1. Introduction

This study examines how Spanish-English bilingual children are able to inherit and retain their parents’ minority language (Spanish) in an English-dominant context. There is an extensive literature on relevant variables that influence language maintenance in a minority language setting. These include the external, community-level factors such as demographic characteristics of the community, language policies, as well as the subjective, personal level-factors such as cultural identity, solidarity and relative prestige of the language variety. The goal of this paper is to examine how external and internal factors jointly determine the parental practices that support or hinder language transmission.

Research shows general associations between bilingual proficiency and instrumental and integrative attitudes towards the minority language in adult bilinguals (e.g., Baker, 1992; Coté & Clement, 1994; Piera-Guasp, 2002). However, other studies indicate that performance in young bilinguals is more strongly associated with adult language input and practice at home than with individual attitudes towards the language and bilingualism (e.g., Hakuta & Andrea, 1992).
In this study, we examine language transmission and language retention in a group of seventeen Spanish-speaking immigrant families in Toronto, Ontario. Our goal is to explore to what extent simultaneous and sequential bilingual children are able to acquire and retain Spanish, what variables determine their language dominance and their performance on several measures of Spanish ability, what their parents’ attitudes and language practices at home are, and what the children themselves think of their bilingual abilities and environments.

The study is organized as follows. Section 2 summarizes the literature on bilingual acquisition, on language maintenance and shift at the community level, and on family language transmission. Section 3 presents the bilingual families that participated in our study, their social context, and the methods used to interview parents and children. Section 4 presents results on children’s abilities and language dominance, followed by discussion of family conditions: their attitudes and practices, and finally, on children’s own perceptions and attitudes about their bilingual circumstances. Section 5 summarizes our observations and presents our proposed model.

2. Language transmission in bilingual children

2.1 Simultaneous and sequential bilingual acquisition

How are children able to grow up in two languages? There are two routes into childhood bilingualism: sequential and simultaneous. Simultaneous bilingual acquisition refers to the acquisition of two languages consequently during the period of primary language acquisition (birth to 3;0). Research has demonstrated that bilingual children can acquire both languages autonomously from the beginning of the preverbal stage, and that in many
respects, they are fundamentally comparable to monolingual peers in terms of rates and patterns of development (e.g., De Houwer, 1994; Grosjean 1989; Meisel, 2001; Schlyter, 1993). However, as Grosjean points out, autonomy in bilingual development does not mean that simultaneous bilinguals are two monolinguals in one. Although both languages develop independently, there is always a degree of interaction between both languages (e.g., Müller & Hulk, 2001; Müller, 2003).

The second route into bilingualism is that of sequential or successive bilingualism, also known as child second language (L2) acquisition, which refers to the acquisition of two languages after the age of 3;0 (e.g., Grosjean, 1989; MacLaughlin, 1978; Romaine, 1995). The primary question around these children is to what extent they are like adult L2 learners or like simultaneous bilinguals. Sequential child bilinguals often show instances of transfer from the second language (dominant one) and distinctive patterns of development from their monolingual peers.

Although most authors agree on a cut-off point ending at the age of 3;0 to differentiate simultaneous versus sequential bilingualism, age of onset of acquisition of the two languages does not condition the degree of bilingual development of the child (e.g., Grosjean, 1989). Within bilingual populations, there is a wide range of variation of the relative dominance and acquired abilities in each of the languages. Socio-cultural and linguistic factors such as motivation, parental language use, educational access and length of exposure to each language are argued to be the determining factors in bilingual dominance and attainment (e.g., Hakuta & D’Andrea, 1992; Grosjean, 1989; Jia, 1998). For instance, in situations where the input available in one of the two languages is reduced, the less accessible language—in most cases the family language—develops
more slowly and bilinguals (both children and adults) show patterns of transfer and difficulties sometimes comparable to those of L2 learners (e.g., Cuza, in press; Schlyter, 1993).

Many bilinguals within minority language communities do not end up acquiring their two languages or develop full competence in both. This is often the case of Spanish heritage speakers in the US and Canada who often demonstrate incomplete acquisition of their first language in areas such as tense and aspect (e.g., Montrul, 2002; Potowski, 2005; Silva-Corvalán, 1994; 2003; Zentella, 1997), gender agreement (e.g., Montrul & Potowski, 2008) or knowledge of morphosyntactic and semantic patterns (e.g., Cuza, 2001; Montrul, 2005). These various authors attribute heritage language incompleteness to insufficient exposure to the home language, among other factors.

That simultaneous bilingual children can succeed at bilingual language acquisition is an argument for the robustness of the language acquisition device (e.g., Paradis & Genesee, 1996), given that a bilingual child by definition has divided input. However, at some point, when the share of input time in one language is reduced beyond the capabilities of the system, acquisition is challenged, or placed at risk. In contrast with Meisel (2007a), who defines bilingual success as full convergence with two first languages, we adopt a broader notion of bilingual success as the attainment of some degree of fluency in both languages, although this fluency may be asymmetric in dominance, even to the extent that it results in incomplete acquisition in the language that is weaker in development or less preferred in use. The question we seek to address is what conditions and practices at home support successful bilingual development, when the outside environment offers limited support.
2.2 Language maintenance and shift in bilingual communities

Traditionally, language attitudes (i.e., a favorable or unfavorable disposition to a language variety or to bilingualism) have been recognized as an influential variable in language maintenance or shift in minority language communities (e.g., Atzen, 1988; Lambert, 2008; López-Morales, 1993; Romaine, 1995). The extent to which a minority language is retained in a community depends both on objective elements of the language contact situation as well as subjective factors; that is, the value placed on the language (e.g., Weinreich, 1974). While external factors such as demographic density, endogamy, economic situation of the subgroup, and governmental policy are important determinants of language maintenance, one can argue that the main determinant is family transmission. However, little is known to what extent the attitudes and beliefs specifically shape family language transmission.

Guardado (in press) suggests that for Hispanic families in Western Canada, the crucial variables favoring the maintenance of the minority language (Spanish) may be cultural awareness and familism (family ties and communication). He found that the level of cultural awareness was directly related to the level of cultural identity and commitment to the maintenance of the home language among Spanish-speaking families in Vancouver. Guardado concludes that the most culturally aware immigrant families are more likely to raise their children bilingual and to preserve strong cultural ties (Guardado, in press: 11).

So, what is the basis of extended family orientation (i.e., familismo)? We propose that family orientation is an expression of the more general notion of ethnolinguistic vitality, one of the subjective factors believed to be a crucial predictor of maintenance.
Perception of ethnolinguisitc vitality is a related but different construct from language attitudes. Vitality refers to the beliefs about a group that makes it likely to behave as a distinctive and active collective entity in inter-group relations (e.g., Bourhis, Giles & Rosenthal, 1981; Giles, Bourhis & Taylor, 1977). One could presumably have positive beliefs about the minority language, but not engage in the relevant language practices if one believes that the ethnolinguistic group is not likely to remain distinct. Results on the predictive power of ethnolinguistic vitality are mixed (e.g., Köpke, 2004). For instance, Yagmur, de Bot and Korzilius (1999) examined the role of subjective ethnolinguistic vitality perceptions in the maintenance of Turkish in Australia. Participants reported that preserving Turkish was very important for self-identity but the data from the ethnolinguistic vitality questionnaires showed very low group vitality for Turkish, and no direct correlation between actual linguistic performance and participants’ ethnolinguistic vitality perceptions and language attitude. However, other studies suggest that attitude and autobiographical factors have an important role in L1 attrition (e.g., Schmid, 2002). Schmid (2002) studied German Jewish immigrants to the U.K and the U.S and found that the degree of attrition among the three different groups was much more significant among the speakers that immigrated during the time of more intense political persecution. She also found correlation between attrition and other external factors such as level of education, length of immigration and ethnicity.

The studies above all investigate language maintenance in adults. Can attitudes determine the language affiliation of young bilinguals? In a study on the role of language attitude and the maintenance of Catalan in Mallorca, Pieras-Guasp (2002) found that Catalan/Spanish bilingual adolescents valued their language mostly for instrumental
purposes, but showed no interest in Catalan for social interaction. Pieras-Guasp predicted that these attitudinal conditions in the younger generation will limit the success of language maintenance goals. Attitudinal and environmental variables may function differently across the lifespan in the acquisition of the dominant L2 and in the maintenance or attrition of the L1 (e.g., Jia, 1998; Potowski, 2004; Schmid, 2002). Jia (1998) studied how environmental factors related to age of arrival in the L2 setting determine the English language performance of Chinese children in New York City. The author acknowledges the presence of age effects in the second language acquisition of children and adults but challenges the view that these are wholly due to biological differences (i.e., on critical periods on language learning). She found an inverse relationship between L1 and L2 proficiency, and strong association between L2 proficiency and communicative networks in the L2. She argues that age effects should be reconsidered in terms of children’s capacity to integrate to the new culture and establish strong new socio-cultural networks, and their willingness to join language networks in the L2. The older immigrants in her study often made social choices that put them in contact with speakers of their L1 resulting in limited exposure to the L2. Their recognition of the instrumental value of the new language did not lead them to make personal choices that led to the development of a new linguistic identity.

Potowski (2004) also observed a tendency of children to integrate into their peer culture in the dominant L2. She noted dual-language immersion Hispanic children in Chicago used Spanish almost exclusively to speak to the teacher (82%) while they communicated mostly in English (68%) among themselves and peers. English was the dominant choice for popular culture topics.
Hakuta and D’Andrea (1992) studied the maintenance of Spanish among 308 high school students of Mexican background in Northern California. The adolescents in their study spoke the language mainly at home with their parents, but outside the parental environment there was a rapid shift towards English. Their findings strongly suggested that Spanish proficiency among young bilinguals is primarily associated with adult language input and practice at home, rather than with attitude itself. However, choice of language outside the home (English) was predicted by the speaker’s attitude to the language, not by language proficiency.

In sum, while there is some evidence of a relationship between attitudes and maintenance, and to attitudes as capable of shaping the language practices of youth, these studies do not directly consider transmission, i.e., whether families are able to establish conditions for the home language to lead to successful bilingual acquisition.

2.3 Family language transmission

Family language transmission refers to the intergenerational transmission of a non-dominant language (henceforth family language) between parents and children within the bilingual family unit (e.g., Döpke, 1992; Fishman, 1991; Lambert, 2008; Romaine, 1989). The day-to-day communication in the family language is established either because the parents are not fluent in the societal/dominant language (default transmission) or because they have made the informed choice to raise bilingual children as an act of identity and linguistic family planning (strategic transmission) (e.g., Cunninham-Andersson & Andersoon, 2004; Lambert, 2008). On the opposite spectrum,
there are bilingual parents with an ethnic link to the family language who sometimes opt for no family language transmission (e.g., Ager, 2001; Lambert 2008).

Another common transmission scenario is when bilingual parents with a direct ethnic link speak to their children consistently in the family language, but have no expectations or intentions of developing productive skills (oral or written). The goal and expectation of the parent is that the child understands what she/he is saying, and that often suffices. The intent of the parent is to foster receptive bilingualism rather than communicative competence or productive skills. As Lambert argues, the parent’s motives, attitudes and expectations determine the transmission strategies to be used, and, ultimately, the type of bilingualism and language dominance achieved by the child.

3. **Methods and participants**

3.1 **Context**

We designed a parent-child study to explore language transmission and language competence in simultaneous and sequential bilingual children growing up in Toronto, which has the greatest concentration of Hispanics in Canada.

The Greater Toronto Area (GTA), the largest urban setting in Canada, represents an intensely multilingual environment. It is common to offer telephone-based services and public interest documentation in dozens of languages. Schools routinely offer interpretation services and circulate information to parents in half a dozen languages, which vary from neighborhood to neighborhood. In the 2006 Statistics Canada Census, 54.1 percent of the GTA families reported English as a mother tongue, 1.2 percent reported French, and 42.6 percent report a non-official language. The most common non-
official languages are the Chinese languages (8.1%) (Cantonese, Mandarin, and Hakka are the most commonly specified), followed by Italian (3.7%) and Punjabi (2.6%), which are then followed closely by Spanish (2.4%), Portuguese (2.3%) and Tagalog (1.9%). More than one third of Canadians that report Spanish as their mother tongue live in this multilingual area. In sum, the community conditions are favorable to bilingualism in terms of general positive attitudes to multilingualism, but demographically unfavorable since the density of Spanish speakers is low.

3.2 Participants

Our recruitment targeted families in which the children spoke Spanish, the parents had knowledge of the majority language (English), had a direct ethnic link with the family language and had made the choice to raise their children bilingual. Most of the families in our study came from low socioeconomic status. They had few economic resources, few travel opportunities and lived in communities where English was dominant. These families showed high levels of language maintenance motivation and language identity. Seventeen families from the greater Toronto area participated in the study.

Six of these families had sibling pairs, so that a total of 23 children were interviewed. We recruited families from three main areas within the GTA characterized by relatively higher and lower density of Hispanics. The high-density areas included Toronto West and the downtown core. A total of 10 children came from these two areas. These areas were considered as high density due to the large number of Hispanic families located in and around downtown Toronto and west of downtown. These two areas are
described as within the top 50 areas of Spanish mother-tongue distribution in Toronto (Farley & Listar, 2007).

The Community and Neighborhood Services analysis based on the 2001 Census also shows higher density of Spanish households in the northwest areas of the City. Thirteen children came from lower-density areas, located north of the city such as Richmond Hill and Markham. The majority mother-tongue distribution in these parts of the city is Italian and Chinese and few Spanish-speaking families reside in these two areas.

Most families were from Mexico, with one family from El Salvador, two from Colombia, and one from Argentina. All parents were sequential bilinguals, born and raised in their country of origin (first generation speakers). Following standard criteria (e.g., Genesee, Paradis & Crago, 2004), individual children were classified into a simultaneous bilingual group, i.e., those who were born in Canada or the U.S., or arrived before the age of 3 (N=13), and a sequential bilingual group, i.e., those who were born outside of Canada or the U.S. and only initiated contact with English after 3;0 (N=10). The simultaneous bilingual children ranged in age from 3;0 to 7;9 (mean 5;2), and their families had been in the US or Canada between 5 and 20 years (except for a younger child, aged 3, whose family moved 2 years ago). The sequential bilingual group was older, ranging in age from 4;9 to 8;4 (mean 6;3). Length of residence in Canada for these families was between 1 and 2 years, except for two siblings and another child who had arrived just 8 and 7 months before the time of the interview, respectively.
3.3 Parent instruments

Parents were asked to complete questionnaires about their language abilities, the language situation and language abilities of the child, their attitudes to the Spanish language and to bilingualism and the general ethnolinguistic characteristics of their community. These instruments were administered in Spanish, unless the parent requested an English version, and included the following five components:

(1) Language history and language self-assessment questionnaire. This survey aimed at eliciting information on languages studied/learned, level of education, age of onset of L2 acquisition, length of residence in Canada or the US, present contact with Spanish and English, and self assessment of L2 language ability among other topics.

(2) Attitude to bilingualism questionnaire (adapted to the local context from Pieras-Guasp 2002). This survey included a total of 33 questions on parents’ instrumental and integrative/personal attitudes to bilingualism in general and Spanish–English bilingualism in specific within the Canadian context.

(3) Attitude to Spanish language questionnaire. Parents responded to specific questions about their perceived vitality and importance of the Spanish language and culture.

(4) Community characteristics/ethnolinguistic vitality questionnaire. The purpose of this questionnaire was to evaluate the ethnolinguistic vitality of each community (e.g., Bourhis, Giles, & Rosenthal, 1981; Giles, Bourhis & Taylor, 1977). It included questions on not only the demography and status of the community (e.g.,
local businesses, proportion of members, economic wealth and prestige, social status) but also on how integrated the members of the community were.

(5) Child language background questionnaire (extended) (adapted and modified from Paradis, Nicoladis, & Crago, 2007). A set of questions on home language practices (language choice, feedback and repair strategies), was included as a final section to the standard children’s language history.

### 3.4 Child instruments

The children’s involvement in the study included the following components: a Spanish speech sample taken from the child, an elicited imitation task, and an interview that covered the child’s beliefs about language and bilingualism.

The speech sample contained both an elicited narrative, and a segment of conversational interaction. For the elicited narrative, children were asked to retell a fairy tale in both English and Spanish, using a wordless picture book. The children chose a book (from a choice of Little Red Riding Hood, Snow White and Cinderella) and proceeded to tell the story on the basis of the images. They told the story first in Spanish and then in English, each time to one of the testers according to their native language. Narratives were digitally recorded and later transcribed for analysis.

As an additional measure of language skill in Spanish, an elicited imitation task was employed (e.g., Crain & Thornton, 1998; Gass & Mackey, 2007). Studies of literacy skills have shown that sequential bilinguals have significantly lower scores in non-word repetition tasks (e.g., Lipka, Siegel & Vukovic, 1997). Therefore, we proposed to test whether a repetition task could be used to measure retention of proficiency in Spanish.
We adapted the test in Eisenchlas’ (2003) study of Spanish monolinguals, which targeted the position of enclitic/proclitic pronouns. The sentences included 8 clitic tokens (4 proclitic and 4 enclitic) plus 6 additional non-clitic items. They were of comparable complexity, and ranged in length from 8-10 words including the clitic, as shown in examples in (1):

(1)  
  a. Por la tarde Aladín quiere darme un caramelo. (Enclitic)  
      “In the afternoon, Aladdin wants to give me a candy.”  
  b. La princesa Jasmín lo puede ver esta noche. (Proclitic)  
      “Princess Jasmin can see him tonight.”  
  c. Dora juega con sus amigas en el parque. (non-clitic control)  
      “Dora plays with her friends in the park.”

Children were instructed to repeat as much as they could remember. The native Spanish interviewer then read target sentences, twice if necessary. Performance was measured by calculating the proportion of words correctly repeated, and the correct proportion of sentences repeated with the correct word order.

The attitude component of the interview was conducted in English, by another bilingual interviewer who presented herself as not fluent in Spanish. The interview followed a set of questions about attitudes to Spanish and bilingualism. Our goal in including this part of the interview was to assess children’s understanding of their own bilingual situation, their language preference, their feelings about being bilingual and about speaking Spanish, and their views on who spoke which language in their social and familial networks. Although there is behavioral evidence for children’s sensitivity to bilingual situations in terms of language choice, and, more recently, in terms of their ability to repair breakdowns in communication (e.g., Comeau & Genesee, 2007), there is

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1 Comeau & Genesee show that bilingual children as young as two and a half use language switch as a strategy to repair communication breakdowns, thus differentiating language from other kinds of communication breakdowns.
little beyond anecdotal evidence about children’s experiences and their perceptions of their bilingual situation.

4. Results

4.1 Language dominance and general language measures

We first examined how these simultaneous and sequential bilingual children are succeeding at developing and retaining Spanish by considering parental reports of fluency in their two languages. To calculate dominance, the scores given to fluency in Spanish were subtracted from those given to English. Unsurprisingly, parental reports described the simultaneous bilingual children as less dominant in Spanish than sequential bilinguals. In both groups there is a wide range of dominance ratings, but the simultaneous bilinguals tend to be balanced or English-dominant, whereas the sequential children tend to be Spanish dominant. Figure 2 reports the observed counts of children in each group, rated as balanced (dominance=0), or English dominant (negative portion of scale), or Spanish dominant (positive side of scale, with 3= as Spanish monolingual).
Children’s elicited narratives were transcribed and analyzed for productivity, measured in terms of total number of clauses or Terminable Units (T-Units consist of a main clause and dependents, see Castilla, 2008), and complexity, measured in terms of subordination index. The subordination index is calculated as the ratio of total number of clauses over number of T-units.

As shown in Table 1, the older Spanish dominant sequential children produced longer narratives in Spanish, and a slightly higher rate of subordinate clauses than their simultaneous counterparts. The sequential children also produce more sentences in Spanish than in English, unlike the simultaneous children, who are only slightly more productive in Spanish. Subordination scores are higher in English in both groups. The two groups are undistinguishable in terms of their measures of productivity and complexity in English.
Table 1
Children scores on measures of productivity and complexity in both languages

<table>
<thead>
<tr>
<th>Age in months</th>
<th>Reported child dominance</th>
<th>Number of T-units in Spanish</th>
<th>Sub. index in Spanish</th>
<th>Number of T Units in English</th>
<th>Sub. index in English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simultaneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>3</td>
<td>36</td>
<td>1.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>1</td>
<td>38</td>
<td>1.29</td>
<td>15.00</td>
<td>1.40</td>
</tr>
<tr>
<td>46</td>
<td>0</td>
<td>76</td>
<td>1.04</td>
<td>15.00</td>
<td>1.00</td>
</tr>
<tr>
<td>46</td>
<td>2</td>
<td>21</td>
<td>1.00</td>
<td>29.00</td>
<td>1.48</td>
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<tr>
<td>48</td>
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<td>20</td>
<td>1.00</td>
<td>11.00</td>
<td>1.09</td>
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<td>59</td>
<td>1</td>
<td>3</td>
<td>1.00</td>
<td>15.00</td>
<td>1.50</td>
</tr>
<tr>
<td>66</td>
<td>1</td>
<td>47</td>
<td>1.11</td>
<td>38.00</td>
<td>1.29</td>
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<td>81</td>
<td>0</td>
<td>47</td>
<td>1.04</td>
<td>57.00</td>
<td>1.58</td>
</tr>
<tr>
<td>81</td>
<td>-2</td>
<td>32</td>
<td>1.06</td>
<td>45.00</td>
<td>1.44</td>
</tr>
<tr>
<td>81</td>
<td>-2</td>
<td>66</td>
<td>1.02</td>
<td>30.00</td>
<td>1.47</td>
</tr>
<tr>
<td>83</td>
<td>-1</td>
<td>36</td>
<td>1.31</td>
<td>34.00</td>
<td>1.18</td>
</tr>
<tr>
<td>93</td>
<td>-1</td>
<td>41</td>
<td>1.07</td>
<td>52.00</td>
<td>1.52</td>
</tr>
<tr>
<td><strong>Means</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>62.61</strong></td>
<td><strong>0.23</strong></td>
<td><strong>37.6</strong></td>
<td><strong>1.08</strong></td>
<td><strong>28.58</strong></td>
<td><strong>1.33</strong></td>
</tr>
<tr>
<td>Sequentials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>1</td>
<td>116</td>
<td>1.17</td>
<td>31.00</td>
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<td>20</td>
<td>1.10</td>
<td>12.00</td>
<td>1.75</td>
</tr>
<tr>
<td><strong>Means 75.6</strong></td>
<td><strong>1.2</strong></td>
<td><strong>59.9</strong></td>
<td><strong>1.14</strong></td>
<td><strong>28.80</strong></td>
<td><strong>1.33</strong></td>
</tr>
</tbody>
</table>

We tested the associations between these measures and parental reports of child language dominance. Parental report was not well correlated with productivity and complexity measures. We found no significant correlations between reported dominance and productivity and complexity measures, except for the subordination index in English,
which showed a significant negative correlation with the parental report of dominance (r=-.473, p=.03).

4.2 Results on elicited imitation

Performance on the sentence imitation task showed that the sequential bilingual children performed better on both the proportion of words correctly imitated, and on the proportion of sentences with the correct clitic order. Group means and standard deviations are reported in Table 2.

Table 2
Performance on the elicited imitation task for simultaneous and sequential bilingual children

<table>
<thead>
<tr>
<th></th>
<th>Mean proportion of words correctly repeated</th>
<th>Mean proportion of utterances repeated with correct clitic order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simultaneous</td>
<td>.81 (sd=.14)</td>
<td>.40 (sd=.27)</td>
</tr>
<tr>
<td>Sequential</td>
<td>.94 (sd=.03)</td>
<td>.61 (sd=.19)</td>
</tr>
</tbody>
</table>

The relationship between parental dominance reports and performance in the imitation task was examined using partial correlations that controlled for age. The parental dominance report showed a significant positive correlation with the proportion of words correctly imitated (r=.681, p=.002), and a positive, but non-significant, correlation with percentage of utterances where the clitic word order was repeated correctly (r=.338, p=.15). These correlations suggest that elicited imitation provides a good assessment of children’s Spanish ability.

To compare the performance across groups, we corrected the age imbalance between the simultaneous and bilingual children by eliminating 5 of the younger children in the simultaneous group. This rendered the age groups more comparable, as the corrected mean age of the simultaneous group raised to 7;3.7 (N=8), just two months
younger than the sequential groups (mean=7;5.6, N=10). The difference between the proportion of words correctly imitated across groups was found to be significant even after correcting for age \((F_{1,16}=6.676, p=.02)\). The difference between the proportion of sentences with the correct clitic order was also found to approach significance at \((F_{1,16}=3.955, p=.06)\).

### 4.3 Perception and attitudes of the bilingual families

The families of simultaneous bilinguals were primarily from low-density neighborhoods (7/9), while families that arrived more recently tended to live in the high-density neighborhoods (7/8). Neighborhood selection itself did not make a difference for the average responses to the questionnaire on neighborhood density. In general, families tended to describe their neighborhoods as allowing low access to contact with other speakers and resources in Spanish. The recently arrived families were more likely to describe their neighborhoods as having some Spanish speakers, and as having some degree of contact with Spanish in their community. In a similar direction, these families were more likely to give positive responses to questions about the ethnolinguistic vitality of the Spanish speaking community than the families that had immigrated less recently.

With regards to attitudes to bilingualism, or attitudes to Spanish, we found the differences across the families to be slight. Of the seventeen families, three strongly agreed with all positive statements about Spanish, nine tended to agree, and five others expressed neutral attitudes on the average. None of the parents provided answers in the negative range of the scale. There was a strong correlation between a family’s attitudes to Spanish and their expressed attitudes to bilingualism \((r=.82)\), with most families
agreeing with positive statements to Spanish. Interestingly, more of the recently arrived families had a more neutral stance towards Spanish than long-time resident families.

One possibility is that the recent arrivals place more instrumental value on mastery of English, and only later feel the desire to maintain Spanish. Shenk (2008), in a study of kindergarteners and second grade students who choose to speak Spanish, reports on one parent who switched orientation after immigration. This father favored learning English when he lived in Mexico, for the instrumental value it offered. Once in the U.S., his focus shifted towards Spanish retention. This parent consistently saw bilingualism as both granting economic and cultural benefits, but his relative orientation towards Spanish changed in response to the external setting. Table 3 summarizes the scores across the various variables for the families of simultaneous and sequential bilingual children.

Table 3
Average scores per family type to responses about perception of community density, ethnolinguistic vitality of the community, and attitudes to the Spanish language and to bilingualism in general.²

<table>
<thead>
<tr>
<th>Family Types</th>
<th>Community density</th>
<th>Ethnolinguistic vitality</th>
<th>Attitudes to Spanish</th>
<th>Attitudes to bilingualism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simultaneous bilinguals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Early arrivals)(N=10)</td>
<td>1.68</td>
<td>2.41</td>
<td>4.07</td>
<td>3.88</td>
</tr>
<tr>
<td>Sequential bilinguals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Recent arrivals)(N=8)</td>
<td>3.15</td>
<td>3.11</td>
<td>3.79</td>
<td>3.96</td>
</tr>
</tbody>
</table>

There were some differences between recent arrivals and long-time resident families in Toronto. More of the recent arrivals lived in the high-density core of the city, and consequently reported greater contact with the language and access to other speakers. They also tended to agree more with statements about the vitality of the language in the

² Scores range from 0 (indicating none/never/strongly disagree) to 5 (indicating many/very frequent/strongly agree).
community. Interestingly, all but one of the adult respondents grossly overestimated the percentage of speakers in the area: estimates ranged from 10 to 40 percent. There were no differences among families in term of attitudes to bilingualism, which was primarily positive, with some wider differentiation in the questionnaires on attitudes to Spanish.

4.4 Characteristics of the home context of bilingual children

We then analyzed the results on the portion of the questionnaires devoted to questions about the language within the home environment. The more obvious differences between the families were, naturally, related to the length of stay. The sequential bilinguals had families that were much more dominant in Spanish, and the children were also described by their parents more often as Spanish-dominant. Furthermore, these children, according to parental reports, were more likely to have less exposure to English during daytime/outside the home settings.

We noted no differences in the parental report of children’s preferred language choice in interactions with various family members. However, parents of sequential bilinguals described themselves as initiating a conversation in Spanish very frequently or always, whereas parents of simultaneous bilinguals reported initiating an exchange in Spanish at slightly lower rates. When a child spoke in Spanish, adults in both groups consistently report responding in Spanish. When the child spoke in English, on the average, families of sequential bilinguals more frequently reported following up with English rather than switching to Spanish.
There were few differences between the two groups in the parental response when
the child changed the language of the conversation. Few parents corrected the child who
spoke Spanish in an English conversation, unless the interlocutor was a monolingual
English speaker, in which case parents tended to remind the children of this fact. Some
parents reported correcting grammatical errors, and others reported reminding children of
how things are said in English. When the conversation was in Spanish, and the child
switched to English, parents reported correcting around 70% of the time, just slightly less
than when the person was monolingual Spanish. Parental feedback was slightly different
in quality: use of Spanish is directly encouraged with expression such as habla español
(Fam4) (“speak Spanish”), contesta en el idioma en que se te habla (Fam13) (“reply in
the language in which you are addressed”), or in our family we speak Spanish (Fam9).
Again, there were no differences in reported response across family types.

We also found no difference between groups in the reported frequency of mixing,
with most parents reporting regular to occasional mixing. The most common parental
response of the simultaneous bilinguals was single-language recast, where the parent
repeats the utterance without mixing, with other parents reporting making explicit
observations to the child. For the families of sequential bilinguals, half of the families
had similar patterns, but half of them also reported explicit negative feedback. In the
words of one parent: “cuando se habla una frase, que se diga toda en español y toda la
frase en inglés sin mezclar una con la otra” (Fam16) (“when you say a phrase, it should
be all in Spanish or all in English without mixing one language with the other”).
Overall, this data suggests continuity in home language practices as time goes by in terms of response to children’s language switching and language mixing. Recent arrivals were no different from the families that had been living here for several years and were raising simultaneous bilinguals. We interpret the absence of difference to indicate that language practices within these bilingual families are not necessarily changing as time goes by. There were also little differences in the reported preferred language of interaction with family members, and only small differences in how adults report their interactions with their bilingual children when these children spoke in English, with the more recent immigrants describing more supportive actions towards their children’s English.

We explored the statistical association between the various variables for family conditions and child dominance. The most significant variable associated with dominance was the time spent in an English speaking environment ($r=-.685, p<.000$), followed by parental initiation in Spanish ($r=.602, p=.002$).

To examine whether attitude had an effect on language practices at home, families were split into those with average attitude scores around the positive range, to those in the very positive range. The results reported on Table 4 show some differences for attitude groups, more visibly in the case of the simultaneous bilinguals. However, these differences are not significant.
Table 4

Average ratings on contextual variables (family members dominance, daytime exposure and parental initiation) and child dominance across attitude stance in families

<table>
<thead>
<tr>
<th></th>
<th>Average Dominance of Family Members (-3 to 3)</th>
<th>Proportion of Daytime exposure in Spanish (0-1)</th>
<th>Parental initiation in Spanish (0 to 5)</th>
<th>Child Dominance -3 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simultaneous Neutral</td>
<td>0.38</td>
<td>0.67</td>
<td>4.67</td>
<td>0.83</td>
</tr>
<tr>
<td>Simultaneous Positive</td>
<td>0.33</td>
<td>0.46</td>
<td>3.29</td>
<td>-0.29</td>
</tr>
<tr>
<td>Sequential Neutral</td>
<td>1.50</td>
<td>0.26</td>
<td>4.50</td>
<td>1.50</td>
</tr>
<tr>
<td>Sequential Positive</td>
<td>1.40</td>
<td>0.25</td>
<td>4.50</td>
<td>1.20</td>
</tr>
</tbody>
</table>

The data suggest that attitude was also unrelated to language dominance of family members for the simultaneous and sequential bilinguals, and had little or no effect in parental response to child language switch. The effect of attitude was apparent only for the simultaneous bilingual groups, in terms of the degree of parental initiation, and the degree of Spanish exposure during daytime outside the home activities.

In sum, we find some trends suggesting that parent’s choices and attitudes may create the conditions to sustain Spanish dominance in the simultaneous bilinguals, and to assist in the retention of Spanish dominance in the sequential bilinguals. However, to verify the validity of these trends is beyond the limitations in the power of the present study.

4.5 Children’s own attitudes and perceptions

The child interview contained questions asking whether the children themselves liked speaking two languages, how come they were able to, who spoke which language among their families and friends, and which language they preferred to speak and why. Nineteen children were able to complete the interview. While these children were not always
willing to state a language preference, or to discuss their attitudes, they were clearly able to describe to whom they spoke which language, and they often linked their attitudes to these interactions. In this part of the interview, children frequently confirmed parental report of the linguistic situation: Spanish was spoken mostly by other family members, but friends at school spoke mostly or all in English, corroborating previous studies (e.g., Potowski, 2004). Only a handful of the children reported that they knew one other child who also spoke Spanish. One child (EM 4;11) said that he generally spoke Spanish in school, and answered in the affirmative when the interviewer asked if many children spoke in Spanish. He was contradicted by his older brother, aged 10, who explained to the interviewer that only one of the school friends actually spoke Spanish.

Most children, either simultaneous or sequential, were not able or interested in responding how they learned each language. A few of these children were able to point out to context (learning Spanish from parents/English at school), and yet others answered “by myself”. A few of them acknowledged that speaking two languages was a bit difficult. Lexical gaps, or inability to understand or say certain things, were the most common explanations provided about why they thought that being bilingual was hard. One child, (*JPM), aged 7;9 described Spanish as hard because there were words he did not know. His description of his Spanish ability as low does not match either the parental report nor the interviewers’ direct observation (see (1)). DAN, a six-year old sequential child, provides a similar explanation, as shown in (2).

(2)  *JPM: It was hard for me
*DLT: Yeah? Is it hard for you to speak or no?
*JPM: Kind of hard.
*DLT: A little bit? Why?
*JPM: Cause I still cause there’s some words I don’t know in Spanish
*DLT: so you have to practice? So how is it that you know both though? How do you know both English and Spanish?
*JPM: I don’t know; I don’t really speak Spanish.
*DLT: Well I heard you speaking […]
*MOT: Sí hablas… (JPM 7;9)

(3) *DLT: is it hard or is it easy to speak both languages?
*DAN: sometimes when we have it’s a little bit hard
*DLT: oh really? Why?
*DAN: because sometimes I don’t know the question (DAN 6;10)

And yet another sequential child (ADE), described being comfortable with both languages, because of the separation by situation:

(4) *DLT: Now is it hard to speak both Spanish and English or is it easy?
*ADE: easy
*DLT: It’s really easy, why do you think so?
*ADE: because sometimes at school I talk English and in my home I talk Spanish and then I start getting it. (ADE 5;6)

With respect to attitudes, children generally reported that they liked Spanish, and liked being able to speak in two languages. Among the children in the simultaneous group who completed the interview (n=9), one child did not state a specific preference, and the others were equally divided among those who preferred English and those who preferred Spanish. There was no correlation between the children’s preferences and the parental responses in the attitude questionnaires. It is important to recall that there were no families with explicit negative attitudes in our sample. This may reflect either a general positive stance towards multilingualism in the Toronto community, or possibly because individuals with a positive orientation towards bilingualism and Spanish self-selected to participate in our study. Surprisingly, more children in the families that expressed
positive or highly positive attitudes to Spanish and bilingualism reported a preference for speaking English. These data are presented in Table 5.

Table 5
Number of simultaneous bilingual children who declared a language preference, according to their family’s ratings of attitude towards the Spanish language.

<table>
<thead>
<tr>
<th>Child preference</th>
<th>Neutral family stance</th>
<th>Positive family stance</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Spanish</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>For English</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>No preference</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

As discussed in the previous section, the families of sequential bilinguals expressed in general more neutral attitudes towards the language. Among these families, most of the children expressed no preference towards either language, one favored Spanish, and two favored English. Among the sequential families with clearly positive attitudes towards Spanish and towards bilingualism most children preferred English, with one child enthusiastically expressing a preference for both languages. This is summarized in Table 6.

Table 6
Number of sequential bilingual children who declared a language preference according to their family’s ratings of attitude towards the Spanish language

<table>
<thead>
<tr>
<th>Child preference</th>
<th>Neutral family stance</th>
<th>Positive family stance</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Spanish</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>For English</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>No preference</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Taken together, these responses already indicate a language orientation towards English. Interestingly, when asked to explain their preference, many of the children, expressed their preference in terms of their ability, even when this justified choices in the direction
opposite to their actual language dominance. For example, a seven year-old sequential child described as Spanish dominant declares she prefers English because it is easier:

(5)  
*DLT: and which language did you tell me you like speaking more?  
*LIN: English  
*DLT: and why English?  
*LIN: because it’s more easy  
*DLT: Ok and Spanish is a little bit harder? Why is it hard?  
*LIN: cause sometime I cannot say it the words.  (LIN, 7;11)

There were some other types of responses. One child explained his preference for Spanish in terms of family affiliations (6). Yet another sequential child, described as a strongly Spanish dominant, explains that she prefers English because that is what their friends speak (7).

(6)  
*DLT: Which one do you like more?  
*ANG: Spanish  
*DLT: You do. Why?  
*ANG: Because it’s what my dad and mom speak  (ANG, 6;11)

(7)  
*KAR: English.  
*DLT: You like English more. Really? Why?  
*KAR: Because I # Because I like # because # because my friends speak English  (KAR 5;10)

Two children pinpointed to school interactions as the source of choosing English. One girl, IVA (6;8), explained that she “hated Spanish” because her friend said he did. Another girl, also a sequential bilingual, says she prefers speaking English, even when her friends also spoke Spanish, because it can create conflict.

(8)  
*DLT: Why do you speak English with your friends?  
*MIR: Yeah and sometimes when I speak Spanish to the people that speak Spanish some other people think they’re talking bad about them and some people feel left out.  (MIR 8;4)
In sum, these children are already developing a language orientation which may determine their future language choices, and possibly their future ability. Interestingly, it is not clear that the parental attitudes are a determinant factor, as children’s declared preferences seem unrelated to parental overall attitudes to bilingualism and to the Spanish language. Instead, when asked to explain their preferences, these children mainly pointed to their perceived abilities, and experience of successful or unsuccessful use. While all children demonstrated clear awareness of the language affiliation and abilities of the members of their social network, some of these children were able to establish a link between their own current preference, and specific interactions with their peers.

5. Conclusions

The families we interviewed had, for the most part, favorable views towards the Spanish language and towards bilingualism in general. This matches the overall stance of the Toronto community, where languages and diverse ethnic backgrounds are accepted as the norm. This is shown by the abundance of multilingual media, street signs, language services in government, education and commercial establishments and general community support for ethnic celebrations. Whether they lived in the downtown core, or in the more dispersed communities around the Greater Toronto Area, the community conditions for our bilingual families were not radically different. Newly arrived families (the sequential bilingual children and their parents) were living in the more dense downtown areas, while the simultaneous bilinguals tended to come from the less dense suburban context.
There were no great differences in language practices among these two types of families. Parental interaction around language switching appeared to be fairly neutral, and parental feedback seemed to be more concerned with repairing conversational exchange, than on enforcing the use of one language or the other. Parents of sequential bilinguals more often reported they reacted to their children’s code-switching, but there was no overall effect of attitude to code-switching and dominance. Overall, these recent immigrant families showed a slight trend towards more maintenance of a Spanish-home language policy, but also seemed more willing to provide English language support for their children.

We found no great differences between the two groups of families in terms of the attitudes exhibited. However, despite the small range of differences, these seemed to determine family practice in two of the dimensions assessed: the proportion of parental conversation initiated in Spanish, and the degree of exposure outside the home (via school or social networks). Although these differences were modest, they seemed to be enough to have an impact on the language dominance of the children, particularly in the case of the simultaneous bilinguals.

This conclusion is attenuated by one potential methodological concern, the question of whether parental attitude is determining actual dominance, or parental perception of child dominance. However, it is worth noting that the validity of parental rating is clearly supported by the correlation data with the objective measures in the language tasks, particularly in the case of the elicited imitation task, and the English measures of complexity. Spanish narrative data is less strong, suggesting the need for more research on language measures for bilingual children. The opposite methodological
concern is also an issue: that the narrowness of the population selected masked the true size of the effects, since our selection strategy targeted successful families (i.e., where the children maintained Spanish), which also happened to have attitudes in the neutral to positive range. Unfortunately, we lack general data on maintenance trends among the Hispanic population at large.

To conclude, these bilingual Hispanic children in Toronto remain speakers of the language, and are growing up in families actively engaging in language transmission. During these preschool and early school years, half of the simultaneous bilinguals retain a Spanish dominance affiliation, and in many ways appear to be quantitative but not qualitatively different from the more recently arrived sequential bilinguals. The family condition and external environment of these two sets of children retain its main characteristics across time, but the families with more positive orientation engage in language practices that favor maintenance, such as initiation of conversations in Spanish. Predicting language outcome in bilingual children is the result of a complex web of factors, some social, some familial, some linguistic. Minimally, one can assume that input conditions are the single most relevant determinant factor, and that these can fluctuate in the course of the life of a young bilingual. Input conditions for younger children depend primarily on the various household members, and their language practices i.e., how often they speak in each language during the language transmission process. Adult language practices are determined by their life experience, their attitudes towards majority and minority language, and possibly, by their perceptions of the vitality of their linguistic community. In addition to these, child input conditions are also partly determined by the external context, such as how much access to the Spanish language
there is outside the home, both through the media as well as by means of passive exposure; how many additional relevant conversational partners will the child be able to encounter outside the home, etc. For school-aged children, clearly, the school setting is a crucial determinant. Finally, it is conceivable, as suggested by Meisel (2007b), that the young bilingual could also exhibit language preferences that could to a certain extent be independent of input conditions. Whether these language preferences or language orientation are determined by child attitudes and beliefs is an open question. We propose thus a multidimensional model of language transmission in bilingual families, as shown below:

Figure 2: Dimensions of language transmission.

In this model, the adult dimensions of language (both subjective, i.e., attitudes, and objective, i.e., language at home and at the community), determine the transmission process (the home language practice), and this in turn is the primary determinant of the
child dimension of use, at least in the initial phase of childhood, and possibly reversed at the onset of schooling. In addition to this, attitude, both in the adult and the child, may have a direct role. Finally, the family language transmission is likely to be affected by the community conditions. We hypothesize that all these factors determine child language use, but that language practices at home are the crucial determinants of bilingual success.

While we don’t know how many of these children of the Hispanic diaspora in Toronto will grow up to be full participants in their heritage language community, three things seem certain: (1) that the potential for language maintenance exists; (2) that family choices can make a difference; (3) and that the future Spanish of these young speakers will exhibit their own distinct features; the structural footprints of their bilingual status.
References


