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**A COMMUNITY-BASED STUDY OF SOCIAL, PROSODIC, AND
SYNTACTIC FACTORS IN CODE-SWITCHING**

A Dissertation in

Spanish

by

Delfina Evelyn Durán Urrea

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The dissertation of Delfina Evelyn Durán Urrea was reviewed and approved* by the following:

Rena Torres Cacoullous
Associate Professor of Spanish and Linguistics
Dissertation Adviser
Chair of Committee

Paola (Giuli) Dussias
Associate Professor of Spanish

Chip Gerfen
Associate Professor of Spanish
Head of the Department of Spanish, Italian, and Portuguese

John M. Lipski
Edwin Erle Sparks Professor of Spanish and Linguistics

Catherine Travis
Special Member
Professor of Linguistics
Chair of Modern European Languages in the School of Language Studies
Australian National University

* Signatures are on file in the Graduate School

ABSTRACT

The phenomenon of code-switching (CS)—the alternation between two languages within a single discourse event—has increasingly attracted the attention of scholars in the last three decades. This study is based on the speech of members of a bilingual community in northern New Mexico, in which Spanish and English have been in contact for over 150 years. The data are 8,723 Intonation Units totaling 43,193 transcribed words and corresponding to approximately 4.5 hours of the 29 hours of recorded material, from conversations lasting from 45 minutes to two hours. 28 Spanish-English bilinguals born and raised in Mora County participated: 14 women and 14 men, 30 to over 70 years old. From this Mora, New Mexico Corpus (MNMC), 1,181 tokens of CS were extracted.

The study focuses on social, prosodic, and syntactic considerations in CS. Information about acquisition and use of the two languages and linguistic attitudes were culled from the recordings, which, unlike answers obtained via a questionnaire, provide an indication of issues of concern to the community. Spanish language dominance, as evaluated by individual speakers themselves, appears to be correlated with older age and primary-school-level education. Prosodic units are important, though this is not a categorical constraint, in that 79% of all switches occur at Intonation Unit (IU) boundaries, with Spanish-dominant speakers showing a higher rate of CS internal to the IU. However, the direction of the switch is not correlated with language dominance and, in the aggregate, IU-internal CS occurs evenly from Spanish to English and from English to Spanish. Finally, with respect to syntactic considerations, the first word in CS is most frequently a closed-class item, a conjunction or preposition in Spanish and subject pronoun in English, while the word preceding a CS is usually an open-class item, in both languages. The most frequent combinations were: English noun / verb / adverb / pronoun + Spanish conjunction

or adverb, and Spanish verb / noun / adverb / conjunction + English subject pronoun or adverb.

These patterns were observed to hold for both kinds of CS, that is, at IU boundaries and IU-internally.

TABLE OF CONTENTS

List of Tables	viii
List of Figures	viii
Dedication	ix
Acknowledgements	x
Chapter 1. Introduction	1
1.1 Issues in the study of code-switching addressed in this research	1
1.2 Spanish-English contact in New Mexico.....	2
1.3 Spanish in New Mexico	4
1.3.1 lexicon.....	4
1.3.2 Phonology	5
1.4 Operational definition of CS adopted in this study.....	6
1.4.1 Nonce borrowing of single-word nouns	7
1.4.2 CS Data	9
1.5. Organization of dissertation.....	10
Chapter 2. The community and fieldwork	12
2.1. Overview of the community	13
2.2. Description of fieldwork	16
2.2.1. Initiation of contact	16
2.2.2. Participant observation.....	17
2.3. Location and selection of consultants	19
2.3.1. Establishing a representative community sample	21
2.3.2. Age.....	23
2.3.3. Sex.....	26
2.3.4. Occupation	26
2.3.5. Level of bilingualism	28
2.4. Elicitation of naturalistic data	29
2.4.1. Individual recordings	31
2.4.2. Group recordings	32
2.4.3. Equipment	33
2.4.4. Data elicitation protocols	34
2.5. Summary	36
Chapter 3. Bilingual usage and linguistic attitudes	37
3.1 Methods of obtaining data about usage and attitudes	37
3.2. Language use.	42
3.3. Language attitudes.	52

3.3.1 Identity	53
3.3.2 Attitudes towards language.....	56
3.3.3 Attitudes toward bilingualism or language mixing.....	59
3.3.4 Attitudes towards Anglos.....	60
3.4 The fate of New Mexican Spanish.....	61
3.4.1 The future of NM Spanish	62
3.4.2 NM Spanish in the next generations	63
3.5 Summary	65
Chapter 4. The Intonation Unit in the study of CS: extraction, transcription, and coding of CS.	67
4.1. Introduction.....	67
4.2. The Intonation Unit in monolingual discourse	68
4.2.1 Intonation Units as cognitive units	68
4.2.2 Completion points.....	70
4.3 The Intonation Unit in bilingual discourse	71
4.4 Transcription method adopted in this study.....	74
4.4.1 Transitional continuity.....	77
4.5 Extraction and coding of tokens	79
4.6 Summary	80
Chapter 5. The IU in the study of CS: Social factor in CS patterns.	81
5.1 Analysis of the data.....	81
5.2 Switch type in the IU	82
5.3 Language of the switch.....	89
5.4 Summary.....	95
Chapter 6. Switch boundary words in bilingual IUs	97
6.1 Constituency in discourse	97
6.2 Constituents in the context of CS.....	99
6.3 The switch-boundary IU and the switch-boundary word in CS	100
6.4 Extraction and coding of tokens	101
6.4.1 Coding of the word immediately preceding the switch and the first word of IU-internal CS and CS across IUs	101
6.5 Quantitative analysis of the data	103
6.5.1 Word Class of first word in CS by type of switch	103
6.5.2 Word Class of first word in CS by type of switch and language.....	104
6.5.3 Word class of word preceding CS by type of switch.....	106
6.5.4 Word class of word preceding CS by language	108
6.5.5 Word Classes forming CS.....	111

6.6 Summary	115
Chapter 7. Conclusion	116
7.1 The study of CS in a community	116
7.1.2 The study of CS in New Mexico.....	116
7.1.3 Data for the current investigation	117
7.2 Bilingual usage and linguistic attitudes	118
7.3 Structural analysis of CS.....	120
7.3.1 Switch type in the Intonation Unit.....	120
7.3.2 The switch boundary word and constituency in bilingual IUs	121
7.4 Future Research	122
Appendix A. Transcription Conventions	123
Appendix B. IU internal CS per language and dominance	124
Appendix C. CS at IU boundaries per language and dominance	125
REFERENCES	126

List of Tables

Table 1. <i>Summary of conversational data</i>	9
Table 2. <i>Distribution of speakers by sex and age</i>	26
Table 3. <i>Social Characteristics of the Speakers.</i>	28
Table 4. <i>Language dominance of the speakers.</i>	29
Table 5. <i>Participants and recording sessions</i>	33
Table 6. <i>Acquisition of Spanish and English by age groups</i>	43
Table 7. <i>Spanish and English use in different domains</i>	44
Table 8. <i>How English was learned</i>	47
Table 9. <i>Language use with different interlocutors</i>	48
Table 10. <i>Ethnic identity</i>	53
Table 11. <i>Attitudes towards language</i>	56
Table 12. <i>Distribution of code-switching by IU in NMCROSS data</i>	73
Table 13. <i>Frequency of CS</i>	81
Table 14. <i>Distribution of CS by IU</i>	82
Table 15. <i>Frequency of CS type</i>	83
Table 16. <i>Social Characteristics of the speakers</i>	84
Table 17. <i>Percentage of CS into English and Spanish</i>	89
Table 18. <i>Percentage of language of switch per speaker</i>	90
Table 19. <i>IU internal CS per language and dominance</i>	92
Table 20. <i>CS at IU boundaries per language and dominance</i>	93
Table 21. <i>Syntactic category of first word in CS</i>	104
Table 22. <i>Word class of first word in CS internal to the IU</i>	105
Table 23. <i>Word class of first word in CS across IUs</i>	106
Table 24. <i>Syntactic category of word preceding CS</i>	107
Table 25. <i>Word class preceding CS internal to the IU</i>	109
Table 26. <i>Word class preceding CS Across IUs</i>	109
Table 27. <i>Combination of word classes in CS internal and across IUs by language</i>	127
Table 28. <i>Combination of word classes in CS internal and across IUs by language</i>	114
Table 29. <i>IU internal CS per language and dominance</i>	124
Table 30. <i>CS at IU boundaries per language and dominance</i>	125

List of Figures

Figure 1	14
Figure 2. <i>Virtual Questionnaire</i>	40
Figure 3. <i>Effects of age of speakers on the rates of CS internal to the IU</i>	85
Figure 4. <i>Effects of language dominance of speakers on the rates of CS internal to the IU</i>	86
Figure 5. <i>Effects of education of speakers</i>	87
Figure 6. <i>Effects of occupation of speakers</i>	87
Figure 7. <i>Effects of ethnic identity of speakers on the rates of CS internal to the IU</i>	87
Figure 8. <i>Percentages of switches to English and Spanish by type of switch for the speakers.</i> ...	94

Dedication

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Chapter 1. Introduction

1.1 Issues in the study of code-switching addressed in this research

The phenomenon of code-switching (henceforward CS), the alternation of two or more languages in the same conversation, often with no change of interlocutor or topic (Poplack 2001), has attracted the attention of scholars in the last decades. Early work on bilingualism declared that CS was random and deviant, and not governed by systematic rules (e.g., Weinreich 1953/1968). However, linguists now agree that CS is grammatically constrained and much CS research has focused on syntactic constraints. This line of investigation has proposed rules and specific syntactic boundaries where bilinguals tend to or may switch, particularly for intra-sentential switching. Yet many issues remain regarding the nature of CS rules and structure.

Given that CS is a discourse phenomenon, however it is important to consider prosody as potentially playing a role. This study aims to deepen the understanding of CS by providing an in-depth description of the structure of CS through the lens of a prosodic analysis in the observation of patterns of CS. Following Shenk's (2006) work, as the only study that has analyzed CS in direct relation to prosodic units in discourse, I analyze CS patterns that may be overlooked when guided exclusively by the traditional concept of syntactic constituents in relation to CS boundaries. Based on CS in spontaneous discourse data, my analysis points to the importance of the intonational completion of the Intonation Unit, the basic discourse unit that segments interaction in discourse and its role in CS. More specifically, I focus on the Intonation Unit and the syntactic categories of the words at CS boundaries. The frequency and patterns with which speakers switch into English and into Spanish show that in this community, speakers switch between their two languages almost with the same frequency and distributions, rather than displaying a base language (cf. Myers-Scotton 1993). In addition, this research analyzes CS

patterns in a bilingual community in order to address how certain social factors are important in the types of CS produced by bilinguals.

1.2 Spanish-English contact in New Mexico

The study of CS in a specific bilingual community, such as the one under study, entails that the community must be identified as a true bilingual community, that is, in this community CS is a discourse mode frequently employed by the great majority of the community members in everyday life and in every conversational topic. And in order to scientifically study natural discourse, the internal structure of the community should be characterized in terms of language knowledge and language use (Poplack and Meechan 1998). This allows us to consider the patterns of members of a community, rather than the individual behavior of just one speaker, which may not be restricted by the community norms (see Torres Cacoullos and Travis 2010).

The unique Spanish spoken in New Mexico and Southern Colorado is one of the only varieties of Spanish that has survived in the United States since colonial times. As early as 1598, Spanish became established in New Mexico when a group of settlers under the command of Juan de Oñate established the first permanent Hispanic settlement north of present day Santa Fe (Bills and Vigil 1999, 2004). Cobos (2003:IX) described the Spanish spoken in Northern New Mexico and Southern Colorado as a regional variety composed of archaic 16th and 17th century Peninsular Spanish (see also Lipski 1994), Mexican Indian words, mostly from Nahuatl, a few indigenous Rio Grande Indian words, idiomatic expressions characteristic of Mexican Spanish (mexicanismos), local New Mexico and Southern Colorado vocabulary, and lexical items borrowed from English.

The isolation of the remote areas in Northern New Mexico explains some of the lexical features of New Mexican Spanish today. Archaic forms described by A. Espinosa since the

1900's, can be still found in the variety. For example '*trujo*' ('he brought'), and '*vide*' ('I saw'), are commonly found in Northern New Mexican Spanish (Bills and Vigil 2004). Likewise, lexical items borrowed from the native languages in the region when the settlers established themselves in the area, can still be found in Northern New Mexican Spanish, for example, '*naguas*' ('slip' or 'skirt'), and '*jején*' ('mosquito') (Vigil and Bills 2001:1371).

The decades since World War II have brought significant changes for New Mexican Spanish, which has suffered powerful influences, on one side from Mexican Spanish and on the other side from English. Mexican immigration grew in big proportions by the latter half of the 20th century, thus favoring an important influence from popular Mexican Spanish (Bills and Vigil 2004:324). Also, the impact of English became strong in the 20th century, after New Mexico gained statehood into the US and education in English was established in the public schools. The increasingly intimate contact with English has had a substantial impact on the vocabulary of the local Spanish (Bills and Vigil 2008:337).

New Mexican Spanish is unique among varieties of Spanish in America in that it has been in a constant situation of language contact for over 150 years. The variety carries the status of a minority language subordinated to English and thus has limited social contexts in which it continues to enjoy widespread use. The impact of English on New Mexican Spanish has been significant at the level of lexical borrowing, and has resulted in the emergence of linguistic phenomena such as CS. As early as the 1990's Aurelio M. Espinosa claimed that the Spanish language in New Mexico, with its frequent English lexical and phrasal alternations, presented a slow and gradual influence from English (1917/1975:102). Even with these tendencies, and the documented language shift to English in the younger generations in New Mexico (see chapter 3), a strong presence of Spanish is documented in the 2000 census. In Albuquerque, 25% of the

population speaks Spanish at home, and in the counties of Northern New Mexico, the presence of Spanish is significant. In Mora 68% of the population speaks Spanish at home, while in Río Arriba and Taos, 60% and 46% of the population, respectively, speak Spanish at home. In the last two decades, much research has focused on Spanish-English language mixing in New Mexico (e.g. Aaron 2004; Clegg 2006; Gonzales 1999; Jenkins 2003; Lipski 1994; Torres and Aaron 2003; Torres and Travis 2010; Torres and Vigil 2002; Vergara 2004).

In this study I draw on a corpus of recorded spontaneous conversations with bilinguals of a community in Northern New Mexico. My corpus comprises conversations with 28 bilinguals native to Northern New Mexico, carried out with the goal of gathering a corpus where spontaneous CS could be analyzed (see chapter 2). The questions that underlie this research are: Do prosodic units correlate with CS boundaries? And what syntactic patterns and social factors describe CS in the community under study?

1.3 Spanish in New Mexico

1.3.1 lexicon

One of the most complete and up-to-date studies is the New Mexico-Colorado Spanish Survey (NMCOSS), (Bills and Vigil 1999, 2008), which is a comprehensive documentation of the Spanish spoken natively across all of New Mexico and 16 counties of southern Colorado. It involved 350 recorded interviews with consultants from 63 localities of New Mexico and Southern Colorado. The data included linguistic elicitation and naturalistic conversations, including narratives. In each location the participants included three age groups (18 to 39, 40 to 60, and 61 and older).

Bills and Vigil (1999, 2008) show how modern variation in the Spanish in New Mexico reflects the historical circumstances of the region. In their study, they primarily investigate

lexical variables from elicited material consisting of responses given by their consultants. They discuss some of the archaic features present in this variety and trace the history of such archaisms and describe them at the lexical, morphological and phonological level. Lexical borrowings from English and the indigenous languages of the region are also discussed by Bills and Vigil (1999, 2008).

1.3.2 Phonology

Other studies on New Mexican Spanish have focused on phonological features characteristic to this variety. Vigil (2008) analyzed the speech of the Spanish of Taos, New Mexico. His study presents a phonological, phonetic and acoustic analysis of the patterning of rhotics and the voiceless velar [x] and glottal [h] fricatives. The speakers of the community of Taos, New Mexico are found to have both [x] and [h] as realization for /x/ in their phonetic inventory. For example, forms such as *humo* (smoke), *hervir* (to boil), *hallar* (to find), and *hediondo* (smelly, stinky), are pronounced with an initial glottal [h] or velar [x]. Vigil mentions that these allophones, which traditionally appear in mutually exclusive dialects, appear not only in word-initial positions as aspirations of 'h', but also for the graphemes 'ge', 'gi' and 'j'.

Another relevant study on phonological features analyzes syllabic consonants (/m/, /n/, /r/, /l/) in New Mexican Spanish (Lipski 1993). This study analyzes these instances of syllabic consonants as the interaction of universal aspects of vocalic feature geometry, and a dialect-specific characteristic which allows resonants to absorb the feature [vocalic] when the remaining features of a vowel have been reassigned to neighboring segments, and, equipped both with a mora and with a [vocalic] specification, to become syllabic heads (Lipski 1993:109).

1.4 Operational definition of CS adopted in this study

Early on in CS research, Poplack (1980/2000) showed that constituent ordering constrains CS. Her research suggested that CS occurs at switch points in discourse where the juxtaposition of the L_1 and L_2 does not violate the syntactic rules of either language. This claim was formalized in the *equivalence constraint*, which states that "[t]he boundary between adjacent fragments occurs between two constituents that are ordered in the same way in both languages, ensuring the linear coherence of sentence structure without omitting or duplicating lexical content" (Poplack 2001: 2063). In the East Harlem New York community studied by Poplack (1980/2000), Spanish-English bilinguals avoided switch points where non-variable rules from L_1 , but not from L_2 , must categorically apply; constituents whose structures are non-equivalent in both languages were produced monolingually in actual performance (Poplack 1980/2000:229).

The equivalence constraint, according to which there are consistent conditions on speakers' production of hierarchically and linearly coherent utterances, accounts for quantitative patterns of switching in large corpora (Poplack 1980/2000:223; Sankoff 1998). For instance, the equivalence constraint has been attested as a general tendency in bilingual communities with typologically different pairs of languages, such as Tamil-English (Sankoff et al. 1990), Fongbe-French and Wolof-French (Meechan and Poplack 1995), among others.

However, given that CS is a discourse phenomenon, it is important to consider prosody as potentially playing a role. This study aims to deepen the understanding of CS by providing an in-depth description of the structure of CS through the lens of a prosodic analysis in the observation of patterns of CS.

Discourse analysis has given central importance to specific prosodic units, which have both cognitive and interactional features (Chafe 1994; Du Bois et al. 1993; Ford et al. 2002; Ford

and Thompson 1996). The following example (1) illustrates the prosodic units in a CS segment of discourse. Each line represents a single prosodic unit (as I will explain in chapter 4) and underlining indicates the beginning of a code-switch, up to the entire prosodic unit. The first CS depicted below is from Spanish to English and begins at *we're living* and continues until the end of the following line, *our son here*. The second CS is from English to Spanish, beginning *buena cosa* and continues until the end of the excerpt. These CS occur at a syntactic boundary as well as at prosodic one, in this case, at a clause boundary.

- (1) *y poder ganar la vida no?*
we're living here,
and then we raised our son here,
buen- buena cosa porque esa experiencia del,
lo hubiera sido otra persona totalmente diferente si- que se creó en la ciudad.
(MNMC-2/136)¹

1.4.1 Nonce borrowing of single-word nouns

CS and borrowing are linguistic phenomena resulting from the language contact present in New Mexico. These phenomena have been widely researched in the United States. CS and lexical borrowing, though often classified as the same phenomenon, are two different manifestations of language contact. The processes involved in each phenomenon are different. Borrowing involves recourse to one grammar, that of the recipient language, while CS requires recurrence to both languages, therefore to two different grammars (Torres and Aaron 2003:289). The differentiation between one-word lexical borrowings and single-word CS can be established in the aggregate for particular communities (Poplack & Meechan 1995). Examples (2) (3) and (4) from Torres and Aaron (2003:290), illustrate single English content words appearing in a

¹ Codes in parentheses following examples indicate the corpus name (Mora New Mexico Corpus, MNMC), corpus recording number, file number, and the transcription line number. Cases of code-switching are underlined. Transcription conventions are given in Appendix A.

clause entirely in Spanish. These authors investigated the status of words such as those underlined in the examples below as (nonce) borrowings or CS.

- (2) *I'd wash the floor **de rodillas y le daba wax*** (117.23)
- (3) *yo arreaba gatos, arreaba **loaders y trocas** y todo eso* (214.5)
- (4) *y le puse **complaint** a ese chota* (219.16)

The prepositional phrase *de rodillas* in example 2 is clearly the beginning of a CS since it initiates a Spanish multiword sequence. In example 3, the English-origin single noun *trocas* is an established lexical borrowing that manifests phonological adaptation to Spanish and satisfies the extralinguistic criteria of diffusion and dictionary attestation (Torres and Aaron 2003:290). On the other hand, single English-origin nouns such as *wax*, *loaders*, and *complaint* in examples 2-4 respectively, were characterized by Torres Cacoullós and Aaron (2003) as nonce borrowings in the bilingual community of New Mexico, based on the distributions of bare (determinerless) forms. Nonce borrowings (Weinreich 1953) involve single lexical items, mostly nouns. Unlike established lexical borrowings and similar to CS, they are neither recurrent nor attested in dictionaries and require some degree of bilingualism. However, their resemblance to lexical borrowing is that they are grammatically indistinguishable from native words (Poplack and Meechan 1998; Poplack 2001; Sankoff et al. 1990; Torres & Aaron 2003). My study does not include an analysis of loanwords or borrowings, but focuses on CS. In order to focus on incontrovertibly unambiguous CS, I made a conservative move and excluded all single-word English-origin nouns (per Torres Cacoullós & Aaron 2003) from the count of CS. Thus, this study focuses on code-switched multiword fragments (and the relatively few cases of other-language single-word insertions that are not nouns).

1.4.2 CS Data

Previous to the extraction of tokens into an Excel file, CS was tagged manually in each transcription, and then tokens were extracted from the portions of the interviews where CS occurred. The data consist of 8,723 analyzable IUs that were extracted from 43,193 transcribed words. These transcriptions correspond to approximately 4.5 hours out of the total of 29 hours of recorded material, from 16 of the 24 digitally recorded informal conversations (Table 1).

Table 1. Summary of conversational data

Conversation	Participants included in this study	Total N of participants	Total duration of transcribed material (hours.minutes.seconds)	# of words in transcribed material	# of IUs in transcribed material
MNMC-1	Karina	1	33.10	5,167	676
	Homero,				
MNMC-2	Karen	2	48.50	3,417	633
MNMC-3	Jesús	1	20.50	3,513	578
MNMC-4	Moisés	1	17.61	481	121
MNMC-5	Javier	1	28.48	2,378	441
MNMC-6	Jimena	1	1.04.07	3,870	706
MNMC-7	Berta	1	1.18.53	3,929	632
MNMC-8	Alicia	1	35.28	1,341	234
	Catalina,				
MNMC-9	Marcos	2	34.43	3,466	893
MNMC-10	Felicia	1	52.18	4,430	1,005
MNMC-11	Lorena	1	41.08		
	Berta,				
MNMC-13	Fabián	2	24.56	2,143	545
	Moisés,				
MNMC-14	Alonso	2	30.03	2,031	529
	Alejandro,				
	Rolando,				
MNMC-15	Uvaldo	3	18.05	2,132	590
MNMC-16	Teodoro	1	54.30	4,895	1,140
Totals		21	9.53.21	43,193	8,723

Excluded from the count of CS are words considered to be established lexical borrowings, such as *biles* or *lonche*, and also the incorporation of single English nouns such as *dad*, or *mom*. Established borrowings, also referred as loanwords, are socially integrated into the language of the community, that is, these words are repeated often enough in a language variety

to be regarded as habitualized, although they may or may not be phonologically integrated into Spanish (Hasselmo 1970; Poplack 1980/2000, and references therein). For example, in NM Spanish, words such as *mom*, *dad*, *granma* and *granpa* are highly recurrent and their ‘native’ equivalent *mamá*, *papá* or *abuelo*, *abuela* are not commonly used, at least in the current materials (see Torres and Aaron 2003:300; Torres and Vigil 2002:455).

Proper names were also omitted from this study, because as mentioned by Poplack et al. (1985/1987:99), they may be treated differently than common nouns in processes of integration and in determiner distribution. Examples of proper nouns excluded from the study are names of persons, place names (*Las Vegas*, *Española*), stores (*All Soups*², *Wal-Mart*), hospitals (*Presbyterian Hospital*), and institutions or organizations (*UNM*, *Senior Center*).

Following these protocols, a total of 1,181 tokens of CS occurrences from English to Spanish and Spanish to English were exhaustively extracted from the Mora, New Mexico Corpus (MNMC) database from the portions of the transcribed materials. This means that on average, there was approximately one CS per minute (29 hours x 60 minutes = 1740 minutes, 1740 minutes ÷ 1181 = 1.4) in the transcribed materials. However, as we will see, the CS is not evenly distributed among participants and conversations.

1.5. Organization of dissertation

The starting point of this research began through participant-observation of the structure and life of a bilingual community in northern New Mexico. The goal was to obtain a large sample of discourse representative of the community in order to carry out the study of social, prosodic and syntactic patterns of CS.

² *All Soups* is the name of a franchise of gas stations in the state of New Mexico.

The body of the dissertation is organized in five chapters. In chapter 2, I present the demographic and social description of the community, which is necessary to provide evidence of how CS is used in real-life situations. I also describe the linguistic fieldwork and the methodology I employed to gather the corpus data of the dissertation.

Chapter 3 examines language use and linguistic attitudes in the community. In this chapter, I provide a description of the methods for obtaining data about language use and attitudes. In addition, the topic of the loss of Spanish and the consequent shift to English was examined since it was recurrent and it was often brought up during conversations with the speakers.

Chapter 4 explains CS patterns in relation to CS boundaries. I describe and illustrate the transcription method developed by discourse analysis and used in the present study. The following sections in the chapter exemplify how this transcription method is relevant to the study of CS with natural data.

In chapter 5, I analyze the distribution of the switch types with respect to Intonation Units examining CS occurring both at IU boundaries and internal to the IU, with an in-depth investigation of CS occurring within the IU. I also analyze the language of the switch to observe if there are differences between the two languages.

Chapter 6 is dedicated to syntactic constraints. I examine the syntax of the switch site, that is, the word class of the preceding and beginning word of the CS. The results describe which syntactic categories are switched internally to the Intonation Unit and at Intonation Unit boundaries and the frequency with which these word classes are produced in each language. Finally, the concluding chapter summarizes the findings.

Chapter 2. The community and fieldwork

The starting point of sociolinguistic analysis is the community, broadly defined as a group of interacting individuals (Gumperz 1997:183). Following Labov's (1972) definition based on the findings of his New York City study, a speech community is a regionally or socially definable group identified by the use of a shared linguistic system and by participation in shared sociolinguistic norms.³

Studies of code-switching (CS) have emphasized the importance of empirically analyzing linguistic norms in the context of a well-defined community, as opposed to the study of individual linguistic behavior, which may or may not exhibit community norms. As shown in Poplack's (1985) comparison of code-switching strategies among French-English bilinguals in Ottawa-Hull and Spanish-English bilinguals in the New York City Puerto Rican community, community norms for combining two or more languages are predictable neither from language typologies nor social categories, and what appears to be the same bilingual phenomenon may have different status from one community to another. In the Ottawa-Hull capital region of Canada, for example, switches were observed to be "flagged", that is, attention was drawn to the CS by repetition or metalinguistic commentary for particular rhetorical purposes, e.g. as a *mot juste* ('apt expression') as in (5), or reported speech as in (6) (Poplack 1985):

(5) *C'est un-a hard-boiled killer*

'He's a-a hard-boiled killer'

(6) *Je m'adresse en français, pis s'il dit "I'm sorry", ben là je recommence en anglais*

³ "Native New Yorkers differ in their usage in terms of absolute values of the variables, but the shifts between contrasting styles follow the same patterns [...] Subjective evaluations of native New Yorkers show a remarkable uniformity" (Labov 2006/1966:6).

‘I begin in French and if he says “I’m sorry”, well then I start over in English’

In New York, in contrast, CS was smooth: frequent, with seamless transitions between languages, and lacking rhetorical effect, occurring unpredictably at permissible switch sites. This kind of CS is what we observed in the present study. Code-switching in New Mexico is widely used as the natural in-group discourse mode (e.g. Gonzales, 1999).

In addition to identifying a speech community in which CS is part of everyday discourse, a second requirement is to "obtain a sufficiently large sample of sustained discourse representative of the bilingual mode in order to carry out the study" (Poplack and Meechan (1998:128). Both requirements entail that, previous to any linguistic analysis, it is necessary to gain demographic and social knowledge of the community to be able to provide evidence of how CS is used in real-life situations.

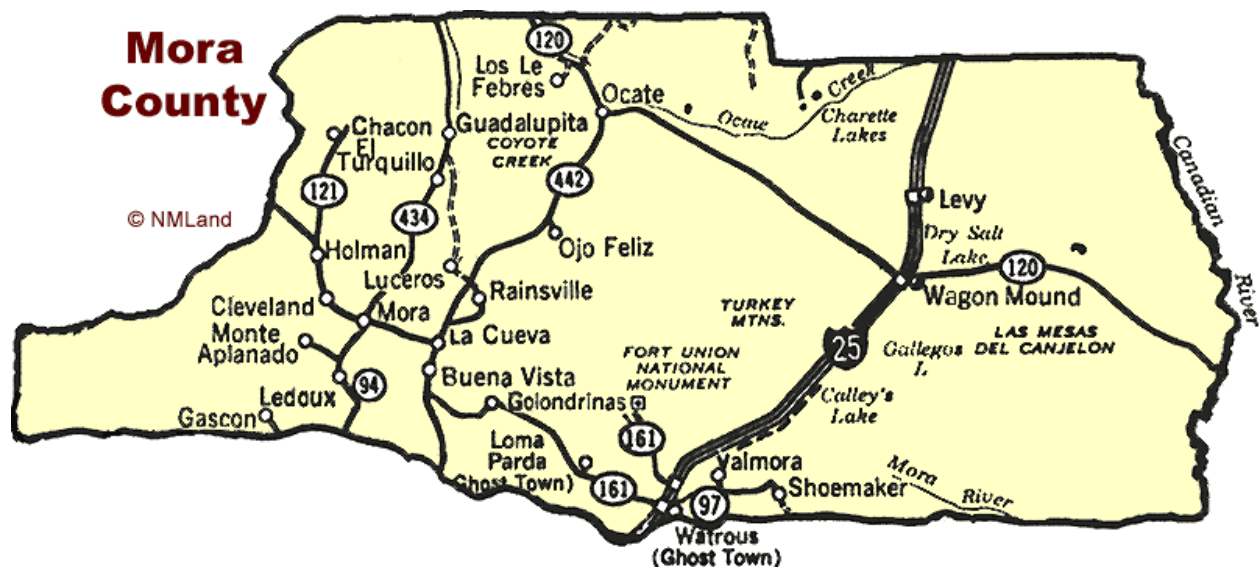
2.1. Overview of the community

The community being studied presents a situation of intense language contact. The town of Mora, New Mexico, and the communities that surround it, was chosen as the main site for this study for two reasons. In the first place, in the towns of Northern New Mexico, Spanish has been spoken for centuries and English has been the dominant language for more than one hundred and fifty years. The intense contact between Spanish and English has resulted in the emergence of linguistic phenomena such as CS. Second, in Mora I found what appeared to be a relatively stable bilingual community, in which the majority of its members (still) speak English and Spanish on a daily basis.

Mora County is sparsely populated and formed by many small villages such as Mora, Guadalupita, La Cueva, Ledoux, Chacon, Cleveland, Holman, and so on (see Figure 1). Mora

County has a population of 5,180 inhabitants according to the 2000 US Census Bureau. The Hispanic population represents 81.6 percent of the total, and 67.8 percent of the population five years and older declared that they speak Spanish at home.

Figure 1



The town of Mora is the main center serving as a nexus of activity for all the villages comprising this county and for this reason it was chosen as the main site for the study. Mora is a small town 31 miles north of Las Vegas, New Mexico, on Highway 518 at an altitude of 7,180 feet (Works Project Administration 1945). As Highway 518 climbs the 15-mile-long Mora Valley, we see one of the most beautiful regions in the state of New Mexico. The Valley has the famous Sangre de Cristo Mountains as its backdrop to the west and the Mora River runs the length of the County from West to East. The town of Mora lies at the junction of Highway 434 and 518 towards the Cleveland Roller Mill. Six miles south we find La Cueva National Historic Site and Salman Ranch, which is famous for its raspberries. As the two-lane highway enters town, it passes the Mora Valley Community Center, the Tapetes de Lana Weaving Center (one

of Mora's largest buildings), the library and, right behind it, the senior center, and Mora Independent Schools. On the other side of the road is the only grocery store in town, the bank, several homes and, at the end of the town limits, a motel. Along the way, one encounters sheep, cattle, and some lamas, brought by ranchers of the area from South America to produce fiber for the making of wool rugs. The road then climbs again at the end of Mora Valley and tops out near Sipapu Ski Area.

The Mora Valley has always been a fertile area, but the demands of Fort Union for wheat flour sparked an agricultural boom in the 1800's. For decades Mora was known as the breadbasket of New Mexico and the several flourmills still standing are reminders of Mora's farming history (Noble 1994). Nowadays Mora's economic activity is still based on its natural resources, making logging, farming, and ranching the main occupations in the valley; other means of earning income are public service, business and self-employment. However, Mora County is one of the most economically depressed regions in the state. Because of the economic depression of the county many of its residents have had to get jobs in urban centers outside the county. As one study participant notes, *'there are no jobs in Mora, people have to go to Las Vegas (the closest urban center), and even in Las Vegas it is hard to find a job, sometimes people have to go to a bigger city'*, like his grandson, who had to move to Albuquerque because he could not find a job in Las Vegas (MNMC-6). In the view of another consultant, almost everybody has to go to Las Vegas, Santa Fe, and Taos, for work, and even to Cuesta to work in the mines (MNMC-1). And another consultant recalls how prosperous Mora was when she was a child. She mentions: *...so, nosotros viníamos, porque había muchas tiendas, muchas cantinas, mucho de todo... Todo esto estaba lleno, todas esas tiendas caídas, Tapetes de Lana esa era una*

tienda y...ahi estaba el theater donde íbanos a ver películas y luego al otro lado de la calle había otras y había cantina en cada lugar y... '(MNMC-7).⁴

2.2. Description of fieldwork

I conducted linguistic fieldwork between January and the summer of 2008 in Mora with the aim of creating a corpus of spontaneous discourse data tied to a specific community.⁵ I chose an ethnographic approach based on participant-observation because it has been shown to provide an in-depth view of the use of natural language in natural settings (Gumperz 1982, Gonzales 1992). At the same time, this observational approach was complemented by digitally recorded sociolinguistic interviews (Labov 1972, 1984), or informal conversations between residents of the area and myself.

In order to make initial contacts and recruit additional participants in the study, I used the social network technique (Milroy 1987, 1992; Milroy and Milroy 1985). I will discuss in detail the steps in the fieldwork.

2.2.1. Initiation of contact

Because as a native of Sonora, Mexico, I was not a member of the community I wanted to study, I had to overcome my status as an outsider. The ethnographic participant-observer and network approaches entail involvement in the community of some duration. Through these approaches, the researcher is able to gain local cultural knowledge of the community and familiarity with community practices; the benefits of this approach lie in the amount and quality of data collected (Milroy 1987b; Milroy and Gordon 2003:68).

⁴ 'We used to go to town because there were a lot of stores, a lot of bars, and a lot of everything... there used to be a lot of commerce, not those now abandon stores. *Tapetes de Lana* used to be a store and there was a theater were we used to go to watch movies, and then across the street there were more stores and more bars, and...'

⁵ This fieldwork was possible thanks to the generous support of the Graduate Research Development (GRD) fund from the University of New Mexico.

In order to gain access to the community and be able to make contacts with people with whom I had not had previous personal connections, I consulted with María Dolores Gonzales, a well-known researcher on bilingual discourse and linguistic attitudes in New Mexico, and a member of that community (Gonzales 1992; 1999). I needed the help of an in-group member of the community who would be my main contact. María Dolores Gonzales put me in touch with her sister Cecilia Gonzales, a retired bilingual teacher who lives in the area and who is very familiar with the Mora community. Cecilia became my main contact and was very helpful since she had family, friends and acquaintances in the community and, at the same time, she understood the kind of linguistic research I was interested in doing.

2.2.2. Participant observation

In the months prior to beginning the fieldwork, and before gathering any recordings, I made several trips from Albuquerque (approximately 3 hours away by car) to Mora and spent some time in the community becoming visible and getting acquainted with its members. This was done by accompanying my main contact Cecilia to make social visits to homes and workplaces and also by frequenting public places such as the bank, the grocery store, the gas station, the Senior Community Center and a restaurant where members of the community gather for social interaction.

My contact with community members was initiated through a social visit with María Dolores Gonzales and Cecilia Gonzales to their relative's home in Mora. I was introduced as a student of María Dolores and a friend of Cecilia; we stayed for a couple of hours in which I participated more as an observer while the participants occupied themselves in casual conversation. In this initial contact I began to observe and learn about how members of this speech community communicated with each other.

In a subsequent visit to Mora I accompanied Cecilia to the Mora Valley Community Health Center where we met with the Planning Coordinator. I was introduced by Cecilia as a student from the University of New Mexico who was interested in doing research about New Mexican Spanish and who wanted to observe the community as well. We had a long informal talk with the coordinator in which he shared extensively his insights about New Mexico and the town of Mora; he also talked about his personal background as a New Mexican and a resident of Mora. The conversation with the coordinator was very enlightening because he provided information about the community and, since he became really interested in the research, he offered to help me to meet other residents.

In another trip I made to get acquainted with the community, Cecilia and I visited the editor of the town's newspaper, *The Mora Communicator*. He seemed very welcoming and we had an informal talk about the community and the people in town. I explained my research project and he also offered to help me meet people in town, further inviting me to visit the newspaper anytime and talk to people over there. The *Mora Communicator* is a very small newspaper published monthly; it consists of two employees, the editor-in-chief and a collaborator, and its office is located right in the middle of town. Because of its location and also because the editor is well known in the area, people stop at the newspaper's office to chat with him, thus it was a potential place to make future contacts to record conversations.

In yet another trip to Mora, I accompanied Cecilia to do some shopping, and then we had lunch in one of the three restaurants in town. As Cecilia was acquainted with a lot of people in town, we spent time greeting people. After lunch we stopped at the only motel in town, owned by Cecilia's cousin. I was introduced to the owner as a student interested in doing research about New Mexican Spanish; we had an informal talk and I asked her questions about the county and

the town of Mora. Being the owner of the only motel in town, she usually gives touristic information to people visiting town, thus she was a good source about the history of Mora. Because she has been a resident all her life, she also was a good source to consult about important places to meet people in town.

For five months I made several trips accompanying Cecilia to town, becoming familiar with people in the community as a participant observer. Over this period I gradually defined the group of potential contacts that might be willing to be recorded for my corpus.

2.3. Location and selection of consultants

After spending time as an observer in the community, I proceeded to make contacts for the recordings of casual conversations, based on my initial contacts' social networks. As Milroy (1987b) points out, the somewhat close relationship that arises with time between the fieldworker and speakers in this kind of study it will influence the quality of data obtained.

One of the main claims of network analysis is that individuals create their own communities, which can provide them with a significant structure for solving the problems of everyday life (Mitchell 1986:74). An individual's social network is defined as "the aggregate of relationships contracted with others, a boundless web of ties which reaches out through social and geographical space linking many individuals" (Milroy 2004: 550), though, as mentioned by Milroy and Li Wei (1995:138), for practical reasons, "social networks are generally 'anchored' to individuals, and analysis is effectively limited to between twenty and fifty individuals".

The network-based approach to selecting participants is useful in the study of relatively clearly definable communities (Milroy and Li Wei 1995:138) such as the one I am studying. This approach provides an optimal way of studying small groups where speakers are not readily classifiable in terms of any kind of social class index or where speakers are minority ethnic

groups, migrants or rural populations (Milroy and Gordon 2003:120). Examples of some of these studies in bilingual communities are Gumperz (1982), Li Wei (1994), L. Milroy and Li Wei (1995), Poplack (1980/2000) and Zentella (1997).

In an individuals' network there are ties of different types and strengths, which he or she maintains. It has been found useful to distinguish close-knit as opposed to loose social networks to identify patterns of linguistic norms. In this study I further draw on the notion of first-order network ties, i.e., "a person's direct contacts, which generally are the focus of interest" (L. Milroy and Gordon 2003:117). First-order network ties are "strong" and "weak" ties of everyday life: the former connect friends or kin and the latter connect acquaintances. Second-order ties are to those individuals to whom the link is indirect but who can offer an important resource such as providing access to a range of local information, goods, and services (Milroy and Gordon 2003:117).

I proceeded to make contacts following close-knit networks of first-order ties. I asked my main contact Cecilia to contact the social worker of Mora High School, who was an acquaintance of hers. She made an appointment with her and the school principal and, a few days later, Cecilia and I met with each of them to ask some questions about the students and the community in general. These meetings were important because they helped me gain knowledge of the community from people actively involved in it, who were native to it, and who have lived there most of their lives. In the meeting with the social worker, she provided me with the names of some community members who I might recruit as possible participants. In the meeting with the principal, he gave me some background information on the linguistic situation of Mora High School students and I asked him for access to the high school campus so I could participate as an observer in several classes and around campus. After following the school district formal

procedure for a background check on any person remaining on school grounds, I was given free access to the school with the understanding that I would not be disruptive. The principal introduced me to some of the teachers, briefly saying that I was a student from the University of New Mexico interested in doing research about Mora, and that I would be on campus just participating as an observer. I talked to some of the teachers suggested by the principal, and asked them permission to sit in their classes as an observer and stated that I would be glad to discuss what I was doing and what my research was about at any time.

After the initial observation period was completed, I moved to Mora for three months in the summer of 2008 to start screening participants for the study. I kept up my role as a participant observer to mitigate as much as possible my status as an outsider. I actively participated in different community activities; I made social visits to different people to whom I was introduced during the initial observation period and who kindly invited me to visit them sometime at their homes. I also visited some of the missions (*misiones*) in Mora County and attended religious festivities. In these missions, after mass or a religious celebration, churchgoers have social gatherings, which I attended, always accompanying a well-respected member of the community. These activities helped me to expand my developing social networks.

2.3.1. Establishing a representative community sample

Any social scientific study that analyzes a group by taking a selected sample of speakers belonging to that group must take into consideration representativeness. As L. Milroy and Gordon point out, "The key to achieving a representative account of the language of a group of speakers is the avoidance of bias. Selecting speakers of a particular subgroup is an obvious source of bias if the goal is to describe the population in general" (2003:24).

Early sociolinguistic studies which focused on urban speech employed sampling methods designed to eliminate as much bias as possible. These methods were first developed by William Labov in his study of the social stratification of English in New York City (1966). In Labov's study a *random sample* of the population was taken, i.e. anyone in a list that enumerates the relevant population, such as electoral registers or telephone directories. However this kind of random sample may also be biased, since one of the lists can exclude a portion of the general population (L. Milroy 1987b). What was important about the New York City study is that it provided a basis for a description of an urban speech community that did not concentrate on any particular group of speakers. Variationist studies often employ *quota or judgment sampling*. "The principle underlying this approach is that the researcher identifies in advance the types of speakers to be studied and then seeks out a quota of speakers who fit the specified categories" (L. Milroy and Gordon 2003:30).

G. Sankoff (1980) points out that there are three decisions that the researcher must make in determining the sample:

1) Defining the sample universe, that is, delineating the boundaries of the group or community in which one is interested.

2) Assessing the relevant dimensions of variation within the community, that is, stratification of the sample. Thus, it might be necessary to take into consideration categories such as ethnicity, gender, or social class and whether these can affect language use in the community.

3) Deciding the sample size.

In some studies, the social categories are not easily identifiable based on a demographic criteria, therefore the researcher is required to have ample knowledge of the community obtained through long-term participant observation, so he or she can establish such categories.

Reporting on her ethnographic study about teenagers' language and identity in a suburban Detroit high school; Eckert (2000:69) states that "Rather than testing hypotheses against predetermined categories, ethnography is, among other things, a search for local categories. Thus while survey fieldwork focuses on filling in a sample, ethnographic fieldwork focuses on finding out what is worth sampling".

I adopted what is called a "snowball" technique (L. Milroy and Gordon 2003:32), that is, I used the social networks of the consultants in the study to recruit more potential participants. I asked the consultants to recommend people they know who they thought might be willing to participate in my study. As mentioned by L. Milroy and Gordon (2003:32), one of the advantages of this technique is that it reduces the rate at which potential subjects decline to participate. When the researcher introduces himself or herself to the potential consultant, he or she mentions the name of the friend who recommended talking to him or her, and thus, the researcher positions himself or herself not as an outsider but as a "friend of a friend".

The primary criterion used in the selection of consultants was that they were New Mexican bilinguals born and raised in Mora County, where they were current residents. This criterion was based on the methodological requirement of delineating the boundaries of the speech community. At the same time, I used a judgment sample in the selection of consultants. The speakers chosen were stratified by age and gender. In addition, the speakers correspond to a range of occupations and also differ in their patterns of bilingualism. I describe these categories in the sections below.

2.3.2. *Age*

One factor that can play an important role in the analysis of variation in language use is a speaker's age. As pointed by Milroy and Gordon (2003:38), "age is a social variable which

allows for a fairly straightforward classification of speakers". And distinct from other variables such as economic status, age is easy to define. On the other hand, "age by itself has no explanatory value; it is only when examined in the context of its social significance as something reflecting differences in life experiences that it becomes a useful analytical construct" (Milroy and Gordon 2003:39). It is important to determine significant ways of grouping and comparing subjects by age. One way is the chronology proposed by Eckert (1997:155) based on life stages, that is, shared experiences of time, rather than a simple chronology based on "equal age spans such as decades"; this scholar mentions that "age has significance because the individual's place in society, the community, and the family changes through time" (155). A classification based on life stages considers important life span periods in an individual's life, for example the middle age of working adults in contrast with the older age of retired adults. These two stages might involve significant changes in a person's life with repercussions for their language.

The consultants are adults in the range of 30 years old to 70 years or older. The initial goal for sampling the subjects and collecting data was to have representative age groups ranging from young adults through older ones. I was following this criterion based on studies that have analyzed language use in different generations, and which have pointed out that younger speakers often lead in the use of innovative forms. On the other hand, older speakers, such as middle age adults who still take part in the workforce, tend to be more conservative due to pressures of the linguistic marketplace. In fact, they can be even more conservative than older speakers, such as retirees who no longer are active in the workforce (Eckert 1997; Labov 2001; Sankoff & Laberge 1978; Silva-Corvalán 2001; Trudgill 1988). Despite the initial goal, I did not manage to interview speakers in a younger generation (between the ages of 16 and 25). The reason for this was that in the period I observed the high school and during the screening of

subjects, I could not find consultants in this age group who were proficient bilingual speakers. This does not mean that these speakers are nonexistent, but rather there are few in the community, and I was not able to contact them. A number of studies have shown that in Southwest bilingual communities, there is a tendency in the younger generations of abandoning (or not acquiring at all) the ethnic mother tongue and shifting to English, which is the dominant, more prestigious and official language (Bills 1997; Bills and Vigil 1999; Hudson et al. 1995; Hudson-Edwards and Bills 1982). Also, there are fewer young people in town due to the economic situation, as young adults have moved to larger towns to seek work or to go to college.

The sample was thus divided according to three groups: younger adults (ages 30 to 48); middle age adults (ages 50 to 68); and older adults (age 70 and older). The three groups represent people at different stages of their lives and, as described by themselves in the recorded conversations, the age group to which they belong also reflects differences in their life experiences. Although I tried to fit a roughly equal number of subjects in each group, there is a higher representation in the older two groups (85% of the participants, 24/28). This might be related to the difficulty of finding younger proficient bilinguals in this community, mentioned above, due to shift and/or the disproportionate number of older people due to the lack of jobs in the area. The younger group, 30 to 48 years of age, is represented by 4 speakers, while the second group has 13 speakers between the ages 50 and 68, and in the third group age 70 and older, there is a total of 11 speakers.

Through these groupings I will attempt to determine the role of age, if any, in the occurrences of CS.

2.3.3. Sex

Sex, together with age, social class and ethnicity, has been a widely studied social category in sociolinguistic research. Sex is now recognized as more complex than just a biological attribute of an individual (Eckert 1998; Chambers 1992; Schilling-Estes 1999). The term sex has often been used to refer to a physiological distinction between males and females, while the term gender refers to a social and cultural construct, "a process that restricts our social roles, opportunities, and expectations" (Cheshire 2004:423).

In this study, participants are evenly distributed by sex, with 14 women and 14 men. The purpose is to observe if the speaker's sex plays a role in the types of occurrences of CS identified in the study. I will also consider whether gender is a relevant social category tied specifically to the community and to other local social categories. Conversely, it may also be the case that sex or gender might not have an effect on CS.

In summary, Table 2 indicates the distribution of the speakers by sex and age.

Table 2. Distribution of speakers by sex and age

AGE GROUP	MALE	FEMALE
30-48	3	1
50-68	7	6
70 +	4	7
Total	14	14

2.3.4. Occupation

Social class has been included as an important social variable in sociolinguistic variationist studies. Nevertheless, defining this variable can be problematic because of a lack of consent in different fields about the variables that should contribute to define social class or social hierarchy (Ash 2004). Milroy (1987:14) points out, furthermore, that the stratification by

social class derived from calculations of an index can be problematic because it may not reflect the speaker's own definition of his social identity. Relevant to the present study is her proposal that the social class variable is not useful in smaller samples of closely knit communities rooted in a particular territory and sharing a sense of belonging.

The identification of socioeconomic variables has been important in variationist studies that examined language variation in monolingual communities (Cedergren 1973; Chambers 1995; Labov 1966; Trudgill 1974), however studies of bilingual populations have based their criteria of speaker selection on characteristics such as age, sex, country of origin, and bilingual ability. For example, in her study of Spanish among immigrants in Los Angeles, California Silva-Corvalán (1994) included a stratified sample based on age, sex, and years of residency in the US, which correlated with bilingual proficiency. In their studies of Traditional New Mexican Spanish, Bills and Vigil (1999, 2008) have chosen the speakers based on three basic criteria: age, birthplace, and bilingual ability. Studies like the ones mentioned have inferred that in bilingual communities where one of the languages has the status of a minority language, variation is not associated with socioeconomic factors but rather with the extent and contexts of use of one language or the other. In my study, bilingual members of the community were sampled based on sex and age, without taking into account occupation or other considerations. Still, the recorded conversations collected information on education, occupation, income and other indicators of social status. And because of my engagement with the community, I was able to infer these categories as well, talking to people about their families and about how they regarded themselves, and also visiting their homes. Because occupation has been found to be the most direct indicator of social class (Labov 1990, 2001; Ash 2004) and since, according to Labov (1990), of extralinguistic factors this one shows the strongest correlation with linguistic

variation, I will take into consideration occupation as well as age and sex in examining possible correlations of social characteristics of speakers with their patterns of CS. The occupation of the speakers was categorized as either unskilled (secretary, business owner, rancher, help, handyman, stay home, etc.), or professional (educator, engineer, professor, government services, etc.). Table 3 lists age, education, and occupation of the speakers.

Table 3. Social Characteristics of the Speakers.

Speaker	Age	Education	Occupation
Berta (MNMC-7)	68	Vocational School	Former: Secretary Current: Artist/ Art gallery owner
Jimena (MNMC-6)	70	10th grade	Home, rancher, help, weaver
Javier (MNMC-5)	58	College	Engineer
Alicia (MNMC-8)	73	5th grade	help on health care
Felicia (MNMC-10)	82	10th grade	Post office (manual)
Fabian (MNMC-13)	70	Primary	business owner (Manual)
Uvaldo (MNMC-15)	44	Primary	Handyman
Moisés (MNMC-4)	60	College (Masters)	Professional
Moisés (MNMC-14)	60	College (Masters)	Professional
Karen (MNMC-2)	60	College	Professional
Jesús (MNMC-3)	70	College	Professional
Catalina (MNMC-9)	70	Primary	Home
Homero (MNMC-2)	59	College	Professional
Marcos (MNMC-9)	55	College	Professional
Teodoro (MNMC-16)	42	College	Forrest department
Alejandro (MNMC-15)	44	Primary School	Manual
Karina (MNMC-1)	49	Associate degree	stylist/ business owner
Alonso (MNMC-14)	60	College	Professional
Rolando (MNMC-15)	44	College	Professional
Lorena (MNMC-11)	49	Associate degree	Post Office/ Weaver

2.3.5. Level of bilingualism

Participant observation of bilingual discourse within the community and speakers' self-reporting on their abilities to speak fluent Spanish and English suggests that bilingualism is an enduring and widespread feature in the community. As stated at the outset, all speakers in the study are bilingual and regularly engage in code-switching between English and Spanish. Bilingualism was determined on the basis of the researcher's rating and the speaker's self-rating. The criterion is that participants have the ability to participate in a smooth and fluent conversation on any variety of topics using both languages. In all most cases my rating and the speaker's self-rating coincided. Table 4 lists speakers by age and language dominance.

Table 4. Language dominance of the speakers.

Speaker	Age	Language dominance
Berta (MNMC-7)	68	Spanish
Jimena (MNMC-6)	70	Spanish
Javier (MNMC-5)	58	English
Alicia (MNMC-8)	73	Spanish
Felicia (MNMC-10)	82	Spanish
Fabian (MNMC-13)	70	Spanish
Uvaldo (MNMC-15)	44	English
Moisés (MNMC-4)	60	Both
Moisés (MNMC-14)	60	Both
Karen (MNMC-2)	60	English
Jesús (MNMC-3)	70	Both
Catalina (MNMC-9)	70	English
Homero (MNMC-2)	59	Spanish
Marcos (MNMC-9)	55	Both
Teodoro (MNMC-16)	42	Spanish
Alejandro (MNMC-15)	44	Both
Karina (MNMC-1)	49	Both
Alonso (MNMC-14)	60	Both
Rolando (MNMC-15)	44	English
Lorena (MNMC-11)	49	English

Nevertheless, speakers show differences in their reported frequency and contexts of use of their two languages, as well as different linguistic attitudes. Chapter 3 will report on bilingual usage and linguistic attitudes based on information that arose naturally in the recordings.

2.4. Elicitation of naturalistic data

Our goal is to access the speakers' *vernacular*, in which the least amount of attention is paid to speech (Labov 1984; L. Milroy 1987). This raises the "observer's paradox", in which the interviewer's presence defines a situation in which the vernacular may not be used (Labov 1972). One method of minimizing this paradox is the *sociolinguistic interview* (Labov 1984), which focuses the speaker's attention on speech content rather than form, by engaging them in naturalistic conversation on topics of their choice. The sociolinguistic interview has been the proven approach to data collection in the speech community, consisting of one-on-one tape-recorded exchanges conducted in person with the objective of obtaining a range of styles,

including approximation to unreflecting speech (Labov 1972; 1984). The goal is one to two hours of speech from each speaker (1984:32) to obtain the volume and quality of data necessary for quantitative analysis (Labov 1972:72).

Obtaining naturalistic data can be particularly challenging in bilingual communities, where normative pressures may inhibit bilinguals' language use in formal situations, particularly for stigmatized features such as CS (Poplack 1993, Torres Cacoullos and Travis 2008). Participant observation is especially important in these communities so that the researcher is able to mitigate his or her role as an outsider. Thus, I followed sociolinguistic fieldwork methodology to obtain analyzable data across speakers, and at the same time, my purpose was to maintain an atmosphere of casual conversation during the recording.

Knowing the consultants beforehand helped to lessen any discomfort in participating in a recorded conversation. In my interactions with the consultants, I was aware that my status as a doctoral student or Spanish teacher could create discomfort or distrust among the consultants. To attempt to avoid this, I positioned myself as an avid learner of anything related to the community and its members, and gave the consultant the place of an expert in our interaction (Labov 1984:40). I also used my cultural, ethnic and linguistic background to be able to establish a more personal bond with the speakers and I functioned as a co-participant in the conversations I was recording, offering my own opinions and personal experiences, though not deviating from the focus of the recording, which was the consultants' casual speech. In short, the recording can be said to consist of unguided casual conversation (Labov 1972, 1984).

The resulting corpus, the Mora New Mexico Corpus (MNMC) consists of audio WAV files for a total of approximately 29 hours. The Mora database (MNMC) is comprised of 24 digitally recorded informal conversations with a total of 28 bilingual Spanish-English speakers in

Spanish and English, in individual and group sessions. Each recording session lasted anywhere from 45 minutes to two hours, but the majority of the sessions lasted one hour or longer; there are 19 individual recordings and 5 group recordings (see Table 5). In the sections below I describe in more detail the format of the recordings.

2.4.1. Individual recordings

Individual recordings or interviews usually result in the best quality of data and sound. The one-on-one interaction provided by an individual recording gives the researcher more control over the ease of the conversation, and the flow of information, bearing in mind that it is important to avoid giving the interaction an interview format because this would create a level of formality that would make it impossible to obtain casual speech (Labov 1984). In this kind of interaction it is easier for the researcher to motivate a casual conversation through topics that he or she knows will be of interest to the consultant.

Prior to arranging any recording, I met informally with participants during the initial period of making contacts in the community. This technique is useful to eliminate uneasiness in participating in the study and, later, to facilitate an informal conversation. Each recording session occurred on the date, time and place specified by the consultant. The sessions were conducted at the consultants' homes or places where members of the community get together, such as the community center or the senior day care. I would suggest the quietest locality so I could get the best sound quality possible, nevertheless on some occasions I recorded spontaneous interactions in places that were not optimal for sound quality; for these recordings I only used the portions in which no conflicting sounds interfered with the speakers' voice. Even recordings with some noise interference could be used since there were long portions of the conversation that had enough quality to be transcribed.

2.4.2. *Group recordings*

Some researchers have pointed out that changing the dynamics from one-to-one interviews to interactions of two or more people can provide better results in obtaining the most natural speech possible (Labov 1966; Wolfram and Schilling-Estes 1996). Using pairs or groups of people can help eliminate the formality or discomfort of a face-to-face interaction when the participants in a conversation do not know each other well⁶. The best optimal way to conduct group sessions is to record together members of the same family or long time friends. The personal experiences and background that the consultants share would allow recording of genuine spontaneous conversation. And, since they feel comfortable with one another, it is better to let the interaction happen mainly between them, with the researcher acting more as an observer than anything else. I recorded together a number of consultants, maintaining a passive role in the conversation most of time to not interrupt the spontaneity of the conversations. Groups usually consisted of two consultants who knew each other very well (such as husband and wife or longtime friends). Two recordings occurred with groups of three consultants. The groups consisted of family members who were in the same home at the time of recording.⁷

Although the group format can supply more casual speech due to the existing personal ties between the consultants, such recordings are generally complicated to attain and require more sophisticated equipment. Without the necessary tools, this type of interaction can result in a recording of lesser quality. For instance, an interaction of many consultants communicating at the same time can yield variable levels of distortion and the volume might not be high enough; all this would make very difficult the process of transcription and therefore a further analysis of

⁶ This not to say that is not possible to engage in a casual conversation with a stranger in everyday life, depending on the context of the interaction, that is, if both persons are sharing something in common (space, origin, background, interests, etc).

⁷ In all cases, informed consent was obtained, following UNM IRB approved procedures.

discourse. What is more, the identification of turn taking for every speaker during the transcription process might be more difficult when speakers' turns overlap.

Together with comparisons based on speaker age and sex, we will consider differences based on type of recording, individual vs. group. Table 5 summarizes the distribution of the recordings.

Table 5. Participants and recording sessions

INDIVIDUAL RECORDINGS (PSEUDONYMS)	GROUP RECORDINGS⁸ (PSEUDONYMS)
Alicia (MNMC-8)	Berta and Fabián (MNMC-13)
Berta (MNMC-7)	
Dora (MNMC-17)	
Pedro (MNMC-12)	
Javier (MNMC-5)	Homero and Karen (MNMC-2)
Jesús (MNMC-3)	
Jimena (MNMC-6)	
Felicia (MNMC-10)	
Karina (MNMC-1)	Mario, Estela and Sonia (MNMC-20)
Lorena (MNMC-11)	
Moisés (MNMC-4)	
Rosa (MNMC-18)	
Rolando (MNMC-22)	Catalina and Marcos (MNMC-9)
Flor (MNMC-21)	
Gabriela (MNMC-23)	
Fabiola (MNMC-19)	
Teodoro (MNMC-16)	Moisés y Alonso (MNMC-14)
Alejandro (MNMC-15)	
Jorge (MNMC-24)	

2.4.3. Equipment

Recordings were made on a Zoom handy recorder H2.⁹ The Zoom H2 is a digital memory-card-based recorder with two operation modes, 2-channel stereo or 4-channel, and a

⁸ Two participants in the group recordings also participated in the individual recordings.

⁹ I thank Professor Enrique Lamadrid, a well-recognized folklorist from New Mexico, for his advice on the best equipment I could use in the field to get the best quality possible sound files.

built-in microphone. The use of this light and small recorder with an integrated microphone and no extravagant look, was also effective in reducing the attention of the speaker towards the equipment and thus, reducing the observer effect

All conversations were digitally recorded in two or four channels. The recordings with just the consultant and me were recorded in a 2-channel mode, i.e., the built-in microphone has two sides making it possible to record sound coming from the back and front of the unit which is optimal for recording a conversation between two people. Besides, the range of the microphone of 90 and 120 degrees allowed positioning the recorder far from the speaker, so he or she did not have to pay attention to it. The group conversations were recorded in a 4-channel mode. In this mode the built-in microphones record the sound coming from the front panel direction and from the rear panel direction resulting in a better quality recording. Also, the use of memory cards is most favorable to record for a long period of time, since they last up to 4 hours for WAV sound files. Also, when the researcher is in the field, working with digital files has the advantage of fast transferring to the computer to avoid the loss of data.

2.4.4. Data elicitation protocols

Data gathered for this study consisted of unguided conversations, thus no questions were planned before the recording. Consultants, nevertheless, were encouraged to speak English, Spanish or both, however they felt at ease. As mentioned in previous sections, I followed techniques developed to obtain casual speech in natural settings (Labov 1972, 1984) and specifically for bilingual communities (Bills and Vigil 2008; Gonzales 1992; Poplack 1980; Silva-Corvalán 1994; Zentella 1997). Since the conversations I wanted to collect were intended to be naturalistic, a variety of everyday topics were discussed such as, friends, family, work, occupations, pastimes, sports, vacations, food, relationships, health issues, politics, religion,

daily chores, life experiences, childhood, places, celebrations and culture of New Mexico, attitudes toward English, Spanish and CS, etc. After the time spent in the community I was able to hold an informal conversation about a variety of topics that held relevance to its members and access to these topics was essential in achieving a consistent flow of conversation. Some recurring topics of conversation were: the economy, *fiestas*, the presidential election, food recipes, ghost stories, etc.

In the elicitation of data the necessary ethical and legal procedures were followed. Prior to any recording, a research proposal was submitted for review by the Institutional Review Board (IRB) of the University of New Mexico and was approved by this IRB¹⁰. Since my goal was to record casual speech, I was concerned about the potential impact of introducing written materials, such as a written consent. A written document of this nature would inhibit the spontaneity of the data, particularly in a small Spanish-speaking community in Northern New Mexico where older people are uncomfortable reading and writing and where signing one's name may be viewed as a formal action.

Following this protocol, subjects were told that I was conducting a study about a bilingual community in Northern New Mexico and that I was interested in observing life in the community and documenting how people use two languages in informal conversations. I emphasized that I wanted to record casual talks ('pláticas') between friends and made clear that my intention was not to make any judgments about how people speak. This helped the consultants to feel more comfortable about the nature of the recording. During the course of the recorded conversation, the topic of bilingualism and CS would eventually arise and it would be discussed in an informal manner. I made sure to always be respectful towards the consultants and

¹⁰ My IRB protocol was approved by The Office of Research Protections at The University of New Mexico, IRB # 08-239, and reviewed and approved by The Office of Research Protections at Penn State University, IRB # 32825.

their opinions. And, when relevant, I explained that my research was seeking to validate CS as something positive and not as a stigmatized form. I tried not to be too specific about the linguistic nature of the study and to avoid linguistic terminology and bookish lexical and grammatical choices (Labov 1984:40).

2.5. Summary

The data for the current investigation consists of recorded speech collected in Northern New Mexico in the county of Mora between January 2008 and Summer of 2008. A total of 28 bilingual Spanish-English bilinguals born and raised in Mora County who were also current residents were recorded. Though levels of bilingual ability may vary from speaker to speaker, each of the consultants were considered to be bilingual since all claimed some level of command of—and were observed to spontaneously use—both English and Spanish. Consultants were recruited through a social network technique. Speakers were sampled based on the social characteristics of sex and age, ranging from 30 to more than 70 years old. Regarding occupation, the consultants were not chosen primarily based on socioeconomic considerations, yet the recorded conversations capture information on education, occupation, income and other indicators of social status. Data was gathered through both individual and group recordings consisting of unguided casual conversation and lasting from 45 minutes to two hours.

Chapter 3. Bilingual usage and linguistic attitudes

3.1 Methods of obtaining data about usage and attitudes

The study of attitudes towards various aspects of bilingualism has been the focus of much research. Some research has centered its analysis on bilinguals' assessments of the future of the minority language, while other research has analyzed the social status languages have in particular bilingual communities (e.g., Fishman 1971; Poplack 1980; Silva-Corvalán 1994; Valdés 1981; Zentella 1997).

In bilingual communities where one language is the subordinate and minority language and the majority language carries the status of the defacto official language (as is the case in the United States, where the Constitution does not impose an official language), speakers may display certain attitudes towards bilingualism and its status in the community. The feelings or emotions that speakers display about bilingual behavior can be difficult to assess, and can result in erroneous generalizations if not properly documented. In particular, the methods used to elicit information about language usage and attitudes can result in problematic data. As Romaine (1995:288) notes, "there are a number of general problems in trying to elicit attitudes towards languages or language varieties or bilingual phenomena like code-switching". One problem with explicitly eliciting data with regard to bilinguals' attitudes and usage is the inaccuracy of the answers given by the speakers when they are asked to provide self-reports about their language use. The information obtained by direct questioning can be inaccurate because the speakers are typically not aware of this information and may not be accustomed to talking about their language use and attitudes explicitly (Fishman 1971).

The attitude questionnaire has been a direct method widely used to elicit data about specific aspects of bilingualism, such as code-switching, the appropriate domains for use of the

languages, self-reports concerning language usage patterns, and level of language proficiency (Romaine 1995; Silva-Corvalán 1994). According to Silva-Corvalán (1994:188), the advantage of the questionnaire over direct observation or non-guided interviews is that a greater number of people can be surveyed in a short period of time and answers to closed questions facilitate measurement and comparison across speakers. On the other hand, it can be misleading to elicit reactions by asking the speakers direct questions, since the researcher predefines the possible attitudes to be elicited and the particular topics on which she or he wants the speaker to comment. As mentioned by Poplack (1993:270), "the very act of asking questions is likely to provoke some answer, regardless of whether the response reflects an idea that would even have occurred to the respondent if the interview had not taken place".

Another disadvantage of administering a questionnaire in communities where this practice is unfamiliar is that it may inhibit the gathering of spontaneous speech production data. This would be the case in small Spanish-speaking communities in Northern New Mexico, where older people are uncomfortable reading and writing. Thus they may not only refuse to participate in answering a questionnaire because they might be intimidated by the unfamiliarity of the task, but asking them to do so may result in increased discomfort and detract from the recording of the conversational portion of the interview. Therefore in this study, rather than relying on a questionnaire, information about usage and attitudes was coded from the sociolinguistic interviews.

Given that the recorded conversations I collected were lengthy, a variety of everyday topics were discussed, attitudes toward English, Spanish and CS. During the course of the recorded conversation, bilingualism and CS would often eventually arise and, like the other

topics, it would be discussed in an informal manner. Several speakers expressed their opinions and ideas about language, offering a window into the use and attitudes about their languages.

From the conversations that constitute my corpus data, I extracted every overt remark that could be interpreted as reflecting the use of language and attitudes toward bilingualism, and also remarks on topics related to ethnic identity and cultural practice. Then, I conducted a content analysis, grouping relevant remarks into broader categories about language use and attitudes. Given that I did not predefine any categories about language use or attitudes to be elicited during the collection of my data, and since these topics nevertheless arose during the conversations with the speakers; I created a 'virtual' questionnaire based on the content analysis of overt remarks (Poplack et al. 2006). The questions that emerged are related to language use, ethnic identity, language attitudes, and emotions toward the languages spoken in the community. The Virtual Questionnaire is displayed in Figure 2. Even though not all speakers provided an answer to each 'virtual' question, this method has the advantage of showing the speakers' genuine and unbiased 'views' about language usage and attitudes.

Not all speakers in the Mora database provided overt remarks about language use or attitudes. Thus, the content analysis is based on the comments addressing language use and attitudes found in the recordings of 16 of the 28 speakers.

Figure 2. Virtual Questionnaire

Questionario de uso y actitudes de la lengua (Language use and attitudes questionnaire)

Nombre (name):

Uso de la lengua (language use)

¿Dónde usa el español? (Where do you use Spanish?)

¿Dónde usa el inglés? (Where do you use English?)

¿Cómo aprendió inglés? (How did you learn English?)

¿Dónde aprendió inglés? (Where did you learn English?)

¿Qué lengua se hablaba en casa? (Which language did you speak at home?)

Interlocutores (interlocutors)

	Español (Spanish)	Inglés (English)	Ambos (Both)	Comentario (comment)
Esposo (Husband)	_____	_____	_____	_____
Hermanos (Siblings)	_____	_____	_____	_____
Hijos (Children)	_____	_____	_____	_____
Padres (Parents)	_____	_____	_____	_____
Abuelos (Grandparents)	_____	_____	_____	_____
Tíos (aunts/uncles)	_____	_____	_____	_____
Familia (family) (nietos) (grandchildren)	_____	_____	_____	_____

Frecuencia de uso de la lengua (frequency of language use)

¿Qué tan frecuente usa inglés y español? (How frequently do you use English and Spanish?)

Preferencia (preference)

¿Qué lengua prefiere hablar o se siente más cómodo hablando?

(Which language do you prefer to speak or do you feel more comfortable speaking?)

Autoevaluación y evaluación del entrevistador acerca de la competencia (speaker's self evaluation and interviewer evaluation about language competence):

Identidad étnica (Ethnic identity)

Denominación de la comunidad y la lengua (Evaluation of the community and the language).

Experiencias en la escuela o en lugares públicos relativas al uso de la lengua
(Life experiences related to the use of language at school or at public places)

Actitudes de uso de la lengua (language attitudes)

Actitudes hacia el español de NM (Attitudes towards NM Spanish)

Actitudes hacia el español (Attitudes towards Spanish)

Actitudes hacia el Bilingüismo (Attitudes towards bilingualism)

Actitudes hacia la lengua en general (Attitudes towards language)

Actitudes hacia los americanos u otros hispanos
(Attitudes towards americans or hispanics)

Visión del futuro del español de NM
(Opinion about the future of NM Spanish)

Comentarios acerca de generaciones más jóvenes
(Comments about the younger generations)

**Observaciones del entrevistador acerca de la persona o acerca de la entrevista
(Interviewer's Observations about the interviewee or the interview)**

3.2. Language use.

The analysis of bilinguals' language use may be important in accounting for the occurrence of certain types of switches. The question is whether language use will be a predictor of CS patterns, specifically, the production of CS at Intonation Unit (IU) boundaries or within IUs, as I will analyze in chapter 4. By bilinguals' language use I mean speakers' acquisition of their two languages and current choice of language according to domain and interlocutor. Using the 'virtual' questionnaire, I grouped overt remarks about language use from the recordings on the following topics: childhood home language, current home language, places where Spanish and English are spoken, how and where English was learned, language used with family members, frequency of Spanish and English language use, and language preference.

Table 6 displays information about the speakers' acquisition of Spanish and English by age groups. The speakers reported learning Spanish as children at home (or at their grandparents' home), while English, on the other hand, was acquired differently. Some speakers reported not learning English until they started school, while others reported acquiring English even later in life.

Table 6. Acquisition of Spanish and English by age groups

	Younger adults	Middle age adults	Older adults	
	Ages 30-48	Ages 50-68	Ages 70 +	Total
N	3	8	5	16
<u>Spanish</u>				
Home language	2	7	5	14
No Information	-	1	-	1
Total	2	8	5	15
<u>English</u>				
Home language	-	-	-	-
School	1	6	3	10
Adult life	-	-	1	1
No Information	1	2	1	4
Total	2	8	5	15
<u>Both</u>				
Home and school	1	-	-	1
No Information	-	-	-	-
Total	1	-	-	1

Table 6 shows that the fifteen speakers providing an answer on the acquisition of Spanish all mentioned acquiring the language at home. A dash is assigned to a cell when the use of Spanish or English with particular (groups of) interlocutors was not indicated by the speaker during the conversation. In contrast, 10 speakers out of the eleven providing responses learned English at school. One speaker mentioned learning English at an even later stage (“adult life”) and only one speaker reported learning both languages at home and at school. This represents an important finding about the acquisition of the bilinguals' languages. With the exception of the one and only young adult speaker who also learned English at home, all speakers mentioned Spanish as the home language of their childhood. This finding can be associated with the age of the speakers since more than eighty percent of the speakers were older than fifty years. These results thus accord with the general observation in other studies that older generations of New

Mexicans acquired Spanish as the home language while younger generations¹¹ have been found to be shifting to English and to be on the verge of losing Spanish as the mother tongue (cf. Bills 1997; Bills and Vigil 1999; Hudson et al. 1995; Hudson-Edwards and Bills 1982).

Further questions addressed (based on the virtual questionnaire) were related to the following topics: domains where the speakers use Spanish and English, language use with family members, frequency of language use, and language preference. Table 7 displays the respondents' Spanish and English use in domains such as the home, the community, the family setting, the job site, the school, etc.

Table 7. Spanish and English use in different domains

	Younger adults Ages 30-48	Middle age adults Ages 50-68	Older adults Ages 70 +	Total
Spanish domain				
At home	2	7	4	13
Family settings	2	5	-	7
In the community	1	2	1	4
No information	-	-	1	1
Cumulative responses from 16 speakers	5	14	6	25
English domain				
At work	3	4	1	8
At school	3	-	1	4
Family settings	2	-	1	3
In the community	-	2	1	3
No information	-	3	1	4
Cumulative responses from 16 speakers	8	9	4	22

Table 7 reveals the domains of use of each language by the speakers who commented on the issue. Regarding the use of Spanish, the results show that its use is more frequent at home, in

¹¹ As mentioned in chapter 2, speakers in a younger generation (16-25 years old) were not included in the study due to the difficulty of finding proficient bilingual speakers in this age range and belonging to the community under study.

the community and in the family setting. Thirteen speakers (81% (13/16) of respondents) in all the age groups mentioned that they use Spanish at home, which represents 52% (13/25) of all cumulative responses to the virtual question '¿dónde usa el español?'. This was followed by the use of Spanish in the family setting, which accounted for 28% (7/25). When the speakers mentioned the family setting, they referred to the use of the language when they find themselves in a family setting, different from the use of the language at home. Finally, use in the community made up 16% (4/25) of responses. These data show that the use of Spanish is more frequent in intimate domains such as the home, the family setting and the community.

Regarding the use of English, it is more prevalent at work, at school, in family settings, and in the community. Seven speakers in the three age groups mentioned speaking English at work, while four (three of them among the seven speakers commenting on the use of English at home) mentioned using English at school, and four (also three of the four belonging to the seven speakers who use English at home) talked about the use of English in a family setting. Also, the community domain ('uso con la gente') was mentioned in the use of English by three speakers (two of them belonging to the seven speakers using English at home, and one of them belonging to the four speakers who mentioned using English in a family setting). These data indicate that the use of English is more common in formal settings such as at work or school, but speakers also reported using English in intimate contexts such as the family setting and the community.

The data provide details about the domains (e.g., work, family) in which each language was used in the community of Mora. Domains are important in the analysis of language choice in bilingual settings because they may reveal how social relationships and outcomes affect language choice. For example, research on language behavior has established different kinds of multilingual settings that benefit from distinct analyses in terms of different domains of language

use, whether defined intuitively, theoretically, or empirically. Fishman (1965/2000, 1966) identified typical clusters of settings and relationships influencing language choice in bilinguals, or domains: family, friendship, employment, education, government, and religion. The domains of language use established in the present analysis were defined based on the speakers' comments rather than pre-established categories. In keeping with Fishman's settings, language use in the home, the family and the community was classified in this study as belonging to the intimate domain. Because of the closeness of the people living in Mora and their tight-knit social structures, the community is included as belonging to the intimate domain (Gonzales 1999). On the other hand, language use in settings such as work or school was classified as belonging to a formal setting.

With the concept of domains in mind, it is important to point out that the use by more respondents of English in more formal domains such as work or school may reflect its status as the dominant and more prestigious language, as the use of Spanish has been relegated to more intimate domains such as the home, because of its subordinate status (Bills 1997; Bills & Vigil 2008; Hudson et al. 1995). However, the data in this community illustrate that the use of English has expanded its domains to intimate contexts as well (Table 7, above), and this may be related to the interlocutors with whom the speakers use each of the languages (Table 9, below).

Following on the use of English, overt remarks about how English was learned were recurrent in the content analysis of the data. Table 8 shows there were 15 comments in the three age groups.

Table 8. *How English was learned*

	Younger adults Ages 30-48	Middle age adults Ages 50-68	Older adults Ages 70 +	Total
How English was learned				
Forced at School	-	3	1	4
Taught at School	2	2	3	7
In the community	-	-	1	1
Learned outside the community	-	2	1	3
Total	2	7	6	15

Considering that all 16 speakers mentioned learning Spanish at home, as described in Table 6 above, the interviewees' comments on how they learned English are quite different. These remarks were relatively frequent, with 15 people volunteering information. Four speakers, three in the middle age group and one in the older adults group, reported they were forced to learn English at school. Seven speakers, two in the younger adults group, two in the middle age group, and three in the older adults group, commented that English was taught in school. One speaker in the older adults group mentioned that she learned English with the people in the community. And three speakers, two in the middle age group and one in the older adults group, said that English was learned when they had to leave the community¹². Table 9 shows the interviewees' language use with different interlocutors.

¹² During the recorded conversations, the speakers mentioned leaving the community for a period of time when they were young in order to go to work or to study.

Table 9. Language use with different interlocutors

	Younger adults Ages 30-48	Middle age adults Ages 50-68	Older adults Ages 70 +	Total (N=16)
Use of Spanish with interlocutor				
Spouse	1	5	2	8
Siblings	-	-	-	-
Children	2	4	2	8
Parents	3	6	2	11
Grandparents	1	3	1	5
Aunts/Uncles	-	2	-	2
Family members (nephews, nieces, grandchildren)	1	2	2	5
Use of English with interlocutor				
Spouse	3	4	-	7
Siblings	1	-	-	1
Children	2	3	-	5
Parents	1	1	1	3
Grandparents	-	-	-	-
Aunts/Uncles	-	-	-	-
Family members (nephews, nieces, grandchildren)	1	4	2	7
Use of both languages with interlocutor				
Spouse	-	4	-	4
Siblings	-	-	-	-
Children	-	3	1	4
Parents	-	-	-	-
Grandparents	-	-	-	-
Aunts/Uncles	-	-	-	-
Family members (nephews, nieces, grandchildren)	-	-	-	-

The use of Spanish and English with different interlocutors shows an interesting pattern depending on whom they speak to, and to which age group the speakers belong. The use of Spanish by the interviewees is more prevalent with their parents, spouses and children. The use of English by the interviewees is more dominant with their spouses, other family members (nephews and nieces, grandchildren), and children. The data show that the interviewees' use of one language or the other with a specific interlocutor varies through the age groups. For example, speakers in the middle age group use Spanish more often with their parents, spouses and children, while among the younger adults only one of three mentions using Spanish with their spouse. In the older adult groups, both speakers use Spanish equally with their spouses,

children and parents. On the other hand, the use of English in the middle age group is more prevalent with family members such as children, grandchildren, nieces and nephews, and also with their spouses. In the younger adults group the result is similar: the use of English is more common with their spouses (3 of 3 speakers) and children (2 of 3 speakers). Speakers in the older adult group did not provide enough comments on the use of English but three interviewees mentioned that they speak English with family members and their children.

To sum up, the results display in Table 9 show that Spanish is more commonly used with the older generations such as with parents and spouses, and somewhat less commonly used with children, possibly in an effort to maintain New Mexican Spanish. This can be observed in the data, considering that five of the eight interviewees who mentioned speaking Spanish to their children are the same ones that mentioned speaking English to them as well. With regard to the use of English, this is more widely used with younger family members (grandchildren and nephews), children, possibly as a consequence of the loss of Spanish among the younger generations (see chapter 2), and spouses. It is important to emphasize that the use of Spanish and English with spouses was frequently mentioned by the speakers, and the data is interesting regarding this interlocutor: eight speakers referred to using Spanish with their spouses and seven speakers also mentioned speaking English with their spouses. Looking at language use by interlocutors in each age group, the only speaker in the younger adults group who mentioned using Spanish with her spouse, also speaks English with him, and the other two speakers who reported speaking English with their spouses are married to English monolinguals. From five speakers in the middle age adults group who mentioned speaking Spanish with their spouses, four also said they speak English with their spouses. The only one who spoke only Spanish with her spouse stated that she lacks fluency in English. In the older adults group, two speakers said

they speak Spanish with their spouses and mentioned that they speak only Spanish with their spouses; no one in the older group mentioned speaking English to a spouse. This can be associated with the age of the speakers (70 years or older), who are part of the generation which has maintained NM Spanish (c.f. Bills and Vigil 2008).

The interviewees also mentioned the use of both languages with some interlocutors. As the data in Table 8 indicate, four speakers in the middle age adults group mentioned they speak both languages, Spanish and English, with their spouses. The speakers' comments referred to the use of one or the other, given that these same speakers mentioned using Spanish and English with their spouses as was described above. Three interviewees in this same group also mentioned using both languages with their children, again the comments referred to the use of one language or the other, given the fact that these same three speakers noted using Spanish with their children and two of them also commented using English with their children, as described above. Just one speaker in the older adults group commented that she speaks a "mix of both" with her children.

With regard to questions about frequency of use of Spanish and English and language preferences, there were fewer responses to these 'virtual' questions. That is, these issues simply did not arise as often. Three interviewees commented on how frequently they use Spanish and English, two of them in the older adults group mentioned they use Spanish "in their everyday life", and one speaker in the younger adults group mentioned that she speaks English more frequently. Concerning language preference toward Spanish or English, there were 4 responses. One interviewee in the younger adults group said that she feels more comfortable speaking English, while another speaker in the middle age group mentioned that she feels more comfortable speaking Spanish because of a better understanding of this language. Two speakers in the older adult age group commented that they prefer to speak Spanish.

In the course of the content analysis of the recordings, I also looked for any overt remarks about the speakers' self-evaluation about their language ability. Just one speaker in the younger adults group expressed the following self-evaluatory comment: *'I don't think of myself as a fluent Spanish speaker at all. Me da vergüenza que no hablo tan bonito español como la gente de aquí de Mora'* (I feel ashamed that I don't speak Spanish as beautiful as the people here in Mora).

In summary, the data described provide details about language use in the bilingual community of Mora, NM. Through this description certain patterns regarding the bilinguals' language acquisition and use according to domain and interlocutor can be inferred. First, Spanish is the language acquired at home in generations of speakers ranging from 30 to 70 years old, while English was learned at school or later in life for these speakers; in contrast, Spanish is not acquired at home by the younger generations, as part of the shift to English in these generations. Second, the analysis of domains where speakers use Spanish and English suggests that Spanish is used more frequently in intimate domains, while English is used in more formal domains but has also expanded its use to intimate contexts such as the home and the community. And third, information about the use of Spanish and English with different interlocutors suggests some patterns: Spanish is used with interlocutors from older generations, such as parents and spouses, and somewhat less with interlocutors in the younger generation, such as children, while English is more prevalent with younger interlocutors such as grandchildren, nephews and nieces, and children. This asymmetry reflects the shift to English monolingualism in the younger generations, as we will see below in the section on the future of New Mexican Spanish. Frequency of language use, language preferences, and speakers' self-evaluations of their language also arose in the recordings, although there were far fewer comments regarding these issues, such that I have not included them in the above discussion.

3.3. Language attitudes.

As mentioned above, the use of direct questioning for the elicitation of language attitudes has been criticized. Poplack (1993:270) argues that "by administering a questionnaire, the researcher not only predefines the possible attitudes that can be elicited (for closed questionnaires), but also the particular areas in which the respondent is permitted to express them (even in response to open ended questions)". To avoid predefining the relevant issues or dimensions of the attitudes in this community, I used the 'virtual' questionnaire to group overt remarks about language attitudes and ethnic identity supplied by the speakers during the recorded casual conversations. This kind of analysis of language attitudes allows us to observe the speakers' 'genuine' feelings towards language or about bilingual phenomena, such as CS, that take place in their community. As Romaine (1990:169) mentions, "Differing attitudes towards bilingualism and the role it plays in establishing a speaker's identity may thus play a part in determining the amount and type of code-switching found in a given case". In the following sections, I analyze answers to the 'virtual' questionnaire that may reflect linguistic attitudes and ideas about ethnic identity that in turn may shed light on CS functions in the community.

In the course of the recordings, the participants spontaneously raised topics related to attitudes towards bilingualism, ethnic identity, and cultural practice. I grouped these into categories. The most common topics of discussion relevant to the assessment of attitudes were those of ethnic identity, language attitudes, and the speaker's opinions about the future of NM Spanish, both in the state and in the community. As in the previous section, the overt remarks about language attitudes that I will analyze next were provided by 16 speakers. In what follows I review the issues about identity and the linguistic attitudes most mentioned by the speakers.

3.3.1 Identity

One of the issues mentioned by the speakers is related to identity, that is, positive or negative feelings towards New Mexican culture and ethnicity. Ethnic identity is measured based on the participants' positive or negative feeling about their identification as New Mexicans, their ideas about belonging to the Mora community, and their experiences in relation to speaking Spanish, English or both, at school and in other public places.

Table 10. Ethnic identity

Issue	# of speakers commenting on the issue		%	
	Positive	Negative	Positive	Negative
Ethnic Identity	8	0	100%	0%
Ideas about language in the community	10	3	70%	30%
Experiences about speaking Spanish and English at school or in public places	10	6	40%	60%

As Table 10 shows, all of the speakers who commented on the issue of ethnic identity (8 of 16) revealed a positive identification as New Mexicans. The participants commented on the issue, identifying themselves as New Mexicans based on their practice of speaking Spanish, while simultaneously separating themselves from being Anglo, as in the following excerpts in (7) and (8). Similarly, in (9) the speaker mentions how even being white, people accept him (the speaker) as part of their community for speaking NM Spanish.

(7) *'Cuando estamos en Mora sólo se habla español. Cuando uno hablaba español, se identificaba como mexicano'¹³. Pero si estaba hablando en inglés, entonces decía que era Spanish-American, cuando hablaban inglés. Y no sé por qué'. (MNMC-12)¹⁴*

(8) *'Ellos (los anglos) te sacaban de tu cultura. Decían que debías aprender inglés para progresar. El idiomia (Español) pa' mi es una de las cosas más ricas'. (MNMC-14)*

¹³ The term *mexicano* is used in Northern New Mexico to refer to New Mexican origin or the Spanish spoken in New Mexico (Bills 1997; Bills and Vigil 2008).

¹⁴ Codes in parentheses following examples indicate corpus recording number and file number. Cases of code-switching are underlined to the end of the prosodic unit.

- (9) *'Hispanics think that if you're white and you know how to speak Spanish, they're like, really accepting you for speaking Spanish, they're accepting some people (like him) for that'. (MNMC-22)*

In the same token, issues of identity include the interviewees' ideas about belonging to the Mora community. As displayed in Table 10 above, seven out of ten participants commenting on this issue expressed a positive view of language in the community, mentioning how relationships in the community have been built through the native language, as exemplified in (10) and (11).

- (10) *'Las relaciones en la comunidad siempre eran en español, no era en inglés. Cada comunidad tiene su modo de establecer comunidad'. (MNMC-12)*
- (11) *'Tenemos que usar el idioma nuestro pero también el inglés que hemos aprendido de la cultura dominante para abrir esas puertas. En Mora somos unos de los últimos pa' ser conquistados completamente'. (MNMC-14)*

In contrast, three out of ten participants expressed a negative judgment about people in the community. The comment in (12) illustrates this negative feeling:

- (12) *'Hay mucha gente muy illiterate aquí en Mora desde antes y ahora. Todo el norte de Nuevo México estaba muy atrasado hasta que entraron los protestantes y educaron a todos, los mejoraron'. (MNMC-13)*

Another issue that is relevant to the relation between language and identity is the bilinguals' experiences in speaking Spanish and English at school or other public places. This issue correlates with identity because it shows some of the reasons why the community members chose to maintain Spanish or shift to English dominance. Bills (1997:169) comments on the myth that "English is good and Spanish is not so good" found among Hispanics:

"In the Southwest, as well as in the United States more generally, the Spanish language is widely considered to occupy a social position vis-a-vis English that is decidedly inferior, if not downright depraved. The socioeconomic support for this myth, perceptible on a daily basis in the material trappings and social status of users of the two languages, is powerful and convincing to the young and impressionable".

It is useful to remind ourselves of some of the historical background of the linguistic situation of Spanish and English in the Southwest, and specifically in New Mexico, in order to appreciate the participants' experiences in relation to speaking their languages outside the home. In the process of occupation after the United States conquest of 1848, the Hispanic population was subjugated and relegated to a subordinate status; and this was also the case with their language, Spanish (Sánchez 1983; Travis and Villa 2011). By the end of the nineteenth century, complete economic, social, and political subjugation of the Spanish-speaking population had occurred and the establishment of American authority was followed by the imposition of the English language (Bills 1997). The imposition of English on the native population in the Southwest was an important mission of the Anglo colonizers, and education was seen as the means to accomplish this domination (Gonzales 1999). With the establishment of English as the language of instruction in the school system, use of Spanish was penalized at school, and this was done through punishment for many generations.

Ten of the bilinguals in the Mora corpus narrated negative experiences provoked by speaking Spanish at school. For example, two of the speakers in the older adults group said that they were punished at school for speaking Spanish, as illustrated in examples (13) and (14).

(13) *'They didn't let us talk in Spanish. Tenías que hablar en inglés. They would send me to the corner for talking Spanish. It wasn't good'.* (MNMC-9)

(14) *'Cuando estaban chiquitos no los dejaban hablar español, solamente inglés. Porque era country americano querían que hablaras puro inglés'.* (MNMC-13)

Nevertheless, one speaker in the older adults group implied that his experience speaking Spanish at school was not a bad one (15).

(15) *'En la escuela se enseñaba en inglés, aprender el español era voluntario. Todos hablaban en español y cuando los niños jugaban hablaban en inglés'.* (MNMC-12)

Similarly, two speakers in the younger adults group talked about their positive experiences when they went to school in Mora, as seen in examples (16) and (17).

- (16) *'When I went to school my classroom was multicultural, Anglos, Hispanics and Blacks. And that was my classroom. Yo- yo crecí con.. without those people, and our primary language was English, that's all we spoke'.* (MNMC-22)
- (17) *'A nosotros no nos castigaron en la escuela por hablar español (a su generación). En generaciones anteriores les pegaban a los niños'.* (MNMC-21)

3.3.2 Attitudes towards language

Some speakers revealed attitudes towards the languages spoken in the community and in the state of New Mexico. The issue of attitudes towards NM Spanish was the most common. Twelve speakers commented on this issue, the majority of whom (N=9) conveyed positive attitudes toward the local variety, while three showed a negative attitude towards this variety (see Table 11).

Table 11. Attitudes towards language

Attitudes		Positive	%	Negative	%
Attitudes towards NM Spanish	12	9	75%	3	25%
Attitudes towards Mexican Spanish	6	5	83%	1	17%
Attitudes towards other varieties of Spanish or Spanish in general	6	4	67%	3	33%

The positive attitudes showed by the majority of the speakers lie in the idea that NM Spanish has a personal connection to their heritage and culture, as speakers put it in (18) and (19).

- (18) *'... yo personalmente estoy conectado al español y la cultura de Nuevo México. Eso fue mucho de lo cual nosotros nos rebelamos no? (hablando de la explotación de los americanos hacia ellos). Y de que tenemos que liberarnos de todo eso, so entonces, de usar el idioma nuestro'.* (MNMC-14)

- (19) *'Hay mucha gente aquí en Mora que están bien fluent in Spanish, y pueden hablar tan bonito, it makes me sad that I'm not like that'. (MNMC-22)*

The consultants who did not value NM Spanish positively indicated that it is not well spoken as in (20), and that people in the community who speak NM Spanish do it in an improper way, as expressed by one speaker in (21). *Mocho* is an adjective used to qualify the spoken language as "incomplete" or "bad".

- (20) *'Aquí hablamos muy mal'. (MNMC-7)*

- (21) *'Aquí todo lo que dicen es 'mocho'. (MNMC-11)*

Another issue relevant to attitudes towards language pertains to the perceptions speakers have about Mexican Spanish. Five out of six speakers that commented on this matter conveyed a positive attitude towards Mexican Spanish (see Table 11). For example, one speaker commented that in Mexico Spanish is better spoken than in New Mexico (22), and another commented that the accent is pleasant (23).

- (22) *'En México hablan mejor. Sólo español'. (MNMC-13)*

- (23) *'Me gusta escucharlo (español de México) y trato de entenderlo. Hablan con sonsonete'¹⁵. (MNMC-8)*

One speaker commented negatively regarding Mexican Spanish. In her opinion, Mexican Spanish, the same as NM Spanish, is not well spoken, as she expressed it in (24).

- (24) *'... también ahora me he dado cuenta que en México, también hay muchas palabras allá que van cambiando. Cuando viene mi tío de México, las platica (las palabras) pero él también habla mocho ahora porque tie- no hay palabras en in- español como las que son de inglés'. (MNMC-11)*

Judgments about which language is considered to be more "proper" might be related to the idea that some people have about the correct forms of Spanish. People often see standard Spanish, as the one from Mexico or Spain, as the correct form of speaking. Thus, Bills

¹⁵ *Sonsonete* refers to the pronunciation of the language.

(1997:169) mentions the myth that New Mexicans have about their Spanish: "Standard Spanish is good and our Spanish is bad":

"Although the *Manitos*¹⁶ tend to have a negative attitude toward the Spanish language in general, they have ambivalent feelings about their own variety. On one level, Spanish may be the warm and comforting language of the home (or remembered home). Yet on a more superficial and more sensitive level, the Spanish speakers of New Mexico are often told, whether by outsiders or by more proficient vernacular speakers within the community, that their Spanish is deficient. Such observations typically come from outsiders imbued with a strong Spanish prescriptivism tradition who see New Mexican Spanish as corrupt and degenerate".

Native speakers of Mexican Spanish often have advanced skills in the language and access to standard Spanish and this can feed the idea that Mexican Spanish is the "proper" form of speaking and therefore this variety is "good" and better than other varieties of Spanish. And those judgments are increased because speakers of NM Spanish are often told that their Spanish is "inferior" or "deficient" due to the minority status of NM Spanish.

In relation to the attitudes of the speakers towards other varieties of Spanish besides NM Spanish or Mexican Spanish, in remarks on the Spanish language in general, four out of six speakers expressed a positive attitude (Table 11). The attitudes classified as negative have to do with a negative stance of other Spanish speakers toward the local variety. For example, one speaker referred to his experience being corrected on the way he said words in Spanish by a native speaker of Venezuelan Spanish (25). Another speaker commented on how people can be prescriptive and judgmental about other varieties of Spanish, and they think that Spanish from Spain is the correct variety, as noted by the speaker in (26).

(25) '*... la mujer que de Venezuela que me dijo: ¿oye en qué andas? Pos una troca. ¿Y qué es una troca? Se dice camioneta. Pus no sabía you know*'. (MNMC-22)

¹⁶ *Manitos* is a term adopted to refer to the descendants of pretwentieth-century settlers of northern New Mexico and southern Colorado that speak the Spanish variety of this area (Bills 1997).

- (26) *'Yo nunca había oído esa palabra y yo le dijía: no esa es de la biblia de España (refiriéndose al diccionario). So que no me hablen de eso. Pero no. La gente piensa que ese (el de España) es el español correcto'. (MNMC-9)*

3.3.3 Attitudes toward bilingualism or language mixing

With respect to ideas about bilingualism or language mixing, the majority (7 of 10) of the speakers who commented on the issue (N=10), valued it as a something good, while three speakers had a negative judgment. The ones who considered bilingualism a positive attribute mentioned that it is a unique quality that should be put into practice by everybody in the community, as one speaker commented in (27).

- (27) *'Yo les aconsejo a mis nietos que practiquen los dos porque es mejor que sepan los dos que un sólo idioma. Valen mucho más si saben los dos idiomas'. (MNMC-8)*

Comments about language mixing or CS were also found in the conversations. CS was said to be present when speaking two languages and it was also part of the way people talk in the community, as noted by one bilingual speaker (28).

- (28) *'I don't know- sometimes I barely think if I bilingual or not porque .. hay en veces cuando watcho el TV, watcho las estaciones españoles, y los españoles que hablan eso y es tan rápido que no puedo ni que dicen que dicen y.. no? Y luego hay unas palabras que no sé. Over here we have to be able to switch between both languages de voladotas. Sin pensar you know. Aquí en América tienes que estar bilingual'. (MNMC-22)*

Three speakers did not see CS as something positive; they thought that people mix languages because they don't know how to speak one of the languages well or properly, as told by these two interviewees in (29) and (30).

- (29) *'... hablan (las personas) así porque cuando no saben decir algo en español lo dicen en inglés'. (MNMC-7)*
- (30) *'En el pueblo se habla más 'Spanglish'. Yo me doy cuenta que muchas palabras que hay en inglés no hay en español'. (MNMC-11)*

3.3.4 Attitudes towards Anglos

During the sociolinguistic interview participants expressed attitudes toward Anglos. The feelings toward Anglos expressed by the participants might be related to the socio-historical context of the Anglo conquest and occupation of the Southwest since 1848. As mentioned by Gonzales (1999:14), "the proliferation of the Anglo population left the Spanish-speaking people vulnerable to an intrusive language and culture and by the end of the nineteenth century, complete economic, social, and political subjugation had occurred". Evidently, the attitudes towards Anglos openly expressed by some of the speakers are rooted in a long history of dominance of the Hispano population and their struggles in a society where their culture has been subjugated for centuries.

Seven out of the sixteen bilinguals that were selected for the content analysis conveyed attitudes towards Anglos. Four of the speakers expressed negative feelings related to the Anglo dominance over Hispanos, as commented by the speakers in (31) to (33).

- (31) *'Ellos (los americanos) querían explotarnos. Lo que querían era sacarte de donde estabas tú para debilitarte y que aprendieras el inglés pa' poder usarte más fácil, to exploit you as cheap labor. But as English-speaking cheap labor. You know what I'm saying'?* (MNMC-14)
- (32) *'They see somebody that is like .. como los indios you know, dark skin. And they think different, you know what I mean? That's what I noticed from people down there from South of the United States. They can be como racista in a way'.* (MNMC-22)
- (33) *'Los gringos tomaron este country. Este país estuvo bajo España y luego bajo México y ahora bajo Estados Unidos y luego yo no sé, bajo los negros o africanos, yo no sé. Si ganan los negros vamos a estar bajo África. Los gabachos creen que NM es parte de México. Los americanos les quitaron las tierras a ellos, los herederos. Los americanos son una gente muy agresivos, ponen la educación encima de todo y es lo que los ha hecho tan grandes, los gringos, la raza sajón. El gringo es muy greedy. El hispano no, nos criamos diferente, nomás a sobrevivir, agarra tu lugarcito y siembra y vive. No semos agresivos'.* (MNMC-13)

On the other hand, three speakers expressed positive attitudes towards Anglos. Among these, one expressed feelings towards the mix between races (34), while another speaker evaluated positively some Americans' willingness to learn Spanish (35), and one expressed a neutral comment about labels given to them by Anglos (36).

- (34) *'Ya cuando vinieron los españoles se revolvió todo. Ya ahora se mezclan todos con todos... mira ahora las mexicanas con gringos, como la ésta... Todos mixteados. Ya no te fijas... yo no soy prejuicé, a mi no importa que sean, siendo gente...'* (MNMC-7)
- (35) *'Muchos gringos aprenden, quieren aprender español. Y los plebes no quieren'*. (MNMC-6)
- (36) *'Pa' nosotros los de habla inglés eran americanos. Los de habla am- americana que llegaron aquí, ellos preferían que nosotros nos identificáramos como Spanish-Americans'*. (MNMC-12)

3.4 The fate of New Mexican Spanish

Different studies have attested the loss of Spanish and as a consequence, the shift to English in Hispano communities (Bills 1997; Bills and Vigil 1999; Hudson et al. 1995; Hudson-Edwards and Bills 1982; Pease-Alvarez 1993; Silva-Corvalán 1994). According to Bills (1997:155), the fast shift to English and the abandonment of Spanish in the Southwest have accelerated since the last half of the twentieth century, rivaling the loss of the ethnic mother tongue by almost any ethnic group in documented U.S. history¹⁷. The case of NM Spanish is no exception in this process, as the dominance of English has resulted in the loss of Spanish or the loss of skills in Spanish. During the second half of the twentieth century and the first decade of this century, Spanish became less useful than English, which was associated with economic, political, and cultural power (Bills and Vigil 2008). English use expanded in all domains of

¹⁷ It should be noted that prominence of an ethnic group is not, of course, an indication of language maintenance. Even with the growing numbers of the Hispanic population in the Southwest due to the immigration flow in the last decades, as demonstrated in Hudson, Bills, and Hernandez Chavez (1995), relative density of speakers in a community is not necessarily a valid measure of language maintenance.

society, relegating the use of Spanish to intimate contexts such as the home, the village, or neighborhood. Moreover, in the last decades English has penetrated even these intimate contexts, resulting in the younger generations transitioning to English monolingualism (see section 3.2).

3.4.1 *The future of NM Spanish*

Spanish in the Southwest faces a bleak prospect. This is the case for the dialect of NM Spanish, which, as suggested by the substantial research of Bills and Vigil (1999a, 1999b, 1999c, 2000, 2008), is dying out. The imminent death of NM Spanish is the result of two main social forces, contact with English as the result of the U.S. conquest of the Southwest since the end of the nineteenth century, on the one hand, and, on the other, contact with modern Mexican Spanish, due to the accelerated immigration from Mexico to the U.S. mainly in the second half of the twentieth century (Bills and Vigil 2008:240). As observed by these researchers, as well as by the native speakers of this variety interviewed for the present study, the future of NM Spanish is not promising. The prediction is that, maybe within as little as one or two generations¹⁸, this unique variety will be lost to English or substituted by Mexican Spanish.

The seven interviewees who commented on the fate of NM Spanish have witnessed for some time the loss of their language and culture, and they show their regret, as can be seen in the following comments. One speaker in (37) mentioned how Spanish is being lost and consequently everything that is part of the people's heritage is being forgotten little by little.

(37) *'Se está perdiendo. Se está olvidando junto con un sistema cultural, no? Porque no es nomás el idioma sino las tradiciones, las creencias, las memorias, las enseñanzas; todo lo que es un pueblo, lo que constituye la gente, desgraciadamente se está perdiendo, se está quebrantando poco a poco. Y una de las cosas que nos avisa de esto es la pérdida y el olvido de la idioma'. (MNMC-14)*

¹⁸ The consequences of the loss of Spanish are clear in my study; this was observed in the difficulty of finding speakers to be interviewed in a younger generation (between the ages of 16 and 25) who were proficient bilinguals.

Another speaker pointed out the importance of teaching Spanish to the younger generations because it will be lost if not taught, as commented in (38), while another speaker mentioned that the younger generations do not get any support to learn Spanish, therefore they must be taught Spanish to prevent its loss (39), and yet another speaker stated that there are no teachers who can teach Spanish to the children (40).

(38) *'Es importante enseñar el español nuevomexicano, porque se pierde si no se enseña. They're trying (young people) but it's still not the same as what it was'.* (MNMC-9)

(39) *'Los niños no tienen apoyo para aprender el español, necesitan continuar enseñándoles en español para que no se pierda'.* (MNMC-21)

(40) *'No hay maestros que les hablen español la los niños'.* (MNMC-6)

3.4.2 NM Spanish in the next generations

As mentioned in section 3.2 above, the domains of English have spread out to intimate contexts where the use of Spanish used to be relegated, such as the home. Spanish speaking parents and grandparents see this ongoing situation with the younger generations. Spanish is no longer transmitted to the younger generations. The children and grandchildren of New Mexicans do not speak the variety or their proficiency is really limited and therefore their exposure to the language is much reduced.

The shift to English is attested by the majority of the speakers, as twelve out of sixteen commented on this issue. The following comments illustrate the regret of the speakers about the loss of Spanish by the younger generations. Three speakers provided comments about how children do not want to speak Spanish anymore and how they prefer to speak English now; they also remarked that younger generations are not interested in learning the language or speaking to their families in Spanish since they are allowed to speak English to them, as mentioned in (41) to (43).

- (41) *'Los niños ya no hablan español. Cuando estaba en la escuela hice algo mal: que no les enseñé español a mis dos hijos mayores, pero dije que iba hacer la fuerza de hablarles más en español. Le estoy enseñado español a mis hijos menores. Los niños no quieren hablar español, no ponen atención cuando los abuelos les hablan en español.'* (MNMC-21)
- (42) *'Aquí en las escuelas ya la plebe no habla no (español). No tienen con naiden (nadie) que hablar. Oyen a los grandpos (grandparents) nomás y entienden pero no hablan porque sus amiguitos no hablan nada, they're not interested. They're just not interested. Los amigos no hablan. They don't have a way to share the Spanish anymore so'...* (MNMC-9)
- (43) *'Los jóvenes ya no quieren hablar español. Los niños en Mora hablan inglés, hablan inglés con los abuelitos. Esos niños cuando llegan a los treinta años entonces quieren hablar español. They don't speak Spanish at least they have to'.* (MNMC-2)

Similarly, some speakers noted how young people think speaking Spanish is difficult, and they do not even try to understand it or learn it because they do not see the importance of speaking the language, as expressed in the following comments.

- (44) *'A los jóvenes se les hace más trabajoso hablar el *mexicano* que el inglés aunque no sé porqué, pero ellos dicen. Yo les aconsejo que tienen que practicarlo pero ellos no lo practican'.* (MNMC-8)
- (45) *'La plebe y la gente hoy en día entienden nuestro idioma pero ya no lo hablan. Ya no lo pueden expresar con un gozo, con un gusto, con algo que de veras es viviente. Algo que sabes está conectado a las entrañas de esa persona. Speaking Spanish (for them) is not important so it's not rewarded. No sé le da valor al idioma'.* (MNMC-14)
- (46) *'Los pebles ya no quieren hablar español. Dicen I can't speak'.* (MNMC-6)

3.5 Summary

In this chapter we have reviewed language use in the bilingual community of Mora (Section 3.2); in this section certain patterns regarding the bilinguals' language acquisition and use according to domain and interlocutor were observed.

With respect to the issue of ethnic identity (Section 3.3.1), remarks culled from the conversations with the bilinguals participating in this study reveal that bilinguals in this community identified themselves as New Mexicans through the practice of speaking the native language. Ethnic identity also included ideas about community membership that is defined through a shared language. And, the bilinguals' negative experiences include reasons why they have chosen either to maintain the mother tongue or shift to English.

Regarding the speakers' attitudes toward their two languages (Section 3.3.2), the majority of the attitudes towards NM Spanish were positive, while attitudes towards Mexican Spanish, which has had a significant presence in NM for more than half a century, were also mostly positive. Furthermore, some speakers reported negative attitudes from speakers of other varieties with the implication that theirs may not be so good. Concerning the participants' attitudes towards bilingualism or language mixing (Section 3.3.3), some valued it as a good quality and recognized that language mixing was present in their community, whereas the ones who considered language mixing negative, mentioned that it was not the proper way of speaking. Attitudes toward Anglos were expressed as well (Section 3.3.4); some comments conveyed negative feelings rooted in the Anglo dominance, while others expressed positive attitudes regarding community members' relations with Anglos.

Finally, the imminent loss of NM Spanish was a common topic that surfaced in the interviews (Section 3.4). The speakers commented on the fate of the dialect and expressed their deep regret about its loss in the younger generations.

Chapter 4. The Intonation Unit in the study of CS: extraction, transcription, and coding of CS.

4.1. Introduction

Discourse analysis has given central importance to specific prosodic units which have important cognitive and interactional features (Chafe 1994; Du Bois, Schuetze-Coburn, Cumming and Paolino 1993; Ford, Fox and Thompson 2002; Ford and Thompson 1996). The following example (47) illustrates the prosodic units in a CS segment of discourse. Each line represents a single prosodic unit (as I will explain in further detail below) and underlining indicates the beginning of a code-switch, up to the entire prosodic unit¹⁹. The first CS depicted below is from Spanish to English and begins at *we're living* and continues until the end of the following line, *our son here*. The second CS is from English to Spanish, beginning *buena cosa* and continues until the end of the excerpt. These CS occur at a syntactic boundary as well, in this case, at a clause boundary.

- (47) *y poder ganar la vida no?*
we're living here,
and then we raised our son here,
buen- buena cosa porque esa experiencia del,
lo hubiera sido otra persona totalmente diferente si- que se creó en la ciudad.
(MNMC-2/136)

Following Shenk's (2006) analysis of prosodic units in bilingual discourse, I will analyze CS patterns that may be overlooked when guided exclusively by the traditional concept of syntactic constituents in relation to CS boundaries. As stressed by those who have studied conversation in terms of prosodic units, phrases and sentences, as fundamental units of

¹⁹ If the speaker switched back in the middle of an Intonation Unit, code-switching was mark with intermittent lines. As in the example (59).

constituent structure, are not an adequate measure to explain the interactional nature of conversation.

4.2. The Intonation Unit in monolingual discourse

The notion of syntactic constituency is closely related to the prosodic units in discourse and both are essential for understanding constituent structure. Chafe (1994:55) mentions that substantive Intonation Units (henceforth IUs) have the grammatical form of single clauses. Although IUs are defined prosodically, they show a strong correlation with the clause and are functionally relevant units that can provide a measure for spontaneous discourse data where the traditional notion of a "sentence" might be problematic to distinguish (Chafe 1994, cf. Torres Cacoullos and Travis 2010). In this study of CS, the basic unit of analysis is the Intonation Unit - both in terms of its prosodic features and its relation with syntax.

The Intonation Unit has been defined as "a stretch of speech uttered under a single coherent intonation contour" (Du Bois et al. 1993:47). Prosodic units as analyzable segments have been identified by other researchers as the "tone group", the "information unit" (Halliday 1985), and the "tone unit" (Crystal 1975). Prosodic units themselves imply the perceptual and physical properties of sound -including pitch, loudness, timing, voice quality, and vocalization (Chafe 1994:56).

4.2.1 Intonation Units as cognitive units

IUs play a functional role in the production and comprehension of language. According to Chafe (1994:55) the IU is a unit of mental and linguistic processing "that seems to be of exactly the right size to be processed in its entirety with the help of echoic memory²⁰, a fact

²⁰ Chafe (1994:55) defines echoic memory as "the ability to shift one's consciousness of sound from the semiactive to the active state during the first few seconds after it has ceased to be present in the air".

suggesting that this ability functions crucially as a support for language". The IU verbalizes the information active in the speaker's mind when it is produced in discourse. IUs are first active in the speaker's conscience, then in the utterance of the IU, and lastly in the listener's conscience. Completion points and prosody cues at the level of the IU are important given that they provide the speaker the opportunity to reproduce his or her focus of consciousness and make it active in the mind of the listener (Chafe 1994:63).

Chafe (1994) identified several types of IUs, which can categorize the information that the speaker wishes to convey. He breaks down the types of IUs into three major categories: *regulatory*²¹ IUs which control the interactional flow in discourse, *substantive* IUs which convey concrete ideas or real ideas of events, states, or referents, and *truncated* or *fragmentary* IUs which indicate an interruption in the flow of information. The following example of a segment of bilingual discourse from Shenk (2006:186, example 5) illustrates these three types of IUs.

- | | | |
|------|--|---------------|
| (48) | E: Yeah, | (Regulatory) |
| | big, big bands are- | (Fragmentary) |
| | are going there. | (Substantive) |
| | [Yeah], | (Regulatory) |
| | A: [Yeah]. | (Regulatory) |
| | E: [[<i>Sí esta lugar</i>]] | (Substantive) |
| | A: [[Uh-huh]]. | (Regulatory) |
| | E: .. <i>Yo paso por allí,</i> | (Substantive) |
| | <i>pero,</i> | (Regulatory) |
| | .. (H) <i>nunca he entrado este lugar.</i> | (Substantive) |

As mentioned above, there is a strong correlation between the clause and the IU. Chafe (1994:66) demonstrated that many substantive IUs are single clauses and further proposed that single-clause substantive IUs assert an idea, and therefore "speakers aim at verbalizing a focus of consciousness in the format of a clause". He stated that the (substantive) IU is a cognitive unit

²¹ According to Chafe (1994) regulatory IUs often constitute discourse markers and form an IU; however, they do not always function this way.

that expresses the idea of an event or state²² and "each such idea is active, or occupies a focus of consciousness" (Chafe 1994:66). According to Chafe, the IU is only capable of carrying a limited quantity of information at a time, that is, an idea to be processed by the speaker and listener in conversation. In this sense, he states that "conversational language appears subject to a constraint that limits an intonation unit to the expression of no more than one new idea" (1994:119).

4.2.2 Completion points

Completion points have been studied in Conversation Analysis as an important characteristic of turn-taking in conversation. Sacks, Schegloff and Jefferson (1974:702) proposed that turns can be constructed from unit-types, where "unit-types for English include sentential, clausal, phrasal, and lexical constructions. Instances of the unit-types so usable allow a projection of the unit-type under way, and what, roughly, it will take for an instance of that unit-type to be completed. Unit-types lacking the feature of projectability may not be usable in the same way." The projectability mentioned by Sacks et al. was interpreted by Ford and Thompson (1996:143) as "syntactic completion points". They considered an utterance to be syntactically complete if, "in its discourse context, it could be interpreted as complete clause, that is, with an overt or directly recoverable predicate, without considering intonation or interactional import". Ford and Thompson (1996) explored the role of syntax, intonation, and conversational pragmatics in the construction of the interactional units of talk, that is, turns in the conversation. The speakers design and place their turns according to these complex turn units. In their analysis of interactional units in conversation, Ford and Thompson (1996) separate intonation, syntax and pragmatics to measure the degree of association that exists between turn completion and

²² Chafe (1994:66) defines *event* as a change during a perceptible interval of time, and *state* as a situation or property that exists for a certain period without significant change.

grammatical completion; however, they do not assume these three systems operate independently; rather that they work together and interact in complex ways.

Shenk (2006) states that Conversation Analysis should be able to explain the projectability of turn taking in bilingual discourse, that is, the interlocutor's ability to predict when a turn will end. According to Shenk (2006:192), "speakers are oriented to discourse structures above the level of the clause that consists of a bundle of features including prosody and syntax. After all, the occurrence of a complete single clause does not mean that the speaker has finished speaking, it does not always coincide with a syntactic completion point, and it is not always the most interactionally advantageous place to code-switch".

4.3 The Intonation Unit in bilingual discourse

To the best of my knowledge, the research by Shenk (2006) is the only study that has analyzed CS in direct relation to IUs. She concludes that (2006:185), "there is a strong correlation between CS and IUs. In fact the correlation is so robust that a structural analysis of the prosodic units of discourse in bilingual conversation may serve to illuminate a possible basis for why some syntactic constraints proposed in the literature are exacting while others are more flexible". Shenk (2006) analyzed the *Switch-Boundary IU* (SBIU) in CS discourse which is the IU directly preceding a switch site. According to Shenk (2006:194), "specific prosodic and syntactic features characterize the IU that directly precedes a switch in language". Features such as transitional continuity are important to identify IUs boundaries (see section 4.4.1 ahead for transitional continuity). The following example illustrates the SBIU:

- (49) a. K: *y aquí ya no se puede,*
→ b. *pues aquí estamos ya bien comunistas,*
→ c. *.. we're the most controlled free country in the world,*
d. *..es el lugar más feo que hay.* (MNMC-1/194)

In example (49) the IUs in lines (b) and (c) marked by arrows are the SBIUs. The example begins with two Spanish IUs. Line (b) is a SBIU because in the following IU in line (c) there is a switch to English. Line (c) is also a SBIU because it precedes the switch to Spanish in line (d).

Shenk's data consisted of one hour of conversational data, from four speakers involved in four different conversations. All that the author reports about these participants is that their age were between 20 and 52 years old, and that they were competent bilinguals of Mexican descent living in Southern California. Her study found that these four bilingual speakers switch at IU boundaries an overwhelming 96% of the time, that is, 96% of the IUs are monolingual English or Spanish IUs. Conversely, bilingual IUs composed of both English and Spanish comprise a mere 4% of the data. According to Shenk (2006:189) this high percentage of CS at the intonational boundary supports her claim that the most robust boundary correlating with CS is prosodic in nature.

While Shenk (2006) found a clear pattern in which CS occurs almost categorically at prosodic boundaries there is evidence that this may not be the case in all bilingual communities. In a previous study (Durán Urrea 2006) based on the materials of the New Mexico Colorado Spanish Survey (NMCROSS)²³ from Bills and Vigil (2008), I found that while 75% of code-switches were indeed found at IUs boundaries (50), a full 25% occurred within the IU (51), that is, internal to the IU (see Table 12).

(50) *I know it is.*
pero no se --
pero no es la palabra que usábamos nosotros aquí. (NMCROSS-270-1B2)

(51) *ella s- --*
ella no sabe que she's Spanish.
como no habla más del inglés ve. (NMCROSS-318-1A2)

²³ The NMCROSS is a corpus of recorded interviews of 350 speakers conducted by New Mexican graduate students between 1992 and 1995 under the direction of Garland D. Bills and Neddy A. Vigil of the University of New Mexico (Bills & Vigil 2008).

Table 12. Distribution of code-switching by IU in NMCOS data (Durán Urrea 2006)

Code-switching	N	Percentage
Internal to the IU	39	25%
At IU boundaries	117	75%
<i>Total</i>	156	100%

Example (52) illustrates CS at prosodic boundaries from the present corpus. In line (b) there is a switch to English from the previous Spanish IU, then in line (c) a switch to Spanish from the previous IU in English in (b) and another switch to English in line (d).

- (52) a. *no había tanto= pinabete.*
b. *so it wasn't close then.*
c. *porque una vez yo fui,*
d. *and --*
e. *and I -- and I painted a pictur=e,* (MNMC-9/836)

Example (53) illustrates CS internal to the IU also from the present corpus. In line (b) the switch occurs within the same IU, the first part of the IU is in Spanish and then there is a switch to English and then back to Spanish in the same IU.

- (53) a. *... but I didn't get nothing you know.*
b. *pero ellas sí once in a while agarraron poquito,*
c. *y yo nada.* (MNMC-10/559)

The high percentage of IU-internal CS in this study and Shenk's study may be rooted in the nature of the data. The speakers in Durán Urrea (2006) are part of a well-defined bilingual community, in which a great majority of members speak English and Spanish in everyday life and in which CS may be characterized as a discourse mode. I will discuss how the characteristics of this particular community may influence their CS patterns later on.

4.4 Transcription method adopted in this study

The interviews for this study were transcribed following the transcription method developed at the University of California, Santa Barbara by Du Bois, Schuetze-Coburn, Cumming and Paolino (1993). This method was created specifically to transcribe discourse with the goal of creating a written representation of speech. In order to identify the segments of the interviews of the MNMC database to be transcribed, CS was first identified by listening to every interview in its entirety and then every portion of the interviews where CS was identified was transcribed following the Du Bois et al. transcription system. As pointed out in section 1.4.2, I recorded a total of 29 hours of conversations. From these, approximately 10 hours were transcribed (see Table 1, section 1.4.2). I will discuss the details of this transcription system below.

The transcription tasks under this method are extremely time consuming. On average, it took me approximately 1.5 to 2 hours to transcribe 5 minutes of recorded speech. Initially, I started the transcription of interviews by myself but in order to be able to advance in this task, I needed to hire assistants to help me with the transcription process. The detailed transcription of the interviews of the MNMC database took several months and was completed by Summer 2010²⁴. After transcription was completed, a sample of the transcription from different recordings was revised by a second transcriber, who agreed with IU segmentation for 129 out of 167 tokens reviewed²⁵.

²⁴ I was awarded a Dissertation Support Grant and a Dissertation Enhancement Award by the College of the Liberal Arts at The Pennsylvania State University for the semester of Spring 2010. With the financial support I was granted I was able to hire three skilled transcribers, who were trained in the Du Bois et al. method, who were bilingual and who were familiar with the variety of Spanish spoken in Northern New Mexico. The transcribers, Ana Medina Murillo, Victor Valdivia and Alison Grochowski, were trained in this method by Catherine Travis in a discourse analysis course at the University of New Mexico.

²⁵ This means an inter-rater reliability rate of 77% for segmenting IUs. I would expect that with more experienced transcribers the rate would be greater. The portions of the intonation contours relevant to this study are specified

In the Du Bois et al. method the main unit of analysis is the IU (see section 4.2). A single coherent IU can be identified by different cues that delimit its contour, such as pauses, pitch reset, accelerated speech at the beginning of the IU (captured by the notion of anacrusis, cf. Chafe 1994), and lengthening of the syllable or syllables at the end of an IU (Chafe 1994; Du Bois et al. 1993). Although pauses are important in identifying IU boundaries, these can be also found internally within a single IU. Even though IU features have been proposed primarily for English, they are universally applicable, including for tonal languages (Chafe 1994). It is important to define all the features that are necessary to identify IUs. These features include changes in fundamental frequency (pitch-reset), changes in word duration (may be perceived as lengthened segments at the end of an IU or shortened rushed segments at the beginning), and changes in intensity (recognized as loudness, pauses of different lengths and changes in voice quality - frequently perceived as creak) (Chafe 1994).

Each line in the transcription represents an IU, however if the IU is too long to fit on one line in the transcript, the second line is indented. A carriage return is used to indicate the end of an IU, that is, the boundary between two IUs. The contour of the IU is marked at the end of each line by a transitional continuity, "when a speaker arrives at the end of an IU, poised to continue on to the next -or not continue- the intonation contour usually gives a fairly clear indication of whether the discourse business at hand will be continued or has finished" (Du Bois et al. 1993:53). An IU may also be broken off before the speaker completes its projected contour. This is represented by a double hyphen (--). When an IU is truncated, the speaker utters the initial portion of an IU but abandons it before finishing, thus there is no transitional continuity. As argued by Du Bois et al. (1993:47), "[t]he double hyphen is not intended to represent the case of

only in terms of the distinction between final vs. non-final (continuing or appeal, see section 4.4.1), which increases the reliability of the auditory judgments.

a unit that appears incomplete when measured against the canons of normative grammar.

Intonation units that do not constitute complete clauses are commonplace and usually quite normal-and complete as intonation units". In example (54), the first two IUs are truncated; then they are followed by three IUs with continuing transitional continuity and an IU with final intonation contour (see section 4.4.1 ahead for transitional continuity).

- (54) K: a. *en inglés dice --*
b. *.. ah dicen --*
c. *cuando van a corte,*
d. *before they go to court,*
e. *he has to take a deposition,*
f. *so he was busy.* (MNMC-2/172-177)

Another important feature in the transcription is the presence or absence of pauses. There are three types of pauses in the transcription: a short pause (0.2 seconds or less) represented by two dots (..), a medium pause (between 0.3 and 0.6 seconds) represented by three dots (...), and a long pause (over 0.7 seconds) indicated by a sequence of three dots (...) followed by a number in single parentheses indicating the duration of the long pause (.7), (1.5), etc. When there is a pause at an IU boundary, it is marked at the beginning of the line of transcript and it must not be taken as belonging to any of the speakers but rather as a pause in the flow of conversation (Travis 2005:25). Example (55) illustrates a long pause in line (c) and a medium pause in line (f).

- (55) A: a. *ehe --*
b. *le echamos en- nomás eh= ,*
c. *... (4) garlic,*
E: d. *ah=,*
A: e. *garlic le echamos al chile,*
f. *... pero no --* (MNMC-8/134-140)

4.4.1 Transitional continuity

Du Bois et al. (1993) defined transitional continuity in terms of its function as marking the degree of continuity between one IU and the next. The different types of continuity are associated with different phonetic contours. There are three basic distinctions in transitional continuity: final, continuing, and appeal. Du Bois et al. (1993) suggest that all languages are likely to make intonational distinctions between the transitional continuity classes, though their phonetic realization may vary.

The symbols used to represent transitional continuity are those employed in written English punctuation. The punctuation symbols used in the transcription represent intonation classes and never grammatical or semantic structure (Du Bois et al. 1993). Final intonation contours are represented by a period (.) and its transitional continuity is marked by a fall to a low pitch at the end of the IU, finishing the speaker's utterance (Travis 2005:22). Example (56) illustrates final intonation contours²⁶.

- (56) B: *just enséñales que tú sabes.*
 [Al igual de ellos].
 H: *[And you'll go big] también.*
 you can go big. (MNMC-13/537-540)

Continuing intonation contours are represented by a comma (,) and marked by a slight rise in pitch, as though the speaker were going to continue what he or she is saying. In (57), the speaker produces two IUs with continuing intonation, and then finishes her utterance with final transitional continuity.

- (57) J: *.. y no le hace aquí sí=,*
 la gente no matter who it is si lo topan lo saluda la gente,
 y eso le gustó a ella aquí. (MNMC-6/387-389)

²⁶ The full list of the conventions used in the transcriptions is given in Appendix A.

Appeal intonation contours are realized by a high rise in pitch and are represented by a question mark (?). When the speaker produces an utterance, he or she seeks a validating response from the listener (Du Bois et al. 1993). As outlined by Du Bois (1993:55), a common type of appeal is a yes-no question; but not all yes-no questions are produced with an appeal intonation. In such cases the question is not represented with a question mark in the transcription. On the other hand, some IUs may have an appeal contour even though they are not questions. The use of an appeal intonation contour is illustrated in example (58)²⁷. Line (b), is an appeal and a yes-no question, while lines (f)-(h) have an appeal contour even though the speaker is not asking questions.

- (58) F: a. *She has a book.*
 b. *You know cookbook?*
 c. *yea=h,*
 d. *pero así --*
 e. *... o sí sí she goes to the grocery store,*
 f. *también?*
 g. *~XXX se pone a leer?*
 h. *and that without telling you that?*
 i. *she's always looking for diabetic food for me.* (MNMC-10/488-491)

Transitional continuity may be useful in analyzing IUs in relation to specific switch sites in CS, as I hope to examine in future research.

²⁷ Following Travis (2005), I chose to use English punctuation for the use of question marks, even though the transcriptions are in Spanish also. Since the appeal transitional continuity refers to pitch at the end of the IU, it was chosen to mark it as in English.

4.5 Extraction and coding of tokens

Three switch types were coded in the IU: internal, across boundaries and one word insertion. Example (59) illustrates a switch occurring internally to the IU: a switch to English is inserted in line (b) and then another switch to Spanish in the same line. Example (60) shows a switch across IUs: there is a switch to English from line (a) to (b), then another switch to Spanish from line (b) to (c) and again another switch to English from line (c) to (d). In example (61), there is a one-word insertion to Spanish in line (c) that is not counted as a borrowing but as one word insertions that are not nouns and do not behave as loanwords but as CS²⁸.

- (59) F: a. *but I didn't get nothing you know,*
b. *pero ellas sí once in a while agarraron poquito,*
c. *y yo nada.* (MNMC-10/559)
- (60) H: a. *so te tiras de nada.*
b. *so that's how it works,*
c. *Pero si le enseñas que tú sabes.*
d. *They'll respect you.* (MNMC-13/280)
- (61) T: a. *Of course your,*
b. *Pop and mom,*
c. *pero,*
d. *when you're,*
e. *everybody talks it.* (MNMC-16/848)

²⁸ As mentioned above this study does not analyze nonce borrowings of single-word English-origin nouns, which are prevalent in NM Spanish (c.f. Torres and Aaron 2003; Torres and Travis 2010), nevertheless I coded one word insertions that are not nouns and do not behave as loanwords but as CS.

4.6 Summary

In sum, there are many factors that contribute to determining an appropriate CS site. While past research has focused primarily on syntactic cues, my analysis sheds light on the intonational completion of the IU and its role in CS. More specifically, I focus on the Intonation Unit.

I analyze CS occurring both at IU boundaries and internal to the IU, with an in-depth investigation of CS occurring within the IU. The high percentage of CS internal to the IU found in my data will then be compared to the intra-sentential CS proposed by Poplack (1980/2000). This type of CS is considered *skilled* or *smooth* since it shows smooth transitions between the L₁ and the L₂ (Poplack 1980/2000:241). Example (62) shows how, in smooth CS, the discourse flows from Spanish to English and back to Spanish in the same utterance:

- (62) *pos ahí tienen uno el día labor day weekend,
september the first and second or con lo que caiga el weekend,
y ahí sí vendo yo ves?* (MNMC-7/53)

This chapter also described and illustrated the transcription method developed by discourse analysis that was used in the present study. The sections in this chapter exemplify how this transcription method is relevant to the study of CS in spontaneous discourse.

In the following chapter I will describe the distribution of the switch types with respect to IUs, that is, of CS occurring at IU boundaries as opposed to internal to the IU. I will also analyze the language of the switch to observe if there are significant rate differences between the two languages and to determine whether there is a language favoring CS. The following chapter is dedicated to the syntax of the immediately preceding and beginning word of CS.

Chapter 5. The IU in the study of CS: Social factors in CS patterns.

5.1 Analysis of the data

Before describing the distribution of switch types with respect to IUs, individual speakers and language of the switch, I will show the total distribution of CS by participant and conversation. Table 13 below displays the total switches produced by the speakers during the duration of the transcribed material and the average frequency with which they produce a switch per minute or hour.

Table 13. *Frequency of CS*

Conversation	Participants included in this study	Total switches per participant	Total duration of transcribed material (minutes.seconds)	Average # of switches per minute
MNMC-1	Karina	27	33.1	0.8
MNMC-2	Homero	26	48.5	0.5
	Karen	36		0.7
MNMC-3	Jesús	36	20.5	1.8
MNMC-4	Moisés	24	17.61	1.4
MNMC-5	Javier	63	28.48	2.2
MNMC-6	Jimena	144	1.04.07	2.3
MNMC-7	Berta	95	1.18.53	1.2
MNMC-8	Alicia	13	35.28	0.4
MNMC-9	Catalina	58	34.43	1.7
	Marcos	118		3.4
MNMC-10	Felicia	190	52.18	3.6
MNMC-11	Lorena	17	41.08	0.4
MNMC-13	Berta	2	24.56	0.1
	Fabián	106		4.3
MNMC-14	Moisés	19	30.03	0.6
	Alonso	42		1.4
MNMC-15	Alejandro,	39	18.05	2.2
	Rolando	17		0.9
	Uvaldo	35		1.9
MNMC-16	Teodoro	74	54.3	1.4
Totals	21 participants	1181	9.53.21	1.5

5.2 Switch type in the IU

In this part of the analysis the switches were categorized according to whether the switch occurred at IU boundaries as in (52) or within the same IU (internal to the IU) as in (53). The goal of this analysis is to demonstrate that prosody plays an important role in the type of switches produced by bilingual speakers. Table 14 shows the results for the type of switch based on the total of 1,181 code-switches. The largest category, comprising 68.7% of the data, is CS occurring across IU boundaries. The next largest category, comprising 25.6% of the data, is CS occurring within the same IU. By far the two smallest categories were one word insertions (not nouns), which make up 5.2% of the data, and truncated words in the IU, which comprise 0.3% of the data.

Table 14. *Distribution of CS by IU*

Switch Type in IU	N	Percent
Internal to IU	303	25.6%
Across Boundaries	812	68.7%
One Word (not nouns)	62	5.2%
Truncated	4	0.3%
Total	1181	100%

Table 15 shows the frequency with which individual speakers produced these switch types, as well as the global averages (i.e., across speakers) for each type. Speakers are listed in descending order of the proportion of CS that is internal to the IU. When comparing CS averages, the One-way Analysis of Variance (ANOVA) detected significant differences at $p < 0.0001$. CS across boundaries is obviously significantly more frequent than CS internal to the IU, which in turn was significantly higher than one-word switches and truncated words. The frequency of one-word switches and truncated words were not statistically different from each other. Overall, these results agree with the raw percentages, showing that a full 25 percent of

switches occur internal to the IU, which represents one fifth of the total switches produced by the speakers.

Table 15. Frequency of CS type

Speaker ²⁹	Internal to	Across	One word	Truncated	Total
	IU	boundaries	(not nouns)	words	switches
	%	%	%	%	N
Berta (MNMC-7)	48	48	4	0	97
Jimena (MNMC-6)	41.0	51.4	6.9	0.7	144
Javier (MNMC-5)	39.7	55.5	4.8	0	63
Alicia (MNMC-8)	38.5	61.5	0	0	13
Felicia (MNMC-10)	32.1	62.1	5.8	0	190
Fabian (MNMC-13)	30.8	61.5	7.7	0	106
Uvaldo (MNMC-15)	28.6	60.0	8.6	2.8	35
Moisés (MNMC-4)	21.0	79	0	0	24
Moisés (MNMC-14)	21.0	79.0	0	0	19
Karen (MNMC-2)	16.7	77.7	5.6	0	36
Jesús (MNMC-3)	16.7	83.3	0	0	36
Catalina (MNMC-9)	15.5	79.4	3.4	1.7	58
Homero (MNMC-2)	15.3	77.0	7.7	0	26
Marcos (MNMC-9)	11.1	80.5	7.6	0.8	118
Teodoro (MNMC-16)	9.5	85.0	5.5	0	74
Alejandro (MNMC-15)	7.7	82.0	10.3	0	39
Karina (MNMC-1)	7.5	92.5	0	0	27
Alonso (MNMC-14)	7.1	92.9	0	0	42
Rolando (MNMC-15)	5.8	94.2	0	0	17
Lorena (MNMC-11)	0	100	0	0	17
Raw percentage	25.6	68.7	5.2	0.3	1181
Average % (\pm s.e.)	20.68 \pm 3.08	75.12 \pm 3.38	3.89 \pm 0.80	0.30 \pm 0.16	
One Way ANOVA, $F_{3,76} = 220.9, P < 0.0001$					

However, there are evident differences among individuals in the rate of CS Internal to the IU, ranging from half of all CS tokens (Bertha) to none (Lorena). I calculated production rates per speaker of CS internal to the IU in terms of five independent variables related to the speakers' personal, sociodemographic and language use characteristics: age, education, occupation, language dominance and ethnic identity. Table 16 presents a summary of the social characteristics of the speakers on whom the analysis presented here is based. Speakers are listed

²⁹ As mentioned earlier, speaker's real names were changed to ensure the anonymity of the informants.

in order of descending rate of IU-internal CS. If we consider the top six (Berta, Jimena, Javier, Alicia, Felicia and Fabian), who have IU-internal CS rates above 30%, and the bottom six speakers (Teodoro, Alejandro, Karina, Alonso, Rolando, Lorena), who have rates below 10%, two speaker characteristics stand out: age and language dominance. The average age of the high IU-internal CS speakers is 70.1 years old, while that of the low rate group is 48 years old. With respect to language dominance, five of the six high IU-internal CS speakers indicated Spanish, while five of the six low IU-internal CS speakers indicated “both” languages or English.

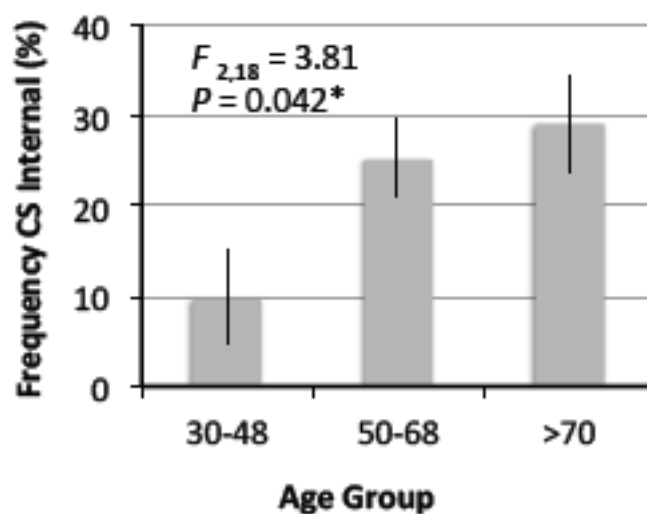
Table 16. Social Characteristics of the speakers

Speaker	% of internal CS	Age	Language dominance	Education	Occupation	Ethnic Identity
Berta (MNMC-7)	48	68	Spanish	Vocational School	Former: Secretary Current: Artist/ Art gallery owner	Negative
Jimena (MNMC-6)	41	70	Spanish	10th grade	Home, rancher, help, weaver	Positive
Javier (MNMC-5)	39.7	58	English	College	Engineer	Positive
Alicia (MNMC-8)	38.5	73	Spanish	5th grade	help on health care	Positive
Felicia (MNMC-10)	32.1	82	Spanish	10th grade	Post office (manual)	Positive
Fabian (MNMC-13)	30.8	70	Spanish	Primary	business owner (Manual)	Positive
Uvaldo (MNMC-15)	28.6	44	English	Primary	Handyman	Positive
Moisés (MNMC-4)	21	60	Both	College (Masters)	Professional	Positive
Moisés (MNMC-14)	21	60	Both	College (Masters)	Professional	Positive
Karen (MNMC-2)	16.7	60	English	College	Professional	Positive
Jesús (MNMC-3)	16.7	70	Both	College	Professional	Positive
Catalina (MNMC-9)	15.5	70	English	Primary	Home	Positive
Homero (MNMC-2)	15.3	59	Spanish	College	Professional	Positive
Marcos (MNMC-9)	11.1	55	Both	College	Professional	Positive
Teodoro	9.5	42	Spanish	College	Forrest	Positive

(MNMC-16) Alejandro	7.7	44	Both	Primary School	department Manual	Positive
(MNMC-15) Karina (MNMC-1)	7.5	49	Both	Associate degree	stylist/ business owner	Positive
Alonso (MNMC-14)	7.1	60	Both	College	Professional	Positive
Rolando (MNMC-15)	5.8	44	English	College	Professional	Positive
Lorena (MNMC-11)	0	49	English	Associate degree	Post Office/ Weaver	Negative

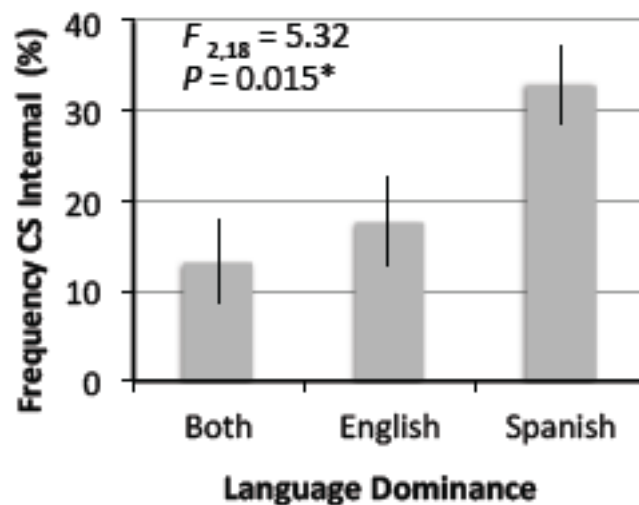
I grouped the speakers according to their social characteristics and found statistically significant effects of age, language dominance, education, and occupation of speakers on the rates of CS internal to the IU. For example, the frequency of internal CS of younger adults (30-48 years old, N = 6) was less than 10%, while there was no difference between middle age adults (50-68 years old, N = 9) and older adults (70 years or more, N = 6). Middle age and older adults tend to produce CS internal to the IU more frequently ranging from more than 10% up to 40%. As shown in Figure 3, older adults produce CS up to 30%.

Figure 3. *Effects of age of speakers on the rates of CS internal to the IU*



Regarding language dominance (Spanish, English or Both), individuals dominant in Spanish had significantly higher rates (32.9%) of CS internal to the IU than individuals dominant in English (17.7%) or both languages (13.1%) (Figure 4). The relationship between language dominance and CS internal to the IU bears a relationship to the age of speakers, since middle-age and older adults also show more production of CS internal to the IU and show more dominance in Spanish.

Figure 4. Effects of language dominance of speakers on the rates of CS internal to the IU



The education level was determined by whether the education of speakers was high (i.e., high school, associate degree or college) or low (primary school or less). The statistical analysis showed that the average rate of CS internal to the IU was higher for speakers with less schooling (29.3%) than in individuals with more schooling (16.4%) (Figure 5). Similarly, the occupation of speakers was categorized as either unskilled (secretary, business owner, rancher, help, handyman, stay home, etc.), or professional (educator, engineer, professor, government services, etc.). The average rate of CS internal to the IU by occupation type showed that 'unskilled' speakers had higher rates (27.2%) of CS internal to the IU than professional types (14.9), although the significance was marginal (i.e., $P = 0.056$, see Figure 6). I found no effect of the

ethnic identity of speakers on the average rates of CS internal to the IU (Figure 7). For this I divided the speakers into individuals with a positive or negative attitude towards their Hispanic identity, that is, whether the speakers showed positive or negative feelings towards New Mexican identity or the use of the language (see chapter 3). However, remember that there were only two speakers who expressed negative attitudes.

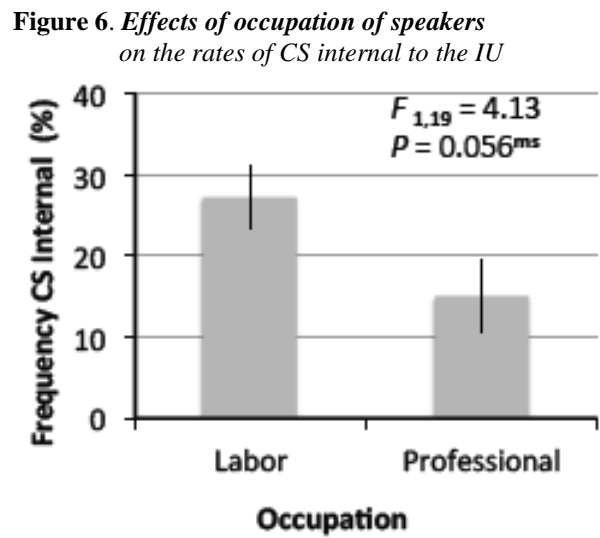
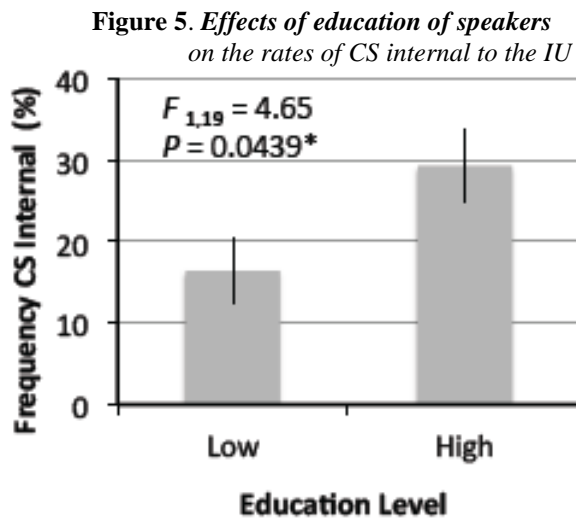
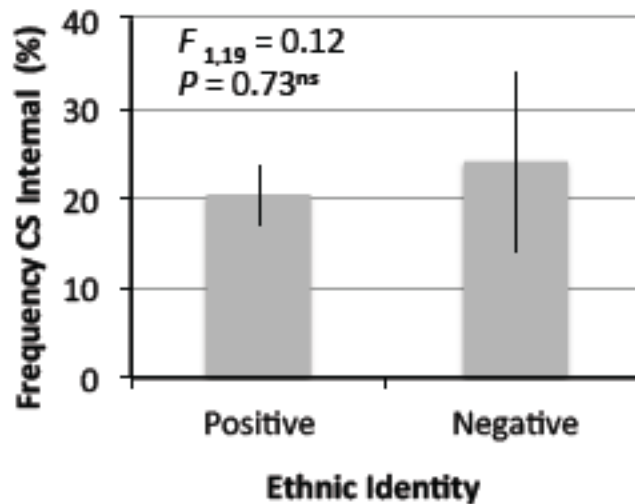


Figure 7. Effects of ethnic identity of speakers on the rates of CS internal to the IU



In summary, language dominance, age and education level all appear to correlate with the type of CS preferred. But these are correlated. Of the seven speakers who indicated Spanish language dominance, four were 70 years or older and two had up to primary school education, while of the twelve speakers who indicated “both” languages or English, only two were 70 years or older and only three had up to primary school education. We may conclude that the most important speaker characteristic is language dominance.

In conclusion, results regarding the types of CS show that CS in the bilingual community of Mora, NM does not occur categorically at prosodic boundaries as proposed by Shenk (2006), but occurs internally, within the IU, at a robust rate (25.6%). These results are in line with the previous study based on the materials of the NMCROSS I mentioned in section 4.3, where I found a full 25% of CS internal to the IU (see Table 12). The similar results in the two NM studies might have originated in the nature of the community as well as the data collection. The NM bilingual speakers are part of a well-defined community, where English and Spanish are used in daily life. The type of CS occurring internally to the IU in this community shows correlations with the characteristics proposed by Poplack (1980/2000) in her study of a Puerto Rican bilingual community in New York City, where she found that intra-sentential CS presented smooth transitions between the L_1 and the L_2 , was unmarked by false starts, hesitations or lengthy pauses, and required the skilled manipulation of both languages. Here results measuring the relation between social characteristics of the speakers and the production of CS internal to the IU showed that social factors are statistically significant in CS occurrence, particularly age and (self-indicated) language dominance (see Chapter 3, Section 3.2).

5.3 Language of the switch

I now examine the frequency with which speakers switch into English and into Spanish. As shown above in example (59), a switch from Spanish 'to English' is inserted in line (b) and then there is another switch 'to Spanish' in the same line. In example (60), there is a switch to English' from line (a) to (b), then another switch 'to Spanish' from line (b) to (c) and again another switch 'to English' from line (c) to (d). Table 17 shows the distribution of the CS tokens according to the language of the switch. In the aggregate, Speakers often switch from Spanish to English (50.9%) and from English to Spanish (49.1) almost with the same frequency, though this global distribution may be an artifact of the way material was selected for transcription.

Table 17. *Percentage of CS into English and Spanish*

Language of Switch	N	Percent
To English	601	50.9%
To Spanish	580	49.1%
Total	1181	100%

A striking result is the uniformity among the speakers. **Table 18** shows the frequency with which individual speakers switch from one language to the other. As can be seen in the percentage columns the switches to Spanish and to English from all of the speakers follow virtually the same pattern, with the percentages from each language being close to each other. Even the speaker with the greatest skewing, Jesús, shows a 42%-58% split. The global rate difference between English (51.70%) and Spanish (48.21%) achieves statistical significance ($P < 0.0003$, Table 8), but the magnitude of this average difference is less than 4% (Table 18). Therefore, my data does not show a major difference in the average frequency of switches from one language to the other.

Table 18. Percentage of language of switch per speaker

Speaker	To Spanish	To English	Total switches	Language
	%	%	N	Dominance
Karina (MNMC-1)	48.1	51.9	27	Both
Homero (MNMC-2)	46.2	53.8	26	Both
Karen (MNMC-2)	50.0	50.0	36	Both
Jesús (MNMC-3)	41.7	58.3	36	Both
Moisés (MNMC-4)	50.0	50.0	24	Both
Javier (MNMC-5)	50.8	49.2	63	Both
Jimena (MNMC-6)	49.0	51.0	145	Both
Berta (MNMC-7)	50.0	50.0	96	English
Alicia (MNMC-8)	46.2	53.8	13	English
Catalina (MNMC-9)	50.0	50.0	58	English
Marcos (MNMC-9)	50.8	49.2	118	English
Felicia (MNMC-10)	48.4	51.6	190	English
Lorena (MNMC-11)	47.1	52.9	17	English
Fabian (MNMC-13)	50.0	50.0	106	Spanish
Alonso (MNMC-14)	45.2	54.8	42	Spanish
Omar (MNMC-14)	42.1	57.9	19	Spanish
Alejandro (MNMC-15)	48.7	51.3	39	Spanish
Rolando (MNMC-15)	47.1	52.9	17	Spanish
Uvaldo (MNMC-15)	51.4	48.6	35	Spanish
Teodoro (MNMC-16)	51.4	48.6	74	Spanish
Average rate (\pm s.e.)	48.21 \pm 0.62	51.70 \pm 0.62	1181	
One Way ANOVA, $F_{1,38} = 16.23, P < 0.0003$				

It is important to stress that language dominance is not an indication of what some analysts might call a base language (e.g. Azuma 1993; Muysken 2000; Myers-Scotton 1993). All speakers in this sample are bilingual, in the sense that they spontaneously and regularly use both languages, but they might be dominant in one language, depending on the functions and domains of use of each language by the speaker (see chapter 3). In this sample, five speakers who identify themselves as dominant in both languages show a higher percentage of switches from Spanish to English, except for one speaker (Marcos) who shows a slightly higher percentage of switches from English to Spanish, and one speaker (Moisés) who has the same percentage (50%) of switches to Spanish and to English. Speakers more dominant in English do not show a systematic pattern. Two speakers (Lorena and Rolando) produce a higher percentage of switches to English,

but two others (Uvaldo and Javier) produce a higher percentage of switches to Spanish. And two speakers (Karen and Catalina) produce the same percentage (50%) of switches to Spanish and English. Of the seven speakers more dominant in Spanish, four speakers produce a higher percentage of switches to English, despite their self-reported dominance in Spanish. Two speakers (Berta and Fabian) produce the same percentage (50%) of switches to Spanish and to English. And just one speaker (Teodoro) shows a higher percentage of switches to Spanish.

Table 19 and Table 20 present the frequency with which speakers switch into Spanish and into English within each of the two the two most frequent categories of switch types: internal to the IU and across IU boundaries and according to language dominance. The results demonstrate that a slightly higher rate in the production of switches in one or the other language does not correlate with the speaker's language dominance.

Table 19 shows the eight speakers with the highest percentage of CS internal to the IU³⁰. Speakers who are more dominant in Spanish (Berta, Jimena, Alicia, Felicia and Fabian) switch slightly more frequently to English. Possibly because they initiated more IUs in Spanish. Only one of the speakers who are more dominant in English (Uvaldo), shows frequent switches to English. Finally, the speaker dominant in both languages (Moisés) presents a slightly higher frequency of switches to English (56%).

³⁰ A complete table listing all speakers in the sample can be found in Appendix C.

Table 19. IU internal CS per language and dominance (in descending order of frequency)

Speaker	Internal to IU	%	To Spanish	%	To English	%	Language Dominance
Berta (MNMC-7)	46	48	21	46	25	54	Spanish
Jimena (MNMC-6)	60	41	29	48	31	52	Spanish
Javier (MNMC-5)	25	40	13	52	12	48	English
Alicia (MNMC-8)	5	39	2	40	3	60	Spanish
Felicia (MNMC-10)	61	32	27	44	34	56	Spanish
Fabian (MNMC-13)	33	31	15	45	18	55	Spanish
Uvaldo (MNMC-15)	10	29	3	30	7	70	English
Moisés (MNMC-4)	9	21	4	44	5	56	Both

Table 20 shows the eight speakers with the highest percentage of CS across IUs boundaries³¹ and the frequency with which individual speakers switch from one language to the other across IUs. The speakers with the highest percentages of switches do not show a pattern according to language dominance: for example two individuals who are more dominant in English show switching to Spanish (Uvaldo) and to English (Javier). Likewise, individuals who are more dominant in Spanish show switches to Spanish (Berta and Jimena), to English (Fabian) and to both languages equally (Alicia). The speaker who is dominant in both languages (Moisés) shows a frequency of switches to Spanish (47%) and to English (53%).

³¹ A complete table listing all speakers in the sample can be found in Appendix D.

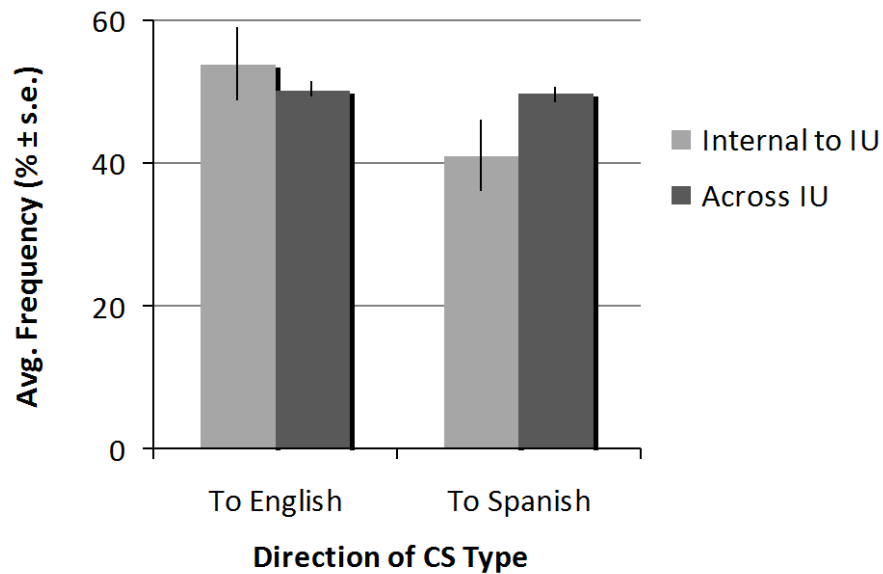
Table 20. CS at IU boundaries per language and dominance
(in ascending order of frequency)

Speaker	Across boundaries	%	To Spanish	%	To English	%	Language Dominance
Berta (MNMC-7)	46	48	26	57	20	43	Spanish
Jimena (MNMC-6)	74	51	38	51	36	49	Spanish
Javier (MNMC-5)	35	56	16	46	19	54	English
Alicia (MNMC-8)	8	62	4	50	4	50	Spanish
Felicia (MNMC-10)	118	62	57	48	61	52	Spanish
Fabian (MNMC-13)	65	62	37	57	28	43	Spanish
Uvaldo (MNMC-15)	21	60	12	0	9	43	English
Moisés (MNMC-4)	34	79	16	47	18	53	Both

In Figure 8 we compare the average rates of CS to English and to Spanish internal to the IU and across IUs. The statistical analysis in Figure 8 shows that in switches internal to the IU, although it appears that switches from Spanish to English are more frequent, the average rate of switches from Spanish to English were not significantly higher (55%) (see Appendix B, Table 29) than the switches from English to Spanish with a percentage of (45%) ($P = 0.077$, see Appendix B, Table 29, and Figure 8). When looking at switches across IUs, the statistical analysis shows that the average rates were the same in either direction of language change with a percentage of 50% in each direction ($P = 0.73$, see Appendix C, Table 30, and Figure 8).³²

³² CS across IUs might present a methodological problem since the transcription was partially made for each recording. Nevertheless, the distribution of CS internal to the IU is also equal.

Figure 8. Percentages of switches to English and Spanish by type of switch for the speakers.



The present results suggesting an even distribution according to the language of the switch belie the claim that bilinguals need to have a single base, or dominant matrix language. The Matrix Language Frame (MLF) model (Azuma 1993; Myers-Scotton 1993) proposes that structural constraints on CS result from a complex interaction between a dominant matrix language and the prohibition against embedding 'system' morphemes from the 'embedded' language (EL) in matrix language structure. In this model, language processing involves the construction of a frame, generally dictated by one of the two languages (the ML), into which elements of the other language (the EL) are slotted. This model is insertional, as opposed to an alternational approach embodied by constraints (Muysken 2000:68).

The prediction following from the hypothesis of a dominant matrix language in the bilinguals' speech in this community is that we would expect a disparity between the frequencies of CS in each language. Instead we observe the occurrence of almost equal percentages in the

production of switches in each language by all the speakers and in both CS types (IU internal and at IU boundaries). This pattern is one of juxtaposition of the two languages, that is, if we assumed that there is a base or matrix language, we would not be able to state which language is the base language in these excerpts with naturally occurring CS. CS in Mora, NM occurs in the course of daily conversations where speech oscillates from English to Spanish and back to English, that is, rather than insertions into a matrix language, CS consists of two alternating languages (see also Poplack 1980/2000, 1987).

5.4 Summary

In this chapter, I have provided a structural analysis of CS in relation to prosodic units in terms of IUs, and have suggested that for a more complete understanding of CS behavior in bilingual discourse it is useful to consider prosody, since most switches occur at the boundary of IUs (cf. Shenk 2006).

Several important patterns emerged from my analysis. Results regarding the production of types of CS show that CS in the bilingual community of Mora, NM does not occur categorically at prosodic boundaries as proposed by Shenk (2006), but occurs internally, within the IU, at a high rate (25.6%), suggesting that this type of CS may be distinctive of this community. Clearly more community-based studies of CS considering prosodic factors are needed. I also found that language dominance (which overlaps largely with age and education level) correlates with rates of production of CS internal to the IU (Section 5.2).

I analyzed the frequency with which speakers fairly uniformly switch into English and into Spanish. Results were striking, showing that speakers switch from Spanish to English and from English to Spanish almost with the same frequency (Section 5.3). The switches to Spanish and to English from both for IU internal and IU-boundary CS, though these may be a slight

tendency to switch to English IUs internally, showed that percentages from each language were close to each other. These results failed to support the view that these bilinguals have a single base, or dominant matrix language, but instead are in line with a view of code-switching as the alternation between two languages.

Since CS internal to the IU, which makes up a full one-fifth of the data, cannot be accounted for in terms of prosody, in the following chapter we turn to syntactic constraints within this type of switch, by considering the syntax at the switch site, that is, the word class of the preceding and beginning word of the CS.

Chapter 6. Switch boundary words in bilingual IUs

6.1 Constituency in discourse

Much work in linguistics over the last five decades has relied upon the notion of grammatical constituents, namely, groups of words that function together as a unit. A traditional notion of constituency holds that "a clause is not made up of a mere linear sequence of words and morphemes. Rather, it has a more complex, hierarchic *constituent structure*" (Givón 2001:110). Tests for identifying constituents have been proposed in the generative phrase-structure-rules paradigm. Carnie (2002:51) provides four main tests:

1. Replacement test: if a group of words can be replaced with a single word, that group of words is a constituent. (*The man from NY flew only ultra-light planes. He flew only ultra-light planes.*)
2. Stand alone test: if a group of words can stand alone in response to a question, then the group probably constitutes a constituent. (*Who chewed up your shoe? My new puppy.*)
3. Movement: if a group of words can be moved around in a sentence, then it is a constituent because the words can be moved as a unit. (*I like big bowls of beans. Big bowls of beans are what I like.*)
4. Coordination or conjunction: coordinate structures are constituents linked by a conjunction such as *and* or *or*. Only constituents of the same syntactic category can be conjoined. (*John and the man went to the store. *John and very blue went to the store.*)

The notion of constituency has been valuable to linguists both within the generative paradigm (see, e.g., Chomsky 1957, 1965; Radford 1988) as well as within a functional framework (see, e.g., Bybee 2002; Givón 1995; Langacker 1997). Linguists have taken the existence of constituent structure and its hierarchical organization as evidence that linguistic

behavior does not consist merely of linear strings of elements. It is also believed that this hierarchical organization of groups of words is one of the basic aspects of language (Bybee 2002:109). Langacker (1997:2) notes that the term *constituent* "implies a connection or association between two or more elements - some reason for considering them together to the exclusion of others". He also proposes that the term *constituency* "implies a hierarchical arrangement, such that of grouping at a given level of organization can function in turn as one component of a higher-level grouping. It is sometimes also required that the arrangement be *strictly* hierarchical, i.e., that constituents not overlap at any level" (Langacker 1997:2).

Even though tree-diagram formalism has been rather successful in representing constituency, hierarchy, node labels and serial order, it has had considerable difficulties when called upon to represent other features of morpho-syntax (Givón 2001:114). Langacker (1997:1) argues that "constituent structure is less essential to grammar than is generally thought and is not appropriately modeled by syntactic phrase trees as they are standardly conceived. To the extent that it needs to be posited, constituency can be seen as emerging from more basic phenomena: conceptual grouping, phonological grouping, and symbolization".

Studies rooted in a functional framework affirm that the repetition of sequences of units is the main factor in the creation of linguistic patterns that have traditionally been identified as constituent structure (Bybee 1998, 2002; Bybee and Scheibman 1999; Goldberg 1998; Thompson and Hopper 2001). Bybee (2002:111) suggests that hierarchies of constituent structure are derivable from frequent sequential co-occurrence. That is, when certain elements co-occur together frequently, constituent structure becomes tighter. In this sense, sequentiality of linguistic units is basic and constituents and hierarchies emerge because frequently used strings are *chunked* as single units (2002:123). Bybee and Scheibman (1999:575) take the position that

constituency is gradient, having many degrees which derive from the frequency with which elements are used together in discourse. Therefore, elements that often occur next to each other have a tighter constituent structure than elements that occur together with less frequency. Bybee and Scheibman (1999:576) proposed that frequency "reveals the essential role of repetition in the creation of constituent structure: while semantic and pragmatic factors determine what occurs together in discourse, the actual repetition of stretches of talk triggers the mechanism that binds them into constituents".

Research within the Conversation Analysis tradition has postulated that in discourse, what are known as "classical constituents" are formats for strategic interactional functions (i.e., turn taking, turn transitions, turn completion and turn extensions) (Ford et al. 2002). Work in Conversation Analysis has suggested that grammatical constituency is central to the projection of points of possible turn completion (Ford and Thompson 1996). Ford et al. (2002:16) suggested that participants in a conversation use constituency as an interactional resource, for example, in the interactional use of increments, such as the addition of more talk by the speaker to what is heard as an already complete sentence.

6.2 Constituents in the context of CS

Research regarding the structure of CS has proved that it is sensitive not only to social factors but is also governed by structural factors. In the CS literature it is widely accepted that general principles govern CS, though the nature and universality of such constraints is still debated.

Poplack (1980/2000) claimed that constituent ordering constrains CS. Her research demonstrated that CS occurs at switch points in discourse where the juxtaposition of the L₁ and L₂ does not violate the syntactic rules of either language. This claim was formalized by the

equivalence constraint which states that "[t]he boundary between adjacent fragments occurs between two constituents that are ordered in the same way in both languages, ensuring the linear coherence of sentence structure without omitting or duplicating lexical content" (Poplack 2001: 2063). Bilinguals who engaged in CS avoided switch points in discourse where the grammar rules from L₁, but not from L₂, must categorically apply; therefore constituents whose structures are non-equivalent in both languages were produced monolingually in actual performance (Poplack 1980/2000:229).

The equivalence constraint, which demonstrated the existence of consistency conditions on speakers' production of hierarchically and linearly coherent utterances, accounts for significant quantitative patterns of switching in large corpora (Poplack 1980/2000:223; Sankoff 1998). For instance, the equivalence constraint has been attested as a general tendency in bilingual communities with typologically different pairs of languages such as Tamil-English (Sankoff et al. 1990), Fongbe-French and Wolof-French (Meechan and Poplack 1995), among others.

6.3 The switch-boundary IU and the switch-boundary word in CS

In this chapter, I focus on the nature of the words preceding and initiating CS, with the purpose of observing syntactic patterns in the juxtaposition of the two languages. The question we address is: Which syntactic categories are switched internally to the IU and at IU boundaries? In the following sections I give an analysis of the word class of both the word immediately preceding the switch as well as the first word of the CS. Lastly I examine the frequency with which these syntactic categories are produced in each language.

6.4 Extraction and coding of tokens

6.4.1 Coding of the word immediately preceding the switch and the first word of IU-internal CS and CS across IUs

Each word immediately preceding a switch internal to the IU, as in examples (63) and (64), and across the IU, as in example (65), was extracted and classified by syntactic function and language. For example, the words *Amarilo*, *changed* and *you* in examples (63) line (c), (64) line (a) and (65) line (c) respectively were extracted in a separate column on the Excel spreadsheet used for coding tokens.

- (63) E: a. *Pero nunca fue .. pa'l este ?*
J: b. *No=,*
c. *I never went pa'l este= nunca pa' Amarilo I never heard of anybody going to Amarilo* <@ yeah @> (MNMC-5/327)
- (64) R: a. *And then all that **changed** cuando comenzaron a cobrar.*
C: b. <X xxxxx X>
R: c. *They didn't --*
d. *they didn't use to.. charge,* (MNMC-9/177)
- (65) H: a. *que tú sabes lo que él sabe.*
E: b. *Sí.*
H: c. *And they'll respect you.*
d. *Pero si no,*
e. *si estás ahí atrás,* (MNMC-13/268)

Each word immediately preceding a switch internal to the IU and across the IU was coded as to its word class and language of provenance. For example, *y* in (66) line (c) was coded as a conjunction. *While* in example (67) line (b) was coded as an adverb. And *works* preceding the one-word insertion in (68) line (b) was coded as a verb. *Bueno* in (69) line (c) exemplifies a discourse marker preceding a switch.

- (66) U: a. *y pus ahi,* (pues)
b. *hay gente,*
c. *y this othe=r,*
d. *a=h,*
e. *...little friend that I had,* (MNMC-15/108)

- (67) F: a. *but I didn't get nothing you know,*
 b. *pero ellas sí once in a while agarraron poquito,*
 c. *y yo nada.* (MNMC-10/559)
- (68) H: a. *so te tiras de nada.*
 b. *so that's how it works,*
 c. *Pero si le enseñas que tú sabes.*
 d. *They'll respect you.* (MNMC-13/281)
- (69) J: a. *ah you- --*
 b. *sabes donde esta Salmas Ranch?*
 c. *bueno go in that way pa'llá cien millas,*
 d. *de- de allá hasta el santuario.* (MNMC-6/532)

I also coded the word class and language of the first word in the CS tokens, internal to the IU, as in example (70), and across the IU, as in example (71), for example, *little* in (70) line (b) was coded as an adjective from English, *llegó* in (71) line (c) was coded as a verb from Spanish.

- (70) F: a. *Oh porque ~XXX,*
 b. *.. ah enseñándole a la **little** girl Spanish words in the --*
 c. *allá cuando estaba con ella,*
 E: d. *ah*
 F: e. *y luego I remember no podíamos saber cómo se llamaba un color,*
 (MNMC-10/638)
- (71) R: a. *and he was playing the guitar,*
 b. *and it was Winter=.*
 c. *llegó a la estació=n,*
 d. *y entró,*
 e. *y= se estaba calentando en el fogone.* (MNMC-9/28)

In the following section I first provide a description of the distribution of the syntactic categories of the first word of the switch and likewise for the word immediately preceding the switch. I then examine the distribution of these syntactic categories with regard to the type of switch in which they occur, that is, at an IU boundary and internal to the IU.

6.5 Quantitative analysis of the data

6.5.1 Word Class of first word in CS by type of switch

In this portion of the analysis the switches were categorized based on the word class of the first word produced in CS internal to the IU, as in example (72), where the first word in CS internal to the IU is the adjective *grandes*. The switches were also classified based on the word class of the first word produced in CS across IUs, as in example (73), where the first word in CS across IUs is the object pronoun *le*.

- (72) F: a. *No ellos vinieron solos.*
b. *No vienen solos.*
E: c. *Ah*
F: d. *yeah,*
e. *they're already **grandes** ya no --*
f. *yeah.* (MNMC-10/528)

- (73) F: a. *yeah,*
b. *but I write to her in almost every week,*
c. ***Le** mando una carta.* (MNMC-10/198)

Ten syntactic categories of words initiating CS appeared in the data and are listed by type of switch in Table 21. In CS occurring internally to the IU, the categories with the highest frequencies are pronouns, found in 20%, of the data, followed by adverbs and prepositions with 14% and 13%, respectively. Also frequent are conjunctions and verbs, with 12% and 11%. In CS occurring across IUs, the most frequent word classes are pronouns, comprising 26% of the data, followed by conjunctions, 20%, and thirdly, adverbs with 16%. With the exception of adverbs, the tendency is that, in both types of switches, the most frequent words at the switch sites are closed classes, such as pronouns - the majority of which are subject pronouns - as well as prepositions and conjunctions.

Table 21. Syntactic category of first word in CS

Word Class	In CS internal to the IU		In CS Across IUs	
	Total N	%	Total N	%
Pronoun	61	20	206	26
Adverb	43	14	129	16
Preposition	40	13	58	7
Conjunction	36	12	157	20
Verb	34	11	83	10
Determiner	28	9	57	7
Noun	25	8	34	4
Adjective	19	6	18	2
Discourse Marker	8	3	52	7
Relative	7	2	4	1
Total	301	100	798*	100

* Fourteen tokens (such as *so* and *yeah*) initially coded as Discourse Markers were excluded from the analysis due to the lack of certainty of the language in which they were uttered, since they are phonologically and morphologically vague or ambiguous (see section 4.5.1 and cf. Aaron 2004; Lipski 2005).

6.5.2 Word Class of first word in CS by type of switch and language

The tables below display the frequencies of the word class of the first word in IU-internal CS as well as across the IU, and the language of the first word in the switch, that is, the language of the switch. In CS into Spanish and internal to the IU (Table 22), conjunctions are the most frequent word class occurring as the first word of CS with 24%, followed by prepositions, making up 21%, and thirdly adverbs, comprising 18%. The high frequency of conjunctions and prepositions as the first word in a switch from English to Spanish shows that these closed classes frequently introduce a switch to Spanish, as in examples (74) and (75).

(74) *pa' la fiesta,*
y... getting out kind of labels y todo,
you know,
y pos ahi,
hay gente, (MNMC-15/104)

(75) *ah you- --*
sabes donde esta Salmas Ranch?
bueno go in that way pa'llá cien millas, (para allá) (MNMC-6/532)
de- de allá hasta el santuario.

In comparison, in IU-internal CS from Spanish into English (Table 22), pronouns present the highest frequency with 27%, followed by nouns, making up 13%, and then verbs, adverbs and determiners each comprising 12%. While IU-internal CS, Spanish to English and English to Spanish both tend to be introduced by a closed class word, they differ with regard to which class. Spanish CS is characterized by conjunctions, and prepositions, whereas a switch to English is initiated by a high percentage of pronouns, specifically expressed subject pronouns (N=45/67), as in example (76).

- (76) *Se enojó con la gente,
 porque **they had just** --
just a selected group.* (MNMC-9/571)

Table 22. Word class of first word in CS internal to the IU

Word Class	To Spanish	%	To English	%	Total N	%
Pronoun	15	12	46	27	61	20
Adverb	23	18	20	12	43	14
Preposition	27	21	13	8	40	13
Conjunction	31	24	5	3	36	12
Verb	13	10	21	12	34	11
Determiner	7	5	21	12	28	9
Noun	2	2	23	13	25	8
Adjective	1	1	18	10	19	6
Discourse Marker	4	3	4	2	8	3
Relative	6	5	1	1	7	2
Total	129	100	172	100	301	100

*DM= Discourse Marker

Table 23 presents the frequencies of the word class of the first word in CS across IUs and the language of the switch.

Similar to the results of the most frequent word classes internal to the IU, closed classes are the most frequent words introducing a switch to Spanish and to English in CS across IUs. Conjunctions are the most frequent word class introducing a switch into Spanish, as in example (77), with 28%, followed by adverbs with 21% and verbs with 14%. And pronouns, specifically expressed subject pronouns (N= 185/206), are highly recurrent as the first word class starting a

switch to English, as in example (78), making up 39%, followed by conjunctions with 20%, and adverbs with 16%.

(77) *I have to be there,
I have to go I have,
y eso es todo lo que hace uno.* (MNMC-1/291)

(78) *y poder as- --
ganar la vida no?
we're gonna live in here.
.. And then we raised our son here,
es buen- buena cosa,
porque esa experiencia de él,* (MNMC-2/154)

Table 23. Word class of first word in CS across IUs

Word Class	To Spanish	%	To English	%	Total N	%
Pronoun	49	12	157	39	206	26
Conjunction	109	28	48	12	157	20
Adverb	82	21	47	12	129	16
Verb	54	14	29	7	83	10
Discourse Marker	17	4	35	9	52	7
Preposition	34	9	24	6	58	7
Determiner	29	7	28	7	57	7
Noun	12	3	22	5	34	4
Adjective	7	2	11	3	18	2
Relative	2	1	2	0	4	1
Total	395	100	403	100	798	100

Note that these the word class of the first word of CS appears to be independent of the prosodic boundaries in the IU, since we have observed the same pattern IU internally and at IU boundaries. Thus, while prosody is important in describing patterns of CS, there seem to be clear syntactic patterns independent of prosody.

6.5.3 Word class of word preceding CS by type of switch

In this section the switches were categorized based on the class of the word preceding the CS, for both IU-internal CS, as in example (79), where the word preceding CS internal to the IU is the verb *pueden*, and CS across IUs, as in example (80), where the word preceding CS across IUs is the noun *rock*.

- (79) H: a. *ahora dijo el General Motors,*
 b. *estos ricos **pueden** dug out with this shit,*
 c. *estas uniones están tan fuertes que ya nos quieren decir cómo,* (MNMC-13/217)
- (80) T: a. *and I was starting to fall asleep on the **rock**,*
 b. *porque hay muchas eh rock where you can lay down,* (MNMC-16/493)

For this portion of the analysis, ten syntactic categories also appeared in the data and are listed by type of switch in Table 24. In CS occurring internally to the IU, the most common categories that precede a switch are verbs, with 30%, followed by nouns, with 21%, and adverbs and determiners, with 10% and 9%, respectively. In CS occurring across IUs, again the most frequently occurring word classes preceding a switch are nouns comprising 33%, followed by verbs with 20% and adverbs with 16%. The generalization seems to be that, in contrast to the closed classes that characterized the first word in a switch (section 6.5.1), words preceding a switch belong to open classes, namely verbs, nouns, or adverbs, with the exception of determiners, which form a closed class.

Table 24. Syntactic category of word preceding CS

Word Class	In CS internal to the IU		In CS Across IUs	
	Total N	%	Total N	%
Verb	90	30	158	20
Noun	64	21	279	35
Adverb	34	11	131	16
Determiner	29	10	42	5
Conjunction	27	9	29	4
Adjective	13	4	58	7
Discourse Marker	13	4	8	1
Pronoun	12	4	68	9
Preposition	9	3	18	2
Relative	8	3	7	1
Total	299	100	798	100

6.5.4 Word class of word preceding CS by language

The following tables show the frequency of the word classes preceding CS, both internal and across the IU, and the language of the word preceding the switch. In IU-internal CS (Table 25), the most frequent word classes in Spanish preceding a switch to English are verbs, comprising 31%, followed by nouns with 15%, and by conjunctions with 14%. That is, the word classes in Spanish that frequently precede a switch to English belong to open classes such as verbs and nouns, as in the following examples:

- (81) J: a. *porque en invierno teníanos que jalar nosotros mismos la eh --*
b. *las cosas que usábanos pa' **limpiar** from condo to condo.*
c. *And that was hard.* (MNMC-6/310)
- (82) H: a. *Historia pa' atrás viene que hay gobiernos como el imperio romano,*
b. *que controló el **mundo** for a while.*
c. *y mira donde están los romanos ahora.* (MNMC-13/167)

Likewise, open classes such as nouns and verbs are the most frequent categories in English preceding a switch to Spanish. The most frequent word classes in English that precede a switch to Spanish are nouns with 29%, followed by verbs making up 28%, and adverbs comprising 12%.

- (83) J: a. *y me dijo que andaba buscando bathroom,*
b. *and we had an old **bathroom** allá ajuera no? ((afuera))*
c. *y le dije no aquí no tengo bathroom le dije,* (MNMC-6/429)
- (84) R: a. *And then all that **changed** cuando comenzaron a cobrar.*
C: b. *<X xxxxx X>* ((unintelligible))
R: c. *They didn't --*
d. *they didn't use to.. charge,* (MNMC-9/177)

As observed in the preceding section, the high frequency of open classes preceding switches to Spanish and to English suggests that words belonging to these classes often precede CS, in both languages.

Table 25. Word class preceding CS internal to the IU

Word Class	Spanish	%	English	%	Total N	%
Verb	53	31	37	28	90	29.8
Noun	26	15	38	29	64	21.2
Adverb	18	11	16	12	34	11.3
Determiner	18	11	11	8	29	9.6
Conjunction	23	14	4	3	27	8.9
Adjective	5	3	8	6	13	4.3
Discourse Marker	4	2	9	7	13	4.3
Pronoun	6	4	6	5	12	4.0
Preposition	8	5	1	1	9	3.0
Relative	8	5	0	0	8	2.6
Total	169	100	130	100	299	100

Table 26 shows the percentages of the word classes preceding CS, now for CS across the IU. The most frequent word classes in Spanish preceding a switch to English are nouns with 30%, followed by verbs comprising 24%, and adverbs with 18%. The most frequent word classes in English preceding a switch to Spanish are also nouns with 39%, verbs making up 16%, followed by adverbs comprising 15%. Once again, we find the same syntactic pattern, independent of prosodic units or boundaries.

Table 26. Word class preceding CS Across IUs

Word Class	Spanish	%	English	%	Total N	%
Noun	118	30	162	39	279	35.0
Verb	93	24	65	16	158	19.8
Adverb	69	18	62	15	131	16.4
Pronoun	25	6	43	10	68	8.5
Adjective	28	7	30	7	58	7.3
Determiner	22	6	20	5	42	5.3
Conjunction	22	6	7	2	29	3.6
Preposition	6	2	12	3	18	2.3
Discourse Marker	0	0	8	2	8	1.0
Relative	5	1	2	0	7	0.9
Total	388	100	411	100	798	100

The following examples illustrate the most frequent word categories found preceding switches into both English and Spanish, namely, nouns (85) and (86), verbs (87) and (88), and adverbs (89) and (90).

- (85) Q: a. *en inglés dice --*
b. *... ah dicen --*
c. *cuando van a corte,*
d. *before they go to court,*

- e. he has to take a deposition,
 f. so he was busy. (MNMC-2/175)
- (86) U: a. *fui pa'llá*, ((para allá))
 b. *pa' su casa*,
 c. *el otro día*.
 d. well he has these pigeons,
 e. *white pigeons*.
 f. quizás es un millonario,
 g. *o algo*, (MNMC-15/502)
- (87) F: a. *in Denver*.
 b. *Yeah*.
 c. *Dormimos y luego **almorzamos***,
 d. and then we left.
 e. *Yeah*. (MNMC-10/751)
- (88) H: a. *so te tiras de nada*.
 b. so that's how it works,
 c. Pero si le enseñas que tú sabes.
 d. They'll respect you. (MNMC-13/281)
- (89) H: a. *sabemos como es el lugar*,
 b. *so .. vivemos **aquí** --* ((vivimos))
 c. *.. by choice*
 d. *no?*
 e. *Escogimos vivir aquí*. (MNMC-2/313)
- (90) M: a. *Yeah*,
 b. *yeah*.
 c. *and they come*,
 d. *over **here***.
 e. ahí estaban todos los días,
 f. *no*,
 g. *estábanos ahí en sábado*, ((estábamos)) (MNMC-15/537)

In summary, in this part of the analysis CS was categorized based on the word class of the word immediately preceding the switch and also by the word class of the first word produced after the switch. Ten syntactic categories were identified. Results showed that closed classes, such as conjunctions and prepositions, frequently occur as the first word in a switch to Spanish. Likewise, the high percentage of pronouns as the first word in a switch to English evidences that

internal switches to English are also frequently introduced by a closed class. The generalization is that closed classes, particularly conjunctions and pronouns, are the most frequent words as the first word in CS across and internal to the IU introducing a switch to Spanish and to English.

Patterns were also found with regard to the word class of the word preceding a switch both internal to the IU and across IUs. Word classes with the highest frequency in Spanish and English preceding CS across the IU are the same open class categories: nouns, verbs, and adverbs.

In conclusion, closed classes occur more frequently as the first word in a switch, both internally and across the IU in both languages, though in Spanish these tend to be conjunctions and prepositions, while in English they are more frequently (subject) pronouns. On the other hand, open classes frequently occur as the word preceding a switch in both languages, internally and across the IU.

6.5.5 *Word Classes forming CS*

I now turn to the combination of the word classes at CS boundaries. In the following sections, I analyze combinations of classes of words preceding and initiating CS occurring both at IU boundaries and internal to the IU. The question addressed is: Which word classes combine more at CS sites (cf. Poplack 1980/2000)?

In this part of the analysis I focused on the larger word classes (50 tokens or more) that appeared in the data preceding a switch in each language, across and internally to the IU. Along with the words preceding the switch, I considered the larger word classes (10 tokens or more) that appeared as the first word in the other language, that is, the word class of the first word in the switch. Example (91), line b, shows the combination of a verb (*daban*) with a noun

(*anything*) in a CS internal to the IU, and example (92), lines h and i, shows the combination of word classes occurring across IUs, a noun (*plate*) and an adverb (*también*).

(91) J: a. ... *and and the- and the --*
 b. *and you know porque si no nos daban .. anything,*
 c. *then we would threaten in X break their windows,* (MNMC-5/146)

(92) U: a. y... getting all kind of labels y todo,
 b. *you know,*
 c. y *pus ahí*, ((pues))
 d. *hay gente,*
 e. y this othe=r,
 f. *a=h,*
 g. *..little friend that I had,*
 h. *she had anothe=r.. plate,*
 i. también decía, ((decía))
 j. *little alaska.* (MNMC-15/112)

Four word classes in English preceding a switch to Spanish presented the higher occurrences.³³ The most frequent word class is that of nouns with 46%, followed by verbs, with 24.3%, then the adverbs comprising 18%, and pronouns, with 11.5%. All four classes of words in English preceding a switch are combined more frequently with conjunctions (93), adverbs (94), and verbs as the first word of a switch to Spanish as shown in Table 27.

(93) J: a. *no se puede= afinar.*
 b. so then we just played,
 c. *he played the **organ** y cantamos.* (MNMC-9/106)

(94) C: a. *So= the second time le dije,*
 b. how could you do that,
 c. *I said.*
 d. *I want my ta=pe.* (MNMC-6/72)

We can infer from the fact that all four classes of English words combine most frequently with a conjunction and an adverb as the first word in a switch in Spanish that the switch begins as a clause in Spanish.

³³ I do not distinguish here between CS internal to the IU and across IUs due to the small numbers once the data is broken up by word class.

Table 27. Combination of word classes in CS internal and across IUs by language

Preceding Word in English	Total N	%	First Word in Spanish	Total N	%
Noun	208	46	Conjunction	55	26.4
			Adverb	36	17.3
			Verb	33	15.9
			Pronoun	23	11.1
			Preposition	23	11.1
			Determiner	12	5.8
			DM	12	5.8
			Verb	110	24.3
Adverb	82	18.1	Adverb	25	22.7
			Preposition	15	13.6
			Verb	11	10
			Determiner	9	8.2
			DM	9	8.2
			Conjunction	20	24.4
Pronoun	52	11.5	Adverb	20	24.4
			Verb	12	14.6
			Pronoun	11	13.4
			Conjunction	14	26.9
Total	452	100	Adverb	9	17.3
				378	

Likewise, when we examine switches from Spanish to English, four word classes preceding a switch presented the higher occurrences. These four classes are verbs, with 35.6% of occurrence, followed by nouns, comprising 33%, adverbs, with 20.3%, and conjunctions, making up 11.1% of the data. All four classes combined most frequently with pronouns as the first word starting a switch to English (example (95), line d) and secondly with adverbs (example (96), line a), as shown in Table 28.

- (95) A:
- a. *I mean,*
 - b. *cuando les [robaron] a todos a estos indios,*
 - c. *todo su terreno,*
 - d. (H) ***We don't get it.***
 - e. *.. Stupid .. yeah.*
 - f. *y <X dije yo X>.*
 - g. *<@ Oh it's a great thi=ng Q>.*
 - h. *oh a great thing for who=?* (MNMC-14/329)

- (96) J:
- a. *Ye=ah nomás **across the street,***
 - b. *bueno está el el eh- --*
 - c. *cómo le dicen?*
 - d. *center primero* (MNMC-6/565)

The high frequency of these four classes in Spanish combining with a (subject) pronoun and an adverb as the word beginning a switch in English, suggests that switches into English also often begin as a clause.

Table 28. *Combination of word classes in CS internal and across IUs by language*

Preceding Word in Spanish	Total N	%	First Word in English	Total N	%
Verb	160	35.6	Pronoun	54	33.8
			Adverb	20	12.5
			Determiner	20	12.5
			Verb	17	10.6
			Adjective	15	9.4
			Noun	10	6.3
			Conjunction	9	5.6
Noun	148	33	Pronoun	49	33.1
			Conjunction	25	16.9
			Adverb	14	9.5
			Verb	13	8.8
			DM	13	8.8
			Preposition	12	8.1
			Noun	10	6.8
Adverb	91	20.3	Pronoun	32	35.2
			Adverb	11	12.1
			Verb	10	11.0
			Determiner	10	11.0
Conjunction	50	11.1	Pronoun	16	32
			Adverb	14	28
Total	449	100		374	

In summary, word classes in Spanish and English that precede a switch are more often open classes, namely nouns, verbs and adverbs. These word classes combined more frequently with closed classes, namely conjunctions, which start a switch in Spanish, and pronouns, which frequently start a switch to English³⁴.

³⁴ The more recurrent combinations found by Poplack (1980/2000:243, Table 9.2) were determiner and noun (recall that I have not included lone English-origin nouns in the data based here), verb and object NP, clause and subordinate clause, verb and adjective, and subject NP and verb.

6.6 Summary

In this chapter, I have provided an analysis on the nature of the words preceding and initiating CS. The goal was to describe which syntactic categories are switched internally to the IU and at IU boundaries.

We observed that closed classes occur more frequently as the first word in a switch, both internally and across the IU in both languages, though in Spanish these tend to be conjunctions and prepositions, while in English they are more frequently subject pronouns. In contrast, open classes, such as nouns, verbs, and adverbs, frequently occur as the word preceding a switch in both languages, internally and across the IU.

In this chapter, I also analyzed combinations of syntactic categories at switch sites, finding that nouns, verbs, adverbs, and pronouns, preceding a switch in English, are all combined more frequently with a conjunction or an adverb as the first word starting a switch to Spanish. Verbs, nouns, adverbs, and conjunctions preceding a switch in Spanish, were all found to combine more frequently with pronouns and adverbs as the first words starting a switch to English.

The data of this analysis shows that there are a rather large number of points within the sentence at which it is permissible to switch languages (Poplack 1980/2000:245). It seems that a large number of switches occur at clause boundaries. Moreover, in not a single case of the more than 1,000 switches analyzed were violations of the word order of either language observed, as predicted by the equivalence constraint (Poplack 1980/2000, 2001).

Chapter 7. Conclusion

7.1 The study of CS in a community

CS phenomena have attracted the attention of scholars in the last decades. To date much of the study of CS has focused on the syntactic constraints on its occurrence. The goal of this study was to deepen our understanding of CS by providing an in-depth description of the structure of CS through the lens of a prosodic analysis in the observation of patterns of CS.

Studies of CS have emphasized the importance of empirically analyzing linguistic norms in the context of a well-defined community, as opposed to the study of individual linguistic behavior, which may or may not exhibit community norms (Poplack 1980, 1985). In addition to identifying a speech community in which CS is part of everyday discourse, it is indispensable to obtain a large sample of discourse representative of the community in order to carry out the study (Poplack and Meechan (1998:128). These requirements entail that, previous to any linguistic analysis, it is necessary to gain demographic and social knowledge of the community to be able to provide evidence of how CS is used in real-life situations. This approach guided the present study.

7.1.2 The study of CS in New Mexico

New Mexican Spanish is unique among varieties of Spanish in America in that it has been in a constant situation of language contact for over 150 years. Additionally, the variety carries the status of a minority language subordinated to English and thus has limited social contexts in which it continues to enjoy widespread use.

The community studied presents a situation of intense language contact. The town of Mora, New Mexico, and the communities that surround it, was chosen as the main site for this

study for two reasons. In the first place, in the towns of Northern New Mexico, Spanish has been spoken for centuries and English has been the dominant language for more than one hundred and fifty years. Secondly, in Mora I found what appeared to be a relatively stable bilingual community, in which the majority of its members still speak English and Spanish on a daily basis. Most importantly, community members regularly engage in CS.

7.1.3 Data for the current investigation

The data for this study consisted of recorded speech. A total of 28 bilingual Spanish-English bilinguals born and raised in Mora County who were also current residents were recorded. Though levels of bilingual ability varied from speaker to speaker, each of the consultants were considered to be bilingual since all claimed some level of command of—and were observed to spontaneously use—both English and Spanish. Consultants were recruited through a social network technique (Milroy 1987, 1992; Milroy and Milroy 1985). Speakers were sampled based on the social characteristics of sex and age, ranging from 30 to more than 70 years old. Regarding occupation, the consultants were not chosen primarily based on socioeconomic considerations, yet the recorded conversations captured information on education, occupation, income and other indicators of social status. Data was gathered through both individual and group recordings consisting of unguided casual conversations and lasting from 45 minutes to two hours.

7.2 Bilingual usage and linguistic attitudes

Given that the recorded conversations I collected were lengthy, a variety of everyday topics were discussed, including attitudes toward English, Spanish and CS. During the course of the recorded conversation, bilingualism and CS would often eventually arise and, like the other topics, it would be discussed in an informal manner. Several speakers expressed their opinions and ideas about language, offering a window into the use and attitudes about their languages and specific aspects of bilingualism, such as CS.

In this study, rather than relying on a direct method to elicit data about specific aspects of bilingualism, information about usage and attitudes was coded from the sociolinguistic interviews. From the conversations that constituted my corpus data, I extracted every overt remark that could be interpreted as reflecting the use of language and attitudes toward bilingualism, and also remarks on topics related to ethnic identity and cultural practice. Then, I conducted a content analysis, grouping relevant remarks into broader categories about language use and attitudes. Given that I did not predefine any categories about language use or attitudes to be elicited during the collection of my data, and since these topics nevertheless arose during the conversations with the speakers; I created a 'virtual' questionnaire based on the content analysis of overt remarks (Poplack et al. 2006).

Certain patterns regarding the bilinguals' language acquisition and the use according to domain and interlocutor were observed. The issue of ethnic identity collected from the conversations with the bilinguals participating in this study, revealed that bilinguals in this community identified themselves as New Mexicans through the practice of speaking the native language. Ethnic identity also included ideas about community membership that is defined

through a shared language. And, the bilinguals' negative experiences included reasons why they have chosen either to maintain the mother tongue or shift to English.

Regarding the speakers' attitudes towards language, the majority of the attitudes towards NM Spanish were positive, while attitudes towards Mexican Spanish, were also mostly positive. Likewise, some speakers reported negative attitudes from speakers of other varieties with the implication that theirs may not be so good. Concerning the participants' attitudes towards bilingualism or language mixing, some consultants considered it a good quality and recognized that language mixing was present in their community, whereas the ones who valued language mixing as negative, mentioned that it was not the proper way of speaking. Attitudes toward Anglos were expressed as well, some of them conveyed negative feelings rooted in the Anglo dominance, and others expressed positive attitudes regarding their relations with Anglos. Finally, the imminent loss of NM Spanish was a common topic that surfaced in the interviews. The speakers commented on the fate of the dialect and expressed their deep regret about its loss in the younger generations.

7.3 Structural analysis of CS

7.3.1 *Switch type in the Intonation Unit*

In this study, I have provided a structural analysis of CS in relation to prosodic units in terms of IUs, and have suggested that for a more complete understanding of CS behavior in bilingual discourse it is useful to consider prosody, since most switches occur at the boundary of IUs (cf. Shenk 2006).

The following patterns were observed in my analysis. Results regarding the production of types of CS show that CS in the bilingual community of Mora, NM does not occur categorically at prosodic boundaries as proposed by Shenk (2006), but occurs internally, within the IU, at a high rate (20.68%), suggesting that this type of CS may be distinctive of this community. Clearly more community-based studies of CS considering prosodic factors are needed. I also found that the relation between social characteristics of the speakers and the production of CS internal to the IU showed that social factors are statistically significant in CS occurrence, particularly age and (self-indicated) language dominance.

I also analyzed the frequency with which speakers switch into English and into Spanish. Results showed that speakers fairly uniformly switch from Spanish to English and from English to Spanish almost with the same frequency. The switches to Spanish and to English, both for IU-internal and IU-boundary CS, of all the speakers showed that percentages from each language were close to each other, though there may be a slight tendency to switch to English IU internally. These results failed to support the view that these bilinguals have a single base, or dominant matrix language, but instead are in line with a view of CS as the alternation between two languages.

7.3.2 *The switch boundary word and constituency in bilingual IUs*

This study provided an analysis of the nature of the words preceding and initiating CS. The goal was to describe which syntactic categories were switched internally to the IU and at IU boundaries. I analyzed the word class immediately preceding a switch, and the first word initiating CS. I also examined the frequency with which these syntactic categories are produced in each language.

Results showed that closed classes, particularly conjunctions and pronouns, are the most frequent words as the first word in CS across IUs introducing a switch to Spanish, as well as to English. The word classes with the highest frequency in Spanish and English preceding CS across the IU are the same open class categories: nouns, verbs, and adverbs. It was observed that closed classes occur more frequently as the first word in a switch, both internally and across the IU in both languages, though in Spanish these tend to be conjunctions and prepositions while in English they are more frequently subject pronouns. In contrast, open classes, such as nouns, verbs, and adverbs, frequently occur as the word preceding a switch in both languages, internally and across the IU.

I also analyzed combinations of syntactic categories of CS occurring both at IU boundaries and internal to the IU, finding that nouns, verbs, adverbs, and pronouns, preceding a switch in English, are combined more frequently with a conjunction or an adverb starting a switch to Spanish. Verbs, nouns, adverbs, and conjunctions in Spanish, were found to combine more frequently with pronouns and adverbs, as the first words starting a switch to English.

The data of this analysis supports that there is a rather large number of points within the sentence at which it is permissible to switch languages (Poplack 1980/2000:245). The data shows that fragments are well-formed in each language in each case where the switch occurs and word

order remains grammatical, as predicted by the equivalence constraint (Poplack 1980/2000, 2001).

7.4 Future Research

Though the current investigation focused on social conditions and structural factors that might condition CS in a specific bilingual community, the possibility for the analysis of other linguistic factors to explain CS behavior also exists. The study of discourse pragmatic categories such as, syntactic completion and type of intonation at syntactic boundaries in discourse can provide a more complete account of CS structure besides a syntactic account alone.

It is important that future research relies on appropriate community-based corpus data to provide valid materials for the scientific study of bilingual discourse. Corpus-based research on language use in well-documented contexts is essential, since the analysis of the data must be tied to the knowledge of the community (Poplack 1987). Agreement on an empirically verifiable characterization of the constraints that model CS remains an important goal.

Since Poplack's (1980) study of Spanish/English contact among Puerto Ricans in New York, few studies have relied on participant observation of language distribution and use in specific bilingual communities. Also few studies have examined a large number of switches extracted from naturalistic data. It is hoped that there will be more of this type of empirical research of CS behavior.

Appendix A. Transcription Conventions (Du Bois et al. 1993)

UNITS

Speaker Label	A, B, C
Carriage return:	New Intonation Unit
Truncated word	-
Segment lengthening	=
Truncated IU	--
Speech overlap	[]

TRANSITIONAL CONTINUITY

Final	.
Continuing	,
Q intonation or appeal	?

PAUSE

Long (more than 3 secs)	...(N)
Medium-short (1-3 secs)	...
Short (0.2 sec or less)	..

VOCAL NOISES

Inhalation	(H)
Exhalation	(Hx)
Laughter (one per pulse or particle of laughter)	@
Hesitation	uh, unh, um

QUALITY

Laugh quality	<@ @>
Quotation quality	<Q Q>

TRANSCRIBER'S PERSPECTIVE

Researcher's comment	(())
Uncertain hearing	<X X>
Indecipherable syllable	X

SPECIALIZED NOTATIONS

Restart	Capital letter: ABC
False start	<>
Code-switching	Main language: regular letters Secondary language: highlight
Non transcription line	\$
Anonymus name	~XXX

OTHER

Nod (backchannel responses)	mhm, uhuh
Clearing throat	(THROAT)
Other noises	(COUGH), (GULP), (SWALLOW), (SNIFF), (SNORT), (BURP), (YAWN)

Appendix B

Table 29. IU internal CS per language and dominance (in descending order of frequency)

Speaker	Internal to IU	%	To Spanish	%	To English	%	Language Dominance
Berta (MNMC-7)	46	48	21	46	25	54	Spanish
Jimena (MNMC-6)	60	41	29	48	31	52	Spanish
Javier (MNMC-5)	25	40	13	52	12	48	English
Alicia (MNMC-8)	5	39	2	40	3	60	Spanish
Felicia (MNMC-10)	61	32	27	44	34	56	Spanish
Fabian (MNMC-13)	33	31	15	45	18	55	Spanish
Uvaldo (MNMC-15)	10	29	3	30	7	70	English
Moisés (MNMC-4)	9	21	4	44	5	56	Both
Karen (MNMC-2)	6	17	4	67	2	33	English
Jesús (MNMC-3)	6	17	1	17	5	83	Both
Catalina (MNMC-9)	9	16	4	44	5	56	English
Homero (MNMC-2)	4	15	1	25	3	75	Spanish
Marcos (MNMC-9)	13	11	6	46	7	54	Both
Teodoro (MNMC-16)	7	10	3	43	4	57	Spanish
Alejandro (MNMC-15)	3	8	0	0	3	100	Both
Karina (MNMC-1)	2	8	1	50	1	50	Both
Alonso (MNMC-14)	3	7	1	33	2	67	Both
Rolando (MNMC-15)	1	6	1	100	0	0	English
Lorena (MNMC-11)	0	0	0	0	0	0	English
Total	303	45	136	45	167	55	

Appendix C

Table 30. CS at IU boundaries per language and dominance (in ascending order of frequency)

Speaker	Across boundaries	%	To Spanish	%	To English	%	Language Dominance
Berta (MNMC-7)	46	48	26	57	20	43	Spanish
Jimena (MNMC-6)	74	51	38	51	36	49	Spanish
Javier (MNMC-5)	35	56	16	46	19	54	English
Alicia (MNMC-8)	8	62	4	50	4	50	Spanish
Felicia (MNMC-10)	118	62	57	48	61	52	Spanish
Fabian (MNMC-13)	65	62	37	57	28	43	Spanish
Uvaldo (MNMC-15)	21	60	12	57	9	43	English
Moisés (MNMC-4)	34	79	16	47	18	53	Both
Karen (MNMC-2)	28	78	13	46	15	54	English
Jesús (MNMC-3)	29	83	13	45	16	55	Both
Catalina (MNMC-9)	46	79	22	48	24	52	English
Homero (MNMC-2)	20	77	10	50	10	50	Spanish
Marcos (MNMC-9)	95	81	47	49	48	51	Both
Teodoro (MNMC-16)	63	85	31	49	32	51	Spanish
Alejandro (MNMC-15)	32	82	19	59	13	41	Both
Karina (MNMC-1)	25	93	13	52	12	48	Both
Alonso (MNMC-14)	39	93	18	46	21	54	Both
Rolando (MNMC-15)	16	94	7	44	9	56	English
Lorena (MNMC-11)	17	100	8	47	9	53	English
Total	811	50	407	50	404	50	

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CURRICULUM VITAE
DELFINA EVELYN DURÁN URREA
Department of Spanish, Italian & Portuguese
The Pennsylvania State University
University Park, PA 16802
ded188@psu.edu

EDUCATION

Ph.D. (Dissertation), Spanish (Hispanic Linguistics), The Pennsylvania State University (Spring 2012)

Ph.D. (Coursework and Exams), Spanish (Hispanic Linguistics),
University of New Mexico (2005-09)

M.A., Spanish (Hispanic Linguistics), University of Arizona (2005)

B.A., Linguistics, *Honors*, University of Sonora, Mexico (2000)

PROFESSIONAL EXPERIENCE

Graduate Teaching Assistant of Spanish, The Pennsylvania State University (2009-present)

Graduate Teaching Associate of Spanish, University of New Mexico (2005-2009)

Graduate Teaching Assistant of Spanish, University of Arizona (2002-2005)

SUPERVISORY AND COORDINATING EXPERIENCE

University of New Mexico

Spanish as a Heritage Language Program Interim Coordinator (Spring 2008)

Supervisor for 12 Sections of Elementary Spanish as a Second Language (Fall 2005,
Spring 2006)

GRANTS & FELLOWSHIPS

Dissertation Support Grant, The Pennsylvania State University, College of the Liberal Arts, The
Pennsylvania State University (Spring 2009): \$5000.

Center for Language Science, Conference Registration Fellowship, The Pennsylvania State
University (2009): \$200.

Graduate Research Development Grant, The University of New Mexico, Graduate and
Professional Student Association and New Mexico State Legislature (Spring 2008):
\$3000.

Office of Graduate Studies, Research Projects & Travel Grant, University of New Mexico
(Spring 2006): \$500.

Student Research Allocations Committee Grant, University of New Mexico (Fall 2006): \$300.

Research Assistantship, Graduate Program in Hispanic Linguistics, University of Arizona
(2004).

Research Assistantship, University of Sonora, Department of Language and Literatures (1997-
98).