

BA'AX T'AAN HABLAREMOS IN SCHOOL? LANGUAGE CHOICE AMONG
YUCATEC MAYAN STUDENTS IN COBA, QUINTANA ROO, MEXICO

By

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A THESIS PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

UNIVERSITY OF FLORIDA

2004

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ACKNOWLEDGMENTS

First and foremost, I would like to thank my parents for their constant support throughout this process, and for helping me return to Mexico numerous times over the past 5 years in order to pursue my interests and goals. I love them both very much, and I promise to take them there with me someday!

Special thanks go to Kenna Noone for introducing me to this wonderful experience in the first place, and allowing me to teach in Coba for three wonderful summers! Also, Dr. Allan Burns and Dr. Gerald Murray provided excellent advice and encouragement pertaining to fieldwork, and my graduate studies in general—I thank them both!

Finally, this project would not have been possible without the support from all of my friends and “family” in Coba. They are the reason for my continued interest in Mayan language and culture, and I treasure my relationship with their community---*jach dios bo'otik ti te'ex, tak le ulak ja'abo'!*

TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS	iii
ABSTRACT	vii
CHAPTER	
1 INTRODUCTION	1
Structure.....	2
Research Questions.....	3
Quintana Roo	4
Coba.....	9
2 SOCIOLINGUISTIC THEORY	13
Sociolinguistics: A history and description	13
Theoretical background	16
Contact languages/Bilingualism	21
Tourism.....	30
Mayan/Indigenous Education	32
3 RESEARCH DATA FOR OBSERVATIONS	41
School demographics.....	41
Research environment	42
Hypotheses.....	45
Observational Background	46
Factors in language choice.....	48
Observations before school.....	50
Observations in the classroom.....	51
Observations during the break.....	52
Observations after school	53
Summary of observational data	54
4 DATA ANALYSIS FOR INTERVIEWS	62
Interviews	62
Question 1: Which language do you normally speak at home?	63

Question 2: Which language do you normally speak outside of the home?	64
Question 3: How many languages do you speak in total? Which language(s) do you feel most comfortable speaking overall?.....	65
Question 4: How do you feel about the presence of tourists in Coba? Do you feel that you should learn to read, write, and speak English?.....	66
Question 5: Do you like speaking Spanish? Do you feel that it is <i>your</i> language,along with Maya?	68
Question 6: Do you think that you should learn Mayan grammar in the schools, that way you could read and write it?	69
Question 7: How many family members speak Mayan, Spanish, or English?.....	70
Question 8: Would you like to visit the USA, other Spanish-speaking countries, or other Mayan areas?	73
Question 9: What do you want to be when you grow up? Which languages do you think you'll have to know to do this?.....	74
Question 10: Have you been to other places in Mexico, or other countries? If so,what languages did you speak?	76
5 CONCLUSIONS	78
Summary of results	78
Reflections	83
Future research.....	84
Theoretical Contributions	85
 APPENDIX	
A MAP OF THE YUCATAN PENINSULA	87
B MAP OF COBA	88
C OBSERVATIONAL RESULTS FOR THE ELEMENTARY STUDENTS	89
D OBSERVATIONAL RESULTS FOR THE SECONDARY STUDENTS	90
E OBSERVATIONAL RESULTS FOR THE HIGH SCHOOL STUDENTS	91
F FREQUENCY TABLE FOR LANGUAGE USUAGE	92
G CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH SETTING (LANGUAGE VS. AGE)	93
H CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH SETTING (LANGUAGE VS. GENDER)	95
I CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH SETTING.....	97

LIST OF REFERENCES.....	98
BIOGRAPHICAL SKETCH.....	102

Abstract of Thesis Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
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August 2004

Chair : Allan Burns
Major Department: Anthropology

This thesis studies language usage by Mayan students in the town of Coba, Quintana Roo, Mexico. While Coba remains a traditional Mayan community in certain respects, it is also a popular tourist destination for tourists who visit the local archaeological site and nearby beaches in the region. Furthermore, Spanish is the official language of academic and formal settings in this Mexican town. Therefore, linguistic research was conducted, in which I recorded the extent to which Mayan, Spanish and/or English were spoken by elementary, secondary, and high school students during various times throughout the school day. Data were organized according to age, sex, and school setting. A total of 30 students participated in this study, which consisted of 5 females and 5 males from each academic level. Furthermore, each individual was interviewed regarding language preference, ability, opinions on tourism, native-language education, and future goals. The purpose of this study was to provide a general overview of

language use by indigenous youth, including the extent to which Mayan is preserved, assimilated into Spanish, and how often English is used by students within an academic environment.

The research shows that the vast majority of males from all educational levels spoke both Spanish and Mayan in most settings. Mostly Mayan followed in terms of frequency heard among this group at school. The data for secondary females showed a much higher tendency to speak Mayan however, which was followed by both languages. The same held true for the high school girls in certain settings, even though their results were slightly more varied at other times during the school day. Language usage among primary girls deviated significantly from the other participants, as Spanish was heard much more often at school. This result may have reflected the random manner in which participants were chosen in such a small sample size, or might provide implications for native language assimilation among the younger generation in the future.

Recess was the only time in which males and females from all grade levels tended to speak both Spanish and Mayan. In general, setting seemed to be a stronger indicator of language use among the males, while age appeared more significant among the females. With respect to the interview questions, most students reacted favorably to speaking both Mayan and Spanish. They further expressed interest in formally learning English and possibly becoming literate in their native language in the future. Tourists were viewed positively overall, as most participants felt that English and Spanish were necessary in order to succeed in the future.

CHAPTER 1 INTRODUCTION

This thesis is a study of language use in the town of Coba, Mexico. It is located in the state of Quintana Roo, which is part of the Yucatan Peninsula. With a population of around 1800, Coba is both a semi-rural town, and a hub for international tourists who visit the archaeological site there. Most citizens are bilingual in Spanish and Mayan, even though English is becoming an increasingly important form of communication due to the tourist industry. Traditional homes and local stores are situated alongside a Club Med hotel, restaurants, and souvenir shops upon entering Coba. A paved road connects this town to various cities throughout the Yucatan Peninsula.

Based on studying this community over the past few years, I was interested in the fact that indigenous youth still retain their native language, speak Spanish, and also formally learn English in school. As a result, this thesis researches the extent to which Mayan and/or English is heard within a normally Spanish-speaking school system in Coba. The objective of this study is to provide general implications for the degree of native-language maintenance, assimilation into Spanish, and/or English permeation in the speech of students from this town. Data were based on formal observations of 30 students total.

Ten students were studied from the primary, secondary, and high school levels respectively, as language usage of each participant was observed before school, in the classroom, during the break, and after school. Furthermore, interviews were conducted with each individual regarding their opinions on speaking Mayan, Spanish, English,

native-language education, tourism and future career goals. Both observational and interview data were analyzed according to age, sex, and school domain.

Structure

This thesis is divided into five general categories: introduction, theory, observational data, interview results, and conclusions. I provide an overview of personal and academic information about myself in the first chapter, along with a synopsis of my experience with the Yucatec Mayan culture over the past few years. After this structural orientation, I state my research questions and purpose for conducting fieldwork in this particular region in Southern Mexico. I follow with a brief historical overview of the state of Quintana Roo, and conclude this chapter by describing developments in Coba over the centuries.

The second section deals with theoretical trends in the fields of sociolinguistics, contact languages, tourism, and education. This study explores each topic in various interlocking manners, and includes both historical and recent perspectives of these phenomenon by scholars in numerous disciplines. The third and fourth chapter examine the demographics of Coba and its school system, along with results of my data in a detailed fashion. These include the outcomes from both personal observations and individual interviews with each participant. This thesis concludes with an overall summary of my research in the last chapter. I reexamine questions that were answered in this study, in addition to those which remained inconclusive. I finally relate my particular topic of interest to other similar issues in the field of linguistic anthropology, allowing for further research possibilities in the Yucatan Peninsula and other regions in the world.

Research Questions

After three summers of teaching English in Coba, I got to know the town and vicinity very well. I observed how traditional culture coexisted with global economies, and the influence that this phenomenon had on the local young population. Usually students speak Mayan at home and among friends, while communicating in Spanish at school and other formal environments. English is also taught as a formal subject in the secondary and high schools. Many of my students have had experience working in the hotels, souvenir shops, and archaeological site, where Spanish and/or English are used on a daily basis to communicate with the tourists. While I heard each language spoken on the school grounds to various extents, I never paid much attention to formally studying this situation. Therefore, the presence of these three languages in Coba led to my interest in performing a sociolinguistic analysis of this town for graduate research.

I wondered the extent to which Mayan and/or English influenced the speech of school-aged youth in this town. I chose the school system as my focus of interest since I was already familiar with the teachers and students, as it would also provide a controlled environment for gender and age variables. Furthermore, the school day lent itself to specific time frames and “sub-settings,” which included students interacting with each other before and after school, during their break, and in the classroom itself. I could then study whether gender, age, and/or school setting influenced language choice among local students.

While Spanish is the official language of instruction in the primary, secondary, and high schools, I was curious as to the degree in which unofficial tongues (Mayan/English) were spoken by the youth of Coba in this particular environment. The results would provide implications for native language maintenance and cultural preservation and/or the

forces of globalization and mainstream society among indigenous youth in the region. In other words, this project would help reflect the current linguistic situation in Coba as being one of stable, transitional, or replacement bilingualism by observing the speech of students at school. This generation of young Mayans still retain their native language, speak Spanish on a daily basis, and are also exposed to English, which is becoming increasingly important with the development of the tourist industry in the Yucatan. For this reason, I chose this population group as subjects for my thesis research, as I was partially funded by the Tinker Field Grant to conduct the study in Mexico.

Quintana Roo

The present-day Mayan region encompasses the Southern Mexican states of Yucatan, Campeche, Quintana Roo, and Chiapas (see Appendix A). It further extends into Guatemala and parts of Belize, Honduras, and El Salvador. Regional variations in dress, language, and other cultural elements are visible between the modern Maya of the Yucatan Peninsula, Chiapas, and distinct regions of Guatemala and other countries. Currently there are around 1,000,000 Yucatec Mayan speakers who live in Southern Mexico and parts of Belize.

According to Miguel Guemez Pineda (2003: 25-37), nearly 50, 000 citizens of the state of Yucatan remain monolingual in their native language today. Different historical events have affected each Mayan group in unique ways on both local and national levels. For the purpose of this thesis however, I will focus on a brief history of Quintana Roo and its relation to the Yucatan Peninsula/Mexico over the past few centuries. Coba is located in this state, and the drastic changes which have occurred in the region are characterized by the cultural, political, economic, and social situation of its citizens today.

Various sites flourished during the Classic (roughly 300 A.D.- 900 A.D.) and Post-Classic Periods (900-1200 A.D.) of Mayan civilization in the Yucatan Peninsula (Coe 1999). Rather than a unified political entity, each center was governed on a relatively individual basis, which allowed for a certain degree of local autonomy among its ancient inhabitants. Both alliances and rivalries between different regional sites were commonplace, along with close contact with Central Mexican groups during this time. The final collapse of Mayan grandeur around the 13th century was attributed to a combination of factors, which included overpopulation, increased warfare amongst themselves and with peoples of Central Mexico, famine, and ecological changes (Coe 1999). By the time of Spanish conquest nearly 300 years later, the Maya remained scattered in pocketed communities of small-scale political/economic function throughout the Yucatan Peninsula.

Conquest of this region was divided into three phases, beginning in the early 16th century with the arrival of Francisco de Montejo in the Yucatec island of Cozumel (Andrade 2001). After establishing himself in the region however, increased native hostility towards his control lead him to eventually settle in the province of Tabasco. In this second phase, from 1530 to 1535, Montejo and his son attempted other offensive attacks on indigenous populations in their quest for control of this territory. Nevertheless, they were again met with fierce resistance which temporarily halted Spanish domination.

The younger Francisco de Montejo was eventually successful in the last period of conquest, as the north, west, and central portions of the peninsula fell under European control by the mid 1500s (Andrade 2001). According to Kintz (1990), the territory of present-day Quintana Roo was never technically conquered due to lack of resources,

frequent droughts, and poisonous insects. As a result, various Mayan groups which managed to escape foreign power fled to the eastern regions, where they maintained a traditional lifestyle independent of outside influence.

The colonial period was characterized by the establishment of *encomiendas*, in which the native peoples were placed under direct control of local officials in exchange for the “religious protection” of Catholic conversion by the Jesuits (Viliesid 1990). The Spanish crown oversaw all developments occurring in the New World through regional governments which divided the Yucatan into three districts: Campeche, Merida, and Valladolid (Andrade 2001). Present-day Quintana Roo remained a vast jungle wilderness, which managed to evade the same political fate of its neighboring regions in the peninsula.

According to Viliesid (1990), nearly 90% of the Mayan population lost their lives over the next two centuries due to a lack of immunity to European diseases, along with the hardships endured by the many social and economic injustices of colonial rule. Numerous revolts resulted from this situation, in which native communities rebelled against foreign control of their rights. While they were unsuccessful in overthrowing colonial rule, the indigenous population proved a significant force to be reckoned with throughout the centuries that followed.

By the mid-1800s, the ideals of Mexican independence from Spain ironically failed to implement a more humane treatment of the Maya by creole leaders. Rather, the demand for increased taxes and native land usage at the expense of social, economic, and political freedom gradually manifested into a large-scale revolt called the Caste War. This rebellion began in 1847, in which the goal of the Maya was to drive out all *dzulo'ob*

(white/foreign people) from the Yucatan (Dachary 1988). While fighting for the reestablishment of fundamental human rights, an indigenous capital was established at Chan Santa Cruz (modern-day Felipe Carrillo Puerto). It was at this location that the religious cult of the *talking cross* was formed, which drew upon traditional Mayan rituals (Cline 1962) under the guidance of a *nohoch tata* (great father) who controlled all functions of the community.

During the Caste War, the native population made tremendous offensive strides against European presence in the region. They managed to regain control of key locations, and were prepared to eventually seize the city of Merida. However, this time of year coincided with the annual harvesting of corn, which forced the Maya to temporarily halt their military practices. As a result, General Ignacio A. Bravo took over Chan Santa Cruz in 1901, and war ended with continued creole control in the region (Viliesid 1990). Nevertheless, the Maya never officially admitted to defeat. In the opinion of Farriss (1984:19), “perhaps the conquest was not complete until 1969, with the death of the last of the Caste War leaders.” Overall, this uprising remains one of most pivotal moments in the relation between native and white citizens in the historical developments of the Yucatan.

Quintana Roo separated from the state of Yucatan, and became a federal territory in 1902 under the decree of President Porfirio Diaz (Andrade 2001). Military offensives continued on the part of Mexican creoles against Mayan communities scattered throughout the jungle. Native followers of the Talking Cross religious sect were still present, as they established sacred towns in the region under the guidance of El Nohoch Tata. He remained an overall protector and intermediary between the Cross and its

members, even though his political and military powers largely disappeared after the Caste War.

In July of 1916, General Octaviano Solis became governor of Quintana Roo. This position allowed him to make more progressive reforms in the overall function of this territory, negotiate with the Maya, and initiate a more cordial relationship between Mexicans and natives after centuries of hostility. Cooperation between the governor, and Mayan leaders (notably General May) resulted in economic success in the rubber industry, which drew both national and international attention (Andrade 2001). The lumber and fishing industries also enjoyed greater development, in addition to an increased presence of schools in indigenous areas.

Between 1913 and 1935, Quintana Roo was annexed twice by Mexican presidents Carranza and Rubio, who wanted to restore this territory back into Yucatec control (Viliesid 1990). It regained its status as a federal territory in 1935, and remained this way for the next four decades. According to this author, the tourist industry established its roots in the Yucatan with the construction of the first hotels on the nearby island of Cozumel in 1928. By 1950 however, the total population of Quintana Roo was only 26,967 inhabitants (Villa Rojas 1969: 247-48). It wasn't until the initiative of the INFRATUR (later known as FONATUR) development project in the early 1970s, that tourism permanently took hold around the center of Cancun (Viliesid 1990). This led to a dramatic increase in population, which remains evident today.

The territory of Quintana Roo finally achieved statehood status in 1974, becoming the newest state in the Mexican republic (Pi-Sunyer, Thomas, and Daltabuit 1999).

Today, contrasts are apparent between the northern and southern areas of this state. Based

on first-hand observations and local accounts, Punta Allan unofficially marks the boundary between the touristic north, and the more traditional/underdeveloped south. In *Tourism and Modern Society in Quintana Roo, Mexico* (1999), Pi-Sunyer, Thomas, and Daltabuit summarize both the positive and negative aspects of this recent development on the local population. On the one hand, this industry has brought overall economic success, modernization, increased employment opportunities, and a sense of globalism to the region.

Nevertheless, linguistic/cultural assimilation is apparent in many formally traditional Mayan communities. While this may be viewed as either a positive or negative phenomenon depending on various perspectives, the amount of citizens (especially indigenous) which have thoroughly benefited from these recent developments has remained unevenly distributed. Many locals continue to earn minimal wages, in addition to an overall increase of geographic, social, religious, economic, and political factionalism which is evident throughout many parts of Yucatan and Quintana Roo today. These authors conclude by emphasizing the overall mixed effects that tourism has had in the peninsula, while allowing for speculation as to what the future will hold for its native inhabitants in the years ahead.

Coba

Coba is a well-known site for tourists and archaeologists alike (see Appendix B). It is distinguished by the presence of five lakes in the vicinity, and a multitude of *sacbeo'ob* (white paths) which were used as a connection between the monuments of the ancient city. The modern town is now built around most of Lake Coba, and the tops of some pyramids are easily seen above the trees when one travels on the main road throughout

this area. Most of its inhabitants are Maya, even though a small number of Mexicans have recently moved to this location in order to teach in the school system. In many ways, Coba is characterized by both traditional and modern elements in terms of its history and developments which have occurred over the past centuries.

According to Benavides (1981), the first settlements in this region occurred during the Pre-Classic period, which lasted until the year 400 A.D. He believes that the accessibility of water in the lakes was a primary factor in the original establishment of Coba, as agriculture quickly developed among these ancient Maya. While the author states that the Classic period in Coba existed between 400-1100 A.D., this era can be further divided into three parts: the Early, Middle, and Late Classic periods. Overall, the pre-Columbian society of Coba was divided into a ruling elite, artisans, and commoners (Kintz 1990). Furthermore, the elite bloodline was passed from one family member to another, particularly on the father's side.

Both regional and distant trade occurred between the inhabitants of this center and other indigenous communities, in which a variety of goods were exchanged throughout the Mesoamerican region. Religion played a dominant role during the pre-Columbian period, as Coba was set on an elevated platform which distinguished this religious center of the city from its secular surroundings. Kintz (1990) adds that pyramids, temples, palaces, and alters were constructed at the order of the elite, as the commoners resided on the outskirts of these central monuments. Various gods were worshipped, as the famous ballgames and other religious ceremonies were conducted in order to appease them. They were especially prevalent during periods of economic, environmental, and political

instability, even though contact with the spiritual world formed the basis of this society on a daily basis.

During the Early Classic (from 400-600), both political and economic power became centralized under the leadership of this site over surrounding communities. The two centuries between 600-800 A.D. encompass the Middle Classic Period, which was characterized by population increases and subsequent geographical expansion. During this time, both *sacbeo'ob* and stelae (large slabs of stone erected to record important dates, events, and rulers) were constructed around this center. Additionally, many famous archaeological monuments, such as Nohoch Mul and Macanxoc, arose within this time frame (Benavides 1981). An overall increase of *sabeo'ob*, stone buildings, and regional control occurred during the Late Classic phase, as development reached its pinnacle in Coba.

From 1100 onwards, Benavides (1981) notes how new monuments in this site begin to assume features from other nearby centers, such as Tulum and Mayapan. Both of these latter cities flourished during this Post Classic period, and became some of the more prominent areas of ancient Mayan civilization. While Coba still retained a certain degree of centralized power in the region, its former prestige eventually diminished over the following centuries. This center remained hidden amidst the Yucatecan jungle for over 300 years until its rediscovery in the mid-nineteenth century. Throughout the twentieth century, numerous archaeologists have studied this site in order to better understand its history, preserve the ruins, and conserve the overall ecological environment surrounding the modern town.

Modern settlement of Coba began in the 1950s, even though it was still isolated. There was neither a paved road, nor an *ejido* (community-owned land) in the town at this time. As the years passed, the Coba grew significantly. In 1971, a school was built and more families moved to this location from nearby towns. An ejido was created the following year, which constituted 3,800 acres of land (Kintz 1990). Coba began to have increased contact with the outside world throughout the decades, as a paved road was constructed, electricity was utilized by local inhabitants, and a Club Med hotel (Villas Arqueologicas) and souvenir shops were built for the tourist industry pertaining to the ancient ruins (Daltabuit and Pi-Sunyer 1990; Kintz 1990: 78-79; Daltabuit 1996:22). As of 1996, Daltabuit reported that nearly 40 percent of the working age population in Coba earns some income from tourism, which has likely increased over the years. Overall, a co-existence of both modern and traditional linguistic, cultural, religious, and economic elements remains apparent in this town today.

CHAPTER 2 SOCIOLINGUISTIC THEORY

This chapter examines sociolinguistic theoretical issues, and their relation to my study of language usage by indigenous children in a multilingual environment. I will begin with a brief description of sociolinguistics, and distinguish this approach from the more neutral field of descriptive linguistics. A comparison of various theoretical viewpoints relating to the general history of sociolinguistics will follow, in addition to theories dealing with contact language phenomenon/bilingualism and tourism. I will end this chapter by focusing on theoretical issues pertaining to language usage in an educational realm, since my research took place in the school system of Coba, Mexico.

Sociolinguistics: A history and description

In *Aspects of Language and Culture* (1990), Eastman summarizes how sociolinguistics examines language usage in its behavioral context. This field analyzes real world interactions by taking into account the relationship between the speaker and listener, subject matter, and contexts in which conversations take place. Ralph Fasold (1984) elaborates by summarizing that the essence of this field depends on two linguistic facts: speakers are able to express themselves in various manners (even when referring to similar concepts), and language usage reinforces both individual identity and relationships between participants in any given conversation. Both tasks normally occur simultaneously and in a subconscious manner, as language satisfies the need to communicate within multiple societal realms.

Discourse analysis relates to sociolinguistics by studying the implications of lexical and syntactic choices in a subject's speech, and how this coincides with the (conventional or flexible) underlying rules governing interactions within a particular society.

Sociolinguistics describe how the results of discourse analysis relate to differences in societal structures found in everyday life. Gender, age, socioeconomic status, and social hierarchies in academic/professional spheres are common factors which contribute to conversational variations among human beings.

Sociolinguistics emerged in the later part of the 20th century, and is now composed of three branches: the ethnography of communication, linguistic variability, and language planning (Eastman 1990). Dell Hymes developed a descriptive method for describing language use in a particular speech community for the first branch. This entails various components, such as speech community, context, style, tone, norms of interaction, and outcomes that are subconsciously factor into a conversation.

William Labov's focus on linguistic variability relates to modifications that speakers make in language usage (normally in the direction of prestige and power) when interactions occur between individuals of different social classes. Moreover, ethnicity, geographical location, sex, age, and status factor into adjustments made by individuals under various contexts. Language planning is a form of applied sociolinguistics. Eastman (1990) states that this field makes decisions in determining the appropriateness of a particular language in varied speech environments. This is especially prevalent in governmental and educational realms of language policy and development.

On the other hand, traditional descriptive linguistics developed earlier than sociolinguistics, and continues to focus on the technical aspects of language usage by its

speakers. Scientific descriptions of phonemes (sounds), morphemes (units of meaning), lexicon (vocabulary), syntax (sentence structure), and semantics (meaning) are transcribed and analyzed from languages all over the world. The combination of each variable results in an organized grammar reproduced in an orderly fashion by its speakers. Linguists examine points and manners of articulation in vocal production, and have formulated a standardized International Phonetic Alphabet (IPA) which accounts for all possible human sounds that can be produced in a given language. Furthermore, Eastman (1990) points out that descriptive linguistics accounts for emics (perception of native sounds in one's own language), and etics (anything a native speaker actually says) in linguistic production. In summary, this field analyzes the grammatical rules which humans subconsciously use in order to successfully communicate in a given language.

Some scholars feel the need to distinguish sociolinguistics from the sociology of language. In their opinion, the former is a branch of linguistics which focuses on how social contexts influence language usage. The latter is categorized in the field of sociology, as language provides a stepping stone for a greater analysis of societal operation. Swann et. al. (2000) continue their explanation by using the terms *macro-* and *micro-sociolinguistics* as an alternate distinction; whereas *macro-sociolinguistics* examines broad societal issues as a result of language (greater emphasis on society), *micro-sociolinguistics* focuses on specific aspects of conversations within certain contexts. A greater emphasis is placed on in-depth linguistic analysis in the latter case.

Ralph Fasold (1984, 1990) further studied this distinction by writing two books, which were titled *The Sociolinguistics of Society* and *The Sociolinguistics of Language*. In both volumes however, he delves into fundamental sociolinguistic issues such as

language choice, maintenance, shift, societal multilingualism, diglossia, and education. With regard to these particular topics, Fasold (1984) elaborates by stating that “All of them are concerned with the social meaning of choices among linguistic variants and so are also consistent with the concept of sociolinguistics”. While theoretical and methodological differences do exist, a significant overlap between these two distinctions is apparent in many respects. Therefore, most scholars prefer the general term *sociolinguistics* when referring to the relation between societal factors and language usage.

Theoretical background

For this portion of general sociolinguistic theory, I will summarize certain trends which have had a significant impact on this field throughout the 20th century. Theoretical contributions from Dell Hymes, William Labov, Noam Chomsky, Ralph Fasold, Edward Sapir, and Benjamin Lee Whorf are mentioned. Each of these linguists provide a unique approach to the relationship between language, thought, and society. Furthermore, their beliefs are compared and contrasted with each other in order to provide a comprehensive framework for sociolinguistic thought.

In *Foundations in Sociolinguistics* (1975), Dell Hymes recommends ethnographic methods for performing linguistic research. In his view, one must take the communicative context where language occurs into consideration rather than analyzing language as an independent factor from its surroundings. He claims that cultural beliefs and values, history, interpersonal relationships between subjects, and social institutions all contribute to language choice in any given conversation. Hymes elaborates by using the example of “I’m hungry” spoken by two different people in separate contexts. In the first scenario, a beggar makes this remark in the hopes that someone will give him food or money to

survive. In the latter case, as child states that he is hungry in order to avoid going to bed. Technically, the two subjects employ the same grammatical phrase from a purely linguistic perspective. However, contextual variables distinguish this phrase spoken by the beggar and child.

As an isolated term, “I’m hungry” directly relates to wanting something to eat at that moment. When communicative context is added however, these words carry different connotations that are not explicitly stated. Visions of general survival on the streets in the former situation, and stubborn/procrastinating behavior implied in the latter case alternate the meaning of these words. Other specific contextual factors include appropriateness to talk, remain silent, take turns, interrupt, express emotions, etc. (Swann et. al. 2000). In summary, elements of the ethnography of communication, such as contextual situation, norms of interaction, and the acquisition of the knowledge to communicate, form vital components to Hyme’s approach to conducting ethnographic linguistic research.

On the other hand, William Labov actually conducted research and stressed more quantitative methods when examining language usage among various speakers. Rather than emphasizing ethnographic approaches and the contextual importance of interaction, he focused on speech variables in relation to the stratified elements within a particular community (Eastman 1990). To him, linguistic variables correlate to socio-economic status, ethnicity, age, sex, geographic location, and interpersonal relationships. Labov further distinguished between ‘overt’ and ‘covert’ prestige (Swann et. al. 2000). The former compares linguistic variants to the standard speech of upper middle-class realms, including academic institutions, and the media. The latter focuses more on solidarity

rather than status, as lower and working-class speech is sometimes retained as a linguistic rebellion to the conventional norms of other socioeconomic groups.

As opposed to language stability, Labov concentrates on motives for change and evolution in hierarchical societies. For example, he focused on the pronunciation of New Yorkers, and how the post-vocalic /r/ is normally dropped from their speech. Participants repeated the utterance “forth floor” when asked for directions within a department store (Labov 1966). He studied how lower-class New Yorkers made a conscious effort (hypercorrection) to include the /r/ in order to gain prestige, since upper-class citizens tended to retain this sound. In other words, Labov placed great importance on linguistic differences due to social variables, which gradually tended to follow the speech of upper-class citizens in a particular society. Instances of overt prestige were especially true in his studies of working-class citizens, who tended to employ higher forms of communication in order to emulate upper-class society. He correlated phonological, lexical, and syntactic choices with social stratifications in order to quantitatively measure language adaptation and change among members of various speech communities.

Noam Chomsky is a notable intellect who founded the concept of generative linguistics in 1957 (Swann et. al. 2000). He wrote *Syntactic Structures* that year, in which he argued for the existence of an abstract ‘universal grammar’ apparent in every language. To him, children are able to acquire any language due to a predisposition in the human brain which operates independently of any social factors. This is also referred to as the Innateness Hypothesis (Eastman 1990). A child is inherently able to produce sounds, words, and sentences without having to take into account issues of identity, social

relationships, or subconscious rules of interaction/manners. In other words, language was seen as a separate entity from its contexts in which it was spoken.

Moreover, Chomsky felt that a true understanding of any language came from analyzing the rules that govern its structural features, rather than studying the surface grammar itself (Eastman 1990). As a result, importance was placed on patterns which govern language production in different societies. While he emphasized that all people are born with a predisposition for an underlying grammatical structure, he accounted for linguistic diversity by noting the innovative ability of human beings to create a multitude of languages which are mutually unintelligible throughout the world today (1966:59).

Chomsky's emphasis on the psycho-biological aspect of linguistics actually led to an increase in sociolinguistic thought during the decades that followed, as other linguistics stressed the significance that society and environment play in verbal interaction. According to Fishman et. al. (1971), a social approach to linguistics "accounts for what can be said, by whom, to whom, in whose presence, when and where, in what manner, and under what circumstances". This is a distinct contrast from Chomsky's focus on the actual technicalities of producing linguistic structures that all human beings possess.

Another theoretical view pertaining to sociolinguistics is that of the Sapir-Whorf hypothesis. This term arose from Edward Sapir and Benjamin Lee Whorf in the early twentieth century, when they theorized that one's native language determines perception of the world. To them, thinking does not produce language. Rather, the mind is influenced by language (Whorf 1956). The Sapir-Whorf Hypothesis elaborates on

previous linguistic concepts by claiming that different languages actually affect how one views the world.

According to these men, similar objects and events will be interpreted in various manners, depending on the grammatical and semantic structure of each language. Whorf (1956:213) described this linguistic power with the analogy that “it is almost like putting on a special pair of glasses that heighten some aspects of the physical and mental world while dimming others”. Since Sapir and Whorf both studied American Indian languages, they formulated this hypothesis based on notable contrasts between the frameworks of those speakers from those of English.

For example, Whorf compared the usage of nouns and verbs in Hopi and English. The latter classifies nouns as people (girl), places (New York), or things (chair), while verbs are anything that someone does (eat, swim, walk). Hopi however, does not make the same distinction. Rather, nouns and verbs are separated according to time of duration. The words ‘lighting’, ‘flame’, and ‘puff of smoke’ are considered verbs in this language, since their time of duration is relatively short (Swann et. al. 2000). On the other hand, ‘cloud’ and ‘storm’ are viewed as nouns, due to the longer duration period of these events.

Debate exists today between followers of Chomsky’s theory of generative linguistics, and those of the Sapir-Whorf hypothesis. On one hand, the former places much less emphasis on “surface grammatical differences” between languages, rather than the “deep structure” for linguistic capacity found in the human brain. On the other hand, believers of the latter hypothesis feel that these “surface grammatical variations” are significant enough to determine perception between speakers of different languages.

Swann et. al. (2000) concludes that most linguistics believe in a weaker form of this hypothesis; rather than completely predict individual frames of mind, languages merely influence them. This is supported by the fact that people are able to view events from various perspectives other than their own, and that the social environment is a significant factor in the possible formation of new ideas and mindsets among all individuals.

Contact languages/Bilingualism

In nearly every society around the world, languages come into contact with each other to various extents. This may result from colonization, technology, tourism, and other forms of inter-group communication. In many cases, bilingualism is a common phenomenon, in which speakers possess differing levels of mastery over two or more languages. Linguistic borrowing and code-switching often occur among bi- or multilingual speakers, in which influences from each language appear in the same speech act. These interferences may occur on phonological, morphological, syntactic, and/or semantic levels, as languages can be combined in a multitude of ways. The extent of borrowing and code-switching has further implications for language stability, shift, and death within individual communities. Factors such as population of speakers, cultural/linguistic pride, and institutional support play significant roles in the continuation or disappearance of a particular language in any society.

Fredric W. Field (2002) defines the term *borrowing* as the integration of forms from a donor language into a recipient language. In other words, borrowing occurs when a foreign item is adopted into the speech of a different language. Some examples include the use of “tortilla,” “patio,” and “siesta” which have been integrated into the English language from Spanish. He continues by stating that in situations of extensive bilingualism, free morphemes (lexical items) are usually the first to be borrowed,

followed by bound morphemes (prefixes, suffixes). Moreover, phonological characteristics normally adapt to the sounds of the recipient language when they are borrowed. For example, most English speakers pronounce “burrito” without the trilled /r/ that is characteristic of Spanish pronunciation. Finally, Romaine (1995:64) asserts that syntax is often the last feature of a language that is adopted by other speakers.

Haugen (1950:211-220) elaborates on the concept of borrowing by dividing it into three classes, based on phonological and semantic characteristics. *Loanwords* entail the incorporation of form and meaning from one language to another, which may or may not include phonological changes from its original form. The example of “burrito” mentioned above fits into this category, along with the Spanish word for blue (azul), which has been adopted into the speech of modern Yucatec Mayan speakers. The former language places the stress of azul on the last syllable however, while the latter usually stresses the first syllable in order for this word to blend in with traditional Mayan pronunciation. Burns (1983) provides another example by adding how this particular language contains many Spanish loanwords which use the two consonants, *r* and *n*, which do not exist in the Mayan alphabet.

Loanblends consist of combinations of terms from both the donor and recipient language. Hartman and Stork (1972:133) use the example of “co-worker” to illustrate one of many loanblend forms. The expression “dios bo’otik” is Mayan for “thank you”, which is another example of a loanblend between Spanish and Mayan terminology. Finally, *loanshifts* entail the representation of a foreign concept by a native form (Field 2002). This may include *calques* (loan translations) such as “Übermensch”, which is literally translated from the English word “superman” into the German language (Crystal

1991:205). Another instance of loanshifts are *semantic extensions*, in which a particular meaning is extended to include new concepts within a language. Silva-Corvalan (1994:170) provides the example of “grados” (degrees) in Spanish, which is sometimes used to refer to grades in English (notas in Spanish), since they are similar in appearance. This example is also known as a *false calque*, since its meaning in Spanish does not originally translate into the same concept in English.

Borrowing can be attributed to numerous social and linguistic factors, which any speaker may subconsciously perform when interacting with others. Thomason and Kaufman (1988:65ff) state that intensity of language contact, number of speakers of each language, and cultural/political hierarchies of different groups of people are some social explanations for this occurrence. In situations of daily interaction between two or more languages, higher instances of borrowing are expected to occur. In the same manner, cases of mutual or one-sided borrowings are partly dependent on social dominance or equality (along with population differences) between two cultural/linguistic groups.

Moreover, Field (2002) quotes various linguistics who provide further reasons for borrowing, which include convenience and facilitated intergenerational communication. In certain cases, a particular word from one language might easily blend into another in the flow of conversation in terms of its pronunciation and/or meaning. Over time, it may be adopted into the natural speech of a certain group. Since words and meanings often change throughout time, borrowing of new linguistic forms also provides a useful tool against misinterpretations between speakers of different ages.

In terms of linguistic factors, borrowing is determined by both frequency and equivalence (Van Hout and Muysken 1994:42; Weinreich 1953:61). The former refers to

the extent to which certain items occur in the donor language. These authors assert that if a certain form (especially nouns, verbs, and adjectives) is highly used in one language, it has a greater chance of being incorporated into another. On the same note, a lexical item that often occurs in a recipient language will usually resist the incorporation of a corresponding form from the donor. With regard to equivalency, lexical gaps in the recessive language facilitates borrowing from the donor, which may provide a specific or uniquely descriptive terms that did not previously exist in the former language. If however, lexical and/or structural equivalency is found between two languages, the social factors mentioned above will help determine whether or not (and to what extent) borrowing might occur.

Swann et. al. (2000) defines *code-switching* as the use of two or more languages during the same conversation. This may even include shifting languages during a single utterance, which normally occurs at specific phrases and clauses within a particular sentence. This author elaborates on the concept of code-switching by explaining the reasons why a speaker would alternate between languages. He stresses that bilinguals do not shift from one language to another in a random or disorganized manner; rather, it is performed in order to fulfill certain functions in a conversation. One function may be to establish a certain social identity with whom one is interacting. This applies to all situations, ranging from strangers who meet for the first time to close family relationships.

In the case of the Yucatec Maya, it is very common for friends and relatives to switch from Spanish into their native language when discussing personal issues as a means of strengthening cultural bonds and indigenous identity. Giles (1991) refers to The

Communication Accommodation Theory (CAT) regarding speakers who may be inclined to alter their speech and speaking style in order to gain social approval from the listener, increase communicative efficiency, and maintain a positive social identity with their audience.

Carol Myers-Scotton, Jan-Petter Blom, John Gumperz, and Susan Gal are noted linguists who have focused on the concept of code-switching throughout the latter half of the twentieth century. While their studies have dealt with language issues in Europe and Africa, many social and linguistic reasons for this occurrence are applicable to any bilingual society. For example, they observed how code-switching relates to situations of *diglossia*, in which the social environment influences which language will be spoken in various settings. Blom and Gumperz (1972) discuss two Norwegian languages, and how one is associated with family, friends, and local activities, while the other is spoken during official/formal transactions and in the educational realm. This same distinction roughly holds true for the relationship between Spanish and Mayan.

When Gal (1979) studied the use of Hungarian and German by bilinguals, she noticed that a shift into another language may add emphasis to a point, and make a particular statement even stronger and/or personal. For instance, bilingual mothers often switch into their native language when disciplining their children or expressing heartfelt emotions, since their point comes across even stronger when communicating in their mother tongue. An outside language may not have quite the same impact when one speaks with deep feelings and high intensity. Swann et. al. (2000) also point out that code-switching does not necessarily have to relate to emotion in a particular situation. Speakers may shift between languages in order to maintain the flow of a conversation; a

particular word or phrase from another language may come to one's mind faster, and be more convenient to express at that moment. It doesn't necessarily mean that intense feelings or calculated choices were involved in that shift.

Both Gal and Myers-Scotton distinguish between *marked* and *unmarked* language choices when code-switching. The former occurs when one speaks a language that is not expected in a particular context, while the latter appears when a speaker uses the more "appropriate" and predicted language in a given situation. Instances of marked choices may be used to increase social distance, or to express anger or authority. Myers-Scotton summarizes this concept with the following statement: "Put aside any presumptions you have based on societal norms for these circumstances. I want your view of me, or of our relationship, to be otherwise" (1993:131). On the other hand, unmarked choices may occur with changes in topic matter, or when someone who only speaks a certain language enters into a conversation with speakers of other tongues. A shift into a mutually intelligible language is expected in this case.

Finally, the extent of code-switching also depends on linguistic factors, in addition to the social elements mentioned above. While bilinguals who are fluent in more than one language have the ability to choose which one they want to express themselves in, different variables are considered when a speaker interacts with others. In many instances, certain vocabulary/grammatical features and concepts either differ or are non-existent from one language to another. Therefore, one might shift in order to convey a message in the most natural manner possible.

This is especially true in cases of diglossia, since a particular language is associated with certain contexts and domains. It follows that a speaker would have a stronger

vocabulary, and be more capable of conversing in the language normally used in that particular domain. When one speaks a different language while referring to subject matter associated with that context, it is quite possible for code-switching to occur among bilingual participants.

Swann et. al. (2000) describes *language maintenance* as “the continuing use of a language in the face of competition from a regionally and socially more powerful language”. On the other hand, language shift entails a replacement of one particular language by another in a given community. The former is still used in a limited manner, while the latter serves as the primary means of interaction within a society. *Language death* however, occurs when members of a community are the last ones to speak a certain tongue. Once the endangered language disappears in that area (via death or assimilation by its speakers), it becomes extinct and no longer used by anyone in the world.

Campbell and Muntzel (1989) distinguish four types of language death, along with their causes and effects. A *gradual manner* of language death first entails a period of language shift in a bilingual environment before its eventual disappearance. Once the former language becomes fully replaced, speakers become monolingual in the new tongue. The authors refer to the replacement of Gaelic by English in some areas of Scotland as one example of gradual death. On the other hand, a *sudden death* occurs when an individual is the last member of a speech community to speak a certain language. This person remains monolingual in their native tongue, which suddenly ceases to exist after he/she dies. According to Swadesh (1948), Truganini was the last speaker of the now extinct Tasmanian language.

A *radical death* relates to severe political repression by one community over another. In this case, a particular language suddenly ceases to be spoken out of self-defense from further consequences by their oppressors. Again, Campbell and Muntzel (1989) refer to the 1932 massacre of indigenous populations in El Salvador, in which survivors stopped speaking their native languages for fear of being identified as “Indians” in that country. Finally, ‘*bottom-to-top*’ death consists of the disappearance of a language from everyday use, even though it is still spoken in religious ceremonies and other traditional realms. While Latin “lives” today through Spanish, French, and other Romance languages, its traditional form remains limited to religious and academic spheres of society.

A decrease in domains in which a particular language is spoken in favor of another characterizes the general phenomenon of language shift. The concept of diglossia is intimately related to this issue, as language usage becomes influenced by various contextual domains. Normally, the minority language is reserved for interactions among friends, family, in traditional folk tales, and in religious environments. The dominant language is usually most prevalent in formal interactions, media, government, and education. Language shift is a gradual process from bilingualism to monolingualism, which might span several generations. As a result, individuals may possess varying levels of competence in either language at a particular time. Dorian (1981) has categorized three general types of bilingual speakers: *young fluent speakers, semi-speakers, and passive bilinguals*.

Fluent bilinguals are fully competent in both languages, even though minor influences from an outside language may occur among younger generations. Semi-

speakers however, have a much more limited ability to speak their “mother” tongue. They can communicate in selected realms, although many deviations from the standard form are apparent at this stage of bilingualism. Finally, passive bilinguals completely understand their ancestral language, but are unable to productively speak it when interacting with others. Giles et. al. (1977); Appel and Muysken (1987: 32-45) have summarized those factors which explain language maintenance, shift, and death into four broad categories: economic, demography, status, and institutional support. These are usually intertwined in various manners, and function as pieces of a greater ethnic/cultural situation of a particular society.

In terms of economics, industrialization and modernization lead to urban migration and an overall tendency for outside influences to seep into formally isolated communities. This has implications for more nationally/internationally prestigious languages to co-exist with, or take the place of regional tongues in certain areas. Generally, languages with large numbers of speakers have a greater chance of survival than those with more limited populations. Greater opportunities for endogamy in larger communities further strengthen the possibility for continued usage of an ancestral tongue when passed on to future generations. Moreover, geographical distribution accounts for the extent of language preservation. For example, Miguel Guemez Pineda (2003: 25-37) states how Yucatec Maya is the second most important language in Mexico in terms of numbers of speakers. While Nahuatl comes in first with its speakers representing 22.7% of the national population, Maya follows with 13.5%, as it is widely spoken throughout the entire Yucatan Peninsula.

Status is another factor which helps characterize the manner in which an individual chooses to speak. Historical achievements, sacred texts, and various cultural traditions relate to how a person views their language in the face of globalization in the world today. Obviously, languages with lower statuses have a much higher chance of shift or death than those which are thought of more favorably by society. Institutional support is a final factor which helps determine the survival of a particular language. The extent to which the government, media, education, and religion support indigenous languages in relation to more standardized and official tongues proportionally relates to preservation, shift, or death in the future. In this sense, Yucatec Mayan maintains relatively high status and institutional support with respect to other indigenous languages in the world.

Tourism

Various debates have centered around the idea of tourism, and its numerous effects on both native communities and global economies throughout the world. On one hand, some theorists believe that tourism results in the commoditization of inauthentic cultural practices (Medina 2002:1-15). In this manner, the very fact that items from traditional communities are sold for a profit render those products as being less genuine than those which are used away from the public sphere. According to MacCannell (1976), tourists search for “authentic differences” when visiting local populations, and misinterpret these foreign representations as a true reflection of their culture. He adds that while host communities do commoditize certain traditions and activities for the sake of tourism and “staged authenticity”, they also insulate and protect other elements of their heritage away from visitors. As a result, this portion of their identity remains sacred and shared only among native members of that particular society.

Greenwood (1977) extends this argument by claiming that practices performed for tourists and monetary profit actually leads to feelings of apathy and meaninglessness on the part of the host population. As opposed to other cultural elements which are hidden from public spectacle, those which foreigners perceive as truly genuine really aren't authentic at all. Finally, Ryan (1996) speculates on the formation of a distinct "tourist culture" that emerges as a result of interaction between locals and visitors. This phenomenon does not completely reflect either community, but rather forms a hybrid of authentic and commoditized features which are commonly seen throughout the world.

Nevertheless, other scholars disagree with the notion that tourism results in a sort of "produced" culture. Rather, Cohen (1988:382) theorizes that the sale of native representations for profit "actually preserves traditions by generating demand or attributing value to them". To him, this idea is especially pertinent to the realm of folk arts and crafts, where modernization and globalization have seeped into the local environment of third world countries. Indigenous characteristics become revived and maintained through the tourist industry, which might otherwise disappear without the consumers' desire for exotic and foreign cultural products.

In the same article, Cohen suggests that tourist performances and/or souvenir items may even become adapted into local culture over time in a dynamic manner. This concept of "emergent authenticity" (1988:371-386) pertains to the influence of the tourist industry in the incorporation of new ideas and materials into genuine representations of indigenous society. While Adams (1996:11) agrees with Cohen's belief in the joint construction of authenticity by tourists and locals alike, she adds that newly formed representations of culture actually stem from ancient conceptual patterns and practice.

This viewpoint is based on firsthand observations of local communities, and the opinions of her subjects. Overall, the theories mentioned above may be broadly categorized into “essentialist” and “constructivist” approaches (Medina 2002:1-15). While the former assumes a more static and dichotomized view of tourism vs. authentic culture, the latter emphasizes the flexible and dynamic aspects of this intricate relationship.

Tourism established itself in the Yucatan Peninsula during the latter half of the twentieth century. With the development of Cancun in the late 1960s, the states of Quintana Roo and Yucatan have experienced an influx of visitors who travel to the beaches and ancient ruins of the region. As a result, the area’s demographic, cultural, political, and economic makeup have significantly transformed over the past few decades. A brief history of the peninsula and the town of Coba are explored with more detail in the first chapter, along with the effects of this industry on local communities. In summary, the presence of foreigners and globalized markets has been met with mixed results. While certain sectors of society have been successful in adapting to a more commercial environment, various consequences have surfaced in response to this phenomenon which characterizes much of Southeastern Mexico.

Mayan/Indigenous Education

In 1951, UNESCO (United Nations Educational, Scientific, and Cultural Organization) summoned a committee of specialists to investigate the issue of language usage in educational realms throughout the world (Swann et. al. 2000). A report of this committee appeared two years later, which included suggestions regarding the importance of vernacular languages (aka native languages of socially/politically dominated groups in a particular country) in academic environments. For example, it states that every student should begin a formal education in his/her mother tongue, and

stressed the possibility of acquiring a second language without necessarily using it as the medium of instruction in the school system.

While UNESCO has made significant strides in bringing issues of native-language education to a forefront, some criticisms of this report relate to a general lack of teachers trained to teach vernacular languages, along with shortages of reading materials in many areas of the world. Furthermore, other critics question the adequacy of local tongues for educational purposes in comparison to more “developed” languages which normally contain more scientific and technical vocabulary and concepts (Swann et. al. 2000). Moreover, some members of local populations actually prefer their child to be educated in the official language of a particular country, as this is linked with a better chance of socio-economic success for future generations.

As a result of conflicting viewpoints pertaining to UNESCO, various theories and models for bilingual education subsequently emerged among scholars. Macnamara’s ‘balance hypothesis’ (1966) implied that learning more than one language actually functions as an inverse proportion, since greater oral/literary skills in one will result in lesser proficiency in the other. He recalled many instances of children from immigrant families and/or minorities who did poorly in transitional bilingual programs. Lambert (1978) referred to these cases as instances of *subtractive bilingualism*, in which the more prestigious language gradually replaces a native tongue as the primary medium of instruction. Developmental skills in a child’s first language is halted at the expense of learning the more dominant mode of communication. Mackey (1984) further opposed mother tongue education, as he felt that children should acquire the national languages of their country in order better function in mainstream society.

However, James Cummins (1979) later studied bilingual students in Canada, and argued against Macnamara's previous claims. He observed how the model of immersion education functioned successfully in that region, as students were taught primarily in French (the second language), while English was also taught as a separate subject in school. This example of *additive bilingualism* (Lambert 1978: 217) demonstrates how a child is able to function in a second language without losing previous skills in their native language. As a result, the interdependence hypothesis claims that first-languages skills must be first be developed in order to effectively add a second language to a child's repertoire, since both processes intimately relate to one other.

Both Cummins and Szepe (1984:69) emphasized the importance of supporting the development of both languages as a vital element to bilingual success, as opposed to strongly favoring one tongue over another within the educational realm. A final model entails a *language-shelter program* (Mikes 1984), in which the mother tongue is used as long as possible in the school system. In this case, less of an emphasis is placed on directly acquiring a second language, as more of a focus centers around continued education in one's native language. Nevertheless, the exact type of program implemented depends on the various cultural, socio-economic, educational, and political factors which pertain to individual communities and/or countries throughout the world.

Finally, Joshua Fishman (1991) is a steadfast believer in the need to preserve minority languages, as he has argued that "there is no language for which nothing at all can be done". He developed the GIDS (Graded Intergenerational Disruption Scale), which accounts for the different stages of native language shift and endangerment in the face of dominant forces within a given society. In addition to providing suggestions for

language-shift reversal at each stage, he states that his ultimate goal is for the continued utilization of minority languages in all realms of society. Ideally, this scale would be applicable to all generations of speakers in order to ensure both present and future preservation of cultural and linguistic traditions.

With regard to the history of bilingual education in Mexico, both Nahuatl and Maya were the two dominant languages of its inhabitants when the Spaniards colonized the country in the 16th century. As a result, these languages rose to become semi-official languages under the formal prestige of Spanish. Therefore, native-language instruction was conducted by the friars, in which indigenous students learned how to write historical accounts of their culture and produce official documents while assimilating an introduced Roman alphabet into their ancient script (Pellicer 1999). A legal separation of Spanish and Indian languages and citizens came into existence, as both written Mayan and Nahuatl were extremely significant for both historical and official purposes.

Furthermore, the Maya gradually fused European aspects of religion, language, and history into their own society while preserving the pride and integrity of their native cultural traditions. Overall, native language and culture received relative support and protection under Spanish control. Throughout the centuries of colonial rule however, Mexico was characterized by an overall ambiguity concerning language and cultural policy regarding Spanish instruction and/or preservation of native-tongues among its inhabitants.

Ironically, the ideals of independence and freedom worsened the situation for indigenous education in their mother language after Mexico separated from Spain in the early nineteenth century. A focus on linguistic unity, encouraged under the church during

the colonial period, was now a requirement: Spanish was to be the only official language taught to its citizens. This decree was both practical and symbolic, as the ideals of “La Raza Cosmica” took hold in Mexico. This term was coined by Jose Vasconcelos in 1923, as he wrote that the formation of the *mestizo* race provided a unique blend of European, African, Asian, and American elements (King 1994).

Mexico was now defined as a *mestizo*, instead of an Indian culture, as the Aztec and Mayan history and language lost their former prestige to the ideals of an integrated, Spanish-speaking society. Moreover, Indian languages became referred to as simply dialects, which lack a correct grammar and alphabet. As a result, Spanish became the only legitimate mode of communication that reinforced nationalistic values in the educational system. This period of governmental policy lasted until around 1940 (King 1994), in which linguistic and cultural integration of native populations into mainstream society was highly stressed in Mexico.

The second phase of governmental action shifted its course of action, as it now dealt with the development of indigenous languages, and the encouragement of their instruction in the school system. This period lasted nearly thirty years, from 1940 to 1968 (King 1994). Community and regional developments arose in the 1940s, along with The Consejo de Lenguas Indigenas, which researched educational policies in native areas. The Summer Institute of Linguistics further emphasized educational opportunities by proposing native-language education, and a revival of indigenous literary traditions in Mexico (King 1994). Only then, would a successful introduction to the Spanish language be possible after first learning how to write in their mother tongue. Nevertheless, pedagogical, linguistic, and stereotypical flaws were apparent in the methods in which

educators attempted to teach Spanish as a second language in native communities. Other projects arose during this time, in which linguists, missionaries, and bureaucrats had varying agendas in promoting bilingual instruction in schools throughout the country.

A final period of governmental policy regarding the language of education in Mexico began over 30 years ago, and continues into the present day. In addition to continued efforts in advocating minority languages, numerous groups and uprisings arose which promoted increased indigenous participation and equal rights in society. National Councils and Congresses promoted bilingual methods for learning both Spanish and their native language in formal contexts (Ramirez 1981). However, government policies tended to stress the incorporation of native groups into mainstream Mexican culture as an ultimate goal, as opposed to the true preservation and legitimacy of those languages other than Spanish.

Revivalist movements initiated in the late 1970s have addressed human rights to education by establishing programs that promote native-language literacy development, rather than eventual shifts solely into Spanish (Hidalgo 1996). According to King (1994), the primary Indian organization that strongly emphasized education was the Alianza Nacional de Profesionales Indigenas Bilingues (ANPIBAC). By 1979, this organization became increasingly significant in the defense and promotion of national bilingual and bicultural education in Mexico. Specific goals included a complete bilingual system from primary schooling to higher education, standardized alphabets for each Indian language, acknowledgement of the history and culture of each indigenous group, encouragement of ethnic pluralism in Mexico, and economic development in rural communities (King 1994). Both ANPIBAC and The Consejo Nacional de Pueblos Indigenas (CNPI) have

become semi-official organizations for the political, linguistic, and cultural advancement of Mexico's Indian citizens.

While regional projects advocating the instruction and maintenance of indigenous languages have made significant strides on local levels, overall national governmental policy still emphasizes Spanish-language instruction as a first priority within the school system. Bilingual education is visible in public schools located throughout certain rural areas, where the vast majority of students speak an Indian language as their primary means of interaction within the community. To a certain extent, it is more prevalent in areas where native languages are viewed with prestige and great pride, as in the case of the Mayan still spoken in the Yucatan Peninsula (Pellicer 1999).

Since many indigenous families cannot afford to send their children to private schools, the need for native-language instruction in this setting is significantly less than in the public facilities. Nevertheless, Spanish remains the dominant language within all educational realms. While most native groups are in favor of preserving their individual languages as a vital feature of their ethnicity and heritage, many are resigned to the fact that literacy in Spanish is a force over which they cannot control. Education in this language is necessary for social, economic, and political success, which national policy continues to stress throughout Mexico today.

Alejandra Pellicer (1999) summarizes the situation regarding bilingual education among the Yucatec Maya as one of general ambivalence. In *Asi Escriben los Ninos Mayas su Lengua Materna*, she observes how in many rural areas, the concept of bilingual education continues to exist mainly for the sake of formality, rather than in actuality. In other words, while certain schools are officially labeled as "bilingual", most

programs still gear indigenous school children towards a Spanish-language education for reasons of social, economic, and practical purposes.

Pellicer elaborates by stressing the importance of a holistic education in Mayan, rather than merely speaking this language in rural classrooms. She states that a truly bilingual school would provide textbooks, workbooks, dictionaries, encyclopedias, magazines, and posters, while using appropriate methodology for developing literacy skills in both Spanish and Mayan. Furthermore, this system would be present among trained teachers in all grade levels, rather than simply the first years of child's academic career.

The issue of writing is one which has created significant obstacles in the limited implementation of bilingual educative programs in Mayan-speaking regions throughout Mexico. Although the Yucatec Mayan alphabet was officially standardized in 1984, it still remains noticeably "unstandardized" among local populations who usually rely on direct phonetic and/or morphological translations either from their own speech or from Spanish when attempting to write down their native language. While books, dictionaries, and papers are written in Mayan, each word may be spelled in a variety of ways, depending on the author and source of publication. This situation pertaining to writing has caused great debate among linguists and scholars in recent years. King (1994) quotes a bilingual Yucatec Mayan speaker who states "The Mayan language is really difficult to write". This person recalls a discussion between two teachers, in which they argued over the correct spelling of 'hen' (kax) in Mayan. The student continues, "...they argued about whether it should be written with a "c" or a "k"... since "k'ax" is a small plant, while "kaax" means hill, and so the same letters have three different meanings". This particular

incident reflects the overall frustration that both intellectuals and native-speakers have when attempting to agree on a standard spelling for Mayan.

In addition, Pellicer (1999) cites other concerns of these intellectuals, in which questions regarding parent participation and support, the usefulness and application of a Mayan education in mainstream society, and overall insecurities in utilizing this language as an established mode of instruction are addressed. In *Los Verbos Mayas: La Conjugacion en el Maya Yucateco Moderno* (1997), Glenn Ayres and Barbara Pfeiler stress how the goal of their book is to stimulate continued interest in the formal analysis of Maya by academic scholars. Additionally, they emphasize the importance of local participation in the scientific study of their native language in order further develop its literary tradition in the future.

Based on my personal experiences in the region, I observed students of all ages writing Mayan for various informal purposes. Whether they were passing notes among friends, or trying to teach me a bit of Mayan, some words and phrases seemed easy to write down, while others were more difficult to transcribe. Small groups of students would debate on the exact spelling of certain words until finally coming to a general consensus on how it should be written down. I did notice some Mayan-language books and dictionaries in the region, particularly in the larger cities and in certain rural homes. Perhaps an increased involvement of local authorities and scholars in developing concrete methods for Mayan literacy will result in a greater success of bilingual schools throughout the Yucatan Peninsula in the near future.

CHAPTER 3 RESEARCH DATA FOR OBSERVATIONS

School demographics

The town of Coba contains two elementary schools, one secondary school, and one high school. The primary schools are located on separate sides of Lake Coba. For the purpose of this study, I only focused on one of the schools that is situated on the main side of the lake. This is the side of town that connects to other cities in the region, and is where tourists visit the ruins, hotels, and souvenir shops in the area. The secondary school lies down the street, and doubles as the high school in the late afternoon and evening.

The vast majority of students are Mayan, and still speak their native language. However, some pupils are from Spanish-speaking Mexican families who previously moved to Coba from other parts of the country. Out of 144 primary students, all but 14 were Maya. Furthermore, three out of six teachers were of Mayan descent. There were 98 secondary students, while only three were pure Spanish-speakers. Two out of six staff members were Mayan. Finally, 90 pupils comprised the high school population. Everyone except two students were indigenous, even though just one of the six teachers was Maya. All of the school materials were printed in Spanish, as official instruction in this language begins in kindergarten. Students learn English throughout their secondary and high school levels of education. Even though most students often speak Mayan on the school grounds with their peers, this language is not formally taught in any of these schools.

Research environment

My sample participants consisted of a total of 30 students. I chose 10 from the elementary, secondary, and high schools, respectively. I observed the same number of boys and girls from each school in order to have an equal representation of subjects for my study. Ideally, I would have chosen more students for my research sample. Due to the short time constraint of fulfilling other summer obligations, however, I felt that 30 subjects served as both a representative and practical number for the purpose of this project.

When I first arrived at the schools, I explained my research project to all of the teachers, and provided them with an overview of my goals to accomplish during my brief stay in Coba. I then went to each classroom and asked for volunteers to participate in my study. Overall, I was curious as to the extent in which a language used primarily in the home (Mayan), and a foreign language (English), was used in a traditionally Spanish-spoken school environment. I felt that Coba was an ideal location to study this occurrence, due to the strong presence of both traditional and global elements that characterize this southern Mexican town.

While some were very eager for me to observe them, others were more shy and hesitant to actively volunteer. In order to fulfill my request for 30 students, the teachers suggested that I ask certain students privately whether they would be willing to become part of my sample. I stressed the fact that no one was obliged to participate, allowing them to refuse if they did not want to be involved in my research. Furthermore, anyone could request for me to stop studying them at any time during this process if they became uncomfortable with me observing or interviewing them. The only preference from the elementary teachers was that I only study the 5th and 6th graders instead of the younger

children due to differences in maturity levels, and greater exposure to the Spanish (and probable) English language on the part of the older elementary students. Therefore, I formally observed 30 students, ranging from 5th through 12th grade.

Once the members were chosen, I held a meeting with the parents in order to obtain permission for their children to participate. This was mandatory for any student under 18 years of age, according to the Institutional Review Board guidelines for field research involving human subjects. We met at the secondary school, and I stated my objectives for my project in Spanish. I additionally handed out sheets to everyone that contained a written explanation of my goals. There were spaces for each student and their parent to sign in order to have written permission, and document their approval of being involved in my research. Some people translated for me in Maya for those parents who did not speak, nor read, Spanish. While some parents were inquisitive and a bit leery about having their children participate at first, everyone finally agreed after I made fully clear my exact procedures for studying an individual student each day over the next month.

Due to previous teaching experience over the past few summers in Coba, I was well-known within the community. I had developed many friendships with the locals since my first visit to the town four summers ago. Nevertheless, I always have sensed a reaction from most of the students upon all of my arrivals in the schools. The fact that I am a young American female sparked curiosity among them. My physical appearance, dress, language, and general mannerisms have always stood out in this semi-rural, indigenous town! For this reason, I went to the schools a few days before my actual observations in order to establish my presence there among the teachers and students. I spent time in various classrooms, and quietly listened to the lectures. Additionally, I

remained during recess and chatted with different people about my research, and answered questions pertaining to my friends, family, and my lifestyle in the United States. Basically, I wanted the students to get accustomed to me spending time among them in the schools. I hoped that they would soon become used to my presence, and “ignore” me by the time I began to formally observe their language usages.

For the next few days, I spent the majority of my time in at least one of the schools while observing an individual student each day. Each subject knew in advance the day in which I would observe them, so no one was surprised by my presence alongside them throughout various times at school. I used school setting, age, and sex as my variables for language usage. In terms of setting, I observed each participant as they came to school in the morning, while they were in the classroom, when they were on a half-hour break, and as they were leaving school for the day. I stayed with the student for 15 minutes at each setting and recorded the number of times in which Mayan, Spanish, or English was spoken.

I wanted to analyze the extent (if any) to which setting influenced language choice among these indigenous students while they were at school. For the purpose of this study, I noted the actual number of times in which each language was spoken, rather than actual content of the language. Due to the intense borrowing of certain words between Spanish and Mayan in this region, I considered at least 3 consecutive words in the same language as actual usage among the participants. While I did not speak nor understand Yucatec Mayan at the time, I was able to recognize when it was spoken, and record language usage from each participant.

While the vast majority of the student population were native Maya, a few of the students were Mexican, whose family only spoke Spanish. It was common for one of their parents to teach in the schools, and move to Coba after living in larger cities previously throughout Mexico. Obviously, I did not choose to research any one of these students, since they could not speak Mayan. Additionally, I was careful to observe my subjects as they interacted with other Mayan speakers, and not with the monolingual Spanish speakers. In this manner, there was an equal possibility of speaking either language. This would more accurately show the extent to which Mayan and/or English influenced the speech of these students. Even though the Mexican pupils might have also been able to speak some English, I was concerned with language usage among the Mayan subjects for the purpose of this study.

Hypotheses

Before starting my research, I had a few hypotheses relating to language choice among the students. I predicted a general trend of more Spanish and/or English spoken as the students got older. In other words, I imagined that the primary and young secondary children would tend to speak more Mayan than the older students. The upper-secondary level and high school students have had more years of formal Spanish education, and tend to be more fluent in this language than elementary children. Additionally, they are more likely to have greater exposure to foreigners, since they are old enough to work in the hotels, restaurants, and tourist shops around town. Finally, assimilation pressures to speak the country's national language (Spanish) relate to academic success, and possible college opportunities for high school students. This also includes global influences, and the desire to blend in with national and international cultural trends.

In terms of gender, my hypothesis was that the boys would tend to speak more Spanish (and possibly English), while the girls would generally use more Mayan in the schools. The reason is that men traditionally work outside the home, and have a greater need to speak Spanish or English with outsiders. Boys might accompany their fathers or male relatives to their jobs, and receive a greater exposure to these languages than the girls. There is also a higher expectation for boys to continue on with their studies in the future, demanding fluency in Spanish and possibly other languages. This is opposed to the traditional role of girls, who are more inclined to help their mothers with domestic duties and remain close to home. This has implications for increased Mayan usage among the female participants in this study.

Furthermore, I hypothesized that more Mayan would be used overall by all students as they walked to school in the morning. Since their native language is used primarily in the home, I predicted that Mayan would still be fresh in the mindset of my subjects before entering an academic atmosphere. Once they entered school however, I imagined that Spanish would be the dominant language in the classroom, and as students left to go home for the day. I felt that the break would be the only time in which my subjects might be inclined to speak either language, depending on the activity they were doing during this time. I also assumed that if English was spoken at all, it would most likely be within the classroom or at recess, where students could practice this language with their teachers and amongst themselves.

Observational Background

Due to the intricate nature of language usage during conversations, I used a minimum of three consecutive words as a standard to count for a particular language spoken. Especially since Mayan and Spanish (and to a lesser extent, English) remain in

intense contact with each other on a daily basis, it is not uncommon to hear a word or two from each language interspersed in another one within a dialogue. For example, Burns (1983) states how Yucatec Mayan numbers are used for counting from one to four only; any number above four is expressed in Spanish. Additionally, he notes the relative paucity of Mayan adjectives compared to other languages. It follows that many Spanish adjectives would be interspersed in a normally Mayan-speaking conversation if any detailed or elaborate descriptions were used. Therefore, I did not count isolated words as a switch between distinct languages.

For the purpose of this investigation, I organized my data into four broad categories. In terms of language spoken, they are: Mostly/All Spanish, Mixed Spanish and Mayan, Mostly/All Mayan, and English mixed with any of the other two languages. Instead of reporting mere numbers of language usage, I chose these categories based on both the amount and length in which each one was spoken in comparison to another. For example, I recorded a participant as speaking Mostly/All Spanish if I heard this language more often and for a longer period of time than the other one spoken within a particular setting.

In order to implement a more exact benchmark regarding comparative language usage, I recorded each subject as speaking mostly/all Spanish or Mayan if I heard it for at least 12-15 minutes in a particular setting. If the two languages were each used for at least 5-11 minutes, then I recorded the student as speaking a mixture of Spanish and Mayan. Furthermore, I considered my subject as speaking mostly/all of Spanish if I only heard them speak Mayan for no longer than 3 minutes during the 15 minute observational period, and vice-versa. Many of the observations fell roughly between these increments,

which helped me decide on this particular grouping of language utilization. Moreover, I did not want to simply divide the intervals evenly by thirds (5 minutes each), since I felt that the combined use of mostly/all of a particular language should be considered only if it was spoken at least 12 (instead of 10) out of 15 minutes during each setting.

I also chose this particular system of measurement based on some of the theoretical concepts mentioned in the second chapter. These included the Communication Accommodation Theory (CAT), and other socio-linguistic factors used by theorists to help explain both the reasons and frequency for code-switching within a particular conversation. This system doesn't account for exact measurements, as it would be difficult and tedious to create a separate category representing every numeric combination of languages produced by the students. Therefore, my intention is to provide a more general indication of language usage within a school setting.

I measured each student individually, as it was difficult to enforce a set standard in determining which language was used most within a particular setting. For instance, a person might have spoken Mayan only one time, and Spanish three times. If they spoke Mayan for 10 minutes straight however, with brief shifts into Spanish interspersed in the conversation for roughly 30 seconds each time, I still counted this individual as speaking mostly/all Mayan. Overall, I analyzed my data based on the number and length of language usage by each person at a particular setting. Since no one was fluent in English, I simply recorded if this language was used at all within the broader context of Spanish or Mayan.

Factors in language choice

Spanish and Mayan generally maintain a *diglossic* situation, in which Spanish is the language of education and outside communication, while Mayan dominates within the

household. Nevertheless, this occurrence doesn't hold 100% of the time. In relation to the prior chapter on theoretical background pertaining to language contact and language usage, I noted other factors which might influence why a particular language is spoken by a student.

Coba is a town which surrounds a lake. One side of the lake has a main road which links the town to other cities in the region, and is where foreigners enter while on tour buses or cars. Additionally, the entrance to visit the ancient ruins is located on the same side of the lake. Hence, all of the restaurants and souvenir shops are also situated on this side. The main road loops around to the other side of the lake, which is known for being more traditional, since no signs of tourism are apparent there. It looks just like any other rural town in the region. There is a small road on this side which leads to another village, which is all indigenous and more conservative towards outsiders.

Even though homes are located on either side of the lake, a student might tend to speak more Spanish (and possibly English) on the main side due to more daily exposure to mainstream society. Especially if one works in any of the restaurants or shops, the need to speak Spanish is much greater than Mayan when interacting with visitors in the city. Moreover, the desire to speak English with the tourists might be higher than someone who does not live or work on the main side of the lake.

The socio-economic background of one's parent(s) is another important factor in determining language usage. Occupations such as tour guides, restaurant/shop owners, and hotel employees demand the need to be conversant in Spanish, and possibly another foreign language, in order to communicate with outsiders. This could carry over into the home, where one might tend to use these languages more often than Mayan. Furthermore,

parental goals regarding their children's academic and occupational future may explain why one language is spoken more than another in the home, which might link to a child's language usage at school.

The general phenomenon is that the mother of a family tends to speak more fluently in Mayan, while the father usually has more mastery of Spanish, and possibly other languages. In certain cases, a father might be absent from a family due to various reasons, including job demands that require work in other larger cities, or leaving the household due to personal conflict. In this manner, interaction between the child and mother might result in an overall stronger grasp of Mayan both inside and outside the home. These, along with other factors and explanations for language usage which I will describe later, will help clarify similarities and differences in the speech of students at school.

Observations before school

Each morning, I waited for a different child in the town square across from the school. This location provided a panoramic view of each student as they were walking to school. Most students arrived with at least one friend since the town was small, and everyone lived within walking distance from the school. When I spotted my particular subject approaching near the school, I walked up to them and listened quietly to their conversation. If they were alone, we would chat for a bit in Spanish until we reached the school entrance. Once at school, the participants joined their friends either in playing soccer, walking around the school, or just relaxing with their friends until the school bell rang. On either occasion, I stayed with each student for 15 minutes, and recorded how many times each language was spoken during this time.

Out of the five elementary-age boys, only one spoke mostly/all Mayan. The others used a mixture of Spanish and Mayan before school. As for the girls, I observed that only one spoke predominately in Mayan also. Furthermore, one spoke a mixture of the two languages, while the other three spoke mostly/all Spanish. No one spoke English at all. For the secondary school boys, three spoke primarily in Mayan, while the other two spoke a mix of Spanish and Mayan. Similarly, Mayan was the dominate language for four of the girls, while only one spoke both a mixture. I did not hear any English spoken by these students before school.

Three of the high school boys spoke Mayan the majority of the time. One used both languages equally, while the final boy mainly spoke Spanish. Two of the girls spoke mostly/all Mayan, while I observed a mixture from the other two. The last girl utilized Spanish as the primary language before school. English was not used by any of these students before school either. While gender did not play a significant role in language usage among secondary and high school students, differences were more evident within the elementary-age children during this time of day.

Observations in the classroom

Everyday, I sat with an individual student for 15 minutes in the classroom. The teacher instructed in Spanish, as any formal interaction was almost always done in this language. However, I wanted to observe my subjects as they communicated with their peers in this academic setting. I usually remained in the class after observing a student, since I found the lectures interesting due to the linguistic and cultural differences between urban U.S. and rural Mexican school systems. I particularly focused on peer interaction when they went over assignments or homework, and when they would ask each other for school supplies or briefly talk to a classmate during the lecture.

The results for primary school language usage in the classroom are as follows: only one boy spoke mostly/all Mayan, while the rest spoke a mixture of Spanish and Mayan. Two of the girls spoke Mayan, while two others spoke both languages. One only spoke Spanish in the classroom. None of the elementary students spoke English at all. Two of the boys at the secondary level mostly spoke Mayan, while the other three incorporated both languages in their discussions. Four of the girls spoke Mayan the majority of the time, as the final girl spoke mostly Spanish. I did not hear any English from the secondary students in this setting. While only one high school male spoke Mayan, the rest spoke both Spanish and Mayan. On the other hand, I recorded three high school females speaking predominantly in Mayan. One spoke a mixture, while another mainly spoke Spanish. Furthermore, two of the boys actually used a bit of English when communicating with their peers in the classroom.

Observations during the break

I use this term to represent the main interlude between classes in each one of the three schools, even though shorter breaks also occurred throughout the day. This particular time usually lasted about 30 minutes, in which students could buy snacks, play sports, and relax with their friends. This occurred roughly halfway through the school day, and gave the youth some time to unwind from their studies for a bit. I wondered if the participants would be more inclined to speak one language over another while they took a brief rest from their schoolwork. Again, I spent 15 minutes with each subject while recording language usage during this time.

I noticed that only one primary boy spoke Maya, as the others spoke two languages during recess. On the other hand, three of the girls spoke both languages, while Spanish dominated among the other two. The results were the same for the boys at the secondary

level; one spoke Mayan the majority of the time, as the other four spoke a balance of Spanish and Mayan while on their break. Surprisingly, I recorded the same measurements for the girls: a 1 to 4 ratio of mostly/all Mayan to both Spanish and Mayan. Both of the high school males and females followed this same pattern! Furthermore, I heard two high school boys and one high school girl speak English during the break.

Observations after school

Finally, I followed each participant after school in order to record language usage once classes ended for the day. I was curious if language usage would change among the students after a full day of (mostly) Spanish-language instruction. While students sometimes lingered on the school grounds for a bit, most would leave in groups and head home once their teachers released them. As usual, I stayed with each subject for 15 minutes and quietly listened for how many times Mayan, Spanish, or English were spoken.

Three of the primary boys primarily spoke Mayan, while the other two spoke Spanish and Mayan. Only one girl spoke Mayan, as two spoke both languages. I recorded the final two as speaking predominately in Spanish. Two of the secondary males used Mayan, while the other three incorporated both languages evenly in their speech. On the other hand, three females spoke Mayan the majority/all of the time, as the other two employed both languages. Furthermore, I noted that only one high school boy spoke mainly in Mayan after school. The four others used a mixture of Spanish and Mayan. Three of the high school females spoke mostly/all Mayan. One spoke both languages evenly, while the last female used Spanish the majority/all of the time. Interestingly, I noted one high school boy and girl speaking a few phrases of English after school!

As mentioned before, I did not formally observe elementary students below the 5th grade level due to the requests of their teachers. However, I did occasionally listen to their conversations throughout various times of the school day in the midst of observing my subjects. I seemed to hear less Mayan and much more Spanish by the younger children. This was especially true among the 1st, 2nd, and 3rd graders, as I did hear some Mayan spoken by certain 4th graders at times. I rarely heard any Mayan from the other grades at all!

Subsequently, I discussed this issue with some of the elementary teachers. They stated that the young primary students hardly use their native language, as Spanish is almost always spoken at school. I do not want to make any conclusions regarding these young children though, since I did not formally observe their language usage. I only listened to various conversations for a few minutes at a time, and the teachers can't hear everything that is said by each student at school (especially upon arriving and leaving the campus). Based on the informal data provided however, I observed a general trend of greater Spanish usage over Mayan among the young primary students while they are at school.

Summary of observational data

In summary, all but one of the primary boys spoke a mixture of Spanish and Mayan before school, while most of the girls spoke Spanish during this time (see Appendices C-E). In the classroom, I recorded the same number of boys speaking both languages, even though the girls were more widespread across the language spectrum. The majority of both sexes used Spanish and Mayan during recess, while most of the boys spoke their native language upon leaving the school grounds. Again, language usage was more evenly spread out among the girls after school. I did not hear any of the

primary boys speaking mostly or all Spanish during any part of the school day. In other words, there was a tendency for the boys to either speak both languages or mostly/all Mayan at school. On the other hand, the girls appeared to shift between a mixture of languages and mostly/all Spanish during the school day.

As for the secondary students, the majority of both sexes spoke predominately in Mayan before school. While most of the males spoke the two languages in the classroom, all but one of the females remained speaking Mayan in this setting. Nevertheless, almost all of the secondary students used both languages at recess. After school, I recorded most of the males as utilizing the two languages, while Mayan still prevailed among the majority of the females. None of the boys spoke predominately in Spanish, as only one girl was heard doing this at just one setting. Overall, both languages were used most frequently among the males, as the females tended to maintain their native language throughout the school day.

Finally, the majority of high school males were observed speaking Mayan before school, whereas female measurements were more evenly spread linguistically. Most of the boys spoke both languages in all other settings, whereas a greater number of girls used Mayan in the classroom and after school. All but one girl spoke both languages at recess. Again, this shows a general tendency for the males to employ both languages, and for females to use more Mayan in school. Moreover, I heard a few high school students utilize some English phrases in each setting except for when they were arriving at school.

I found that school setting, age, and gender did in fact affect language choice to a certain extent, as most primary boys utilized both Spanish and Mayan before school. On

the other hand, the majority of elementary girls spoke predominately in Spanish at this time. Mayan dominated among both secondary boys and girls before school. Most high school males spoke Mayan before school, even though female figures were more case-specific for the females during this time of day. The majority of boys from each school spoke both languages in the classroom. While the results for the elementary girls were more evenly distributed, most secondary and high school girls utilized Mayan in the classroom environment. A great number of males and females from each school were heard speaking both Spanish and Mayan during recess. While most primary boys used Mayan after school, language usage among the girls was more individualized during the time. The majority of secondary and high school males spoke both languages after school, even though most of their female peers communicated primarily in Mayan upon leaving the school grounds for the day.

My initial hypotheses correlate with these results in varying degrees. I originally expected age to play a major role in language usage at school, with the younger students speaking their native language more often than the older ones. Based on the data, however, the majority of males from all school levels tended to speak both Spanish and Mayan in most settings. A predominate use of Mayan by the boys came in second in terms of frequency heard at school. As for the females, my hypothesis was correct in the sense that a high number spoke Mayan most of the time, while also utilizing both languages with lesser frequency. Nevertheless, these results pertained mostly to the secondary girls, and high school girls to a lesser extent. Surprisingly, the primary female students actually spoke both languages and mostly/all Spanish a similar number of times!

These girls spoke predominately in Spanish in many more instances than either sex in any other school level.

While setting did affect language preference, the results were not as clear-cut as I originally expected. General tendencies do appear at these times, but in a semi-random fashion among the participants. All grade levels tended to speak both languages during the break. The same held true for most of the boys in the classroom setting, while most of the older girls still gravitated towards Mayan both in class and after school. The results for the younger girls were fairly evenly spread out during these times. It was only after school that most of the elementary boys spoke mostly/all Mayan, while a high number of older boys used a mixture of both languages. The secondary students and high school boys tended to speak their native language before school, as the high school girls and elementary boys used both languages at this time. Most of the elementary girls spoke mainly/all in Spanish upon walking to school in the morning. English was indeed used by some high school students throughout the day, except for before school.

With respect to the theoretical explanations and the variables mentioned earlier which contribute to language preference and usage, other factors may help justify some of the particular data results regarding Spanish, Mayan, and/or English usage. On the one hand, a knowledge of Spanish (and English to a lesser extent) by the secondary and older participants is often linked with academic and economic success. It is vital that they master this language if they are to continue with higher education, or have a career where they will have to interact with outsiders in any fashion. Likewise, while the older students are dominant in both languages, (as they have already had more years of Spanish grammar than the elementary children), the younger ones are still learning this “outside”

language. In addition to the intense instruction by their teachers, their older siblings might speak to them mainly in Spanish in order for them to acquire it faster and with more ease in preparation for future academic success.

On the other hand, even though Spanish is formally introduced at the primary level, elementary kids are still heavily exposed to Mayan at home. Usually, they continue to communicate in their native language either to their mother, or to older family members who might not have a knowledge of Spanish. Furthermore, since the secondary and high school students have already received more years of exposure to Spanish, there might be less pressure on them to speak this language and become familiar with its grammar. For this reason, they could possibly feel more comfortable speaking their native language among one another.

Additionally, the use of Mayan might encourage solidarity and pride among the secondary and high school students, especially since it is their native language. Emotions and communication on a deeper and more mature level might also be easier for the older students to express in Mayan. Even though the data reflect certain generalities and patterns in language usage, various socio-economic and demographic factors also combine which influence communicative choice among these school-age youth.

I incorporated some statistical calculations of my observational data in order to represent the relationship between language, sex, age, and setting from a more holistic and scientific perspective. Frequency tables, chi-square, and adjusted residual analyses were implemented in this study. Frequency tables simply reflect the total number and percentage of students who spoke a particular language at each setting (see Appendix F). The languages included Maya, Spanish, both languages, and Maya/Both with English

(m&E/b&E). Tables E&F account for overall usage by males and females, respectively. Finally, table G records the total frequency of languages utilized by everyone in all combined settings. Since English was only used on occasion by a few participants, I focused only on Mayan, Spanish, or both languages for the sake of simplicity when calculating overall frequencies in tables E-G.

I performed a chi-square tabulation of language/gender and language/age in order to detect the likelihood of association between these variables. Based on the large P-values ($P > .05$), the results showed strong evidence for independence in all settings except for in the classroom (see Appendices G-H). In this setting, the P-value was .009, which provided a strong probability for association. In other words, the greatest *difference* between male/female language usage occurred during this time. Appendix I records language and gender/age association for everyone in all settings. The results will inevitably differ as a result of an increased sample size (120 vs. 30). A small P-value of .001 in demonstrates strong evidence for association between language and gender. For example, there is a high discrepancy between male/female speakers of Spanish (39 vs 23), Maya (20 vs 25) and of both languages (1 vs 12). Likewise, a P-value of .055 provides only minimal evidence for independence between language and age. The differences between elementary, secondary, and high school students differ slightly with regard to language choice. Overall, it appears that gender is a more significant factor than age for determining whether Spanish, both, or Mayan will be spoken in school.

Nevertheless, the adjusted residual accounts for *each cell* in terms of association, as opposed to the combined results of language and gender/age. Agresti (1997) states that a large adjusted residual provides evidence against independence in that particular cell. For

example, a value of 3.2 between gender and language shows strong support for association, mainly due to the observational results of primary girls in school. A value of 2.0 between age and language is also supportive of dependence. On the contrary, a negative value (such as -3.2 for age vs. language) provides strong evidence against association.

Based on an overall analysis of observational data, I would conclude that the linguistic situation in Coba reflects that of relatively stable bilingualism among the primary boys, secondary, and high school students at school. All of the males tended to speak both languages in three out of the four settings, as Mayan was dominant in the other one. Conversely, Mayan was the primary tongue used by most secondary girls, with both languages occurring only at one setting (break). Mayan was further heard often among the high school females in two of the settings. In either case, no more than 1 boy or girl spoke only Spanish at any given time among all male participants or older (secondary/high school) females.

The primary girls however, were recorded as speaking mostly in Spanish in one setting, as both languages were employed in another. The results were more evenly distributed during the other two times at school. Nevertheless, some girls did only speak Mayan in certain settings, which leads me to believe that this language is not in danger of quickly being replaced by Spanish (nonetheless English) among indigenous youth in this town. I feel that the varied results among the young girls partially reflect individual social status, family occupation, and the overall random manner in which these participants were chosen. The data might or might not have better correlated with the younger males and older students if a different group of elementary girls were chosen for this study.

Nevertheless, I cannot totally discard the possible implications for a gradual shift from Mayan/bilingual usage towards a greater dependency on Spanish in the future. Based on informal observations of high (if not total) usages of Spanish among students in grades K-4, perhaps bilingualism may not be quite as stable in the upcoming generations. Ideally, I would have preferred to study a larger group of students encompassing more grade levels, which might have provided a more holistic and accurate account of language usage in Coba. Based on my formal observations however, I am led to conclude that the overall significant presence of Mayan usage in a normally Spanish-speaking academic environment (independent of its importance in the domestic sphere) helps legitimize its continued existence in the near future.

CHAPTER 4 DATA ANALYSIS FOR INTERVIEWS

Interviews

The second phase of my research entailed informal interviews with each participant. This complemented the observations by providing more background information on my subjects, along with a greater perspective on general linguistic and cultural trends occurring among Mayan youth in Coba. I focused on each student individually, and asked them ten questions regarding language preference, usage, tourism, travel and identity. Due to increased time constraints on my stay in Coba, and frequent national holidays in Mexico during May, formal scheduling for these interviews were sometimes difficult to plan in advance. Therefore, some sessions occurred on schedule, while others were delayed until the last week or so of my visit. As a result, I sometimes approached certain participants spontaneously; either at school or at their homes, and asked to conduct the interviews at that particular moment. Since this question-answer session only lasted about 10 minutes, none of the selected students minded taking a brief moment from their activities during my impromptu visits to them.

I wanted to interview each participant individually in order to prevent outside influences from classmates or family which might affect their answers. Therefore, these interactions usually took place in a secluded area either at school or at the student's home. I emphasized that no one was obligated to answer any question that made them uncomfortable. Additionally, I stressed that everyone should express their opinions honestly; there were no "correct" responses, nor should they feel any pressure to please

me when I ask particular questions. I wanted this portion of my data to be as heartfelt and straightforward as possible.

I conducted the interviews orally, while asking each question in Spanish to the students. I made enough copies of interview questions for everyone, so I wrote down all of their responses on a separate sheet of paper. I also repeated what they told me after each question in order to confirm their statements. Some participants provided abundant and detailed information on each question, while others were a bit shy and less verbose in their responses. Nevertheless, each person answered every question in a willing manner. I will analyze the results from all ten questions separately throughout the following pages.

Question 1: Which language do you normally speak at home?

I wanted to first see which language each student spoke at home in order to establish a linguistic base for the individual. Even though I knew previously that the vast majority of my subjects usually speak Mayan at home, I wanted to see if other languages are also used frequently within this domestic realm. As with the observational data, I will divide all of my interview results based on gender and age in order to detect other patterns of language usage, life experiences, and general opinions among indigenous youth in Coba.

For the elementary students, four of the boys and girls answered that they speak Mayan to their parents and Spanish to their brothers and sisters. The other three boys and two girls stated that they normally speak Mayan at home, while the final girl responded that Spanish was mainly used in her household. As for the secondary students, three males and two females answered that Mayan is normally spoken to the parents, while Spanish is used between siblings. The remaining participants mostly speak their native language amongst their family members.

For the high school students, three out of five boys and girls stated that they usually speak Mayan with their parents and Spanish with their siblings. The other four individuals told me that Mayan is the dominant language spoken at home. Overall, the elementary students spoke either both languages or mostly Mayan at home, while one girl mostly spoke Spanish in this setting. The results were similar between secondary males and females; a slight majority of males spoke both languages, while more females tended to speak only Mayan at home. The majority of high school students spoke Spanish and Mayan, with the results being equal among males and females.

Question 2: Which language do you normally speak outside of the home?

Aside from the academic environment, I was curious as to the extent to which Mayan or English influenced the speech of the participants in a public atmosphere where Spanish is normally expected to be spoken. This entails daily communication in local stores, restaurants, and other public locations within the town. Rather than include these variables individually, along with age/sex of addressee(s), I focused on a more general measurement of language usage within these domains for this particular question.

Two elementary boys responded as usually speaking their mother language even in the public sphere. Two others alternated between Spanish and Mayan, as the final boy conversed in Spanish. As for the girls, most spoke in Spanish within the community setting. Only one answered that she used both Spanish and Mayan. Three secondary school males reported speaking Spanish, while one normally spoke both languages outside of the home environment. The final one stated that he mostly used his native language in public. Four of the secondary girls spoke a mixture of the two languages, while the last one typically conversed in Spanish during these times. The results for the high school males were the same as those of the secondary males, whereas three of the

same-aged girls said that they spoke a mixture of Spanish and Mayan. The other two mainly communicated in Spanish.

In general, there was a slight tendency for the majority of secondary and high school males to interact primarily in Spanish outside of the home. The results differed among their female peers, as most of them were inclined to utilize both languages while in public. The answers were more diverse for the young boys, while most girls spoke Spanish in this environment. No one mentioned English as being a widely used on a regular basis within the community.

Question 3: How many languages do you speak in total? Which language(s) do you feel most comfortable speaking overall?

I wanted to assess the total number of languages that each subject spoke in addition to Spanish and Mayan. I was mainly referring to English, but also other foreign language(s) that someone might have learned in the past. I was curious as to the number of participants who considered themselves bilingual, trilingual, and so forth. Furthermore, I was interested in discovering which particular language(s) each person felt the most comfortable speaking on an overall basis. By this, I mean the language that is easiest and feels most natural to them when communicating with others.

All of the primary boys reported speaking two languages (Spanish and Mayan) in total, while one stated that he felt equally comfortable in either language. One preferred Spanish, as the other three claimed that Mayan was easiest for them. Each girl also knew two languages, even though only one favored speaking her native language on a regular basis. Another subject had no preference of language usage, while the rest declared Spanish as their natural choice for communication.

The responses differed slightly among the secondary students, as two boys claimed to speak some English in addition to the other two standard languages. They also felt most at ease speaking Spanish. The three others just knew Spanish and Mayan, but two of them still preferred to interact in Spanish. The final boy regarded Mayan as the most comfortable language to express himself in overall. All of the girls reported speaking two languages, as three of them preferred to speak Spanish on a normal basis. One felt at ease with both languages, while the final girl felt more natural interacting in her native language.

The high school males reported similar answers, as two of them also spoke some English along with Spanish and Mayan. One felt most comfortable speaking Spanish, as the other had no preference between Spanish or Mayan. The three remaining males knew two languages. They each considered Spanish as their natural mode of communication, except for one who expressed himself best in Mayan. Only one female claimed to know some English, as the remaining four just spoke the standard two languages. This particular subject felt most at ease in Spanish, along with another female. Two others were comfortable in either language, as the final one preferred to interact in Mayan on a normal basis. In general, language preference results are fairly sporadic among the subjects. The vast majority of participants reported speaking only two languages, in spite of the tourist industry in Coba, and English instruction given in the secondary and high schools.

Question 4: How do you feel about the presence of tourists in Coba? Do you feel that you should learn to read, write, and speak English?

I asked this question to my subjects in order to hear their viewpoint regarding the year-round influx of tourists that normally visit Coba. Did they resent the constant

presence of foreigners in their town and subsequent “commoditization” of Mayan culture, or were they proud to show off their ancient heritage and interact with people from all over the world? Did they perceive the visitors as “invading” the societal landscape of Coba, or were they grateful for the economic benefits that tourism brought to the area? Basically, I wanted to see how many students were in favor of, or against, the general presence of national and international tourists in their town. Furthermore, I was curious as to how important they felt it was to read, write, and speak English in order to better communicate with foreign visitors.

Aside from one child, every primary boy was in favor of the presence of tourists in Coba. This particular person did not have an opinion of the foreigners. However, everyone felt that it was important to learn English—either to interact with outsiders, or for future academic/economic success. With the exception of one participant, all of the young girls were pleased with the existence of visitors. This child did not like the tourists, since she couldn’t understand their language(s). Nevertheless, all of the girls felt that they should learn English in order to improve communication with them.

All of the secondary students had a positive attitude toward the presence of outsiders in their community. Some reasons included the economic benefits that the tourist industry brought to the region, local pride in presenting Mayan cultural heritage, and opportunities to interact with people from all over the world. Additionally, almost everyone believed in the importance of reading, writing, and speaking English. Only one girl remained neutral by not having any opinion about learning English. Finally, every high school participant had a positive reaction to the tourists. They each wanted to

improve their English-language skills, both orally and grammatically. Overall, almost every subject answered favorably to both parts of this question.

Question 5: Do you like speaking Spanish? Do you feel that it is *your* language, along with Maya?

This is another two-part question, in which I wanted to know how each student liked speaking Spanish. Usually, most indigenous students begin to learn Spanish when they start school as a young child. Until that point, these children only speak Mayan amongst friends and family before receiving formal Spanish-language exposure at around 5 years of age. Additionally, I was curious as to whether the participants considered Spanish to be either their native language or a foreign language. In other words, did they regard both languages in the same manner and have equal attachment to them? On the contrary, did they have separate feelings towards Mayan and Spanish? Did the former characterize their identity, while the latter was viewed as a mere second language in contrast to their native tongue. Basically, I wanted this question to provide a more in-depth insight into personal sentiments relating to bilingualism among these participants.

Almost all of the primary boys liked speaking Spanish, while one child only partially enjoyed communicating in this language. Except for one boy, however, no one considered Spanish as their own language in the same fashion as they regarded Mayan. The final person viewed both languages equally. The results differed among the girls, as everyone answered that they like speaking in Spanish. Nevertheless, two of them had separate attachments to each language. The final three viewed Spanish and Mayan in the same manner.

The results for the secondary males were exactly the same as those for the younger males. Everyone had a positive attitude towards speaking Spanish, except for one who

only partially liked this language. Furthermore, just one boy had similar sentiments regarding both languages, while the others distinguished them between native and foreign tongues. All of the secondary females enjoyed interacting in Spanish, even though only two of them actually considered it to be *their* language along with Mayan. The other three did not view Spanish and Mayan in the same realm, as they had separate sentiments towards each language.

Finally, every high school male viewed Spanish favorably. Nevertheless, only one participant perceived both languages equally. The rest of the males possessed different perceptions and feelings towards Spanish and their mother language. Similarly, all of the female students liked communicating in Spanish. Whereas two of them perceived each language in separate spheres, the rest viewed Spanish and Mayan equally. Overall, the vast majority of my subjects enjoyed speaking Spanish. On the other hand, most males from each educational level distinguished Mayan from Spanish in terms of native and second languages, respectively. The answers from the females were less clear-cut, as slightly more elementary and high school girls viewed both languages in the same fashion than the secondary girls. This secondary group of females tended to have separate feelings towards Spanish and Mayan.

Question 6: Do you think that you should learn Mayan grammar in the schools, that way you could read and write it?

I previously asked for student feedback regarding English instruction in the school system. On a related issue, I asked this question about formal Mayan education in order to assess its importance among the participants. Even though the vast majority of Maya students still speak Mayan in Coba, most do not know how to read or write this language. For this reason, I wondered how my subjects felt about the possibility of native-language

instruction. Did they believe it was central for cultural and linguistic preservation, or was just a spoken knowledge of Mayan sufficient enough for indigenous youth? Would they benefit from formal Mayan education, or were Spanish and/or English the principal languages needed for personal and professional success in the future?

All of the primary students believed that they should learn how to read and write Mayan in order to attain the same grammatical mastery of their mother tongue as they do in Spanish. While most secondary males shared this same opinion, two of them did not feel that it was important to become literate in Mayan. To them, Mayan literacy was not as practical as other languages for success in a modern society. These exact results applied to the secondary females as well; three were in favor of Mayan education, while the other two did not feel that literacy in their native language was necessary. Every high school male supported the idea of learning to read and write Mayan. Almost every female also shared this sentiment except for one, who didn't feel this grammatical knowledge was of any use to her. In summary, all of the primary students were in favor of learning to read and write Mayan. This applied to most of the older students as well, even though some individuals were not interested in improving their mastery of Mayan beyond the spoken realm of communication.

Question 7: How many family members speak Mayan, Spanish, or English?

For this question, I was interested in the linguistic background of the subjects' family within the household. I expected everyone to speak Mayan, even though I just wanted to clarify this assumption with each participant. I wasn't quite as sure that every family member would know Spanish, especially the parents or grandparents who might live in the home. I was also curious as to how many family members (aside from the students themselves) spoke English, or any other language. I asked this question in order

to gain a broader perspective of the participants' exposure to each language within in the home. Furthermore, I wanted to see if any gender and/or generational trends existed relating to linguistic knowledge among family members.

Every participant clarified that all of their family members spoke Mayan. As for the elementary boys, three of them answered that their mother did not speak Spanish. One stated that his mom only knew some Spanish, while the final boy said that his grandmother was the only member of his family who did not speak Spanish. The situation differed for the girls, as two of them stated that everyone knew Spanish. One said that her mother only spoke a little bit of this language, as another girl's parents did not speak any Spanish. The final girl claimed that no one in her household knew Spanish. Two primary boys stated that their uncle spoke English, while another student said that his father only spoke a little bit of this language. Another boy's older brother also knew some English, even though no one in the final boy's family knew any English. Two primary girls answered that nobody spoke English, as another claimed that her aunt had some knowledge of the language. However, the final two girls stated that their older brothers did speak English.

Everyone spoke Spanish in three of the secondary boys' families. Another boy's mother didn't know Spanish, while the grandmother of the final student had no knowledge of this language. Two of the secondary girls stated neither one of their parents knew Spanish. The parents of another student just spoke a little of Spanish. One girl's mother only knew some of this language, while the final participant's mom did not speak any Spanish. The older brothers of three secondary males spoke English, along with the fathers of two of the students. One stated that his uncle knew English, even though no

one in the final boy's family were able to communicate in this language. Finally, two of the secondary girls stated that nobody in their family knew English. The final three claimed that their father, brother, and uncle spoke this language, respectively.

Two high school males answered that their mothers did not know Spanish, while one stated that neither parent spoke this language. The parents of another male only understood Spanish. Finally, the grandmother and little sister were the only members of the last student's family who did not know Spanish. Three of the high school females claimed that everyone in their family spoke Spanish, while the mother of another girl did not know this language. Neither the mother nor father of the final girl spoke Spanish. Three of the older males stated that no one spoke English in their family. Two answered that their brother knew English, while another brother of one student spoke Italian! The fathers of two female high school students spoke English. As for two other females, their brother and brother-in-law were able to communicate in this language, respectively. However, no one in the final girl's family knew English.

In summary, everyone's family spoke Mayan. In most cases, either the mother or both parents only knew a little bit of Spanish at best. For some students, everyone in their family spoke Spanish, while other families did not speak it at all. In situations where the grandmother lived in the same household, no one from this generation spoke this language either. However, most participants had at least one relative who knew English to a certain extent. These included older brothers, uncles, and fathers. Certain linguistic patterns arose, as a significant number of parents (especially mothers) and older family members tended not to speak Spanish. Furthermore, most relatives that knew English

were adult males who either worked as tour guides, in the souvenir shops, restaurants, or hotels in town.

Question 8: Would you like to visit the USA, other Spanish-speaking countries, or other Mayan areas?

I asked this question in order to gain insight into how each student felt about visiting other places in the world. I wondered if anyone was interested in traveling to the USA, and what those reasons might be for the participants. Additionally, I was curious as to how many students would want to travel to other Spanish-speaking countries in Latin America or Europe. Did they feel any linguistic or cultural bond between themselves and other speakers of Spanish? Finally, I wanted to know if my subjects had any fascination with touring other Mayan areas in Mexico, Guatemala, or other regions in Central America. Were they interested in learning more about the similarities and differences between themselves and other Mayan groups? I felt that this question would also provide a general perspective on issues of identity, and desire to become involved in a more global society.

Every primary student responded positively to each part of the question. Almost all secondary boys answered in the same manner as well. Only one boy wasn't sure if he wanted to visit other Mayan areas, since the people might speak a language that he didn't understand. This student would have more desire to see these areas if he could interact with the local communities. Nearly all secondary girls also answered favorably this question. However, one had reservations about traveling to Spanish-speaking countries, along with other Mayan locations. She had no interest in visiting the former places, and she wouldn't be able to understand the different languages in the latter sites. All of the high school females wanted to visit each area, as well as most of the males. Only two

boys had no desire to see other Spanish-speaking countries. One stated that he was much more interested in learning about the USA, while the other student felt that the economy was too unstable to travel around Latin America.

Many of the reasons why the students wanted to visit the USA included sheer curiosity as to how life is in America. All of the participants were interested in knowing more about the culture, language, economy, and geography of this country. Some incentives for traveling to other Latin American countries were linguistic ties, improving Spanish-language skills, searching for better economic opportunities, and discovering other cultures in the world. Most participants stated that they felt a cultural tie with other Mayan areas. They were interested in comparing similarities and differences between various groups, and learning more about their Mayan heritage.

Question 9: What do you want to be when you grow up? Which languages do you think you'll have to know to do this?

This question pertains to the future goals of my subjects when they become adults. I wanted to gain a more in-depth perspective of each student's interests and career plans, and how this might relate to language usage over time. Two of the primary boys wanted to become teachers, while another child wanted to be a waiter. The final two boys weren't sure what their career goals were yet. Nevertheless, they all thought that Spanish and English were needed in order to be successful in their fields of interests.

The elementary girls wanted to be a doctor, soccer player, teacher, and painter, respectfully. One girl didn't know what she wanted to do in the future. The doctor felt that Spanish and some Mayan were useful to her profession, while the soccer player said that she only needed Spanish. The teacher also believed that only Spanish was necessary

for her field of work. The final girls both thought that Spanish and English would be beneficial for their careers.

Two of the secondary males wanted to be teachers, as another student was interested in becoming a veterinarian. One boy wished to become a doctor, while the last participant did not have exact plans for the future. One teacher thought that he needed to know both Spanish and English, even though the other only stressed Spanish mastery. The veterinarian believed that Spanish, English, and Italian would be useful to learn, whereas the final two males focused on knowing Spanish and English. The secondary females wanted to be a tour guide, an accountant, a clothing designer, and computer programmer, respectfully. One student wanted to work at home, and she felt that Mayan was the only language that she would need to know. The other girls believed that Spanish and English were needed for their professions.

The high school males had varying interests which included tour guiding, agriculture, architecture, art, and business administration. Most participants felt that Spanish and English were important to know, while the architect believed that Spanish was useful enough for him. On the other hand, the business administrator answered that Spanish, English, French, and German would all benefit his career. One of the high school females wished to teach literature, as another was interested in accounting. One girl wanted to stay at home, while the final two weren't sure of their future goals. Nevertheless, both of these students felt that Spanish and English were important, along with the accountant. The literature teacher stressed Spanish, as the girl who wanted to stay at home believed that Spanish and Mayan would serve her interests well. Overall, Spanish and English prevailed as the most useful languages to know in the future among

the majority of students. Some felt that only Spanish was needed, while a couple of participants emphasized Mayan usage for their career plans. Only two students believed that a knowledge of other languages, such as Italian, French, and German would also be important for future success in their jobs.

Question 10: Have you been to other places in Mexico, or other countries? If so, what languages did you speak?

I asked this final question pertaining to any travel experience among these students. Aside from general curiosity, I wanted to know what languages the participants spoke at each locality. I did clarify that “other places in Mexico” meant anywhere outside of the states of Quintana Roo and Yucatan. Domestic travel between these two states is common, since Tulum, Chemax, Tizimin, Felipe Carrillo Puerto, Valladolid, Merida, and even Cancun are just some of the larger cities located there. Many students often travel to these places, as they are easily assessable by bus or car. Therefore, I was interested in trips to other parts of Mexico, or the world.

None of the students traveled outside of Mexico, even though some have been to various places within the country. One primary boy went to Chetumal, which is the capital of Quintana Roo, and spoke Spanish there. Even though this city is in the Yucatan Peninsula, it is located in the southern part of the state, and is very close to the border with Belize. He was the only student to have visited this city, which is why I considered Chetumal “another location” in Mexico.

A secondary boy went to Cozumel, which is a small island off the northern coast of the Yucatan Peninsula. Again, he was the only student to reach this area, as one needs to take a ferry from Cancun to reach this island. Another secondary male visited Chiapas, situated in southern Mexico. Both of these participants spoke Spanish in each locality.

Two high school females also traveled to Chiapas, even though one communicated in Mayan, while the other interacted in Spanish. One high school male toured Mexico City and Campeche. Finally, another male visited the states of Chiapas, Tabasco, Veracruz, and Campeche. Both high school students spoke Spanish in these regions throughout Mexico. In summary, only 7 out of 30 participants had traveled outside of Quintana Roo and Yucatan. Most were secondary and high school subjects, who tended to speak Spanish in each part of the country.

CHAPTER 5 CONCLUSIONS

Summary of results

After conducting research of language usage within the school system of Coba, I have observed that all of the males tended to speak both languages in most settings. Mostly/all Mayan came in second in terms of frequency used at school. In this sense, age did not play a significant factor in speech production among the male participants, even though a few high school boys were the only ones recorded as speaking any English at all. I observed the majority of secondary girls as communicating mostly/all in Mayan in nearly every setting. The same held true for the high school females in two of the settings, even though their results were more varied during the other two times. While English was heard on a few occasions by them, the number of their male peers who utilized this language surpassed them.

Observational data pertaining to language usage among the primary girls deviated significantly from the other measurements due to relatively higher numbers of participants who spoke mostly/all Spanish in school. Communication in both languages was also frequent, and a small number did rely on Maya as their primary method of interaction. This deviation might be the result of the random manner in which subjects were chosen by their teachers, as social class, family occupation, geographical location of living residence, and other factors mentioned before may better account for the higher usage of Spanish among the younger girls. Again, only 5 girls and boys were studied from each academic level. Nevertheless, these results may also indicate a general shift

toward Spanish usage among younger children in the future. Ideally, I would have wished to study a much larger group of students in all grade levels in order to ascertain a more accurate perception of Spanish, Mayan, and English usage in the school system of Coba.

In terms of setting, recess was the only time in which males and females from all grade levels tended to speak both Spanish and Mayan. Most of the male participants spoke these two languages in three out of the four settings; while the majority of primary students spoke Mayan after school, the same held true for the secondary and high school boys upon arriving on the school grounds at the beginning of the day. This pattern differed slightly for the secondary females, as most utilized mostly/all Mayan in every setting except recess. The same also held true for many high school girls in the classroom and after school.

Language usage was fairly sporadic among the elementary girls in the classroom and after school, even though most tended to speak only Spanish before school. With the exception of the young girls, a general trend for the other participants was to speak more Mayan before and/or after the school day. This tendency continued for the other females in the classroom, while most males utilized both languages during this time. Therefore, setting appeared to be an influential factor in certain respects, even though the only time in which language usage was consistent among the vast majority of participants occurred only during the break. Statistical analyses also reflect the correlation between language usage, setting, gender, and age in various manners throughout the school day.

The observational data have different degrees of correlation with the interview responses. I felt that questions 1,2, and 3 provided the best insight into the current linguistic situation among indigenous youth in Coba today, which is why those answers

are summarized with the most detail. In question 1 for example, the majority of participants from each grade level reported speaking either Mayan or both languages at home. In many cases, they communicated in their native tongue with their parents, while using Spanish with siblings and younger family members. In terms of language usage outside of the home in question 2, the majority of elementary boys responded that they normally speak either Mayan or both languages, while most of the girls only used Spanish. While many secondary and high school males also spoke Spanish within the community setting, most of their female peers answered that they used both languages when interacting with others outside of the home.

The answers for question 3 deviated slightly from the observational results in the sense of inquiry about the total number of languages spoken by each individual, along with which one felt the most comfortable for them to speak. The elementary students were only bilingual in Spanish and Mayan, even though most of the boys claimed that Mayan was easiest for them. Many of the girls however, declared Spanish as their natural language for interaction with others. Two of the secondary boys claimed to speak some English, even though I did not hear any used during my observations. Furthermore, the majority of males and females from this academic level stated that they felt most comfortable when communicating in Spanish, although I observed higher instances of bilingualism and/or a greater Mayan dependency on an overall basis from this particular group.

Finally, two of the high school boys and one girl reported a knowledge of all three languages, which I did notice during my observations. Nevertheless, most of the male participants felt more comfortable interacting in Spanish, despite a significant usage of

both languages observed in school. On the other hand, the majority of high school females responded that they prefer either both languages or Mayan when communicating on a normal basis, which did correlate overall with the observational data for these participants.

With respect to the other interview questions, almost every student reacted favorably to the presence of tourists in Coba, and had a desire to eventually become literate in the English language. Furthermore, everyone enjoyed speaking Spanish, even though only the primary and high school females actually felt that this was their “native” language along with Mayan. The other groups possessed differing degrees of personal attachment between Spanish and Mayan. Ironically, all of the primary students and high school males felt that it was important to become literate in Mayan. While the majority of secondary students and older females also shared in these sentiments, a few did not feel that literacy in this language would be of much use to them in the future.

Everyone’s family spoke Mayan, whereas the parents (especially mothers) and elder relatives of most participants only had a rudimentary knowledge of Spanish at best. Furthermore, most students had at least one relative who knew English to a certain extent. However, they tended to be adult males who were affiliated with the tourist industry by working as guides, in the souvenir stores, restaurants, or hotels in town. All of the students had a desire to learn more about and possibly visit the USA someday. Most felt the same way towards seeing other countries in Latin America, and visiting other Mayan locations in Mexico, Guatemala, Belize, El Salvador and Honduras.

With respect to language usage in relation to future goals, Spanish and English prevailed as the most beneficial to know among a vast number of students. While a few

felt that only Spanish was needed, some emphasized Mayan usage in their desired professions. Age and gender were not significant factors on an overall basis. Nevertheless, those that placed more importance on Mayan came only from the girls, while those who stressed learning Italian, French, and German arose from the males. Finally, no one had traveled outside of Mexico, while only 7 students previously visited locations outside of Quintana Roo and Yucatan. Most were secondary and high school males, who spoke Spanish in each location.

Based on both observational data and interview answers, I would have to conclude that the linguistic situation in Coba reflects one of relatively stable bilingualism. Aside from the observational results from the young female participants, Mayan and Spanish appear to co-exist peacefully without a noticeable threat of the latter overtaking the former language. Based on first-hand observations, Mayan was employed just as much (if not more) as Spanish on many occasions within the school setting. While adhering to a diglossic system to a certain extent, Mayan was heard in this normally Spanish-speaking environment much more than I originally expected.

English was also employed in small instances, even though this language did not pose a significant threat to the continued usage either Spanish or Mayan. Generally, it appears that the majority of students are proud of their native language and culture, while simultaneously embracing national and international elements in a balanced fashion. Further research would provide more insight into the grammatical influences that these languages have on each other, along with a greater focus on the speech of young school-age children in order to analyze this linguistic situation from a more detailed and holistic perspective.

Reflections

In spite of the short time frame, I feel that my study provided a sufficient account of the general linguistic and cultural situation which exists in Coba today. I was able to concentrate on a group of 30 willing participants who were cooperative (along with their parents) throughout the entire study. Every observation was slightly unique in terms of when and how often Spanish, Mayan, or English were implemented at school, which depended on the specific circumstances of each individual. Furthermore, I believe that the interviews reflected a genuine perspective of how each person viewed the social, economic, and linguistic phenomenon occurring in their town today. In this aspect, my questions and research goals for this particular project were answered, as I left the town with a sense of fulfillment and more in-depth understanding of language usage among local youth.

Ideally however, I would have preferred to observe and interview many more students over a much longer time frame. Furthermore, a comparison between various towns in the region (such as Tulum, Playa del Carmen, or Valladolid) would have lead to a broader linguistic and cultural perspective of indigenous students living in similar environments. A formal observation of younger elementary students (grades K-4) would also have been beneficial in order to better understand their attitudes towards speaking Spanish, Mayan, and/or English. Since the data on elementary girls was noticeably different than those of their male peers and other participants, this might have shown an even greater propensity for language maintenance or shift in the following generations of young students to come.

Consequently, a question still lingers as to whether that particular data was the result of mere random sampling, or if it implied a gradual tendency for linguistic

assimilation to occur among younger children in the future. Finally, an alternate time-frame reference as a standard for observational language usage would certainly yield different results to a certain degree. Nevertheless, the ultimate goal of this study was to provide an overview of the general extent to which Mayan and English are utilized within a normally Spanish-speaking academic environment.

Future research

In terms of future linguistic research in the Yucatan, a focus on actual speech content will be able to further reflect the degree of influence that these three languages have on each other. While this study analyzed when, where, and for how long Mayan and/or English were spoken in a normally Spanish-speaking environment, it did not reveal what was said among my participants. Moreover, it did not delve into phonetic, morphological, syntactic, lexical, or semantic features which might have been adapted from one language to another. One would need to have a knowledge of all three languages in order to fully comprehend the extent to which any of these characteristics may occur among indigenous youth. A more in-depth grammatical approach to researching various linguistic phenomena within bi- or multilingual communities leads to many possibilities for extrapolation on this particular study.

Moreover, a concentration on selected grammatical features may be applied to other settings, such as the home or store within Coba or other similar locations. As mentioned before, linguistic comparisons between different towns in the Yucatan Peninsula would provide a broader perspective on the extent to which local populations incorporate native, national, and international languages into their repertoire. Inter-generational analyses of speech production are other feasible avenues to explore, in which a researcher may compare/contrast the manner and extent to which these languages

appear in their conversations with others. The age and sex of both the addressor and addressee are additional factors which might be examined to perceive any patterns in linguistic usage among the Yucatec Maya. Empirical research methods, such as observations, interviews, match-guised techniques, and questionnaires may further be applied to other communities throughout Latin America and the world, where traditional and modern linguistic/cultural characteristics co-exist in a unique manner at each location.

Theoretical Contributions

This thesis has summarized various theoretical perspectives relating to language contact, education, tourism, and the field of sociolinguistics itself. Each of these topics reflect numerous aspects of Coba's society, and to a greater extent, that of many communities in the Yucatan Peninsula. Since these issues have previously been analyzed by scholars either as separate or connected entities, I have provided a holistic framework for viewing all of them in a collected manner in the context of an academic environment.

The theories mentioned in the second chapter help reinforce current approaches, and allow for future perspectives in understanding how the presence of native (Mayan), national (Spanish), and international (English) elements affect language usage among local youth at school. Overall, a theoretical basis was implemented in both categorizing my data, and interpreting those interrelated social, cultural, economic, and linguistic phenomena which influence the speech of indigenous students in the region today.

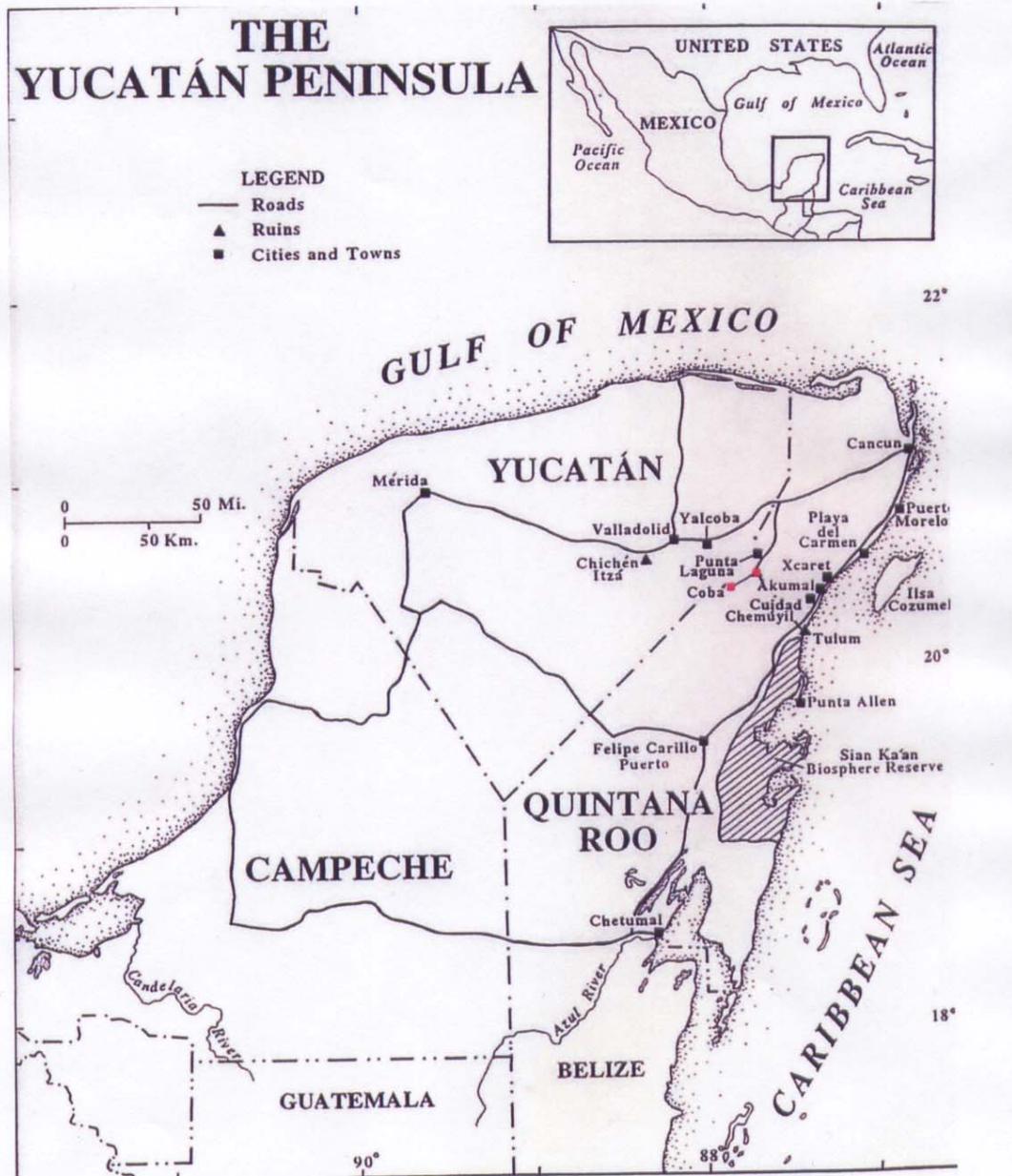
Additionally, this study ties in to those theories which support native-language education in bi- or multilingual environments. Mayan was often used in the school setting among participants of all grade levels, and most were in favor of formally becoming literate in their mother tongue. While Yucatec Mayan appears relatively stable on a

spoken level, this language has a greater chance of diminishing in the future if its literary features are not preserved. Based on Fishman's theory on language shift and preservation for instance, he would probably argue that since Mayan is still frequently spoken and viewed favorably by students, language planners should take advantage of this situation by implementing an increased number of Mayan literacy programs while it remains a vital linguistic and cultural feature in the region.

The addition of Cummin's and Szepe's advocacy of additive bilingualism runs parallel to Fishman in the sense that it is likely much easier to promote native-language development while the general attitude of the community still views Mayan favorably and utilizes this language on a normal basis, rather than one who only speaks their native language in limited domains. Overall, the high number of bilingual speakers throughout the Yucatan, its relative prestige compared to other indigenous languages, and regional efforts to standardize and produce more scholarly materials in Mayan have led to an increased awareness on the importance of linguistic/cultural protection among its youth.

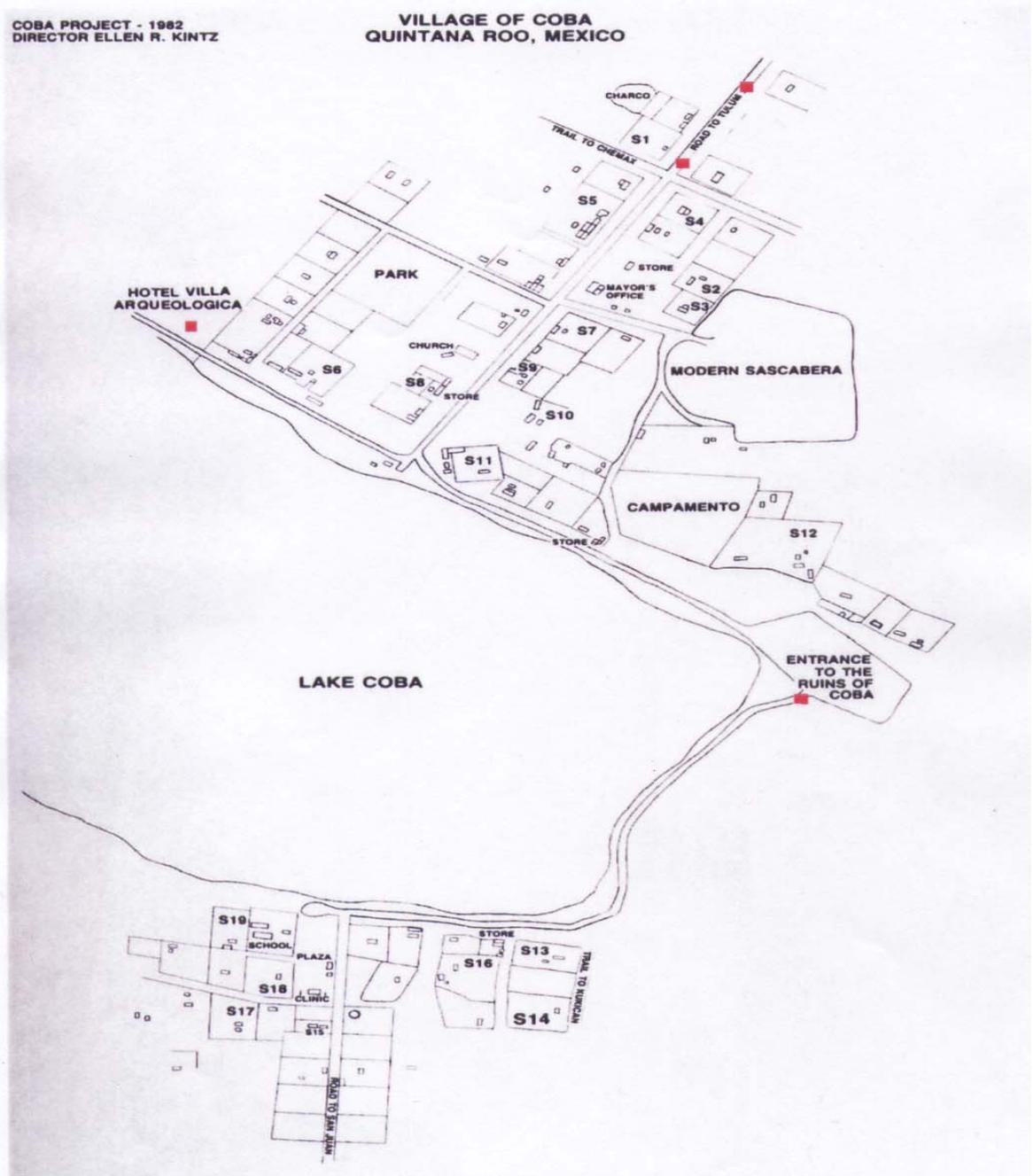
Furthermore, the fact that the vast majority of my subjects were in favor of learning English for the sake of tourism and upward mobility and maintaining their linguistic heritage, demonstrates how two or more languages may exist in relative harmony without necessarily replacing each other. As a result, both Mayan and English education (in addition to Spanish) are feasible possibilities which would help legitimize native, national, and international aspects which are apparent in Coba and other locations throughout the Yucatan today.

APPENDIX A
 MAP OF THE YUCATAN PENINSULA



After Pi-Sunyer's et. al. *Tourism and Mayan Society in Quintana Roo, Mexico* (1999)

APPENDIX B
MAP OF COBA



APPENDIX D
OBSERVATIONAL RESULTS FOR THE SECONDARY STUDENTS

Observational Results for the Secondary Students				
* = Boys * = Girls				
English				
Mostly/All Mayan	* * *	* * *	* *	* * *
Both Spanish and Mayan	* *	* * *	* * * *	* * * *
Mostly/All Spanish		*		
	Before School	Classroom	Break	After School

APPENDIX E
OBSERVATIONAL RESULTS FOR THE HIGH SCHOOL STUDENTS

Observational Results for the High School Students				
* = Boys * = Girls				
	Before School	Classroom	Break	After School
English		* *	* * *	* *
Mostly/All Mayan	* * * * *	* * * * *	* *	* * * * *
Both Spanish and Mayan	* * *	* * * * * *	* * * * * * * *	* * * * * *
Mostly/All Spanish	* *	*		*

APPENDIX F
FREQUENCY TABLE FOR LANGUAGE USAGE

Frequency tables for language usage

A) Everyone before school

		Frequency	Percent
Valid	both	11	36.7
	maya	14	46.7
	span	5	16.7
	Total	30	100.0

B) Everyone in class

		Frequency	Percent
Valid	b&E	1	3.3
	both	13	43.3
	m&E	1	3.3
	maya	12	40.0
	span	3	10.0
	Total	30	100.0

C) Everyone during break

		Frequency	Percent
Valid	b&E	1	3.3
	both	22	73.3
	m&E	2	6.7
	maya	3	10.0
	span	2	6.7
	Total	30	100.0

D) Everyone after school

		Frequency	Percent
Valid	both	14	46.7
	m&E	2	6.7
	maya	11	36.7
	span	3	10.0
	Total	30	100.0

E) Overall frequency for males

		Frequency	Percent
Valid	both	39	65.0
	maya	20	33.3
	span	1	1.7
	Total	60	100.0

F) Overall frequency for females

		Frequency	Percent
Valid	both	22	36.7
	maya	25	41.7
	span	13	21.7
	Total	60	100.0

G) Overall frequency for everyone

		Frequency	Percent
Valid	both	61	50.8
	maya	45	37.5
	span	14	11.7
	Total	120	100.0

APPENDIX G
 CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH
 SETTING (LANGUAGE VS. AGE)

Chi-Square/Adjusted Residual Data for everyone before school

LANGUAGE * AGE Crosstabulation

			AGE			Total
			elem	high	sec	
LANGUAGE	both	Count	5	3	3	11
		Adjusted Residual	1.1	-.5	-.5	
	maya	Count	2	5	7	14
		Adjusted Residual	-2.1	.3	1.8	
	span	Count	3	2	0	5
		Adjusted Residual	1.4	.3	-1.7	
Total		Count	10	10	10	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.242 ^a	4	.182
Likelihood Ratio	7.927	4	.094
N of Valid Cases	30		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is 1.67.

In the classroom

LANGUAGE * AGE Crosstabulation

			AGE			Total
			elem	high	sec	
LANGUAGE	both	Count	6	5	3	14
		Adjusted Residual	1.0	.3	-1.3	
	maya	Count	3	4	6	13
		Adjusted Residual	-1.0	-.3	1.3	
	span	Count	1	1	1	3
		Adjusted Residual	.0	.0	.0	
Total		Count	10	10	10	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.077 ^a	4	.722
Likelihood Ratio	2.113	4	.715
N of Valid Cases	30		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is 1.00.

Break

LANGUAGE * AGE Crosstabulation

			AGE			Total
			elem	high	sec	
LANGUAGE	both	Count	7	8	8	23
		Adjusted Residual	-.6	.3	.3	
	maya	Count	1	2	2	5
		Adjusted Residual	-.7	.3	.3	
	span	Count	2	0	0	2
		Adjusted Residual	2.1	-1.0	-1.0	
Total		Count	10	10	10	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.487 ^a	4	.344
Likelihood Ratio	4.920	4	.296
N of Valid Cases	30		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .67.

After

			AGE			Total
			elem	high	sec	
LANGUAGE	both	Count	4	5	5	14
		Adjusted Residual	-.5	.3	.3	
	maya	Count	4	4	5	13
		Adjusted Residual	-.3	-.3	.5	
	span	Count	2	1	0	3
		Adjusted Residual	1.3	.0	-1.3	
Total		Count	10	10	10	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.297 ^a	4	.681
Likelihood Ratio	3.070	4	.546
N of Valid Cases	30		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is 1.00.

APPENDIX H
 CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH
 SETTING (LANGUAGE VS. GENDER)

Chi-Squared/Adjusted Residual Data for everyone before school

LANGUAGE * GENDER Crosstabulation

			GENDER		Total
			fema	male	
LANGUAGE	both	Count	4	7	11
		Adjusted Residual	-1.1	1.1	
	maya	Count	7	7	14
		Adjusted Residual	.0	.0	
	span	Count	4	1	5
		Adjusted Residual	1.5	-1.5	
Total		Count	15	15	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.618 ^a	2	.270
Likelihood Ratio	2.756	2	.252
N of Valid Cases	30		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.50

In the classroom

LANGUAGE * GENDER Crosstabulation

			GENDER		Total
			fema	male	
LANGUAGE	both	Count	3	11	14
		Adjusted Residual	-2.9	2.9	
	maya	Count	9	4	13
		Adjusted Residual	1.8	-1.8	
	span	Count	3	0	3
		Adjusted Residual	1.8	-1.8	
Total		Count	15	15	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.495 ^a	2	.009
Likelihood Ratio	10.992	2	.004
N of Valid Cases	30		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.50.

Break

LANGUAGE * GENDER Crosstabulation

			GENDER		Total
			fema	male	
LANGUAGE	both	Count	11	12	23
		Adjusted Residual	-.4	.4	
	maya	Count	2	3	5
		Adjusted Residual	-.5	.5	
	span	Count	2	0	2
		Adjusted Residual	1.5	-1.5	
Total		Count	15	15	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.243 ^a	2	.326
Likelihood Ratio	3.017	2	.221
N of Valid Cases	30		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 1.00

After

LANGUAGE * GENDER Crosstabulation

			GENDER		Total
			fema	male	
LANGUAGE	both	Count	5	9	14
		Adjusted Residual	-1.5	1.5	
	maya	Count	7	6	13
		Adjusted Residual	.4	-.4	
	span	Count	3	0	3
		Adjusted Residual	1.8	-1.8	
Total		Count	15	15	30

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.220 ^a	2	.121
Likelihood Ratio	5.395	2	.067
N of Valid Cases	30		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.50.

APPENDIX I
CHI-SQUARE/ADJUSTED RESIDUAL DATA FOR EVERYONE IN EACH
SETTING

Chi-Square/Adjusted Residual Data for everyone in all settings

Table 1

LANGUAGE * GENDER Crosstabulation

			GENDER		Total
			female	male	
LANGUAGE	both	Count	23	39	62
		Adjusted Residual	-2.9	2.9	
	maya	Count	25	20	45
		Adjusted Residual	.9	-.9	
	span	Count	12	1	13
		Adjusted Residual	3.2	-3.2	
Total		Count	60	60	120

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.992 ^a	2	.001
Likelihood Ratio	15.704	2	.000
N of Valid Cases	120		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.

Table 2

LANGUAGE * AGE Crosstabulation

			AGE			Total
			elem	high	sec	
LANGUAGE	both	Count	22	21	19	62
		Adjusted Residual	.5	.1	-.6	
	maya	Count	10	15	20	45
		Adjusted Residual	-2.0	.0	2.0	
	span	Count	8	4	1	13
		Adjusted Residual	2.3	-.2	-2.1	
Total		Count	40	40	40	120

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.251 ^a	4	.055
Likelihood Ratio	9.862	4	.043
N of Valid Cases	120		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is 4.33.

LIST OF REFERENCES

- Agresti, A. and B. Finlay. 1997. *Statistical Methods for the Social Sciences*. Upper Saddle River, NJ: Prentice Hall, Inc.
- Andrade, V. 2001. *Historia Regional de Quintana Roo: Perfil Socioeconomico*. Mexico City: Editorial Limusa, Grupo Noriega Editores.
- Appel, R. and P. Muysken, 1987. *Language Contact and Bilingualism*. London: Arnold.
- Ayers, G. and Barbara Pfeiler. 1999. *Asi Escriben Los Ninos Su Lengua Materna*. Mexico City: Plaza y Valdes.
- Benavides, A. 1981. *Coba: Una Ciudad Prehispanica de Quintana Roo*. Mexico: Instituto Nacional de Anthropologia e Historia.
- Bevington, G. 1995. *Maya for Travelers and Students: A Guide to Language and Culture in Yucatan*. Austin: University of Texas Press.
- Blom, J.P. and J.J. Gumperz. 1972. "Social Meanings in Linguistic Structures: Code-Switching in Norway," in J.J. Gumperz and D. Hymes (eds) (1972, rev. edn 1986), *Directions in Sociolinguistics: The Ethnography of Communication*. New York and Oxford: Basil Blackwell, pp. 407-34.
- Burns, A. 1983. *An Epoch of Miracles*. Austin: University of Texas Press.
- Campbell, L. and M.C. Muntzel. 1989. "The Structural Consequences of Language Death," in Dorian (ed), *Investigating Obsolescence: Studies in Language Contraction and Death*. Cambridge: Cambridge University Press, pp. 181-196.
- Chomsky, N. 1966:59. *Cartesian Linguistics*. New York: Harper and Row.
- Cline, H. 1962. *Mexico: Revolution to Evolution, 1940-1960*. London: Oxford University Press.
- Coe, M. 1999. *The Maya*. London: Thames and Hudson Ltd.
- Cohen, E. 1988. Authenticity and Commoditization in Tourism. *Annuals of Tourism Research* 15, pp. 371-86.
- Crystal, D. 1991. *A Dictionary of Linguistics and Phonetics*. London: Blackwell.

- Cummins, J. 1979. "Linguistic Interdependence and the Educational Development of Bilingual Children." *Review of Educational Research* 49, 221-51.
- Cummins, J. 1984. *Bilingualism and Special Education: Issues in Assessment and Pedagogy*. Clevedon, Avon: Multilingual Matters.
- Dachary, C. and S. Burne. 1988. *El Caribe Mexicano: Una Introduccion a su Historia*. Cancun: Fondo de Publicaciones y Ediciones de Quintana Roo.
- Daltabuit, M. 1996. *Ecoturismo y Desarrollo Sustentable: Impacto en Comunidades Rurales de la Frontera Sur*. Cuernavaca, Morelos. Mexico City: CRIM/UNAM, Instituto de Investigaciones Antropologicas.
- Dorian, N.C. 1981. *Language Death: The Life Cycle of a Scottish Gaelic Dialect*. Philadelphia: University of Pennsylvania Press.
- Eastman, C. 1990. *Aspects of Language and Culture*. Novato: Chandler and Sharp Publishers, Inc.
- Farriss, N. 1984:19. *Maya Society Under Colonial Rule*. Princeton: Princeton University Press.
- Fasold, R. 1990. *The Sociology of Language*. Oxford: Basil Blackwell.
- Fasold, R. 1984. *The Sociology of Society*. Oxford and Cambridge: Blackwell.
- Field, F. 2002. *Linguistic Borrowing in Bilingual Contexts*. Philadelphia: John Benjamin Publishing Company.
- Fishman, J.A. 1971. "The Links Between Micro-and Macro-Sociolinguistics in the Study of who Speaks What Language to Whom and When," in J.A. Fishman, R.L. Cooper and R. Ma (eds), *Bilingualism in the Barrio*. Bloomington: Indiana University Language Science Monograph Series, N. 7, pp.583-604.
- Fishman, J. 1991. *Reversing Language Shift: Theoretical and Empirical Foundations of Assistance to Threatened Languages*. Clevedon: Multilingual Matters.
- Gal, S. 1979. *Language Shift: Social Determinants of Linguistic Change in Bilingual Austria*. New York: Academic Press.
- Giles, H., N. Coupland and J. Coupland 1991. "Accommodation Theory: Communication, Context, and Consequence," in H. Giles, J. Coupland, and N. Coupland (eds), *Contexts of Accommodation: Developments in applied Sociolinguistics*. Cambridge: Cambridge University Press.
- Giles, H., R.Y. Bourhis and D.M. Taylor. 'Toward a Theory of Language in Ethnic Group Relations', in H. Giles (ed) *Language and Intergroup Relations*. London: Academic Press.

- Greenwood, D. 1977. "Culture by the Pound: An Anthropological Perspective on Tourism as Cultural Commodification." In: Smith, V., Editor, 1977. *Hosts and Guests*, University of Pennsylvania Press, Philadelphia, pp. 171-186.
- Guemez, M. 2003. "Capsulas Etno-Linguisticas Sobre El Maya Yucateco." In *The Consortium in Latin American Studies Handbook*. Chapel Hill: University of North Carolina Press, pp. 25-35.
- Hartman, R.R.K., and F.C. Stork. 1972. *Dictionary of Language and Linguistics*. New York and Toronto: J. Wiley and Sons.
- Haugen, E. 1950. "The Analysis of Linguistic Borrowing," in *Language* 26:210-231.
- Hidalgo, M. 1996. "A Profile of Language Issues in Contemporary Mexico," in Ana Roca and John B. Jensen (eds), *Spanish in Contact: Issues in Bilingualism*. Somerville: Cascadilla Press, pp. 45-73.
- Hymes, D. 1974. *Foundations in Sociolinguistics*. Philadelphia: University of Pennsylvania Press.
- King, L. 1994. *Roots of Identity: Language and Literacy in Mexico*. Stanford: Stanford University Press.
- Kintz, E. 1990. *Life Under the Tropical Canopy*. Fort Worth: Holt, Rinehart and Winston.
- Lambert, W.E. (1978), "Some Cognitive and Sociocultural Consequences of Being Bilingual," in J.C. Alatis (ed.), *Georgetown Round Table on Languages and Linguistics* 1978. Washington, DC: Georgetown University Press, pp. 214-229.
- Labov, W. 1966. *The Social Stratification of English in New York City*. Washington D.C.: Center for Applied Linguistics.
- MacCannell, D. 1976. *The Tourist: A New Theory of the Leisure Class*. New York: Schocken.
- Mackey, W.F. 1984. "Mother Tongue Education: Problems and Prospects." In *Prospects* 14:1, pp. 37-49. Paris:UNESCO.
- Macnamara, J. 1966. *Bilingualism and Primary Education*. Edinburgh: University of Edinburgh Press.
- Mikes, M. 1984. Pitanje Nastavnog Jezika u Procesima Dekolonizacije I Nacionalne Emancipacije Africkih Zemalja. Paper presented at the conference on Language and National Relations, Sarajevo, 1984.
- Myers-Scotton, C.1993. *Social Motivations for Code-Switching: Evidence from Africa*. Oxford: Clarendon.

- Pellicer, A. 1999. *Asi Escriben Los Ninos Su Lengua Materna*. Mexico City: Plaza y Valdes.
- Pi-Sunyer, O., R. Brooke Thomas and M. Daltabuit. 1999. *Tourism and Mayan Society in Quintana Roo*, Mexico. Storrs, CT: Center for Latin American and Caribbean Studies at the University of Connecticut.
- Ramirez, R. 1981. *La Escuela Rural Mexicana*. Mexico: SEP.
- Romaine, S. 1995. *Bilingualism*. 2nd Edition. [Language in Society 13]. Cambridge: Blackwell.
- Ryan, C. 1996. *Recreational Tourism: A Social Science Perspective*. New York: International Thompson Business Press.
- Silva-Corvalan, C. 1994. *Language Contact and Change: Spanish in Latin America*. New York: Oxford University Press.
- Swadesh, M. 1948. "Sociologic Notes on Obsolescent Languages", in *International Journal of American Linguistics* 14: 226-235.
- Swann, J., R. Mesthrie, A. Deumert and W. Leap. 2000. *Introducing Sociolinguistics*. Philadelphia: John Benjamin Publishing Company.
- Szepe, G. 1984. "Mother Tongue, Language Policy, and Education," in *Prospects: Quarterly Review of Education*, V. 14 No. 1. pp. 63-73 AV:UMI.
- Thomason, S. and T. Kaufman. 1988:65ff. *Language Contact, Creolization and Genetic Linguistics*. Berkeley: University of California Press.
- Van Hout, R. and P. Muysken. 1994:42. "Modeling Lexical Borrowability." In *Language Variation and Change*, 6 (1):39-62.
- Viliesid, L. 1990. *Quintana Roo: Una Historia Compartida*. Mexico City: Instituto de Investigaciones Dr. Jose Maria Luis Mora.
- Villa Rojas, A. 1969. "The Mayas of Yucatan." In *Ethnology*, part 1, edited by Evon Z. Vogt, pp. 244-275. *Handbook of Middle American Indians*, vol. 7, Robert Wauchope, general editor. Austin: University of Texas Press.
- Weinreich U. 1953:61 (reprinted in 1968). *Languages in Contact*. The Hague: Mouton.
- Whorf, B.L. 1956. *Language, Thought and Reality: Selected Writings*, J.B. Carroll (ed.), Cambridge, MA: MIT Press.

BIOGRAPHICAL SKETCH

Stephanie Litka graduated from the University of Florida in 2001 with a B.A. in Spanish and Portuguese. She continued with graduate studies in linguistic anthropology at the same institution, and received her master's in 2004. Her interest in Mayan culture and languages began in the summer of 1999, when she taught English in Coba during a summer anthropological fieldwork course from Seminole Community College in Orlando, Florida. She returned twice more over the following summers, and participated in the Summer Intensive Yucatec Mayan program sponsored by the University of North Carolina at Chapel Hill in 2003. She plans to continue with doctoral studies in anthropology at Florida State University starting in August 2004, and hopes to eventually become a professor of anthropology and linguistics in the future.