

John Benjamins Publishing Company



This is a contribution from *Hispanic Linguistics at the Crossroads. Theoretical linguistics, language acquisition and language contact. Proceedings of the Hispanic Linguistics Symposium 2013*.

Edited by Rachel Klassen, Juana M. Liceras and Elena Valenzuela.

© 2015. John Benjamins Publishing Company

This electronic file may not be altered in any way.

The author(s) of this article is/are permitted to use this PDF file to generate printed copies to be used by way of offprints, for their personal use only.

Permission is granted by the publishers to post this file on a closed server which is accessible to members (students and staff) only of the author's/s' institute, it is not permitted to post this PDF on the open internet.

For any other use of this material prior written permission should be obtained from the publishers or through the Copyright Clearance Center (for USA: www.copyright.com).

Please contact rights@benjamins.nl or consult our website: www.benjamins.com

Tables of Contents, abstracts and guidelines are available at www.benjamins.com

The protracted acquisition of past tense aspectual values in child heritage Spanish*

Alejandro Cuza & Lauren Miller

Purdue University

This study examines the knowledge of past tense aspectual distinctions in Spanish among 19 Spanish-English bilingual children born and raised in the United States. We compare their results with those of 12 of the children's parents, who are long-term immigrants of Mexican background. We predicted more difficulties among the bilingual children with increasing age as well as strong correlations between performance and language dominance. As expected, the bilingual children showed low production of the imperfect form in characterizing situations, crucially with eventive predicates, but no deficits with the use of the preterit. In contrast to what was expected, target performance was not correlated with language dominance, and we found no correlation between performance and developmental age. However, at the individual level, the older children outperformed the younger children despite more prolonged contact with English. This contrasts with previous research claiming L1 attrition throughout the life span of the bilingual child to account for heritage speakers' difficulties. Regarding the children's parents, they all behaved at ceiling and showed no signs of attrition.

Keywords: Child heritage Spanish; tense and aspect; crosslinguistic influence effects; L1 attrition

1. Introduction

The acquisition of past tense aspectual distinctions in Spanish occurs without incident in non-pathological first (L1) language development, as evidenced by a proportional use of preterit and imperfect tense forms by the age of 3 (Hernández-Pina, 1984; Pérez-Pereira, 1989; Sebastian & Slobin, 1994). This success in the acquisition

* We would like to thank the two anonymous reviewers for their helpful comments and suggestions as well as the audience of the 2013 Hispanic Linguistics Symposium. We would also like to thank all the parents and children for their time and assistance.

process, however, is hardly the case in second (L2) language learners (Cuza, 2010; Montrul & Slabakova, 2002; Salaberry, 1999; Salaberry & Shirai, 2002), adult heritage speakers (Montrul, 2002) or bilingual children (Cuza, Pérez-Tattam, Barajas, Miller, & Sadowski, 2013; Silva-Corvalán, 2003, 2014) as far as aspectual selection is concerned.

As we will discuss in detail shortly, one recurring explanation for the observed aspectual deficits among adult and child bilinguals is related to the role of crosslinguistic influence as well as limited input and use. Crosslinguistic influence refers to the positive (facilitation) or negative (interference) effects that one linguistic system might have on another as a result of their typological differences or similarities (Jarvis & Pavlenko, 2008; Odlin, 1989).¹ Montrul (2002), for example, argues that the morpho-syntactic variability that adult Spanish heritage speakers typically display with past tense aspectual distinctions stems from incomplete acquisition during the early stages of development as a result of limited input and transfer from English, a language that differs from Spanish in regards to the instantiation of aspectual features. Montrul defines incomplete acquisition as the outcome of an interrupted process of language development stemming from input reduction during early childhood (Montrul, 2008). However, when looking at bilingual children of different ages, Cuza et al. (2013) found patterns of incomplete acquisition in the case of the imperfect as well as evidence of child L1 attrition in the target use of the preterit. Child L1 attrition refers to the loss of previously developed grammatical properties as a child ages, as well as potential convergence with L2 forms, due to increased contact with the dominant L2 accompanied by reduced minority language use (see Polinsky, 2011 for recent discussion). These results lead the authors to conclude that both L1 attrition and incomplete acquisition may characterize the acquisition of tense and aspect morphology in child heritage Spanish. More recent research argues for a featural reassembly of L1 functional properties leading to the formation of a featural matrix that is intrinsically variable – albeit not incomplete – stemming from low language activation and use in a language contact scenario (Putnam & Sánchez, 2013). This approach focuses on the ongoing process of language reanalysis throughout the lifespan rather than a static outcome at any one time.

Despite the breadth of research mentioned above, the precise nature of heritage language acquisition remains unclear due to several common limitations of previous research. First, it has focused primarily on adult heritage speakers at the university

1. Crosslinguistic influence effects have been found from the L1 into the L2 but also from the L2 into the L1 among long-term immigrants and bilingual children and in almost all grammatical areas but primarily in syntax and phonology (Au, Knightly, Ju, & Oh, 2002; Müller & Hulk, 2001). It is a precursor of L1 attrition as well as incomplete acquisition.

level, and, with the exception of very few recent studies, claims about incomplete acquisition or L1 attrition among Spanish heritage speakers have been made without examining the developmental process these bilinguals undergo during earlier stages of development, either cross-sectionally or longitudinally. The exploration of the child-adult connection is essential to testing existing claims, and to provide a reliable linguistic explanation about the nature and source of heritage speakers' difficulties. Furthermore, elicited production data remain largely underexplored, with more studies looking at interpretation or grammatical intuition, task types which, due to the specific nature of heritage language learners, do not reliably measure grammatical competence.

We aim to address these shortcomings and add to previous research by examining the elicited production of aspectual properties in a group of nineteen ($n = 19$) simultaneous Spanish-English bilingual children born and raised in the United States. Their results are compared to those of twelve ($n = 12$) of the children's parents, who were born and raised in Mexico but have been living in the United States for an average of 14 years. Following previous research in child bilingual acquisition, we implement an elicited production task (Crain & Thornton, 1998) and investigate the potential correlations between target aspectual production and two main factors affecting the language acquisition process: crosslinguistic influence (Montrul, 2002; Müller & Hulk, 2001) and language dominance (Argyri & Sorace, 2007; Paradis, 2001; Pérez-Leroux, Cuza & Thomas, 2011).

We predict that English-dominant children will have more difficulties with target aspectual use than Spanish-dominant or balanced bilingual children. Specifically, we expect a protracted development of the imperfect form, a form not available in English. Moreover, we anticipate finding an effect by lexical class. For instance, participants may have more difficulty with the use of the imperfect with telic predicates (accomplishments and achievements), which, in day-to-day use, appear more often in the preterit, or with the use of the preterit with stative verbs, which more often appear in the imperfect.

In what follows we summarize the main aspectual differences between English and Spanish, followed by a literature review of previous research in aspectual development in Section 3. Section 4 outlines the study and the results. The discussion is provided in Section 5, followed by the conclusions in Section 6.

2. Past tense aspectual values in Spanish and English

English and Spanish behave differently in regard to their representation of past tense aspectual values in that, in the past tense, Spanish expresses the difference between imperfective and perfective aspect morphologically, whereas the English past tense

morpheme *-ed* does not differentiate these two meanings (Comrie, 1976; de Miguel, 1992; Smith, 1997). The two morphemes used in Spanish to express this difference are illustrated in (1a) and (1b):

- (1) a. *Dora comió helado ayer.* (perfective aspect)
 Dora ate-PRET ice cream yesterday
 ‘Dora ate ice cream yesterday.’
- b. *Dora comía helado todas las noches después de cenar.* (imperfective aspect)
 Dora ate-IMP ice cream all the nights after
 eating dinner
 ‘Dora ate ice cream every night after dinner.’

In (1a) the intended meaning in Spanish is that of a completed/episodic event in the past, and therefore the preterit should be used (*-ió*). In (1b), however, the intended meaning is that of a repeated/characterizing action in the past, and thus the imperfect form should be used. In English, as represented in the translation of (1a) and (1b), there is no morphological differentiation between the two aspectual classes, and the preterit tense is used in both cases. However, it is also possible to express the imperfect meaning with the periphrastic expression *used to* or *would* (*Dora used to eat/would eat ice cream every night after dinner*). This is what is known in the literature as *Grammatical Aspect* (Comrie, 1976).

English and Spanish also diverge in the use of the past progressive. In Spanish, an ongoing activity in the past can be expressed either using the imperfect form or the past progressive form. In English, only the past progressive is allowed, as represented in (2a) and (2b).

- (2) a. *Ramiro cruzaba la calle cuando vio*
 Ramiro was crossing the street when saw
a María. (past ongoing)
 to Mary
 ‘Ramiro was crossing the street when he saw Mary.’
- b. *Ramiro estaba cruzando la calle cuando vio*
 Ramiro was crossing the street when saw
a María. (past ongoing)
 to Mary
 ‘Ramiro was crossing the street when he saw Mary.’

Although grammatical aspect is useful to describe the “different ways of viewing the internal temporal constituency of the situation” (Comrie, 1976:3), researchers have also described aspectual distinctions based on the lexical properties of tense heads. This classification is referred to as *Lexical Aspect* (Vendler, 1967), which divides verbs

into four classes according to their specific lexical temporal properties: states, activities, accomplishments and achievements. States (*have, know*) and activities (*eat, play*) are considered atelic predicates with no intrinsic endpoint. Accomplishments (*feed the dog*) and achievements (*fall, break*) on the other hand are considered telic as they have a clear endpoint. This classification is useful but, again, limited as verbs often move from one aspectual class to the other depending on their internal arguments (Schmitt, 1996; Verkuyl, 1972). Verkuyl (1972) and others propose that aspectual notions are determined compositionally; that is, they depend on the specific compositional relation between the verbal head and its complements. For example, the verb *to eat* has an activity lexical meaning in (3a) but an accomplishment meaning in (3b).

- (3) a. *Dora comió esta mañana.* (activity)
 Dora ate this morning
 'Dora ate this morning.'
- b. *Dora comió una galleta esta mañana.* (accomplishment)
 Dora ate a cookie this morning.
 'Dora ate a cookie this morning.'

In (3a), the verb *to eat* has an activity aspectual class but it is coerced into an accomplishment in (3b) due to the insertion of the direct object *una galleta* ('a cookie'). This is known in the literature as *Compositional Aspect*. The interaction between the three types of aspect exacerbates difficulties that any learners may have, and may lead to reliance on frequent or prototypical combinations of lexical, compositional and grammatical aspect in Spanish, such as stative verbs appearing only with imperfect morphology or telic verbs (accomplishments and achievements) appearing only in preterit morphology (Montrul, 2002).

Given these differences between the English and Spanish aspectual systems, Spanish-English bilinguals have to learn the specific aspectual properties of each specific tense head, and make the necessary form/meaning connections. This is a challenging task for English-speaking learners of Spanish, heritage speakers and child bilinguals, as they tend to transfer English aspectual values and the morphological representation from English, which can select either aspectual meaning, and is, therefore, the default or unmarked form. In what follows, we discuss recent research on the bilingual acquisition of these structures, outline our research questions and postulate our hypotheses.

3. The acquisition of aspectual values in Spanish

Research on the acquisition of tense and aspect in Spanish monolingual children shows a proportional use of each morpheme by age 3 (Hernández Pina, 1984; Pérez-Pereira, 1989; Sebastian & Slobin, 1994). For example, Pérez-Pereira (1989) conducted

an in-depth study of the acquisition of verbal morphology with 109 monolingual Spanish children between the ages of 3 and 6 and found stable and accurate production of the preterit and imperfect by the age of 4. The children were presented with a short preamble and were asked to fill in a blank with the grammatically correct word based on what they had heard. With regards to the accurate use of verbal morphology, the author's results showed stable uses of the preterit and imperfect by age 4 with 98% of imperfect tokens correct and 74% of preterit tokens correct. The higher accuracy with the imperfect may be due to the regularity of its morphology. The preterit, in comparison, is highly irregular and may require higher amounts of input for complete mastery. Other studies have replicated these results, finding that monolingual acquisition of tense and aspect does not pose any special difficulty (Hernández Pina, 1984; Sebastian & Slobin, 1994).

Research with L2 learners of Spanish (Cuza, 2010; Montrul & Slabakova, 2002; Montrul & Slabakova, 2003; Pérez-Leroux et al., 2008; Salaberry, 1999), Spanish heritage speakers (Montrul, 2002) and Spanish-English bilingual children (Cuza et al., 2013; Silva-Corvalán, 1994, 2014), however, suggest that, for these populations, tense and aspect can be more challenging. Montrul (2002), for example, did not find the same level of mastery among Spanish heritage speakers *vis a vis* L2 learners. The author tested 16 simultaneous Spanish-English bilinguals, 15 L1 Spanish child L2 learners of English, 8 L1 Spanish late L2 learners of English and 20 monolingual Spanish speakers, who, at the time of testing, were all adults. The author presented the participants with four tasks: a cloze task, an oral narrative, a truth value judgment task and an acceptability judgment task. In all tasks, simultaneous bilinguals were less accurate than child L2 learners of English who were in turn less accurate than those who learned English as adults (who performed like Spanish monolinguals). Montrul concluded that age of onset of bilingualism is negatively correlated with maintenance or acquisition of the minority language. Stative verbs in the preterit were found to be the most difficult, followed by achievements in the imperfect and other uses of the imperfect. The author also found a high amount of individual variation, but concludes that results do suggest the presence of incomplete acquisition and L1 attrition. However, it is difficult to draw conclusions about processes that occurred during early childhood without testing children, as mentioned earlier.

Cuza et al. (2013) examined the production of tense and aspect morphology cross-sectionally among a group of Spanish-English bilingual children via a story retelling task (*Little Red Riding Hood*). They compared the children's production of preterit and imperfect forms to that of adult heritage speakers, monolingual children and adult monolinguals. When production across different age groups was compared, the results suggested that both incomplete acquisition and L1 attrition play a role in determining heritage speakers' competence. Specifically, the preterit tense, which is acquired earlier in monolingual contexts, was fully acquired by the older

bilingual children, while the adult bilinguals had regressed to a usage of the preterit tense similar to that of the younger bilinguals, suggesting that they had undergone L1 attrition of preterit morphology. However, the use of the imperfect tense remained low across all three bilingual groups, in contrast to monolinguals who show a steady increase in the use of the imperfect morphology with age, suggesting incomplete acquisition with the imperfect which is acquired later than the preterit in monolingual contexts.

Despite these informative results, the lack of elicited production data prevents previous research in the acquisition of tense and aspect among heritage speakers of Spanish from drawing any definitive conclusions. Elicited production is necessary since, as Silva-Corvalán (1994) states, the absence of a structure in spontaneous production is not necessarily evidence of its absence in a speaker's grammar. In addition, elicited production tasks are especially important given that heritage speakers often underperform on metalinguistic and written tasks but quite often do very well with oral production (Montrul, Davidson, de la Fuente, & Foote, 2013). Moreover, it remains to be seen, when using controlled production tasks, which combinations of lexical and grammatical aspect, if any, cause difficulties for bilingual children of different ages. Such detailed data would allow us to understand not only the acquisition of challenging structures in heritage Spanish and how to address these difficulties, but also the nature of language acquisition in general and the variables that affect it such as transfer, input, language dominance and age. For the aforementioned reasons, the current study is necessary to address this considerable gap.

An important dimension in child bilingual acquisition is the role of language dominance and its correlation with crosslinguistic influence and the development of target linguistic representations in the minority language (Argyri & Sorace, 2007; Genesee & Nicoladis, 2007; Pérez-Leroux et al., 2011; Yip & Matthews, 2006). Pérez-Leroux et al. (2011) examined the acquisition of clitic climbing among 23 Spanish-English bilingual children living in Toronto. Results from a repetition task showed that those children who arrived to Toronto at a later age (sequential bilinguals), and who were more Spanish-dominant, maintained higher levels of pre-verbal object clitic placement, typical of the monolingual Spanish norm (i.e. *Jazmin lo quiere ver esta noche* 'Jazmin wants to see him tonight'). The simultaneous bilinguals, in contrast, reported to be English-dominant and showed a preference for the post-verbal option (*Jazmin quiere verlo esta noche* 'Jazmin wants to see him tonight'). Although dominance might be a determining factor, it does not always provide clear-cut results. For example, Argyri & Sorace (2007) examined the acquisition of different complementizer phrase (CP) structures among 16 Greek-dominant children living in Greece and 16 English-dominant children living in the UK. Results show unidirectional transfer from English into Greek among the English-dominant bilinguals but no transfer effects from Greek into English among the Greek-dominant bilinguals. These results

suggest that dominance may not be the sole determiner of crosslinguistic influence (Hulk & Müller, 2000; Yip & Matthews, 2000).

3.1 Research questions and hypotheses

Taking into account previous research on the source of heritage speakers' difficulties, we examine the following research questions:

RQ1: To what extent do Spanish-English bilingual children have knowledge of preterit versus imperfect distinctions in Spanish? And if difficulties are found, in which contexts do they occur?

RQ2: Will older children show more difficulties than younger children due to a greater length of exposure to English as a dominant societal language leading to greater variability in the aspectual domain?

RQ3: Can the difficulties, if any, be accounted for in terms of crosslinguistic influence from English and language dominance? That is, will English-dominant children show more difficulties than Spanish-dominant children or balanced bilinguals?

Based on these research questions, we posit the following hypotheses:

H1: Bilingual children will show low production of the imperfect form in contexts where the imperfect should be used. Specifically, we predict more deficits with the use of the imperfect with telic predicates as those verbs are usually found in the preterit. Conversely, there will be no difficulties with the use of the preterit, as this is the default option in English.

H2: Older children will show more difficulties than younger children. This is due to the fact that older children have longer exposure and use of English as dominant language in the school system and, consequently, less exposure to and use of Spanish.

H3: There will be strong correlations between target performance and patterns of language dominance. We expect more variability among English-dominant children than Spanish-dominant children.

In what follows, we present the study as well as the results and discussion.

4. The study

4.1 Participants

Nineteen ($n = 19$) Spanish-English bilingual children participated in the current study. The children were born and raised in the United States, and were exposed to both languages at an early age via television, friends, parents and siblings. They all lived in Northwestern Indiana at time of testing and came from low socioeconomic

backgrounds. Age at time of testing ranged from 5;5 to 11;1 ($M = 8;2$, $SD = 1.60$). The children attended English-only schools but had received some Spanish instruction as part of an after-school Spanish program. The patterns of minority language use at home were very positive with most children, with 70% reported as speaking Spanish to the mother. The rest of the children were reported to speak both English and Spanish or only English. In addition, most of the parents (79%) reported initiating a topic with their children only in Spanish or most often in Spanish. About a third of the children (36%) were reported to speak English with their siblings, while 26% were reported to speak Spanish and 26% were reported to speak both.

All of the children's parents except one were born and raised in Mexico and had been living in the United States for more than 10 years. They completed a parental language history questionnaire and a child language background questionnaire (adapted from Pérez-Leroux et al., 2011). The language history questionnaire inquired as to place of birth, age of arrival to the U.S., length of residence and patterns of language use. The questionnaire also included a self-assessment of the parents' linguistic proficiency in the four skills of language via a Likert scale ranging from 'basic' (1) to 'excellent' (4). The child language background questionnaire elicited information on each child's patterns of language use and bilingual dominance, among other variables.

Twelve ($n = 12$) of the children's parents completed the elicitation task, serving as a control baseline. The parent data was intended to help us determine whether the difficulties children had, if any, were a replication of the parents' input. Parents had a mean age of 34 years at time of testing and were born and raised in Mexico. Their mean length of residence (LOR) in the U.S. was 14 years. Most of the parents indicated having a basic knowledge of English (mean score, 1.4/4) and good/fluent knowledge of Spanish (mean score, 3.4/4). A reviewer points out that, methodologically speaking, testing the parents as baseline is a limitation given the fact that they might have undergone L1 attrition themselves after 14 years living in the U.S. However, these parents all spoke Spanish in their daily life as they had very limited knowledge of English. They lived in a community where Spanish was part of their day-to-day interaction with family members and friends. Thus, L1 attrition among these immigrants is very unlikely.² Table 1 summarizes the participants' demographic information:

2. While no evidence of attrition was found among the parents, even if there had been, they would still be the valid baseline for their children, since whatever input they provide to their children is the child's "target" grammar (see Montrul & Sánchez-Walker (2013) for recent discussion).

Table 1. Participants' demographic information

	Age at testing	Place of birth	Mean age of arrival	Mean LOR
Bilingual Children (n = 19)	5;5–11;1 (M = 8;2; SD = 1.60)	United States	Birth	Birth
Parents (n = 12)	23–39 (M = 34.3; SD = 4.70)	Mexico	20.3	14

4.2 Tasks

Data was collected via a question-after-story task, whose purpose was to elicit preterit and imperfect past tense forms in contexts where either one or the other was most appropriate. Following previous research (Cuza, 2008, 2010), we organized the test tokens taking into consideration predicate type (statives, activities, accomplishments, achievements) and situation type (characterizing, episodic), for a total of eight conditions. There were a total of 45 test tokens (5 tokens per 9 conditions) plus 4 practice items.³ Each token consisted of a preamble followed by a question. The participant was required to respond to the question based on the information provided in the preamble and a photo, as represented in (4).

- (4)

Preamble:

Normalmente Dora dibuja estrellas pero ayer no.
'Normally, Dora draws stars, but not yesterday.'
- Prompt:

¿Ayer, qué? (a photo of Dora with a drawing of a heart was presented)
'Yesterday, what?'
- Target:

*Ayer, Dora **dibujó** un corazón.*
'Yesterday, Dora drew a heart.'

The task was administered to the participants orally and visually via text and photos with the aid of Microsoft PowerPoint. The testing was conducted by the investigators in the school setting, the participant's home or in a private office. Table 2 outlines the structures under examination.

All responses were digitally recorded and later coded for statistical analysis. Accurate responses (expected use of the preterit or the imperfect according to the preamble) were coded as 1 and non-accurate responses (unexpected use of the preterit, the imperfect or the present) were coded as 0. For the quantitative analysis, we used the proportion correct per participant for each condition. Whenever the child did not respond to one of the items, we excluded that item from the total number of items in that condition.

3. We also tested the use of the imperfect with a past progressive interpretation, in addition to the other eight conditions, which we do not report for the purpose of the present study.

Table 2. Structures under examination (without preamble)

Predicate type	Characterizing	Episodic
State	(5) <i>De niña, Dora era una bailarina.</i> 'As a little girl, Dora was a ballerina.'	(6) <i>Ayer, Dora no quiso caramelos.</i> 'Yesterday, Dora didn't want candy.'
Activity	(7) <i>De niña, Dora jugaba al baloncesto</i> 'As a little girl, Dora played basketball.'	(8) <i>Ayer, Dora tocó la guitarra.</i> 'Yesterday, Dora played the guitar.'
Accomplishment	(9) <i>De niña, Dora hacía su cama todos los días.</i> 'As a little girl, Dora made her bed every day.'	(10) <i>Ayer, Dora pintó un corazón.</i> 'Yesterday, Dora painted a heart.'
Achievement	(11) <i>Antes, Dora siempre perdía.</i> 'Before, Dora always lost.'	(12) <i>La mamá de Dora llamó.</i> 'Dora's mother called.'

Language dominance was determined based on parental reports and scalar ratings for English and Spanish ranging from "not fluent" (1) to "completely fluent" (4), following Pérez-Leroux et al. (2011). To obtain the dominance score for each child, we subtracted the child fluency ratings given for English from those given for Spanish. Thus, scores above 0 (positive range of the scale) were interpreted as Spanish-dominant, scores under 0 were interpreted as English-dominant (negative range of the scale) and 0 scores were interpreted as balanced.

5. Results and discussion

5.1 Preterite versus imperfect forms

As predicted, the bilingual children showed very low proportions of imperfect form use in characterizing contexts. With the preterit, both the children and adults showed high levels of production except with stative predicates; with this predicate type, both groups showed low levels of preterit use. These results are represented in Figure 1.

The decreased use of the preterit with stative verbs in episodic contexts might stem from the fact that some of the verbs used, such as *querer* ('to want'), change their meanings in the preterit. For example, *Dora no quería caramelos* ('Dora did not want any candy') means that she did not want any candy but there is a possibility that she had some. With the preterit, however, the latter meaning is not possible. It requires the interpretation that she did not want any candy, nor did she have any. Thus, it is possible that both the children and parents used the imperfect instead of the preterit to imply the corresponding aspectual meaning.

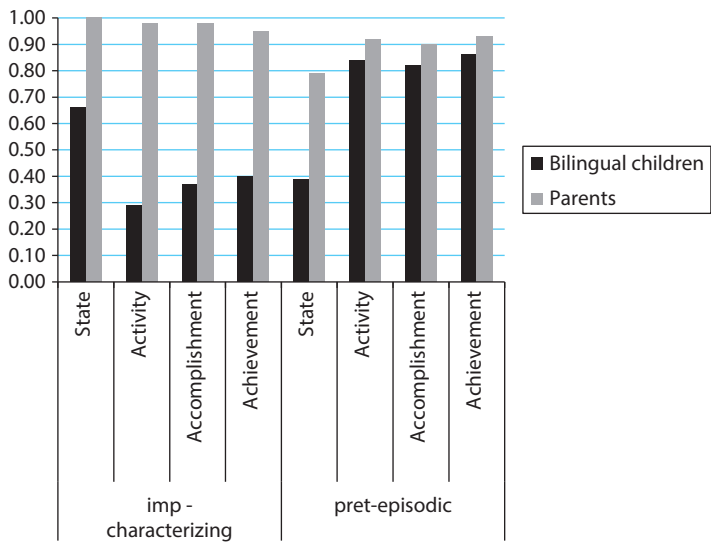


Figure 1. Proportion correct of imperfect and preterit form use by predicate and situation type per group

The proportions of preterit and imperfect forms produced were submitted to an analysis of variance (ANOVA) with repeated measures, with group as the between-subjects variable and eventuality type and situation type as the within-subject variables. Overall ANOVA results showed significant main effects for group ($F_{1,29} = 41.4, p < .000$). As predicted, the bilingual children showed much lower levels of target preterit form use with episodic conditions and target imperfect form use with characterizing conditions when compared to the parents. To further examine the observed means between groups and conditions, we conducted independent sample t-tests. Regarding the use of the imperfect in characterizing situations, we found highly significant differences between the two groups across all predicate types (states, $p < .000$; activity, $p < .000$; accomplishment, $p < .000$; achievements, $p < .000$). Regarding the use of the preterit, results showed no significant differences between the two groups except with states (states, $p < .001$; activity, $p = .307$; accomplishment, $p = .307$; achievements, $p = 0.88$). It is clear that, as far as the bilingual children are concerned, difficulties with past tense aspectual morphology lie with the imperfect, confirming Hypothesis 1.

The low levels of imperfect form use were related for the most part to an overextension of the preterit but also to the use of the present tense. As a reviewer points out, the use of the present instead of the imperfect should not be considered as a non-target response or “error” given its own imperfective aspectual value. However, given the context provided by the preamble, which clearly indicated that the situation occurred

in the past via a temporal adverb, we strongly believe that a marked preference for the present among some of the bilingual children might be considered as a case of avoidance, especially if this occurred crucially in cases where the imperfect was expected rather than the preterit. This is confirmed by the fact that only 5% of the children used the present in contexts where the preterit was required versus 19% in contexts where the imperfect was expected. Thus, the use of the present instead of the imperfect or the preterit was unrelated to lexical class, which is not characteristic of the reportative present. Table 3 represents the proportion of preterit, imperfect, present, and other forms used by group in each predicate type and situation type.

Table 3. Proportion of morpheme production by situation type per group

	EVENTIVE				CHARACTERIZING			
	PRET	IMP	PRES	OTHER	PRET	IMP	PRES	OTHER
Children	0.69	0.17	0.05	0.09	0.34	0.41	0.19	0.06
Parents	0.85	0.11	0	0.04	0.01	0.92	0.05	0.03

The existing differences we have found between the parents and children contradict previous research arguing that the difficulties that heritage speakers have stem from the acquisition of an *a priori* attrited contact variety (*Missing Input Competence Divergence Hypothesis*) (Rothman, 2007). As far as aspectual differences are concerned, with this particular type of population, this is not the case, as all of the parents performed at ceiling.

5.2 Older versus younger children

Regarding the relationship between age and morpheme production, a Pearson correlation analysis showed no strong correlations between performance and age in months ($r = .324$, $p = .177$), disconfirming Hypothesis 2. In contrast to what was predicted, younger children and older children did not behave significantly differently from each other. However, a look at the individual data shows that older children have an advantage with both the preterit and imperfect forms. This is represented in Figure 2.

As shown in Figure 2, the use of the preterit is stable ($M = 72\%$, range 40%–100%) and remains around the 70% target rate among most participants past the age of 76 months (6;4 years of age). Although this is a much lower target proportion compared with monolingual children of a similar age (Pérez-Pereira, 1989; Sebastian & Slobin, 1994), we found no sharp decrease in their production with increasing age. In the case of the imperfect, the children's behavior is less linear than with the preterit ($M = 42\%$, range 0%–95%), but, again, we do not see a sharp decrease with age either, except

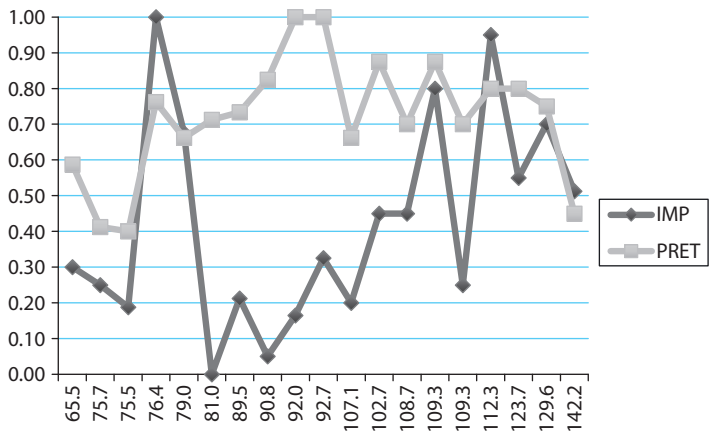


Figure 2. Average proportion of preterit and imperfect form use in episodic and characterizing contexts by age in months

in the case of one child. Overall, we see an improvement in the level of morpheme production despite more extensive exposure to English after the age of six through immersion in the school system. Thus, intense exposure to English does not seem to be a barrier preventing the native morphosyntactic system from continuing to develop towards a more adult-like state. It simply develops more slowly, leading to a protracted development, as we have seen with other morphosyntactic structures including differential object marking (Cuza, Miller & Pérez-Tattam, 2014). These results are also along the lines of recent data documenting a protracted development in the acquisition of tense and aspect morphology among Spanish-English bilingual children in the U.S. (Silva-Corvalán, 2014). Although longitudinal data is necessary to confirm this trend, the fact that there is an improvement in the target production of both the imperfect and preterit forms with developmental age questions previous research arguing for child L1 attrition in the lifespan of the child (Polinsky, 2011).

The nature of our elicited production task, as mentioned, also allowed us to analyze performance based on predicate type in order to better understand the nature of the difficulties found, and this analysis revealed differential outcomes according to the type of predicate. For example, participants often overextended the preterit to contexts where the imperfect should have been used primarily with activity and accomplishment predicates, as predicted. This is not unusual within a usage-based approach to language acquisition given that activities and accomplishment predicates don't usually appear in the imperfect form in day-to-day use. Similarly, some participants overextended the imperfect or the present to stative episodic contexts where the preterit is required, as has been found in previous research (Montrul, 2002). This is not

surprising as stative verbs are most frequently formed in the imperfect. In cases where bilingual children are unsure, they may resort to the use of the preterit, the unmarked form, due to a clash between aspectual class and morphosyntactic form, transfer from English, or the form in which that verb appears most frequently due to input reduction. In this context, it is important to keep in mind that there were instances where both the preterit and the imperfect were possible depending on the aspectual meaning of the phrase (*Ayer, Dora no quiso/quería caramelos* ‘Yesterday, Dora didn’t want candy’) as discussed earlier.

5.3 English-dominant versus Spanish-dominant children

As mentioned in the introduction, we were interested in examining the potential correlation between target aspectual use and language dominance. To do so, we looked at the target proportion of preterit and imperfect use across all predicate types and compared the participants’ target scores with their parent-reported dominance in Spanish. Most of the children (53%, 10/19) were reported to be English-dominant, 21% (4/19) as Spanish-dominant and 26% (5/19) as balanced.

A Pearson correlation analysis showed no significant correlation between the proportion correct across all the contexts examined and the individual dominance scores ($r = -.241$, $p = .320$), disconfirming Hypothesis 3. Performance was not related to language dominance, which confirms previous research (Kupisch, 2007). The lack of strong correlations may stem from the fact that most of the children were English-dominant. In addition, they all came from very similar sociocultural backgrounds, and were very homogeneous in regards to patterns of language use at home. Future research with a larger group of children from more heterogeneous backgrounds and with differing language dominance profiles is necessary to investigate this issue further.

6. Conclusions

The present study examined the acquisition of past tense aspectual morphology among a group of Spanish heritage children living in the U.S. Our main goal was to investigate the role of language dominance and crosslinguistic influence in the use of preterit versus imperfect morphology. We were also interested in analyzing the effects of predicate and situation type, and whether the difficulties these children have, if any, were the result of child L1 attrition due to increasing exposure to English throughout the lifespan. In contrast with previous research, we implemented an elicited production task and controlled for language dominance via parental reports.

We have found significant difficulties in the target production of aspectual morphology among the bilingual children. The difficulties lied almost exclusively in the use of the imperfect, especially with activity and accomplishment predicates. The use of the preterit is overall stable and does not present a problem for child bilinguals. Bilingual children tend to overextend the preterit when unsure, as this is the default/unmarked representation in English, leading to infelicitous constructions. Another strategy, which does not seem to be directly related to transfer from English, is the use of the most frequent morpheme with which a particular verb occurs in the input when the child is unsure, possibly an effect of reduced input.

In contrast with what we expected, the older children outperformed the younger children but not significantly. This casts doubt on previous research claiming child L1 attrition as an inherent characterization of heritage language development. This does not seem to be the case, as far as the controlled production of tense and aspect morphology is concerned. In addition, our results do not support the claim that the difficulties heritage speakers have stem from the acquisition of an already attrited input (Rothman, 2007). Parents behaved at ceiling in their aspectual production, except with the use of the preterit with stative verbs where they showed some variability due to ambiguity in the intended interpretation. Thus, difficulties with tense and aspect cannot be attributed to the acquisition of an already attrited contact variety.

We argue that the protracted development observed in our data might be explained in terms of crosslinguistic influence from English. Future research would benefit from a monolingual control group matched by age to see if monolingual children show similar patterns of performance, acquisition order and error types in comparison to the bilingual children. Although research in L1 acquisition shows target use of preterit versus imperfect morphology by age 4, it is possible that our task was too metalinguistically centered or cognitively complex for the younger children. Furthermore, future research should examine the extent to which the difficulties observed in this study are present at younger stages of development (3;0 to 4;0), and crucially, before the age of 6;0 when immersion in the school system usually starts. Finally, although cross-sectional methodology is valid and, by all means, reliable with participants from similar socio-cultural and linguistic background (as is the case in our study), future research would benefit from longitudinal analyses to completely disambiguate issues related to L1 attrition or incomplete acquisition.

References

- Argyri, E. & Sorace, A. (2007). Crosslinguistic influence and language dominance in older bilingual children. *Bilingualism: Language and Cognition*, 10(1), 77–99.
DOI: 10.1017/s1366728906002835

- Au, T., Knightly, L., Jun, S., & Oh, J. (2002). Overhearing a language during childhood. *Psychological Science*, 13, 238–243. DOI: 10.1111/1467-9280.00444
- Comrie, B. (1976). *Aspect*. Cambridge: Cambridge University Press.
DOI: 10.1017/s0022226700007544
- Crain, S., & Thornton, R. (1998). *Investigations in Universal Grammar: A guide to experiments on the acquisition of syntax and semantics*. Cambridge, MA: The MIT Press.
DOI: 10.1017/s0022226701238651
- Cuza, A. (2008). *The L2 acquisition and L1 attrition of the interpretation and use of aspectual properties in Spanish among English-speaking L2 learners and long-term Spanish immigrants*. Unpublished Doctoral Dissertation. University of Toronto.
- Cuza, A. (2010). The L2 acquisition of aspectual properties in Spanish. *Canadian Journal of Linguistics*, 55(2), 1001–1028. DOI: 10.1353/cjl.2010.0007
- Cuza, A., Pérez-Tattam, R., Barajas, E., Miller, L., & Sadowski, C. (2013). The development of tense and aspect morphology in child and adult heritage Spanish: Implications for heritage language pedagogy. In J. W. Schwieter (Ed.), *Innovative research and practices in second language acquisition and bilingualism* (pp.193–220). Amsterdam: John Benjamins.
DOI: 10.1075/lllt.38.12cuz
- Cuza, A., Miller L., & Pérez-Tattam, R. (2014). Bilingual success above and beyond the dominance shift: Evidence from the Spanish personal -a in child and adult heritage Spanish. Paper presented at the 44th *Linguistic Symposium on Romance Languages*. University of Western Ontario. May 2–4.
- de Miguel, E. (1992). *El aspecto en la sintaxis del español: Perfectividad e impersonalidad*. Madrid: Ediciones de la Universidad Autónoma de Madrid.
- Genesee, F., & Nicoladis, E. (2007). Bilingual first language acquisition. In E. Hoff & M. Shatz (Eds.), *Handbook on language acquisition* (pp. 324–343). Oxford: Blackwell.
DOI: 10.1002/9780470757833.ch16
- Hernández Pina, F. (1984). *Teorías psicosociolingüísticas y su aplicación a la adquisición del español como lengua materna*. Madrid: Siglo XXI. DOI: 10.2307/342474
- Hulk, A., & Müller, N. (2000). Bilingual first language acquisition at the interface between syntax and pragmatics. *Bilingualism: Language and Cognition*, 3, 227–244.
DOI: 10.1017/s1366728900000353
- Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic influence in language and cognition*. New York, NY: Routledge. DOI: 10.1558/sols.v6i3.603
- Kupisch, T. (2007). Determiners in bilingual German–Italian children: What they tell us about the relation between language influence and language dominance. *Bilingualism: Language and Cognition*, 10, 57–78. DOI:10.1017/S1366728906002823
- Montrul, S. (2002). Incomplete acquisition and attrition of Spanish tense/aspect distinctions in adult bilinguals. *Bilingualism: Language and Cognition*, 5, 39–68.
DOI: 10.1017/s1366728902000135
- Montrul, S., & Slabakova, R. (2002). The L2 acquisition of morphosyntactic and semantic properties of the aspectual tenses preterit and imperfect. In A. T. Pérez-Leroux & J. Liceras (Eds.), *The acquisition of Spanish morphosyntax* (pp. 113–149). Dordrecht: Kluwer.
DOI: 10.1007/978-94-010-0291-2_5
- Montrul, S., & Slabakova, R. (2003). Competence similarities between native and near-native speakers: An investigation of the preterit/imperfect contrast in Spanish. *Studies in Second Language Acquisition*, 25, 351–398. DOI: 10.1017/s0272263103000159

- Montrul, S. (2008). Incomplete acquisition in Spanish heritage speakers: Chronological age or interface vulnerability? In H. Chan, H. Jacob, & E. Kapia (Eds.), *Proceedings of the 32nd Annual Boston University Conference on Language Development*, (pp. 299–310). Somerville, MA: Cascadilla Press.
- Montrul, S., Davidson, J., de la Fuente, I., & Foote, R. (2013). Early language experience facilitates gender agreement processing in Spanish heritage speakers. *Bilingualism: Language and Cognition*, 17(1), 118–138. (OnlineFirst). DOI: 10.1017/s1366728913000114
- Montrul, S., & Sánchez-Walker, N. (2013). Differential object marking in child and adult Spanish heritage speakers. *Language Acquisition*, 20(2), 109–132.
DOI: 10.1080/10489223.2013.766741
- Müller, N., & Hulk, A. (2001). Crosslinguistic influence in bilingual acquisition: Italian and French as recipient languages. *Bilingualism: Language and Cognition*, 4(1), 1–21.
DOI: 10.1017/s1366728901000116
- Odlin, T. (1989). *Language transfer: Crosslinguistic influence in language learning*. Cambridge: Cambridge University Press. DOI: 10.1177/026765839100700305
- Paradis, J. (2001). Do bilingual two-year-olds have separate phonological systems? *International Journal of Bilingualism*, 5(1), 19–38. DOI: 10.1177/13670069010050010201
- Pérez-Leroux, A.T., Pirvulescu, M. & Roberge, Y. (2008). Null objects in child language: Syntax and the lexicon. *Lingua*, 118, 370–398. DOI:10.1016/j.lingua.2007.07.002
- Pérez-Leroux, A.T. Cuza, A., & Thomas, D. (2011). From parental attitudes to input conditions: A look at Spanish-English bilingual development in Toronto. In K. Potowski & J. Rothman (Eds.), *Bilingual youth: Spanish in English-speaking societies*. Amsterdam: John Benjamins. DOI: 10.1075/sibil.42.10per
- Pérez-Pereira, M. (1989). The acquisition of morphemes: Some evidence from Spanish. *Journal of Psycholinguistic Research*, 18, 289–312. DOI: 10.1007/bf01067038
- Polinsky, M. (2011). Reanalysis in adult heritage language: A case for attrition. *Studies in Second Language Acquisition*, 33, 305–328. DOI: 10.1017/s027226311000077x
- Putnam, M., & Sánchez, L. (2013). What's so incomplete about incomplete acquisition? A prolegomenon to modeling heritage language grammars. *Linguistic Approaches to Bilingualism*, 3(4), 476–506. DOI: 10.1075/lab.3.4.04put
- Rothman, J. (2007). Heritage speaker competence differences, language change and input type: inflected infinitives in heritage Brazilian Portuguese. *International Journal of Bilingualism*, 11(4), 359–389. DOI: 10.1177/13670069070110040201
- Salaberry, R. (1999). The development of past tense verbal morphology in classroom L2 Spanish. *Applied Linguistics*, 20, 151–178. DOI: 10.1093/applin/20.2.151
- Salaberry, R., & Shirai, Y. (2002). *The L2 acquisition of tense-aspect morphology*. Amsterdam: John Benjamins. DOI: 10.1075/lald.27.04sal
- Schmitt, C. (1996). *Aspect and the syntax of noun phrases*. College Park, MD: University of Maryland dissertation.
- Sebastián, E., & Slobin, D. (1994). Development of linguistic forms: Spanish. In R.A. Berman & D. I. Slobin (Eds.), *Relating events in narrative: A crosslinguistic developmental study* (pp. 239–284). Hillsdale, NJ: Lawrence Erlbaum Associates.
DOI: 10.1017/s0272263100014443
- Silva-Corvalán, C. (2014). *Bilingual language acquisition: Spanish and English in the first six years*. Cambridge: Cambridge University Press. DOI: 10.1017/cbo9781139162531

- Silva-Corvalán, C. (2003). Linguistic consequences of reduced input in bilingual first language acquisition. In S. Montrul & F. Ordóñez (Eds.), *Linguistic Theory and Language Development in Hispanic Languages* (pp. 375–397). Somerville, MA: Cascadia Press.
- Silva-Corvalán, C. (1994). *Language contact and change*. Oxford: Oxford University Press.
DOI: 10.1017/s0047404500020753
- Smith, C. (1997). *The parameter of aspect*. Dordrecht: Kluwer.
- Vendler, Z. (1967). Verbs and times. *Philosophical Review*, 56, 143–160. DOI: 10.2307/2182371
- Verkuyl, H.J. (1972). *On the compositional nature of the aspects*. Dordrecht: Foris.
DOI: 10.1007/978-94-017-2478-4
- Yip, V., & Matthews, S. (2000). Syntactic transfer in a Cantonese-English bilingual child. *Bilingualism: Language and Cognition*, 3(3), 193–208. DOI: 10.1017/s136672890000033x
- Yip, V. & Matthews, S. (2006). Assessing language dominance in bilingual acquisition: A case for mean length utterance differentials. *Language Assessment Quarterly*, 3, 97–116.
DOI: 10.1207/s15434311laq0302_2