A study of sociolinguistic variation in a small community: Puerto Rican Spanish in Amsterdam, New York

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A STUDY OF SOCIOLINGUISTIC VARIATION IN A SMALL COMMUNITY: PUERTO RICAN SPANISH IN AMSTERDAM, NEW YORK

by

Zahir Mumin

A Dissertation
Submitted to the University at Albany, State University of New York
in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

College of Arts & Sciences
Department of Languages, Literatures and Cultures

2017
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DEDICATION

I dedicate this dissertation to all of my family members. I greatly appreciate all of the support that you have provided and I send you all of my best wishes. Also, I would like to thank the Puerto Rican community of Amsterdam, New York for their strong support of my linguistic research.
ACKNOWLEDGEMENTS

I would like to thank all of my dissertation committee members for their tremendous support during the dissertation process: Dr. Sayahi (director), Dr. Westmoreland, and Dr. Bickmore.

Professor Sayahi provided the guidance necessary to encourage me to pursue academic excellence in the field of sociolinguistics. He maintained a positive outlook on my potential as a researcher and professor in this field of study. Also, he provided professional/academic development meetings aimed at supporting students before, during, and after the dissertation process.

Professor Westmoreland consistently provided me with academic encouragement and insight concerning research in the field of sociolinguistics throughout the time of my doctoral study. Through this encouragement and insight, I was inspired to establish specific goals of professional and academic success.

Professor Bickmore was always available to discuss issues related to linguistic research. He provided multifaceted points of view regarding a wide variety of topics (e.g., phonetics, phonology, morphosyntax, and semantics) in light of his experience in the field of linguistic anthropology.

Overall, I appreciate all of the support of my committee members from whom I have learned a lot; the support that they have provided is unparalleled.
ABSTRACT

The objective of the current study is to contribute to the larger body of sociophonetic variation research by describing and analyzing Spanish as spoken in a small Puerto Rican community in the US. First, I describe phonological and morphosyntactic features of Spanish as used by four different groups of Puerto Rican informants in Amsterdam, New York based on the duration of time that they have lived on the Island of Puerto Rico. Previous research on Puerto Rican Spanish in the US has focused particularly on final /s/ deletion (Poplack, 1980b, 1980c), final liquid production of /l/ and /ɾ/ (Ramos-Pellicia, 2007), and code switching (Otheguy & Zentella, 2012). The results of these studies show that final /s/ is frequently deleted, final /ɾ/ is commonly lateralized, and that code switching is also a common behavior among bilinguals with high levels of competence in both languages. On the other hand, the results of the current study show that, across the four groups of informants, the production of final /s/ is relatively stable and informants tend to favor aspiration and deletion in word-final contexts and retention in word-internal contexts. Also, these results show that lateralization of final /ɾ/ appears in the speech of all four of these groups. Finally, code switching is more prevalent in the data of speakers who have spent less time in Puerto Rico. Given the nature of the cyclical Puerto Rican migration to the US, this study offers a new approach to the study of Spanish in contact with English that focuses on time of residence in Puerto Rico rather than generation and place of birth.
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CHAPTER ONE: INTRODUCTION

1.1 Introduction

The current study describes the presence of Puerto Rican Spanish in Amsterdam, New York with a special focus on its sociophonetic features. The data collection consists of questionnaires and audio recordings of semi-directed sociolinguistic interviews with four different groups of Puerto Rican informants. Qualitatively, the data show that time spent in Puerto Rico influences the production of phonological and morphosyntactic phenomena such as lateralization of the final /ɾ/, weakening of the intervocalic /d/, velarization of the intervocalic /ɾ/, higher rates of overt subject expression, and simplification of the subjunctive mood. Quantitatively, I take the case of final /s/ as a case study to investigate the role of the different internal and external variables that condition variation in this small community.

1.2 Sociolinguistic variation in Amsterdam

There has been a variety of studies concerning Spanish in the U.S. and Puerto Rican Spanish in particular (Lipski, 2008; Otheguy & Zentella, 2012). Prior research concerning Puerto Rican Spanish in the US focuses on larger communities such as New York City (Zentella, 1997; Otheguy & Zentella, 2012), Philadelphia (Poplack, 1980a, 1980b) and Lorain, Ohio (Ramos-Pellicia, 2004, 2012), although the latter is clearly much smaller than the first two. The current study aims to contribute to this body of research on Spanish in the U.S. by providing a detailed description of Puerto Rican Spanish in a small relatively-stable community that has existed in this part of New York State for several decades. One other aspect of my study that is different from the majority of prior research is a comparative analysis of the variation in the speech of four different groups based on time spent on the Island of Puerto Rico. This approach allows for a better understanding of the role of the status of Puerto Rico as a US territory and the cyclical
migration that is typical of Puerto Ricans. Speakers who are born in the US mainland may spend longer periods, sometimes years, in Puerto Rico before coming back to New York State. This eludes traditional classifications of the Hispanic population by immigrant generation as often assumed in other studies.

In the case of final /s/, my purpose is to examine whether similar factors that have been found to be at play elsewhere, also condition the distribution of the different variants of this commonly studied variable across the four groups under study. In addition to variables examined by other researchers for the conditioning of /s/ production in the speech of Puerto Ricans in the US (Poplack, 1979a; Ramos-Pelliccia, 2012), the current study also examines factors related to the migration habits of the informants (i.e. years in Amsterdam, years in New York City, and years in Puerto Rico) to determine how the exposure to different environments of language contact constrain this variable in a small community. Patterns of variation that emerge from this examination may lead to substantiated inferences concerning cross-group variation in small Spanish-speaking communities in the US.

By examining Puerto Rican Spanish in Amsterdam, it is possible to establish a description of linguistic features that appear in a small community where (in addition to linguistic factors) intense language contact, linguistic competence, migration, and spouse’s ethnicity may play a major role in language production.

1.3 Research questions and dissertation outline

My research questions are the following:

1. What is the distribution of the major sociophonetic features in Puerto Rican Spanish as spoken in Amsterdam? How does it compare to what is found in larger communities?
2. What is the role of time spent in Puerto Rico in relation to sociophonetic variation in this small-city context?

3. Taking final /s/ as a case study for quantitative analysis, which factors play a more significant role in determining the distribution of the different variants?

In chapter 2, I review the literature concerning language variation in Caribbean Spanish as a whole and Puerto Rican Spanish in the US. The chapter discusses issues related to native and heritage speaker tendencies amongst different groups of informants so as to provide the foundation for undertaking the current study.

Chapter 3 presents the research objectives, the data collection procedures, and data analyses methods. The historical context of Amsterdam is also described in order to demonstrate how this community is different from others that have a Spanish-speaking Puerto Rican population.

Chapter 4 investigates the most salient phonological and morphosyntactic features that appear in the data of the four groups under study.

Chapter 5 quantitatively analyzes variation in the articulation of final /s/. I account for retention, aspiration, and deletion according to each group factor while examining the quantitative significance of each social and linguistic variable under study.

Chapter 6 presents an interpretation of the results and discusses implications related to variation in Spanish in Amsterdam and its maintenance in the city. The limitations of the study serve as a backdrop to the suggestions for future research which highlight the need for further investigations concerning Spanish as a minority language in small communities. The conclusion reinforces the contribution of the current study to the larger body of literature while summarizing the main findings.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter aims to describe sociolinguistic variation in Caribbean Spanish. I start by reviewing phonological characteristics of different regions in the Caribbean dialect zone. Then, I discuss the historical presence of Spanish in the US to establish a background context for analyzing Caribbean Spanish in the country. While examining research related to the variation in US Spanish, I focus on Puerto Rican Spanish in order to illuminate the lack of empirical research conducted on Spanish in small communities and the role of cyclical migration in language maintenance and language shift. Finally, I conclude the chapter by describing how the current study is different from other studies that examine variation in Puerto Rican Spanish in the US.

2.2 Major phonological features of Caribbean Spanish

Caribbean Spanish is a general term used to describe Spanish-speaking dialects in the following regions: Cuba, the Dominican Republic, Puerto Rico, Panama, and coastal areas of Colombia and Venezuela. The emergence of these dialects arises from, in part, the New World colonization period when Spanish colonizers and their followers imposed the use of Spanish as the mainstream language (Payne, 2011). During this era of imposition, language contact and cohabitation between Spaniards, indigenous peoples, and African slaves shaped the initial development of Caribbean Spanish. Subsequent development of Caribbean Spanish is strongly influenced by the migration of southern Spaniards as well as those who lived in other regions of Spain. The majority of the migrants who arrived in Puerto Rico, Cuba, and the Dominican Republican came from the Andalusia region and the Canary Islands (Payne, 2011).

Nonetheless, there are still divergent arguments concerning the extent to which southern
Spanish dialects solely influenced the development of Caribbean Spanish. Some researchers (Álvarez-Nazario, 1974; Lipski, 2005) contend that language contact and the linguistic prestige attributed to speakers from Spain induced residents in the Caribbean Spanish region to emulate the speech of southern Spanish dialects. Others (Phillips Jr. & Phillips, 2010; Payne, 2011) argue that southern Spanish dialects indirectly impacted Caribbean Spanish as constant shifts in mobility in the midst of territorial wars precluded a standardization of speech norms. Modern sociolinguistic studies (Navarro Tómas, 1948; Lipski, 1994; Holmquist, 2008; among many others) highlight various phonological phenomena in the Caribbean region (e.g., deletion of the final /s/ and lateralization of the final /ɾ/) that are similar to those exhibited in southern Spanish dialects. The following two sections explore variation in the production of vowels and consonants in Caribbean Spanish respectively.

2.2.1 Variation in the production of vowels in Caribbean Spanish

Vowel nasalization, diphthongization of hiatus, and vowel raising are three common linguistic phenomena that describe the production of vowel sounds in Caribbean Spanish. All five vowels are often nasalized when they appear adjacent to nasal consonants in a wide variety of contexts: [kõmẽn](comen/they eat), [nõrte] (norte/north), [armã] (arma/weapon), [mũro] (muro/wall) and [mĩrar] (mirar/to watch) (López-Morales, 1992). These examples exhibit cases that occur much more frequently in the Dominican Republic and Puerto Rico than in Cuba (López-Morales, 1992; Alvar, 1996). Vowel nasalization is also produced when nasal consonants are deleted word-internally in cases such as [enkõ̞Øtrar] (encontrar/to find) and [exẽØplo] (ejemplo/example) (López-Morales, 1992; Lipski, 1994). In addition to these cases, even if nasal consonants do not appear immediately before or after vowels, nasalization is sometimes produced when there is a nasal consonant somewhere in the word. This is because informants
tend to partially close the nasal cavity when producing speech sounds in informal contexts (Lipski, 1992; López-Morales, 1992). The abovementioned examples and cases such as [bândērā] (bandera/flag) (López-Morales, 1992, p. 47) help demonstrate that any vowel may be susceptible to this phenomenon regardless of the grammatical function of a word or a certain phonetic context.

Diphthongization of hiatus, the reduction of one of two vowels that are adjacent to each other, usually occurs in spontaneous informal speech. Throughout the main Caribbean regions, this phenomenon tends to occur more frequently amongst younger informants of low social class (López-Morales, 1992). Some of the most common cases exhibit a reduction of the /ea/ hiatus to the [ja] diphthong as in /leal/ (leal/loyal) to [ljal] (López-Morales, 1992; Alvar, 1996; Holmquist, 2001). Fewer cases show a reduction of the /o/ to a semivowel [y] when the /o/ appears adjacent to a tonic /a/ or /e/ vowel as in /roer/ (roer/to gnaw) to [ɾuer] (Alvar, 1996).

Vowel raising, the raising of the mid vowels /e/ and /o/ as in /lente/ and /pelo/ to the high vowels /i/ and /u/ as in /lenti/ and /pelu/ respectively, has been examined extensively on the Island of Puerto Rico (Navarro Tomás, 1948; Holmquist, 1998, 2001, 2008; Oliver Rajan, 2007). Navarro Tomás (1948) showed that preceding tonic high vowels strongly condition this phenomenon. Preceding mid vowels also condition the reduction of the final mid vowels although this occurs with less frequency. Vowel raising in Puerto Rico occurs most frequently amongst informants who reside in the western interior areas of Ciales and in the coastal municipality of Aguada (Navarro Tomás, 1948). The raising of /o/ to /u/ appears throughout the Island, especially in the eastern and northeastern municipalities (Navarro Tomás, 1948). These findings are widely corroborated, but it has also been argued that the raising of /e/ to /i/ is prevalent in western Puerto Rico amongst both rural and urban informants (López-Morales,
1983a; Álvarez-Nazario, 1982). In the study carried out by Holmquist (2001), 60 male subjects are stratified into five different social categories which identify their occupational status as agricultural workers. They are also stratified into two different social networks: dense and open. A dense network describes those informants who usually communicate with people from the local rural community while an open network denotes those informants who have additional communication experience with people outside of the local community. The results demonstrate that informants who possess the least prestigious agricultural jobs (e.g., small-land farmers) and/or have a dense social network are those who tend to raise both the /e/ and /o/ most frequently in word-final position (Holmquist, 2001). On the other hand, those informants who possess more prestigious agricultural jobs and/or have open social networks tend to maintain the standard production of these mid vowels (Holmquist, 2001). These findings demonstrate that social networks, which may possibly include contact with people from urban communities, play an important role in final mid-vowel production.

Analyzing women’s occupational status and social networks in relation to their language production of vowel raising has provided further insight into this phenomenon. Holmquist (2005) begins to explore this issue by comparing female farm workers to female non-farm workers as well as open social networks to closed social networks. Findings from the examination of these comparisons show that female farm workers who have closed social networks favor raising word-final /e/ to [i] and /o/ to [u] (Holmquist, 2005). The majority of these cases occur when there are preceding high tonic vowels [dulsi] (dulce/sweet) or preceding palatal consonants [kayi] (calle/street) (Holmquist, 2005). Acoustic analyses (Oliver Rajan, 2007) expound on prior auditory analyses (Holmquist, 2005) by investigating the relationship between mobility and vowel raising in young adults, mature adults, and elders. Findings from these analyses show that
informants who are born and raised in the Coffee Zone and never work outside of this rural zone are inclined to produce word-final vowel raising.

Morphosyntactic conditioning of vowel raising has been examined to a lesser extent than phonological conditioning. It is generally accepted that verbs and nouns favor the production of vowel raising and that this phenomenon occurs most frequently with nouns (Navarro Tomás, 1948; Holmquist, 2001).

2.2.2 Variation in the production of consonants in Caribbean Spanish

Final /s/ weakening is one of the most commonly analyzed phenomena in Spanish-speaking dialects. In general, informants in northern and central Spain, central Mexico, central America, and in the interior mainland areas of South America retain word-final and word-internal /s/ in informal contexts (Lipski, 1994; Hualde, 2005; Schwegler, Kempff, & Ameal-Guerra, 2010). On the other hand, informants in Southern Spain, coastal areas of Mexico and South America, and in the Caribbean aspirate or delete the final /s/ in these same contexts (Lipski, 1994; Hualde, Olarrea & María Escobar, 2001; Hualde, 2005). It is accepted that following segments condition the production of the final /s/. Prior studies of final /s/ in Caribbean Spanish examine these segmental contexts to help explain informants’ language use in relation to both linguistic and social factors (Uber, 1981; Holmquist, 2008). For example, in Caribbean Spanish, informants from rural areas who are of low social class favor deletion of word-final /s/ before a pause and deletion of syllable-final /s/ before a consonant (Lipski, 1994; Holmquist, 2008). Informants from urban areas who are of mid/high social class tend to aspirate the final /s/ in these two contexts (Navarro Tomás, 1948; Holmquist, 2008). With regard to comparing male and female informants’ language production, Holmquist (2008) shows that female informants produce more cases of plural final /s/ deletion (.59 following consonant, .70
following pause) than male informants (.50 following consonant, .57 following pause). With this in mind, it is important to clarify that Holmquist’s study differs from the other studies because he exclusively examines rural informants whereas the other studies take into consideration both rural and urban informants.

Analyses of syllable-final and word-final liquids /l/ and /ɾ/ in Caribbean Spanish were documented in early scholarship (Henríquez Ureña, 1940; Navarro Tomás, 1948; Almendros, 1958). Some of the most common phenomena are lateralization [komel] (comer/to eat), rhotacism [arма](alma/soul), and deletion [muxeØ] (mujer/woman) (Lipski, 1994). Less common phenomena include vocalization [aiyo](algo/something) (Álvarez Nazario, 1990), gemination [puetta](puerta/door) (Harris, 1985a), and other intermediary articulations. Abundant scholarship documents these phenomena in Puerto Rico (Navarro Tomás, 1948; Lópes-Morales, 1983b, 1992; Alvar, 1996; Holmquist, 2005, 2008), the Dominican Republic (Jorge Morel, 1974; Nuñez- Cedeño, 1980; Jímenez Sabater, 1986; Hualde, 2005), Cuba (García González, 1980; Uber, 1986; Pérez, 2006), and on the northeast coast of Venezuela (D’Introno, Rojas, & Sosa, 1979; Lipski, 1994; Proctor, 2010). Socially stigmatized articulations of the final liquids predominate in the speech patterns of males, older informants, and those from rural areas (Lipski, 1994). In the case of rural informants from western Puerto Rico, men usually lateralize the /ɾ/ more frequently than women, but both men and women favor lateralization before a pause and when producing infinitive forms (Holmquist, 2008, p. 26-27). Findings concerning rhotacism in this same region demonstrate that male and female informants produce this phenomenon most frequently in word-internal position before a consonant (Holmquist, 2005). In urban areas, this pattern of language production is similar, but it is more dominant in the speech of males rather than females (Navarro Tomás, 1948).
When examining the occlusive and fricative characteristics of the affricate /ʃʃ/, it was found that informants typically maintain the initial occlusive and subsequent fricative elements of the affricate /ʃʃko/ (chico/boy) (Navarro Tomás, 1948). Later studies showed that the occlusive element suffered a frequent reduction and is pronounced as a fricative sound /ʃko/ (chico/boy) (Vaquero, 1972, 1978). Women, young informants, and middle class informants most frequently produce this phenomenon (Lipski, 1990e). Males, middle-aged and older informants and upper-and lower-class informants tend to retain the affricate pronunciation (Lipski, 1990e).

The production of final /n/ varies in the Caribbean. In Puerto Rico, velarization occurs frequently throughout the Island [komeŋ] (comen/they eat) (López-Morales, 1980a; Uber, 1981; Lipski, 1986a). Cases of elision are also produced in word-final and phrase-final position, especially when the word produced has a verbal inflexion or is not a monomorpheme [ablaØ] (hablan/they speak) (Poplack, 1979a). Cases of word-final /n/ deletion have also been related to contextual information. In these cases, morphosyntactic and semantic information has been viewed as important for the phonetic realization of final /n/ (Uber, 1981).

The production of the post-vocalic /d/ is one of the most frequently analyzed phenomena in Caribbean Spanish. In Venezuela, Panama, Puerto Rico and Cuba, informants usually produce a weakened sound (the fricative) or delete the /d/ in both of these phonetic contexts (Lipski, 1994). In most of the Caribbean region, informants strongly favor deletion in the –ado participle and in the final /d/ before a pause (López-Morales, 1983a). Informants of low social class, males, and younger informants most frequently delete the /d/ in these contexts (López-Morales, 1983a).

2.3 Variation in Caribbean Spanish in the US
Variation in Caribbean Spanish in the US has been analyzed since the late 1970s (Poplack, 1978, 1979a). One of the major differences between variation in Caribbean Spanish in the US and variation in Caribbean Spanish outside of the US is the intense English/Spanish language contact situation in the US. Issues concerning language maintenance continue to permeate linguistic scholarship (Roca & Lipski, 1993; Silva-Corvalán, 1995; Klee & Lynch, 2009). While English tends to become the predominant language of American-born generations of informants, the continuous immigration of native Spanish speakers into the US has an impact on the maintenance of Spanish. In the majority of studies on Spanish in the US, researchers often ascribe major importance to the speaker generation role in maintenance and variation in Spanish.

In this dissertation, it was observed early on that the special status of Puerto Rico allowed for cyclical migration back and forth that renders the reliability of generation as a diagnostic of maintenance of Spanish questionable. In fact, several of my participants are third generation Puerto Ricans, born in the US to parents who themselves were born in the US, but they spent years in Puerto Rico and as a result they exhibit native competence in Spanish. I will further discuss the application of the concept of generation as a social factor in the methodology chapter and the results chapters.

Other factors that may also affect this maintenance are the level of exposure to Spanish at home and in public domains as well as the level of formal education (Bahrick, Hall, Goggin, Bahrick, & Berger, 1994; Silva-Corvalán, 1994; Fuller, 2013). In addition to these social factors, linguistic factors have also helped to explain the extent to which Spanish is maintained and possible contact-induced change. In the case of Caribbean Spanish in the US, the varying levels of Spanish acquisition of informants makes a variationist analysis more complex as their production of sounds in Spanish may be affected by English or incomplete acquisition of
Spanish. The current study examines this impact by stratifying informants according to their overall self-reported linguistic competence. An in-depth description of this stratification is included in the following chapter.

Research conducted on variation in Cuban Spanish in the US early on focused on analyses of data collected from exiled communities of informants who were recently-arrived immigrants in the US (Guitart, 1976, 1978; Hammond, 1979b, 1986b; Núñez- Cedeño, 1988a; Varela, 1992). For example, the production of the final /s/ was extensively examined in Miami, Florida (Hammond, 1979a, 1980). Results show that informants favor aspiration of the final /s/ in word-internal position and tend to delete the final /s/ in word-final absolute position (Hammond, 1979a; Varela, 1992). More recent research has focused on both exiled and non-exiled communities of informants (Alfaraz, 2008; Lynch, 2009). Some of these informants were recently-arrived immigrants and others had lived in the US for a long period of time. With these migration issues in mind, the neutralization of /ɾ/ is still a widely examined phenomenon in Caribbean Spanish in the US (Lipski, 1994). For example, a study of 24 Cuban informants who lived in Miami, Florida shows that informants from younger generations (ages 30-47) favor the lateralization of /ɾ/ in word-internal contexts whereas informants from older generations (ages 62-77) disfavor this lateralization (Alfaraz, 2008). Generally, these findings support prior research conducted in Cuba (Terrell, 1976; García González, 1980). In addition, in word-internal position, especially before a voiceless stop, informants tend to produce a glottal or geminate sound [pokké] (porque/because) (Lipski, 2008). This phenomenon has only been documented occasionally in rural provinces in Cuba (Lipski, 2008).

In addition to the final /ɾ/, the final /s/ in US Cuban Spanish has been extensively examined. Recent research in Miami, Florida shows that Miami-born third generation informants
retain the /s/ more frequently than Cuban-born first generation informants (Lynch, 2009). It has been argued that language contact may influence third generation informants’ production of the final /s/ because of the inconsistent level of exposure to standard (i.e., retention) and non-standard variants (i.e., aspiration and deletion) (Lynch, 2009).

The influx of Dominican immigrants into the US did not commence until the 1960s. After the death of the Dominican dictator Trujillo in 1961, the US began granting Dominicans permission to more easily obtain visas in order to immigrate into the country (Payne, 2011). The majority of the Dominicans who emigrated from the Dominican Republic into the US resided in the state of New York (Grassmuck & Pesar, 1991). This trend continued throughout the 1970s and during the 1980s as much as 78% of the Dominicans who arrived in the US lived in New York (Lipski, 2008). English inevitably had a strong influence on Dominicans once they arrived in the US as they used it more frequently in public domains and began to replace Spanish with English in private domains. Dialect contact amongst native Spanish speakers and English/Spanish contact also affected Dominicans’ use of the Spanish language while they started to assimilate to new cultural environments.

In-depth analyses of Dominican Spanish in the US have covered a wide variety of topics. Some research analyzes the lexicon of New York Dominican Spanish in order to provide insight into the adaptation of English loanwords (Otheguy, 1993; Toribio, 2000b, 2002). Other research examines sociophonetic aspects and morphosyntax features while relating language attitudes to language use in different contexts (Toribio, 2000a, 2006; Bullock & Toribio, 2006). Final /s/ is a widely investigated variable in US Dominican Spanish. Dominicans favor the deletion of the word-internal /s/ especially when followed by a consonant. They also tend to delete the /s/ in word-final position and strongly favor this deletion when followed by a pause (Lipski, 2008).
The production of the final liquids /l/ and /ɾ/ has also been examined frequently. In US Dominican Spanish, the liquids are either neutralized or deleted in word-final position and neutralized in world-internal position (Lipski, 2008). In the case of New York City Spanish, in the barrios, Dominicans are inclined to produce a semivocalic [i] pronunciation in syllable-final contexts (Lipski, 2008). According to Lipski (2008), this phenomenon occurs more frequently than lateralization and rhotacism in New York City.

### 2.4 Puerto Rican Spanish in the US

Since the early 1950s, Puerto Rico has been a Free Associated State of the US mainland. This status—which contributed to the development of cyclical migration—means that all Puerto Ricans born on the Island are US citizens. During the 1960s and early 1970s, major waves of Puerto Rican immigration arrived in the US mainland. Variationist studies on Puerto Rican informants in the US began to surface in the late 1970s (Poplack, 1978, 1979a, 1979b). Poplack focused on different communities that had bilingual, Spanish-dominant, and English-dominant informants who lived in Philadelphia and New York City. Additional studies followed since then and included research on code switching between Puerto Rican Spanish and English (Poplack, 1980c; Zentella, 1981a, 1983, 1988, 1997; Álvarez, 1989; Torres, 1989, 1997, 2002). At the beginning of the 21st century, analyses concerning the phonetic features of Puerto Rican speakers returned to being a major focus of variationist research. However, sparse documentation describes sociophonetic variation in small communities.

As mentioned above, variation in Puerto Rican Spanish in the US has often been associated with language contact between English and Spanish with informants’ linguistic competence usually taken into account when analyzing speech tendencies. One of the first major
studies examines six-grade Puerto Rican students who are English-dominant speakers with advanced levels of linguistic competence in Spanish (Poplack, 1978). Poplack analyzes the production of English diphthongs, monophthongs, and the /ɾ/ in different phonetic contexts in order to examine the relationship between Philadelphia English, Puerto Rican Spanish, and Black English Vernacular (BEV). Within the context of a school environment, informal interviews were conducted and the results show that in boys, the Puerto Rican Spanish back vowel [u] occurs more frequently than the Philadelphia English diphthong (ow) which is often fronted in most phonetic contexts except before [l] (Poplack, 1978). The results also show that the variants of BEV (r-lessness [Ø]; [a], [a:], and [aɹ]; and [æ.ɪ] [æː]) occur very frequently in the casual and careful speech style of Puerto Rican bilinguals (Poplack, 1978). These variants of BEV appear to be in competition with the following Philadelphia English variants: [ɾ]; [ɔ̞ ɪ̞], [ ^ ɪ̞], and [ə]; and [ɛ], [æ], [iɹ], and [æ] respectively. Males tend to produce the BEV variants [a], [a:], and [aɹ] more frequently than their Philadelphia English counterparts [ə>ɪ], [ ^ ɪ], and [ə] (Poplack 1978). Because the total population breakdown of the school where the interviews took place is 3% black, 46% white, and 51% Puerto Rican (Poplack, 1978), it may be surmised that the Philadelphia English variants should have predominant influence on Puerto Rican bilinguals’ speech tendencies when compared to the BEV variants. Because this is not the case, the frequent use of BEV variants may be due to covert prestige (Poplack, 1978). While it is difficult to demonstrate covert prestige as a major factor of language production, research shows that external social environments outside of school may impact casual speech styles (Wolfram, 1971). These environments may include the exposure to complex social networks of working-class BEV informants (Trudgill, 1976) and a positive attitude towards certain linguistic phenomena produced by these informants. This attitude is usually not explicitly conveyed in
The retention and deletion of plural markers in Puerto Rican Spanish has been a major area of variationist analyses (Poplack, 1980c). The functional hypothesis argues that monomorphemic words such as *mis(t)* are more likely to suffer deletion than nonmonomorphemic words such as *miss(ed)* where the past participle may be deleted (Labov, Cohen, Robins, & Lewis, 1968; Kiparsky, 1972). Research concerning the production of the final /s/ and final /n/ as plural markers in Puerto Rican Spanish (Poplack 1980b,c) clashes with the functional hypothesis as these final consonants are more frequently deleted in nonmonomorphemic words such as *bonitas* and *tienen* than in monomorphemic words such as *las* and *van*. In addition to the grammatical category, the extent to which disambiguating information impinges on the production of final consonants has also been closely examined. For example, plural markers in word-final position are frequently deleted in sentences such as the following which, in theory, could potentially cause ambiguity:

(1) *Bailaba(n) una(s) nena(s) bien bonita(s).*

‘Some pretty girls were dancing.’ (Poplack, 1980b, p. 372).

However, in cases such as example (1), where all of the plural markers are deleted, there is no evidence that the deletion of these markers triggers cases of ambiguity (Poplack, 1980c) as semantic, morphological, and syntactic factors play a vital role in the transmission of intelligible messages. When informants produce the final /n/ as a third person plural marker, they favor final /n/ deletion with regular verb forms /73/ and disfavor this deletion with irregular verb forms /27/ (Poplack, 1979b, p. 137). In this case, there is still no indication of ambiguity in number caused by deletion.

The place where disambiguating information is located also has a significant impact on
the elision of the final /n/ as when this information appears after the verb, the final /n/ tends to be deleted (Poplack, 1979b, p. 137). This is the factor that most strongly affects the deletion of the final /n/ which means that if no disambiguating information appears after the verb, informants tend to retain the final /n/. Informants’ tendency to velarize the final /n/ differs substantially from their tendency to delete the final /n/. When the segment that immediately follows the final /n/ is a vowel or a pause, informants favor velarization. However, the presence of a following consonant favors retention of the standard alveolar variant (Poplack, 1979b, p. 141). A major difference in variation with regard to velarization and deletion of the final /n/ is that functional factors have a greater impact on deletion than phonological factors and phonological factors have a greater impact on velarization than functional factors (Poplack, 1979b, 1980b).

Another approach to examining variation in the production of final consonants considers how the position of the tokens in a string affects how a consonant is produced: position one [las], [lah], [laØ] (las/the); position two [kosas], [kosah], [kosaØ] (cosas/things); and position three [bonitas], [bonitah], [bonitaØ] (bonitas/pretty) (Poplack, 1980c, p. 61). When these three different positions appear in the token string (las cosas bonitas/the pretty things), deletion is favored when the preceding plural marker in the token string is also deleted (Poplack, 1980c). The token string position type that most strongly favors deletion is ØØ (Poplack, 1980c, p. 62) which means that when the plural marker in both position one and position two is elided, it is very likely that the final /s/ in position three will not be produced. On the other hand, when the plural markers in the first two positions are retained, informants tend to retain the marker in the third position (Poplack, 1980c). Puerto Rican informants’ tendency to produce or delete final plural markers aligns with Martinet’s (1962) theory of least effort which helps explain that informants’ production or deletion of plural markers should not be directly correlated with
disambiguation of information. A combination of functional factors related to morphological, syntactic, and semantic information appears to favor plural marker deletion to a certain extent (.58) (Poplack, 1980b, p. 377), especially when these factors provide additional information following the verb. The extent to which combinations of functional factors—that both precede and follow the verb—impact plural marker deletion is still unclear. However, when the verb inflection itself is exclusively the only way to convey plural marking, informants favor retention over deletion (Poplack, 1980b, p. 377). This indicates that plural marking in the inflection is sufficient for the exclusion of additional disambiguating information conveyed through morphological, syntactic, or semantic information.

Recent research on variation in Puerto Rican Spanish in the US explores the language production of first, second, and third generation informants from Lorain, Ohio (Ramos-Pellicia, 2004, 2005, 2007). The vowel raising speech patterns of these speakers are examined with regard to their tendency to raise the /e/ and /o/ vowels to /i/ and /u/ respectively. With regard to /e/, the first and third generations categorically retain the /e/ in word-final position. Second generation informants produce few cases of vowel raising in this same context and thus, they also tend to retain the /e/ and the /o/. The factor that most strongly favors the retention of the /e/ is when it appears as a stressed syllable (Ramos-Pellicia, 2004, p. 93). Results by Ramos-Pellicia (2004, p. 103) also demonstrate that although first generation informants produce an infrequent amount of vowel raising, all three generations strongly favor the retention of the /o/ in word-final position especially when the /o/ appears in stressed syllables. These findings regarding retention corroborate those on the Island of Puerto Rico (Navarro Tomás, 1948; Álvarez Nazario 1982, 1990; Holmquist, 2008), but vowel raising appears to occur more frequently on the Island than in the US. Another feature concerns lowering of tonic vowels of diphthongs (raina instead of
reina, queen) and vowel lowering in word-internal position (serrocho instead of serrucho, saw) (Decker, 1952, p. 95). The most recent research on Lorain Puerto Rican Spanish does not corroborate these findings (Ramos-Pellicia, 2004) as there are currently only vowel raising tendencies in Lorain Puerto Rican informants.

Analyses of final consonants in Puerto Rican Spanish in the US have focused on the production of final /ɾ/ and final /s/. Unlike on the Island of Puerto Rico, the retroflex [ɾ] has been examined as a variant in Puerto Rican Spanish in the US because of language contact. In Lorain, Ohio, third generation informants produce the retroflex [ɾ] occasionally (N=78, 10%) when they are reading aloud, and to a lesser extent, the first (N=52, 3%) and second (N=33, 2%) generation informants produce this variant (Ramos-Pellicia, 2007, p. 56). Although the retroflex [ɾ] is not produced frequently, the fact that it appears when informants read aloud indicates that there may be an American English influence in their production of the Spanish /ɾ/. First and third generation informants, regardless of their level of exposure to Spanish and English, more strongly favor lambdacism in word-final position than second generation informants (Ramos-Pellicia, 2004, 2007). Earlier research shows that lambdacism occurs frequently in word-internal position before a consonant [palte] (parte/part) in first generation informants (Decker, 1952). However, in some cases, when the liquids are neutralized in word-internal position, there is no clear phonemic contrast (Kreidler, 1958, p. 56). The deletion of the final /ɾ/ occurs much less frequently than lambdacism. Both male and female informants in all three generations tend to delete the /ɾ/ more frequently in word-final position rather than word-internal position. (Ramos-Pellicia, 2004). In general, first generation informants favor the retention of /ɾ/ (or a variant of this phoneme that is not deletion) in word-final position more than second and third generation informants (Decker, 1952; Ramos-Pellicia, 2004). This pattern of variation is illuminated by
cases of the infinitive –ar form which is frequently lambdacized by first generation informants and deleted by second and third generation informants (Ramos-Pellicia, 2004).

In comparison to the liquids and other commonly analyzed variables in Puerto Rican Spanish in the US, research on the intervocalic and word-final /d/ in Puerto Rican communities in the US is sparse. Unsurprisingly, this variable is usually weakened (as a fricative), and occasionally deleted, in intervocalic and word-final position (Decker, 1952). Lambdacism of the /d/ in intervocalic position has also been documented in cases where a diphthong precedes the /d/ [ruela] (rueda/wheel) although this phenomenon is rare and clearly does not occur as much as deletion (Decker, 1952, p. 101). Recent research (Lipski, 2008) shows that the intervocalic /d/ is frequently deleted in the –ado past participle and in word-final absolute position.

Informants’ tendency to delete final /s/ is substantively different than that of final /d/. Analyses of more than 3,400 tokens by Ramos-Pellicia (2009) demonstrate that third generation informants favor deletion of final /s/ in both word-internal and word-final position. Second generation informants slightly favor retention. First generation informants are very resistant against deletion in word-internal and word-final position. Even when the final /s/ appears in stressed and unstressed syllables and in absolute and non-absolute position, these informants tend to retain or aspirate the final /s/ (Decker, 1952). Retention occurs most often in stressed syllables in absolute-final position and aspiration is favored in unstressed syllables in absolute-final position (Decker, 1952). Retention is also favored by informants who attained a college-level education in Puerto Rico (Kreidler, 1958). This tendency to resist deletion has been often related to Puerto Rican Spanish on the Island where speakers generally favor aspiration despite differences in preceding segment syllable stress (López-Morales, 1992; Lipski, 1994). Because first generation informants in the US are frequently exposed to English, it is necessary to explore
other potential factors that may help explain why retention and aspiration are dominant when they produce the final /s/. Third generation informants’ tendency towards deletion has been challenging to explain, but it has been argued that in this specific case, they acquire deletion as a predominant variant in lieu of aspiration or retention (Ramos-Pellicia, 2009). One contribution of the current dissertation is that classifying some speakers as third generation speakers, and thus assuming divergent behavior from first generation immigrants, may be misleading as intense contact in small communities and cyclical migration effectively blur the lines between generations when it comes to using variable features.

Another difference in variation between Puerto Rican Spanish in the US and Puerto Rican Spanish on the Island deals with the /b/ which usually has two variants: a bilabial stop [b] and a bilabial fricative\(^1\) \([\beta]\). The bilabial stop normally occurs after a nasal consonant \([\text{ambos}]\) \((\text{ambos}/\text{both})\) or after a pause in word-initial position \([\text{#beso}]\) \((\text{beso}/\text{I kiss})\) (Lipski, 2008; Schwegler, Kempff, & Ameal-Guerra, 2010). The bilabial fricative frequently occurs elsewhere. In Puerto Rican Spanish on the Island, the bilabial stop and the bilabial fricative are the only two variants of /b/. However, it has been documented that a third variant appears (i.e. labiodental \([v]\)) word-initially, following a consonant, and intervocalically in other Spanish-speaking communities. This labiodental variant also appears in Lorain Puerto Rican Spanish in postconsonantal \([\text{mvi\'erno}]\) \((\text{mvi\'erno}/\text{winter})\), word-initial \([\text{vas\’o}]\) \((\text{vas\’o}/\text{empty})\) and intervocalic \([\text{lava\’ora}]\) \((\text{lava\’ora}/\text{washer})\) position (Ramos-Pellicia, 2004, p. 132). Informants tend to produce the labiodental variant much more frequently when they are reading than when they are speaking (Ramos-Pellicia, 2004). The first generation tends to maintain the two bilabial variants, but there is a steady increase in the use of the \([v]\) when looking at all three generations. The first

\(^1\) This is sometimes referred to as approximate.
generation produces one of the two standard bilabial consonants very frequently (N=991, 91%) whilst the second (N=699, 74%) and third generations (N=224, 66%) produce these variants less frequently (Ramos-Pellicia, 2004, p. 137). With regard to the labiodental variant, the first generation produces few cases (N=97, 9%), while the second (N=244, 26%) and third generations (N=113, 34%) produce this variant at a higher rate (Ramos-Pellicia, 2004, p. 138).

The extent to which English influences the tendency to produce the labiodental variant will require further research into how linguistic and social factors interact with each other in different phonetic contexts. Earlier research in Lorain, Ohio does not document this voiced labiodental variant, but points to Lorain Puerto Rican informants’ confusion between voiced /b/ and voiceless /p/ consonants which sometimes results in the production of /balma/ rather than /palma/ (palma/palm) (Decker, 1952, p. 103). It is unclear if there may be any potential influence of English because this phenomenon occurs inconsistently, but is present amongst informants of different generations.

The voiced palatal obstruent\(^2\) has not received much attention in sociolinguistic research conducted on Spanish-speaking Puerto Ricans in the US. Ramos-Pellicia (2004) found that her participants produced three variants: an affricate [dʒ], a semiconsonant [j], and a vowel [i]. These variants may be produced in word-initial [iéno], [jéno], [dʒéno] (lleno/full) or intervocalic position [io], [jo], [dʒo] (yo/I) (Ramos-Pellicia, 2004, p. 153). First (N=1846, 95%) and second (N=1414, 84%) generation informants tend to favor the [dʒ] even when considering the linguistic context (e.g., word-initial, after a front vowel, and before a back vowel) and communication style (i.e., talking or reading) (Ramos-Pellicia, 2004, p. 159). Third generation informants are producing an increasing percentage of the semivowel [j] (N=65, 20%) and vowel [i] (N=51,

\(^2\) This standard pronunciation appears in the data from Amsterdam, New York.
15%), although they maintain the [dʒ] (N=214, 65%) with more frequency than the other two variants (Ramos-Pellicia, 2004, p. 159). The linguistic context that most strongly favors the production of [dʒ] is word-initial position followed by a back vowel and after a front vowel respectively (Ramos-Pellicia, 2004, p. 160). A more detailed explanation as to why the first and second generation informants favor [dʒ] over [j] and [i] has not been undertaken.

2.5 The Current Study

The current study is substantively different at many levels from prior studies conducted on variation in Puerto Rican Spanish in the US (Poplack, 1979b, 1980b, 1980c; Ramos-Pellicia, 2004, 2007). This is especially with regard to the demographic makeup, the location of the research, and the use of time of residence of speakers in Puerto Rico to contextualize speaker generation as a variable. It explores variation in a small community which has experienced migration trends of Puerto Ricans who arrive to Amsterdam from the Island of Puerto Rico, New York City or other regions of the US. The case of Lorain, Ohio exhibits cases of migration in which the majority of the Spanish-speaking population consists of both Puerto Ricans and Mexicans who arrive to Lorain, Ohio from their respective native regions (Ramos-Pellicia, 2005). Lorain—a town that is part of the Greater Cleveland metropolitan area—is also a larger community than Amsterdam as statistics show that the total population of Lorain (64,097) is more than three times that of the total population of Amsterdam is 18,620 (Census, 2010c). New York City and Philadelphia, other major sites for research on Puerto Rican Spanish, of course are much more populated than these other two communities. In these more populated communities, migrations trends show that Hispanics from all over the Spanish-speaking world converge in a context of both language and dialect contact. The current study will take a close look at how
migration trends impact variation by examining the number of years that informants have resided in Amsterdam, in Puerto Rico, and in New York City. Specific variables under study and the methodology of data collection and analysis are detailed in the next chapter.

2.6 Conclusion

The chapter has reviewed prior and current research trends regarding the sociolinguistic situation of Caribbean Spanish. I have provided a historical background for analyzing these varieties and have demonstrated how phonological variation carries over to areas where Puerto Rican Spanish in particular is spoken in the US. The following chapter, which details the methodology of the current study, starts to fill in some of the gaps that I have highlighted so far.
CHAPTER THREE: METHODOLOGY

3.1 Introduction

The chapter begins with a brief description of the research objectives. Then, I discuss the historical background of Amsterdam (NY) whilst providing information regarding migration trends and current populations of the city. Afterwards, I describe the data collection procedures. Later, I provide information about the informants that make up the sample of the study. Finally, the remainder of the chapter details the data analysis techniques.

3.2 Research Objectives

The current study intends to focus on sociophonetic characteristics of Spanish as used by four different groups of informants in Amsterdam stratified by a set of variables including the number of years of residence in Puerto Rico.

My research objectives are detailed below:

1. To provide an overview of the phonetic, lexical, and morphosyntactic features of Spanish in Amsterdam while examining how Spanish spoken in this community compares to Spanish spoken in other communities in the US and on the Island of Puerto Rico.

2. To describe the extent to which informants’ speech varies in relation to a set of linguistic and extralinguistic factors.

3.3 Historical Background

Amsterdam is a small city located in Montgomery County in eastern New York. Figure 3.1 of New York State shows that Montgomery County, where Amsterdam is located, is northwest of Albany County. Montgomery County is a principal county of the Mohawk Valley...
region which is comprised of other counties including Fulton, Herkimer, and Oneida.
Montgomery County is sometimes considered as part of the Capital District region for general statistical purposes that include population and demographic statistics (Dauria, 1994).

The city was initially founded by Dutch immigrants during the early 1700s and was officially named Amsterdam in the early 1800s in remembrance of the city of Amsterdam located in the Netherlands (Donlon, 1980). During the late 1800s and the early 1900s, Amsterdam experienced exponential population growth due to the construction of dams which led to an increase of manufacturing jobs. Statistics show that in 1870, the population was only 5,426; however, by 1920, population estimates reached 33,524 (Census Bureau, 2010a). The first major wave of Polish and Italian immigration into Amsterdam began during the late 19th century when the US strongly encouraged immigration and used the Port of Ellis Island to facilitate the entry of newcomers into New York State (Dauria, 1994). The second wave began during the mid-late 20th century when the economic growth of Amsterdam fluctuated constantly because of the comings and goings of manufacturing plants. In the midst of these fluctuations, Italians and Poles continued to populate the south side of the city. Other European groups began to inhabit the north side, especially towards the end of the century. Hispanic groups began to establish residency in the city center area of town during the mid-1950s and the Hispanic population continued to grow as the century came to a close.
The highest concentration of the Hispanic population in Amsterdam is of Puerto Rican origin. Recent statistics show that Puerto Ricans encompass 80.5% of the total Hispanic population (4,873) in Amsterdam. (Census Bureau/American Fact Finder, 2008-2012). Overall, Hispanics comprise 26.2% of the total population of Amsterdam (18,620) (Census Bureau, 2010a). At the turn of the century, Hispanics already accounted for 16.02% of the total population (18,355) (Census Bureau, 2000). While the total Hispanic population in Amsterdam has increased from 2,941 in 2000 to 4,873 in 2010, the total White population in Amsterdam has decreased from 90.0% (16,522) in 2000 to 80.4% (14,963) in 2010 (Census Bureau, 2000; Census Bureau, 2010a). The former increase and the latter decrease indicate that during the past decade, Hispanics tended to immigrate into Amsterdam whereas Whites tended to emigrate from Amsterdam.
3.4 Data Collection

In 2009, I visited the Civic Center of Amsterdam and started attending community events. After almost a year of building amicable relationships with different members of the community, I submitted documentation to the University at Albany’s IRB in order to request permission to start the current study which was approved in August of 2010.

I began to recruit participants for the study in November of 2010 by notifying members of the community about my research and inviting them to participate. Meanwhile, I continued to attend community events which helped me build a strong social network of potential informants who often referred me to their friends or colleagues. Roughly seven months into the recruitment process, the majority of the potential informants began to participate. The data were collected between May 2011 and September 2011 and a total of 55 informants participated in the study—38 females and 17 males.

Data were collected through three different methods: interviews, questionnaires, and surveys. First, the interviews were recorded with an RCA VR5220 digital voice recorder and a Samson R10S microphone. Each interview lasted approximately between one hour and one hour and fifteen minutes. All of the interviews were conducted in Spanish and were semi-directed in order to allow informants to speak as spontaneously and naturally as possible. A written list of general conversation topics was used in order to facilitate the flow of the interview conversations. This list included the following general topics: sports, education, language, food, music, vacations, shopping, and the Hispanic community in Amsterdam. Some of the most frequently discussed topics dealt with educational attainment, language skills in Spanish and English, and the sociocultural development of the Hispanic community in Amsterdam. In general, the majority of the informants value different educational opportunities: General
Education Degree (GED) preparation courses, English classes, and college courses. They also believe that speaking Spanish is an important part of their daily life while recognizing that English is used more frequently for work-related issues. The majority of the informants also envisage the Hispanic community of Amsterdam as a socially strong community that fosters both Hispanic and non-Hispanic cultures.

After the interviews, informants spent about 15-30 minutes filling out a questionnaire with demographic information and a survey regarding their opinion about how they speak Spanish. After reviewing the data collected from the survey, the decision was made to not use the survey in order to focus the current study on describing how informants actually produce sounds in different contexts rather than informants’ linguistic attitude about their sociophonetic language production which would be a different project. On the questionnaires, informants were asked questions about different social factors such as age, sex, level of education, and the number of years they have lived in Amsterdam, New York City, and Puerto Rico. A lot of the informants thought that questions 10-13 were very interesting because they tended to self-evaluate their language experiences, by talking to themselves, right before responding to each of these questions. Question 10 asks informants to indicate their first/native language (English, Spanish, or English and Spanish). Question 11 asks informants to identify their second language (English, Spanish, or another language—what language?). These two questions were asked in order to help determine informants’ perception of their level of language skills in English and Spanish: English dominant, Spanish dominant, and bilingual. Question 12 asks informants where they speak Spanish most frequently: at home, at school, at church, and outdoors with friends. Question 13 asks informants where they speak English most frequently using the same four options as Question 12. These last two questions were asked in order to examine how the domain
of use relates to the frequency with which informants speak English and Spanish. Some of the informants thought that an option labelled *at work* (*en el trabajo*) should have been included in this questionnaire. On the one hand, incorporating this option would broaden the scope of analysis. On the other hand, those informants who are unemployed would not be able to choose this option.

All informants had the option to complete the questionnaire in either English or Spanish. Eight of the 17 male informants completed the questionnaire in English. A different group of 8 of the 17 male informants completed the questionnaire in Spanish. There is one semiliterate\(^3\) male informant (semiliterate in both English and Spanish) whose questionnaire was completed in English. However, I had to read the instructions and questions to him orally in Spanish and record his responses on the English language questionnaire in writing. I had to record most of his responses in Spanish and a few times in English because the informant felt more comfortable speaking Spanish rather than English.

Seventeen of the 38 female informants completed the questionnaire in English. A different group of 17 of the 38 female informants completed the questionnaire in Spanish. There is a total of four semiliterate female informants—semiliterate in both English and Spanish. Two of these informants’ questionnaires were completed in Spanish and the other two informants’ questionnaires were completed in English at the request of the informants. However, because all of these informants felt more comfortable speaking in Spanish rather than English, I had to read the instructions and questions on these documents to them orally in Spanish and record their oral responses in writing on the questionnaires.

\(^3\) Semiliterate means that the informant has received an insufficient amount of formal instruction in reading and writing skills. Therefore, the informant is not capable of completing the survey and questionnaire without oral assistance.
3.4.1 The participants

The total female population of Amsterdam is 52.6% (9,799 people) and the total male population is 47.4% (8,821 people) (Census 2010c). These population statistics refer to the entire population of Amsterdam. More specifically, the higher number of female participants in the current study may cause one to surmise that the Hispanic female population in Amsterdam substantively outnumbers that of Hispanic males. However, this does not appear to be the case as recent statistics show that between 2008 and 2012, there were 2,406 Hispanic males and 2,275 Hispanic females in Amsterdam (Census Bureau/American Fact Finder 2008-2012). In the initial stages of recruiting informants, I experienced some difficulty with finding potential male participants because some of them seemed very shy and uninterested in linguistic research. I managed to partially resolve this issue by recruiting male informants who were friends of other informants who had already participated in the current study. Out of the 55 informants who participated in the current study, a more balanced sample of 34 informants was chosen for analysis primarily based on the following social factors: time spent in Puerto Rico, sex, and education. Generation is briefly examined in this chapter (see below) and in Chapter 5 because unlike prior studies, the majority of the second and third generation informants in the current study are native-like speakers as they have lived on the Island of Puerto Rico for 1 or more years during their lifetime. This means that even though they were all born and raised in the US mainland, during different periods of time (e.g., childhood, adolescence, or adulthood), they returned to Puerto Rico and acquired language skills in an environment where Spanish is the majority language. Because the majority of the informants in the current study have been exposed to L1 Spanish on the Island of Puerto Rico, time spent in Puerto Rico is a more stable variable than generation. The terms second and third generation assume that informants do not
have extensive exposure to L1 Spanish. With this in mind, the current study quantitatively analyzes generation because it brings to light how heritage speakers from these two generations and first generation informants use Spanish while considering the time that they have spent on the Island of Puerto Rico.

3.4.2 The extralinguistic variables

In the current study, I define *time spent in Puerto Rico* as the number of years that informants have been exposed to L1 Spanish on the Island of Puerto Rico based on the following time frame categories: Group 1 (15 or more years), Group 2 (5-15 years), Group 3 (1-5 years), and Group 4 (less than 1 year). Table 1 below displays this variable in relation to sex.

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<td>5-15 years</td>
<td>15 or more years</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>18</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 1 shows that the majority of the informants (18/34=52.94%) have 15 or more years of experience with L1 Spanish. To a lesser extent, Group 2 (6/34=17.64%) and Group 3 (5/34=14.70%) have had experience in a Spanish-dominant language environment during a long
period of time. Group 1 (5/34=14.70%) informants have the least amount of experience with L1 Spanish. It is important to note that this variable (i.e., time spent in Puerto Rico) is different from the variable labeled Years lived in Puerto Rico as this latter variable provides a more expanded stratification of time frames and is systematically examined in relation to Years lived in Amsterdam and Years in New York City in Chapter 5.

Because there is such a wide age range amongst the informants, I decided to stratify this category into three age groups: 18-38, 38-58, and 58 or older. Using three age groups instead of four or more is appropriate for the current study as the sample size of 34 informants is insufficient for the inclusion of an expanded stratification of age groups.

<table>
<thead>
<tr>
<th>Table 2. Informants by sex and age</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-38</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The above stratification of age in Table 2 demonstrates that the majority of the informants are in the middle-aged group (16/34=47.1%) and a slightly lower number of informants are in the younger age group (10/34=29.4%) and the older age group (8/34=23.5%). While preparing to collect data, I determined that having at least three to five informants in each age group would allow for a more in-depth study in the context of analyzing speakers’ ages. This is because I can plausibly compare age groups of US Puerto Rican informants to those from previous studies that examine informants who live on the Island of Puerto Rico.

*Generation* is often one of the most difficult terms to define when conducting
sociolinguistic research. In common terms, *generation* is indicated by a certain age range that subsumes an era of sociocultural experiences of groups of people. With this in mind, this concept becomes even more difficult to decipher when examining a minority language in contact with a majority language. This is because it is necessary to determine how the place of birth and the age of arrival in the US mainland indicates one’s respective generational category. Silva-Corvalán (1994), in her analysis of Mexican American Spanish, argues that informants who are born in their native country and arrive to the US mainland after age 12 are first generation informants. She further contends that informants born in the US whose parents are from their native country are second generation informants; and those informants born in the US with parents born in the US and grandparents born in their native country are third generation informants. I employ this same criterion for stratifying informants in the current study while taking into account the fact that the majority of the informants in the current study—who are not first generation informants—have lived in Puerto Rico and thus, exhibit native-like competence.

<table>
<thead>
<tr>
<th></th>
<th>First Generation</th>
<th>Second Generation</th>
<th>Third Generation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>14</td>
<td>6</td>
<td>34</td>
</tr>
</tbody>
</table>

According to the generation criteria outlined above, I chose a stratified sample of 7 male and 7 female informants from the first and second generations and 3 male and 3 female informants from the third generation. While there are only 6 third generation informants, the length of the
oral interviews conducted with these research participants provides a good amount of data for an in-depth analysis.

Informants’ level of education has widespread importance in various sociolinguistic studies. Those informants who possess high levels of education (college or higher) tend to employ conservative linguistic forms in formal contexts and innovative linguistic forms in informal contexts (Silva-Corvalán, 1994). Those informants who possess lower levels of education (high school or below) are inclined to produce innovative linguistic forms in formal contexts and stigmatized linguistic forms in informal contexts (Silva-Corvalán, 1994; Ramos-Pellicia, 2004). The current study will test these general conclusions by examining how the level of education of Puerto Rican informants relates to their language use in different phonetic contexts. Table 4 below displays the highest level of education that was attained by each of the 34 informants in the sample of the current study.

<table>
<thead>
<tr>
<th></th>
<th>College in US</th>
<th>College in PR</th>
<th>High School in US</th>
<th>High School in PR</th>
<th>Elementary/ Middle School in US</th>
<th>Elementary/ Middle School in PR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>4</td>
<td>10</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>34</td>
</tr>
</tbody>
</table>

The data in Table 4 demonstrate that the majority of informants (30/34=88.2%) possess either a high school or college-level education while fewer informants (4/34=11.8%) attained an
elementary/middle school-level education. This table also shows that a large portion of the female informants are college educated (9/17 = 52.9%) whereas the majority of male informants are high school educated (11/17 = 64.7%). In the sample of 34 informants in the current study, there are no informants who obtained their highest level of education at the elementary/middle school level in the US mainland. Overall, there are 15 informants (15/34 = 44.1%) who attained their highest level of education in Puerto Rico and 19 informants (19/34 = 55.9%) who achieved their highest level of education in the US.

In addition to considering informants’ level of education, I explore how their overall linguistic competence may impact their language production. Plentiful amounts of prior research (Poplack, 1980b, 1980c; Silva-Corvalán, 1994; Trudgill, 2002) has investigated this impact by examining informants’ first and second languages separately or by parsing informants’ overall language dominance of L1 or L2. In the current study, I stratify informants’ linguistic competence based on whether they are Spanish dominant, English dominant, or bilingual informants. In Spanish dominant informants, Spanish is the L1 and English is the L2. In English dominant informants, English is the L1 and Spanish is the L2. In bilingual informants, English or Spanish may be the L1 or L2 or both languages may be L1s. Using these criteria, Table 5 shows the linguistic competence stratification of the sample of the current study.

<table>
<thead>
<tr>
<th></th>
<th>English dominant</th>
<th>Spanish dominant</th>
<th>Bilingual</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>16</td>
<td>16</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 5. Informants by sex and linguistic competence
Table 5 shows that out of the sample of 34 informants, there are 2 English dominant informants: 1 male and 1 female (2/34=5.9%). During the data collection process, I realized that it was extremely difficult to find English dominant Puerto Rican informants in Amsterdam. This could be due to the fact that the majority of the informants in the second and third generations are native-like speakers (see above) and thus, they are considered bilingual. Even when taking into consideration the 55 informants who initially participated in the current study, out of these 55 informants, there are only 7 English dominant informants (7/55=12.7%) indicated in the self-reported competence data. While most of the informants have constant exposure to English on a daily basis via television programs, work obligations and/or community activities, they are also exposed to Spanish in these same environments although it is to a lesser extent. Table 5 also shows that there is an identical number of Spanish dominant (8 males and 8 females) and bilingual informants (8 males and 8 females) in each sex group. In order to determine informants’ linguistic competence, I used questions 10 (What is your first language?) and 11 (What is your second language?) from the questionnaire in addition to reviewing the transcriptions of the recorded interviews to more closely examine cases where informants lacked vocabulary, native-like pronunciation, and appropriate grammatical structures in both English and Spanish. I also paid close attention to cases of inter- and intra-sentential code-switching and code-mixing because these phenomena sometimes appear when informants demonstrate the ability to produce complex morphosyntactic structures in Spanish and English or need to fill in knowledge gaps in one of these two languages. However, as with any study based on self-reported competence, speakers do not necessarily always provide an accurate evaluation of their

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4 The data in Table 4 in this chapter—which is primarily based on my evaluation of informants’ linguistic competence—is different from the data in Chapter 4 regarding linguistic competence which is exclusively based on informants’ self-reported responses.
competence as it correlates with actual language use.

Addressing social factors related to marital status are sometimes challenging because informants may be reluctant to reveal this information. For the current study, I inquire about the ethnic background of informants’ spouses so as to examine how this information may constrain their language production. Table 6 shows the three options from which informants chose when completing the questionnaire: Hispanic, non-Hispanic, and no spouse.

<table>
<thead>
<tr>
<th>Table 6. Informants by sex and spouse’s ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The majority of the informants have Hispanic spouses (8/17=47% of the male informants and 15/17=88.2% of the female informants). There are fewer informants who do not have spouses: 7/17=41.2% of the male informants and 2/17=11.8% of the female informants. Two informants have spouses who are not of Hispanic origin: 2/17=11.8% of the male informants. There are no females who have non-Hispanic spouses in this sample. Examining spouses’ ethnicity will help contribute to the larger body of literature as the relationship between spouses’ ethnicity and language production is not specifically examined in prior studies of Puerto Rican Spanish in the US.

Exploring the extent to which the number of years lived in Amsterdam influences informants’ language production is another important variable in this study. In Table 7 below, I stratify this social variable in increments of 5 years up to 20 years beginning after the category labeled Less than 1 year. I also include a category of more than 20 years.
Table 7. Informants by sex and years lived in Amsterdam

<table>
<thead>
<tr>
<th></th>
<th>Less than 1 year</th>
<th>1-5 years</th>
<th>5-10 years</th>
<th>10-15 years</th>
<th>15-20 years</th>
<th>More than 20 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>18</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 7 shows that the majority of the male (8/17=47.1%) and female informants (10/17=58.8%) have resided in Amsterdam for more than 20 years. There is one female informant who has resided in Amsterdam for less than 1 year, but there are no male informants in this same category. Also, there are 2 male informants who have lived in Amsterdam for 15-20 years whereas there are not any female informants in this same time frame. Prior research (Poplack, 1978; Corvalán, 1994; Lapidus & Otheguy, 2005) tends to define social variables related to migration more broadly by examining the age of arrival to the US or years of residence in the US. However, specifying the location of residence is contextually appropriate for the current study as there are Puerto Rican informants in Amsterdam who have lived in New York City, on the Island of Puerto Rico, and in other regions.

The case of years lived in New York City may impact informants’ language production. This is because their exposure to Spanish can be affected by different situations of language contact in large city environments. As shown below in Table 8, I stratify this variable into six different time frames so as to lay the groundwork for analyzing how it may affect informants’ language use in distinct contexts.

---

5 I examine age of arrival to Amsterdam in Chapter 4.
Table 8. Informants by sex and years lived in New York City

<table>
<thead>
<tr>
<th></th>
<th>Less than 1 year</th>
<th>1-5 years</th>
<th>5-10 years</th>
<th>10-15 years</th>
<th>15-20 years</th>
<th>More than 20 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>34</td>
</tr>
</tbody>
</table>

More than half of the informants (19/34=55.9%) have lived in New York City for less than 1 year or have never lived in this city. Fourteen of the 19 informants in the first column (8 males and 6 females) have never lived in New York City. Because there is an abundance of Spanish-speaking communities in New York City, informants who have or have not lived in these communities may have varying levels of exposure to Spanish. This exposure can impact their production of Spanish sounds depending on the extent to which they acquire overall linguistic competency.

The amount of time that informants reside in Puerto Rico evidently influences their acquisition of Spanish. This influence manifests itself in their language production and allows for the analysis of their speech tendencies in different phonetic contexts. In the current study, I examine how the length of time of residence in Puerto Rico conditions informants’ use of Spanish. In Table 9, I stratify this variable in alignment with the previous two social variables by using six different time frames.
Table 9. Informants by sex and years lived in Puerto Rico

<table>
<thead>
<tr>
<th></th>
<th>Less than 1 year</th>
<th>1-5 years</th>
<th>5-10 years</th>
<th>10-15 years</th>
<th>15-20 years</th>
<th>More than 20 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>34</td>
</tr>
</tbody>
</table>

As shown in the table above, the majority of the informants (24/34=70.59%) lived in Puerto Rico for 5 or more years. On the other hand, a fewer number of informants (6 males and 4 females, 10/34=29.41%) resided in Puerto Rico for up to 5 years. Based on the sex group, an identical number of male (N=7, 41.2% of males) and female (N=7, 41.2% of females) informants lived in Puerto Rico for more than 20 years. Although one may suspect that these informants have similar speech tendencies as those who do not emigrate to the US mainland, this is not necessarily the case. This is because age of exposure to a monolingual Spanish context and intense language contact may affect their development of competence in Spanish (Silva-Corvalán, 1991).

The social variable categorized as domain of language use for English and Spanish (i.e. at home, at school, at church, and outdoors with friends) will be discussed in detail in the current study when describing Spanish in Amsterdam (NY) in Chapter 4. This is because some of the informants chose more than one domain to indicate where they most frequently speak Spanish or English. Because more than one domain was chosen in some cases and not in others, the data will be described from a qualitative point of view rather than a quantitative point of view.
3.5 Data Analysis

The SPSS program was used for quantitative analysis of the final /s/ in the current study. A total of 13,600 tokens of this variable were analyzed. The first 400 tokens of /s/ that appear in the data of each of the 34 informants were examined. In order to transcribe the data, I employed the Express Scribe software. I also made use of the PRAAT software to analyze speech sounds, when necessary, during the transcription process. All of the data of the current study were transcribed between October 2011 and September 2012. During the first five-to-six months of the transcription process, I wrote out informants’ spoken words/sounds. During the last five months of the transcription process, I employed the respective phonetic symbols and other transcription conventions in order to represent the production of the variables under study.

3.6 Conclusion

This chapter has outlined the methodology of the current study by detailing the research objectives, describing the historical background of Amsterdam, New York, discussing the data collection procedures, and highlighting the data analysis techniques. I have also discussed social and linguistic factors that are analyzed in order to test prior research findings.
CHAPTER FOUR: SPANISH IN AMSTERDAM

4.1 Introduction

This chapter presents a description of the presence of Spanish in Amsterdam, New York. I start by providing background information concerning its presence as gleaned from census statistics related to the Hispanic community and the results of the questionnaire (Sections 4.2, 4.3, and 4.4). Then, I describe phonetic and morphosyntactic features of Spanish as used by the four different groups of informants described in Chapter 3 (Sections 4.5 and 4.6). The remainder of the chapter examines issues regarding code-switching and language shift/language maintenance (Section 4.7) and concludes by summarizing how the linguistic situation in Amsterdam compares to other studied communities.

4.2 Background Information on Spanish in Amsterdam

A consistent flow of European immigration into Amsterdam (NY) occurred in the early 1900s because of the industrial growth of carpet factories. At the time, the majority of the Amsterdam population consisted of immigrants from several different European countries: e.g., Poland, Italy, the Netherlands, and Germany. Before the 1950s, there were no specific documented cases of Spanish spoken in Amsterdam. However, sporadic immigration of Puerto Ricans into Amsterdam began in the 1940s (Dauria, 1994). In the early 1950s, some of the carpet mills based in New York City (NYC), which had Puerto Rican workforces, relocated to Amsterdam (Donlon, 1980; Dauria, 1994). The carpet mills that relocated to Amsterdam brought job opportunities for both Hispanic and non-Hispanic Amsterdam residents. In addition to these opportunities, Hispanics worked in other low-paying industry jobs that were available as the local government offered economic incentives in an attempt to boost the economy.

The resurgence of the job market in Amsterdam in the 1950s was a major reason why
Hispanics immigrated into Amsterdam. Towards the end of the 1950s, Hispanics still accounted for a small portion of the total population (32,240) (Donlon, 1980). The majority of these immigrants were Puerto Ricans who came from either the Island of Puerto Rico or NYC (Dauria, 1994; Snyder & Hasseln, 2010). Other Hispanic populations that immigrated into Amsterdam (Dominicans, Mexicans, and Cubans) usually came from NYC also. From the 1960s through the 1980s, Amsterdam continued to experience consistent growth of Hispanic immigration despite two major economic downturns during the late 1960s and early 1980s. In the late 1960s, the majority of the carpet mills left Amsterdam due to the desire for nonunionized cheap labor and more affordable taxes. In the early 1980s, Coleco, a popular toy and video game manufacturer, closed all of its manufacturing plants in Amsterdam and outsourced these jobs to foreign countries. Nonetheless, from the 1980s to the present, stable levels of Hispanic immigration into Amsterdam continued and Puerto Ricans tended to immigrate into Amsterdam more than any other Hispanic population in the state of New York.

Reasons for these immigration trends during the last 30 plus years are not totally clear. It has been argued that Puerto Ricans who came to Amsterdam from NYC left NYC because of the prevalence of criminal activity in the areas where they lived (Dauria, 1994). However, based on the data of the informants of the current study, the majority of them immigrated into Amsterdam in order to live with family members who were already residing in Amsterdam. This reason was

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6 The specific percentage of Hispanics in relation to the total population of Amsterdam was not documented during the 1950s. However, Donlon infers that this population of immigrants was a very small portion of the total population in Amsterdam.

7 Several first generation informants in the current study expressed their desire to migrate to Amsterdam during this era for the following reasons: to provide their children with better access to educational opportunities and to earn a wage sufficient enough to financially support their family.
provided regardless of whether the informant came to Amsterdam from NYC, the Island of Puerto Rico, or a different region of the US.

4.3 Population Statistics

Census Bureau (2010a) statistics show that Puerto Ricans are the predominate population of Hispanics in Amsterdam. Out of a general population of 18,620 in 2010, 21.1% was Puerto Rican (3,923), 1.3% was Dominican (239), 1.0% was Central American (185) (excluding Mexico), 0.6% was South American (107), 0.5% was Mexican (102), 0.4% was Cuban (80), and 1.3% was other Hispanic (237) (Census Bureau, 2010a). These statistics show that the population numbers amongst the non-Puerto Rican groups are similar to each other. With regard to the Puerto Ricans specifically, the Census population data does not distinguish between native Puerto Ricans, who were born on the Island of Puerto Rico, and non-native Puerto Ricans who were born in the US mainland. Estimates of Amsterdam’s Hispanic population by the Census Bureau, (2013), for the period between 2009 and 2013, show that from a sample of 1,544 males age 18 and older, there are 1,274 natives (82.5%) and 270 (17.5%) foreign born informants (Census Bureau, 2013). From a sample size of 1,622 females age 18 and older, there are 1,451 (89.46%) natives and 171 (10.54%) foreign-born informants.

In order to supplement the abovementioned census data, in the current study, I distinguish between US-born Puerto Ricans and Puerto Ricans born on the Island of Puerto Rico. With regard to the case of Amsterdam, being born and raised in the US mainland does not necessarily mean that an informant has not had experience with an L1 Spanish environment. In fact, the majority of the second and third generation informants in the current study have been exposed to L1 Spanish in Puerto Rico. Out of the 34 informants in the current study, there are 7 male Puerto Rican informants who were born on the Island of Puerto Rico and 10 male Puerto Rican
informants who were born in the US mainland (N=17). There are also 7 female Puerto Rican informants who were born on the Island of Puerto Rico and 10 female Puerto Rican informants who were born in the US mainland (N=17). Out of the 34 informants in the current study, 2 informants (1 male and 1 female) were born in Amsterdam. This means that the remaining 32 informants migrated to Amsterdam from other regions. There is also 1 male informant who lived in Puerto Rico from birth to the age of 10 before migrating to Amsterdam. There are three other male informants who arrived in Amsterdam during their early childhood (1 at age 7 and 2 at age 8) from other US regions. In the case of females, there are two informants who arrived in Amsterdam during their early childhood (1 at age 6 and 1 at age 7) from other US regions. With regard to informants with an older age of arrival, 6 Puerto Rican-born male informants arrived in Amsterdam between the ages of 23 and 42. When comparing these 6 native informants to 6 US-born Puerto Rican males in the current study, the range for age of arrival in this latter group is slightly younger: between 18 and 32 years old. As far as females, the age range of age of arrival of these informants—beyond early childhood age—is wider than that of males. For example, the age range (from 13 to 55) for 7 US-born female informants and 7 Puerto Rican-born female informants (from 20 to 67) accounts for informants who are over the age of 50. Overall, the data show that the highest age of arrival in Amsterdam for Puerto Rican-born males is 42 as opposed to 67 for Puerto Rican-born females. On the other hand, the oldest age of arrival for US-born Puerto Rican males is 32 as opposed to 55 for US-born Puerto Rican females.

4.4 Community Perception of the Spanish language and Hispanics in Amsterdam

The community’s perception concerning the presence of Spanish in Amsterdam is similar amongst Groups 1 and 2 and somewhat different in Groups 3 and 4. In the current study, Group 1 and Group 2 informants recognize the importance of speaking Spanish as a way of embracing
their group identity as Puerto Ricans. Group 3 and Group 4 informants are clearly aware of the resistance towards speaking Spanish as a minority language. The recognition (quotes 2 and 3 below) of and resistance (quotes 4 and 5 below) towards the Spanish language in Amsterdam is illustrated in the three quotes below:

(2) Algunas veces hay gente que no sabe el inglés y los hijos míos han servido de intérpretes. Parece importante porque ésa es la raza de uno. (Group 1)
   ‘Sometimes there are people who do not know English and my children have served as interpreters. It seems important because that is one’s race.’

(3) Yo les decía háblame español porque soy puertorriqueña. Ustedes tienen que hablar el idioma mío. (Group 2)
   ‘I told them, speak to me in Spanish because I am Puerto Rican. You all have to speak my language.’

(4) Yo les explico a ellos de donde vienen, de la cultura de que son puertorriqueños, que tienen que hablar otro idioma pero me dicen no te entiendo háblame inglés. (Group 3)
   ‘I explain to them where they come from, about the culture, that they are Puerto Ricans, that they have to speak another language but they tell me, “I do not understand you, speak English to me”.’

(5) Ellos hablan inglés la mayor parte del tiempo a pesar de que yo les hablo español. Me imagino que no están interesados. Lo entienden cuando ellos quieren. (Group 4)
   ‘They speak English the majority of the time despite the fact that I speak to them in Spanish. I imagine that they are not interested. They understand it when they want to.’

8 All of the quotes are reproduced directly from the recordings of the interview conversations.
Quote (2) helps show that Group 1 informants are cognizant of the language barriers that exist between Spanish dominant Puerto Ricans and English dominant mainlanders in Amsterdam. This quote also suggests that children’s bilingualism is an important aspect of their Puerto Rican identity as they can competently use Spanish as a minority language in order to identify with members of the Spanish-speaking community in an English dominant environment. Quote (3) demonstrates that Group 2 informants attempt to obligate their children—who are from the third generation—to speak Spanish as a way of representing their group identity. Quote (4) from the Group 3 informant indicates that children have a strong resistance against speaking Spanish even though the informant makes them aware of the cultural value of language maintenance. In Quote (5), the Group 4 informant describes a situation in which her children refuse to speak Spanish although they clearly understand the language. This resistance is not surprising as the literature has shown that once children recognize that English is the language with social prestige, they tend to avoid speaking Spanish.

Throughout the interviews, informants from all four groups demonstrated a strong sense of Hispanic population growth (quotes 6 and 8), community participation in extracurricular activities (quote 7), and amicable relationships amongst different members of the Hispanic community (quotes 9):

(6) La comunidad que está aquí en Amsterdam es yo creo que llega a como cinco mil o seis mil hispanos. Yo creo que ha crecido bastante. Ahora hay muchos puertorriqueños. (Group 1)

‘The community that is here in Amsterdam is I believe it has roughly five or six thousand Hispanics. I believe that it has grown quite a lot. Now there are a lot of Puerto Ricans.’
(7) Desde mil novecientos noventa y uno yo he participado en lo que se llama Recreational Softball of Amsterdam City. Todos los veranos, hay sobre veinte equipos de softball. Para mil novecientos noventa, había solamente un equipo puertorriqueño. Hoy en día hay cinco equipos puertorriqueños.

(Group 2)

‘Since 1991, I have participated in what is called Recreational Softball of Amsterdam City. Every summer, there are about 20 softball teams. By 1990, there was only one Puerto Rican team. Nowadays, there are 5 Puerto Rican teams.’

(8) La comunidad hispana ha ido creciendo poco a poco. Cuando llegué diez años atrás yo no veía tanta gente como veo ahora y mientras han pasado los años he visto que la población ha estado creciendo con más intensidad. (Group 3)

‘The Hispanic community has grown little by little. When I arrived 10 years ago, I did not see as many people as I see now and as the years have passed, I have seen that the population has grown with more intensity.’

(9) La unidad es entre todos los puertorriqueños que vemos y algunos latinos dominicanos. Siempre estamos compartiendo juntos. Después de cada juego algunos se toman su cervecita. Nosotros preparamos comida. Nos juntamos toda la familia.

‘The unity is amongst all of the Puerto Ricans that we see and some of the Latino Dominicans. We are always sharing together. After each game, some drink their beer. We prepare food. All of the family gets together.’ (Group 4)
Quotes (6) and (8) suggests that informants believe that the population of Hispanics in Amsterdam has consistently grown. Quote (6) specifically highlights the growth of the Puerto Rican community and quote (8) provides a more general view of Hispanic population growth during a decade. These informants’ overt awareness of population growth is consistent with other Puerto Rican communities in the US. With this awareness in mind, quote (7) provides more support for the Hispanic population growth in Amsterdam with regard to the participation in a recreational softball league over a period of time that exceeds two decades: from 1990 to 2011. Quote (9) demonstrates a strong overall sense of friendly relationships amongst Puerto Ricans and other Hispanic populations who are involved in extracurricular activities.

4.4.1 Perception of Linguistic Competence

In the current study, informants self-reported their linguistic competence in Spanish and English on the questionnaire by indicating their first language (L1) and second language (L2). It is important to bear in mind that some informants may perceive their L1 to be Spanish even if they were born in the US while other informants may perceive their L1 to be English even if they were born in Puerto Rico. The results of the self-reported data for L1 are shown below.
Figure 4.1 shows that the majority of males (N=13, 76.5% of males) and females (N=13, 76.5% of females) indicated on their questionnaires that their L1 is Spanish. This suggests that both sex groups have an identical perception of how they identify with Spanish in a language contact situation. The lowest number of informants (2 males, 11.8% of males and 1 female, 5.9% of females) chose English as their L1. A total of 5 informants (2 males, 11.8% of males and 3 females, 17.6% of females) identified both Spanish and English as their L1s. Overall, the data in Figure 4.1 demonstrate that the informants in the current study strongly associate themselves with Spanish as an L1. With this in mind, it is expected that informants will view English as a predominate L2. Figure 4.2 below displays the results of L2.
Out of the 17 male informants, 13 informants (76.5% of males) wrote that English is their L2 and 4 informants (23.5%) indicated that Spanish is their L2. Interestingly, 2 of the male informants that identified Spanish as their L2 also identified Spanish and English as their L1s. This means that they perceive Spanish as a primary and secondary language. With regard to females, Figure 4.2 shows that the majority of them (N=15, 88.2% of females) believe that English is their L2 and 2 female informants (N=2, 11.8% of females) mentioned Spanish as their L2. These same two informants—whose L2 is Spanish—identified both English and Spanish as their L1s. This supports males’ perception of Spanish as having a dual L1/L2 function. One of the female informants, who chose English as an L2, also wrote that English and Spanish were her L1s. This is interesting because English carries linguistic prestige whereas Spanish is socially marginalized in the US mainland.
4.4.2 Perception of Linguistic Behavior in Domains of Use

The frequency with which informants use Spanish and English in a language contact situation inevitably has an impact on their linguistic competence. In Amsterdam, the sample of 34 informants self-reported on the domains in which they most frequently use these two languages: i.e. at church, at school, at home, and outdoors with friends. These domains were examined in relation to each of the four groups under study for both Spanish and English. Figure 4.3 below displays the results concerning these groups and Spanish.

Overall, Figure 4.3 shows that across the four groups, the majority of the informants claim that they speak Spanish most frequently at home or both at home and in other domains. In Group 1,
13 out of the 18 informants (72.2%) follow this pattern of use. The remaining 5 informants in this group use Spanish most frequently while outdoors with friends (N=4) or while at church (N=1). In Group 2, 5 out of the 6 informants (83.3%) follow a pattern of use that includes the home environment: N= 4 at home and N=1 all four domains chosen. The remaining informant in this group uses Spanish most frequently while outdoors with friends. As far as Group 3, 4 out of the 5 informants (80%) indicated that the home environment is associated with their most frequent use of Spanish: N=2 at home, N=1 at home and outdoors with friends, and N=1 at home, at church, and outdoors with friends. The remaining informant in this group uses this language frequently while at church. In Group 4, there are 3 out of 5 informants (60%) who use Spanish most frequently at home: N=2 at home and N=1 at home and at school. The remaining 2 informants in this group use this language frequently while outdoors with friends. Generally, it is not surprising that informants speak Spanish frequently at home because it is a socially marginalized language in public domains in the US. With this marginalization in mind, it is important to mention that a total of 13 out of the 34 (38.2%) informants in the current study indicated in their questionnaires that they speak Spanish most frequently in a domain that is usually considered a public domain: outdoors with friends (N=11) and at school (N=1), and all four domains chosen (N=1).

The domains in which informants most frequently use English are relevant to those in which they use Spanish given that both of these languages are in intense contact with each other. Figure 4.4 below shows the results concerning the four groups under study and English language use.
Figure 4.4 shows that the majority of the Group 1 informants (11 out of 18, 61.1%) use English most frequently when they are outdoors with friends: N=9 (outdoors with friends) and N=2 (at school and outdoors with friends). The remaining informants in this group chose different domains of use: N=4 (at home), N=2 (at school), and N=1 (at church). The results of Group 2 informants indicated that they speak English most frequently in public domains: N=5 (outdoors with friends) and N=1 (at school). With regard to Group 3, the majority of the informants (4 out of 5, 80%) also indicated that they speak English most frequently while outdoors with friends and the remaining informant chose all four domains. In Group 4, one of the informants speaks English most frequently in a private domain (i.e. at home), but the remaining four informants
indicated that they speak this language most frequently in a public domain: N= 2 (outdoors with friends) and N=2 (at school). The case of the Group 3 informant who chose all of the domains of use is interesting because this implies that English language use is dominant in their daily life regardless of the domain in which they are speaking. Also, this is the only informant in the current study who self-reported English as being the language most frequently used in all four domains. Overall, the results above show that the majority of the informants in the current study—especially those informants who spent 15 or more years in Puerto Rico—believe that they speak English most frequently in public domains: e.g., outdoors with friends and at school.

Figure 4.5 Time Spent in Puerto Rico by Generation

![Figure 4.5 Time Spent in Puerto Rico by Generation](image-url)
Figure 4.5 provides evidence that generation is an unstable sociolinguistic variable for analyzing the informants in the current study because as native-like speakers, the majority of the second and third generation informants have substantial language experience in an L1 Spanish environment. With regard to the second generation, Figure 4.5 shows that 10 of the 14 informants (71.43%) lived in Puerto Rico for 5 or more years, and the remaining 4 informants (28.57%) lived on the Island for either less than 1 year (N=2) or 1-5 years (N=2). As far as the third generation, out of the 6 informants, 2 (33.33%) lived in Puerto Rico for 15 or more years, 1 (16.67%) lived on the Island for 1-5 years, and the remaining 3 informants (50%) were in this Spanish-speaking region for less than 1 year. With regard to first generation, 12 of the 14 (85.71%) informants have lived in Puerto Rico for 5 or more years and 2 (14.29%) of these informants have lived on the Island for 1-5 years. Overall, the data helps shed light on the cyclical migration trend in Amsterdam which necessitates a quantitative analysis of informants’ final consonant production in Spanish (see Chapter 5) based on time spent in Puerto Rico rather than generation.

4.5. Phonetic Features of Spanish in Amsterdam

This section offers a qualitative overview of some of the most salient features in Puerto Rican Spanish in Amsterdam, except for the /s/ which will be discussed quantitatively in the next chapter.

4.5.1. Dental stop and fricative

In the current study, Group 1 informants delete the word-final /d/ as shown in the examples below.

(10) Hoy en día un celular es una necesida[Ø] para mí.

‘Nowadays a cell phone is a necessity for me.’
(11) De verda[Ø] a mí no me gusta la salsa.

‘Truthfully, I do not like salsa.’

(12) La comunida[Ø] hispana cada día está creciendo más y más.

‘The Hispanic community is growing more and more every day.’

Group 2 informants also delete the word-final /d/ in similar contextual situations (example 13) and in phrase-final position (example 14):

(13) La comunida[Ø] hispana de Amsterdam ha cambiado drásticamente.

‘The Hispanic community in Amsterdam has changed drastically.’

(14) Hay que ir tan lejos para la ciuda[Ø].

‘It is necessary to go so far towards the city.’

In the data of Group 3, less deletion and more common use of the fricative was observed as shown below.

(15) Yo llegué a la eda[ð] de ocho años de Newark, New Jersey.

‘I actually arrived at the age of 8 from Newark, New Jersey.’

(16) Me gradué ahora voy para FCCC para el colegio I mean la universida[ð] .

‘I graduated I am headed for FCCC for the high school I mean the university.’

Example (15) shows that the fricative is retained when the word-final /d/ is followed by a word-initial dental stop. In example (16), this same variant appears in phrase-final position.

The fricative is also more common than deletion in the data of Group 4 informants. Two examples are displayed below.

(17) Es muy bueno para criar a mis hijos. Es un ambiente más tranquilo que la ciuda[ð] y todo eso.

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9 Fulton County Community College is located about 10 miles northwest of Amsterdam.
‘It is very good in order to raise my children. It is a more tranquil environment than the city.’

(18) Sí, le voy a hablar con sinceridad. Cuando yo llegué a este lugar, me gustó mucho el lugar.

Yes, I am going to speak to you with sincerity. When I arrived to this place, I liked the place a lot.

In intervocalic position, Group 1 informants tend to delete the /d/ in the –ado and –ada past participles and in nouns ending in –ado. They also tend to retain the fricative in the –ido past participle as in the following examples.

(19) No puede ser que tú hayas cocinado. Tú nunca has cocinado.

‘It is not possible that you have cooked. You never have cooked’.

(20) Si yo no entiendo los americanos y los americanos no me entienden a mí no podemos llegar a ningún lado.

‘If I do not understand the Americans and the Americans do not understand me, we will not be able to get anywhere.’

(21) Últimamente todas las vacaciones han sido en Puerto Rico.

‘Lately, all of the vacations have been in Puerto Rico.’

(22) A ellos les gustan mucho el arroz blanco y la habichuela guisada.

‘They like white rice and bean stew a lot.’

In the data of Group 2 informants, the fricative was observed in the following intervocalic contexts: –ado, –ido, and –ada. Examples (23-26) below illustrate this language production.

(23) En dos mil yo llegué a Amsterdam de Delaware del estado de Delaware.

‘In 2000, I arrived to Amsterdam from Delaware from the state of Delaware.’
(24) Ya se les ha olvidado el español.

‘They have forgotten Spanish.’

(25) Me he mantenido solo y así seguiré.

‘I have maintained myself alone and that is the way I will continue’.

(26) Yo estoy casada después ya veinticinco años casada.

‘I am married after twenty-five years still married.’

In Group 3, deletion and the fricative appear in the –ado past participle and the fricative is retained in the –ido past participle. These informants also retain this variant when –ada appears in the data. The examples below display these three different intervocalic contexts.

(27) ‘La comunidad de Amsterdam nunca ha cambiado siempre ha sido lo mismo.’

‘The Amsterdam community has never changed, it has always been the same.’

(28) ‘Nunca tuve ninguna efe en ningún grado ni nada así pero me ayudaron suficiente.’

‘I never had any “F” in any grade or anything like that, but they helped me a lot.’

(29) Vivimos en una sociedad donde está tan mezclada con diferentes idiomas.

‘We live in a society where it is so mixed with several languages.’

Example (27) shows a case of deletion in the past participle with the a vowel as the anterior segment and the o vowel as the posterior segment. Also, this example includes the articulation of the fricative when the i vowel is the anterior segment and o vowel is the following segment.
Example (28) exhibits two cases where the fricative is retained: first, in a noun (*grado*) and second, in a pronoun (*nada*) respectively. Example (29) displays the production of the fricative in the –*ada* past participle which of course has identical vowel segments in anterior and posterior position.

In Group 4, the fricative was observed as the dominant variant in these intervocalic contexts of the /d/. A few examples are shown below.


‘I have seen how they have changed any situation. Sometimes, I have become discouraged also.’

(31) Yo he teni[ð]o casos con mis hijjos que he teni[ð]o que ir a la corte.

‘I have had cases with my children in which I have had to go to court.’

(32) Llegamos a la conclusión que nunca se hace na[ð]a. Me ofrecen diferentess tipos de ayuda.

‘We came to the conclusion that nothing is ever done. They offer me several tips of help.’

Across all four groups, in word-initial/pre-pausal position [doy] (*doy* I give) and after a nasal consonant [andar] (*andar* to walk), the standard dental stop [d] appears. This standard pronunciation also appears when preceded by the [l] as in [toldo] (*toldo*/awning). The standard fricative pronunciation occurs elsewhere: e.g., [arðer] (*arder*/to burn) and [dezðe] (*desde*/from). All of these standard pronunciations are consistent with prior research (Schwegler, Kempff, & Ameal-Guerra, 2010).
4.5.2 Word-initial /r/ and Intervocalic /r/: tap, trill, and velar fricative

In Amsterdam, Group 1 informants produced a simple vibrant [ɾ] in word-initial position and a velar fricative [x] in intervocalic position. The examples below display these two phenomena.

(33) ‘Yo llegué muy bien aquí en Amsterdam guiando con tres nenes del ca[x]o.’

‘I arrived very well here in Amsterdam, driving with three babies from the car.’

(34) ‘No les proveen lo que en [ɾ]ealidad ellos desean tener.’

‘The do not provide them what, in reality, they desire to have.’

Examples (33) and (34) show that Group 1 informants produce a non-standard variant of /r/ in both intervocalic and word-initial position. Group 2 informants’ production of /r/ is similar to that of Group 1 as shown below in examples (35) and (36).

(35) Ella siempre está cocinando a[x]oz con habichuela.

‘She is always cooking rice with kidney beans.’

(36) Nos [ɾ]elacionamos en ciertas maneras con la familia.

‘We relate to each other in certain ways with the family.’

Group 3 and Group 4 informants articulate the simple vibrant [ɾ] in intervocalic position and the velar fricative [x] in word-initial position as shown below in examples (37) and (38).

(37) No me gustaría nada más quedarme en esa específicamente en esa ca[r]era.

‘I would not like to just stay in that one, specifically in that career.’

(38) No me gustan los [x]uidos.

‘I do not like the noisy sounds.’
The English retroflex palatal [ɾ]—which was documented in Lorain, Ohio (Ramos-Pellicia, 2007)—was not observed in the data of the current study. The description provided above of /r/ is supported by Holmquist’s (2005) results concerning Puerto Rican informants on the Island of Puerto Rico who produce the velar fricative [x] in word-initial and intervocalic position. Very few cases of the trill variant [r] were observed in the data of the four groups under study in both word-initial and intervocalic position. In onset consonant clusters (e.g., tr and dr), the standard alveolar tap is produced [tres] (tres/three) and [drama] (drama). After a nasal consonant, the standard alveolar trill is produced [enrollar] (enroll/to wrap). The production of word final /r/ is discussed in the following section.

4.5.3 Final liquids

With regard to the final liquids, the current study considers the most salient variants of /l/ (retention, rhotacism, and deletion) and /ɾ/ (retention, lateralization, and deletion). In Group 1, lateralization of the final [ɾ] was observed in phrase-final, word-final, and word-internal position. Retention of the final /l/ appears in phrase-final and word-internal position and deletion occurs in word-final position. Rhotacism was not observed in the data of Group 1. The examples below (39-44) show all of these phonetic contexts and the respective articulations produced.

(39) Yo estoy dispuesto a ayuda[l].

‘I am willing to help.’

(40) Descubrieron que tiene el azúca[l] alto como en quinientos.

‘They discovered that he has high sugar like at five hundred.’

(41) Alguien se tiene que enca[l]ga[l] porque es como una tradición.

‘Someone has to take charge because it is like a tradition.’

(42) Sí yo siempre hablaba españo[l].
‘Yes I always spoke Spanish.’

(43) La vianda no les gusta mucho pero el arroz y el pernil eso es lo más favorito de ellos.

‘They do not like tubers that much but rice and pork, that is their most favorite.’

(44) Algun día van a Puerto Rico y se tropiezan con alguien.

‘Some day they will go to Puerto Rico and run into someone.’

Group 2 informants produce retention and lateralization of the final /ɾ/ in word-final contexts. Retention is produced in phrase-final and word-internal position. These informants also retain the final /l/. Examples (45-50) below display these features in different contexts.

(45) Yo he ido a New York City muchas veces. Me gusta para visitar pero no para vivir.

‘I have been to New York City many times. I like to visit but not to live.’

(46) No, mi esposa no puede tener hijos.

‘No, my wife cannot have children.’

(47) Lo que he tenido son cinco meses de layoff. Siempre he tenido la oportunidad gracias a Dios.

‘What I have had are five months of layoff. I have always had the opportunity thanks to God.’

(48) Veo más programas en inglés que en español.

I see more programs in English than in Spanish.

(49) Si uno contra uno no sabe inglés va a ser difícil trabajar aquí.

‘If one against another you do not know English, it will be difficult to work here.’
(50) Vamos a buscar algo de hacer.

‘We are going to look for something to do.’

In Group 2, rhotacism and deletion were not observed. The presence of both retention (e.g., example 45) and lateralization in word-final position (e.g., example 46) is corroborated by the results in Lorain, Ohio.

As far as Group 3 and Group 4, lateralization of the final [ɾ] appears in word-final and phrase-final contexts. Both of these groups retain this sound in word-internal position. Retention of the final /l/ was observed in all three contexts (phrase-final, word-final, and word-internal) under examination. The examples below (44-46) display the phonetic production of the final /ɾ/.

Because only the standard pronunciation (i.e. retention) of the final /l/ was observed in the data in these three contexts under study, no examples are provided below.

(51) Yo puedo adivinar en que paso yo puedo coge[l].

‘I can guess on which path I am able to take.’


‘I was of the stop five, the best of runners of Puerto Rico.’

(53) Yo soy una persona que me gusta cuidar a la gente enfe[r]ma.

‘I am a person who likes to take care of sick people.’

Similar to Group 2, deletion and rhotacism were not observed in Groups 3 and 4. Based on the examples provided of the four groups, retention of the final /l/ and lateralization are present across all four groups.
4.6 Morphosyntactic and Lexical Features in Amsterdam

4.6.1 Overt Subject Expression

High rates of overt subject expression appear in the data of all four groups. Below are two examples of this phenomenon as produced by Group 1 informants.

(54) Ellos se dedican a cocinar las cosas que ellos cosechan.

‘They dedicate themselves to cooking the things that they harvest.’

(55) Yo estaba en el hogar tocando con mi papá. Yo oigo la música clásica.

‘I was in the home playing with my father. I hear the classical music.’

Similar to Group 1, Group 2 usually produces higher rates of overt subject expression with the first person singular (yo) or the third person plural pronouns (ellos) as shown below.

(56) Yo creo que sí. Yo estoy de acuerdo. Yo estoy de acuerdo porque y ése es un programa que le ayuda a los niños precisamente a lidiar con ese problema que ellos tienen de cuando vienen de que no saben un idioma.

‘I believe so. I agree. I agree because and that is a program that helps children precisely to fight with that problem that they have when they come from not knowing a language.’

(57) Ellos dicen que viven bien pero no lo viven bien. Ellos no viven bien porque ellos son ricos. Ellos están sufriendo. Ellos no lo saben que están sufriendo.

‘They say that they live well but they do not live well. They do not live well because they are rich. They are suffering. They do not know it, that they are suffering.’

Higher rates of overt subject expression in Groups 3 and Group 4 are prevalent throughout all of the sociolinguistic interviews. The examples shown below reinforce the overall dominance
of this phenomenon.

(58) Ellos me ayudaron siempre después de la escuela. Ellos me dieron tutoring.

‘They always helped me after school. They gave me tutoring.’

(59) De gramática, no sé casi nada en español. Pues cuando yo escribo, yo miro, yo digo mire es con ce o ese.

‘About grammar, I do not know hardly anything in Spanish. Well, when I write, I look, I say, look it is with ‘C’ or ‘S’ ’.

Based on my review of the data of Group 3 and Group 4, these informants show much higher rates of over subject expression although a detailed quantitative study of the different factors that condition the occurrence of this variable could shed more light on differences across the four groups under study.

4.6.2 Simplification and maintenance of the subjunctive in Amsterdam

Simplifying the subjunctive mood is a common phenomenon in US Spanish which occurs for several reasons such as incomplete acquisition of Spanish, predominant exposure to English, and language contact. In Amsterdam, alternation between the indicative and subjunctive mood was not observed in the data of Group 1 informants as shown in the examples below.

(60) Yo no quiero que ellos aprendan nada.

‘I do not want them to learn anything.’

(61) No permitía a nadie que dijera una mala palabra en mi casa.

‘I did not allow anyone to say a bad word in my house.’

Example (60) presents a simple subjunctive mood structure in the present verb tense with two different subjects clearly marked by both the subject pronouns (yo and ellos) and the verb conjugations in the independent (quiero) and dependent (aprendan) clauses. Example (61)
displays a more complex structure which includes double negation (*no* and *a nadie*) and past tense verb conjugations in the imperfect indicative (*permitía* in the independent clause) and the imperfect subjunctive (*dijera* in the dependent clause).

In the data of the Group 2 informants, simplification was observed more commonly with present tense verbs.

(62) Yo no creo que la iglesia aquí en Saint Mary’s cobra mucho dinero.

‘I do not believe that the church here in Saint Mary’s charges a lot of money.’

(63) Hay que seguir llevando la cultura del idioma en español para que ellos así sepan dos idiomas.

‘It is necessary to continue passing on the culture of the language in Spanish so that they, in that way, know two languages.’

Simplification of the present subjunctive verb form *cobre*—which is produced as *cobra*—is shown in example (62). On the other hand, the subjunctive is maintained in example (63) with an irregular verb form: *sepan*. Examples of alternation between the subjunctive and indicative moods can be found in the speech of Group 2 informants throughout their sociolinguistic interviews.

Simplification of the subjunctive was also observed in the data of Group 3 and Group 4 informants. The following examples illustrate their language use.

(64) Yo quiero que ella se puede aprender todas lenguas.

‘I want her to learn all languages.’

(65) Yo no puedo dejar que mi hijo entregue algo así.

‘I cannot allow my son to turn in something like that.’

(66) Les dijimos que tuvieran más cuidado con las cosas que estuvieran diciendo.
‘We told them to be more careful with the things that they were saying.’

The examples above show that Group 3 and Group 4 informants commonly use the present indicative verb form (examples 64 and 65) when describing actions in the present and the imperfect subjunctive verb form (example 66) when describing actions in the past. Across the four groups under study, it appears that Group 1 maintains the subjunctive mood, simplification phenomena emerge in Group 2, and this pattern of use becomes more salient in Groups 3 and 4. However, here again, a quantitative study would be necessary to confirm these general impressions.

4.6.3 Expression of the future in Amsterdam

In Spanish, expressing future actions may entail the use of the synthetic future (estaré), the periphrastic future (voy a estar), and the present indicative (estoy). Out of these three expressions, the periphrastic future is by far the most common expression used by speakers in any Spanish-speaking population worldwide. Informants in Amsterdam use these three expressions in a manner similar to that of other informants in different Spanish-speaking communities in other regions of the world. In the current study, use of the synthetic future was very rare, especially in the data of informants from Group 2, Group 3, and Group 4. Also, in Group 1, there are very few cases of this type of future expression (example 69 below). The periphrastic future (example 68) and the present indicative (example 67) are clearly dominant in their data.

(67) Pues cuando ella ya se mude, mándame tu mail para arriba.

‘Well when she moves, send me your mail upstairs.’

(68) Mientras uno está oyendo canales en español no va a aprender nunca.

‘While one is hearing channels in Spanish, one will not learn ever.’
(69) Aquí a lo mejor ya me quedaré aquí.

‘Here perhaps now I will stay here.’

In Example (67), the informant uses both an adverb of time (cuando) and the present subjunctive mood (se mude) to refer to a future action of the informants’ neighbor who will be moving to another residence at sometime in the future. Example (68) presents a future reference concerning the difficulty of learning English in the US mainland if someone is frequently exposed to Spanish television program channels. In example (69), the informant expresses the desire to stay in Amsterdam in future years.

In comparison to Group 1, Group 2 informants employ similar syntactic structures to express the future as illustrated below.

(70) Cuando ya crezca, ella puede tener un buen trabajo en la universidad.

También la pueden utilizar para ser bilingüe.

‘When she is grown up, she will be able to have a good job at the university.

Also, they will be able to utilize her for being bilingual.’

(71) Voy a sentarme en una silla de una máquina.

‘I am going to sit down in a chair of a machine.’

In example (70), the informant discusses the future benefits that his child will have as an adult because he requires her to learn Spanish. Example (71) presents an informant’s comments about what they will do when they arrive at work on the day after the sociolinguistic interview.

Group 3 and Group 4 informants’ expression of the future is similar to that of Group 1 and Group 2. The examples below show a similar pattern of use.

(72) Un día si yo me pongo como actor y ellos a mí me empiezan a pagar como diez millones o cualquier cosa así lo primero lo que yo quiero hacer es ayudar
a la gente.

‘One day if I become an actor and they start to pay me like ten million dollars or anything like that the first thing which I will want to do is help the people.’

(73) Voy a tener un bebé.

‘I am going to have a baby.’

In example (72), the informant talks about his future aspirations of becoming an actor and helping people in the local community. In example (73), the informant discusses their contentment with having a child in the future. Across the four groups under study, informants typically use the present indicative verb forms and the periphrastic structure (ir + a + infinitive) to express the future. Of course, a quantitative analysis would be necessary in order to arrive at a more precise conclusion concerning these phenomena.

4.6.4 Lexical phenomena

Lexical phenomena in Puerto Rican Spanish in the US have been documented since the 1980s (Poplack & Sankoff, 1984; Zentella, 1990; Zentella, 1997; Otheguy & Zentella, 2012). In Amsterdam, the lexical phenomena observed are similar to what appears in the speech data of other Puerto Rican communities in the US. All of the phenomena described in this section will be highlighted in bold print.

In Group 1, some of the more common phenomena observed are closely associated with US Spanish as shown in the examples below.

(74) Para mí, primero, pagar la renta y los biles y después si a uno le sobran entonces puede comprar si no, tiene que abstenerse de eso.

‘For me, first, paying the rent and the bills and afterwards if one has something remaining then one can make a purchase, but if not one has to
abstain from that.’

(75) Gracias a Dios ellos pudieron aprender el español en un año y ellos no querían

**venir para atrás** pero por la situación económica no había trabajo.

‘Thanks to God, they were able to learn Spanish in one year and they did not

want to come back, but because of the economic situation there was no work.’

In example (74), *biles* is commonly used to refer to the English word *bills*. In example (75), a

nearly literal translation of *to come back* in English is equivalent to *venir para atrás* in Spanish.

The data from Group 2 also includes phenomena related to US Spanish. The examples

below (76-78) display different cases observed in Amsterdam.

(76) Yo he visto muchachitos muy buenos, muchachitos bien educados y de

momento, veo un patrón en ellos. No van a la escuela. Empiezan a **cortar clases**.

‘I have seen very good boys and girls, well-educated boys and girls, and at the

moment, I see a pattern in them. They do not go to school. They start to cut

classes.’

(77) Ahora mismo estaba trabajando en **un laundry** que ganaba once pesos.

‘Right now I was working in a laundromat where I was earning eleven

dollars**.10**.’

(78) **Tuve un tiempo chévere** en Italia.

‘I had a cool time in Italy.’

Example (76) shows a case where the informant produces a direct literal translation of the

English phrase *to cut classes* (**cortar clases**). In modern Spanish, the equivalent of this English

expression is **faltar a clase**. In example (77), **Un laundry** is comprised of a masculine indefinite

---

10 Puerto Ricans often refer to US dollars as pesos.
Spanish article and an English noun. In example (78), *Tuve un tiempo chévere* is a literal translation of the English expression *I had a cool time*. An equivalent of this expression in Spanish is *lo/la pasé chévere*.

With regard to Groups 3 and 4, there are similar lexical phenomena as shown below.

(79) Mi opinión sobre todo es bueno saber los dos idiomas porque la población más grande en los Estados Unidos para mi opinión es hispana.

‘My opinion overall, it is good to know the two languages because the the most large population in the United States in my opinion is Hispanic.’

(80) Cuando tenía como dieciséis años nos mudamos para atrás a los Estados Unidos entonces me fui para atrás.

‘When I was like 16 years old, we moved back to the United States so I went back.’

In example (79), the informant employs the word *populación* which is common in US Spanish as it is similar to the English word *population*. In example (80), the informant uses a more common lexical expression (*para atrás*) in order to describe migration back-and-forth from Puerto Rico to the US mainland and vice versa. Across the four groups, the majority of the lexical phenomena observed are clearly representative of an intense English/Spanish language contact situation.

4.7 Language shift and code-switching in Amsterdam

Language shift has been defined as a process through which a speech community in a language contact situation eventually discontinues the use of a minority language in favor of the majority language (Poplack, 1993; Ravindranath, 2009). In Amsterdam, all of the informants in the four groups under study tend to maintain the use of the Spanish language and do not stop speaking Spanish in exclusive favor of English. Of course, there is a gradual loss of linguistic competence in younger generations, but informants’ production of Spanish sounds remains
native-like. There are a plethora of possible reasons why the majority of Puerto Rican informants in the current study maintain the production of native-like features of Spanish mainly related to the string ethnolinguistic vitality of the community as reflected in cyclical migration\(^\text{11}\); extracurricular sports activities exclusively available for members of the Hispanic community; cultural events organized by bilingual churches; the Civic Center of Amsterdam, neighborhoods where the majority of the residents are bilingual or monolingual Spanish speakers; and a constant flow of Hispanic migration into Amsterdam from the Island of Puerto Rico, NYC, and other regions. The extent to which each of these factors impacts the maintenance of Spanish in Amsterdam is difficult to determine, but the use of Spanish in public (outdoors with friends) and private (at home) domains may be viewed as a major contributing factor.

Within this context of language maintenance, code-switching is least common in Group 1 and most common in Groups 2, 3, and 4. Below are some examples of code-switching in Group 1.

(81) *Grandma* mi mamá quiere doscientos pesos ¿Qué? tú sabes entonces después me dijo, no, son *a hundred a hundred*, yeah, entonces se los di.

‘Grandma my mother wants two hundred pesos. What? you know, so afterwards he told me, no, one hundred one hundred, yeah, so I gave them to him.’

(82) Para mucha gente es que *it is a priority* tener ese teléfono en la mano.

‘For a lot of people it is just that it is a priority to have that telephone in your hand.’

In example (81), the informant is discussing a conversation that she had with her grandson about

---

\(^{11}\) See more information in Chapters 3 and 4. Cyclical migration means that the majority of the informants in the current study spend a certain number of years in Puerto Rico and return to Amsterdam.
money. All of the code-switches are intrasentential. Example (82) displays a simple case of intrasentential code-switching from Spanish to English.

Both intersentential and intrasentential code-switches were observed in Group 2. A couple of examples are shown below.

(83) Me gustan libros de arte de antiques. *I love arts and antiques sí.*

‘I like books of art and of antiques. I love arts and antiques yes.’

(84) Yo era un *tax collector*. Trabajé para *department of social services*. *I was an employment supervisor there.* Entonces sólo hablaba inglés.

‘I was a tax collector. I worked for the department of social services. I was an employment supervisor there. So I was speaking English only.’

Examples (83) and (84) help demonstrate that the code-switches of Group 2 informants usually include more English expressions than those of Group 1. This is expected because, in general, Group 2 is more accustomed to native-like English language production.

Code-switching in Groups 3 and 4 is similar to that of Group 2. The examples below demonstrate Group 3 and 4 informants’ language use.

(85) O sea que hay mucha gente que dice *oh it is the end of the world* el final del mundo.

‘That is to say that there are a lot of people who say oh it is the end of the world the end of the world.’

(86) África, no sé por qué pero me gusta la cultura me gusta. *I would like to travel.*

Me gustaría ir para todos sitios.

‘Africa, I do not know why but I like the culture I like it. I would like to travel.

I would like to go to all places.’
Across the four groups, the data show that informants exhibit a relatively stable level of linguistic competence which results in code-switches with both simple and complex syntactic structures.

4.8 Conclusion

This chapter has explored the most salient features of Puerto Rican Spanish in Amsterdam, New York. I provide a detailed description of the historical background and population statistics concerning the Hispanic community in Amsterdam in order to set the stage for an in-depth look at the main phonetic, morphosyntactic, and lexical features. The exploration of these features is supported by informants’ overall tendency to maintain Spanish while making use of English in code-switches and other linguistic phenomena. The chapter demonstrates that in a small community in which there is constant migration from NYC, the Island of Puerto Rico, and other regions, intense language contact does not necessarily mean that the gradual loss of competence in Spanish in younger generations will result in a complete language shift from Spanish to English. Most notably, the majority of the participants in the current study, including those born in the US, have spent years living in Puerto Rico further consolidating their competence in Spanish.
CHAPTER FIVE: A QUANTITATIVE ANALYSIS OF CODA /S/ PRODUCTION
IN AMSTERDAM, NEW YORK

5.1 Introduction

This chapter examines the behavior of the final /s/ in Puerto Rican Spanish in Amsterdam, New York. Unlike prior research (Poplack, 1980a, 1980b; Holmquist, 2011; Ramos-Pellicia, 2012), the current study fully accounts for the production tendencies within and between the three standard variants of the final /s/: retention, aspiration, and deletion. Frequency distribution analyses provide a broad overview of the phonetic variants and linguistic contexts that condition /s/ behavior in the data of this small Spanish-speaking community. Cross tabulation analyses include several social factors already discussed in the methods section, including sex, time spent in Puerto Rico, and education. Linguistic factors include position of the /s/ in the word, following segment, type of word, grammatical status, and preceding disambiguating information. The chapter concludes with a discussion of the overall tendencies of final /s/ variation in Amsterdam.

5.2 Overall results

A total of 13,600 tokens of final /s/ were extracted from the corpus. Overall, 7,200 tokens were by Group 1, 2,400 by Group 2, and 2,000 by Group 3, and 2,000 by Group 4. Retention, aspiration, and deletion appear with different rates of frequency as shown in Table 10.

Table 10. Variants of /s/

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>retention</td>
<td>7502</td>
<td>55.2</td>
</tr>
<tr>
<td>aspiration</td>
<td>4741</td>
<td>34.9</td>
</tr>
<tr>
<td>deletion</td>
<td>1357</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>13600</td>
<td>100.0</td>
</tr>
</tbody>
</table>
In total, there are 7,502 tokens of /s/ retention, representing 55.2% of the cases analyzed. Aspiration is the second most common variant produced, it occurred in 4,741 of all tokens (34.9%). Finally, deletion occurs at a much lower rate: 1,357 tokens (10.0%). Rates of frequency in other US cities are somewhat different from those in Amsterdam: e.g., 24.9% retention, 65.4% aspiration, and 9.7% deletion in Lorain, Ohio (Ramos-Pellicia, 2012). Also, on the Island, these variants are produced at a rate that differs from US communities: 6.4% retention, 24.5% aspiration, and 69.1% deletion (Holmquist, 2011). The difference between the data in Amsterdam and other Puerto Rican communities could be due to several social factors such as cyclical migration, domains of use of English and Spanish, linguistic competence, and level of education. Based on the absolute frequencies presented above, the overall reduction process of the final /s/ is most advanced in Puerto Rico.

5.3. Linguistic factors

5.3.1. Position segments of /s/

The first variable under consideration is the position of the /s/ within the word: word-final and word-internal position. Table 11 below presents the frequency data of these two segments.

<table>
<thead>
<tr>
<th>Table 11. Position segments of /s/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>final</td>
</tr>
<tr>
<td>internal</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 11 demonstrates that the majority of the cases of final /s/ (72.2%) occur in word-final position which may be either word-final phrase-medial or word-final phrase-final position. Word-internal cases represent 27.8% of all 13,600 tokens analyzed. These rates of frequency are
similar to those on the Island as in the study by Terrell (1978b) where 70.8% (14,393 tokens) accounts for word-final position and 29.2% (5,951 tokens) represents word-internal position.

Statistical analysis shows that there is substantial interaction between pronunciation and position which is evident below in Table 12.

Table 12. Pronunciation of the /s/ by position of the /s/ in the word

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Position of the s sound</th>
<th>Count</th>
<th>% within Pronunciation of the s sound</th>
<th>% within Position of the s sound</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td>final</td>
<td>4736</td>
<td>63.1%</td>
<td>48.2%</td>
<td>34.8%</td>
</tr>
<tr>
<td></td>
<td>internal</td>
<td>2766</td>
<td>36.9%</td>
<td>73.3%</td>
<td>20.3%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>7502</td>
<td>100.0%</td>
<td>55.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>aspiration</td>
<td>Count</td>
<td>3993</td>
<td>82.3%</td>
<td>39.7%</td>
<td>28.7%</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>17.7%</td>
<td>60.3%</td>
<td>71.3%</td>
<td>41.3%</td>
</tr>
<tr>
<td></td>
<td>% within Position of the s sound</td>
<td>34.9%</td>
<td>65.1%</td>
<td>35.1%</td>
<td>25.1%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>deletion</td>
<td>Count</td>
<td>1186</td>
<td>87.4%</td>
<td>12.1%</td>
<td>8.7%</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>12.6%</td>
<td>87.4%</td>
<td>11.9%</td>
<td>7.3%</td>
</tr>
<tr>
<td></td>
<td>% within Position of the s sound</td>
<td>10.0%</td>
<td>90.0%</td>
<td>9.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>9825</td>
<td>72.2%</td>
<td>100.0%</td>
<td>72.2%</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>27.8%</td>
<td>27.8%</td>
<td>27.8%</td>
<td>27.8%</td>
</tr>
<tr>
<td></td>
<td>% within Position of the s sound</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 12 shows that the position of the final /s/ within the word conditions the frequency of the variants produced. Word-internal position has a substantially higher rate of retention (73.3%) than word-final position (48.2%). Also, informants tend to produce aspiration more frequently in word-final contexts (39.7%) than in word-internal contexts (22.2%). There is a small difference between the deletion rates for these same two contexts respectively: 12.1% and 4.5%. The data presented clearly indicate that /s/ aspiration and deletion are more favored in word-final position than in word-internal position where /s/ is retained at a higher rate. This is not the case on the
Island where there is a minimal difference in retention rates (15% in word-final and 3% in word-
internal), but a substantial difference in aspiration (56% in word-final position and 92% in word-
internal) and deletion rates (29% in word-final position and 5% in word-internal position)
(Terrell, 1978b).

5.3.2 Following segment

With regard to the following segments, Table 13 below shows that the following three were analyzed: vowel, consonant, and pause. Out of the 13,600 tokens examined, vowels account
for 20.8% (2,835), consonants represent 70.3% (9,557), and pauses consist of 8.9% (1,208).

<table>
<thead>
<tr>
<th>Table 13. Following segment of /s/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>vowel</td>
</tr>
<tr>
<td>consonant</td>
</tr>
<tr>
<td>pause</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The predominance of consonants as the following type of sound is also encountered in other research both on Puerto Rican Spanish in the US (Klee & Lynch, 2009; Ramos-Pellicia, 2012) and on the Island (Navarro Tomás, 1948; Holmquist, 2011).

Table 14 below shows how phonetic context affects the pronunciation of the final /s/.
Table 14. Pronunciation of the /s/ by phonetic context

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Phonetic context</th>
<th>word final following vowel</th>
<th>word final following consonant</th>
<th>phrase final following pause</th>
<th>syllable final word medially</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td>Count</td>
<td>1306</td>
<td>2995</td>
<td>447</td>
<td>2754</td>
<td>7502</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>17.4%</td>
<td>39.9%</td>
<td>6.0%</td>
<td>36.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within Phonetic context</td>
<td>46.1%</td>
<td>51.6%</td>
<td>37.0%</td>
<td>73.4%</td>
<td>55.2%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>9.6%</td>
<td>22.0%</td>
<td>3.3%</td>
<td>20.3%</td>
<td>55.2%</td>
</tr>
<tr>
<td>aspiration</td>
<td>Count</td>
<td>1156</td>
<td>2232</td>
<td>524</td>
<td>829</td>
<td>4741</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>24.4%</td>
<td>47.1%</td>
<td>11.3%</td>
<td>17.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within Phonetic context</td>
<td>40.8%</td>
<td>38.4%</td>
<td>43.4%</td>
<td>22.1%</td>
<td>34.9%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>8.5%</td>
<td>16.4%</td>
<td>3.0%</td>
<td>6.1%</td>
<td>34.9%</td>
</tr>
<tr>
<td>deletion</td>
<td>Count</td>
<td>369</td>
<td>581</td>
<td>236</td>
<td>171</td>
<td>1357</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>27.2%</td>
<td>42.8%</td>
<td>17.4%</td>
<td>12.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within Phonetic context</td>
<td>13.0%</td>
<td>10.0%</td>
<td>19.6%</td>
<td>4.6%</td>
<td>10.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>2.7%</td>
<td>4.3%</td>
<td>1.7%</td>
<td>1.3%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>2831</td>
<td>5808</td>
<td>1207</td>
<td>3754</td>
<td>13600</td>
</tr>
<tr>
<td></td>
<td>% within Pronunciation of the s sound</td>
<td>20.8%</td>
<td>42.7%</td>
<td>8.9%</td>
<td>27.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within Phonetic context</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>20.8%</td>
<td>42.7%</td>
<td>8.9%</td>
<td>27.6%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 14 shows that the /s/ is usually retained in syllable-final word-medial position (73.4%). This variant is produced to a lesser extent when a consonant (51.6%), vowel (46.1%) or a pause (37%) is the following segment. With regard to aspiration, there is a close range amongst the percentages for each segment: phrase-final following pause (43.4%), word-final following vowel (40.8%), word-final following consonant (38.4%), and syllable-final word-medially 22.1%. This means that aspiration is produced at a relatively consistent level across the four different contexts although following pause contexts most strongly favor this variant. A similar situation occurs with deletion: phrase-final following pause (19.6%), word-final following vowel (13%), word-final following consonant (10%), and syllable-final word-medially (4.6%). The findings concerning vowel segments in Amsterdam are consistent with those on the Island of Puerto Rico (Holmquist, 2011) and in Philadelphia (Poplack, 1980a). Retention is produced categorically anytime that the /s/ appears in syllable-initial position both word-initially and word-medially.
5.3.3 Type of word

The type of word when final /s/ occurs is another significant factor in the current study. I examined the following categories: nouns, adjectives, verbs, determiners, adverbs, and prepositions. As shown in Table 15 below, there is a statistically significant correlation between type of word and pronunciation of the final /s/.

<table>
<thead>
<tr>
<th>Type of word of s</th>
<th>noun</th>
<th>adjective</th>
<th>verb</th>
<th>determiner</th>
<th>adverb</th>
<th>preposition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>2740</td>
<td>798</td>
<td>2323</td>
<td>620</td>
<td>937</td>
<td>84</td>
<td>7502</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>36.5%</td>
<td>10.6%</td>
<td>31.0%</td>
<td>8.3%</td>
<td>12.5%</td>
<td>1.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Type of word of s</td>
<td>50.4%</td>
<td>46.4%</td>
<td>70.5%</td>
<td>48.7%</td>
<td>53.7%</td>
<td>54.9%</td>
<td>55.2%</td>
</tr>
<tr>
<td>% of Total</td>
<td>20.1%</td>
<td>5.9%</td>
<td>17.1%</td>
<td>4.6%</td>
<td>6.9%</td>
<td>0.6%</td>
<td>55.2%</td>
</tr>
</tbody>
</table>

Table 15. Pronunciation of /s/ by type of word of /s/

The most common types of words in the corpus with a final /s/ are nouns (39.9%, 5,433 tokens) and verbs (24.1%, 3,275 tokens). Combined, these types of words account for 64% of those analyzed. Retention is produced in the majority of word types at a relatively consistent level: 46.4% (adjective), 48.7% (determiner), 50.4% (noun), 53.7% (adverb), and 54.9% (preposition). Verbs (70.9%) clearly favor retention at a much higher rate. Informants tend to produce aspiration (40.6%) and deletion (13.0%) in adjectives at a slightly higher rate than in any of the other types of words: determiner (40.3%, aspiration and 11.1%, deletion), noun (38%, aspiration
and 11.6%, deletion), adverb (34.8%, aspiration and 11.5%, deletion), preposition (33.3%, aspiration and 11.8%, deletion), and verb (24.7%, aspiration and 4.4%, deletion). These results align with the production tendencies of Puerto Ricans in Lorain, Ohio (Ramos-Pellicia, 2012) and Philadelphia to a lesser extent (Poplack, 1980a).

5.3.4 Grammatical category

The relationship between the grammatical category of the /s/ and its articulation has been the focus of the majority of prior research concerning Puerto Rican Spanish in the US (Poplack 1980a, 1980b; Lipski, 1994; Holmquist, 2011). The current study uses three categories: monomorpheme, inflection, and word internal. This latter category accounts for the tokens (e.g., está/is and estado/state) that cannot be coded with either of the first two options. Table 16 shows how the grammatical function of /s/ affects its articulation.

<table>
<thead>
<tr>
<th>Pronunciation of the /s/ sound</th>
<th>Count</th>
<th>% within Pronunciation of the /s/ sound</th>
<th>% within Grammatical category of /s/</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>988</td>
<td>3756</td>
<td>2760</td>
<td>7502</td>
</tr>
<tr>
<td>% within Pronunciation of the /s/ sound</td>
<td>13.1%</td>
<td>50.1%</td>
<td>36.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Grammatical category of /s/</td>
<td>44.0%</td>
<td>49.5%</td>
<td>73.3%</td>
<td>55.2%</td>
</tr>
<tr>
<td>% of Total</td>
<td>7.2%</td>
<td>27.6%</td>
<td>20.3%</td>
<td>55.2%</td>
</tr>
<tr>
<td>aspiration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>673</td>
<td>3033</td>
<td>835</td>
<td>4741</td>
</tr>
<tr>
<td>% within Pronunciation of the /s/ sound</td>
<td>18.4%</td>
<td>64.0%</td>
<td>17.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Grammatical category of /s/</td>
<td>38.9%</td>
<td>39.9%</td>
<td>22.2%</td>
<td>34.9%</td>
</tr>
<tr>
<td>% of Total</td>
<td>6.4%</td>
<td>22.3%</td>
<td>6.1%</td>
<td>34.9%</td>
</tr>
<tr>
<td>deletion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>384</td>
<td>803</td>
<td>170</td>
<td>1357</td>
</tr>
<tr>
<td>% within Pronunciation of the /s/ sound</td>
<td>28.3%</td>
<td>59.2%</td>
<td>12.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Grammatical category of /s/</td>
<td>17.1%</td>
<td>10.6%</td>
<td>4.5%</td>
<td>10.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>2.8%</td>
<td>5.9%</td>
<td>1.3%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>2243</td>
<td>7592</td>
<td>3765</td>
<td>13600</td>
</tr>
<tr>
<td>% within Pronunciation of the /s/ sound</td>
<td>16.5%</td>
<td>55.8%</td>
<td>27.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Grammatical category of /s/</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>16.5%</td>
<td>55.8%</td>
<td>27.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Monomorphemes are retained (44%) and aspirated (38.9%) at close rates of frequency and deletion occurs at a lower rate of frequency (17.1%). This is similar to the case of inflection: 49.5% retention, 39.9% aspiration, and 10.6% deletion. Retention is dominant in word-internal contexts (73.3%) and aspiration (22.2%) and deletion (4.5%) occur at a much lower rate of frequency. Across different grammatical categories, monomorphemes (44%) and inflection (49.5%) are retained at similar rates, but word-internal contexts favor this variant at a much higher rate of frequency (73.3%). Cases of monomorphemes (38.9%), inflection (39.9%) and word internal (22.2%) are realized as aspiration at very similar rates. These production tendencies are similar to cases of deletion (monomorpheme 17.1%, inflection 10.6%, and word internal 4.5%), but the differences between the deletion percentages are spread more evenly.

These results do not bear out in larger cities in the US as deletion occurs with inflection (68%) at a slightly higher rate than with monomorphemes (54%) (Poplack, 1980b).

5.3.5 Preceding disambiguating information

The presence or absence of preceding disambiguating information of the final /s/ has been related to variation in its production. Preceding disambiguating information has been defined as morphosyntactic or lexical information that precedes a given word with a final /s/ and clarifies its meaning (Poplack, 1980b). Table 17 below shows that there is a statistically significant relationship between preceding disambiguating information and /s/ articulation.
Results show that when preceding disambiguating information is present, retention (40.8%) and aspiration (46.7%) are produced at close rates and deletion is realized at a lower rate (12.5%). When this information is absent, retention (58.4%) occurs at a higher rate than aspiration (32.3%) while deletion (9.4%) is still realized at a low rate of frequency. Given these two phonological contexts, informants favor retention (58.4% when the information is absent in opposition to 40.8% when the information is present), but they favor aspiration (46.7% when the information is present in opposition to 32.2% when the information is absent) and to a lesser extent deletion (12.5% when the information is present in opposition to 9.4% when the information is absent) when preceding disambiguating information is present. The results concerning deletion oppose the findings in Philadelphia where the absence of this information
favors deletion (Poplack, 1980a). In my data, there are various cases in which deletion occurs with the presence of disambiguating information as in example 87 below.


‘In Puerto Rico, I have all of my aunts and uncles.’

5.3.6 Analysis of multiple variables: linguistic factors

Examining how multiple linguistic variables interact with each other offers more insight into the understanding of final /s/ behavior. In this analysis, pronunciation, position, and following segment consonants yielded statistically significant results as shown in Table 18 below. Following segment vowels and pauses were not statistically significant.

<table>
<thead>
<tr>
<th>Following segment of /s/</th>
<th>Position of the /s sound</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>final</td>
<td>internal</td>
</tr>
<tr>
<td>consonant</td>
<td>2985</td>
<td>2763</td>
</tr>
<tr>
<td>Pronunciation of the /s sound</td>
<td>51.9%</td>
<td>48.1%</td>
</tr>
<tr>
<td>% within Pronunciation of the /s sound</td>
<td>51.6%</td>
<td>73.3%</td>
</tr>
<tr>
<td>% within Position of the /s sound</td>
<td>31.2%</td>
<td>28.9%</td>
</tr>
<tr>
<td>aspiration</td>
<td>2223</td>
<td>835</td>
</tr>
<tr>
<td>% within Pronunciation of the /s sound</td>
<td>72.7%</td>
<td>27.3%</td>
</tr>
<tr>
<td>% within Position of the /s sound</td>
<td>38.4%</td>
<td>22.2%</td>
</tr>
<tr>
<td>% of Total</td>
<td>23.3%</td>
<td>8.7%</td>
</tr>
<tr>
<td>deletion</td>
<td>581</td>
<td>170</td>
</tr>
<tr>
<td>% within Pronunciation of the /s sound</td>
<td>77.4%</td>
<td>22.6%</td>
</tr>
<tr>
<td>% within Position of the /s sound</td>
<td>10.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>% of Total</td>
<td>6.1%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Total</td>
<td>5789</td>
<td>3768</td>
</tr>
<tr>
<td>% within Pronunciation of the /s sound</td>
<td>60.6%</td>
<td>39.4%</td>
</tr>
<tr>
<td>% within Position of the /s sound</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>60.6%</td>
<td>39.4%</td>
</tr>
</tbody>
</table>

The results show that in word-final contexts, retention is produced at a frequency of 51.6%, aspiration is realized at 38.4% and deletion occurs at 10%. In word-internal contexts, retention
(73.3%) occurs at a higher rate than aspiration (22.2%) and deletion (4.5%). When comparing the position segments, informants tend to retain the final /s/ in word-internal contexts (73.3%) more frequently than word-final contexts (51.6%). Also, they usually aspirate (38.4%, word-final; 22.2% word-internal) and delete (10%, word-final; 4.5%, word-internal) these latter contexts more than the former contexts. This means that when there is a following segment consonant, word-final position of /s/—as opposed to word-internal position—is most susceptible to phonetic reduction in the form of aspiration or deletion.

5.4 Social Factors and Phonological Contexts

Analyzing how social factors interact with the production of the final /s/ provides further insight into the nature of Puerto Rican Spanish in the US. In the following section, I analyze the extent to which these factors play a role in constraining this variable in Amsterdam.

5.4.1 Sex group

Sex group is one of the most common social variables that is related to the articulation of the final /s/. In Amsterdam, this variable constrains final /s/ production as shown in Table 19 below.
The results show that males tend to produce retention (51.3%) at a higher rate of frequency than aspiration (37.9%) and deletion (10.8%) combined. This is also the case for females: 59% retention, 31.9% aspiration, and 9.1% deletion. However, males and females produce all three of these variants at relatively similar rates of frequency with deletion (10.8% for males and 9.1% for females) showing a very minimal difference in percentage followed by aspiration (37.9% for males and 31.9% for females) and retention (51.3% for males and 59% for females). These findings are somewhat different than those on the Island of Puerto Rico where deletion is predominant (Holmquist, 2011), but this research excludes second person singular verbs from the analysis of the final /s/. The findings in Amsterdam are supported by the results on Caribbean Spanish in New York City where females and males retain the final /s/ at similar rates of frequency (Lamboy, 2004). This trend in Puerto Rican Spanish in the US is reinforced by the percentage of total data for retention in Table 19 because 29.5% of all tokens analyzed that are
produced by females are retention. Similarly, 25.7% of all of the tokens examined that are produced by males are retention. Overall, this means that separately, each sex group retains roughly 1 out of every 4 cases of final /s/ that appear in the data.

5.4.2. Pronunciation of /s/ by time spent in Puerto Rico

The influence that reverse-migration (i.e. time spent in Puerto Rico) has on final /s/ pronunciation varies throughout different regions of Puerto Rican Spanish-speaking communities in the US (Lamboy, 2004; Ramos-Pellicia, 2012). In Amsterdam, the results that help explain the interaction between these two variables are shown in Table 20 below.

<table>
<thead>
<tr>
<th>Table 20. Pronunciation of /s/ by time spent in Puerto Rico</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time spent in Puerto Rico</strong></td>
</tr>
<tr>
<td>Group 1: 15 or more years</td>
</tr>
<tr>
<td>Group 2: 5-15 years</td>
</tr>
<tr>
<td>Group 3: 1-5 years</td>
</tr>
<tr>
<td>Group 4: less than 1 year</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Count</th>
<th>Group 2 5-15 years</th>
<th>Group 3 1-5 years</th>
<th>Group 4 less than 1 year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td>4040</td>
<td>1371</td>
<td>1108</td>
<td>983</td>
<td>7502</td>
</tr>
<tr>
<td>% of Total</td>
<td>29.7%</td>
<td>10.1%</td>
<td>8.1%</td>
<td>7.2%</td>
<td>55.2%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>53.9%</td>
<td>18.3%</td>
<td>14.8%</td>
<td>13.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Time spent in Puerto Rico</td>
<td>56.1%</td>
<td>57.1%</td>
<td>55.4%</td>
<td>49.2%</td>
<td>55.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Count</th>
<th>Group 2 5-15 years</th>
<th>Group 3 1-5 years</th>
<th>Group 4 less than 1 year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>aspiration</td>
<td>2527</td>
<td>764</td>
<td>732</td>
<td>718</td>
<td>4741</td>
</tr>
<tr>
<td>% of Total</td>
<td>18.6%</td>
<td>5.6%</td>
<td>5.4%</td>
<td>5.3%</td>
<td>34.9%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>53.3%</td>
<td>16.1%</td>
<td>15.4%</td>
<td>15.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Time spent in Puerto Rico</td>
<td>35.1%</td>
<td>31.8%</td>
<td>36.0%</td>
<td>35.9%</td>
<td>34.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Count</th>
<th>Group 2 5-15 years</th>
<th>Group 3 1-5 years</th>
<th>Group 4 less than 1 year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>deletion</td>
<td>633</td>
<td>265</td>
<td>160</td>
<td>299</td>
<td>1357</td>
</tr>
<tr>
<td>% of Total</td>
<td>4.7%</td>
<td>1.9%</td>
<td>1.2%</td>
<td>2.2%</td>
<td>10.0%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>46.6%</td>
<td>19.5%</td>
<td>11.8%</td>
<td>22.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Time spent in Puerto Rico</td>
<td>8.8%</td>
<td>11.0%</td>
<td>8.0%</td>
<td>15.0%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Count</th>
<th>Group 2 5-15 years</th>
<th>Group 3 1-5 years</th>
<th>Group 4 less than 1 year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Total</td>
<td>52.9%</td>
<td>17.6%</td>
<td>14.7%</td>
<td>14.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>52.9%</td>
<td>17.6%</td>
<td>14.7%</td>
<td>14.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Time spent in Puerto Rico</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
The table shows that Group 2 produces the highest rate of retention (57.1%), which is close to that of Group 1 (56.1%) and Group 3 (55.4%) and Group 4 (49.2%). Group 3 informants are the leaders of aspiration (36.6%) and followed by Group 4 (35.9%), Group 1 (35.1%), and Group 2 (31.8%). Group 4 informants (15%) tend to delete the final /s/ at a higher rate than the other three groups: Group 2 (11%), Group 1 (8.8%), and Group 3 (8%). Overall, the rates of frequency described for each variant are similar which means that the production of the final /s/ across the four groups is relatively stable.

5.4.3 Education

There has been a wide variety of different arguments concerning whether informants’ level of education is related to their use of non-standard variants in Spanish. To my knowledge, prior studies on Puerto Rican Spanish in the US do not specifically analyze this social variable in direct relation to the final /s/ (Poplack, 1980a, 1980b; Lipski, 2008; Otheguy & Zentella, 2012; Ramos-Pellicia, 2012). However, in the current study, it is necessary to undertake this analysis for two reasons. First, the population of informants come from diverse educational backgrounds which encompass educational experiences in Puerto Rico, the US mainland, or in both regions. Second, their exposure to formal education in different languages and/or in different communities may affect how they produce the final /s/. Table 21 demonstrates how level of education constrains this variable.
Table 21. Pronunciation of /s/ by education level

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Education level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>elementary/middle school in PR</td>
<td>high school in PR</td>
</tr>
<tr>
<td>Count</td>
<td>960</td>
<td>2469</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>12.8%</td>
<td>32.9%</td>
</tr>
<tr>
<td>% within Education level</td>
<td>60.0%</td>
<td>51.4%</td>
</tr>
<tr>
<td>% of Total</td>
<td>7.1%</td>
<td>18.2%</td>
</tr>
<tr>
<td><strong>aspiration</strong></td>
<td><strong>511</strong></td>
<td><strong>1857</strong></td>
</tr>
<tr>
<td>Count</td>
<td>10.8%</td>
<td>39.2%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>31.9%</td>
<td>38.7%</td>
</tr>
<tr>
<td>% within Education level</td>
<td>3.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td>% of Total</td>
<td>3.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td><strong>deletion</strong></td>
<td><strong>129</strong></td>
<td><strong>474</strong></td>
</tr>
<tr>
<td>Count</td>
<td>9.5%</td>
<td>34.9%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>8.1%</td>
<td>9.9%</td>
</tr>
<tr>
<td>% within Education level</td>
<td>0.9%</td>
<td>3.5%</td>
</tr>
<tr>
<td>% of Total</td>
<td>0.9%</td>
<td>3.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1600</strong></td>
<td><strong>4800</strong></td>
</tr>
<tr>
<td>Count</td>
<td>11.8%</td>
<td>35.3%</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Education level</td>
<td>11.8%</td>
<td>35.3%</td>
</tr>
<tr>
<td>% of Total</td>
<td>11.8%</td>
<td>35.3%</td>
</tr>
</tbody>
</table>

The table shows the highest level of education attained by informants: elementary/middle school, high school, and college. Out of the 34 informants in the sample of the current study, all from Groups 2, 3, and 4 (N=20) have either a high school or college level of education. On the other hand, four of the Group 1 informants achieved an elementary/middle school level of education and the remaining informants of Group 1 (N=10) attained a high school or college level of education. The results show that retention is produced at a relatively similar rate of frequency across all groups: elementary/middle school in PR (60%), high school in PR (51.4%), high school in US (58%), college in PR (56.9%) and college in US (55.7%). This means that receiving formal education lends itself to a high rate of final /s/ retention. Frequency rates of aspiration are also similar amongst the different groups: elementary/middle school in PR (31.9%), high school in PR (38.7%), high school in US (30%), college in PR (36.1%) and college in US (33.2%). These similar rates of frequency suggest that aspiration is a stable variant of /s/ in Amsterdam.
The deletion rates follow a similar pattern of stability shown in retention and aspiration although they are produced at a lower level of frequency: elementary/middle school in PR (8.1%), high school in PR (9.9%), high school in the US (12.1%), college in PR (7%), and college in US (11.1%). Overall, the data show that across groups, the leaders of retention (elementary/middle school in PR), aspiration (high school in PR), and deletion (high school in the US) have different education experiences.

5.4.4 Age group

In the current study, the stratification of age groups is similar to what appears in Holmquist’s (2011) study of Puerto Rican Spanish on the Island. Here, the first two age groups span 20 years and the third age group accounts for informants who are 58 years of age or older. Table 22 below shows how age interacts with final /s/ production in Amsterdam.
Table 22. Pronunciation of /s/ by age group

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>Age group</th>
<th>18-38</th>
<th>38-58</th>
<th>58 or older</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td>Count</td>
<td>1858</td>
<td>3442</td>
<td>2202</td>
<td>7502</td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>24.8%</td>
<td>45.9%</td>
<td>29.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Pronunciation of the s sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>51.6%</td>
<td>57.4%</td>
<td>55.1%</td>
<td>55.2%</td>
</tr>
<tr>
<td></td>
<td>Age group</td>
<td>13.7%</td>
<td>25.3%</td>
<td>16.2%</td>
<td>55.2%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aspiration</td>
<td>Count</td>
<td>1369</td>
<td>1991</td>
<td>1381</td>
<td>4741</td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>28.9%</td>
<td>42.0%</td>
<td>29.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Pronunciation of the s sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>38.0%</td>
<td>33.2%</td>
<td>34.5%</td>
<td>34.9%</td>
</tr>
<tr>
<td></td>
<td>Age group</td>
<td>10.1%</td>
<td>14.6%</td>
<td>10.2%</td>
<td>34.9%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>deletion</td>
<td>Count</td>
<td>373</td>
<td>567</td>
<td>417</td>
<td>1357</td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>27.5%</td>
<td>41.8%</td>
<td>30.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Pronunciation of the s sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>10.4%</td>
<td>9.5%</td>
<td>10.4%</td>
<td>10.0%</td>
</tr>
<tr>
<td></td>
<td>Age group</td>
<td>2.7%</td>
<td>4.2%</td>
<td>3.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>3600</td>
<td>6000</td>
<td>4000</td>
<td>13600</td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>26.5%</td>
<td>44.1%</td>
<td>29.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Pronunciation of the s sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Age group</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results show similar rates of retention across all age groups. The middle age group (57.4%) slightly favors retention more than the older (55.1%) and younger (51.6%) groups. Similar rates of frequency also appear in /s/ aspiration, however, the younger group (38%) is the leader followed by the older (34.5%) and middle age groups (33.2%). The case of deletion is interesting because the rates of frequency show that younger (10.4%) and older groups (10.4%) equally favor deletion slightly more than the middle age group (9.5%). The findings concerning deletion support those from the Island with regard to the younger group, but the middle age group in this region favors deletion more than the older age group (Holmquist, 2011). To my knowledge, prior quantitative studies of Puerto Rican Spanish in the US do not specifically examine the interaction between final /s/ production and age (e.g., Otheguy & Celia Zentella, 2012; Ramos-Pellicia, 2012, & Decker, 1952).
5.4.5 Linguistic competence

In the current study, linguistic competence was coded as Spanish dominant, English dominant, and bilingual. Based on the questionnaires and my conversations with the informants, I determined the appropriate code for each research participant. Because there is intense language contact between English and Spanish in Amsterdam, the level of linguistic competence amongst the informants varies widely. This variation—the extent to which they have developed or have acquired native-like skills in two different languages—may affect their production of the final /s/ in Spanish. Table 23 below shows the results concerning how linguistic competence interacts with this linguistic variable.

Table 23. Pronunciation of /s/ by linguistic competence

<table>
<thead>
<tr>
<th>Linguistic Competence</th>
<th>Count</th>
<th>English dominant</th>
<th>Bilingual</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish dominant</td>
<td>3,460</td>
<td>378</td>
<td>3,664</td>
<td>7,502</td>
</tr>
<tr>
<td>English dominant</td>
<td>378</td>
<td>3664</td>
<td>7,502</td>
<td></td>
</tr>
<tr>
<td>Bilingual</td>
<td>3,664</td>
<td>7,502</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within</td>
<td>46.1%</td>
<td>48.8%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>5.0%</td>
<td>57.3%</td>
<td>55.2%</td>
<td></td>
</tr>
<tr>
<td>% within Linguistic Competence</td>
<td>47.3%</td>
<td>57.3%</td>
<td>55.2%</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>25.4%</td>
<td>26.9%</td>
<td>55.2%</td>
<td></td>
</tr>
</tbody>
</table>

With regard to informants’ different production tendencies, bilinguals are the leaders of retention (57.3%) in opposition to Spanish dominant (54.1%) and English dominant (47.3%) informants. Based on these results, it appears that the retention percentage may be associated with
informants’ native-like knowledge of two linguistic systems. Because of bilinguals’ experience with Spanish and English in a contact situation, they may be more cognizant of how they produce the final /s/. Spanish dominant informants favor aspiration (37.6%) at a slightly higher rate than English dominant (35%) and bilingual (32%) informants. While these rates of frequency are similar, the results indicate that informants who possess predominant Spanish language skills prefer aspiration more than the other two groups. This is consistent with qualitative analyses of Puerto Rican Spanish in the US (Lipski, 2008; Otheguy & Zentella, 2012) which show that aspiration—a socially accepted variant—is favored by the majority of Spanish dominant informants. In Amsterdam, the results concerning deletion are somewhat surprising as English dominant informants (17%) tend to produce more deletion than the other two groups: 10.7% for bilinguals and 8.4% for Spanish dominant. This suggests that informants with the lowest level of linguistic competence in Spanish more frequently produce the most advanced variant (i.e. deletion) of the final /s/ reduction process. It is also possible that these English dominant informants are not cognizant of the social stigma attached to final /s/ deletion amongst native Spanish-speaking populations.

5.4.6 Years in Amsterdam

The number of years that informants have resided in Amsterdam affects final /s/ production. In the current study, the number of years ranges from less than one year to more than 20 years. Table 24 below displays the results for the two aforementioned variables.
Informants who have lived in Amsterdam for between 10-15 years are the most likely to retain the final /s/ (63.7%) followed by more than 20 years (58.2%), 5-10 years (53.3%), 1-5 years (50.3%) and less than 1 year (48.8%). These retention rates across the different groups exhibit a widespread of variation which includes the 15-20 years group who does not favor retention (34.9%). Based on the data, the 15-20 years group represents a fall-point in which retention is substantially reduced. The 15-20 years group (47.9%) most strongly favors aspiration. The other groups tend to produce aspiration at similar rates of frequency (less than 1 year, 41.3%, 1-5 years, 38.5%, 5-10 years, 38.8%, and more than 20 years, 32.1%), but informants in the 10-15 years group are the least likely to produce aspiration (27.8%). Final /s/ deletion is clearly favored by the 15-20 years group (17.3%) more than any of the other groups. The deletion rates of relative frequency fluctuate from one group to the next: less than 1 year (10%), 1-5 years (11.2%), 5-10 years (7.9%), 10-15 years (8.4%), 15-20 years (17.3%), and more than 20 years (6.8%).
(9.7%). This suggests that the level of exposure to this variant in a contact situation varies widely.

5.4.7 Years in New York City

Historically, there has been Puerto Rican migration into Amsterdam from NYC since the 1950s. Therefore, the current study explored years in NYC as a social variable in order to determine how the number of years that an informant has resided in NYC before migrating to Amsterdam affects their final /s/ production. This is important because the literature suggests that migration habits, to a certain extent, condition this variable based on the length of time that an individual has been exposed to a language contact environment. For example, Otheguy & Zentella (2012) found that immigrant newcomers (Puerto Ricans who had lived in NYC for less than 5 years) favor deletion of the final /s/ in second person singular verbs whereas New York residents (Puerto Ricans who had lived in NYC for more than 5 years) resist deletion in favor of retention. Table 25 sheds more light on this issue by analyzing multiple specific time frames of years (e.g., less than 1 year, 1 to 5 years, 5-10 years, 15-20 years and more than 20 years). The 10-15 years time frame was also coded for analysis, but there were not any informants in the sample of the current study who lived in NYC during this specific time frame before arriving to Amsterdam. Therefore, this dissertation is not able to draw any conclusions regarding the 10-15 years group which does not appear in Table 25 below.
Across groups, there are different leaders for retention (5-10 years group, 62.4%), aspiration (15-20 years, 41.8%) and deletion (more than 20 years, 14.8%). Retention appears to be a stable variant as there is a close percentage range in the relative rates of frequency displayed in Table 25: less than 1 year (54.3%), 1-5 years (54.6%), 5-10 years (62.4%), 15-20 years (50.2%), and more than 20 years (61%). The in-group percentages for aspiration vary more widely than those of retention: less than 1 year, 34.7%, 1-5 years, 36.6%, 5-10 years, 31.8%, 15-20 years, 41.8%, and more than 20 years, 24.3%). The more than 20 years group is most resistant to aspiration (24.3%). However, the 15-20 years group (41.8%) strongly favors this variant. The deletion rates in Table 25 show that the frequency with which this variant is produced is very stable: less than 1 year (11.1%), 1-5 years (8.9%), 5-10 years (5.8%), 15-20 years (8%), and more than 20 years (14.8%). In other regions of the US (Ramos-Pellicia, 2012) and on the Island (Holmquist, 2011), deletion is stable, but it appears as the most dominant variant in the data.
5.4.8 Years in Puerto Rico

Similar to the case of NYC, Puerto Ricans’ migration directly into Amsterdam from the Island of Puerto Rico is commonplace. The examination of years in Puerto Rico prior to residing in Amsterdam will help determine the extent to which living in a Spanish dominant environment before migrating to Amsterdam conditions the articulation of the final /s/. Table 26 shows the results of this social variable.
Table 26. Pronunciation of /s/ by years in Puerto Rico

<table>
<thead>
<tr>
<th>Pronunciation of the s sound</th>
<th>years in Puerto Rico</th>
<th>less than 1 year</th>
<th>1-5 years</th>
<th>5-10 years</th>
<th>10-15 years</th>
<th>15-20 years</th>
<th>more than 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>retention</td>
<td>Count</td>
<td>983</td>
<td>1108</td>
<td>665</td>
<td>706</td>
<td>890</td>
<td>3130</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>13.1%</td>
<td>14.8%</td>
<td>8.9%</td>
<td>9.4%</td>
<td>11.9%</td>
<td>42.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Years in Puerto Rico</td>
<td>49.2%</td>
<td>55.4%</td>
<td>55.4%</td>
<td>58.8%</td>
<td>56.8%</td>
<td>56.6%</td>
<td>56.3%</td>
</tr>
<tr>
<td>% of Total</td>
<td>7.2%</td>
<td>8.1%</td>
<td>4.9%</td>
<td>5.2%</td>
<td>6.3%</td>
<td>23.2%</td>
<td>55.2%</td>
</tr>
<tr>
<td>aspiration</td>
<td>Count</td>
<td>718</td>
<td>732</td>
<td>397</td>
<td>367</td>
<td>565</td>
<td>1962</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>15.1%</td>
<td>15.4%</td>
<td>8.4%</td>
<td>7.7%</td>
<td>11.9%</td>
<td>41.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Years in Puerto Rico</td>
<td>35.9%</td>
<td>36.6%</td>
<td>33.1%</td>
<td>30.6%</td>
<td>35.3%</td>
<td>35.0%</td>
<td>34.9%</td>
</tr>
<tr>
<td>% of Total</td>
<td>5.3%</td>
<td>5.4%</td>
<td>2.9%</td>
<td>2.7%</td>
<td>4.2%</td>
<td>14.4%</td>
<td>34.9%</td>
</tr>
<tr>
<td>deletion</td>
<td>Count</td>
<td>299</td>
<td>160</td>
<td>138</td>
<td>127</td>
<td>145</td>
<td>488</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>22.0%</td>
<td>11.8%</td>
<td>10.2%</td>
<td>9.4%</td>
<td>10.7%</td>
<td>36.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Years in Puerto Rico</td>
<td>15.0%</td>
<td>8.0%</td>
<td>11.5%</td>
<td>10.6%</td>
<td>9.1%</td>
<td>8.7%</td>
<td>10.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>2.2%</td>
<td>1.2%</td>
<td>1.0%</td>
<td>0.9%</td>
<td>1.1%</td>
<td>3.6%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>2000</td>
<td>2000</td>
<td>1200</td>
<td>1200</td>
<td>1600</td>
<td>5600</td>
</tr>
<tr>
<td>% within Pronunciation of the s sound</td>
<td>14.7%</td>
<td>14.7%</td>
<td>8.8%</td>
<td>8.8%</td>
<td>11.8%</td>
<td>41.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Years in Puerto Rico</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>14.7%</td>
<td>14.7%</td>
<td>8.8%</td>
<td>8.8%</td>
<td>11.8%</td>
<td>41.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The results show that there is no difference in the retention rates of the 1-5 years group (55.4%) and the 5-10 years group (55.4%). The other groups exhibit similar rates: less than 1 year (49.2%), 10-15 years (58.8%), 15-20 years (55.6%), and more than 20 years (56.3%). The lowest rate of retention (49.2%) is strongly supported by the literature because informants who have recently arrived to the US mainland typically realize fewer cases of retention than those who have resided in this region for longer periods of time (Otheguy & Zentella, 2012). With regard to aspiration, it has been documented that this is the most favored variant amongst Puerto Ricans who reside on the Island (Lipski, 2008). In Amsterdam, the rates of aspiration are very stable because there is a minimal difference (0.7%-6.0%) between the leader (1-5 years group, 36.6%) and the followers: less than 1 year (35.9%), 5-10 years group (33.1%), 10-15 years group (30.6%), 15-20 years group (35.3%), and more than 20 years group (35%). When taking into consideration the three social variables associated with migration trends, aspiration is clearly
more stable based on years in Puerto Rico than on years in Amsterdam or years in NYC. This indicates that exposure to native-like production tendencies—where Spanish is the mainstream language—leads to a more stable pattern of final /s/ production. As far as deletion, newcomers (less than 1 year, 15%) to Amsterdam from the Island prefer this variant more frequently than the other groups: 1-5 years (8%), 5-10 years (11.5%), 10-15 years (10.6%), 15-20 years (9.1%), and more than 20 years (8.7%). These results suggest that informants acquire deletion as a stable variant of the final /s/ even if they live in Puerto Rico for a short period of time before migrating to Amsterdam.

5.4.9 Spouse ethnicity

In the current study, the spouse’s ethnicity has significant interaction with final /s/ production. The three categories used (Hispanic, non-Hispanic, and no spouse) entail the options from which informants chose when completing the questionnaire. Table 27 shows the results of this social variable.
The production tendencies vary based on the in-group percentages. Informants without a spouse favor retention (57.1%) more than the other two groups: Hispanic spouse (54.9%) and non-Hispanic spouse (49.5%). In the case of aspiration, informants who have a non-Hispanic spouse prefer aspiration (42.8%) with more frequency than those who have a Hispanic spouse (34.7%) or no spouse (33.5%). This means that even if informants do not receive or produce the Spanish language via spousal interaction, the existence of a spouse will most frequently favor the articulation of /s/ aspiration. Deletion occurs at very similar rates across the three groups: Hispanic spouse (10.4%), non-Hispanic spouse (7.8%) and no spouse (9.4%). Because these rates are similar, the overall impact that spousal interaction has on final /s/ deletion when Spanish is used as a minority language should be further examined in future studies. During the interview conversations, some of the informants notified me that they use Spanish in daily interactions that do not include spouses: at church, with siblings, and at the store. This linguistic
behavior—outside of the spousal interaction context—may also contribute to their production tendencies.

5.5 Analysis of multiple variables: linguistic and social factors

Examining the interaction between linguistic and social factors permits a more in-depth look at final /s/ variation from a synchronic point of view. Below, I examine the relationship between time spent in Puerto Rico, pronunciation of /s/, and position of /s/.

In all four groups, there is a similar pattern of variation regarding the three variants under study. Retention is more strongly favored in word-internal contexts (Group 3, 77.7%, Group 2, 74.5%, Group 1, 74%, and Group 4, 65.7%) than in word-final contexts (Group 2, 51.1%, Group 1, 49.6%, Group 3 45.9%, and Group 4, 41.6%). This is consistent with findings in Lorain, Ohio (Ramos-Pellicia, 2012), especially the rates of retention for informants who have lived in Puerto Rico. With regard to aspiration, this variant is preferred in word-final contexts (Group 3, 43.8%, Group 1, 40.2%, Group 4, 39.7%, Group 2, 35.3%) at a higher rate of frequency than in word-internal contexts (Group 4, 27.6%, Group 2, 21.9%, Group 1, 21.3%, and Group 3, 19.6%). This helps show that word-final position is a strong conditioner of the reduction process of /s/ in Amsterdam. To a lesser extent, deletion follows a pattern that is similar to aspiration. Informants slightly favor this variant more in word-final position (Group 4, 18.7%, Group 2, 13.7%, Group 3, 10.3%, and Group 1, 10.3%) than in word-internal position (Group 4, 6.7%, Group 1, 4.7%, Group 2, 3.5%, and Group 3, 2.7%). Because the rates of relative frequency are similar across the positional segments, deletion is very stable amongst the four groups under study. Group 4 informants are the leaders of deletion and this corroborates Ramos-Pellicia’s (2012) findings on final /s/ variation.
5.6 Conclusion

This chapter provided a quantitative analysis of final /s/ variation in Amsterdam, New York. The examination of linguistic and social factors shows that based on time spent in Puerto Rico, aspiration and deletion are favored in word-final contexts whereas retention is the preferred variant in word-internal contexts. For the most part, rates of relative frequency show that the three variants under study are relatively stable in Amsterdam when compared across the four groups under study.
CHAPTER SIX: CONCLUSION

6.1 Introduction

This dissertation has provided a general overview of the presence of Spanish in Amsterdam, New York, and offered some insights regarding its use by four different groups of Puerto Rican informants in the city. The description of the phonological features in Chapter 4 demonstrated that lateralization of final /r/, although it is a stigmatized variant, was observed in all four groups. Also, deletion of the word-final /d/ appears in the data of Groups 1 and 2, but was not observed in Groups 3 and 4. With regard to morphosyntactic features, Group 1 informants maintain the subjunctive mood in the dependent clause, but Groups 2, 3, and 4 alternate between the indicative and the subjunctive mood in this same clause. Overt subject expression appears in the data of all four groups. This phenomenon is prevalent in the data of Groups 3 and 4. The results in Chapter 5 offered a quantitative analysis that showed the different linguistic (e.g., following segment and grammatical category) and social factors (e.g., level of education and sex) which constrain final /s/ production. This concluding chapter discusses how the results and the focus of this dissertation contribute to the body of research on Spanish in the United States. Specifically, I detail the implications of these findings in relation to small Spanish-speaking Puerto Rican communities in the US. Finally, I discuss different limitations of the current study and suggestions for future studies related to Puerto Rican Spanish in the US.

6.2 Summary of findings regarding final /s/ and linguistic and social factors

Previous research in larger communities of Puerto Ricans in the US, mainly New York City and Philadelphia, focused primarily on deletion of the final /s/. The current study provides a more complete view of retention, aspiration, and deletion. Based on the results presented in Chapter 5, it is clear that there is less deletion in Amsterdam in word-final and word-internal
contexts than in other regions of the US. This may be due to methodological aspects of prior studies. For example, in New York City (Otheguy & Zentella, 2012), the focus of research centered on coda /s/ deletion in relation to overt subject expression in the first and second generations, but the current study considered a wider variety of linguistic and social variables and examined informants based on time spent in Puerto Rico in light of cyclical migration. Because of this cyclical migration, generation as a sociolinguistic variable is unstable because it does not account for second and third generation native-like speakers who have experience living in an L1 Spanish environment (i.e. in Puerto Rico), during a certain span of their lifetime. For example, time spent in Puerto Rico accounts for Puerto Rican informants who were born and raised in the US mainland and visit Puerto Rico for a specific number of years during their lifetime before returning to the US mainland. Also, time spent in Puerto Rico accounts for those informants who migrate back-and-forth from the Island of Puerto Rico to the US mainland and vice versa because their total number of years of language experience in an L1 Spanish environment substantively impacts their language production and language use.

Overall, the results show that—based on the in-group percentages of relative frequency—the production of the final /s/ (i.e. retention, aspiration, and deletion) is stable across the four groups under study. With regard to linguistic factors, when there is a word-internal /s/ with a following segment consonant, informants clearly favor retention over aspiration or deletion. This phonetic context is the strongest conditioner of the final /s/ in Amsterdam. As far as the interaction between linguistic and social factors, across the four groups under examination, informants tend to produce either aspiration or deletion in word-final contexts and retention in word-internal contexts.
6.3 Implications of research

The results of the current study suggest that the future of Spanish in Amsterdam will include a gradual loss of some native-like morphosyntactic and lexical features, but a stable level of native-like phonological features, including the realization of the final /s/, will be maintained. Several potential factors that may impact this gradual loss of language production and maintenance of native-like pronunciation are the frequency of use of Spanish in private and public domains, the age at which Puerto Ricans migrate to Amsterdam, and level of education. However, cyclical migration that is typical of the Puerto Rican community seems to put a break on language shift. In fact, the great similarities in linguistic behavior across all my participants has as much to do with the fact that the majority have spent five years or more living in Puerto Rico.

6.4 Suggestions for future research

An intriguing area of research to undertake concerning Amsterdam is a quantitative analysis of the intervocalic multiple /r/ and word-initial /r/. While examining the data qualitatively, I noticed that there are a substantial amount of cases in which the /r/ is velarized in intervocalic position as shown below:

(81) /puertoxiqueño/,
    ‘puertorriqueño’
    ‘Puerto Rican’
(82) /axos/
    ‘arroz’,
    ‘rice’

Also, the word-initial /r/ is produced with either a single alveolar tap or is velarized as in the
following examples.

(83) /rekoxer/

‘recoger’

‘to pick up’

(84) /xío/

‘ríô’

‘river’

These features should be examined quantitatively in order to examine the relationship between informants’ actual language production in comparison to their self-reported perception of how they produce the /r/ in these two phonetic contexts.

With this in mind, code-switching is another line of research that should be explored quantitatively in small Spanish-speaking Puerto Rican communities in the US in order to further contribute to prior research conducted in larger communities such as New York City (Otheguy & Zentella, 2012; Zentella 1997) and Philadelphia (Poplack, 1978). In Amsterdam, the majority of the cases of code-switching (intersentential and intrasentential) appear in the data of Groups 2, 3, and 4. Overt subject expression should also be analyzed quantitatively in order to determine to what extent linguistic input in English influences subject pronoun use in a language contact situation. Finally, the analysis of discourse markers (e.g., *pues*, *bien*, *es decir*, *o sea*, *bueno*, and *entonces*) is a viable area of research to explore because it will provide results concerning how informants use adverbial-type expressions in order to convey influential messages.

6.5 Conclusion

This chapter has summarized the main findings of the current study. Despite limitations, the current study opened up a passageway for future research concerning more in-depth
phonological and morphological analyses. These analyses encompass sociophonetic linguistic behavior within the context of language contact and language maintenance. Future investigations will offer cross linguistic comparisons amongst small communities and large communities while aiming to show how the interaction between linguistic and social variables leads to native-like or non-native like language production tendencies.


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