilingual child between ages 2;3 and 5;6 (i.e., three consecutive years and three months). The child's

father is a native English speaker; his Spanish skills are limited and he never spoke Spanish around the child throughout the data collection period. The mother is a native Spanish speaker though she speaks English as a Second language fluently. Although she mostly speaks only Spanish to the child, given that the family lived in an English-speaking country at the time of the data collection and that the child's father spoke little Spanish, she had to speak English around the child when in company of English-speaking relatives and friends and around her husband. The child was audio-recorded in free play and feeding interactions with his parents, friends, and relatives twice a month in each language; each recording session lasted approximately thirty-five minutes. The mother, who is also the main researcher, transcribed all the recordings following the CHILDES format (CHILDES; MacWhinny, 2000). The child's MLUw (Mean Length of Utterance calculated in Words) was between 2 (at age 2;3) and 6 (at age 5;6) in both languages. The study examines non-target-like Generic NPs in this child's speech and compares them to Generic NPs in the speech of monolingual children of comparable ages from each of the two languages.

Data from eleven English-monolingual children and fourteen Spanish monolingual children between ages 2 and 5 were used for the comparative analysis. The monolingual data were not collected by the researcher; instead, these were accessed through the Child Language Data Exchange System (CHILDES; MacWhinny, 2000). The monolingual data came from longitudinal and cross-linguistic studies.

The bilingual child's non-target-like constructions were compared to the patterns in his parental speech in an effort to discard non-target-like constructions in the bilingual child speech that might simply be a reflection of the parental input (i.e., given that both parents spoke the two languages, the mother more than the father, it was possible that they may use non-target-like Generic NPs as a result of transfer from their native tongues; this possibility was reported in a study on cross-linguistic influence by Paradis and Navarro, 2003).

In addition to offering the comparative analysis, the study shows the developmental stage at which the non-target-like constructions regarding generic nouns appear in the child data and when they disappear and the child starts producing target-like forms.

4. Data analysis

4.1 The English monolingual data

The first part of the analysis of the monolingual data focused on the parental speech in order to determine whether generics with a definite article were part of the children's input alongside bare generics. The second part of the analysis of the English monolingual data consisted of determining the rate of target-like generics as well as non-target-like forms in the child data.

Given that several studies on English monolingual acquisition report an initial high rate of article omissions that ceases by the time these children attain an MLU of approximately 2.0, only the child data from ages 2;5 and 5;0 were analyzed in this study; before that age articles are said to be omitted with both definite and generic nouns (Brown, 1973; Clark, 1985; Chierchia et al. 1999; Guasti & Gavarró, 2003; López-Ornat, 1997; Maratsos, 1974; Radford, 1990; Schnel de Acacedo, 1994; Soler, 1984; Tolbert, 1978), so it is impossible to determine whether these children are producing bare generics or simply Bare Nouns in general.

In order to determine which nouns were generic, the definitions provided in Pérez-Leroux et al. (2003) and Gelman and Raman (2003) were used. In concrete terms, nouns were counted as generic only if they referred to general kinds (e.g., 'zebras'; *all* zebras and not only sub-categories of them). The context in which a noun was produced was used in order to determine whether it was generic or not and whether it was grammatical. For example, in an utterance such as 'I dug **worm holes** in our garden' [age: 3;5], although the noun 'worm holes' was bare, it constituted an indefinite noun and not a generic noun. In contrast, nouns were counted as generic in utterances such as 'a lot of times **dogs** chase **cats**' [age: 5;1] and 'I like

[salad] **‘dressing’** [age: 3;5], where ‘dogs’, ‘cats’, and ‘dressing’ all referred to the class denoted by that noun and not just to a restricted number of items within the class.

A thorough analysis of the parental speech in 20% of the English monolingual files (a total of 2733 utterances) showed a very small number of bare generics (39). Furthermore, none of the adults produced generic nouns with a definite determiner, at least not in any of the transcripts analyzed. This suggests that the monolingual children were unlikely to produce non-target-like generics where they used a definite determiner because their exposure to such form was, at most, very small (i.e., their input did not contain ambiguous input). However, given the problems regarding these children’s comprehension of generics reported in Pérez-Leroux et al. (2003), the monolingual child data were examined for grammatical and non-target-like generic nouns.

The analysis of the child monolingual data, not surprisingly, revealed that just as was the case with the monolingual adults, the children only produced a small number of generic nouns; this is shown in Table 1.

No instances of grammatical generic nouns with a definite determiner were found, which is not surprising given that the adult speech did not contain evidence for that grammatical form either (the adult data analyzed only show a small percentage of the children’s input, of course).

By and large, all the children used bare generics in their speech, except for one of the children in the Gathercole cross-sectional data.⁵

TABLE 1: Number of generic nouns identified in the child English monolingual data by age group.

Age	Number of utterances analyzed	Number of bare generic nouns ⁴
2;5 - 3;0	6184	26
3;0 - 4;0	8411	65
4;0-5;0	5132	82
5;0 →	1496	15
Total	21223	188

Overall then, the fact that only one of the total 188 generic nouns found constituted a true non-target-like generic suggests that these non-target-like forms do not represent a systematic pattern in monolingual child English speech.

4.2 The Spanish monolingual data

Just as in the analysis of the English monolingual data, only the child data produced after age 2;5 were analyzed. The criteria used to establish whether a given noun was used with a generic meaning was the same as that used in the analysis of the English monolingual data.

A thorough analysis of the parental speech in 20% of the monolingual files (a total of 4192 utterances) yielded 78 generic nouns. Twenty-five per cent of the total number of Generic Nouns were bare, whereas the rest appeared with a definite determiner. In other words, the monolingual input contained both generic nouns with a definite determiner and bare generics (i.e., potential ambiguous input) and hence the monolingual children could produce non-target-like forms due to such overlap.

The analysis of the child data revealed a small number of generics overall, as compared to the adult data. Furthermore, by and large, the generics found in the child data occurred with a definite article, although a small number of bare generic nouns were also found, as shown in Table 2.

TABLE 2: Number of generic nouns identified in the child Spanish monolingual data by age group.

Age	Number of utterances analyzed	Number of generics with a definite determiner ⁶	Number of bare generics
2;5 – 3;0	4722	17	3
3;0 – 4;0	4232	12	2
4;0 – 5;0	2324	9	2
5;0 →	817	12	0
Total	12095	50	7

All the generic nouns in the monolingual child data were appropriate as they were used in semantic contexts that require generics to be bare.

Only one non-target-like generic was identified, namely a bare generic noun (*osos sí come(n) hie(r)ba* ‘bears do eat grass’ [Alfonso; 2;6.09]), which should have appeared with a definite determiner. This child also omitted the definite determiner with many definite nouns (e.g., **en foto hay molas* ‘in picture there are blackberries’). For example, in the same transcript (age 2;6.09), out of a total 43 definite nouns identified, the child omitted the definite article in 11 of them (26%). Recall that Spanish monolingual children reportedly start producing definite determiners at approximately age 1;6 and that their non-target-like omissions normally stop by age 2;5 (González, 1970; Hernández-Piña, 1984; López-Ornat, 1997; Soler, 1984; Tolbert, 1978; Schnel de Acedo, 1994); yet, this child was still omitting the definite determiner very often and hence, the example with the generic noun is not consequential. In other words, this non-target-like bare noun should not be taken to represent a pattern for child Spanish monolingual speech but rather a pattern for this particular child.

The analysis suggests that the potential ambiguity in the input where both bare generics and generics with a definite determiner are common does not pose ambiguity for these Spanish monolingual children, as they do not evidence non-target-like bare generics.

In sum, the analysis of the monolingual adult data revealed no ambiguity in the English input with regard to the syntactic realization of the generic: only evidence for bare generics was found. In contrast, the adult Spanish data contained both generics with a definite determiner and a small number of bare generics. The English child data showed the same pattern as that of the adults, as only bare generics were found; the only true non-target-like form found was most likely a performance error given that the same child produced a large number of target-like forms. The child Spanish data mostly contained generics with a definite article, although a small number of generics were bare. None of the children’s generics were truly non-target-like, which is somewhat surprising given that the input contained potential

ambiguous evidence (i.e., two possible ways of syntactically realizing this semantic target). The results strongly indicate that the overlap regarding generics in the Spanish input did not pose ambiguity for these monolingual children.

4.3 The bilingual data

The bilingual child whose speech development constitutes the main focus in this study might evidence non-target-like forms in his use of generics for several reasons. First, his Spanish input probably contains evidence for both generics with a definite determiner and bare generics, given that bare generics are obligatory in certain semantic contexts whereas generics with a definite determiner are required in most contexts. The evidence in the Spanish input for both generic forms might be reinforced in the English input where bare generics are widely available. This ambiguity might result in non-target-like bare generics because the child might over-use bare generics in Spanish and he might use them in contexts in which generics require a definite determiner. Additionally, the child’s English input might contain evidence for generics with a definite determiner, which are a grammatical option in adult English monolingual speech, although they occur rarely. If the child receives evidence of generics with a definite determiner in his English input, along side bare generics, the evidence for such a grammatical option can be reinforced in his Spanish input, and he might produce generics with definite determiners in English.

Second, given that the child’s mother used English, her Second language, on a regular basis, her speech might have contained ungrammatical bare generics due to influence from English (Paradis & Navarro, 2003, found modified parental speech due to influence from the parents’ second language). This might enhance the ambiguity in the child’s input. If this were true, then the child’s productions of bare generics in contexts other than those where bare generics are allowed could simply be a reproduction of his parental input. The father never used Spanish around the child in any of the recorded sessions, and hence his data could not be analyzed for possible ungrammatical

generic forms in Spanish. Nonetheless, according to the mother's records and recollections, the father never produced ungrammatical bare generics in Spanish (recall that the mother is the main researcher, an experienced linguist).

Third, although the analysis of the adult English monolingual data revealed no potential ambiguity, the bilingual child's father also spoke Spanish, and hence he might use generics with a definite article in his speech alongside bare generics, unlike the English monolingual adults, due to influence from Spanish. Similarly, it is possible that the child's mother might use non-target-like forms in English due to transfer from Spanish. In that case, the child might hypothesize that generics can always appear with a definite determiner in English and hence his speech might contain ungrammatical generics with a definite determiner. Under such circumstances, if the child were to produce such forms, they of course would be target-like as they would simply be a reflection of the child's parental input (but they would differ qualitatively from child English monolingual speech).

The first part of the analysis focused on determining the degree of ambiguity in the bilingual child's overall input. The second stage of the analysis focused on the child's speech. Once the degree of potential ambiguity in the child's input was established, his speech was thoroughly analyzed for non-target-like generic forms in the two languages that might constitute evidence for cross-linguistic influence in this syntactic domain.

The analysis of the parental speech (i.e., a total of 4982 English utterances produced by the father and a total of 7867 Spanish utterances produced by the mother) revealed the following patterns:

1. The father never produced any generics with a definite determiner, just like the English monolingual adults reported on earlier. All of the generic nouns in the father's speech, a total of 26, were bare. In other words, the English input did not seem to constitute ambiguous evidence.
2. One hundred nine of the mother's Spanish utterances contained generics with a definite determiner (e.g., *a ti te gustan*

los peluches, cierto? 'you like stuffed animals, right?'), whereas 38 contained bare generics in semantic contexts in which they were obligatory (e.g., *una cuchara para servir ensalada* 'a spoon for serving salad'). In other words, the child's Spanish input contained potential evidence of ambiguity regarding definite and bare generics, just as did the monolingual Spanish input (recall that such data did not seem to pose ambiguity for the monolingual group, as evidenced in the fact that no non-target-like forms were identified in the monolingual child data).

3. Although a total of 122 English utterances were identified where the mother spoke English around the child (while she interacted with one of the child's friends or with his father), none of them contained ungrammatical forms.

The analysis of the English utterances in the child bilingual data revealed a small number of bare generics, as shown in Table 3 below. This parallels the father's speech which also revealed only a small number of bare generics.

The bilingual child data contained no instances of generics with a definite determiner in English. This pattern replicates the child's input which did not contain ambiguous evidence for both bare generics and generics with definite determiners in English, at least not in any of the recorded sessions. The bilingual child's pattern in English also parallels that of his English monolingual counterparts.

TABLE 3: Number of generic nouns identified in the bilingual child English data according to age range

Age	Number of utterances analyzed	Number of bare generics
2;5 – 3;0	897	2
3;0 – 4;0	2508	6
4;0 – 5;0	1342	15
5;0 →	1253	11
Total	6000	34

Data for the child’s production of generics in Spanish are shown in Table 4. Interestingly, the child produced a larger percentage of target-like generics than his monolingual peers (i.e., bare generics in obligatory semantic contexts) and than his mother: only 12% of the generic nouns in the child monolingual data were bare generics, and 26% of the mother’s generic nouns were bare. In contrast, 63% of the child’s target-like generic nouns were bare.

As shown in Table 4, however, the analysis additionally revealed a substantial number of non-target-like bare generics in the bilingual child’s Spanish speech, 40% of the overall number of

generic nouns found. Recall that the child’s mother never produced any ungrammatical bare generic nouns; hence, the child’s non-target-like forms were not due to influence from the mother’s speech. The child’s non-target-like forms are consistent with the predictions put forth earlier: they probably resulted from ambiguity in the child’s Spanish input which contained both generics with a definite determiner and bare generics; the grammaticality of bare generics was possibly reinforced in the child’s English input. The ambiguity in the input resulted in non-target-like forms that differ qualitatively from the child Spanish monolingual data seemingly due to influence from English.

TABLE 4: Number of generic nouns identified in the bilingual child Spanish data according to age range.

Age	Number of utterances analyzed	Number of generics with a definite determiner	Number of target-like bare generics	Number of non-target-like bare generics
2;5 – 3;0	1580	1	0	4
3;0 – 4;0	2309	6	19	18
4;0 – 5;0	1668	6	5	9
5;0 →	1226	4	5	0
Total	6783	17	29	31

Examples of the non-target-like bare generics found in the bilingual data are listed in the following examples :

- (1) *porque iguanas tienen eso* ‘iguanas have that’ [2;10.21]
- (2) *no me gusta fideos* ‘I don’t like noodles’ [3;0.28]
- (3) *chapulines pican?* ‘grasshoppers bite?’ [3;6.10]
- (4) *pero mami chanchitos comen caca* ‘but mommy, pigs eat poop’ [3;6.28]
- (5) *no, yo no sabía que anguilas son venenosas* ‘no, I didn’t know that eels are poisonous’ [4;8.5]

Non-target-like generics appeared in both object and subject position. Furthermore, the same generic noun sometimes appeared both

bare and with a definite determiner, even within the same transcript, or within the same utterance.

The fact that the Spanish input contained ambiguous evidence (i.e., it contained Generics with a definite determiner and bare generics) whereas the English input did not provide a possible explanation for the non-target-like forms appearing only in Spanish.

As can be seen in the data provided in Table 4, the child started producing non-target-like generics before age 3;0 and continued producing them in Spanish until age 5;0. However, the fact that no non-target-like forms were found in the data collected after age 5;0 appears to be a coincidence because, according to the diary records, which were kept by the mother throughout the recording period, in addition to the recordings, the child did continue to produce

such non-target-like forms frequently up to at least age 6;6.

5. Summary and Conclusions

Generic nouns are normally bare in adult English, although sometimes they might appear with a definite determiner (this form is not common in adult speech). In contrast, generics normally appear with a definite determiner in adult Spanish, although in some semantic contexts they are obligatorily bare. It was initially anticipated that the input that English and Spanish monolingual children are exposed to most likely contained both syntactic realizations of generic nouns, and that such overlap could result in non-target-like forms in the two monolingual groups.

Previous studies revealed non-target-like interpretations of generic nouns by English and Spanish monolingual children (i.e., whereas the English monolingual children often interpreted definite nouns as generic, the Spanish monolingual children sometimes interpreted generics as definite; Gelman & Raman, 2003; Hollander & Gelman, 2002; Pérez-Leroux et al., 2003). None of the studies reviewed, however, studied English or Spanish monolingual children's spontaneous production of generics.

This study examined data from English and Spanish monolingual children and adults to determine first, the rate of possible ambiguity in the children's input (i.e., whether each language contained evidence for both bare generics and generics with a definite determiner), and second, whether the children evidenced developmental problems in their use of generics. The analysis of the parental speech revealed that whereas the English input only contained evidence for bare generics, the Spanish input contained evidence for both bare generics and generics with a definite determiner. No non-target-like generics were found in the child English monolingual data. The child Spanish monolingual data did not reveal any non-target-like generic forms either, which was surprising given that their input did contain overlapping evidence regarding the realization of generics. Evidently, the potential ambiguity did not cause problems for this monolingual group.

The analysis of the parental speech in the bilingual data revealed the same patterns as that for the monolingual adults: no examples of generics with a definite determiner were found in the father's English speech nor in the mother's English speech; in Spanish, the mother used both grammatical bare generics and grammatical generics with a definite determiner. The English input did not contain possible ambiguous evidence regarding generics, whereas the Spanish input did.

The bilingual child's English speech did not contain any generics with a definite determiner; it paralleled that of his English monolingual peers as well as his parental input. In Spanish, the child produced target-like bare generics as well as target-like generics with a definite determiner. The ambiguity in the child's input, however, appears to have accounted for the non-target-like bare generics in his Spanish speech, just as predicted. The evidence for bare generics in the child's English most likely reinforced the evidence for bare generics in his Spanish input, and as a result 40% of his generic nouns were bare in ungrammatical contexts.

The fact that the child produced a substantial number of non-target-like forms in Spanish strongly suggests cross-linguistic influence. The child appeared to have taken the evidence from his English input that generics must be bare and he used it with his Spanish generic nouns (sometimes he used the target-like form). This pattern differed qualitatively from both the parental speech and from the child Spanish monolingual speech, and hence the most likely explanation is that it resulted from influence from English. The child did not apply the Spanish rule for generics in his English probably because his English input did not provide evidence that generics with a definite article were a grammatical option.

Notas

- 2 The sentence '**the** zebras have stripes' could be used in a context in which the speaker wishes to indicate that he/she is talking about 'the zebras' as opposed to 'the lions' or 'the bears'. Here, 'the zebras', refers to a sub-group of the generic kind 'zebras'.

- 3 According to Mackenzie (2003), the prototypical activity predicates are intransitive activity verbs such as *trabajar* 'to work', *correr* 'to run', *comer* 'to eat', and *hablar* 'to talk/speak', although many verb + complement sequences also count as activity predicates (e.g., *escuchar música* 'to listen to music', *hablar con periodistas* 'to talk to reporters').
- 4 The numbers here refer to each instance of a generic noun so that in some utterances there might have been multiple bare generic nouns (e.g., because **cats** eat **frogs** too [Abe; 3.4.08]). Furthermore, non-target-like generic nouns were not included in the quantitative analysis.
- 5 This is not surprising however, given that it is very likely just a result of a very small sample size for this child (i.e., only three files were analyzed for this child (Gillian), and all three files only accounted for a small percentage of the total number of utterances analyzed).
- 6 Just as with the English data, only the target-like forms were counted in the quantitative analysis, and some utterances contained multiple generic nouns.

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Appendix A

A graph illustration of ‘ambiguity’ as a result of overlap in the input.

Language A	Language B
realization <i>x</i>	realization <i>y</i>
realization <i>y</i>	realization <i>x</i>

This figure illustrates that for a simultaneous bilingual child, it is possible that a given semantic target, say a generic NP, may be realized in two ways in language A (Spanish), namely *x*: a definite article + a noun (e.g., *los perros son muy listos* ‘dogs are very smart’) or as *y*: a bare noun (e.g., *mi primo repara autos* ‘my cousin fixes cars’); one of the two realizations is normally pragmatically or semantically restricted. In language B, the same semantic target (Generic NPS) is realized through at least one of those syntactic structures: either as *x* or as *y*, although it could be realized as both, one form being more restricted than the other. That is the case in English where Generic NPs are realized as either Bare Nouns or as a definite article and a noun (e.g., ‘the Macaw is a colorful animal found in rainforests’).