Grammatical Gender in Child Bilinguals:
Language Acquisition across Sociolinguistic & Pedagogical Spheres

BY

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THESIS

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ZCM
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### Abbreviations

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<tr>
<td>ACCESS</td>
<td>Assessing Communication and Comprehension in English State to State (Exam)</td>
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<tr>
<td>BFLA</td>
<td>Bilingual First Language Acquisition</td>
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<td>CS</td>
<td>Code Switching</td>
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<td>ELL</td>
<td>English Language Learner</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>HL</td>
<td>Heritage Language</td>
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<td>LEP</td>
<td>Limited English Proficient Student</td>
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<td>LRE</td>
<td>Language Related Episodes</td>
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<td>NP</td>
<td>Noun Phrase</td>
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SUMMARY

In this thesis, I study use of grammatical gender agreement, a problematic feature of both L2 and heritage language studies. Here I work with a group of Mexican bilingual children in order to assess their performance with this linguistic object at a local school. Though grammatical gender agreement has been previously studied in bilingual children, this project affords a new view with respect to the following contributions. First, I aim to investigate a diverse group of heritage language users who participate in multiple domains, some accessing Spanish in their social network and school classrooms, while others fail to access input in either class or home network. Secondly, here I address the topic of grammatical gender from a multiple methods approach, using a concord task in Chapter four, a story retelling task commonly used in the acquisition literature in Chapter five, sociolinguistic interviews, a modern day Spanish version of Labov’s sociolinguistic projects with African American Youth (Chapter Six), and finally incorporate a qualitative ethnographic focus to studying local language use (Chapter seven). Throughout this multi-methods project, one surprising result was that children living in this ethnic enclave area were found to be highly proficient in their use of gender agreement in Spanish, with all groups averaging from 98% to 100% during the sociolinguistic interview. Children also performed well in the story retelling segment, though by comparison the sociolinguistic interview relayed even more proficient data. This project underscores the role of input in language acquisition. Some surprising results including finding the overwhelming mastery of gender concord in this group of bilinguals, and the high levels of performance on a sociolinguistic interview compared to an acquisition task. These differences prompt the reader to consider the role of methodology in heritage language studies. Between group differences suggest assets of an additive bilingual program, such as dual language education.

During the project, I focused on gender agreement, however, as I developed my data set I discovered that gender was only one possible linguistic object to consider, and data collection with bilingual children provides a wealth of information about their i-knowledge of language structure.
INTRODUCTION

Gender agreement has been shown to be unstable in groups of adult heritage language speakers of Spanish (Montrul, Foote, and Perpiñan 2008), but the finding of incomplete acquisition of gender has been disputed by others who attribute differences to language proficiency (Alarcón 2010, 2011), or more recently attributing maintenance of linguistic features such as pronoun expression to social network/socioeconomic status (Shin & Otheguy, 2013; Shin & Van Buren 2016). The precise cause and nature of how it is that speakers of contact variety Spanish at times do not acquire the same variety as monolingual speakers is not completely understood. Researchers have attributed the differences between monolinguals and contact variety speakers to incomplete acquisition (Montrul 2008), attrition or “loss” (Merino 1983), due to age effects (Merino 1983, Montrul and Potowski 2007), type of acquisition (Montrul and Potowski 2007), language environment in school (Merino, 1983; Montrul and Potowski, 2007), the use of low proficiency participants in the research (Alarcón 2010, 2011), or social factors such as social network (Shin & Van Buren 2016). While some researchers find differences between groups of Spanish speakers/learners (Merino, 1983; Montrul and Potowski, 2007) others find that differences are minimal when considering advanced proficiency speakers (Alarcón 2011) and use this fact to argue for a theoretical framework advocating for a uniform system of acquisition. While age, type of acquisition, and school context have all been thought to affect acquisition of heritage language Spanish, the previous work with children has focused on one educational context rather than considering classroom language a variable of the linguistic study. For instance, Merino, in an early study, investigated the Spanish of California children in a subtractive school setting (Merino 1983). She found that older students were less proficient with gender than younger students, in a cross-sectional study. The author labeled this “language loss”
and contributed the phenomenon to the dominance of English in the school setting. However, the results from these children were not compared to others who experienced a different educational setting leading to greater proficiency, modeling Alarcón’s (2011) work with adults who were, ‘advanced proficiency speakers’. Thus this leaves a gap in the current studies on bilingual children where high proficiency home language speakers have been understudied.

Montrul and Potowski (2007) issued grammatical tasks for gender to dual language students in Chicago and found that students increased their usage of grammatical gender with age. Older students, exposed to more years of instruction in a dual language setting, were found to be more proficient with gender than younger students. This finding was in contrast to Merino’s earlier finding of ‘language loss”. The authors attributed gains by age to the additive climate of the dual language elementary school. Though the literature has compared heritage speakers to monolingual speakers, we have not seen a study of agreement that compares bilinguals across contexts: two groups of heritage speakers in the same community school who experience different school programs in distinct languages. Addressing this gap in the literature would relay a project in response to Alarcón’s (2011) proposal accounting for high proficiency heritage language adults. In fact, a study of high and low proficiency groups of heritage speakers, or as I model here heritage speakers exposed to distinct social conditions that might result in distinct input levels, serves to underscore Otheguy’s (2013) point about heritage speaker studies. Otheguy (2013) has pointed out that the concept of ‘heritage speaker’ in and of itself, lacks sufficient definition to define the field of study of these individuals. Thus by modeling a broad group of heritage speakers of differing proficiencies, we can aim to better understand this linguistic group.
Alarcón (2011) analyzed a gap in the research which she considered to be a focus on ‘low proficiency speakers’ in the literature (Montrul 2008 et al. for example) rather than high proficiency speakers. Thus there has been work on high proficiency speakers on adults (Alarcón 2011) and low proficiency speakers in adults (Montrul et. al 2008). However we can only speculate if Alarcón’s findings with the high proficiency adult heritage speakers might also apply to children with high levels of input. Applications of this body of research to groups of bilingual children, rarely studied, are lacking.

Many studies have examined features of heritage language Spanish that are problematic to acquire, though these studies rarely take place across a multi-methods framework. In Chapter six, then, I will address how results of a sociolinguistic task compare to a retelling task found in chapter five as we examine cross-methods effects of style-shifting.

I aim to contribute to the literature on Spanish in contact settings by studying two groups of child bilinguals from the same community and school, where one group has received instruction in Spanish--bilingual education--and other has received instruction only in English, in a subtractive context similar to that brought to light by Merino (1983). The bilingual children reside near the Chicago area, in a corridor area mentioned in the ethnographic work of Farr and Velázquez (Farr, 2010; Velázquez, 2013). One research question considered is, “Which group shows greater accuracy in grammatical gender: Mexican descent students in bilingual or English school programs?” I will show that when students access a dense network, classroom instruction loses strength and is not associated with any increased accuracy in grammatical gender. For students who lack a dense social network, education in the heritage language becomes their main source of input. Thus, students who don’t live in a dense social network may show different
levels of Spanish heritage language if they are in a school program that supports the heritage language or if they are not.

Based on previous findings (Merino, 1983; Montrul and Potowski, 2007) we would expect that students in the bilingual rooms would out-perform their Latino peers instructed in English on a measure of Spanish accuracy on grammatical components. For children who lack a dense language network in Spanish, I will show this is indeed the case. However, this is only the case when they are assessed with an acquisition-based task, a story retelling, and these results do not extend to accuracies on grammatical gender reflected by assessing through other methods, based on a sociolinguistic interview.

I analyze this data using a two by two design, where I consider four participant groups: those who were educated in Spanish and have dense Spanish-speaking social networks, those who were educated in Spanish but lack dense social networks, children who were educated in English but have dense social networks in the community language, and children who lack dense social networks and were educated only in English. Social network connections will be determined via a sociolinguistic interview asking individuals about their friendship and kinship connections as Ennett et. al and Eckert have undertaken in high school settings (Eckert, 1999; Ennett et. al., 2006), Velázquez in Latino communities (Velázquez 2013) and Milroy in the work context (Milroy 1987), and I operationalize a scale for social network rating that is relevant to children in the methods chapter. By using two group design, we can investigate differences in Spanish language maintenance and proficiency based on network relationships. We will see that it is not possible to discount the role of educational environment because research has shown that bilingual children are susceptible to rapid changes in language proficiency depending on their environment (Merino 1983). This is precisely why the educational setting is a relevant factor.
Knowing that children face drastic linguistic change with changes in environment (Merino, 1983; Montrul, 2008), we can examine students in two different classroom settings to form two groups looking at children who may be both highly proficient in Spanish and those who may be less proficient. These social groups can be evaluated on a variety of tasks: on concord agreement, traditional story retellings based on work in the acquisition literature, and sociolinguistic interviews.

I select the noun phrase for the object of analysis for various reasons. First, the noun phrase is acquired early in acquisition (Alarcón, 2011; Eichler et. al., 2012; Larrañaga and Guijarro Fuentes, 2012; Lew-Williams and Fernald, 2007; Montrul, 2004) so it would be an object we could expect to find even in the contact setting. We might expect that even young school-age children have mastered agreement which Alarcón notes is acquired ‘easily’ and ‘early’ (Alarcón, 2011, p. 352). Montrul notes that the development of agreement emerges as early as one year five months and is mastered by age three (Montrul, 2004, 52). Nevertheless, she also notes that children go through stages of overgeneralizing both masculine and feminine genders, these phases are resolved by the age of three or four.

Another reason to consider gender is that it shows up in a variety of places both in subject or object position, including agreement with adjectives and determiners and also agreement with objects throughout discourse so this justifies use of the story retelling which will be explained in chapter three. Gender agreement is an area of interest because the phenomena of agreement by gender and number do not exist in English, so these are features that have been shown to be difficult for child bilinguals to acquire. Finally, Alarcón notes that “grammatical gender in an interesting category for analysis because it provides a window on both lexical access and syntactic processing” (Alarcón, 2011, 352).
The methods will be detailed in Section three and will use a story retelling. I select the story retelling because it will not require young children or home language speakers who may not read Spanish to complete any written task that might burden them or skew the data in favor of those who are readers of Spanish. I will discuss my rationale for the story retelling task in section three. The story retelling was part of the methods used in adult heritage language studies (Montrul 2009) as well as in studies of school age bilingual children (Montrul and Potwoski 2007, Montrul and Sánchez-Walker 2013). The retelling has some additional advantages because researchers have used data from a story retelling to investigate other linguistic features of contact Spanish, such as tense, mood, and more. These features could be considered for other separate projects, as a means of capitalizing on unusual data with minors. Additionally an ethnographic approach and sociolinguistic interviews will be used to gain information about the children’s use of language in their community and to study their social network, and the results of the sociolinguistic interviews will be compared to those of the story retellings. Sociolinguistic interviews have been widely employed with both adults and children and in particular in research using social network analysis (Shin & Van Buren 2016). Thus, the purpose of the ethnographic method which I discuss further in section three, is to identify which groups speak Spanish more. Then I focus on participant observation in a qualitative component to the methodology. In the ethnographic methodology I focus on what other social contacts and settings have resulted in this high level of acquisition. In summary, I plan multiple methods of story retellings to garner quantitative data on gender agreement along with a concord task to distinguish any effects for gender assignment and gender agreement, sociolinguistic interviews to gather information on social networks, and ethnographic participant observation to gather data on the languages the children use.
1.1 Research questions

Q1. Which groups perform more accurately with respect to grammatical gender: Spanish language speakers in bilingual programs or Spanish/English bilinguals in English-only settings?

A relationship between students’ social and academic use of the heritage language will be shown if there are significant differences between two student groups: those who participated in the school’s bilingual program, and those who did not, with respect to their use of gender agreement marking within the noun phrase. Failure to substantiate differences between these two groups would suggest that type of education may not impact their proficiency of gender agreement marking in this community and school. Type of education did not impact proficiency in contexts where students access a dense social network.

Findings about the impact of the child’s experience with language are significant both for linguistic theories as well as for language policy planning related to bilingual children and language use at school and at home. Incomplete acquisition theory would predict that children who lack input in the home language may fail to acquire gender agreement marking within the noun phrase. While language input at school was not a sole factor, I will show it is a crucial one for children who did not access the dense network. However language of school instruction was not a relevant factor for children who accessed the network, these children were highly accurate in grammatical gender regardless of the language of their class at school. I will show that the low input group is statistically distinct from the other participants with respect to grammatical gender. This fact indicates that low levels of Spanish input combined at home as well as at school may have negative effects on language acquisition and in turn may result in some learners who may not completely acquire grammatical features.
Some students in the group that was taught in English, and lacked dense network, were successful in acquiring grammatical features in Spanish. This suggests that other factors in the local community contribute to vitalization of the Spanish, and I address this topic of individual variation by looking at focal students who acquire grammatical gender at 100% accuracy in the ethnographic component. Other questions follow:

Q2. What is the effect of language network on acquisition of noun phrase agreement? And how is the noun phrase locally acquired?

Large scale research on child bilinguals is infrequently undertaken, a few examples were previously noted (Merino, 1983; Montrul and Potowski, 2007). This is a shame because social research has reported the ratio of immigrant children to be one in five, with an expectation that the number will grow to one in three by the year 2040 (Suárez-Orozco 2001). Given these figures it is surprising there is not a larger body of research on the heritage language use of children who are born to immigrants in the United States. The proposed research may prove relevant for language policy planning in schools or at home. If home language use is insufficient for students to show accuracy in noun phrase agreement, this information should be relayed to parents as support of school bilingual programs. Furthermore, if use of the Spanish at school supports features of the home language such as gender agreement then this evidence should be considered for policy recommendations to school districts in support of bilingual programs including dual language and transitional programs. On the other hand if network ties are significant for language maintenance and accuracy of grammatical gender then parents should be informed of the role of community and home language use on accuracy in Spanish performance.

1.2 Noun Phrase: Internal and External Factors
Some of the internal factors I address in this investigation include: percentage accuracy with masculine and feminine nouns. I also address the topic of overt/covert, or non-canonical forms, in section 5.1.5. I address the distinction between masculine and feminine forms in Chapter four, looking at distinctions between masculine/feminine in both the concord task which comprised an elicitation of adjectives. The concord task asked for characteristic traits of characters in the story by asking the participants: ¿cómo era el lobo? (What was the wolf like?), ¿cómo era la niña? (What was the girl like?), and so on. For adjectives, masculine NPs were matched with masculine adjectives 100% of the time, while feminine adjectives were somewhat less accurate.

Extralinguistic factors will be described in section 3.4 “variables” and include two primary variables school program: bilingual or English and also social network. Combining these two factors construct the four social groups referred to in repeated measures ANOVAs used in Chapter Five (Acquisition Task---Story Retellings) and Chapter Six (Sociolinguistic Interviews).

1.3 Statement of the Problem

The problem I will address then, is a study of what factors contribute to maintenance and acquisition of Spanish in the local community. The linguistic object of gender agreement of the noun phrase will be used as a tool to address whether or not the noun phrase agreement is acquired, and by what groups of bilingual speakers in diverse educational settings and networks. How will I do this? I will create two groups of data from child bilinguals either in the school bilingual programs or not in bilingual programs. Then I will take a token count and accuracy for each group of data considering the different types of gender errors noted in section 2.2.4. Similarly, with a network rating score for each participant, I could create two groups of
participants, those with dense social network ratings, and those who lack dense social networks. Literature on social network rating scales and how various researchers have used this information will be reviewed in section 2.1.2 ‘social networks’. Ultimately, the creation of two groups based on educational experience, and two more groups based on social network (dense, not dense) results in four groups: dense social network plus Spanish at school, dense social network with no Spanish at school, low social network and Spanish at school, low social network no Spanish at school. These four groups will facilitate an analysis of speakers of varying abilities, encompassing bilingual children of diverse input levels. Then I could use a frequency count of tokens and accuracy on grammatical gender with respect to the different types of internal factors noted above for each of the four social groups to determine if there are between group differences. A network rating score for each child would facilitate an ethnographic study of what local factors promote language maintenance.

In summary, the research object is similar to those traditionally studied in child and adult bilingualism and SLA research (Alarcón, 2010; Alarcón 2011; Montrul and Potowski, 2007) with the addition of a concord task to check for children’s knowledge of gender agreement, and a sociolinguistic task to check children’s performance on grammatical gender assignment and agreement across methodologies. The task by practical necessity is similar to those employed in heritage language studies and is modeled after work in gender agreement in adults and children. I address procedures for the task further in section three (Montrul and Sánchez-Walker 2013, Montrul, 2009; Montrul and Potowski, 2007). The methods adopted are be ethnographic (discussed in section 3.3.1), utilizing participant observation and sociolinguistic interviews to acquire information about the social networks of the participants, along with story retellings along with a concord task and sociolinguistic interviews to gather linguistic data using
methodological triangulation (Mackey and Gass 2005). And the variables are socially oriented. As a result, I will document the language use of Mexican child bilinguals in the local area, contribute to research on heritage language acquisition of children and questions of universality of linguistic features, and provide a study of language socialization to provide recommendations to parents, educators, and school boards to inform about practices that encourage language maintenance.
LITERATURE REVIEW

In the literature review, I overview work on several concepts fundamental to carrying out this project. First, I overview the principle variables, bilingual education and social networks, in section 2.1. Section 2.2 reviews background on grammatical gender.

2.1 Review and explanation of the variables: Bilingual Education and Language Networks

In this literature review, I start by reviewing two topics that are the variables I will consider in section 3.4 of the methods section: bilingual education and language networks. I evaluate the effect each factor has on the performance of the bilingual child with respect to the research object, gender agreement in the noun phrase. I selected these factors because I investigated gender previously in this location. In 2010, I repeated all linguistic tasks from “Gender Agreement in School Age Bilingual Children” (Montrul and Potowski 2007) in an area school. At this time, the variables I was investigating were age of the child and type of bilingual, simultaneous or sequential, as the authors used. These variables are prominent in the literature owing to a tradition of investigating language loss (Merino 1983), attrition, or incomplete acquisition in bilinguals (Montrul 2008). However, when I used these tasks in the local context, there were no significant differences for type of bilingual (sequential or simultaneous), a finding that bears out in more recent literature (Montrul and Sánchez-Walker 2013). Nor were there many differences based on age. The groups’ homogeneity with respect to accuracy in Spanish led me to conclude that something unique was going on in this area. It is possible that because the individuals were selected from my bilingual classes, and their siblings, the groups were very homogenous. On the other hand other researchers have used similar findings to argue for a theoretical framework of universal access (Alarcón, 2010; Alarcón, 2011). Because early work
on incomplete acquisition was critiqued for not including groups of heritage speakers of varying proficiencies or for not accounting for proficiency (Alarcón 2010, Alarcón 2011, Otheguy 2013) here I incorporate groups benefiting from diverse input attending Spanish classes, English classes, and accessing social networks as well as groups that do not.

Regardless of the underlying rationale for finding mitigating differences, whether a unique linguistic context or a theoretical approach such as Universal Grammar, it is sensible to consider a broader group of speakers. Also, it merits consideration if age or type of bilingual are the most relevant factors to consider for the context of a bilingual community where 70% of the population speaks Spanish (Modern Language Association Language Map). I discuss the previous project further in the sections on methods 3.2.1 “student participants” and 3.4.1 “variables to disregard”. Because the factors of age and type of bilingual were not found to be significant, this time I investigate effects for bilingual education and language networks. Type of education has the possibility of including a more heterogeneous group of child bilinguals modeling previous work with adults (Alarcón 2011). Whether or not type of school program proves to be a significant factor, using social networks in combination with ethnographic methods has the potential to account for individual differences between speakers that may affect their use and performance in Spanish, because the students’ experience with language effects their use of language.

Merino (1983) for instance, in one of few studies documenting children’s Spanish proficiency, found rapid changes in children’s Spanish when they were immersed in a subtractive (English) context. Additionally, Montrul (2008) summarizes similar effects of changes in educational context on language maintenance or loss. Although Alarcón (2011) did not find sizeable differences in highly proficient Spanish speaking adults, other researchers have found
differences (Montrul et. al, 2008; Montrul and Potowski. 2007). Alarcón (2011) attributes the differences found to pooling subjects who are ‘low proficiency speakers’. Given the differing results in the literature between low and high proficiency speakers, and absence of a study, in particular with children, to account for groups of both high and low input exposure. As a result I propose to account for two educational groups: one exposed to Spanish in school and the other exposed to English in the classroom. It is possible that students who participated in the school’s bilingual program have a language experience that is distinct from those who did not. The distinct school experience or social network experience may produce differences in linguistic features such as gender agreement. This could provide a contribution to the literature on morpho-syntactic variation in the noun phrase in child speakers of varying proficiencies.

2.1.1 Bilingual Education

Since type of education will be considered in the study, in particular the effects of a bilingual education program and policy, in this section I will review some background on bilingual education in the United States and some research showing effects of different instructional programs. Owing to the 1974 Supreme Court case Lau v. Nichols, public schools are required to provide language programming accommodations for students attending the school. These students may go by a variety of terms: English Language Learners (ELLs), heritage language learners, or Limited English Proficient (LEP) students (Crawford 2004). In spite of federal regulations sited under Lau v. Nichols and the fourteenth Amendment, individual school districts decide what programming best meets their needs. In Illinois, it is legally the case that the school must provide native language (or bilingual) instruction if the population of a language reaches above twenty individuals, which is universally the case in this community of minority language use. Practically speaking, for speakers of French, Portuguese, or Arabic,
depending on their area of residency they will likely not be provided a bilingual class in many areas of Illinois. However, since Spanish is the most common language other than English used around Chicago, many students are afforded opportunities for some types of bilingual programming in their neighborhood schools in Chicago and suburbs.

The types of Bilingual programs provided may vary. Recently, dual language programs (Potowski 2007) have become a trend, however, such programs require a sizeable population of native English speakers. In sectors of the town I hope to research, the population of English speaking children may be too limited for the school district to offer a two way dual language program. Other school districts may satisfy the need for programming for these students by offering an English as a Second Language (ESL) program. Another possibility is the transitional bilingual, or late exit bilingual program. This transitional/late exit is the type of program that this project will be situated in. Before engaging in research we should engage in a review of similar programs and any effect these may have on language development. In doing so in the remainder of this section, we will see that there has been some research on academic and cognitive effects of bilingualism as well as language loss, however, there is little research about effects of these programs on Spanish language development, which is a clear gap in the research field.

In this section I will review research related to the effectiveness of similar bilingual education programs. Previous research has examined the effect of bilingual programs on academic achievement, high school graduation rates, language loss, and cognitive effects, which are briefly reviewed here. Merino (1983) has collected data on Spanish proficiency, finding losses, however this data was purely from students immersed in an English setting, and did not
compare proficiencies or maintenance to any other student groups. No research, that I am aware of, has examined the effects of a bilingual program on Spanish language development itself.

Language of instruction was previously hypothesized to be a source of language loss and educational difficulties (Fillmore 1991, 344). Now scholars recognize that classroom language models have positive effects on academic achievement (Siegel, 1999). Regarding the effect of bilingual programs on academic achievement, the first study we will review of these effects is that of Thomas and Collier (2002). Thomas and Collier analyze eight different instructional settings for instructional outcomes for bilingual children: (1) two way bilingual immersion/dual language 90/10, (2) 50/50 two way bilingual immersion/dual language, (3) 90/10 one way bilingual education, (4) 50/50 one way bilingual education, (5) 90/10 transitional bilingual education, (6) 50/50 transitional bilingual education, (7) English as a Second Language Programming, and (8) mainstream instruction. They find that students most in jeopardy are those whose parents or other stakeholders have placed them in an English program of instruction. These students showed decreases of reading and math achievement of up to three fourths of a standard deviation. Also, the authors found this group to be the most at-risk of dropping out of school (MacGregor Mendoza, 1999; Thomas and Collier, 2002). Among the various instructional types, the 50/50 one way developmental bilingual education students preformed best, reading the 72nd percentile, and out preforming a comparison group of ELLs schooled in English by 15 points (Thomas and Collier 2002, 327). However, the authors do note that these results were found in a “high achieving school district”. More typical results were found from 50-50 transitional bilingual education students who reached on average the 45th percentile.

Thomas and Collier found that ESL or bilingual services raise students’ academic achievements by significant amounts. Newcomer students, those who are simultaneous
bilinguals completing 4-5 years of L1 schooling in the home country, scored 6 NCEs higher in English reading in 11th grade than those who received only 1-3 years of education in the native country (Thomas and Collier 2002, 332). These comparison effects were found when students received the U.S. instruction only in English, and are noteworthy because these data demonstrate the importance of first language acquisition for transfer to literacy and other academic skills. The authors conclude, “The strongest predictor of L2 student achievement is amount of formal L1 schooling” (Thomas and Collier 2002, 334). In summary, development of native or heritage language was found to be beneficial for academic growth and achievement. Thus we can conclude that the bilingual education program would be a strong educational program for ethnically Mexican students. Most relevant to the current study are the findings related to 50/50 transitional bilingual education and also English, the programs which most approximate those used in the present school setting.

Another study relevant to the effects of bilingual education on academic achievement is MacGregor-Mendoza (1999). MacGregor-Mendoza compiled a survey of Mexican secondary students in a Chicago high school, and found that “there was no evidence found in the present study to indicate that Spanish hindered the academic achievement of the informants” (MacGregor-Mendoza 1999, 85). The author’s conclusion is that the heritage language is not detrimental, in fact Spanish was found to accompany high levels of academic achievement. Furthermore, English was not associated with increased academic achievement: high levels of English proficiency, English use, and attitudes toward English were not found to guarantee academic achievement (MacGregor-Mendoza, 1999, xiv). While Spanish was not a hindrance, some students studied faced challenges to school completion, and the effect of legal status on
school completion is a factor suggested but unexplored. Given these results, we might expect some educational benefits with student groups in bilingual education.

Regarding language loss, we will review the findings of Merino (1983) on the outcomes of Spanish speaking children immersed in an English setting. An early study of child bilinguals at an English medium school showed detrimental effects on the students’ heritage language over time (Merino 1983), in particular the author showed a decline in Spanish comprehension in third and fourth grade. Older bilingual children struggled with forms in the conditional and also the subjunctive. When the authors completed a follow up study, they found heritage language loss in 50% of the children, and some grammatical forms, like the conditional, had fossilized. Other students, 25%, showed no gains. In sum, only 25% of students showed gains in the native language across time. In English, by contrast, 72% of the children tested showed gains at the second test. Conclusions result that children who do not have school supports for their native language are at a risk of language loss: 88% of children lost more or gained less in the heritage language when compared to the culturally dominant language, English. Children who mixed languages demonstrated more loss than those who interacted with others in one language only. No academic support for English, and mixing of languages with others, was shown to result in loss. Though Merino’s study shows the risk of language loss in children immersed in English, theories of ‘loss’ and ‘attrition’ (Merino, 1983; Montrul et. al., 2008) have been recently criticized in the literature for a focus on low proficiency language users. When heritage language users like those in Merino (1983) are examined as adults, low proficiency speakers are found to have some losses (Montrul et. al 2008) however high proficiency speaking adults are found to have minimal differences with monolinguals (Alarcón 2011). This presents a significant gap in the literature and a need to document the language use of diverse groups of
child speakers, of varying input levels and proficiencies. Merino’s study focuses mainly on proficiency measures as opposed to affective measures, the stark contrast in the children’s improvement shown in English and stagnant growth in the heritage language is shocking, and shows that home languages are fragile in particular in children.

Further in regard to language loss, we will review a second piece by Fillmore (1991). Fillmore (1991) reports on a nationwide survey of language minority parents who speak diverse languages and sent their children to a pre-school program in English. The results were compared to a sample of Spanish speaking parents who did not send their children to pre-school, and as a result received input only in the heritage language. The data was based on parent ratings of child language. Some fifty percent of parents noticed a negative change, or less Spanish language use, in their child upon entering school. The study shows that early exposure to English can put the home language at risk. These findings coincide with those of Merino (1983) and suggest that language of the educational program would be a variable to control for in a study of this type.

This section will briefly address theories of bilingualism with respect to cognitive and other educational benefits reviewing the work of several key authors. Aside from studies showing benefits on bilingual education programs on achievement test scores (Thomas and Collier 2003), general academic achievement (MacGregor Mendoza 1999) and language loss or maintenance (Merino, 1983; Fillmore 1991), bilingualism has been shown to have benefits for intelligence and processing as well. Though some researchers believed bilingualism was a deficit prior to the 1960s, a great body of later work proved just the opposite. Peal and Lambert (1962) found that bilingual students had better results in intelligence assessments, were better able to transfer knowledge between languages and think abstractly. Kaufman (1968) similarly found transfer of skills between Spanish and English, in particular related to reading skills. Baker (1995) found
that bilingualism fosters cognitive development. Bilingualism was found to correlate with categorization skills, analogical reasoning, and visual spatial skills (Ben –Zeev, 1977; Bialystok 1991; Diaz and Klingler, 1991). Additionally, Cummins (2000) found that bilingualism has positive effects on children’s linguistic and educational development. Bilingual children show better metalinguistic awareness, cognitive skills, and processing,

A review of the literature finds detrimental effects on the heritage languages of child bilinguals (Merino, 1983; Fillmore, 1991), and evidence from children exposed to English school environments supports instruction in the native language (MacGregor-Mendoza, 1999; Thomas and Collier, 2002). School language, then, has the potential to impact native language maintenance or loss, while first language use promotes academic skills. Data on the proficiency of Spanish speakers when they entered school is limited, however, the research from Fillmore and Merino in particular show that students may face rapid changes in their language proficiency as a result of the school program. Further, Alarcón’s (2011) work with adults which we will review in the next section on gender agreement, demonstrates a disparity between high and low proficiency speakers. This is a gap that can be addressed through a consideration of the Spanish of two different school groups: children taught in Spanish and others taught in English. Thus, the school program cannot be disregarded as a variable of study, by planning a study focusing on only one flavor of instruction. Rather it should be controlled to the extent possible.

Given the positive effects shown in groups of first language speakers, newcomers and 50/50 dual language students alike shown in Thomas and Collier’s work, we can wonder what role the school program or cultural setting has on language use in Mexican child bilinguals. Bilingual Education is a significant factor to consider as a variable in this project. My previous work on the topic of grammatical gender led me to discard type of bilingual (sequential or simultaneous)
as a significant factor in language performance in this town. Then, I was prompted to consider what other social factors may play a role in student’s acquisition of the home language. Of these, I believe education program, whether the child experienced a bilingual school program or not, is one factor that merits consideration. The effects of school environment cannot be discarded, even if students have similar social networks they may experience a very different social setting at school and research has shown dramatic and sudden changes in language use in response to a change in the language environment (Merino, 1983; Montrul, 2008). This research suggests that there are several benefits for this type of program. Crucially, no research has examined Spanish language development of bilingual children, in particular across different instructional settings, justifying this plan of research as a gap in particular as it related to pedagogical implications within the field of bilingual education and acquisition.

2.1.2 Social Networks

Social network is a second variable I propose evaluating in this project. The network is relevant to purposes of the study gathering data on the Spanish of U.S. born bilinguals. Many studies, both empirical (Gumperz, 1976; Milroy, 1987; Shin and Van Buren 2016, Velázquez, 2013; Zentella, 1997) and conceptual (Evans-Wagner, and Ravindranath, forthcoming; Potowski, 2013) alike, have shown associations between a dense social network and language maintenance. Furthermore, the role of social networks in migrant communities has been shown in social based research (Shin and Van Buren 2016, Zúñiga, Hamann and Sánchez García 2008), and I will show that the network is relevant in the linguistic sphere as well: chapter seven will show that that network connections are one way in which children who use a heritage language enrich and maintain it. Dense and multiplex networks with strong ties were associated with language maintenance (Shin & Otheguy 2013; Shin & Van Buren 2016), while weak network ties were
associated with language shift. We can deduce that children who live in an immigrant community residing in the United States a short time would have more opportunities to enrich their Spanish than others living in communities with few Spanish speakers, or having fewer connections in their social network. For instance, Potowski (2013) notes that the role of the family is fundamental for intergenerational language transmission. She writes, “even if the educational system and government provide support for the home language, this will be valuable only if family adults use the language with children and continually foster acquisition and use of that language” (Potowski, 2013, 324). Furthermore, social research has confirmed that children are quite able to learn more than one language, if they are in favorable environment for doing so (Sánchez García 2007). While the role of the school language programming is important, the role of the social networks children are exposed to at home and at school is at least as important. Thus social network should be considered as a variable in the study, one that I address in the quantitative work in Chapter five, follow up on in Chapter seven where I use a qualitative approach to investigate individual differences and high preforming heritage language speakers who manage to acquire Spanish without classroom instruction.

We can expect that child participants would have social networks of varying densities. This is because in the school population of about six hundred, a sizeable number, several hundred live in a communal setting of migrant laborers which will be discussed further in section three on participants. The communal setting is home to 900 residents where most workers in this setting came from Mexico as adults themselves. Thus they are L1 speakers of Mexican dialect Spanish. The community of families from Puebla, Mexico has become an enclave of sorts, with hundreds of families living in close proximity. Evans-Wagner and Ravindranath note that network studies are central in immigrant and migrant communities, and that “dense, multiplex
networks tend to foster longer maintenance of immigrant and minority language in the face of language shift to the dominant language" (Evans-Wagner and Ravindranath forthcoming, 13). Though a few may have learned some English, this is not a necessary skill for their field of work. I overview details of the labor and employment of this group of parents in section 3.4.1 on variables. I expect that they mainly continue to use Spanish at work with each other, which also happens to be where they reside owing to unique circumstances. In the case of students living in the hipodramo, many of these students are in class with cousins or other relatives, and in many cases they live with the families of their classmates (these factors will be accounted for when I operationalize the social network factor for children in the methods section). Potowski (2013) discusses the effect of peer language networks among adolescents, “the importance of peers among adolescents brings us to the value of the social network as a heuristic for understanding language maintenance and shift” (Potowski, 2013, 230). Thus, it would not be possible to undertake a study of language in this community without understanding the social networks that children keep. The close physical quarters, workplace and educational connections, and kindship ties may lead to dense network connections and these differences between those residing at the racetrack and those residing in traditional housing should be accounted for to determine if these affect acquisition.

Not all students live in this hipodramo setting, about half of the school population lives in the neighborhood, in more typical dwellings such as houses and apartments. Though these students may speak Spanish in their homes, it is possible that the network of speakers they associate with may be less dense than that of students residing in the migrant area. I investigate area social networks to study if there is a relationship between social networks and Spanish
performance with respect to grammatical gender. Here I review some work on social networks and theories of quantifying social networks.

Social networks have been quantified in a variety of ways. Some ways networks are quantified include use of a network rating scale (Milroy 1987) or network neighborhood strength coefficient that can be correlated with other factors (Ennett et. al. 2006). Ennett et. al. identify density of the ‘network neighborhood’, defined as the “number of friendship ties present among alters divided by the total number of possible ties” (Ennett. Et al. 2006, 168). Thus, there are several ways to quantify social network that present themselves in the literature. Throughout the literature, researches usually begin by asking individuals who is their best friend, and they are also asked to name other friends. This was the case in projects by Eckert, Ennett. Et. al. as well as Velázquez (Eckert, 2000; Ennett et. al., 2006; Velázquez, 2013). When the researcher has a list of connections, they look for reciprocal connections which indicate a denser network. Each individual is assigned a network strength coefficient, and this is correlated with other variables in the study.

Milroy (1987) uses a network rating scale, which is a five point rating. Using this method, individuals are awarded points for meeting a variety of criterion, listed below, which indicate association with a strong network. If the individual scores more than two points, they have a dense network. If the individual scores two points or less they have a weak network. The ‘social network scale’ is one Milroy develops based on data collected from numerous studies. The social network rating is based on the individuals’ interactions with friends, family, and group memberships. Thus Milroy develops a five point scale, a “Network Strength Scale” in which an individual earns zero points or one point for each of the following network ties:

1. Membership of a high-density, territorially based cluster.
2. Having substantial ties of kinship in the neighborhood. (More than one household, in addition to his own nuclear family).

3. Working at the same place as at least two others from the same area.

4. The same place of work as at least two others of the same sex from the area.

5. Voluntarily association with workmates in leisure hours.

[From Milroy 1987, 143-142]

This quantification of ‘social network’ it must be noted is based on a worker frame work, and would require some modifications to use it with children, since they do not have a ‘place of work’ noted in item three and four, rather we could consider if they share a classroom with others from the same residence. Using a network rating scale and a network coefficient are both ways to quantify network density on an individual basis.

The questions to elicit information on social networks often start by asking individuals about their friends. Therefore, in the methods section, I show some of the questions planned for the sociolinguistic interviews, and questions about friends will take a priority among these questions. Also I ask what language the individual uses with each of their associates.

Though there have been many studies on social networks, many are sociolinguistic pieces that do not pertain to Spanish (Eckert, 2000; Milroy, 1987), while others pertain to Spanish transnational adults (Farr 2010) or Spanish maintenance in communities of adults (Velázquez 2013). While some work has been done on networks of Spanish speaking children, the work on this was mostly linked to the Puerto Rican community in New York (Zentella 1997), and work on social networks in communities of G2 children is an emergent field, with a recent piece published on pronoun expression in a community of migrant workers and children in Washington/Montana (Shin and Van Buren 2016). The work on social network and maintenance
in G2 Spanish/English bilingual children is emergent, and work on other linguistic features, such as gender agreement, has only recently extended to dense migrant networks.

Social Network is a key factor to studying language maintenance. Why are social networks so fundamental? Evans-Wagner and Ravindranath review a variety of empirical works on social network theory in sociolinguistics, and critique the previous focus within sociolinguistics on gender as a social variable (Evans-Wagner and Ravindranath, forthcoming). The authors argue that gender in and of itself can influence the speakers’ social network connections. Indeed, network effects may be the only relevant explanation for language change when the speech community is relatively socially homogenous” (Evans-Wagner and Ravindranath forthcoming, 23). The authors reference Dodsworth who argues that when investigating language variation and change, the social network model may be underutilized (Dodsworth 2009). The significance of social network in language change and language maintenance in particular in migrant and immigrant communities leads me to conclude social network may be a relevant variable to consider for my study in an immigrant outlier neighborhood of Chicago populated by immigrants from Puebla, Mexico.

I propose collecting information on social networks locally through ethnographic methods, participant observation, and sociolinguistic interviews. This information could be used to separate students into groups of “dense” and “not dense” social networks through a sociolinguistic interview. The protocol and procedures for the sociolinguistic interview will be notes in section 3.5.2 ‘procedures for sociolinguistic interview’ where I include appropriate questions from the Q-GEN II to ascertain the home environment. I would select a linguistic task, the story retelling, to assess gender agreement marking within the noun phrase along with an adjective elicitation and concord task, and correlate the linguistic variable (accuracy with gender
marking) to the social variables (school program, social networks). Thus I could evaluate if there is an effect of language network on maintenance of the heritage language. In summary, this analysis of social network has the potential to contribute to the literature on gender agreement in contact communities because using a social network factor can aid in distinguishing between speakers exposed to high and low input, following up on the work on Alarcón (2010, 2011) which I will review in the following section.

2.2 Gender agreement in Spanish

This section will discuss gender features and issues with gender agreement. First in section 2.2.1 we will see how features play a role in the gender of nouns. Section 2.2.2 will explain how gender errors in bilinguals call for a refinement of theories of incomplete acquisition/maintenance in child bilinguals, with a variety of frameworks providing possible theories (Alarcón 2011, Merino, 1983; Montrul and Potowski 2007).

2.2.1. Gender and its Features

This section on gender first reviews in section one some types of gender, both overt and covert. Then I explain the purpose of morphosyntactic features for gender, reviewing principally Adger’s (2002) work on features. I will briefly review some literature about gender assignment and gender agreement in section 2.2.2. In section 2.2.3 I research on acquisition of gender features. Finally in section 2.2.4 I review some literature on agreement of different types of gender error. In section 2.2.5 I address the different theoretical perspectives associated with differing views of acquisition.

With respect to overt and covert genders, first I review the difference between both and implications of the difference on gender agreement. Gender agreement is a phenomena that links
the gender of a noun to its agreeing elements, usually a determiner and often an adjective (Corbett, 1991, 106), and we will see the distinction between these two types of errors in the following section. Alarcos Llorach writes in a text of the Academia Real “el sujeto explícito [. . .] concordará también en número con el atributo, y si este es capaz de variar en género, hay también concordancia de género entre ambas unidades” (The subject agrees in number with its attribute, and if it’s possible that gender varies, there is also gender agreement between both units). (Alarcos Llorach, 1994, 301). Similarly Alarcos Llorach describes the case of the covert gendered noun, “la concordancia de género entre el sujeto explícito y el atributo deja de producirse cuando la palabra que cumple esta función carece de variación de género” (Gender agreement between the subject and the attribute ceases to occur when the word that serves this function lacks gender variation” (Alarcos Llorach, 1994, p. 301). Thus while we would expect nouns to agree with their ‘agreeing elements (Corbett, 1991, p. 106), sometimes gender is covert and not made explicit. Corbett (1991) distinguishes between overt and covert nouns, those that have a clear gender marking, and others that do not. Covert nouns are referred to in other literature as ‘non-canonical’ nouns and I use this term in section 5.1.5 where I discuss the problems bilingual children had with gender assignment to these items, siting similar findings presented in Montrul et. al (2008) and Montrul et. al. (2013). In a study of adult, high proficiency heritage language speakers, Alarcón found lexical or assignment errors principally with covert nouns, especially in feminine cases (Alarcón 2011, 342). This demonstrates that some study of different types of gender, be they overt, covert, or others we will see in this present section, are relevant to an understanding of linguistic variation in gender in bilinguals.

Secondly, with respect to feature theory, gender agreement pertains to the category of morphosyntactic features described in Adger (2002). There are a variety of features: case,
number, person, gender, and tense. Gender is one of these. Adger notes two gender features, masculine and feminine. However, he notes that languages have different sets of features. Spanish in particular expresses gender in both semantic and in formal ways. For animate nouns gender is assigned in accordance with biological sex. This is the case of biological or natural gender. Alarcón (2011) notes there is a semantic motivation for animate gender assignment. However, Spanish differs in that it has gender that applies to non-animates, which is known as grammatical gender, assigned in a semantically arbitrary way (Corbett 1991). We will see that Adger’s definition of grammatical gender applies gender to words which have no natural gender themselves, inanimates, which are found in Spanish but not English. Consider examples of la mesa (desk) or el pizarrón (chalkboard). Grammatical gender assignment to inanimate nouns in thought to be ‘semantically arbitrary’ (Corbett 1991). Research has found differences in the accuracy of gender whether it is related to animates or inanimates, marked overtly or covertly, or masculine or feminine contexts (Alarcón 2010). Alarcón (2010) incorporates this analysis in studies of second language learners, while her 2011 work studies early and late bilinguals at an end-state in adulthood. However this analysis has not been applied to studies of bilingual children, demonstrating another gap in the literature.

2.2.2 Types of gender errors

The purpose of this section is to review several ways in which bilinguals may produce instances of atypical gender in their Spanish. These atypical traits of bilingual children would be notable because they might distinguish the children’s speech from that of their parents, for whom Spanish in an L1. Here we will review three instances of atypical gender to classify these for purpose of considering which will be investigated for this project.
One of three types of errors that might be encountered in the data is a lexical error, which Alarcón refers to as “assignment error” or “lexical assignment error” (Alarcón 2011 p. 334). In a lexical error, the wrong gender is placed on a noun. This mistake might be repeated throughout the data. For example, a child might repeatedly refer to “la lobo” (wolf-feminine) or “el mariposa rojo” (the-masc butterfly-fem red-masc). If the child continuously states, “la lobo” (wolf-fem) this might indicate that the child believes lobo has feminine features. This could be considered a lexical error. An accuracy rate on “gender assignment” would be garnered by an accuracy count on the grammatical gender of determiners in Noun Phrases, as we will review in Chapter Five of this text.

A second type of error is an agreement error. Adger defines grammatical gender as “assigning words a gender category (masculine, feminine, neuter) which bears no obvious semantic relation to what the word refers to” (Adger 2002, 31). Martínez refers to this as an “inherently gendered lexeme” (Martínez, 2003, p. 2). Montrul (2004) refers to the agreement mechanism as a syntactic operation, “gender assignment is lexical, whereas gender agreement among the elements of the DP is a syntactic operation requiring a particular structural relationship between the trigger and the target of agreement, depending on the analysis assumed” (Montrul, 2004, 52). In the case of a grammatical gender error the agreement mechanism is not in place. The gender features are not matching. This would be the case of adjectives that employ incorrect gender features to refer to a Noun Phrase, for example, “la mariposa rojo”. I review the data exclusively on adjectives in Chapter Four which reviews the data from a concord task.

A third type of error that we might find in the data is a mismatch. Principal means of determining a mismatch would require an adjective (Montrul and Potowski 2007) or elicitation
of a phrase with an adjective. If the student said, “La lobo bonito” (the-fem wolf-masc. beautiful-masc.) or “el mariposa roja” these would be cases of gender mismatch, because the adjective in this case has masculine gender features, while the determiner has feminine features. Since feature theory suggests that both gender features are derived from “lobo” this is a problematic case, since we would expect the same features to transmit to both adjective and determiner (e.g. either both are masculine or both feminine). Gender mismatch cannot be ascertained or resolved without a complete adjective phrase. These types of errors: assignment errors, agreement errors, and mismatches—-are relevant to the present study because they make different accounts of language processing of gender both lexical and syntactic.

2.2.3 The acquisition of gender and questions of universality

With respect to the acquisition of gender, it is important to consider that gender is a feature that is early acquired, proven in Lew-Williams and Fernald (2007). Adger’s approach presumes a set of universal features, from which the child selects features pertinent to the language they acquire. Gender is thought to be acquired phonologically in Spanish due to the regularity of the word endings –o and –a, these being overt cases, with a reliability of 95% (Eichler, Jansen, and Muller, 2012, 556; Larrañaga and Guijarro Fuentes, 2012, 580). Indeed, Alarcón’s (2011) findings note few problems with these ‘overt nouns’. Gender agreement in noun phrases is a skill that has been demonstrated to be acquired in monolinguals as early as 3 years old with a high degree of accuracy (Montrul, 2004), “very early” and “in a nearly error free fashion” (Eicher, Jansen, and Muller 2012, 557), ‘easily’ and ‘early’ (Alarcón 2011). The system is thought to be a transparent gender system with “highly valid gender rules” (Eichler, Jansen, and Muller 2012, 554) which Corbett labels “straightforward” (Corbett 1991, 57).
First I will review some research in language acquisition showing that bilinguals, both children and adults alike, attend to gender in a receptive language task with eye tracking (Lew-Williams and Fernald, 2007; Lew-Williams and Fernald, 2010).

Lew-Williams and Fernald (2007) found that Spanish speaking children ages 34-42 months exploit grammatical gender as a cue in sentence interpretation the authors refer to as a ‘looking while listening’ (LWL) procedure. When listening to utterances like “encuentra la pelota” (find the ball), when viewing two objects of different genders young children attended to the stated object faster, using eye tracking ratings. This shows that young children attended to cues from the item’s gender as soon as the article was stated. This result was not shown in contexts where both items had the same gender. For example, if the children were read “encuentra la pelota” (find the ball) and the items were a ball and a carrot (la pelota, la zanahoria) the cues from the object’s gender ceased to be relevant, and the processing time was greater than in examples with different genders. This shows us that young children attend to gender even in cases where the children only have a vocabulary of some 500 words. The authors find that “Latino children learning Spanish [. . . ] already demonstrate a significant processing advantage that is characteristic of adult native speakers of languages with grammatical gender, but not of adults who learned such languages later in life” (Lew-Williams and Fernald, 2007, 197). Similar results were found in Spanish native speaker adults, but not second language adults (Lew-Williams and Fernald 2010). Though the children were shown to have receptive capacities with gender at a young age, it is unclear how such children would respond in a production task, in particular how they would fare with the different types of gender errors discussed in section 2.2.2.
In spite of the clear gender system of Spanish, children acquire gender of animate nouns before inanimates and the later cause more difficulties both with L1 and L2 learners (Alarcón 2011). While semantic nouns, animates, are acquired earlier and with a higher degree of accuracy than non-semantic nouns, Alarcón (2010) has also found overtly marked nouns are acquired earlier and with more accuracy than non-overt ‘non canonical’ nouns. On the other hand, in bilinguals, those with two languages, “have conflicting systems or which lack parallel systems across their two languages experience different developmental patterns” (Guijarro Fuentes 2013, 546). Monolingual children produce gender agreement correctly, which suggests to some that the process of agreement is a ‘rule governed behavior’ (Alarcón 2010, p. 270). It seems the believed universality of these features would cause children who are bilingual to acquire the gender features with ease, as monolingual children do, were they so universal. However, we do not really know how bilingual children acquire these linguistic rules, and why it is that they would experience “different developmental patterns” (Guijarro Fuentes 2013, 546). Alarcón states that this body of research on language loss and attrition perceives errors as a “lack of native like representation in the learner’s grammar” (Alarcón, 2011, p. 332), however, she argues that “advanced proficiency heritage speaker adults have gender in their underlying grammars, and that the errors in oral production that L2 learners occasionally produce are due to difficulties in the surface manifestations of the abstract features of gender” (Alarcón, 2011, p. 332). This leads to questions of what, exactly, a gender error consists? Is there such thing as a gender error, or simply production errors? And how do the findings from heritage speaker adults relate to any findings for bilingual children, exposed to varying input levels of Spanish? These questions are a gap in the literature on grammatical gender in child bilinguals.
With respect to the distinction between lexical and grammatical gender reviewed above, in the preceding section we overview’s Alarcón (2010, 2011) well-explained distinction between gender assignment and gender agreement. She claims that agreement presupposes assignment (Alarcón 2010, p. 272) on a scale of acquisition based on research of second language learners of Spanish. It may be relevant to consider the different kinds of errors that heritage language speakers might make, be they assignment errors (semantic) or agreement errors (syntactic). Since the recent literature has focused on different types of gender errors, this is relevant to consider for this study, and so I will review the literature briefly here.

This section explains Alarcón’s application of the distinction of lexical and grammatical gender to her work on different types of gender agreement in bilingual adults. Alarcón argues that gender acquisition is both lexical and syntactic. The lexical part of gender acquisition according to Alarcón is learning the noun’s ‘gender assignment or inherent gender feature’. Syntax also comes into play with gender agreement when the noun must agree with other elements in the sentence. Franceshina (2001) provides an account by which features are valued:

the crucial difference between noun, on the one hand, and adjectives, articles, pronouns, and demonstratives, on the other, is that the former are triggers of gender while the latter are all targets. Triggers carry interpretable gender features which need to be valued by the feature of the corresponding trigger and deleted. 

[Franceshina, 2001, p. 236]

Alarcón (2011) provides a clear analysis of the two distinct phenomenon in her article, “errors in concord between the article and noun can be referred to as ‘gender assignment’ (lexical gender), since the only processing going on in gender recognition of a single noun, but when a linguistic task requires producing an agreeing adjective according to the meaning of a sentence, the concord between the noun and adjective can be referred to as ‘gender agreement’ (syntactic
level), because there is syntactic processing involved” (Alarcón, 2010, p. 272). Alarcón argues that gender agreement errors are syntactic mapping errors, a production error causes a problem “mapping the abstract gender features to appropriate surface manifestations” (Alarcón, 2011, p. 334). Other authors propose different types of agreement within syntactic gender agreement, for instance Martínez proposes that Syntax has both concord and agreement, and within the later are two varieties: morphosyntactic agreement and index agreement (Martínez 2003, p. 6).

With masculine nouns, several studies have found that errors in masculine nouns are more often to be agreement errors rather than assignment errors, and are more likely to be found with non-overt nouns (Alarcón, 2011; Montrul et. al., 2008). Alarcón’s results diverged from those of Montrul et. al. (2008) as she found that adult advanced heritage and L2 learners produced more assignment errors than agreement errors (Alarcón, 2011, p. 342). Furthermore, Alarcón acknowledges differences in heritage speakers both high and low proficiency owing to “an early Spanish-English contact situation” (Alarcón, 2011, 346) or “a reduction in meaningful Spanish input that blocked their ultimate attainment of gender” (Alarcón 2011, p. 347). Further, she criticizes previous work for its failure to incorporate a variety of proficiency levels (Alarcón, 2010, p. 269). This is precisely the reason why we would need to include groups with differing social networks and school programs. Crucially this line of research on various types of gender errors in adults of varying proficiencies has not been extended to child bilinguals. Thus the present research would investigate what differences exist between child bilingual exposed to different levels of input.

The research goal with respect to gender would be to determine what kinds of gender errors child bilinguals in a contact setting make. For example, do they make more lexical assignment errors or agreement errors? This is a gap in the current research because previous
work on child bilinguals (Merino, 1983; Montrul & Potowski 2007) did not account for different
types of gender errors: assignment errors (lexical) or agreement errors (syntactic). One possible
way to investigate this would be to examine data from children who have a meaningful input in
Spanish owing to educational placement and social networks, and comparing the data with others
who lack meaningful input in school or at home. In summary, we have seen that distinctions
between different gender errors both lexical and syntactic errors have played a role in the recent
literature on gender agreement (Alarcón, 2010; Alarcón, 2011). However, this literature has
been limited to second language learner adults and early and late bilinguals tested as adults. This
line of work on different types of gender errors has not been expanded to child bilinguals. Thus
these distinctions are relevant and should be considered in the analysis. I consider some of these
factors in the analysis of internal factors in section 3.4.2 on variables/internal factors.

2.2.4 Theoretical perspectives of morpho-syntactic variation in gender

Having reviewed in the previous sections gender and the role of features in gender theory
including various types of gender agreement both lexical and grammatical, and factors affecting
acquisition of grammar such as distinctions between overt and covert nouns, here I present
several theoretical perspectives about morphosyntactic variation with respect to gender, where
two theories are grounded in Second Language Acquisition Theory, while the third accounts for
social accounts of acquisition. These are incomplete acquisition theory (Montrul 2008),
Universal Access/UG Theory (Alarcón 2010, Alarcón 2011), and finally language experience/
social network theory (Bybee 2006, Shin and Van Buren 2016). I will address these three
theories considering ‘social network’ a variety of ‘language experience’ below.
The first theories addressing errors in heritage speakers focused on the ways in which heritage speakers are like second language learners. Researchers posit that heritage speakers incompletely acquire their home language grammars as a result of insufficient input for acquisition, or later language loss or attrition, with resulting grammars similar to those of second language learners. Results of incomplete acquisition/attrition have proved difficult to obtain, because proving either incomplete acquisition or attrition as the cause requires longitudinal study of individuals from child-age. Since research with children is a challenge, the long term following of these individuals would prove difficult. Major researchers proposing the concept of ‘Incomplete Acquisition’ include (Benmamoun, Montrul & Polinsky 2010; Montrul 2008, 2009, 2013; Zapata, Sánchez & Toribio 2005, Silva-Corvalán 2003). Incomplete Acquisition has been used to explain data from second language learners and heritage speakers. However, in this local setting, incomplete acquisition theory is not adequate to explain gender agreement, since three of the four research groups score at 98% accuracy for gender agreement. This high level of accuracy extends to usage of agreement in contexts of noun phrases (1750 tokens) as well as concord phrases, which had a similarly high level of accuracy in spite of many theories positing that concord phrases are more difficult to process and acquire. In fact, there were only seven speakers who presented an accuracy of gender agreement of less than 95% (see Table Three). Incomplete acquisition theory may play a role in the acquisition of other linguistic objects in Spanish, a topic I address in the conclusion. On the other hand, the concept of “incomplete acquisition” has been criticized (Otheguy 2013). In light of criticism of “incomplete acquisition” as a theoretical concept, it is important to point out that in this study, I make no attempt to compare these speakers of their parents’ language to monolingual natives of another country. Instead, I choose to compare them to other social groups in the same community, who perhaps
access different contexts of difference levels of input. Furthermore, with such a large number of participants scoring at highly proficient levels, it is difficult to make a claim for incomplete acquisition of gender agreement at a group level in this social context. If the data does not provide evidence of incomplete acquisition theory, what other theories might prove relevant to this data?

Alarcón (2011) presents a theoretical perspectives on morphosyntactic variation in developing grammars that counters the theory of ‘Incomplete Acquisition’. In her work she studied heritage speaker adults, but she employs traditional SLA theories in her analysis. The first branch of theories Alarcón references are those that suggest there is a clear difference between L1 and L2, and adult learners are not able to acquire grammatical features that are not in their L1. Some theories behind this line of thought are the Fundamental Difference Hypothesis (Bley-Vroman 1989) and also the Failed Functional Features Hypothesis (Hawkins and Chan 1997). Such theories imply that only L1 learners have access to Universal Grammar (UG) and so only L1 learners would be able to fully acquire features like gender. This theory would predict that Spanish speakers would be more accurate than L2 learners in comprehension and production. Some literature has found results that coincide with these theories, however Alarcón criticizes that body of work for using mainly low proficiency participant groups.

A second theory which explains cases where little difference is found between groups (native speakers, heritage speakers, and L2 learners) is the Full Transfer/Full access hypothesis (Schwartz and Sprouse 1994) and the Missing Surface Inflections Hypothesis (Prevost and White 2000). These theories suggest that L1 and L2 acquisition is similar, and that both L1 and L2 learners are able to access aspects of UG including gender features. When this perspective is applied to gender acquisition, errors are considered, “occasional errors in the surface realization
of abstract features” and grammatical gender itself is considered well acquired (Alarcón 2011). Further Alarcón considers such errors, “errors of performance rather than competence, and stem from difficulties in accessing the abstract features of gender from the lexicon and mapping those features onto their surface forms” (Alarcón 2011, p. 333). Alarcón states this second theory predicts no difference between L2 learners and heritage speakers on gender knowledge. Similarly, this concept could be extended and would suggest that there would not be differences between heritage speakers and monolinguals, thus supposing no incomplete acquisition, but rather slight ‘performance errors’. In summary, the discussion of theoretical frameworks is relevant to the study because my previous work did not find many differences between age-based groups, suggesting a more universal acquisition of gender. However, acquisition of gender was not universal, Table Two shows seven individuals scored less than 95% accuracy in gender agreement, with five being very low scoring in gender assignment. These errors do not indicate the grammar has been universally acquired. Thus, the data I found in this local setting cannot be explained by SLA theories to account for incomplete acquisition or universal acquisition, and requires an alternate approach.

A third approach would account for individual differences in production of gender agreement by adopting a “Language Experience approach”. That is, one’s experience with language affects how it is acquired and produced. We could consider “experience with language” to broadly encompass social variables that can qualify the type of input in Spanish a child might get. These variables could include factors such as whether the child was exposed to Spanish at school in a bilingual education setting, or alternatively may have been in an English class, which will be explained as a variable in chapter three on methodology. In fact, I will show some differences between these two groups when children do not access a social network.
“Language Experience” could focus on the qualitative study that explains individual differences that might lead one individual many rich opportunities to practice a language that another individual may not have. This approach will be addressed in the qualitative chapters. Another variable that could be explained by “language experience” is social network, and for that reason I have chosen to consider social network a variable along with “language experience approach”.

One approach within the field of “language experience” relies upon social network theory. This approach is consistent with the “Language Experience” approach but focuses the ‘experience’ component on one’s experience within a social network. Social network theory has shown that speakers in dense multiplex networks, in particular, networks of migrant workers in impoverished conditions, are more likely to result in language maintenance (Shin & Otheguy 2013, Shin & Van Buren 2016). Social network is documented as a factor in language maintenance, however, its application with groups of children is emergent (Shin & Van Buren 2016) and has not extended to studies of gender agreement. Thus, we can relate the research on maintenance of pronouns in dense social networks to other linguistic variables and other social contexts. I plan to study how gender agreement is acquired across two groups, one accessing a dense network and the other not accessing the dense network.

2.3 Conclusion

The section on literature review has reviewed relevant aspects of literature pertaining to a project on Spanish speaking bilingual children. In section 2.1, I stated that two variables I anticipated being relevant for the project were type of education program (bilingual or English) as well as social networks. The social network is relevant because children who have few speakers with whom to speak in Spanish have little practice using Spanish and little input. School programs also have the potential to alter children’s’ use or knowledge of a language, and...
drastic changes in their knowledge of minority languages have been shown to speedily result from changes in environment (Merino, 1983; Montrul 2008). Because drastic changes have been shown to result with a change in the type of educational program, this is a relevant factor to consider because type of educational program may help to parse differences between more proficient and less proficient speakers, a distinction Alarcón (2011) made in her work with adults, though the distinction has not been well developed in studies of bilingual children.

Finally section 2.2 on gender agreement reviews gender as a linguistic feature, and some different types of gender errors children might make, generally assignment errors or agreement errors (concord errors). Mismatches are another possible error type not found in my data. Within these different types of errors there is a theoretical framework base I review in section 2.2.5, well explained in Alarcón (2011) which argues that ‘errors’ are actually minimal, and that in fact only minor differences exist between various learners (L2, heritage speakers, and native speakers) and that errors are found in only the low proficiency speakers, while high proficiency speakers show minimal differences. Sections 2.2.4 reviews literature addressing these different types, mostly published on adult second language learners and adult heritage speakers. This background literature is relevant to the current study to provide a breakdown of the types of errors made. Furthermore, Alarcón (2010, 2011) has used distinctions between high and low proficiency speakers to argue for a theoretical framework, and considering groups from two different school programs could help to distinguish speakers both high and low proficiency. In section 2.2.5, I address three approaches to explaining variation in bilinguals. The first approach is incomplete acquisition theory (Montrul 2008), based on premises of second language acquisition. The subsequent reaction to incomplete acquisition theory is universal access/universal grammar theory (Alarcón 2010, Alarcón 2011) which resulted when data was
uncovered that could not be explained by incomplete acquisition. However there is a conflicting problem: not all contexts and all individuals are subject to incomplete acquisition, nor do I find all individuals subject to universal access. There is a need for a theory that accounts for individual differences in acquisition patterns. Why is it the case that in a community thirty three individuals may acquire gender agreement, and several may fail to acquire it well? An alternate approach focuses on social factors to explain patterns of acquisition, instead of acquisition theories. A study of “Language Experience” focuses on what effect an individual’s practice with the language may cause, whether that is participation in a social network or other factors observable in qualitative ethnographic study.

Here, I overview some of the research gaps I plan to address in this project:

1. Previous work on bilingual children focuses on children in one type of school setting where Merino focused on English instruction and Montrul and Potowski collect data from a dual language setting (Merino 1983, Montrul and Potowski 2007). The research in child bilingualism generally does not address any possible differences across different instructional settings. Thus previous work in the field has been criticized for failing to incorporate ‘high proficiency speakers’. Alarcón (2011) addresses the gap for adult high proficiency speakers, but the gap has not been extended to studies of child speakers of heritage Spanish. I plan to account for different proficiencies by considering speakers with different types of input: dense network at home and Spanish at school, Spanish at school but lacking a dense network at home, English at school and with a dense network at home, and the group with least input: lacking Spanish at school and lacking a dense network in Spanish at home.
2. Studies on bilingual education (Thomas & Collier 2002, MacGregor Mendoza 1998) reported in 2.1.1 have addressed differing results from different types of bilingual programs (transitional, ESL, dual language, etc) however these types of studies, siting figures such as 75% of LEP students are Spanish speakers (Romo 1996) almost universally focus on English skill level, and fail to report on grammatical features of bilingual children’s Spanish, resulting in a gap in the literature.

3. Research on heritage speaker adults has distinguished between gender assignment and gender agreement or concord (Alarcón 2011), however literature on children has not developed this line of inquiry with respect to studies of concord agreement.

4. Social network theory has been used to explain patterns of language maintenance of pronoun expression in bilingual children living in migrant labor settings. However, the body of research on social networks has not been extended to account for gender agreement, nor has there been studies comparing two groups where one accesses a dense network and the other group does not.

These gaps lead me to the following research questions I address in chapters three, four, five, and six. First, which groups perform more accurately with respect to grammatical gender, Spanish language speakers in bilingual programs or Spanish/English bilinguals in English-only settings? Secondly, what is the effect of language network on acquisition of noun phrase agreement? The reasons noted above justify the research topic of grammatical gender agreement as being a worthwhile one to study. Previous work in the field has explicitly distinguished between gender assignment and gender agreement in heritage language adults (Alarcón 2011, Montrul 2008), however this work has not been extended to studies of child bilinguals, which are
scarcer by comparison. While there is a body of literature addressing different contexts and varieties of bilingual education, looking at outcomes across settings (Thomas and Collier 2002, MacGregor Mendoza 1998), these publications rarely focus on Spanish and when they do fail to investigate any specific grammatical feature. While there are studies investigating grammatical features of Spanish in one sole educational context (Merino 1983, Montrul and Potowski 2007), these projects have drawn critique for using homogenous participant groups. Researchers have studied dense networks and maintenance in such migrant communities (Shin & Van Buren 2016), but these studies have not been expanded to compare two groups where one accesses network and the other group that does not access network, nor have they studied gender agreement acquisition in dense networks. Thus, for this project, I aim to look at a variety of proficiencies of Spanish across different educational contexts, addressing accuracy with grammatical gender in forms of lexical assignment and gender agreement/concord.
METHODS
3.1 The bilingual school and school community

In this section I will elaborate on some details of the school and its setting in an urban outlier community outside of Chicago. I worked at the school for four years prior to writing this text, and in these capacities I mostly served as an ESL teacher to third and fourth grades though I was also a transitional bilingual teacher to third grades. I was authorized to recruit research participants at the school located outside of Chicago in the Latino enclave neighborhood. I will on occasion refer to the school as “Trackside”, a pseudonym, because I may not reveal its precise location.

The school of investigation is a public school located in a suburban outlier neighborhood of Chicago. Spanish is the most commonly used minority language in the community, which is 70% Latino according to the Modern Language Association Map. The school is a K-6 school. Notably half the population served by the school is bilingual. Half of the sections in kindergarten, first, and second grades are composed of bilingual classrooms for a total of seven bilingual classrooms in early elementary. Most classes from the bilingual program were taught by Mexican born or Mexican heritage speakers, also one teacher from Peru.

In the late elementary grades, 4-6, there are sections of bilingual classrooms available in fourth and fifth grade. Many bilingual students transition out of the bilingual program in this age group, and those who do so are child bilinguals served in the school’s ESL program or in the general education classrooms. Many move from a bilingual class to an ESL classroom. Thus, a high number of the school’s general education population in these grades is comprised of children who are bilingual in Spanish and in English and use Spanish at home with adults.
Similarly, child bilinguals speaking predominantly Spanish and English, also comprise the school’s ESL classrooms in first through sixth grade.

Many representatives at the school speak Spanish. Many of the school parent and family events take place in a bilingual format. Several of the school’s office secretarial staff are also Spanish speaking and Mexican.

The school is representative of the district in terms of its demographic makeup. According to the Interactive Illinois School Report Card, 96.4% of the school population is “Hispanic”, this figure is comparable to the district rate of 94% Hispanic. Of these Hispanics, the vast majority are of Mexican descent. Eighty seven percent of the school is low income. These factors will be relevant for a discussion of the selection of variables. The community of study is homogenous for ethnic background and socio economic status, which I determine on the basis of census data I report in detail in the ethnographic component of Chapter Seven. Therefore, these are variables I discard for my analysis.

The school is unique within the district in that it serves a large population of migrant families who work in a local industry residing in the area between October and April. Migrant residents were first mentioned in section 2.1.2 where I discussed “language networks”. Parents of these families are in large part undocumented immigrants arriving from Mexico in the late 1990s and early 2000s. A sizeable population is from Puebla, Mexico, I determined on the basis of conversations with community adults during the ethnographic component. The migrant population is unique in that they reside together in their place of labor. A reasonable estimate is that half of the school’s children participate in the migrant community with their parents. As a result, these children live within an extensive community of Spanish speaking families, and
although the majority are G2 (U.S. born), they are afforded extensive input in Spanish within the network.

3.1.1 Curriculum at the School

Prior to 2012, all early elementary (K-3) bilingual classrooms were run in Spanish, aside from a 45 minute ESL class period. This is important to note, because many students in fourth, fifth, and sixth grade, were educated within this instructional model. In Fall of 2012, the curriculum was loosened as a reaction to research on “the bridge” (see for example Beeman and Urow 2013). Beeman and Urow’s text “Teaching for Biliteracy” (2013) advocates for biliteracy as students effectively transition toward English. As a result of this redirection, these classes were termed “transitional” permitting a greater percentage of English throughout the school day. At this point, Spanish was regimented as the language of all literacy instruction, both reading and writing, in all bilingual rooms. Since writing is 45 minutes, and reading is regimented for 90 minutes, theoretically Spanish should have comprised at least 50% of the school day in bilingual rooms, possibly more. Though the curriculum permitted more English, at the early stages matters such as only having math books in Spanish contributed to some limitations in increasing English use across all subjects. For practical purposes, most kindergarten, first, and second grade rooms must be managed in Spanish because these students come from home speaking Spanish. In fact, some complications arise when first grade students must attend activities in the library for the first time, where no teacher or assistant with them speaks Spanish. These observations are relevant because they compromise concepts of language shift (Fishman 1991) in the local setting and challenge assumptions that all children born in the United States must speak English. Certainly, many, though not all, children may be sequential bilinguals, and many are not exposed to English before they arrive at the local school. The next section will discuss the
As evidence of the prominence of Spanish in the school curriculum, third grade students first participate in state mandated PARCC testing. Previously under the system of ISAT testing, of 18 students in my third grade bilingual room in 2012-2013, all eighteen elected to complete their math written responses sent to the state of Illinois in Spanish, while 16 of 18 chose to respond to the English story they read in Spanish. This demonstrates that most students in a third grade bilingual classrooms consider themselves Spanish dominant. Though, certainly the students develop bilingual skills by translanguaging materials in English and Spanish throughout their day.

3.2 Classroom research at school and student participants

As noted in section 3.1, the school has seven bilingual classrooms in early primary (K-3) and two more in grades four and six. Thus, there are a total of nine bilingual classrooms in the school, with eight bilingual teachers. Five of these teachers are Mexican born native speakers of Spanish, one is a Mexican G2, one is South American, and one is a Spanish-speaking non-Latina (sixth grade). Other support staff in the building speak Spanish, such as a reading interventionist (Texas born Mexican heritage), a Venezuelan born reading specialist and several class assistants who are Mexican.

After working ten years in this school district, during the 2012-2013 school year, I was the only non-native speaker in early primary, and I taught one of the school’s two sections of third grade bilingual. At this time I worked with 18 children. More than half resided in the local housing for families of migrant laborers. All children were of Mexican heritage. All but two
children were U.S. born speakers of Spanish who had been educated nearly completely in Spanish in grades kindergarten, one, and two. I consider the students to be heritage speakers because they speak to their friends in Spanish or mixed languages, and speak to their parents in Spanish. Also mentioned above nearly all of them preferred to write their essays on the state ISAT test in Spanish.

During the 2013-2014, I moved with the third grade group to fourth grade, where I taught the ESL homeroom for the fourth grade. The ESL homeroom has students who formerly participated in the school’s bilingual program the previous year, students who are registered as ESL according to school records, and students who are listed as “general education”. In spite of the students’ classification for school purposes, 22 of the 24 students in this homeroom speak Spanish at home. These students frequently use Spanish with their peer groups. Occasionally one hears children addressing table mates as “mijos” (common address form in Mexican Spanish, variant of ‘mis hijos’). The two others who were not speakers of Spanish have Spanish at the home, but they did not learn to speak it. Twenty-three parent households speak Spanish. 7 families live in the local migrant labor hipodromo (Sport’s Center). Because I spend thirty hours a week in this school community, I am a participant observer in the activities of the school.

3.2.1 Recruitment and Methodology Plan for Student Participants

Now that I have discussed the participants I will address the investigative methodology. I planned a story retelling and sociolinguistic interview with a larger participant group and a qualitative ethnographic methodology with a focused case study group. In contrast, a story retelling could be administered on a wider scale to the school population of child bilinguals who consent and in classrooms that agree to participate. I obtained an IRB approval for 150 and to date have forty individuals recruited. The school houses bilingual children and Spanish is widely
used. Individuals in the school are predominantly Mexican heritage and speak Spanish as well as English. Most were born in the U.S., while a small group of individuals were born in Mexico and arrived at a young age. Thus, the students are type three bilinguals per Romaine’s typology (Romaine 1995). I know this because I meet with the parents for parent teacher conferences, and all of the parents speak Spanish. For instance, in my present homeroom, there is one student who should be a type three bilingual per family typology. Both of his parents arrived from Mexico and speak Spanish. The student’s older sister did indeed learn Spanish in the home and uses it with her parents and is bilingual. However, the younger child is learning disabled with speech disorders and failed to acquire Spanish, or actually any language, in the home. Aside from this unusual case, everyone else is a type three bilingual. I do not speak to any parents in English. Here in the methods section I will address the type most relevant to the group of potential participants.

Romaine’s type three child bilingualism involves the case of immigrants arriving to Chicago from Mexico, who have children born in the United States. The dominant language dialect of both parents is Mexican Spanish while the community language is English. Thus, the child would attain bilingualism by exposure to the community language at school and with older siblings, while attaining dominance in Spanish through interactions with parents and other immigrant adults living in the local community. These patterns are indicated in my participant observation of community activities, for example soccer matches. Of course, the extent to which the child interacts with the outside community depends upon the family’s level of integration with the community as a whole. In the case of those living at the hipodramo, their interactions may in fact be predominantly within that network. Others may have working parents and less time for community interaction.
The heritage language speaker in a bilingual program is a Spanish-English bilingual who resides in the school community and participated in the school’s bilingual program currently or in the past. Students who participated in the school bilingual program present at school as Spanish-speakers at the age of five, in other words, they scored “incorrect” on the language placement screening at the school (in English). In school, they initially learn to read and write in Spanish, and many ultimately develop bi-literacy.

An English program student may be a heritage language speaker, or Spanish English bilingual, who resides in the school community but did not participate in the bilingual classrooms at their school. They may have participated in the school’s ESL curriculum, or they may have received no special services. Many of these child bilinguals may have presented at school at age five speaking English proficiently, though they may also be bilinguals. Some then, may be simultaneous bilinguals. However, others may be sequential bilinguals whose parents may have refused the school’s bilingual program, or who were misplaced in the school program. In school, these students learn to read and write only in English. They may speak Spanish to their parents or peers, however, we cannot assume they have developed any literacy skills in the home language and this plays a key role in the task I select for this project, explained in the section on methodology.

Here I will explain with a bit more detail what information the school has about these two groups of students and their initial proficiency levels. First, all routine yearly assessments are completed in English (ISAT test, ACCESS test) except for the reading inventory. The ACCESS test is a yearly assessment of English given to students who participated in the bilingual program, participate in the school’s ESL program, recently exited the program, or whose parents withdrew them from the program. Spanish speaking students complete their reading assessments and
writing assessments in Spanish. Only a record of the level text read and title of the text is kept. The students’ folder may contain a “bilingual program envelope” which often has a “language screener” issued to the student when a decision is made about their placement in a classroom. The screener presently used in the WIDA-APT\(^1\), usually given by an ESL teacher or other trained teacher. However, it would be misguided to consider this a Spanish proficiency task, rather it is a picture naming task. If the student identifies the target word in English, they earn points on the screener. If the student fails to produce the target word in English, they are scored “incorrect”. Thus, it would be a logical conclusion that students with a high percentage of “incorrect” marks on the placement screener are actually Spanish dominant, perhaps even Spanish monolingual speakers (sequential bilinguals). The screener labels the Spanish speaking students as ‘deficient’. Note that no record is kept of their Spanish proficiency. The only record is that the student scored low on the screener, meaning that they did not know many of those words in English. Thus the proficiency measure is an accuracy score on a picture naming task awarding points for target production of English.

The folder also elaborates some information about the ‘home language survey’. When the placement decision is made, parents are asked to identify if there is another language in the home. Also, depending of the year of the home language surveys, some ask what language parents use to speak to the child, and a few older versions ask about the child’s language use with other family members: mom, dad, and siblings. This data is self-reported.

In practice, I have seen several student folders where the parent reported another language in the home, however the child scored adequately on the screener. If the child’s

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\(^1\) WIDA is a consortium that has developed the English Language Proficiency Standards and corresponding assessments including the yearly ACCESS test and the WIDA-APT screener. A large number of states in the United States participate in this consortium of assessment for English Language Learner Students.
screener score was sufficient, they were placed in the English language room. Nevertheless, as the home language survey reports they may be bilinguals who speak Spanish with parents.

Anderson in an early conceptual account of language attrition and incomplete development notes that, “the immigrant language may be restricted to communication with older monolingual speakers of that language and to home, church, and other family- and community-related uses” (Anderson 1982, 88). This data concurs with Ramirez who found a large number of Spanish speakers in Chicago compared to the other nine areas of study (Ramirez 1991). However, use of Spanish was mostly in the context of speaking to older relatives. We will examine community uses of language with parents and at religious activities in chapter six.

3.3 Data gathering

The research questions that guided my study were the following:

How does the students’ past experience with language at school impact their language used?

I seek to answer these questions using a variety of mixed methods: naturalistic recordings during classroom activities and socio-linguistic interviews with quantification and analysis. I also will make observations and used a story retelling with a concord task to elicit language showing how bilingual children use the noun phrase agreement. Finally I will use ethnographic methods and participant observation to learn how bilingual students use their languages. In effect these three means of gathering data: ethnographic observation, sociolinguistic interviews, and story retelling with concord task create a methodological triangulation as referred to in Mackey and Gass (2005). I will review the purposes of the ethnographic methods in section 3.3.1, the sociolinguistic interview in 3.3.4 with further details
elaborated in the procedural protocol in 3.5.2. The methodological details of the story retelling with be elaborated in section 3.3.5, with procedural details elaborated in section 3.5.3.

The relevancy of laboratory research to classroom settings is one that has been debated, in particular by Foster (Foster 1998). This author questioned the applicability of laboratory research to classroom settings, owing to a greater interaction in classroom contexts. While there is reason to question whether findings of laboratory research and classroom research would be similar, Gass, and colleagues did not find significant differences between classroom and laboratory contexts with respect to interactions, analyzed for the following interaction types: negotiation for meaning, LREs (Language Related Episodes: self-corrections or correcting another individual), and recasts—corrections of inaccurately formed utterances (Gass, Mackey, and Ross-Feldman, 2005; Gass, Mackey, and Ross –Feldman, 2011). Gass, Mackey, and Ross-Feldman studied interactions of second language learners of Spanish in classroom and laboratory contexts and while they found no significant differences relating to the three interaction types mentioned above with respect to where the interaction took place (classroom or laboratory), they did find differences in interactions with the type of activity that was used. While the setting did not affect interactions, the type of task did affect the interactions, and information exchange tasks were found to facilitate more interaction than consensus tasks.

With respect to the planned study, I would predict that the type of task might similarly influence student’s use of self-correction or other interactions. The proposed activity of a story retelling where the student interacts with a teacher/researcher would certainly pose a different context than that of a child engaged in a peer group or dyad activity in the classroom or interview setting. Compared to a group activity I would expect less interaction in the story re-telling because the purpose is to elicit speech rather than create a teachable moment, learning
opportunity, or pathway for corrective feedback. We can extend the findings on type of task to Labov’s findings about including same-age peers in data gathering interview sessions (Gass, Mackey and Ross-Feldman, 2005; Gass, Mackey and Ross-Feldman, 2011; Labov 1969). The peer group was crucial to the sociolinguistic interview with children; Labov found that changing the group dynamic to same age peers increased the quantity and quality of information provided by participants. For this reason in the interview setting I would include peer groups in dyads or similarly-sized groups. Furthermore, use of peer groups reduces the effect of the observer’s paradox in the methodology I mention in 3.3.3.1. This is because of working exclusively with a teacher/researcher, children are using language with their peers.

3.3.1 Ethnographic methods

Ethnography has been used as a basis of studying school communities (Fuller, 2012; Potowski, 2007) transnational immigrant communities of adults (De Fina, 2003; Farr, 2010), and bilingual communities (Schecter and Bayley 2002; Zentella, 1997). Within education, ethnography is also an established method for gleaning a better understanding of a community of learners, and gaining knowledge to support educational efforts (Heath 1983). In this study, the purpose of the ethnographic method is to study how children use Spanish within their peer groups.

Discourse-based ethnography has focused on migrant and transnational communities (De Fina, 2003; Farr, 2010; Fuller, 2012). Given the particular context of Spanish in Chicago, the high population of Mexican and U.S. born Latinos living in Chicago, and considerations of the status of Spanish as a Chicago language, a study of U.S. born Mexican children is relevant in this context. No similar study of U.S. born Mexican child bilinguals been undertaken to my knowledge.
There are many bilingual children and Spanish native speaker adults who go underrepresented in this field of bilingualism. These bilinguals are part of a population that lives in local language networks that were Velázquez’s focus, and work in migrant labor positions such as the immigrants De Fina studied (De Fina, 2003; Velázquez, 2013). Furthermore, a focus on such a community serves in an activist way to provide a greater voice to migrant communities and the undocumented bilinguals and Spanish speakers who live there, and also to make others aware of the context and educational needs of bilingual children who grow up in such areas.

Distinct from work on adult members in transnational communities (De Fina, 2003; Farr, 2010), or immigrant bilingual school age children (Fuller 2012), U.S. born child bilinguals are in the unique place for study: not only are they Mexican----born to Mexican parents, living in a Mexican community, where they speak the same dialect Spanish; but they also are American, in that they are U.S. born, and learn English. Thus, the population of U.S. born heritage language speakers of Spanish is a justifiable context for study, when I intend to focus the ethnographic methods on language use in the community. Indeed Johnson notes that one of the main purposes of ethnography is to “inform us about the ways that students’ cultural experiences in home and community compare with the culture of schools, universities, and communities where they study, and the implications of these differences for second language and culture learning” (Johnson, 1992, 135). Details of an ethnographic methods often evolve as questions are refined during the research process (Mackey and Gass 2005). Ethnography then, has its purpose in increasing our knowledge of the human species, and it has the potential to gain increased knowledge about communities of bilingual children and their language choices.

The purpose of applying the ethnographic method in this context is to gather data on languages used by children, how they use Spanish, and any resulting effects on language
maintenance. In this section I summarize key points related to the methodology of several ethnographic texts on minority languages in the United States (Fuller, 2012; Schecter and Bayley, 2002; Zentella, 1997). Each author mentioned here focused on children in bilingual communities and what languages the children used. The purpose of planning ethnographic methods is to study the languages children use in a local bilingual community.

3.3.2 Role of the researcher in participant observation

Fuller, referencing Foucault’s work on subjectivity, writes, “individuals are not fixed subjects, but position themselves, and are positioned by others, in multiple and sometimes contradictory ways” (Fuller 2012, 7). An account of the researcher’s own “subjectivities” should follow. One of my principal subjectivities is my role as teacher and associated lack of scrutiny with regards to language choice in the classroom. An outsider might overhear students speaking English to their teacher, or the teacher speaking English to the students, and might interpret this as indexing English as a status language within a macro-social context. A coworker might overhear Spanish and think that the students were not being taught the language of our nation. Because of my role as teacher, I am routinely faced with making decisions with each turn or interaction with bilingual children, irrespective of such judgments. When addressed by individual students, this often requires using the language that will best support the student’s needs at that moment.

The role of the researcher has drawbacks whether the researcher is viewed as a member of the community, or an outsider. Li Wei notes the importance of the researcher, and their relationship with the people being studied (Wei 2000, 496). If the researcher is a member of the community, this fact complicates the researcher’s ability to recognize patterned behavior to which they might already be accustomed. Saville writes, “Discovering patterned behavior which
operates largely unconsciously for the native investigator presents quite different problems for ‘objectivity’” (Saville 1982, 4). So, the ethnographer’s status as an in-group member may pose a hindrance to identifying roles and relationships that might be more readily apparent to an outside observer.

However, relying on an outside observer also has its limitations, since the presence of an outsider faces the possibility of altering the discourse itself. The researcher’s ethnic origin and nationality have the possibility to affect the research outcomes (Li Wei, 2000; Saville, 1982). In particular, Saville notes that interviewer’s race or ethnicity might alter the context, what is known as observer’s paradox (Saville 1982, 114), that is, the researcher cannot observe what would have taken place had the researcher not been present. In this way we can see that in spite of my time spent in the school community being a white female is different than being a community member. Zentella notes that there are both advantages and disadvantages of being a member of the same ethnic group she studied (Zentella 1997, 6). Being a network insider comes with a great responsibility associated with portraying the group accurately, which Zentella notes was challenging since some members felt the group should be vindicated, while others felt it should be rehabilitated (Zentella 1997, 8). Being an outsider has the advantage of being able to see the community with fresh eyes, but De Fina notes her social class was a cause of separation between herself and the subjects of her ethnographic work (De Fina 2003). The role of the participant observer justifies the role of the research in ethnographic work. Acting as a participant observer acknowledges that by one’s own presence, one may impact the discourse and setting. De Fina notes, “Trying to eliminate the influence of the observer on the data would imply believing the data can be observed independently from the observer. Such an opinion is, in my view, naïve” (De Fina 2003, 47).
To that end, many questions can be posed about the role of an outside researcher, her ethnic origin, identity, language background, or social class. However, acknowledging the role of the researcher clearly as a participant observer, as Zentella, Farr, De Fina, and Fuller have done, helps to explain the role (De Fina, 2003; Farr, 2010; Fuller, 2012: Zentella, 1997). Clearly, I am neither the same ethnicity nor social class of the children who would be participants in this study. In spite of this, we all spend a lot of time together in the school setting. While the role of the observer cannot be eliminated, it can and should be acknowledged.

One response has been made by Milroy to the confounded status of insider/outsider researchers. Milroy combined perspectives of both insider and outsider as fieldworkers (Milroy 1987). A similar approach was used by Farr who involved members of the community as research assistants, who made recordings or aided with transcriptions (Farr 2010). Other investigators, Lucía Elías-Olivares and Juan Guerra, functioned as interviewers. Involving members of the community in the research methods is one way to minimize the insider/outsider effect, and can be beneficial in particular if the researcher does not have competency in the language of the community. Ultimately, Li Wei notes that “there is no ideal candidate for carrying out bilingualism research. Successful investigation requires the researcher’s sensitivity to the context of study, willingness to overcome difficulties, and honesty about his or her identity, attitude, and research agenda” (Wei 2000, 496).

3.3.3 Instruments

I recorded students in naturalistic activities in the classroom as well as in socio-linguistic group interview settings (Cameron, 2010; Labov, 1969, Labov 1984, Labov 2016) using standard recording equipment for the purpose of ethnographic observations and determining social
network factors that may influence Spanish use and maintenance. Then, I used a story retelling task to elicit children’s noun phrases across grades at the school along with the concord task.

3.3.3.1 The Sociolinguistic Interview

The interview is a key instrument for gathering speech data in sociolinguistics. While traditional sociolinguistic interviews are undertaken on an individual basis, research has found that in groups of children, the adult researcher gets a better result by including peer groups of “friends” in the interview process (Cameron, 2010; Labov, 1969). So to that end, consenting children are interviewed in small groups, with a time frame that is age-appropriate. Occasionally, it was not possible to interview the child in a group. This was the case, on a few occasions, when I had two consenting participants scheduled for the day, but one went home from school sick. Rather than cancelling on the present minor whose parents expected them to stay with me, in these few cases I continued the interview although it was not possible to do so in a small group and it had to be done individually.

Additionally, the “observer’s paradox” is a conflict within sociolinguistic interviews, one that is addressed by employing peers in the interview process. Inviting peers to the interview was a component Labov used when working with African American youth. Labov found that the African American children were more participatory with a peer group than with an adult researcher. The observer’s paradox suggests that the children will modify their production in the presence of the teacher/participant/researcher. It is possible that the adult presence causes changes in the child’s language used, in particular in bilingual children in a diglossic situation who may be accustomed to addressing adults in the school in English. Therefore including peers in the interview helps to counteract any possible effect of “observer’s paradox” during the data collection.
3.3.3.2. Story Retelling

The story retelling is an important component of this mixed-methods project which will facilitate the collection of data from a larger sample. However, some considerations need to be taken into account when developing a grammatical task to be used by children. First, an elicitation must be age appropriate. It is important to get data about the Spanish knowledge of young children, but, children in kindergarten, first, and even second grades may not be able to read a questionnaire. Considering the population of child bilinguals, these students may speak Spanish, but may have little or no experience reading Spanish, irrespective of their grade level in school. Thus, it is important to take into account a task that is not dependent on reading ability or other literacy skills. Thus, I propose use of a story retelling as was used with adult heritage language speakers in Montrul or in diverse groups of Spanish bilingual children in Montrul and Potowski (Montrul and Sánchez-Walker 2013; Montrul, 2009; Montrul and Potowski, 2007). In the following sections I will review previous literature that employed a story retelling and explain the impetus for using a story retelling in the bilingual context.

Montrul uses a story retelling of a picture book, Little Red Riding Hood in her study of adult heritage language speakers in a component of the study she refers to as “elicited production task” (Montrul 2009). The focus of Montrul’s work is tense and mood. The diverse linguistic studies undertaken in heritage language working with a story retelling evidence the utility of using these methods for data collection for the proposed work on gender agreement. Also, recordings of a story retelling such as this might provide a wealth of data on other aspects of heritage grammars used in the local sphere.

Montrul and Potowski used a story retelling as one component of their research project with bilingual children (Montrul and Potowski 2007). In their publication they reviewed gender
accuracy of three groups of child bilinguals: monolingual Spanish speaking children raised in Mexico, bilingual children, and L2 learners of Spanish attending a dual language school. The authors reported the accuracy of these three groups of bilinguals on both masculine and feminine gender NPs. The tokens of gender were counted and examined for within subjects variables including gender on determiners (masculine and feminine) as well as gender on adjectives (position, gender agreement, and number agreement). The group of heritage language speakers was broken into two subgroups: those who were considered sequential heritage language speakers, and those who were considered simultaneous bilinguals. Finally, the subjects in all four categories (monolingual, sequential HS, simultaneous HS, and L2 learners) were sectioned by age into two groups: younger (ages 6-8) and older (ages 9-10). The data from the story retellings are reported graphically (Montrul and Potowski 2007, 315-316). Crucially, of all of these groups and age based subgroups surveyed by Montrul and Potowski, the only group with an accuracy below 80% was the group of younger (age 6-8) L2 learners, with respect to their accuracy only on the feminine gender. Later, Montrul with Sánchez Walker use this same task to address the topic of the direct object agreement marker (Montrul and Sánchez-Walker 2013). It is clear that this is a widely-used elicitation of language in children, in particular in groups of heritage speakers who, as I noted, may lack literacy skills. Employing a task such as one previously used in the literature allows this data to be compared to data gathered from other children in other locales. While this project is not, in effect, a replication study, rather the topics of concord in grammatical gender is novel in so far as its investigation in children, and the analysis of groups by social factors such as type of school program is original, the data bank in and of itself could potentially be used for replication of other published work.
I have made some considerations about the linguistic task to be used, and have selected a task that is in line with previous work on heritage language speakers (Montrul, 2009; Montrul and Potowski, 2007). The task will be a story retelling of a commonly known children’s story. This task was selected because of considerations of including child bilinguals exposed to low levels of input in the data collection. Mexican descent children may or may not have been schooled in their home language in this town. As a result, those who did not experience school in Spanish may not be able to read a grammaticality judgment task to be able to complete it. For this reason I select a language elicitation task based on a children’s book. Also, I considered that using a grammaticality judgment task would limit the data collection so that young children ages five or six, who participate in the bilingual program at school, may not have the reading skills to complete such a task independently. A story retelling with recording was selected for the task.

In this project I propose studying only heritage language speakers (e.g. students who speak Spanish at home, and whose parents speak Spanish at home). Instead of focusing on variables for the type of bilingual (sequential or simultaneous) or age, instead I focus on social and educational factors that may result in greater acquisition of grammatical gender including: type of educational program and social network. Access to schooling in the family language in childhood is one sociolinguistic factor Montrul notes may result in decreased language use (Montrul 2009, 240). Thus, I propose a two by two design for the project focusing on the variables: language of schooling and social network. These two variables were addressed in the literature review in section 2.1, and will be detailed in the following section 3.4 “variables”. Also, in the following section, I will explain why, based on pilot data I collected previously in
2010, I choose not to section the participants into two groups: sequential and simultaneous bilinguals.

Finally, following the story retelling task I add a concord task asking about characters in the story retelling component, asking the children “¿cómo era el lobo?” “¿cómo era la niña?” y “¿cómo era la abuela?” (What was the wolf like? What was the girl like?) Details of this component of the methodology related to the story retelling task will be elaborated in Chapter Four.

3.4 Variables

The primary variable I evaluate is “language experience” following the model of Bybee (Bybee 2006). Bybee takes a usage-based approach to grammar in which grammar is “the cognitive organization of one’s experience with language” (Bybee 2006, 711). Usage-based theory provides a background for considering language change. Within this framework, language use or change is linked to the experience that a speaker has with language. The author argues that frequency of use impacts grammatical representations (Bybee 2006, 719). The usage-based approach to grammar can be extended to look at minority language if we consider that there may be language variation in populations that do not frequently use the minority language. On the other hand, we can consider populations that have a vital use of the minority language (in the home, school programs, or in their social networks). For this reason I am interested in studying the language used across groups exposed to different levels of input in social and educational contexts and this is reflected in the research design of this project.

I predict that students’ experience with language affects their use of language. Here I consider the variable of bilingual education where two of the four groups are exposed to native language (Spanish instruction) and the other two groups are not exposed to Spanish instruction.
Thus, I predict that students who participated in the school’s bilingual program have a language experience that is distinct from those who did not, and produces measurable results with respect to the child’s use of the noun phrases. Thus, I predict differences in the Spanish of those students who did participate in the school’s bilingual program in the early grades, and those who did not. The purpose of this distinction is not simply to ascertain any supposed benefits of bilingual programs, but also to study children exposed to various levels of input. This decision was made in light of Alarcón’s (2010) work with high and low proficiency adult speakers in the research on heritage speakers in language acquisition.

3.4.1 Variables to disregard

I do not expect ethnicity to play a significant role in this study, because most students share a common Mexican ethnic background as noted by the school data reported in 3.4.1. I don’t expect age of exposure to Spanish to play a factor and I disregard this as a variable. Most children are U.S. born and so the group is homogenous with respect to age of arrival in the U.S. Other factors would need to be delineated to address differences in children, I propose social network and educational setting.

Pilot work on the direct object marker and gender agreement I undertook in 2010 did not indicate significant differences between sequential and simultaneous bilinguals in the north section of this same town, and minimal distinctions between these groups has recently been shown in work on the direct object marker (Montrul and Sánchez-Walker 2013). A very limited number of students arrived in the U.S. at a young age. Since the children grew up in a similar community whether they were U.S. born or arrived early in infancy, differences between groups whether they are sequential or simultaneous bilinguals are not expected to be significant, in particular in light of the small number of foreign-born children. In fact, the students were placed
in a program based on picture naming tasks, sorting those who could answer in English from those who could not. This means that no information was actually gathered about the student’s proficiency in Spanish, though we can assume that those with low scores were not proficient in English. Since the only sorting mechanism used was a picture naming task awarding points for elicitations in English, actually no data was collected about any Spanish knowledge these children might have. Moreover, my previous data collection suggests type of bilingual should be disregarded as a variable in favor of a social focus on the child’s experience with language.

Similarly, I disregard socio-economic status, a commonly reported variable in sociolinguistic work, owing to the fact that 87% of the school is on free and reduced lunch, the group is predominantly homogenous with regard to social class. Parents who reside at the racetrack are backstretch workers. Their employment includes cleaning horse stalls, grooming horses, and walking horses. Some mothers also work and when they do they are often employed in the light labor positions of backstretch workers, like walking horses. Other parents who do not reside at the racetrack participate in local cash labor industries, and some work at local factories.

3.4.2. Additional variables.

Another variable to consider is social network. In particular, a large segment of the school population lives at a local sports facility (hipodromo) where their parents work in a migrant cash labor industry. As a result, they live in a network of hundreds of Mexican-born speakers. Thus, it is possible that students living in this context exhibit less contact-variety Spanish traits than students who reside in their own homes or apartments, where they do not daily interact in this community of Spanish-speaking immigrants. It is possible then that students in this community may exhibit a more vital use of the home language, Spanish, and its
noun phrases regardless of their school program: bilingual or general education. In the qualitative section I will study a focal student who lives in this dense network and maintains Spanish through his contacts and activities out of school at a local place of worship, and not through the bilingual instruction at school.

I have reviewed various approaches researchers take to quantifying a social network in section 2.1.2. Many researchers start by asking individuals “who are your friends?”, or who are their contacts (Eckert, 2000; Velazquez, 2013). Once associates are established, reciprocal connections indicate more dense and multiplex networks. Researchers group individuals into membership categories, identifying key individuals and outside networks based on individuals with more or less network connections. While many researchers look at sounds produced in various groups (Eckert, 2000; Milroy, 1987), I would ask what language the individual uses with each of their connections, in particular whether the individual uses Spanish, English, or code alternation. Thus, the analysis would identify social network ties and the language associated with these connections, similar to Velázquez and Zentella (Velázquez, 2013; Zentella, 1997). Distinct from using a membership category approach, Milroy suggests using an individual scale rating social network (Milroy 1987), which I reviewed in section 2.1.2 on social networks. The individuals’ network rating scores can then be correlated with the linguistic variants considered.

For this project, then, I would propose collecting information about individuals contacts and associates, both by asking them to name friends as Eckert and Velázquez have both done in their own research, as well as asking a student-friendly version of the questions indicated in the ‘social network rating scale’ proposed by Milroy (Eckert, 2000; Milroy 1987; Velázquez, 2013). See section 2.1.2 on social networks for an example of a quantitative rating scale. This information could be gathered during a sociolinguistic interview. This is an approach that
Milroy recognizes as one used in prior research. With the information of a child-friendly rating scale handy, it would then be possible to hone in on individual network rating scores and any possible existing correlation to maintenance of Spanish as indicated by accuracy in the research object. Initially, it may make sense to group participants in four groups using a two by two design as previously described. The story retelling will gain more information about grammatical gender than could be possible gained from participant observations limited to my classroom or any spaces within the school I could record. This is why I choose a mixed-methods approach for this study.

In summary, the external factors are

a. Accuracy in Spanish gender agreement, based on school language experience in Spanish or English

b. Accuracy in Spanish gender agreement, related to social network

These are the factors to be analyzed in the proposed recordings.

The internal factors (“dependent variables” for acquisitionists) are gender, correct or incorrect. However, it may be useful to consider some fine grained views of gender other researchers have considered with studies of gender in adults or SLA populations.

a. percentage accuracy with overt and covert nouns

b. Percentage accuracy with masculine and feminine nouns.

3.5 Materials and Procedures

In this section I will describe the procedures necessary to undertake the proposed investigation. First, I would identify students who are bilingual in Spanish and in English. This could be done in several ways, one way would be to investigate the school program placement of the student and the information contained in the bilingual folder for each student to determine if
parents indicated a non-English language was used in the home, this pre-selection criteria was indicated with the IRB. Other ways to identify Spanish-speaking students is by participant observation in the classroom setting, or by peer identification during a sociolinguistic interview.

3.5.1 Procedures for story retelling

Once individuals are identified and recruited, one strand of data collection would focus on the story retelling task, an elicited production task. This is a task used in previous research both in adults and in children. I adapt it from Montrul and Sánchez-Walker (2013), Montrul (2009) and Montrul and Potowski (2007). Here is a description of the task from Montrul (2009):

For the elicited production task, all participants were shown pictures of the children’s story *Little Red Riding Hood* and were asked to retell the story in the past, with as much detail as possible. All speakers were audio recorded, and speech samples were later transcribed by several research assistants, coded and analyzed. (Montrul, 2009, 249).

Here is a description of the same task used with children in Montrul and Potowski (2007):

The first task was an oral narrative. The children were shown colored pictures of a well-known children’s tale *Little Red Riding Hood* and were asked to narrate the story in the past. The purpose of this task was to elicit noun phrases in extended discourse. By using a story, the choice of vocabulary remained relatively constant across the children. Most of the children were familiar with the vocabulary. (Montrul and Potowski 2007, 313).

For this case I would adopt the task from the previous literature and I would not specify use of the past tense due to the fact that this project does not focus on tense and aspect as Montrul
(2009) did in her work. Also in my experience young children do not follow instructions about
telling stories in the past, they may not be proficient in producing narratives in either past or
present as directed.

I would start the story retelling task in the following way:

¿Cómo te llamas? ¿Sabes la historia de Caperucita Roja? (show cover of text by
Marshall 1987). Me vas a contar la historia de Caperucita. No te preocupes, no hay que
leer. (start recorder and the child advances pages on the smart board as she talks).

The children see the pictures from the book, and they describe the pictures. This recording of the
spontaneous oral production would be the basis for data on gender agreement. Marshall (1987)
is the text I used. I suggest this one as the principle text used in linguistic research of heritage
language users (Montrul and Sánchez-Walker 2013; Montrul, 2009; Montrul and Potowski,
2007). At the end of the story retelling, it might be interesting to ask questions about the
characters in the story to elicit possible cases of gender concord/agreement2. Some questions
would be

-¿Cómo era la abuela? (What was the grandma like?)

-¿Cómo era el lobo? (What was the Wolf like?)

-¿Cómo era la niña? (What was the girl like?)

There is good reason to elicit the bilingual child’s use of gender agreement on the phrase level.
Research in second language acquisition has shown that this is a difficult feature to acquire for
second language learners. The distinction between noun phrase agreement, reviewed in chapter
five, and phrase or concord agreement, reviewed in chapter four, demonstrates the distinction

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2 Thanks to Kay Gonzalez Vilbazo suggested this component.
between acquiring interpretable and uninterpretable features of the grammar. While the inherent
gender of lexical nouns is considered to be an interpretable feature of the grammar, gender of
adjectives agreeing with nouns in ‘gender concord’ is considered uninterpretable for SLA
purposes. The Interpretability Hypothesis predicts that concord features (gender agreement on
adjectives) is uninterpretable for second language learners unless they filter through native
grammar to the L2. Thus the Interpretability Hypothesis would predict that heritage speakers
who access native grammar might prove accurate with concord agreement, while a heritage
speaker with limited access to native like grammar would perform less accurately on a concord
task similar to a L2 learner. We will see the results of this concord task in Chapter four.
Relevant questioning could inquire if these heritage speakers perform like L2 learners on a
concord task, experiencing difficulty with gender agreement in concord, or if they have a native-
like performance on grammatical gender in concord.

3.5.2 Procedures for sociolinguistic interview

A second strand of data collection would focus on the sociolinguistic interview.
Procedures and details for the sociolinguistic interview are detailed in “Field Methods of the
Project on Linguistic Change and Variation” (Labov 1984). These field methods combine
participant observation with individual interviewed and a linguistic task, with the goal of
“obtaining specific information on linguistic structures through formal elicitation” (Labov 1984,
33). Often times a specific neighborhood is the focus of the researcher’s field methods. In the
case of this project the neighborhood would be the school neighborhood.

Labov’s text on field methods defines the Q-GEN-II set of modules, which the author
refers to as “a conversational resource on which the interviewer draws in constructing an
interview schedule” (Labov 1984, 33). Reviewing the modules, or question strands used in the
Q-GEN-II, only some of these strands are relevant for the child. A discussion of marriage or race, would neither be appropriate nor interest a child greatly. So I focus on certain strands of sociolinguistic questioning relevant to the desired demographic data. I will identify here several modules which are primary, and other modules that are secondary. Secondary strands do not elicit demographically requisite data, but they may provide topics of interest for a sociolinguistic interview with the child. Keeping in mind that children have a limited attention span, and the interview may be briefer than one we would expect from an adult, both the number of modules and the number of questions in each shall be limited.

Modules that I would prioritize include demographic (module 1), family (module 9), peer group (module 11), school (module 15), and help in the neighborhood (module 17). I selected these modules to prioritize because they have the potential to gain relevant sociolinguistic information (modules one and 9) or social network information (11, 15, and 17).

Secondary modules I select as being of interest to children this age, but not requisite for data gathering of relevant social information for the project include dreams (module 7), crime (module 14), danger/spooky places, games (module 2) and religion (module 10). These ‘modules’ are suggestions and could be modified to the interest of the speaker. Some of the other modules, like marriage, sex, and race, need to be avoided because the topics are not appropriate for children. Thus I develop the following list of questions, modified from Labov’s project on Linguistic Variation and Change to Spanish and in consideration of child participants:

Mod 1: Demographic

(1) ¿Cómo te llamas?
(2) ¿Cuántos años tienes?
(3) ¿Y dónde vives? ¿Es casa/apartamento?
(4) ¿Cómo es la casa?

Family

(5) ¿Con quién vives? ¿Quiénes son las personas en tu familia?

(6) ¿Hablas con ____________ en inglés/español?

(7) ¿Eres hijo mayor/menor?

(8) ¿Tus papas te ponen reglas en tu casa? ¿Cuáles son las reglas de la casa?

(9) ¿Tienes que comer las comidas que te ponen?

Peer Group

(10) ¿Tienes un grupo de amigos?

(11) ¿Quién es tu mejor amigo/a?

(12) ¿Quiénes son los otros amigos/as?

(13) ¿Quién manda el grupo?

(14) ¿Cuáles actividades hacen cuando no están en la escuela?

(15) ¿Cuáles juegos les gustan?

(16) ¿Hay juegos de noche?

(17) ¿Juegos de esconderse?

School

(18) ¿Cuál es lo peor que has visto una maestra hacer a un compañero?

(19) ¿Alguna vez te echaron la culpa sin razón?

(20) ¿Había una maestra que te cayó bien?

(21) ¿Pasaban cartas?

(22) ¿Alguna vez tu maestra encontró una carta que tú mandaste?

(23) ¿Qué trabajo te gustaría hacer?
Help in the Neighborhood

(24) ¿Hay alguien que te cuida? ¿Quién?

(25) ¿Tienes correo en tu casa?

(26) ¿Cuándo tienes ropa vieja, se regala a alguien? ¿A quién?

(27) ¿Si tu mamá no tiene coche, y tiene que ir al mandado, quien le ayuda?

Secondary Modules:

(28) ¿Vas a alguna iglesia con tu familia? ¿Cómo es?

(29) ¿Qué pasa después de morir?

(30) ¿Alguna vez te robaron en tu casa?

(31) ¿Hay lugares que te asustan donde no te atreves ir?

(32) ¿Alguna vez sonaste con algo que te asustó bien?

(33) ¿te acuerdas de los sueños?

(34) ¿Y el sueño ocurre en inglés o en español?

(35) ¿Qué haces cuando no te puedes dormir?

One characteristic of the sociolinguistic interview is that it develops freely according to the directions the speaker selects. Aside from the story retelling and sociolinguistic interview, the final component of the methods is ethnography and participant observation. The purpose of the participant observation is to collect data on language choice and language use in the local setting. That is, the goal is to observe what languages the child uses in their interactions. Observation could take place in the classroom or in the community. The ethnographic fieldwork
would be on-going and would involve a subset of the larger participant group completing the story re-telling and sociolinguistic interview.

3.5.3 Procedures for scoring and analysis

Once the data is stored it is transcribed and quantified for the statistical analysis. Aside from the data on gender agreement, data on social networks can also be quantified, and I do this using a modified social network rating scale. Milroy’s network rating scale awards a point for each value leading to a numerical network rating for each individual (Milroy 1987). Using this method information gathered in the sociolinguistic interviews could be compared to the rating scale to award points. In this way individuals receiving more than 2.5 points on the 5 point scale are considered to have a ‘dense’ social network and those who receive less than 2.5 points are thought to have weaker network ties. Thus the network rating scale can lead to formation of two groups for the purpose of a data analysis.

Here is an account of the operationalization of the social network rating scale I used with child participants.

1. I live in a territorially based cluster.
2. In my class at school there are at least three other students who live in the same residence where I live.
3. I have at least three other playmates who live in the same residence where I live.
4. During the sociolinguistic interview, I report that other family lives in the residence with me (perhaps I pass my hand-me downs to them or stated they help me parents when they need help).
Children were awarded one point for each statement that was true for them. Points were totaled and each child that had two or more points was considered part of a dense social network for purposes of this study.

A study of social networks and adolescent substance abuse shows a more sophisticated quantitative take on social networks. In Ennett et. al.’s piece “The Peer Context of Adolescent Substance use: Findings from Social Network Analysis” the authors asked participants to identify their friends by name, in a similar fashion as we propose in these procedures for asking about a best friend and other friends. The authors also solicited participation from named friends. The authors define network density quantitatively as “the number of friendship ties present in the network divided by the total number of possible ties” (Ennett et. al. 2006, 169). For this project I attempt to gather info on friendship connections, however there were limitations to this because the friends named were not always consenting participants. Thus, the network rating scale became the best means to identify a dense social network.

3.6 Summary of Data Collection and analysis

While research notes variation in Spanish in contact settings, few publications address the language use of child bilinguals. As noted in section two, Fuller presents an ethnography from an anthropological perspective on the Spanish of immigrant newcomers to the U.S. living in Southern Illinois (Fuller 2012). Her research focuses on code-switching and identity, however, there are many remaining questions about the types of linguistic structures child bilinguals employ when they speak Spanish. Thus, I used mixed methods of sociolinguistic interviews, and a recorded story retelling. This work may make a contribution to the discussion of child language acquisition, bilingual first language acquisition, and contact Spanish by documenting the language use of G2 child bilinguals in this Mexican dominant outlier suburb of Chicago.
3.7 Coding of the story retelling and concord task.

In 2015 I gathered sociolinguistic interviews, story retellings, and concord task data from forty participants. I transcribed the data, and coded it in files for the following areas: CONCORD DATA, NOUNPHRASE DATA, INDIVIDUAL DATA BY STUDENT, SOCIOLINGUISTIC BACKGROUND DATA, CODESWITCHING DATA, DIRECT OBJECT MARKER DATA, etc.

3.8 Future Areas of research with gender

By gathering data with interviews and recordings, this may produce other data relevant to studies of child bilinguals in contact settings, such as tense, aspect, direct object marker, etc. These are structures that are prominent subjects of language change in bilingual communities in contact: subjunctive, verb tense, discourse markers, gender agreement, and the direct object marker. However, to limit this project to one that can be feasibly completed within a short timeframe, here I focus only on noun phrase grammatical gender, though I do hope the recordings will lead to more projects.

Other aspects of the children’s language that may present in the data include use of pronouns and pronoun alternation in discourse. That is, the pronoun may not match the expected gender of the item. See the following examples:

(1)  Su mamá le llamó y le dijo que esperara para que llevara unos cookies y un pastel para la abuela. Entonces la niña *lo obedeció y se fue caminando por el bosque.

‘Her mom called her and told her to wait to bring some-masc cookies-∅ and a cake for grandma. Then the girl obeyed *him and left walking through the forest.’
In (1), the child uses a masculine pronoun ‘lo’ to refer to a feminine antecedent ‘la mamá’. The topic of clitic pronouns is beyond the scope of this text.

3.9 Conclusions and Outlook

Heritage language is a ‘nascent’ field of study (Alarcón, 2011); however, children are an under-sourced population within the field because of complications involving them in research. For this study, I will make use of a resource, a community school with population close to 600, in which 80-90% of the student population speaks Spanish, whether they use the language only at home, or may have been educated in Spanish at school. My main goal is to document the Spanish of this population of two student groups detailed in Section Four of the methods, bilingual program students and English program students. The community has valuable linguistic resources, however, since research on bilingualism points to language change by the third generation (Fishman, 1991; Potowski, 2004; Potowski, 2013; Zentella, 1997) it is fundamental to document the language use of G2 children in these communities. Research reports that G2 children are particularly at risk of subtractive bilingualism and problems in school (Valenzuela 1999). Further research demonstrates that heritage language speakers are subject to competing goals of cultural assimilation and pluralism (Wong Fillmore and Meyer 1992), placing the heritage language in jeopardy as a result of assimilation. Documenting child language with recordings of socio-linguistic interviews and naturalistic data outlined in section three can create a baseline of data by which to measure any subsequent language change in the community, and is the only way to confirm if grammatical structures have ever been acquired by children living in the contact setting, contributing to the debate on “language loss” or universal access.
The project has the potential to lend a contribution to bilingualism because while components of the noun phrase have shown variation in adult bilinguals (Montrul and Bowles 2009), there has been little evidence to verify if this linguistic feature is acquired by bilingual children in contact.
QUANTITATIVE RESULTS
Chapter 4

HOW ACCURATELY DO BILINGUAL CHILDREN PERFORM ON GRAMMATICAL GENDER IN CONTEXTS WITH CONCORD?

The previous chapter addresses details of the methods for the research at hand, including: participants at the school, variables, materials and procedures, and well as data gathering for this methodology including the story retelling, the sociolinguistic interview, and ethnographic methods. Previous research has indicated that bilingual children may not master gender agreement (Merino 1983, Montrul and Potowski 2007), but, as discussed in earlier chapters, such research on children has not controlled for the type of bilingual program the children are in, nor for the child’s social networks.

In this chapter, I present the results of data acquired across the phrase. First, a word elicitation task used with bilingual child participants following their participation in the story retelling segment. After the story retelling, children were asked three simple questions, ¿cómo era la abuela? ¿cómo era el lobo? And finally, ¿cómo era la niña? (What was the grandma like? What was the Wolf like? And, what was the girl like?) Each of these inquiries relates to the images the child viewed on their classroom smartboard while they were recorded telling the story of Little Red Riding Hood (Marshall 1987). This data collection addresses the question of whether bilingual children correctly produce grammatical gender, and, the accuracy at which they do so, when the agreement takes place in non-local contexts. The data in this chapter is novel because it addresses accuracy with respect to distance or non-local gender agreement as it affects heritage speakers. Previously this hypothesis was tested on second language learners of

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3 Thank you to Kay González-Vilbazo for his kind suggestion to elicit concord statements from the children.
Spanish (Franceschina 2001; Franceschina 2005; Hawkins and Franceshina 2004). Since previous research has indicated that heritage speakers share some similarities with second language learners, in this chapter I investigate whether the heritage speakers of Mexican Spanish produce uninterpretable gender features as do second language learners or in a native like way. In these following chapters, when I specify ‘interpretable’ features, these are the ones that are locally found, while those that are referred to in the literature as ‘uninterpretable’ are found in non-local, distance contexts (across the phrase) as in the following examples. For a thorough explanation of the Interpretability Hypothesis and its effects on SLA research in local/non-local contexts, see the literature review in chapter two.

(3) *El bosque estaba muy oscuro* (non-local)

‘The forest was very dark’

(4) *El lobo estaba muy llena* (non-local)

‘The Wolf-masc was very full-fem’

4.1 Elicitation of Grammatical Gender in Concord

As noted above, we developed a simple task to determine if these bilingual children controlled grammatical gender. After they told the story of Little Red Riding Hood, child participants were asked questions about the main characters, the grandma (*la abuela*), the wolf (*el lobo*) and the girl (*la niña*). Children were asked to describe each character in response to the prompt, “*cómo era el/la____?”* (What was the____like?). These questions in the concord task followed the story retelling task. This task was unique from previous work with bilingual children in that the focus is on high use vocabulary with which the child was already familiar by viewing and telling the story and modeled a data collection on agreement that has previously
been undertaken in adult heritage language studies. Grandma (*abuela*), and girl (*la niña*) are two high frequency words that would be available in the linguistic repertoire of even a challenged heritage language speaker.

The expectation of the task was that children who controlled use of grammatical gender in Spanish would provide an adjective to describe the characters and that the adjective used would contain the appropriate morphological endings for the character’s gender demonstrating control of grammatical gender agreement as a syntactic operation. Since this category for gender is unique to Spanish and does not exist in English, grammatical gender has been problematic for developing bilinguals. In particular, control of grammatical gender has been shown to be problematic in both groups of heritage language speakers as well as second language learners (Alarcón 2011, Montrul 2008, Montrul and Potowski 2007). In Spanish, feminine nouns, such as *abuela*, or *niña*, would require an adjective with a feminine ending, such as *Buena, maleducada, viejita, chaparra* (good, badly brought up, old, short). Similarly, the wolf, as a masculine noun, would require adjectives with masculine endings, such as *mentiroso, espantoso, feo, traía dientes filosos* (deceitful, scary, ugly, with sharp teeth).

In total more than two hundred adjectives were elicited during the concord task from the child bilinguals participants. Of these elicitations, for the analysis we must extract only those adjectives that contain a morphological ending. For example, adjectives such as “*alegre*” (happy) or “*feliz*” or “*feroz*” (fierce) while they may describe the relevant characters, do not contain any morphological segment to distinguish the masculine variety from its feminine counterpart or indicate any operation of agreement. Since these types of adjectives have no inflection for gender, I remove them from the data set which results in one hundred and eighty two adjectives to analyze for gender agreement.
4.1.1 Methods

In this section I briefly overview the methodology as it relates to the whole project methodology explained in the previous chapter.

Participants Thirty nine child bilinguals consented to participate in an after school project, of which the elicitation of concord was one part. Participants were of Mexican heritage, though most were U.S. born. Their ages ranged between six and twelve. Both genders were represented in an approximately equal fashion. Children did not know the purpose of the experiment or that it related to grammatical gender. Children were told only that ‘the teacher was interested in how bilingual children use Spanish’ and that they were telling the teacher a story and answering questions about the characters. These activities took place in the PI’s classroom at school, outside of Chicago.

Materials Children viewed a copy of the illustrations from the text Little Red Riding Hood, on which the words were blocked out. The pictures were projected on the classroom Smartboard, and children advanced through the images at their own pace by touching arrows in the corner of the board, much like you might advance through a PowerPoint presentation. Children were recorded telling the story, using a hand-held Sony recording device, for which the story re-telling component was used for the following chapter. Following the story, children were asked questions to elicit descriptions of the characters using concord. These questions included: “¿cómo era la abuela? ¿cómo era el lobo? And finally, ¿cómo era la niña?.

Procedure Children told the story as they advanced through the pictures, effectively creating a “performance” in which they retold the story. Some participants even provided voiced characters, sound effects, are other story telling details. Following the story, the children were asked the questions and they were recorded while they stated their responses. Owing to age and
developmental characteristics, responses varied in quantity. Some children provided only short responses while others provided lengthy and verbally complex responses. If the child did not provide an adjective, then I repeated the question, ¿cómo era? (And what was he/she like?) The purpose of continuing to elicit an adjective was further inquiry about the character they child was talking about. Though occasionally children asked if I wanted them to tell me the story in English or Spanish, by the time the children were asked the concord elicitation, which was the final of three activities, most were in a monolingual Spanish mode. There were very few instances of code-switching or mixed speech in this concord elicitation, and these were out of the realm of the present project. While some provided as little as one adjective per character others provided a more lengthy response with more tokens of agreement. Indeed, a between subjects ANOVA showed a significant difference for number of adjectives, with the group –BIL, -SN producing less adjectives overall than the other groups.

Statistical Analysis on Number of Adjectives (tokens)

A repeated measures analysis of variance (ANOVA), with grammatical gender (masculine/feminine) as the within subjects factor and social group as the between subjects factor, was calculated on number of adjective tokens produced by the four social groups. There was no main effect of gender ($F(1, 35)=2.01, p=.165$). There was a main effect for group. ($F(3, 35)=2.915, p=.048$). There was not an interaction ($F(3, 35)=2.146, p=.112$). Tukey HSD post hoc tests indicate that –BIL, -SN produced fewer adjectives than the other groups.

4.1.2 Results and Discussion of Concord task (adjectives)

In the concord elicitation section, children produced one hundred and eighty two adjectives that were inflected for Spanish gender. One hundred and one adjectives were inflected for feminine nouns, while eighty one were inflected for masculine nouns.
Figure 1. Accuracy on Grammatical Gender Agreement in Expressions of Concord

For adjectives that refer to feminine nouns such as ‘abuela’ or ‘la niña’, ninety seven of the one hundred and one adjectives were correctly inflected for grammatical gender (96% accuracy, n=101). For adjectives inflected on masculine nouns during the concord task, all social groups scored mean 100% accuracy with a Standard deviation of 0. This was the case for the group of bilingual students in a dense social network (M=100, SD=0), for bilingual classroom students who were not in a dense social network (M=100, SD=0), for students in an English classroom who were part of the dense social network (M=100, SD=0), and also for those students in English classrooms who were not part of the social network (M=100, SD=0). With respect to the adjectives referring to feminine nouns during the concord task, there was one difference, that one participant in the English/no social network group had errors. As a result, the English, -SN group had a mean of 90% with respect to accuracy of feminine adjectives (M=90, SD=31.62). All other groups scored 100% accurate on the feminine adjectives: Students attending bilingual
education class living in the social network made no errors (M=100, SD=0). Students attending bilingual education who did not live in the dense social network similarly made no errors (M=100, SD=0). Finally students in English class who lived in the dense social network setting made no errors on the concord task on adjectives (M=100, SD=0).

Results of ANOVA on concord task data

We used a repeated measures ANOVA to dissect the differences between the four participant groups with respect to their accuracy on gender agreement in a concord task (a gender assignment task will follow). There is no main effect for gender ($F(1, 36)=.869, p=.357$). There is no main effect of group ($F(3, 36)=1.000, p=.404$). There was not an interaction ($F(3, 36)=1.000, p=.404$).

There were no noteworthy differences from a between subjects ANOVA preformed on this data with four social groups, and this was because, in the concord task, only four adjectives describing a feminine noun (la abuela) were mismatched for gender and all erroneous tokens from the same participant. The high standard deviation shown for the group of participants in English, no network, underscores that we had an outlier in this group.

This sole participant to make errors in this context was not a resident of the racetrack community, lacked social networks in Spanish, did not report any activities he participated in using Spanish, and had attended a bilingual program for a short time but was removed from the bilingual program because he was unable to do the work there. He was presently in an English class, but was a heritage speaker. The vast majority of the participants in this concord task had levels of accuracy with non-local features that was like that which we would expect from native speakers, rather than second language learners. This participant who made errors produced six adjectives in the concord elicitation task. Of the six adjectives produced, one had no inflected
gender (grande), one was correctly inflected for gender (malo) and four others were incorrect for an accuracy of 20% (1 correct of five). This was the only child who made errors on concord. All other thirty nine individuals were 100% accurate.

For masculine adjectives, all eighty one adjectives were correctly inflected for grammatical gender to refer to their masculine nouns. This data breaks from findings of second language learner’s accuracy with non-local features, suggesting that these heritage speakers are more native-like in their performance.

In terms of the statistical analysis, there was a difference for group when a repeated measures ANOVA was tested on number of tokens. The group –BIL, -SN was found to produce less adjectives overall than the other groups, as described in section 4.1.1

**Code-switching in the concord elicitation** As noted, there were few instances of code-switched speech in this concord elicitation, and most participants were in a monolingual Spanish mode. A few instances of code switching occurred when the participant lacked the vocabulary they wanted, for example in this response of A., a fifth grade female who was trying to describe Little Red Riding Hood’s cape, “Usaba . . No sé cómo decirlo en español. Usaba . . like a little cape o algo así . . Esa cosa roja.” (She used . . . I don’t know how to say that in Spanish. She used. . . like a little cape or something like this. . . that red thing). Another instance of switching occurred with a fifth grade male, J. who used ‘sharp’ in English when describing the wolf, “tenía dientes sharp”. (He had teeth sharp). In this case, the matrix language was Spanish, and the English adjective fills the slot it would occupy in Spanish, following the noun. Since the English adjective provided, ‘sharp’ fails to reflect any morphological ending that expresses gender for the wolf, it was discarded from the data analysis for this chapter and project. A third individual, a fourth grade male R., used a switch for galletas when he described where Little Red Riding
Hood took “los cookies”. Apart from these few exceptions, participants were largely in a monolingual Spanish mode by the time the concord questions were asked. Though there were few instances of code-switching, these few examples could be taken into account with other instances of switching from the larger data set including sociolinguistic interviews and story retellings for future investigations, outside of reach of the present project.

4.2 Summary

This task on gender agreement in contexts with concord demonstrates that these heritage speakers, most of them born in the United States, have in fact mastered grammatical gender agreement in ways only native speakers have been found to do. The data on adjective agreement counters previous accounts of ‘incomplete acquisition’ or ‘attrition’ in bilingualism. In fact, it seems that nearly all the individuals who were participants have acquired grammatical gender even on this task of non-local features which would be challenging for a second language learner. While not all speakers demonstrated one hundred percent accuracy on grammatical gender (one did not) it is of note that this one speaker struggled in particular with the feminine adjectives, which is consistent with previous findings. This concord task served to demonstrate that the child participants were in fact able to demonstrate correct gender assignment in adjective contexts across the phrase.

These findings of gender acquisition need further explanation. These data can be interpreted with different accounts. One account interprets these acquisition patterns in light of a ‘universal access to grammar’ (Alarcón 2011). Other accounts may justify this data relative to social factors providing a rich linguistic setting. The role of social setting, in particular social networks, and educational programs for these speakers are also fundamental, and will be addressed in the following chapters.
Chapter Five

GRAMMATICAL GENDER IN THE STORY RETELLING SEGMENT

The previous chapter addresses details of one part of the methods for this study which focused on the bilingual children and their accuracy in producing phrases in Spanish. These phrases demonstrated grammatical gender agreement using non-local features across the phrase. The distinction between noun phrase agreement and agreement across the whole phrase is a crucial one noted in second language acquisition research, in particular because the agreement across the phrase is one that has been found to be more difficult to acquire as in the following examples repeated from Chapter 4.

(5) El bosque estaba muy oscuro

(6) El lobo estaba muy lleno*

Thus, researchers hypothesize that agreement in phrases (1) and (2) would be more difficult to acquire than simple assignments of determiners to a noun phrase. Adjective agreement, which is referred to as ‘concord’ in general is more difficult to acquire than selecting a determiner. This distinction has been documented in the SLA research (Franceschina 2001; Franceschina 2005; Hawkins and Franceschina 2004).

In the previous chapter, we saw that these bilingual children who speak Mexican dialect Spanish had generally acquired the agreement of adjectives across the phrase. In fact, only one child made errors in the data on concord agreement, and the errors only occurred with feminine tokens. To expand this to a wider sample than the 200 tokens considered in the previous chapter, in this chapter I turn to the tokens of gender expressed not only across the phrase in non-local contexts as elicited in the concord task, but in all gender contexts including local contexts of
gender assignment as found in articles/nouns in a story retelling (1750 tokens). With this larger base of tokens, I will employ an analysis of four groups of children based on their access to educational settings in Spanish (bilingual education) as well as dense social networks in Spanish.

In this chapter, I present the results of a transcription and analysis of story retelling components of the methods (naturalistic data). These inquiries relate to the images the child viewed on their classroom smartboard while they were recorded telling the story of Little Red Riding Hood (Marshall 1987). This data collection addresses the question of whether bilingual children correctly produce grammatical gender, and, the accuracy at which they do so.

5.1 Elicitation of Grammatical Gender in story retelling

As noted above, we developed a simple task to determine if these bilingual children controlled grammatical gender agreement. Children told the story of Little Red Riding Hood and they were recorded while they did this, a task which is consistent with the methodology used for gender agreement in second language research as well as previous work with SLA/heritage language (Montrul and Sánchez-Walker 2013; Montrul 2009; Montrul and Potowski 2007). Now that we know they control gender agreement (adjectives) we examine their production in a story retelling task to see if the child participants control gender well in contexts on gender assignment on determiners.

The expectation of the task was that children who controlled use of grammatical gender in Spanish would provide a variety of tokens in their spoken speech (determiners, adjectives, etc) to describe the characters and that their use of these gendered tokens would contain the appropriate morphological endings for the characters the children were discussing while telling the story. We would expect appropriate masculine determiners, adjectives, and word endings as described in the previous chapter. Words such as abuela, or niña, would often require an
adjective with a feminine ending, such as *Buena, maleducada, viejita, chaparra*. Similarly, the wolf, as a masculine noun, would often require adjectives with masculine endings, such as *mentiroso, espantoso, feo, traía dientes filosos*, either when adjectives were provided or in sequence with masculine determiners *el* or *los*. When adjectives were not provided, we would expect the determiner to match the gender of the item used. In total some 1750 gendered items were elicited from the child bilinguals who were participants. The average number of gendered items each child produced was 44.15, and the high range was 80 gendered items produced in a single child’s story retelling. All gendered items were extracted, including determiners, and adjectives.

5.1.1 Methods

I provide a brief overview of the methods fully explained in Chapter Three. Here I explain any task dependent differences (we see one participant did not complete this task in Spanish, for example) and overview the task components related to the data reported in this chapter specifically.

**Participants** Forty child bilinguals consented to participate in an after school project, and of these thirty nine completed the story retelling in Spanish which is the relevant task for this chapter. Participants were just like those described in the previous chapter: of Mexican heritage, ages ranged between six and twelve. Both genders were represented in an approximately equal fashion.

**Materials** Children viewed a copy of the illustrations from the text Little Red Riding Hood, on which the words were blocked out. The pictures were projected on the classroom Smartboard, and children advanced through the images at their own pace by touching arrows in the corner of the board, much like you might advance through a PowerPoint presentation. Children were
recorded telling the story, using a hand-held Sony recording device, and from this recording I gathered the 1750 tokens used for this chapter.

**Procedure** Children told the story as they advanced through the pictures, effectively creating a “performance” during which they retold the story. Some participants even provided voiced characters, sound effects, are other story telling details. The children were recorded. I transcribed the recordings, and coded the tokens of gender.

5.1.2 Results and Discussion

In the component of the methods on story-retelling, some 1750 tokens were inflected for Spanish gender. For this analysis, I break down the tokens based on two social factors associated with the speaker in consideration of four social categories that classify these speakers with greater/lesser quantities of Spanish language input.

**Figure 2. Accuracy on Grammatical Gender Agreement by Social Group**
The key question is, which individuals fail to acquire the grammatical gender in Spanish, and which group do they belong to: those that access native language instruction and social network, or those who do not? In respect to Research Question 1: will we find that speakers in Spanish language programs or English only setting perform better with respect to grammatical gender? With respect to research Question 2, will we find that speakers with a dense social network perform better than those with a less dense social network in Spanish or vice versa?

Looking at each variable: school program and social network independently we find possible effects for each variable before stacking the variables in a four group format (+Bilingual Education +Network; +Bilingual Education –Network; -Bilingual Education +Network; -Bilingual Education, -Network). First a look at each variable independently. Looking at tokens related to educational program, 1144 tokens were gathered from individuals in bilingual programs, and 606 tokens from individuals in English language programs. Why were there so many more tokens from those in bilingual programs? It is possible that these individuals provided more rich story narratives than their peers in English classrooms, or that their responses were longer in length. In any case, in spite of the difference in tokens we will see that the results of the two groups: heritage language Spanish instruction, no heritage language Spanish instruction are minimally different. Children in Spanish language classrooms made a total of 19 errors of gender in the data set for an accuracy rate of 98%. Those who were in English classrooms made thirty five errors with gendered tokens for an accuracy rate of 94%. Quantitatively there does not appear to be a great difference between these two groups. To answer research question two, those in Spanish language classrooms performed only slightly better.
To further analyze the data, I look at four groups, considering those who access BOTH social network and heritage language instruction, and those who access neither heritage language instruction nor a dense network of Spanish speakers, along with either one of these two social factors. Here the results prove to be a bit more interesting with a larger difference between these two groups: We can see in this table that of the four groups, three seem to perform quite well with grammatical gender in Spanish. The only group lagging by the others is the group does not access bilingual school programs nor social network in the heritage language.

Statistical Analysis of Gender Assignment Tokens
I submitted the data to a repeated measure ANOVA analysis with two factors where the between subjects factor was the four social groups with treatments of +/- for social network and bilingual education programs. The within subjects factors include grammatical gender feminine and masculine, and the dependent variable was accuracy on gender. There was no main effect of grammatical gender either masculine or feminine ($F(1, 35)= 1.596, p=.215$). There was no main effect of group ($F(3, 35)= 1.782, p=.169$). There was no interaction ($F(3, 35)= .567, p=.641$).

With respect to token count, there was no main effect of gender ($F(1, 35)= .792, p=.379$). There was no main effect of group ($F(3, 35)= .562, p=.667$). There was no interaction ($F(3, 35)= .598, p=.620$). There was no significant difference in number of articles, though the group +SN, +BIL produced more article tokens on average. Participants who were in the group –BIL, -SN produced less feminine articles (M=18.89, SD=6.33) and masculine articles (M=18.44, SD=12.70) than participants who were exposed to a dense social network with bilingual education (M=22.42, SD=6.037) for feminine tokens as well as masculine article tokens (M=20.67, SD=8.80).

With respect to the homogeneity, children in bilingual classrooms were more homogenous than those who weren’t, and children placed in an English class who lacked social network were the least homogenous of any group, with a factor of 92%. This reflects that it was those children exposed to the least input (English class and lacking social network) who were the least consistent in their group responses. The indicators for homogeneity suggest that later qualitative results of working with one participant from the group (-Bilingual, -Social Network) should be interpreted with some caution because the group shows diversity within itself. This is underscored by the high standard deviations found in the group (-BIL, -Social Network), as high as 25 for feminine article assignment and 8 for masculine article assignment. By contrast, the
group +BIL, +SN had a standard deviation of 1 for feminine article assignment. The homogeneity values and standard deviations for the group (-BIL, -Social Network) suggest this group as an area of further study within child bilingualism.

Because the ANOVA did not indicate differences, I further investigated the topic of grammatical gender. I compared the group –BIL, -SN with the other three groups combined using an independent samples t-test. This study found that participants who did not access a dense Spanish network and did not access Spanish at school had statistically significantly lower accuracy on grammatical gender agreement (88.94 ± 21.95) compared to peers who accessed a dense network and/or Spanish language instruction at the school (97.92 ± 3.30), t(36) = 2.188, p = 0.035. The results were statistically significant with the ENG –SN group preforming differently than a combined set of children in the other groups using an independent t-test. Some interesting points are made by these results. First, for the group of students who access a dense social network, there appears not to be differences in those groups that access bilingual education and those who do not. In fact, I checked these groups and there was no statistically significant difference between them, as we would expect from the table above. For students in a dense network, there is no statistical effect for heritage language instruction. A second point to be made is that, for students who lack a dense social network in Spanish, children in a bilingual education setting perform at 98% much like their dense network peers, while those who also lack heritage language at school perform at a lower accuracy level. Thus, there appear to be effects for instruction in the heritage language in cases where children do not access a dense network in Spanish. However, while there is a percentage difference between speakers in English and Spanish classes who did not access the social network it was not statistically significant. We must admit, if we were not researching in a Mexican enclave area with 90% Latino population,
children who lack a Spanish social network would likely be the case of majority of heritage language speakers in the United States. Admittedly, it would be highly unusual for many heritage speakers of Mexican Spanish to access a network of several hundred individuals who recently migrated from Puebla Mexico. Thus, effects for instruction are relevant, but not statistically so.

5.1.3 Gender Agreement or Gender Assignment?

The literature on acquisition recognizes a distinction between gender assignment, which is the assignment of an article or determiner to a noun, and gender agreement, which is the application of that noun’s gender to other terms in the sentence that express grammatical agreement, such as adjectives. In this section then I address three topics. First, what was the accuracy is assigning gender to determiners (gender assignment)? Secondly, what was the accuracy is assigning gender to adjectives (gender agreement)? Finally, I will combine adjectives from the concord task discussed in the previous chapter along with the adjectives that appear in the story retelling task for a more complete view of gender agreement in heritage language Spanish.

5.1.3.1 How accurate were the children with gender assignment?

I reviewed 1750 tokens of gender in the story retelling component, of which 1410 contexts were assignment of a determiner to a noun phrase in Spanish. Of the 1410 contexts for determiner assignment, the incorrect grammatical gender was assigned in forty five tokens, for an accuracy rate of 96.81%. Of the forty five tokens, sixteen of these are non-canonical forms I will address in section 5.1.5. Furthermore, of the forty five erroneous tokens, twenty were made by the same individual speaker who scored only 35% on gender accuracy. Outliers and
individual results will be addressed in section 5.1.3. Overall, barring non canonical forms and individual outliers, heritage speakers were highly accurate with gender agreement.

5.1.3.2 How accurate were the children with gender agreement (adjectives)?

I reviewed 1750 tokens of gender in the story retelling component, of which 332 exposed the process of grammatical gender on a Spanish adjective, the process of ‘agree’. Of the 332 tokens in the story retelling component, there were only seven errors, and actually two of these used female adjectives to describe a wolf dressed as a woman, which one could argue it might be rational to use feminine gender markings in this context. Taking the maximum possible rate of errors, including these on the wolf which has masculine gender in Spanish but was dressed as a female and referred to with feminine adjectives, the accuracy rate is 97.60, higher than the accuracy on gender assignment. More errors were made in gender assignment than gender agreement. This underscores that the children who were participants overwhelmingly commanded the process of “agree” that they were examined for in these tasks.

5.1.4 Individual results on grammatical gender

I was prompted to have a look at individual results on gender assignment. Some facts that stood out when looking at this data are that twenty three of thirty nine participants scored 100% on gender assignment. Even more made only one or two errors, which were generally errors in non-canonical forms I will address in the following section. There were very few individuals, only seven, who did not meet 95% accuracy on the gender assignment task, and we will have a look at these cases below. The breakdown of data follows below.
Looking at these seven individuals who did not meet 95% accuracy on gender agreement, they actually come from all four groups I investigated at in this sociolinguistic project. However, some of the lowest scoring individuals did come from the group who were instructed in English and did not access the dense social network, as shown in the following chart.
Table 2. *Lowest Scoring Individuals on Gender Agreement/Story retelling Task*

<table>
<thead>
<tr>
<th>Lowest Scoring Accuracy Gender Agreement</th>
<th>Sociolinguistic Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.48</td>
<td>English-No Network</td>
</tr>
<tr>
<td>73</td>
<td>English-No Network</td>
</tr>
<tr>
<td>86</td>
<td>English-Network</td>
</tr>
<tr>
<td>92</td>
<td>English-No Network</td>
</tr>
<tr>
<td>91.66</td>
<td>Bilingual-No Network</td>
</tr>
<tr>
<td>92.45</td>
<td>Bilingual-Network</td>
</tr>
<tr>
<td>93.88</td>
<td>Bilingual-No Network</td>
</tr>
</tbody>
</table>

In conclusion, overall the students performed well with gender agreement, the cases noted above being the seven lowest scoring cases. We can see in these outliers, that children without a dense social network outnumber those with a dense social network in this low performing group. Also, there are more outlying individuals in the English instruction—not accessing dense network group (n=3) than in any other group. The fact that this group has more outlying underperforming child participants than any other was the reason why the accuracy on gender agreement was statistically different from these other three groups. Since many students scored 100% accurate, and others had just a small number of non-canonical errors, we will turn to non-canonical forms in this section.

5.1.5 Relevance of grammatical assignment to non-canonical forms in the data set.
An aspect of grammatical gender that was less salient in this data set is the gender agreement of non-canonical forms. These forms do not have overt morphological expressions of gender, typically characterized in Spanish by the word endings –o, -a, or, cases in which the word ending is present but fails to correspond with the word’s gender. Some examples of items that had an associated grammatical gender that was frequently confused included: la miel, la flor, la llave, and the masculine item el arma. In the sociolinguistic interview section el idioma was also problematic. The bilingual children who participated in this study had particular difficulty with these forms and this finding is consistent with previous research on grammatical gender in bilingualism (Montrul & Potowski 2007) and also with research on non-canonical forms in particular (Montrul et. al 2008, Montrul et. al. 2013). For many students one or two errors with these non-canonical forms was the only error they made in their data recording. For instance, llave was produced once in the data set as el llave. Two individuals told the story using the term miel, in spite of being in the same grade and class at school, one individual used el miel, and the other used la miel. Twenty six individuals used flores in their story retelling. Most did use the correct feminine form, though two individuals alternated between las flores and los flores, and three others used the masculine form exclusively. Arma seemed to pose particular difficulty. Three speakers in the dense social network living at the polideportivo used la arma. Thus, we can see that these non-canonical forms pose particular difficulty to heritage language speakers, and in some cases are used in variation presenting both the masculine and feminine tagged forms.
Table 3. *Gender assignment to non-canonical nouns*

<table>
<thead>
<tr>
<th>Masculine NP Assigned Feminine</th>
<th>Feminine NP assigned Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Arma</td>
<td>El llave</td>
</tr>
<tr>
<td></td>
<td>El miel</td>
</tr>
<tr>
<td></td>
<td>Los flores</td>
</tr>
</tbody>
</table>

**Code-switching in the concord elicitation** There were few instances of code-switching in this data. Of these, most English NPs were assigned a masculine default gender. A detailed account of code-switching in the data set is beyond the scope of this study.

5.2 Summary

This chapter capitalizes on a real word situation where more than a hundred children reside on the backstretch of an Illinois racetrack with their parents who emigrated from Puebla Mexico. These children were found to access a dense social network in Spanish, and we compare features of their Spanish with their school peers who do not live in this context. This setting, modeled off a real world context, imitates the effects on grammatical gender acquisition for children who lack social network in Spanish in another city or context. For students who accessed instruction, the effects of network were mitigated and the accuracy rate of a speaker without network approaches that of in-network speakers. For a lay person, if you were a Spanish speaker living in an upscale neighborhood like Oak Park or Lakeview without a large community of speakers or a wide scale network in Spanish, it would be a benefit for any offspring to participate in a Spanish program at their school. In fact, the group that had no social network in Spanish, and no Spanish instruction at school, was the lowest performing group assessed at grammatical gender, with only 73%
accuracy rate and this group showed an accuracy on gender agreement that was significantly
different from the other participants who accessed Spanish in a social network and/or school
instruction using an independent samples t-test comparing two groups. However, another
interesting result is that students accessing social network were able to perform at an advanced
rate with their use of grammatical gender regardless of the school program they are in,
underscoring the importance of social network, a topic featured in the following qualitative
chapters.

Intriguing too, is the fact that for three of the four child bilingual groups, the accuracy on
the local features tested in Chapter five was quite similar to the findings of non-local item
features related in Chapter four. This is convincing evidence that speakers who access either
heritage language instruction at their elementary school or a dense social network are able to
acquire both interpretable and uninterpretable features in ways much like native speakers, in
spite of being bilingual and in spite of living in a contact setting in Chicago-land. The concept of
the “incomplete acquisition” associated with the bilingual or heritage speakers seems limited in
its application in this setting. In this location and social context, if one were to use the term
“incomplete” it might apply only to some speakers in the no network/no Spanish instruction
group. Even then, it would not to apply to all individuals in the group. Many bilingual child
speakers produced accurate statements of grammatical gender in Spanish, and many have
practice in Spanish as we will see from the qualitative section that follows.

One group did have problems with gender agreement and did not perform at ceiling. This
was the group lacking heritage language education in Spanish and lacking a social network in
Spanish. Neither factor, lack of social network alone, nor lack of Spanish instruction at school,
was itself correlated with a low accuracy rate on gender agreement. Rather it was the
combination of lack of Spanish in both realms that was correlated with a lower accuracy in gender agreement compared to the other groups. Overall lack of Spanish input in both realms (school and network) was associated with the group that was the lowest performing with respect to grammatical gender, on this story retelling, acquisition-based task.
THE SOCIOLINGUISTIC INTERVIEW

As I reported on results of the gender concord task for adjective agreement in Chapter Four, and results of the story retelling task and findings of gender assignment to NPs in Chapter Five, in this chapter I focus on results from the sociolinguistic interview component of the methodology. During the sociolinguistic interview nearly eight hours of recordings were made with forty participants: twenty two girls and eighteen boys. The interviews took place in sixteen sessions with groups from one to six individuals.

The groups with only one child obviously had some of the shorter recording times. These were not intentionally planned, and were the result when a second participant went home ill or was absent from school on their scheduled day. Similarly the larger group size of six had one of the longest interview sessions. This was also not expected, and occurred when the three main participants informed me they would be bringing younger siblings. Thus the planned group size doubled. This was a group of former students from my fourth grade class, who were part of a friendship group. The best group size was three or four individuals. This group size allowed for good conversation, was achievable in the hour time slot after school, and was not so large that some participants were dissuaded from talk time. The average time per interview was about half an hour, which was age appropriate. As mentioned when there was only one participant the interview time was shorter, sometimes around twenty minutes, and with a group size of six the interview took up to an hour.

There were 520 tokens of gendered articles and 108 tokens of gender on adjectives, representing a total of 628 gendered items in the sociolinguistic component of the corpus.
The sociolinguistic interview was qualitatively different from the other components of the task. During the story retelling task, child participants enacted a performance activity when telling the story, and nearly all of them engaged in the retelling task in Spanish. There were occasional instances of one word code-switches. The sociolinguistic interview component of the methodology was a distinct task. The interview was almost always a group conversation in which participants engaged in a discussion with classmates, peers, or siblings. Additionally this casual format of the peer discussion (posited as a best practice in Labov, 1969) permitted natural speech styles that were different from those in the retelling and offered more occasions for discourse-level code switching, and more participant direction in the languages employed in the conversation. For example, one participant, a student from my fourth grade class (2014-2015) who lived at the racetrack, commented, “Hay pues tierra, that when it rains, like se hace lodo.” (There’s –discourse marker-land, that when it rains, like it makes mud). This type of language variety was not typically found in the story retelling segment, where children were enacting a performance, suggesting some stylistic differences across components of the methodology. Retelling performances, in contrast, were largely constrained to one language, barring one word switches. Differences between sociolinguistic interviews and naming tasks have been found in the literature on Thai adults (Beebe, 1987), in a sociolinguistic/acquisition study of phonology, finding that either L1 or L2 may form a superordinate rule system, with effects for contexts in which the language carries social value. We can consider the distinct findings of the sociolinguistic interviews in this chapter in light of the style differences that may exist between sociolinguistic and acquisition-based (story retelling) tasks, as well as in consideration of the question “where is Spanish socially valued?”
Several researchers have studied the topic of bilingual child language from a variety of approaches both sociolinguistic and acquisition in nature. They have, with varied focuses, and varied methodologies, commented on each other’s results drawing comparisons between the findings of both fields: acquisition and sociolinguistics. For instance, the topic of pronoun variation in child bilinguals has been treated from the point of view of both sociolinguistic and acquisition studies (Shin and Van Buren to appear 2016, Montrul & Sánchez Walker 2015). Thus we can consider, the way in which the selected methods, interviews or retellings, result in like or comparable data sets for representing the contact use of these various features across linguistic corpora. In this section, I report on the findings of data from forty Mexican-American bilingual children, focusing on their performance during a group sociolinguistic interview.

6.1 Methods

Participants Forty child bilinguals consented to participate in an after school project, and of these all participated in a sociolinguistic interview, relevant task for this chapter. A few insisted on speaking English in the interview, this will be addressed as it relates to the results of the data. Participants were just like those described in the previous chapter: of Mexican heritage, ages ranged between six and twelve. Both genders were represented in an approximately equal fashion.

Materials Children sat at a table in my classroom, where they were presented the assent document and explained the recording equipment. In most cases, children who participated in the interview brought along a sibling or with same-age peers from their grade/class as recommended in the literature (Labov, 1969). During the interview, I asked the children background information about their social network, family, siblings, and languages used in these social contexts, along with further questioning to elicit possible social networks in their
community. These inquiries were made to document the student’s social network to place in groups for the statistical analysis. The questions were extracted from the Q-GEN II set of sociolinguistic question strands, which I modified for topics that were both of interest to children and appropriate for their age, as I mentioned previously in section 3.5.2. Children were recorded during the conversation, using a hand-held Sony recording device.

Procedure The children were recorded. The sociolinguistic task allowed for looser discussion. Children had choice in the language and vocabulary they used. Part of the procedure included my transcription of the recordings, and coding of gendered tokens.

6.2. Results

Table 4. Accuracy on Grammatical Gender Agreement by group (sociolinguistic interview compared to story retelling)

<table>
<thead>
<tr>
<th>Group</th>
<th>Accuracy/Socio</th>
<th>Accuracy/Retelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>+Bilingual Ed +Social Network</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>n=10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Bilingual Ed + Social Network</td>
<td>100%</td>
<td>98.6%</td>
</tr>
<tr>
<td>n=4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+Bilingual Ed –Social Network</td>
<td>99.38%</td>
<td>98%</td>
</tr>
<tr>
<td>n=14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Bilingual Ed –Social Network</td>
<td>98.61%</td>
<td>73%</td>
</tr>
<tr>
<td>n=6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I have some comments about this data, and the different findings in the results of the sociolinguistic interview and the story retelling. It has been noted that a story retelling is a highly cognitively demanding task. In this data set, each social group performed more accurately on gender agreement in the sociolinguistic interview task compared to their performance on the same linguistic object in the cognitively demanding retelling task. The disparity in results is marked as noticeable in particular in the group receiving the least input, the group that does not access a dense network nor do they participate in heritage language instruction at the school. This group scored only 73% accuracy on the story retelling task, but 98.61% accuracy on the sociolinguistic interview task, approaching native-like results in the later.

For example, one participant, J.A., scored only 37.5% accuracy on gender agreement during the story retelling, but 100% accuracy on his tokens of gender agreement in the sociolinguistic interview. For instance, he formed an accurate usage of both gender assignment (la casa) and gender concord (la casa limpia) in the following expression from the sociolinguistic interview.

(9) Oh Rules! De dejar la casa limpia cuando nos vamos.

‘Oh Rules! Leave the house clean when we go.’

However, in the story retelling the same subject showed greater difficulty:

(10) El mamá (*) le está diciendo que se va a casa de su abuelita. Los gatos están en la puerta y lo (*) dejaron abierta.

‘The-masc Mom-fem is telling him to go-indicative to his grandma’s house. The cats are at the-fem door-fem and they left it-masc. open-fem’
In the later example from the story retelling performance task, the student makes several gender errors in common usage words: *el mamá* contains a gender assignment error, while ‘*lo dejaron abierta*’ (they left it-masc open) reflects an inaccurate selection of object pronoun, which appears to refer to ‘*puerta*’ (door-feminine) with a masculine pronoun. However the concord is correct on ‘*puerta . . abierta*’.

The findings of greater proficiency on a sociolinguistic task compared to an acquisition-type story retelling task would suggest that children who lack input in the heritage language at school may struggle with academic tasks in Spanish like a story retelling. The data suggests that the story retelling task may have been a more complex task for low input speakers. We can consider further implications of methodological choices for heritage studies, and resulting effects on labels given to heritage language speakers.

Figure 4: Comparing Accuracies on Sociolinguistic and Story Retelling Tasks.
These findings can be interpreted with some caution, since a few individuals were not counted in the sociolinguistic task, by self-selection. That is, a few participants, when meeting with their peer group, chose to speak to their peers and myself in English during the sociolinguistic interview. This occasionally occurred in spite of my efforts to state all questions in Spanish. Thus, when the data was imported to SPSS, individuals who failed to produce tokens of gender agreement were dropped from the statistical analysis. Some unintended subject attrition resulted, with a loss of a few subjects. Lost subjects were represented among all the social groups. Of the thirty nine individuals who participated in the sociolinguistic interviews, thirty four produced data to be analyzed for gender. One possibility then, is that accuracies were higher in the data from the sociolinguistic interview, simply because children who were not comfortable in Spanish, insisted on speaking English during the sociolinguistic interview, failed to produce any gendered tokens, and were dropped from the data set in this sociolinguistic task (were not counted).

I will claim that this is not the case, and in fact children were more proficient in their performance on gender agreement during the sociolinguistic interview based on two accounts. First, we will extract the five individuals refusing to speak Spanish in the sociolinguistic set from the retelling data set, and re-run the statistical analysis, showing that there is still a disparity in the children’s’ performance between the two tasks, retelling task and sociolinguistic task, even excluding the five individuals who failed to produce Spanish tokens (those who opted out out). Secondly, I will analyze here the retelling performance of the individuals who failed to produce tokens in Spanish during the sociolinguistic interview, showing that children who spoke English during the sociolinguistic interview included children who had high accuracy scores on the retelling. In effect, these individuals who declined participation in the heritage language during
the interview did not do so because they were low proficiency heritage language speakers, and were not the individuals bringing down group accuracies on the retelling task. This finding about English use in the sociolinguistic interview part of the methodology is consistent with findings about code switching, accounting for the speaker’s knowledge of the code switched term in Spanish (Zentella 1997). Showing, in effect, language is a choice. This analysis suggests that choices made during the sociolinguistic interview were less determined by the individuals’ accuracy in Spanish and more determined by stylistic choices of the child’s own participation.

First, I deal with the question of explaining the higher accuracy rate found in the sociolinguistic interviews, confounded by the fact that the sociolinguistic interview includes less participants than the story retelling. To address this, I re-run the ANOVA with the story retelling data, including only participants who also participated in the sociolinguistic interview (n=34). The new results, different from those reported previously, appear in bold in the following table.
Table 5. Accuracy on Grammatical Gender Agreement by group  
(sociolinguistic interview compared to story retelling—only participants who completed Sociolinguistic interviews)

<table>
<thead>
<tr>
<th>Group</th>
<th>Accuracy/Socio</th>
<th>Accuracy/Retelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>+Bilingual Ed +Social Network</td>
<td>100%</td>
<td>98.80%</td>
</tr>
<tr>
<td>n=10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Bilingual Ed + Social Network</td>
<td>100%</td>
<td>96.16%</td>
</tr>
<tr>
<td>n=4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+Bilingual Ed –Social Network</td>
<td>99.38%</td>
<td>98.50%</td>
</tr>
<tr>
<td>n=14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Bilingual Ed –Social Network</td>
<td>98.61%</td>
<td>89.58%</td>
</tr>
<tr>
<td>n=6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this table I compare the accuracies of the story retelling and sociolinguistic task only with those individuals who completed both. Excluding the individuals who failed to produce gendered tokens in the sociolinguistic interview increased the results of accuracy of the –BIL, -SN group. That is, the difference of a 73% accuracy score on retelling and 98.61% scores on the sociolinguistic interview in this group was partially due to a few low performing speakers who failed to produce tokens in the sociolinguistic interview. Still, even excluding these individuals, the –BIL, -SN group was still the lowest performing group on the story retelling, and their
sociolinguistic interview accuracy on gender agreement was 98.61%. Some speakers performed better on a sociolinguistic interview task than a story retelling task.

Looking at the story retelling data excluding individuals who did not produce Spanish during the sociolinguistic interview actually resulted in a decrease in the mean on the –BIL, +SN group. The two groups of students in bilingual education maintained their accuracy scores similarly in both the story retelling and qualitative component.

In this section, I am going to draw a comparison between the story retelling task, which had thirty nine participants, and the sociolinguistic data set, of which only thirty four of the participants produced gendered data (Spanish). I will elaborate here upon the five individuals who did not provide gendered data in Spanish in the sociolinguistic task did not result in the increase in means on the sociolinguistic data set. In effect, these were not the individuals who brought down the means from the story retelling data.

**Table 6. Details of participants who did not produce gender in the sociolinguistic task: Identifiers, Accuracy on gender in retelling task, and social background**

<table>
<thead>
<tr>
<th>Number</th>
<th>Accuracy</th>
<th>Social Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100%</td>
<td>Bilingual/Used to live in dense network</td>
</tr>
<tr>
<td>2</td>
<td>100%</td>
<td>English/No dense Network</td>
</tr>
<tr>
<td>3</td>
<td>97.6%</td>
<td>English/Lives in Dense Network but recently moved to area</td>
</tr>
<tr>
<td>4</td>
<td>92.9%</td>
<td>English/No Dense Network</td>
</tr>
<tr>
<td>5</td>
<td>74%</td>
<td>English/No Dense Network/Older Sibling of #4</td>
</tr>
</tbody>
</table>
These data suggest that most of the individuals who failed to produce morphological gender in the sociolinguistic interview were capable of doing so, simply for stylistic or other reasons they chose to predominate in English during the group discussion part of the study. In fact, these five individuals were from two meeting days (Adnan and Stephanie met on the same day and the other three on a different day). This suggests that in some groups of interlocutors, English became dominant in the discourse, in spite of some individuals’ capacity to produce gendered tokens in Spanish, as shown by the story retelling task.

These findings show that heritage language speakers show a higher accuracy on measures of gender assignment in a sociolinguistic interview compared to a retelling. The group with the least input in Spanish, lacking instruction in Spanish at school and lacking a social network outside, was still the lowest performing group. However when using the sociolinguistic task the differences between the –SN, -BIL group and other groups was cut to less than two percentage points. On the sociolinguistic task, two groups scored means at 100% accuracy, and these were the two groups accessing social network. Furthermore, all four social groups were between 98%-100% accuracy, approaching or meeting accuracies found by native speakers. As a result, we can expect that there were not any significant differences between these four subject groups, and in fact a repeated measures ANOVA showed this was in fact the case. There was no main effect of gender ($F (1, 25)= .217, p=.607$). There was no main effect of group ($F (3, 25)= .870, p=.470$). There was no interaction ($F (3, 25)= 1.685, p=.201$).

In fact, there were further differences between the findings of the story retelling (Chapter Five) and Sociolinguistic Interview (Chapter Six). In the retelling component, I found that accuracy on gender assignment showed a significant difference between the group experiencing the least input conditions (-BIL, -SN) and the rest of the participants. However, in the
sociolinguistic interview task, the low input group did not perform any differently than the other three groups with varying input conditions.

How do these findings impact prevalent terminology for heritage language speakers? These speakers have been found to be proficient in sociolinguistic studies of dense networks (Shin and 2016), and have also been labeled “incomplete” in acquisition research. However, no study to my knowledge has studied proficiencies of heritage language speakers across methodologies, both sociolinguistic and acquisition grounded. There is a study on phonology of Thai adults discussing phonological accuracies across style shifting (Beebe, 1987). However this line of thought has not extended to heritage speakers thought to be ‘incomplete’. This project, which does so, demonstrates that heritage language speakers, who were proficient in concord, demonstrate greater proficiencies in a sociolinguistic task. We can only speculate then, if social networks of migrant children were subjected to an acquisition based task, they might be labeled as having “incomplete grammars”. On the other hand, individuals labeled “incomplete” or “low proficiency speakers” might be found to have higher proficiencies if measured with a different (sociolinguistic) task. This study, employing a diverse methodology has made some contribution in showing that low input speakers show varying proficiencies across distinct methodological tasks. I propose that the methodology of the task has some role in the linguistic competency and label we place upon heritage language speakers.
QUALITATIVE RESULTS
PARTICIPANT OBSERVATION IN THE COMMUNITY

As the project progressed, I engaged in participant observation in a select group of the child participants, with a case study approach combined with principles of ethnographic fieldwork. I observed four children outside of school: Lalo neither lived in the racetrack community nor was he in a bilingual class (-SN, -BIL), another, Ricardo, was living at the racetrack community but not in a bilingual class (+SN, -BIL). Two other participants, Kay and Kara, had attended bilingual classes but were not living in the racetrack community.

These students had already returned consent forms agreeing to participate in community fieldwork when they attended the classroom component/quantitative piece. I pursued continuing the work outside of school by either commenting to the parents in person that the child had mentioned their activity that I was interested in observing, or alternatively writing a note that the child had commented that they would be participating in an activity and would it be possible to join them there. Thus I used data gathered from the sociolinguistic interviews as a basis for pursuing a continued study of select students for the case study component.

The case study students are representative of the diverse groups accounted for in the quantitative piece, however, as noted above certain students were targeted because they presented topics that were interesting to view and observe outside of school. For instance, one student mentioned that they would be celebrating la Virgen de Guadalupe (Virgen of Guadalupe) the week we met for a quantitative appointment. When the child presented a topic of cultural or linguistic interest this became a basis for pursuing fieldwork with select individuals, as I developed ideas for this qualitative session based on the findings of the sociolinguistic interviews.
In this qualitative section, data will show that all four case study students maintained their Spanish through interactions with family, local interactions at the hipodramo (Sport’s Center) inhabited by immigrants from Puebla, or at local religious services attendees participate in using Spanish. Since the population of Mexicans living in the United States is sizeable, these children were able to access linguistic resources in the community that enabled them to maintain their Spanish. The focal students are functionally bilingual and interact with certain individuals in each language. This section presents qualitative observations from my interactions with these focal students, as well as the parents, during some community activities.

Children represented used Spanish in their lives and activities outside of school, and Spanish was vibrantly employed in the local community. Here I focus first on two students I observed in their religious settings/religious activities. One eight year old boy, Lalo, mentioned the celebration of the Virgen de Guadalupe at a local church and his mother responded to my inquiry with a detailed letter explaining these traditions and invited me to accompany them to the church activities. Another family of Ricardo, a sixth grade boy residing at the racetrack, welcomed me to a local Kingdom Hall of Jehovah’s Witnesses where the family took part in religious readings in Spanish. I also observed two students who had attended bilingual classes in their community activities. I observed Kay at local soccer tournaments, and I observed Kara at her dance school’s Halloween party. At all places where I visited with the students Spanish was in use, and widely so.

7.1. Role of the Researcher in Qualitative Research

Here I explain my role in qualitative research in this Latino community. First, I was not a resident of either community, and this included the school community, as well as the racetrack community some children lived in. As a result, accessing some parts of the community life
became difficult, and this included accessing the racetrack residences. Because I was not a community member, I attempted to develop conversations with parents about out-of-school activities I could observe and participant in. This was how I came across the possibility to visit children at their religious activities, first at the Jehovah’s Witness Kingdom Hall, and later at the local Catholic Church Mary Queen of Heaven where I attended the Fiestas Guadelupanas.

7.2 “No somos de aquí ni somos de allá”: las fiestas Guadelupanas at a suburban church.

As mentioned, I interviewed a student in my class Lalo (eight years old) who spoke Spanish but had not been in a bilingual class. He mentioned planning to celebrate the day of la Virgen de Guadalupe later the same week we had met, and his mom Sylvia was more than welcoming in explaining the Mexican traditions of the celebration to me and inviting me along. Here I explain what practices are entailed in the celebration of Virgen de Guadalupe at a local Catholic Church, the typical language practices enacted at the community church event, the clothing styles worn by community members attending the event in particular the children, and finally, sharing some comments Sylvia made about raising her children as bilingual in Chicago and her choices and decision making about home language practices and school programming. I will show here that the events, language use, and clothing and style invoked show that the event is celebrated here in the suburbs as a replication of the celebration that would take place in Mexico.

7.1.1 Celebrating la Virgen de Guadalupe

At churches throughout Chicagoland, in neighborhoods where Mexicans reside, masses celebrate the Virgen de Guadalupe the second week of December. Sylvia commented that this was a special celebration for Mexicans, who pray to the Virgen of Guadalupe for favors or miracles (APPENDIX D). The Virgen of Guadalupe is believed to have made an appearance in
Mexico, Distrito Federal in an area called “serrito en la Ciudad de Mexico”. Sylvia was very proud to report that the state of Illinois has the only site for the Virgen de Guadalupe in the United States, which can be found in Desplaines, at “Santuario de Nuestra Señora de Guadalupe” (Serrito del Tepeyac), a replica of the site in Mexico City, Mexico. The site in Desplaines is attended by upwards of 150,000 people the week of Virgen de Guadalupe’s birth in December. She commented, “para todas las personas que no podemos ir a México a verla hallá [sic] la podemos visitar aquí”. (For all the people who can’t go to Mexico to see her there we can see her here). Sylvia had attended the site in Desplaines the previous year, in 2014, where the Virgen “La Morenita” (Little Tan One) is celebrated with music of mariachis, food, and masses, however this year they chose to celebrate at a neighborhood church where I joined them.

The festivities at the neighborhood Catholic Church, María Reina del Cielo/Mary Queen of Heaven, started around 10 PM as the church was decorated with flowers and flowers were available for purchase outside of the church entrance. It is traditional for participants, especially children, to present flowers at the altar for the Virgen. At 11PM the festivities continued with the arrival of a troupe of dancers, Comparza la Pura Lumbre de Morelos, dressed as bearded men in indigenous costumes. The dancers paraded through the aisle of the Church, accompanied by vibrant music proportioned by a D.J. Sylvia explained to me that this was a tradition from the villages of Mexico, where dances were presented to la Virgen de Guadalupe. Different villages may use different dances or costumes, but the troupe of dancers was reenacting the traditional experience. Thus, these practices served to reenact in Chicago experiences that Sylvia, her husband, mother, sister, and others community members had experienced in their youth in Mexico. A photo of the costumed dancers follows.
Photo of Traditional Dancers at Mary Queen of Heaven Church
Following the traditional dances made for la Virgen de Guadalupe, the next celebration from 12:00 midnight until approximately 1 AM was celebratory music by a mariachi group, which first sang las Mañanitas for la Virgen de Guadalupe, and then proceeded with other traditional songs. During the proceedings of music and dance, individuals entering the church approached the altar with floral offerings for the Virgen and to pray. Some approached the altar on their knees.

Following the dance troupe (11PM-midnight), and Mariachi band (midnight-1AM) there was a traditional mass to celebrate la Virgen de Guadalupe (1AM-2AM). The mass took place in Spanish with four Spanish speaking priests. All components of the mass and readings were celebrated in Spanish, including the homily which discussed motherhood and the role of the mother of god. More celebratory music continued hour by hour: 3AM, 4AM, and 5AM. Following the 1AM mass tamales, pan and coffee were served in the Church community room. Following the 6AM Mass more tamales and coffee were served. (SEE APPENDIX E).

The celebration was well attended by the local community. I saw other participants from this study, other parents, and even coworkers and cafeteria staff from the school where the ethnography took place in attendance at this celebration. The seats in the church were filled by the time the mariachis started playing, and people needed to be distributed to the balcony area. Once the balcony was filled, participants were attending on a standing room basis. I would estimate that some 3,000 community members attended the celebration. In fact, the homily by one priest suggested that the celebration of la Virgen de Guadalupe was more popular than Christmas, remarking to the crowd on the number of people “cuántos de ustedes van a estar aquí en dos semanas?” (How many of you will be here in two weeks?)

7.1.2 Language Practices at the Catholic Church: María Reina del Cielo.
As noted, the mass on this day celebrating the Virgen de Guadalupe, took place in Spanish. Sylvia noted that the church celebrated four masses each Sunday, of these three are celebrated in Spanish, and she noted the one English mass was not well attended. She reported that her son’s Catechism class was in English, because the teacher of his room spoke English, however it seemed that other classes may be operating in Spanish in accord with the language the teacher used.

All responses during the ceremony were remarked in Spanish, including prayers and other traditional responses part of the Catholic Church Service. Additionally, participants frequently shouted joyfully “¡Que Viva!” (Let her live!). When a Mariachi member or priest stated, “¡Que Viva Cristo Rey!” (Let Christ Live!) the community responded “¡Que Viva!” (Let him live!) This was followed by the mariachi or priest joyfully shouting “¡Que Viva la Virgen de Guadalupe!” (Let the Virgen of Guadalupe live) and the community responded “¡Que Viva!” (Let her live!) Spanish was found to be overwhelming present in this community Church celebration of La Virgen de Guadalupe.

7.1.3 Traditional Clothing at the Celebration

Part of the celebratory activities for Virgen de Guadalupe included a style of dress used by children, and some women participating at the altar. Young girls and some of the older women dressed as “Indianitas” (Little Indian Girls) in traditional style clothing using indigenous-type skirts and white embroidered blouses. Additionally, many girls were seen with hair ribbons in red, white and green, the colors of the Mexican flag. This style of dress was used by some older women, with older community members showing less detail to hair adornments than young girls. Some young boys were dressed as “Juan Diegitos” (Juan Diegos) replicating the dress style of a child la Virgen de Guadalupe made an appearance to in 1531 in Mexico City.
The “Juan Diegitos” were dressed in white pants and shirts, with a poncho type white covering with red adornments. Occasionally older men had vests with detailed images of la Virgen, similar to the image one would find on a holy card (APPENDIX F), and blinged out. We can see then that the styles used at the celebration were employed to replicate some historical events in Mexico, such as the Juan Diegitos, and otherwise replicate the way that children and adults would dress for this type of event were they celebrating the day in Mexico.

7.1.4 Raising four children as bilingual in Chicago

During the event in between the traditional dancers, the mariachis, and the mass, I had occasion to talk to Sylvia, who was the mother of a participant, and she commented about language practices she used at home with her four children.

Sylvia commented that with her oldest child (the participant’s older brother, now in high school) she spoke to him in English, which is interesting and not the finding we might typically expect from a study of birth order. As he grew up, Sylvia noticed Spanish was a struggle for her first born. Though she initially felt the assimilationist needed to speak to him in English, when she saw the negative impact on his Spanish, she changed her mind about this practice, in particular after several of the son’s cousins came to visit Chicago. After the cousins’ visit, she witnessed their Spanish skills, and realized that she could speak to the children in Spanish at home and they would learn English at school. She started to speak to the oldest child exclusively in Spanish, which was a struggle, though he ultimately improved his Spanish. Thus, the family language policy took strides against assimilation to ultimately support heritage language attainment and maintenance.

Her second daughter then, was in a bilingual education program, though only for two years and then she pulled her out of the bilingual program noticing a different quality of teachers
between the two programs English and Spanish. The third child, LALO, the participant from my class, attended class in English and spoke Spanish at home. Sylvia acknowledged that this practice left the child lacking certain vocabulary, though she deemed his skills to be adequate. Lalo and the other children had never been to Mexico, they used Spanish at their home with their parents and grandmother. An aunt I met at the church celebration plans a trip to Michoacán for Christmas, and Sylvia stated, “*Se dice que Mexico está muy feo ahora. Que vaya ella a ver que me cuente*” (Mexico’s gotten ugly. Let her go and let’s see what she tells me).

Most amusing of the children’s linguistic capacities was her youngest child, three years old. He does not attend school, and as such he only speaks Spanish, evidencing Sylvia’s change in family language policy from oldest to youngest in the family. I asked Sylvia if he would go to school in English or Spanish, imagining that if given a language test the local school would recommend a placement in a bilingual room. Would she sign him out of the program? Sylvia stated that the youngest would be attending pre-school in English, so he would use Spanish at home and English at school. She classified my Spanish as slightly peninsular, and in discussing dialectal differences Sylvia commented that the youngest speaks peninsular Spanish as a result of watching Peppa cartoons on her smartphone. She commented that the three year old overuses the present perfect tense, having asked mom “*¿Qué ha pasado?*” (What has happened (past perfect?)) along with other expressions more traditionally found in peninsular varieties such as “*¿Qué cosas mas raras!*” (What unusual things!), which she attributes to his viewing a peninsular dubbing of a British cartoon in Spanish online. She was very surprised that her three year old would use these expressions and told him “*niño, no hablamos así, decimos ‘qué pasó’*”. (Boy, we don’t talk like this, we say what happened –preterite.)
The observation of the family and four children was fascinating, especially the spectacular celebration of La Virgen de Guadalupe at the local Catholic Church María Reina del Cielo. The experiences of visiting with the family allowed me to learn about their culture, an experience the family seemed to value as well. Furthermore I gained knowledge of how cultural celebrations serve to enact: culture, language, and religion in one setting.

7.3 Where I live it’s a big Place Where I live like Big Big,

Ricardo is a heritage speaker who, like Lalo is in an English class at the local school. Distinct from Lalo, Ricardo lives at a local racetrack with his parents who emigrated from Mexico. Ricardo described the racetrack where he lives using these words: “where I live it’s a big place where I live like big big”. As a member of this racetrack community he lives in a dense social network with, classmates, peers, and many other families from Mexico. Ricardo caught my attention because he uses Spanish at a local Jehovah’s Witness Kingdom Hall I had visited previously with other students from the racetrack. In this section I will address how Ricardo’s social network, in particular his membership in the church community, contributes to his Spanish use and heritage language maintenance.

7.2.1 Methods: Interview & Ethnography

The child participated in a sociolinguistic interview, story retelling, and concord task along with their peers. This child consented to all parts of the methods and after knowing that the child used language at a local place of worship, the Kingdom Hall of Jehovah’s Witnesses, I decided to follow up with the family more to learn more about how they use both languages. I visited at the Kingdom Hall weekly for a period of several months, the service lasts approximately two hours per visit.
7.2.2 Linguistic Objects in Ricardo’s Spanish

When I interviewed Ricardo with a peer group, he was so proficient in English I wondered if he would be able to do the story retelling in Spanish. Completely bilingual, he mastered any task I gave. His score on gender agreement was 100% (with 56 tokens for gender). However, Ricardo struggled with the DOAM using the marker in only 57% of obligatory contexts. The case marker was occasionally used correctly, “acá veo el lobo que se comió a Caperucita Roja”, (Here I see the wolf that ate up Little Red Riding Hood), but other times it was not used in a native like-way, as in the following: “veo su mama” (I see her mom). Ricardo did use code switching and borrowing in his story, in two isolated contexts. One borrowing referred to *fenza* (fence) in the story pictures from *Little Red Riding Hood*. A code switch Ricardo made was referred to in section 10.5.2, “veo que Maybe sacaron a Caperucita” (I see that maybe they took Little Red Riding Hood). Overall Ricardo was a competent bilingual speaker.

7.2.3 Qualitative findings of the sociolinguistic interviews

I met with Ricardo with a peer group, and during the interview, he reported that he spoke to his mom in Spanish, but spoke to his dad in both languages English and Spanish. He has no siblings. During the interview Ricardo understood all of my questions in Spanish, but he responded to all questions in English during the sociolinguistic component. As a result I was skeptical about Ricardo’s story retelling component, however he was successful in relaying the pictures in Spanish. A competent bilingual, he was accurate on gender agreement at 100%. He reports he wants to be an engineer.

7.2.4 Community ethnographic fieldwork
I visited with Ricardo, his mother, and other members of the racetrack community at a local place of worship: Kingdom Hall of Jehovah’s witnesses. The hall is linguistically segregated from the moment of entry. There are two doors, the south door is for the Spanish speaking congregation, while the north door is for the English speaking congregation (predominantly African American). A major component of the worship is referencing a variety of texts: a book of songs, the *Santas Escripturas* (biblical text), and a third text *La Atalaya*, a publication put out by the Jehovah’s Witness Organization. Crucially the organization publishes all materials in a variety of languages. The location I visited used the materials in Spanish at the south entrance of the building, however with a glance at the organization’s webpage jw.org, one can see that they publish *La Atalaya* and *Santas Escripturas* in a variety of languages, even Basque. The rooms and groups are divided, and in the Spanish speaking group crucially all materials referred to, as well as any worship or talk, and community participation, is partaken in Spanish. As I participated there I observed Ricardo and his mother participating in Spanish in these community activities. It was explained to me that the worship organization publishes parallel texts to support children who have difficulty participating in the worship with their parents (in effect a modified text for heritage language speakers). Additionally, there were weekly sessions for children in which the children study the print material for the weekly meeting. I was intrigued by the profound literacy basis used at the Kingdom Hall/Spanish speaking room, and the methods used to accommodate participants with limited Spanish. I observed that this dedication first to literacy material in the heritage language as well as the socialization and required participatory components became a forum in which families and children such as Ricardo developed and maintained their use of the heritage language Spanish.

7.2.5 Use of Address forms at the Kingdom Hall
Discourse components such as address forms were a critical component to participation at the Kingdom Hall, and these were universally enacted in Spanish. Female and Male members of the congregation were addressed as “hermano lastname” or “hermana lastname”, and individuals were often called upon in this manner to comment on the weekly readings. New visitors to the congregation were referred to as “hermana/hermano”, (sister/brother) without use of the last name if it was unknown. The address forms were related to a hierarchical component, and children were referred to simply as “joven” (youth) or “joven familyname”, while adolescents were sometimes referred to as “hermanita”. Children were also called upon to read sections of the texts or interpret them, and these activities, all enacted in Spanish, played a prominent role in the worship routine. La Atalaya, or monthly magazine, has lectures on chosen topics, with corresponding questions of clarification or interpretation noted in the margins. A critical component of the worship, is that participants answer these questions noted referring to the religious texts, and I observed during my visits that this participation always takes place in Spanish. The use of texts at the religious service provided a ripe setting for children to use their heritage language with their family and other adults while focusing on reading, listening, and speaking. Though both Lalo and Ricardo did not attend class in Spanish, they participated in activities with their families that allowed them to use Spanish outside of school.

7.4 Futból Culture

Not only did I observe children at their religious activities (Kingdom Hall of Jehovah’s Witnesses, Mary Queen of Heaven Catholic Church), I also visited some children in their athletic/hobby past times. I visited a participant Kay, with his younger sister (presently in my class) and younger brother. Kay, the participant, is a talented soccer player recognized by local educators who coach on the local high school soccer team. The area, housing a large percentage
of Mexican ethnic students, has a strong culture of soccer, and the public high school soccer
team has fared well in yearly state championship games. Kay in particular was scouted at a
young age of eight when he was a third grader in my class, and was recruited to several local
teams. His mom reported to me that he competed in up to five teams at once, including MAYAS,
REAL JERUCO, ALLIANCE, and TLACUACHINEZ. On the day I observed the family had
been to five different games. Mom reported that she used to take Kay to five teams’ practices,
however, now that his younger sister and younger brother also need a team, and practices, the
oldest was forced to cut his practices to only three teams.

7.3.1. Language Use at the soccer game by parents

At the game, the home team “MAYAS” had parents who were encouraging the children
from the sidelines using Spanish. Some parents used code-switching and appeared to be
bilingual. One parent, in particular, said he worked for the local town government and made
comments in both languages. However, the coaches and most parents encouraged children from
the sidelines in Spanish, with occasional remarks from few individuals in English.

7.3.2. Language use at the soccer game by child players

The coach spoke to the young players in Spanish, and many players also spoke Spanish.
After the game, Kay, the primary participant, played goalie while the younger players took shots
at the goal. Meanwhile the parents discussed decision-making for the team. The participant,
Kay, spoke to younger players in accented English. He is Spanish dominant, but was speaking to
the younger players in English. One younger player shouted “My turn! A ver si la meto!” (My
turn! Let’s see if I get it in). Thus the younger players indicated bilingual competence in their
participation, but some responded to Kay in Spanish, and both languages were accepted as an
interaction.
7.3.3. Language use when organizing team decision-making (parents and coach).

Following the game I observed, parents of children on the MAYAS team met with the coach to discuss taking decisions about where to train the players on the team. The team has a non-profit organization, so parents had to find/select a local arena to house the children’s team practices and jointly fund the practice space. Parents discussed looking for an appropriate space in town, the difficulty in finding a space in town, and the closest place they could find to train the children, cost of renting/using the space, and times available. All of these decision making conversations took place between the coach and parents in Spanish, though some parents appeared to speak English also, the discussion took place in Spanish. Most parents sending their children to this soccer team in town seemed to be Spanish dominant, with a few families being bilingual but willing to use Spanish in these spheres.

7.3.4 Language use by opposing teams.

In one match I witnessed, the home team (MAYAS) played a competitor GALAXY from a suburb of Naperville. The contrast between the two communities was astonishing. Parents of the Naperville team spoke English exclusively, while parents of the home team MAYAS used Spanish in cheering the team and in team decision making. Examining the socioeconomic status of Naperville, IL according to the US Census 76.5% of the population of Naperville is Caucasian. Only 5% is Latino, with only 22% speaking any language other than English, indicating a majority of non-English speakers coming from non-Latino groups. The small figure of Latinos indicates that possibly only a small figure of the languages spoken in Naperville include Spanish. Sixty nine percent of the population holds a bachelor’s degree or higher. The Median household income in Naperville is $108,000 and only 4% of individuals live below the poverty level (All data from US Census).
The local community, in contrast, has an 87% Latino population. Forty two percent of the population of the school community is foreign born, with 83% of the population speaking a language other than English. Only 7% of the population of the local community has a bachelor’s degree. In comparison to the figures of median income in Naperville, the local community has a median income of only $44,000. A larger figure, 20%, live below the poverty rate. The contrast between the two parent groups was astonishing: one group speaking almost exclusively Spanish, the other group speaking exclusively English, living in proximal areas. These contrasts in social contexts and language use were clearly apparent observing the spectators at the soccer game.

7.3.5 Participant’s accuracy with linguistic objects problematic to heritage speakers

Kay was successful in completing the story retelling in Spanish, and also contributed to the group sociolinguistic interview in Spanish. During the sociolinguistic interview with one other male participant, of the same age, and myself, Kay produced twenty six noun phrases and nine adjectives phrases in Spanish, all of which were corrected marked for grammatical gender, for an accuracy of 100% across all categories (100% accuracy on determiners assigned to feminine nouns, 100% accuracy on determiners assigned to masculine nouns, 100% accuracy on adjective concord with feminine NPs, and 100% accuracy on adjective concord to masculine NPs). This participant participated in a bilingual class, but was not part of the social network community. He has acquired grammatical gender. However, he demonstrated more problems with the direct object marker producing it in 40% of obligatory contexts, as presented in the two following examples:

(11) vio a Caperucita Roja.

‘He saw (case marker) Little Red Riding Hood.’
It would be very interesting to work with his two younger siblings, who unlike Kay were not in a Spanish class at school.

7.5 Dance Club Halloween Party

The fourth participant I observed outside of school, was Kara, a bright fifth grade student who was in my fourth grade class the year prior, and used to be in a bilingual class. This observation was different from the other three because the location of the child’s activity extended East of the area bounded by the school residency guidelines. Kara’s dance studio was located in an area close to Brighton Park, in Chicago, an area west of downtown described in the ethnographic work of Farr (2010). Approaching the neighborhood, I got lost looking for the dance studio, and found along the street a “tienda de abaorotes” (corner store). The presence of this type of commercial venue, a Mexican type corner store indicates the composition of the surrounding neighborhood.

Arriving at the dance studio in Brighton Park, it was decorated for a children’s Halloween party, where the parents had set up games, crafts, candy, and other activities. The purpose of the party was a fundraiser for the children’s travel dance competitions. I learned that the dance studio represented a wide variety of cultural interests within dance, offering courses in a wide variety of dancing from Traditional Mexican Folkloric Dancing to Hip Hop.

Entering the studio, the variety of Halloween activities set up similarly reflected the diversity of the studio’s repertoire. Tables had been set up with displays for “día de los muertos”. Thus, the celebration was not exclusively a Halloween festivity, but reflected
components of Mexican culture as well. Parents commented on the authenticity of the tissue paper-garland donning the muertos (dead) display, and the mother responsible for the table remarked that a family member had brought the authentic garland for her from Mexico. The mother of the participant reported that the family had a similar display in their house. Photos of the Día de los Muertos displays at the children’s Halloween party follow:

Image of the día de los Muertos Activity Table at the Dance Club Halloween Party:
7.4.1 Costumes at the dance club event

Because the event was a Halloween party, children showed up in costume. One of the most popular costumes for the young girls was “Day of the Dead”. In fact, Kara herself showed up in a costume marketed as “Day of the Dead” sold at a local big box retailer. Another child showed up as Fridah Kahlo, complete with an accompanying portrait. Though the event was marketed as a Halloween Party, Mexican culture and prominent historical characters from Mexico figured into the children’s choice of costumes.
7.4.2 Music at the dance club event

At the dance club party, Spanish music was occasionally played, however the most popular song was “Watch Me (Whip/Nae Nae)” by Silentó, a song which topped out the billboard charts from Summer to Fall 2015, and is considered widely popular. Other music was heard in Spanish, including Pitbull’s “Toma”, and Don Omar’s “Danza Kuduro”. The music at the dance study was diverse, representing a variety of cultures.

7.4.3. Language Use at the dance studio

At the dance studio, the mother of the participant spoke to me in Spanish, and introduced me to her older daughter and granddaughters in Spanish as well. Other parents at the event were observed to speak Spanish, and/or respond to Spanish with discourse level and sentential code switching. For example, I witnessed the following exchanges at the dance studio:

(13) MOTHER 1: Se me hace que no tenga música.

‘Seems like they may not have music’

MOTHER 2: I know right?

Meanwhile I observed some mothers working on a craft station of paper flowers. The mothers spoke to the participant’s mother in Spanish, however among themselves were witnessed to use mixed speech.

(14) MOTHER 3: ¿No las van a cortar? You’re not going to cut them?

‘You’re not going to cut them? (Spanish). You’re not going to cut them? (English).

(15) MOTHER 4: ¿Cómo se hace el stem?

‘How do you make the stem?”
These speech samples indicate that mothers of children attending the dance studio were competent speakers of Spanish, however, among themselves they often chose to use mixed speech.

7.4.4 Language Use within the participant’s family

At the Dance Club party, I observed the participant with other female family members and was witness to the languages they used among each other. I observed: Kara, her mother, her sister, and her sister’s children.

Kara, the focal participant, spoke English to her nieces, spoke English with me and other adults my age, but spoke Spanish to her mother. Kara’s sister spoke Spanish to her daughters, and also spoke Spanish to her mother. Kara’s young nieces spoke Spanish to adults and spoke Spanish among each other. It seemed then, that Spanish was being maintained among the family with younger generations being bilingual.

7.4.5 Kara’s performance with linguistic objects

Kara participated in the group sociolinguistic interviews with two female classmates. Like Kara, one of the other two girls had also been in bilingual class but was not part of the social network of racetrack students. The third student meeting with that group had both been in a bilingual class with the two others, and also lived at the racetrack.

Kara completed the performance retelling task in Spanish, and also used Spanish during the sociolinguistic interview with her peers though she tended to code switch during the conversational recording. She produced a total of fourteen tokens of gender assignment on noun phrases, and a total of three tokens of concord agreement on adjectives, with an accuracy of 100% across all these categories: 100% accuracy on gender assignment of determiner to
feminine NPs, 100% accuracy on gender assignment of determiner to masculine NPs, 100% accuracy of adjective concord with masculine NPs, and 100% accuracy of feminine adjective concord to feminine NPs. She demonstrated that aside from being a competent bilingual capable of alternating languages for different purposes, she had acquired grammatical gender in an age appropriate way.

Not only had she successfully acquired gender agreement, she also mastered the case marker in the few contexts she produced it. One example follows here: “Después el señor sacó a la abuelita del closet” (The man took case marker-Grandma out of the closet).

7.6 Qualitative Conclusion

Four focal participants were observed in various activities in the community including religious activities and recreational activities. Throughout these activities, it was clear that other adults attending some community events, such as the soccer game, and the dance club party, were more bilingual than the parents of the participants I was observing. Thus, it is possible that some community members may use less Spanish in their homes than those I met in the school community and observed. Is it also possible that some parents spend a lot of time working, or working multiple jobs, and these children might have a less rich context for heritage language learning. Possibly these children are under-represented in this text, because parents working long hours might be reluctant to partake in this type of qualitative fieldwork. Still, the observations I made of the four focal children indicated that Spanish is widely used in neighborhood activities with rich opportunities to acquire and practice the heritage language.
CONCLUSION

This sociolinguistic project followed up on a body of research noting that heritage speakers as well as second language learners have challenges acquiring specific grammatical features in Spanish, what has been termed ‘incomplete acquisition’ (Montrul 2008, Montrul & Potowski 2007, Montrul & Sánchez-Walker 2013). In this text, I focus on grammatical gender agreement, which I examined via a study of phrases of concord that elicit adjectives (chapter four), assignment of gender to determiners of noun phrases (chapter five), and assignment of gender to noun phrases and agreement with adjective phrases via sociolinguistic interviews (chapter six). My aim was to discover what social and pedagogical spheres aid bilingual children in acquiring native-like features of their parents’ language, Mexican Spanish, via both quantitative and qualitative methods. In the quantitative sphere, I investigated two social treatment conditions: the first was a dense social network I established a child-friendly scale for operationalizing. I seized the opportunity to investigate the Spanish acquisition within a community of several hundred families (seasonal workers in a residence group of 900 summer/500 winter) headed by immigrants mainly from Puebla Mexico. The second treatment condition considered pedagogical and linguistic outcomes of school instruction in the heritage language. I cross these two treatment conditions to consider four total treatment groups. Looking at children in these four groups, I showed that three of the four groups were actually preforming at a very high accuracy rate, 98% (story retellings) which would approach that of native speakers. Furthermore, in the sociolinguistic interview component, I discovered that the two social network groups scored as high as 100%, with the no social network groups scoring in the 98-99% range. Only one group was distinguishably low, and this was the group that was not instructed in Spanish at school, nor did they access the dense social network at the group
residence inhabited by the Puebla families. Furthermore, this group only rated low in the acquisition-based methodology component, and not in the sociolinguistic interview component of the methodology. A repeated measures ANOVA did not show differences between the four groups in either the acquisition based (retelling) or sociolinguistic task, however, the low input group did show differences in gender agreement which were statistically significant and different from the grammatical gender agreement performance of the other three groups via an analysis of an independent samples t-test (Retelling task). The group with least input (-BIL, -SN) showed lower accuracy on grammatical gender agreement (88.94 ± 21.95) compared to peers who accessed a dense network and/or Spanish language instruction at the school (97.92 ± 3.30), t(36) = 2.188, p = 0.035. This finding of group difference for the low input group was not shown in the sociolinguistic task. The group exposed to low input (-BIL, -SN) had some outliers, and I address the performance of individual heritage speakers in 5.1.4.

8.1 Conclusions and educational recommendations

With respect to the group of students who were not exposed to English at school or in a dense social network, we can state that this group was showed significant differences from the other student groups combined. These facts would provide evidence for heritage language support in this group of students, for instance a dual language program, or other foreign language support. Their home environment alone did not provide input sufficient for all of the students in this group to fully acquire Spanish, though there were some individual differences.

With respect to the students who were in the school’s bilingual program, both those exposed to dense social networks as well as those who were not exposed to such a network, these students were performing at high rates of accuracy. Students in both groups scored around 98%
accuracy on gender agreement. For these students, they seem to have acquired gender agreement in Spanish, however follow up to determine if they later experience attrition would be a topic for further research investigation.

Students who were proficient with gender agreement in spite of being placed in an English program of instruction included those who were living in the dense social network. For these students, their oral language performance was adequate, but educational recommendations would focus on literacy with an emphasis on bi-literacy.

With respect to the distinction between gender assignment and gender agreement, there is a difference, while assignment is thought to take place locally, agreement as an operation may occur throughout the phrase. These bilingual children were only slightly more accurate with gender agreement (97.68%) compared to gender assignment (96.81%). In particular, the rates of gender assignment were brought down by inaccuracies with non-canonical forms, such as el *arma*, a topic I address in section 5.1.5. These non-canonical forms, similar to others addressed in previous literature (Montrul et. al. 2013) are an important area for pedagogical implications, since they comprised a large percentage of the few errors made. I would recommend an instructional focus on these forms for bilingual or dual language teachers working with bilingual children.

On the topic of pedagogical implications, some important distinctions were made between children attending Spanish language instruction and those who did not. For children who accessed this dense network, there was no statistical distinction on accuracy with respect for grammatical gender for those attending Spanish instruction versus those in English instruction. That is, heritage language instruction was not crucial for acquisition of grammatical gender for those child speakers in a dense network. However, relating these results to a broader context, if
we consider heritage language speakers throughout Illinois or throughout the United States, we must admit few are likely to live in a *hipodramo* (Sport’s Center) with immigrants from Puebla Mexico, and this social context is highly unusual and probably not like one that most heritage speaker children experience. Thus we can see the utility of a heritage language education in the general context. A second finding was that for children lacking such a dense social network, heritage language instruction was associated with a higher accuracy rate of grammatical gender agreement that was comparable to dense network peers on the story retelling task only. Non network children in Spanish language/bilingual classrooms scored 98% accuracy while the group that had not enrolled in Spanish instruction scored an average of only 73% on assignment of gender to NPs during the story retelling task. On a sociolinguistic interview task, differences between groups exposed to heritage language instruction and those not exposed to native language instruction were mitigated, underscoring the relevance of the methodology in heritage language studies.

8.2 Qualitative Results

I substantiated documentation on local language use by looking at sources of native input in the community where I research local language use in families, where I considered several focal students in chapter seven: one focal student invited me to a celebration of la *Virgen de Guadalupe* at a community church, the other an inhabitant of the local racetrack community, regularly took part in readings and worship at a local Kingdom Hall of Jehovah’s Witnesses. I investigated these communities using ethnographic methodology, ultimately discovering that this community operated exclusively in Spanish, including use of linguistic features like address terms: *hermano, Hermana*, and *joven* (brother, sister, youth). These two focal students in the ethnographic methodology were both individuals who lacked instruction in Spanish, yet became
dominant in Spanish and proficient bilinguals not in the classroom through other aspects of the community, underscoring the fact that there were some individual differences that results in individual performance on gender agreement. While the male focal student accessed the dense network at the hipodramo, the Catholic male did not access this dense community network.

In these case studies of these two focal students I identify some other linguistic objects that could be of interest for future projects related to the recorded data, such as non-native like usage of the direct object agreement marker, and code switching. In spite of the high accuracy rate with gender agreement in this local community outside of Chicago, many children did not perform as well with the direct object agreement marker, using the marker in required contexts only 70.13% of the time, a figure that strongly resembles the findings of Montrul and Sanchez-Walker (2013), who found 69.3% usage of this marker in simultaneous bilinguals. If errors of this sort are thought to be a result of incomplete acquisition, we then have to explain why this incomplete acquisition affects some grammatical forms such as case marking, but does not have a widespread effect on other objects like gender agreement, at least in this social context. Moreover, linguistic objects like gender agreement are more affected in low input participant groups in a story retelling methodology more than an interview-based corpus. Similarly, we can wonder why certain social contexts are more subject to incomplete acquisition than other geographic areas.

8.3 Conclusions from Initial Questions

To follow up on the research questions I initially posited:
Q1. Which groups perform more accurately with respect to grammatical gender: Spanish language speakers in bilingual programs or Spanish/English bilinguals in English-only settings?

Spanish heritage speakers in bilingual programs tended to perform about 98% accuracy with respect to grammatical gender, while those in English classrooms were only able to perform as accurately if they accessed a dense network. In a sociolinguistic interview corpus, results from both groups approached the 98-100% range.

Schooling in Spanish is associated with higher levels of accuracy on grammatical gender only for children who do not access a social network and only on the story retelling task based on acquisition methodology. Children in a Spanish bilingual class without network scored an average of 98% on gender agreement while those in an English class scored an average of 73%.

Q2. What is the effect of language network on acquisition of noun phrase agreement? And how is the noun phrase locally acquired?

Social network appeared to play a crucial role for heritage language acquisition, children in the dense network were very accurate with grammatical gender and it did not matter what type of classroom instruction they were exposed to. Nor did it matter the type of task they were given: network students scored 98% on retelling tasks based on the acquisition literature and 100% on a methodology of sociolinguistic interviews. Furthermore, looking at individual differences in section 5.1.4, lowest preforming speakers (n=7) were dominated by those who did not access a
network (n=5). This is to say nearly all network speakers either scored 100% accurate on grammatical gender or made a 1-3 mistakes with non-canonical or troublesome forms.

To turn to the initial topic, while certain individuals referenced in 5.1.4 did not acquire grammatical gender, these were isolated cases, and on the whole there did not seem to be a widespread case for incomplete acquisition of grammatical gender in this school and town. Though the term “incomplete acquisition” is controversial in and of itself (see, for example, Otheguy 2013), if one were to use this term to refer to speakers in this study, it would apply only to a small number of individual speakers, and not as a widespread phenomenon. Furthermore, we could interpret that it could apply to these speakers only in the story retelling task, and less so in the sociolinguistic interview tasks. These findings underscore the methodological confounds for heritage language research: heritage speakers of Spanish may perform with greater accuracy at certain tasks. Overall the heritage speakers in this Mexican outlier neighborhood were quite successful with grammatical gender: some twenty three of thirty nine participants completing the story retelling task scored 100% accuracy on grammatical gender, with some nine others only showing a couple errors, largely with non-canonical forms. Thus, we can look at grammatical gender agreement as a feature that represents some individual differences but overall tends to be acquired in this context.

I have established that it would be problematic to use the concept of ‘incomplete acquisition’ to describe this particular sociolinguistic context of child bilingual speakers first because many speakers acquire gender agreement well, and secondly because the features of gender agreement were well acquired, although other linguistic features may be less well acquired, such as the case marker noted above. Furthermore, heritage speakers show command
of grammatical gender both in the concord task (Chapter Four) and also the sociolinguistic interview Task (Chapter Six). However, they may demonstrate difficulty with a more academic task, the story retelling (Chapter Five) in particular among groups that were exposed to the least input. Just as the fact that gender agreement is well acquired causes a problem for the theory of incomplete acquisition, the fact that other features may be less well acquired poses a problem for alternative theories such as universal access. It is necessary to consider also, that there were a few individual speakers who did not acquire grammatical gender well, further complicating any consideration of alternative theories.

If this social setting is not described by either incomplete acquisition or universal access, how can we explain what factors cause speakers to acquire grammatical gender well, while a few others are less successful? Input seems to play a pivotal role with the lowest performing group lacking input in the heritage language at school, and also lacking a dense network out of school. Thus, one conclusion could be that “low proficiency heritage language speakers” result when children lack input in the heritage language. Just as second language acquisition is subject to individual differences, heritage language acquisition may be subject to similar constraints. One’s experiences (in school, in networks), in effect one’s language socialization, effect the grammar acquired and a heritage speaker’s accuracy with their parents’ language.
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APPENDIX A: IRB APPROVAL

UNIVERSITY OF SOUTHERN UTAH

APPROVAL NOTICE

Initial Review (Compliance to Federal Standards)

February 3, 2008

Protocol # 2014-0077

"Photobiology of Vincent Hildebrand"

Date: Feb. 22-2008

Your Institutional Review Board (IRB) has reviewed and approved this study in accordance with applicable United States Federal and Utah State regulations and policies. The study will be conducted in compliance with the provisions of Title 45, Code of Federal Regulations, Part 46, Protection of Human Subjects. This study has been determined to be exempt from Federal and State regulations. There will be no compensation for the study participants.

Human Subjects: None

Specific Purpose: To investigate the effects of light on plant growth, specifically focusing on the role of blue light in promoting seed germination.

Methodology:

1. Germination Study: 50 seeds of each of the five species will be planted in separate trays. Each tray will receive daily exposure to light from a grow light. The light intensity will be adjusted to simulate various natural light conditions.

2. Growth Study: The plants will be grown under controlled conditions in a greenhouse. Their growth will be measured weekly, focusing on factors such as height, leaf area, and overall health.

3. Data Analysis: The data will be analyzed using statistical software to determine any significant differences in growth rates and other parameters between the different species and light conditions.

IRB Approval Date: January 26, 2008

By: [IRB Chair]

Note: This study is being conducted in accordance with applicable Federal and State regulations and policies.
b) A waiver of consent/entertainment has been granted for research conducted in a certain process under 45 C.F.R 46.116(a) (Religious and Developmental Disabilities). 

Assent:
1) Assent (Spanish) Version 2: 07/26/2015
2) Spanish (English) Version 2: 07/26/2015

Parental Permissions:
1) Permission/Consent Document (Spanish) Version 1: 07/26/2015
2) Permission/Consent Document (English) Version 1: 07/26/2015

Your research must be reviewed by the Ethical Review Board under the following specific categories:

1) Research involving human subjects, documents, records, or specimens that have been collected, or will be collected solely for non-research purposes such as medical treatment or diagnosis.
2) Collection of data from video, digital, or image recordings made for research purposes.
3) Research on individual or group characteristics or behaviors including but not limited to race, ethnicity, pretensions, language, communication, cultural beliefs or practices not related to research employing survey, interview, and in-person, focus group, process evaluation, human subject evaluation, or quality assurance methodologies.

Please note the Review History of this submission:

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<th>Review Date</th>
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<td>Modifications</td>
<td>06/24/2015</td>
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Please read the following:

1. Use your research protocol number (OR 16-000) on any documents or correspondence with the IRB or any other UIUC Office.

2. Review and comply with all requirements as listed above.

3. UC Investigator Responsibilities, Protection of Human Research Subjects

Please note that the IRB has the prerogative to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Please be aware that if the scope of work changes, the protocol must be amended and approved by the IRB before the initiation of the changes.

We wish you the best in your endeavors. If you have any questions or need further help, please contact OR 863-595-8131 or email at (312) 596-7814. For additional correspondence about this protocol, contact the IRB at 200 NOS, MC 672.
Sincerely,

Sandra Cerviño

Assistant Director, IRB 4.2
Office for the Protection of Research Subjects

Enclosures:
1. UIC Investigator Responsibilities, Protection of Human Research Subjects
2. Assent Document:
   a) Assent Document - Version 3, 08/26/2015
   b) Assent (English), Version 3, 08/26/2015
3. Parental Permissions:
   a) Parental Consent Document (Spanish), Version 3, 08/26/2015
   b) Parental Consent Document (English), Version 3, 08/26/2015
4. Recruiting Materials:
   a) Recruitment Study Protocol Community, Version 5, 08/22/2015
   b) Recruitment Script, Version 3, 08/22/2015

Lis: Lopez, Spanish, French, Italian, and Portuguese, M/C 315
Rebecca Carte, faculty advisor, Spanish, French, Italian, and Portuguese, M/C 315
## APPENDIX C: DATA TABLE OF QUANTITATIVE STATISTICS

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<thead>
<tr>
<th>Accuracy</th>
<th>+B+SN ((N = 12))</th>
<th>+B-SN ((N = 13))</th>
<th>-B+SN ((N = 5))</th>
<th>-B-SN ((N = 10))</th>
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<td></td>
<td># Tokens (M (SD)) Total</td>
<td>Accuracy (M (SD))</td>
<td># Tokens (M (SD)) Total</td>
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<td></td>
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<tr>
<td>masc</td>
<td>20.66 ((2.89))</td>
<td>18.54 ((2.52))</td>
<td>17 ((2.98))</td>
<td>18.44 ((8.81))</td>
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<tr>
<td>fem</td>
<td>22.42 ((1.56))</td>
<td>17.15 ((6.27))</td>
<td>22 ((9.01))</td>
<td>18.89 ((25.23))</td>
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<td>Total</td>
<td>43.08 ((19.26))</td>
<td>37.23 ((8.27))</td>
<td>39 ((18.96))</td>
<td>37.33 ((34.23))</td>
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<td>masc</td>
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<td>1.77 ((6))</td>
<td>1.2 ((28))</td>
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<td>6</td>
<td>100, SD=0</td>
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<tr>
<td>fem</td>
<td>2.83 ((2.69))</td>
<td>2.0 ((10))</td>
<td>2.33 ((21))</td>
<td></td>
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<td>10</td>
<td>91.67, Pop=31.62</td>
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<td>100, SD=0</td>
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<td>+B-SN Mean (SD)</td>
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<td>17 (9.46)</td>
<td>18.44 (12.7)</td>
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<td>fem</td>
<td>22.42 (6.04)</td>
<td>17.15 (10.70)</td>
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<td>18.89 (6.33)</td>
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<td>37.23</td>
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<td></td>
<td>Sample SD=.94</td>
<td>Sample SD=</td>
<td>Sample SD=.84</td>
<td>Sample SD=1.83</td>
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<td>23</td>
<td>6</td>
<td>28</td>
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<tr>
<td>fem</td>
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<td>2.69</td>
<td>2.0</td>
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<td>Sample SD =1.41</td>
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<td>10</td>
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<tr>
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<td>4.46</td>
<td>3.2</td>
<td>5.44</td>
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<td></td>
<td>Total 60</td>
<td>58</td>
<td>16</td>
<td>49</td>
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<sup>1</sup> Refers to data from the story retelling task.

<sup>2</sup> Refers to data collected from the concord elicitation task, “¿cómo era el lobo?” Adjectives only were elicited from the concord task, and not articles, because the articles were primed as in the above question.
Querida madre:

Por medio de la presente le comunico la información que usted me pidió.

Mi hijo Eduardo me está preguntando lo siguiente sobre la celebración de la Virgen de Guadalupe.

Primero, que nada le quiero compartir que la Virgen de Guadalupe se apareció en México D.F. cerca de la Ciudad de México y nosotros mismos acudimos por esto. Son noticias acerca de ella, creemos mucho en ella y por eso se dice que es un milagro. En los praderas y nos las consagran. Yo estoy muy contenta por que aquí en el país para ser más exacta en desplazamiento, esta el territorio del tepozcal es una Réplica del territorio en la Ciudad de México, entonces para todos los personas que no podemos ir a México y quería invitarlos a visitar aquí. Este es el único Estado en U.S.A. que tiene esa Réplica.
Si usted quiere saber cómo va a
puede ir a Desplánes el cerro del Tepuy.
hoy toda la tarde y la noche y mañana
ba a ver muchísima gente, música, comida
mariachis y por supuesto misas. La Virgen
de Guadalupe o La Morenita es muy querida
por todo el mundo, en especial por los Mexicanos
y Centroe. Americanos.

Nosotros este año no vamos a ir al
Cerro, este año en nuestra Iglesia, María Reina
del Cielo que está en la 24 y una Calle después
de la Laramie va a ver Celebración como en
muchas parroquias de Chicago. El horario esta
así: - Rosario 6 pm. Después no hay dar café
- Danzas tradicionales Mexicanas 10 pm.
- A las 11 pm Los Mañanitos con Mariachi.
- A las 8 pm Misa con mariachi.
- Y después Comida gratis otra vez.

Bueno eso es todo. Son tradiciones muy fuertes de los Mexicanos
Gracias
Si quiere acompañar no, o quiere ir a Desplánes para que vea.
APPENDIX E: EVENT FLIER FOR 'FIESTAS GUADALUPANAS' AT A COMMUNITY CHURCH
APPENDIX F: RELIGIOUS ICON EMBROIDERED ON CLOTHING AT THE EVENT
Professional:

Morton College
TESOL INSTRUCTOR
3801 South Central Ave.
Cicero, IL 60804
zoeclair@sbcglobal.net

EDUCATION


ACADEMIC EMPLOYMENT


DISSERTATION

Grammatical Gender in Child Bilinguals: Language Acquisition across Sociolinguistic and Pedagogical Spheres (UIC IRB # 2014-0877) is a multi-methods project involving sociolinguistic interviews, elicited narratives, and ethnographic field work in a school in a Chicago-area linguistic enclave serving a vibrant community of families from Puebla, Mexico.  In this piece combining both quantitative and qualitative methods, I investigate the use of gender agreement by heritage speaker bilinguals.  I evaluate several factors affecting accuracy in gender agreement including social network and school setting to argue that this language community shows little evidence of incomplete acquisition.  A Concord task shows nearly all participants were 100% accurate with gender concord, suggesting that errors in gender, amounting to 2% in three social groups, are largely production errors.  Thesis adviser, Richard Cameron.
GRANTS AND FUNDING


CONFERENCE ACTIVITY/PRESENTATIONS

2016. Methodological Considerations in Heritage Language Studies. To be presented at: Workshop in Spanish Sociolinguistics 8, Universidad de Puerto Rico Rio Piedras (San Juan, Puerto Rico). (Accepted)


2010. “Heritage Language Maintenance”. Presented at Statewide Conference for Teachers of Linguistically and Culturally Diverse Students in OakBrook, IL.


TEACHING EXPERIENCE

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<th>Course</th>
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<td>ESL 008</td>
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<td>ESL Language Fundamentals (TESOL)</td>
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<td>ESL 1 (TESOL)</td>
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<td>Applications in ESL II (TESOL)</td>
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<td>Introduction to Citizenship. (TESOL)</td>
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<td>Beginning Conversation Practice. (TESOL)</td>
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<td>Intermediate Writing workshop. (TESOL)</td>
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<td>Advanced Writing Workshop. (TESOL)</td>
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**RESEARCH EXPERIENCE**

- 2015. Sociolinguistic and ethnographic fieldwork researching Mexican bilinguals in Cicero, IL.
- 2010. Pilot research on Mexican bilinguals who are second language learners of English.

**VOLUNTEER INVOLVEMENT**


**COURSES PREPARED TO TEACH**

- TESOL (Adult Ed)
  - Introduction to Linguistics/Linguistics for Teachers
  - Spanish, all levels. Experience with heritage speakers.
  - Methods and Materials for Bilingual Education
  - Methods and Materials for TESOL/Second Language Acquisition
Assessment of English Language Learners
Sociolinguistics
Multicultural Education

**RELATED PROFESSIONAL EMPLOYMENT**


**STATE TEACHING CREDENTIALS AND ENDORSEMENTS**

2015. Spanish Foreign Language Middle School.
2015. ESL Endorsement extended to middle school grades 5-8
2008. School Administrator Licensure added on Professional Educator’s License.

**LANGUAGES**

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<th>Language</th>
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<tr>
<td>Spanish</td>
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</tr>
<tr>
<td>Italian</td>
<td>Reading Proficiency</td>
</tr>
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<td>Catalán</td>
<td>Reading Proficiency</td>
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**MEMBERSHIP IN ASSOCIATIONS**

2014-present. Illinois TESOL/Teachers of Bilingual Education