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BILINGUALISM AND THE INROADS OF THE

SPANISH LANGUAGE INTO THE MONTAÑA

REGION OF THE STATE OF GUERRERO, MÉXICO

By

Georgeanne Weller

A dissertation submitted to the Faculty of the University of
Delaware in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Linguistics
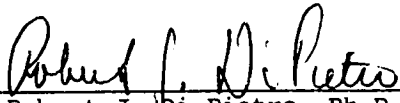
December, 1986

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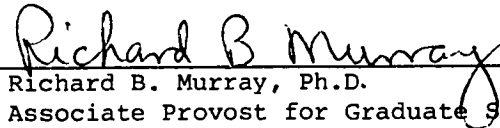
Robert J. Di Pietro, Ph.D.
Professor in charge of dissertation on behalf of the
Advisory Committee

Approved: _____

James P. Lantolf, Ph.D.
Chairman of the Department of Linguistics

Approved: _____

Richard B. Murray, Ph.D.
Associate Provost for Graduate Studies

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DEDICATION

TO MY PARENTS, for their loving care and support over the years

TO CARLOS, for his devotion during these difficult years

TO VANI and NIKI, for their company

TO the CIIS, my source of inspiration and, above all,

TO the NAHUATLS, the MIXTECS and the TLAPANECS, may this study in scme small way benefit them

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I. INTRODUCTION

This dissertation concerns "Bilingualism and the Inroads of the
Spanish Language into the Montaña Region of the State of Guerrero,
México". It is a study of the co-existence between three Indian langu-
ages (Nahuatl, Mixtec and Tlapanec) and Spanish in the Montaña Region, as
well as the circumstances which have allowed Spanish to gain ground with
respect to the role and importance of the Indian languages over the
years. The study not only describes the present situation, but also
looks at the evolution of the phenomena of bilingualism and monolingua-
lism in the Montaña Region over the past several decades.

An attempt is made to document the "whys" behind this evolution,
as well as to predict what will happen in the future in this area
regarding language maintenance and shift between the Indian tongues and
Spanish. These data will be complemented by a qualitative analysis of
the extent to which Spanish is spoken by those individuals who answered
"yes" to the 1980 Census question "Do you speak Spanish". Attitudes
toward the Indian languages and the Spanish language will also be taken
into account.

Chapter II attempts to explain the practical and political
motives behind an academic endeavor of this nature, while Chapter III
provides the reader with basic statistical information on the trends of

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bilingualism and monolingualism in México on a national and regional level, with particular emphasis on the Montaña Region where the three ethnic groups included in this study live.

Chapter IV provides the necessary background information for the reader to understand how the language problem is inserted in the socio-economic reality of the Montaña Region.

Chapter V verses on the more theoretical issues of interest in a dissertation on the "Bilingualism and the Inroads of the Spanish Language into the Montaña Region of the State of Guerrero, México". The concepts of ethnicity, marginality, bilingual education, language policy, and language maintenance and shift are considered in depth and related to the subject at hand.

Chapter VI is theoretical-practical in nature and deals with the following three main topics: 1) the design, application and evaluation of language instruments and questionnaires, 2) the theoretical constructs of language proficiency, and 3) theoretical considerations in language testing.

The largest chapter (VII) covers a wide array of variables which are considered to directly impinge on language proficiency and language maintenance and shift. These variables reflect the Indians' self-evaluations, the researcher's evaluation of their oral proficiency in Spanish, and their attitudes toward their native and second languages and bilingual instruction.

Finally, Chapter VII provides conclusions for all the research presented in the dissertation as well as future lines of research on this subject.

II. SIGNIFICANCE OF THE STUDY

During this Sexennium (President Miguel de la Madrid Hurtado,
1982-88), the Government of México has manifested its desire that the
Indian groups, to the extent possible, have bilingual-bicultural educa-
tion in their native tongue and in Spanish. To confront this enormous
task, educational materials have been prepared in some 25 Indian tongues.
The campaign to begin teaching literacy through the native Indian tongue
was officially begun in September, 1983. Spanish is introduced as a
second language during the second year of primary school.

In addition to the major shortcomings in human and economic
resources, this program lacks a considerable amount of background data of
prime importance, such as detailed information on the degree of monolin-
gualism and bilingualism over the years, the attitudes of the Indians
with respect to the importance of maintaining their language and culture,
the ways maintenance is manifested, a direct measure of the ways and the
extent to which Spanish has penetrated into the lives of the population,
and where the future is likely to lead with respect to language use in
the Indian communities.

Undoubtedly, if the Mexican Government had data of this nature it
would be in a better position to develop a more sound language policy in
the future. Even though many make the mistake of grouping all Indians as

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'Indians', it should be pointed out that the surveys required to obtain
basic information on their language ability in both tongues, attitudes,
the usefulness of the two languages, etc., are valid only for a particu-
lar group. Although certain trends might be present, the data must be
collected and interpreted in the light of each ethnic group's particular
situation.

In carrying out this study, an attempt is made to scientifically
document certain phenomena, such as the fact that women usually are less
proficient in Spanish than men, that Spanish can not only be learned
formally in the classroom, but also acquired informally in many different
settings, etc. Another specific goal is to provide the information
necessary on a pilot project level for making better language policy
decisions in the Montaña Region, and this hopefully will be useful for
subsequent investigations in other areas, although it would be a great
mistake to automatically extrapolate the results to other ethnic groups
in other regions, where the emotional ties to the land, past traditions
and their native language might not be comparable.

III. THE PROBLEM UNDER STUDY

This chapter provides the reader with basic statistical informa-
tion on the number of speakers of Indian languages on a national, state
and regional level, with particular emphasis on the State of Guerrero.
It also includes a detailed breakdown over the past four decades with
respect to monolingual and bilingual speakers in the twenty counties that
make up the Montaña Region and the reasons why the three counties
selected for this study were chosen over the other seventeen.

The Indian-Spanish Language Situation at a National Level

The Indian languages have co-existed with Spanish in México
for centuries. Each one has had its respective functions and prestige.
However, as has occurred with most vernaculars throughout the world, the
Indian languages have been gradually displaced by Spanish. This dis-
placement is manifested as follows: (1) a drop in the percentage of
Indian monolinguals, (2) a noteworthy increase in the percentage of
bilinguals, and (3) a considerable increase in the percentage of monolin-
guals in Spanish of Indian origin (see Tables 1 and 2). Why should such
be the case, what are the causes, why has this trend been more apparent
over the last few decades, and what are the factors that contribute to
the preservation or disappearance of the Indian languages are only a few
of the many questions that have no answer to date.

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Before attempting to respond to this series of questions, it will be necessary to look at the background data we already obtained to better understand the role and importance of the Indian languages in the history of México.

TABLE NO 1 [1]

Number of Speakers of Indian Languages Throughout México's History

Year	Total Population		Indian Popultion		
	Absolute Number	Index 1492 = 100	Absolute Number	Index	% of(2) 1492=100
1	2	3	4	5	6
1492	4,500,000	100	4,500,000	100	100.00
1570	3,555,000	79	3,500,000	78	8.45
1650	3,800,000	84	3,400,000	76	89.47
1825	6,800,000	151	3,700,000	82	54.41
1940	19,653,552	436	5,427,396	121	27.91

It is readily apparent that the Indian language has lost ground from the time of the Spanish Conquest to the present, as often happens when subordinate languages come in contact with languages of greater prestige. As we can be see from Table No 1, the percentage of Indian language speakers declined from 100% at the time of the Spanish Conquest to 54% in just a little over three centuries, during the Colonial Period.

[1] Instituto Nacional Indigenista, Memorias del INI, Vol. 1, No. 1, Mexico, D.F., 1950, p. 20.

TABLE NO 2

Historical Overview of the Importance of Indian Speakers in México during the 20th Century

Total Population	Year	Indian Population	Percentage of Indian Population to Overall Population
13,607,272 [2]	1900	-	-
11,673,283 [3]	1900	1,794,283	15%
15,160,369 [2]	1910	-	-
12,984,962 [3]	1910	1,685,864	13%
14,334,780 [2]	1921	-	-
12,368,321 [3]	1921	1,868,892	15%
14,834,780 [2]	1930	2,251,086	. 15%
16,552,722 [4]	1930	2,656,112	16%
16,552,722 [2]	1940	2,490,909	15%
19,653,600 [4]	1940	2,939,272	15%
19,653,600 [2]	1950	2,447,408	13%
25,791,017 [4]	1950	2,888,178	11%
35,923,129 [2]	1960	3,030,254	8%
34,625,903 [4]	1960	3,575,698	10%
48,225,238 [2]	1970	3,111,411	7%
48,377,363 [4]	1970	3,724,860	8%
69,346,900 [2]	1980	3,999,211	6%
65,863,800 [4]	1978	8,042,390	12%
	1980	4,897,261[5]	7%

---

[2] Secretaría de Programación y Presupuesto X Censo General de Población y Vivienda, 1980.

[3] Memorias del INI, p. 18.

[4] Stefano Varese, Indígenas y educación en México, México, D.F., Centro de Estudios Educativos, 1982, p. 28.

[5] Author's best estimate from confidential sources.

From Independence (1825) till the Mexican Revolution (1910), the percentage continued to drop markedly, from 55% to 13% of the total population. Since then the decreases have been much less dramatic, remaining at about 13-15% for several decades, but dropping to around 7-8% during the 1960's, 1970's and 1980's. This, in turn, has led to considerable concern in academic and political circles interested in Indian affairs that the Indian languages might possibly disappear in the upcoming decades. If we take into account that México's population in 1980 was about 70 million, a population of 4-5 million (6-7%) is not negligible and certainly has socioeconomic and educational repercussions. Once again, it is not enough to talk about figures, but rather what these figures represent. In other words, are the speakers only monolingual in their Indian language, or are they bilingual? How old are they? Are they dying off, or do the young also speak the Indian language? Do they prefer Spanish? Do these considerations hold true across Indian groups, or are there geographical factors which come into play?

Table No. 3 and the three graphs that follow clarify any doubts whatsoever regarding the trend of monolingualism and bilingualism in the Indian languages and Spanish in México. There has been a clear increase in bilingualism over the past five decades, while monolingualism has been unstable, with an overall trend to decrease from 1960 on. In the next section the specific case of the State of Guerrero and the Montaña Region will be examined.

TABLE NO 3

Historical Overview of Monolingual and Bilingual Speakers in
México 1930 - 1980

Number of Indian Language Speakers	Year	Percentage of Indian Speakers of All Speakers	Monolinguals	%	Bilinguals	%
2,251,086 [6]	1930	15%	1,185.162	53	1,065,924	47
2,656,112 [7]	1930	16%	1,185,273	45	1,065,670	40
2,490,909 [6]	1940	15%	1,237,018	50	1,253,981	50
2,939,272 [7]	1940	15%	1,237,018	42	1,253,891	42
2,447,408 [6]	1950	13%	795,067	32	1,652,341	68
2,888,178 [7]	1950	11%	795,069	28	1,652,540	57
3,030,254 [6]	1960	8%	1,104,955	37	1,925,299	63
3,575,698 [7]	1960	10%	1,104,955	31	1,925,299	54
3,111,211 [6]	1970	7%	861,538	28	2,249,873	72
3,724,860 [7]	1970	8%	873,545	23	2,283,071	61
3,999,211 [6]	1980	6%	-	-	-	-
4,897,261 [8]	1980	7%	-	-	-	-
8,042,390 [7]	1978	12%	-	-	-	-

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[6] x Censo 1980.

[7] Indígenas y educación en México, p. 28.

[8] Author's best estimates.

GRAPH NO. 1 [9]

Monolingual and Bilingual Speakers of Indian Languages and Spanish in
México 1930 - 1970

MILLIONS

1930   1940   1950   1960

___ MONOLINGUALS AND BILINGUALS

_ . _ BILINGUALS
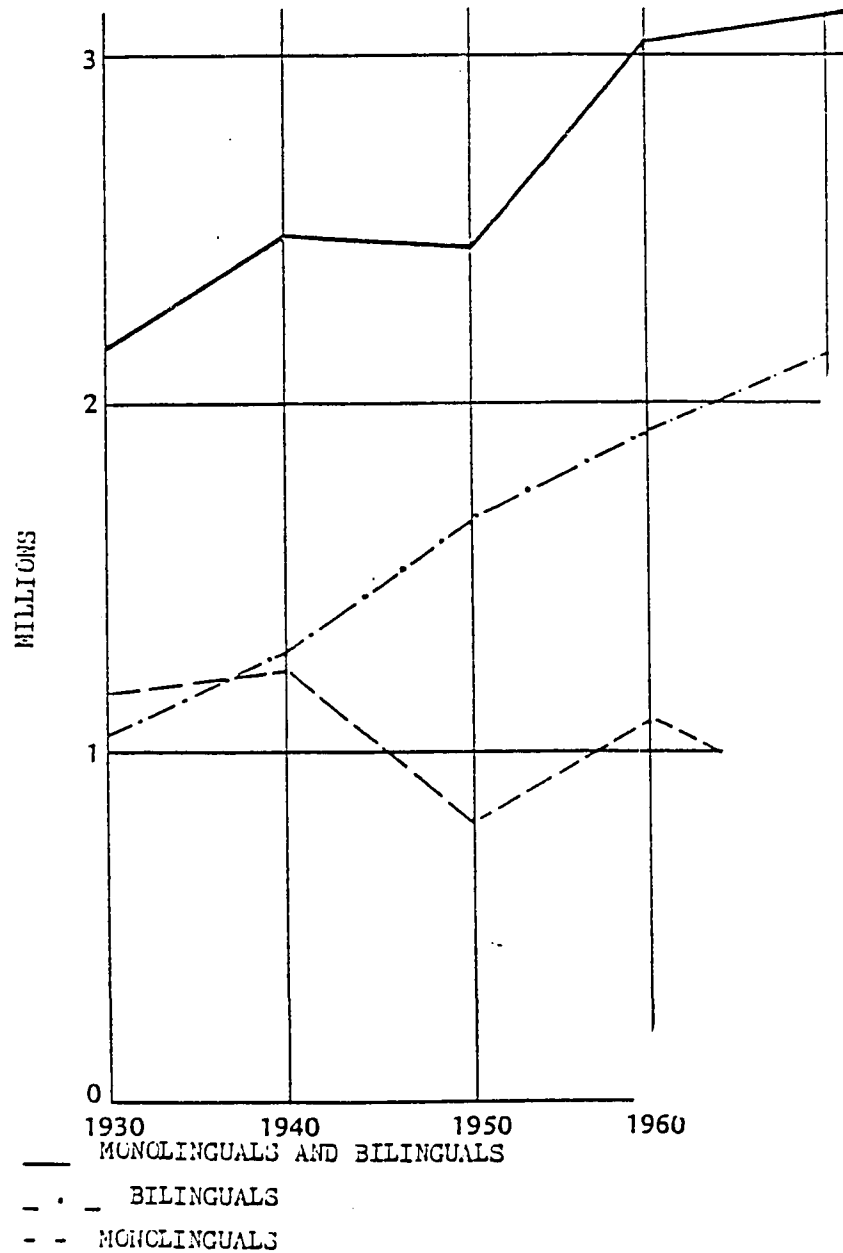
- - MONOLINGUALS

[9] M.L. Horcasitas and A.M. Crespo, Hablantes de lenguas
indígenas en México, México, D.F., SEP-INAH, 1979, p. 17.

GRAPH NO. 2 [10]

Percentage of Monolinguals and Bilinguals with respect to the Overall
Number of Speakers of Indian Languages in México 1930 – 1970

MONOLINGUALS	53	50	33	36	28
BILINGUALS	47	50	67	64	72
	1930	1940	1950	1960	1970

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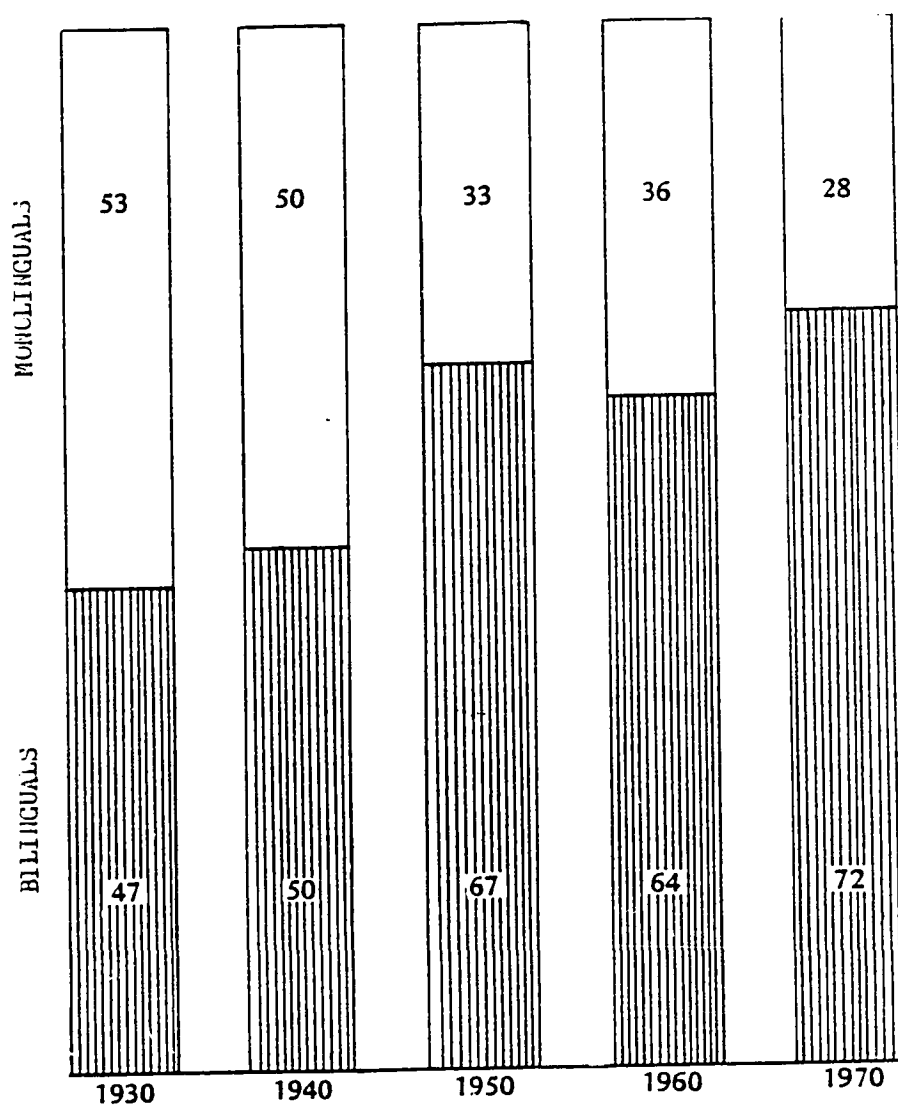
[10] <u>Ibid</u>, p. 18.

GRAPH NO 3 [11]

Percentage of Indian Language Speakers by State Compared to
the Total Population of Each State, 1970

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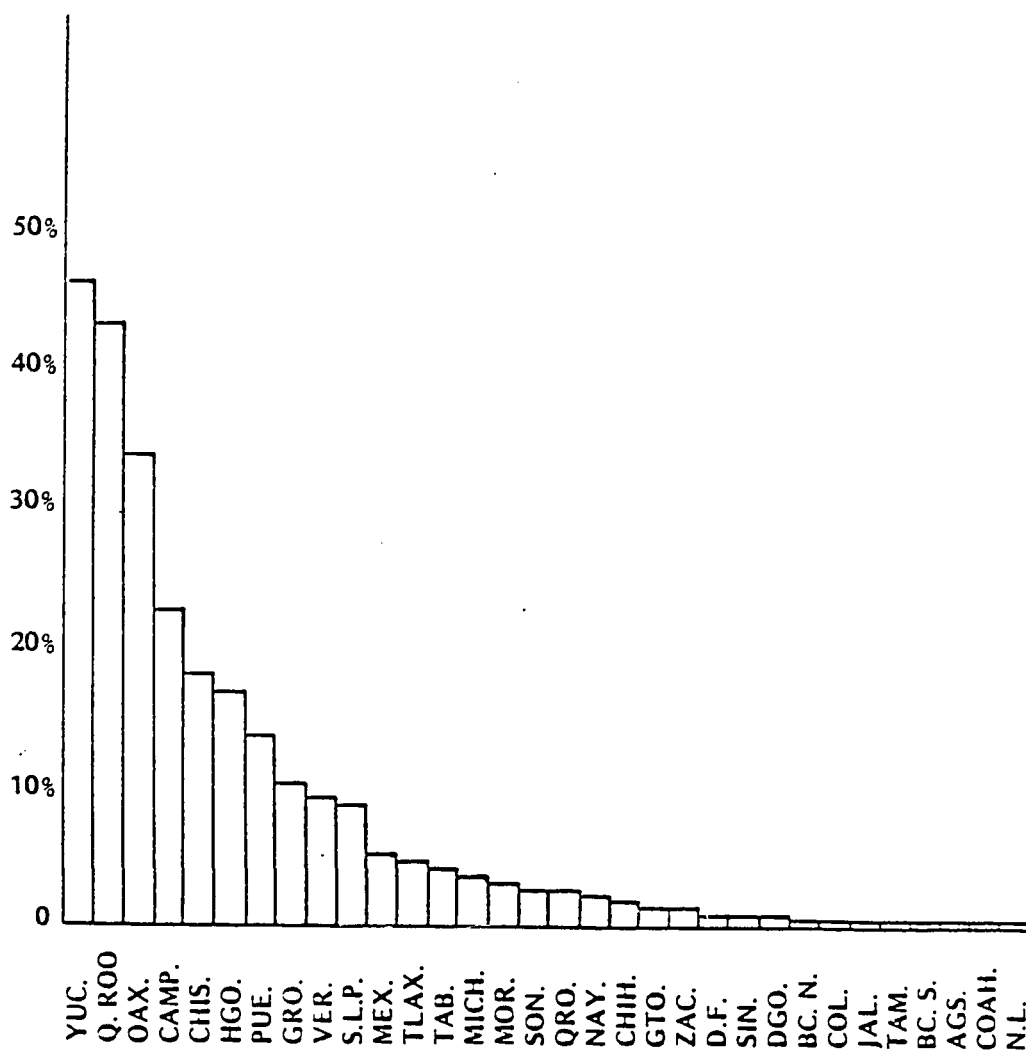
11 Ibid, p. 25.

The Indian-Spanish Language Situation in the State of Guerrero and the Montaña Region

This section contains a statistical representation of what has transpired over the years in the State of Guerrero and specifically in the Montaña Region regarding language maintenance and shift as well as a justification for selecting the three counties to be investigated.

Several facts are of immediate interest (see Table No. 4). First, the population of the State of Guerrero has shown the fast growth rate typical of México in general over the last few decades. The same situation has occurred in the Montaña Region as well, which proportionately has increased at an even faster rate. The percentage of Indian-language speakers in the State has remained more or less constant over the last half decade, hovering around 10% and 18%. Perhaps the most relevant information is the extremely high percentage of the population in the Montaña Region which is Indian-language speaking (41% - 62% over the past half a century) and is not decreasing (51% estimated for 1980). This marks the Montaña Region as an important potential enclave for Indian language maintenance. One of the main issues at hand is the influence of geographical considerations on language maintenance and shift, as well as the interaction between the inhabitants of the different communities included in the study.

As one can readily observe in Table No. 5, from 1960 to 1980, the percentage of speakers of Indian tongues in the Montaña Region with respect to all Indian-language speakers in the State of Guerrero remained

constant (59%, 62% and 58% respectively). With regard to the linguistic
behaviour of this important sector, one can quickly see, with diminishing
percentages, that there are many more monolinguals than bilinguals in the
years from 1940 - 1970 (see Tables No. 6-10). This is not the case in
1980 when, for the first time, there are more bilinguals than monolin-
guals. This information is of vital importance for projecting language
maintenance and shift for the area. Naturally it remains to be seen who
these monolinguals and bilinguals are, since social variables such as
age, sex, attitudes, level of education, etc. are important factors to
know for the purposes of making predictions.

At this stage the evolution of the Indian languages in the
Montaña Region is clear, but attention now needs to be turned to criteria
used for selecting the specific counties and communities included in this
study. The three counties covered - Copalillo (Nahuatl-speaking),
Alcozauca (Mixtec-speaking) and Zapotitlán Tablas (Tlapanec-speaking)
were chosen for the following facts:

(1) For political reasons it was important to include a county
for each ethnic group;

(2) The high percentage of native speakers of the Indian tongues
in each of these three counties in 1980 - Copalillo (77%),
Alcozauca (67%) and Zapotitlán Tablas (80%) rendered them
appropriate for this study;

(3) Not only was it important that there be a high percentage of
Indian-language speakers present in 1980, but also over the

TABLE NO 4

An Overview of the Relative Importance of Indian language Speakers in the State of Guerrero and the Montaña Region during the 20th Century

Population of the State of Guerrero[12]	Year	Number of Speakers of Indian Languages	Percentage of column 3/1	Population in the Montaña Region	Number of Speakers Indian Languages	Percentage of column 6/3
429,205	1900	-	-	-	-	-
594,278	1910	-	-	-	-	-
566,836	1921	-	-	-	-	-
641,690	1930	115,110[13]	18%	119,112[14]	-	-
732,910	1940	-	-	113,392[14]	70,474[14]	62
919,386	1950	-	-	160,907[14]	78,132[14]	49
1,186,716	1960	199,377[13]	17%	202,106[14]	117,231[14]	58
1,677,992	1970	160,182[13]	10%	244,853[14]	99,879[14]	41
2,109,513	1980	274,426[12]	13%	310,687[12]	159,430[12]	51

12 X Censo 1980.

13 Indígenas y educación en México, p. 40-41.

14 Presidencia de la República, Programa Integrado de la Montaña de Guerrero. COPLAMAR 21, México, D. F., 1978, p. 11-13

TABLE NO 5

Historical Overview of the Relative Standing of Monolingual and Bilingual Speakers in the State of Guerrero and the Montaña Region 1930-1980

Indian-speaking Population in the State of Guerrero	Year	Monolinguals	Bilinguals	Indian-speaking Population in the Montaña Region	Percentage 5/1	Monolinguals [16]	Bilinguals [16]
115,110 [15]	1930	79,525 [15]	35,525 [15]	-	-	-	-
-	1940	-	-	70,474 [16]	-	47,683	22,851
-	1950	-	-	78,132 [16]	-	41,262	36,870
199,377 [15]	1960	98,999 [15]	100,378 [15]	117,231 [16]	59%	69,953	47,278
160,182 [15]	1970	85,091 [15]	75,091 [15]	99,879	62%	57,413	42,466
274,426 [16] (including non-specified)	1980	108,947 [16]	149,526 [16]	159,430 [16] (including non-specified)	58%	73,479	77,824

15 X Censo 1980.

16 Indígenas y educación en México, p. 40-41.

years. Graphs 4, 5, and 6 illustrate the percentages of
Indian speakers with respect to the overall population of
each county from 1940 to 1980, and also the percentages of
monolingual Indian-language speakers and Indian-Spanish
bilinguals during the same decades

(4) The remaining 17 counties were excluded for the following
     reasons: Group A: In Atlajamacingo, Atlixtac, Copanatoyac,
     Malinaltepec, Tlapa and Xalpatláhuac more than one Indian
     language is widely spoken, which in turn would have compli-
     cated the study unnecessarily; Group B: In Ahuacotzingo,
     Alpoyeca, Cualac, Chilapa, Huamuxtitlán, Olinalá,
     Tlalixtaquilla and Xochihuehuetlán Spanish is spoken widely
     and the percentage of Indian-language speakers is much lower
     than in the counties selected; and Group C: Metlatónoc was
     eliminated because of geographical difficulties involved in
     getting into the region. Tlacoapa was not included because
     it is farther away than Zapotitlán Tablas but in exactly the
     same region and can be assumed to be more conservative than
     Zapotitlán, where travelers pass through to reach Spanish-
     speaking areas, and Zitlala, which offered no advantage of
     being located on the northernmost extreme of the Montaña
     Region with a different entry point form Alcozauca and
     Zapotitlán.

(5) The specific communities visited in each county were always
     of the following characteristics: the county seat, with

more than 2,500 inhabitants, a large town with 500 to 1500 inhabitants, and a small town with less than 500 people.

Graphs 4, 5, and 6 show the change in the number of Indian-language speakers in each of the three counties included in the study from 1940 to 1980, as well as the distribution of monolinguals and bilinguals. In Alcozauca relatively little variation can be seen (with the exception of a low in 1970) over the years in the percentage of Indian-language speakers (47% - 77%) and in the subdivision of monolinguals (61% - 80%) versus bilinguals (18% - 35%), with monolinguals obviously predominating.

The case of Copalillo is quite different with regard to monolingual and bilingual behavior, although the general tendency of Indian-language speakers is similar to that of Alcozauca (49% - 78%). There is considerable variation in monolingualism (23% - 93%), with the curve peaking in 1950, only to bottom out in 1960. No linguistic or specific demographic phenomenon was detected to explain this anomaly. The reason likely lies in a major census error, a large-scale migration, or perhaps a new road, new schools, etc. which led to more contact with the outside world or an influx of Spanish speakers in Copalillo. Unfortunately a search of this type is outside the scope of this dissertation. Obviously bilingualism shows exactly the opposite trend of monolingualism, with a good statistical fit.

In the case of Zapotitlán Tablas, the same general tendency holds true for the percentage of Indian-language speakers (64% - 99%) over the years. It is interesting that Zapotitlán also peaks in 1960, but in the percentage of monolinguals and not bilinguals. In other words, what took place in Zapotitlán is exactly the opposite of what took place in Copalillo.

As was mentioned in the criteria for selection, all of these three counties have a high percentage of Indian-language speakers in 1980. It is also interesting to note that in Alcozauca the proportion of monolingual speakers to bilingual speakers is 61% to 35%; in Copalillo the opposite is true, and the figures are almost inversely proportionate (28% to 63%); in Zapotitlán the case is nearly identical to Alcozauca (60% to 35%). It will be interesting to see if and how these statistics hold up to the oral Spanish proficiency evaluation carried out as part of this dissertation and what reasons can be put forth to explain each situation.

Of the remaining tables, Table No. 11 summarizes the longitudinal situation of the monolingual and bilingual Indian-language speakers in the Montaña Region from 1940 to 1980. While the previous tables reflect the situation of the 20 counties that make up the Montaña Region for each decade, this table allows us to quickly discern the particular relationship for each decade in all the counties. As can be gleaned from the

GRAPH NO 4 *

Percentage of Indian-Language Speakers According to Monolingual or Bilingual Status in the County of Alcozauca 1940-1980

Percentage of Indian-Language Speakers

Percentage of Bilingual Speakers

Percentage of Monolingual Speakers
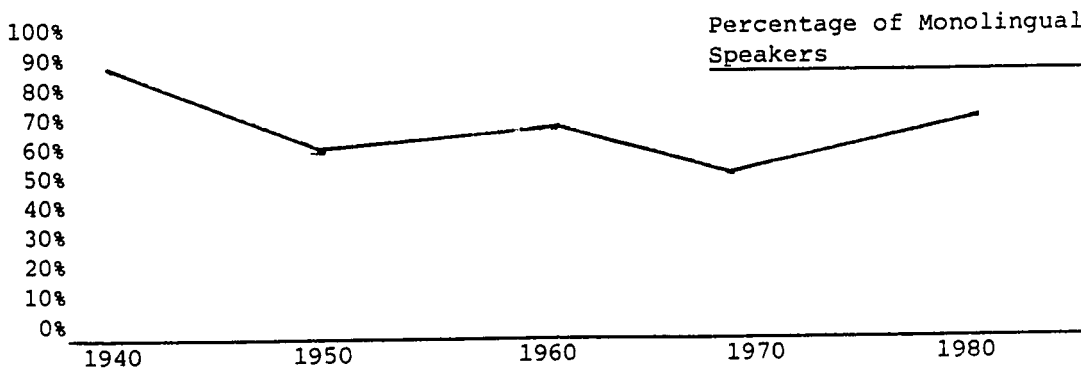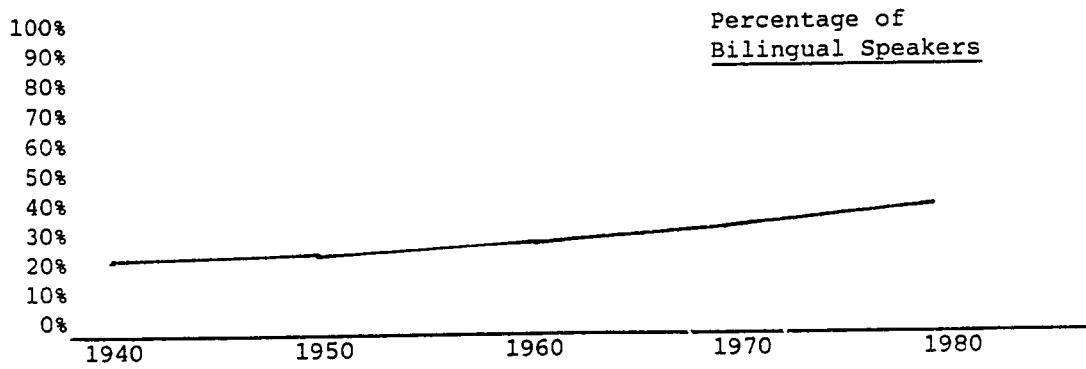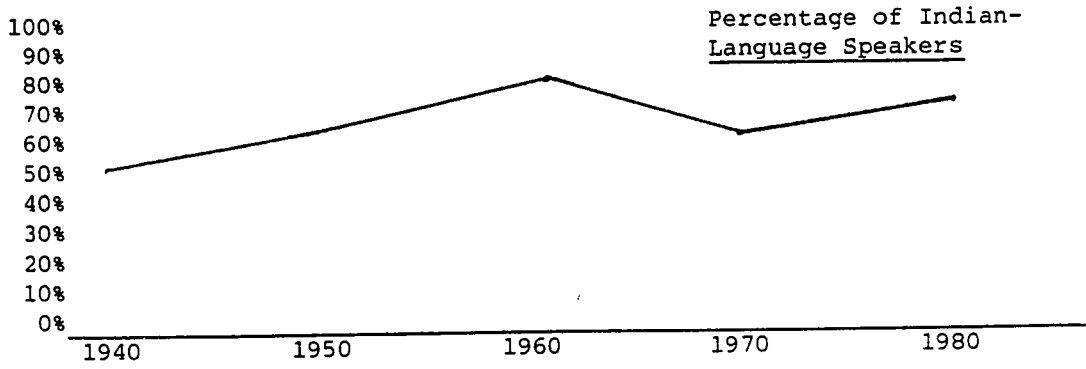
* Graphs are author's.

GRAPH NO 5

Percentage of Indian-Language Speakers According to Monolingual or Bilingual Status in the County of Copalillo 1940-1980
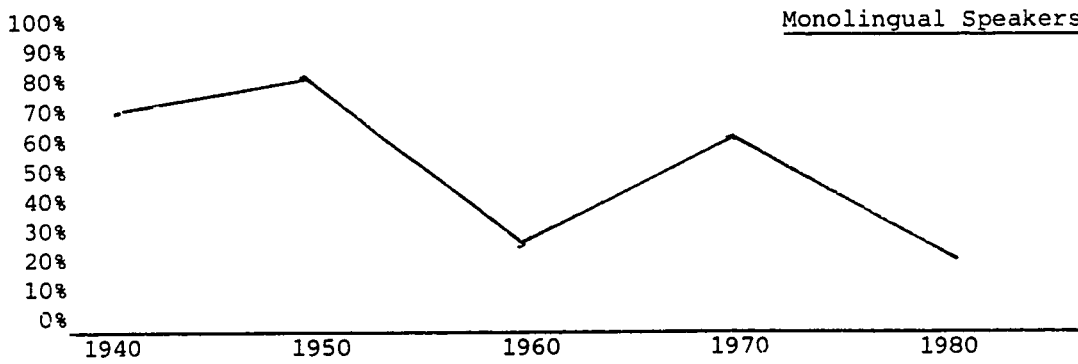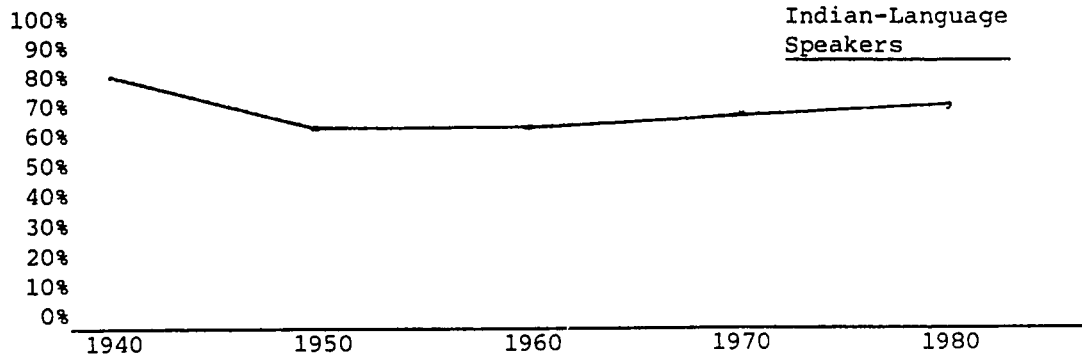
GRAPH NO 6

Percentages of Indian-Language Speakers According to Monolingual or
Bilingual Status in the County of Zapotitlán Tablas 1940 - 1980

Indian-Language
Speakers

Monolingual Speakers

Bilingual Speakers
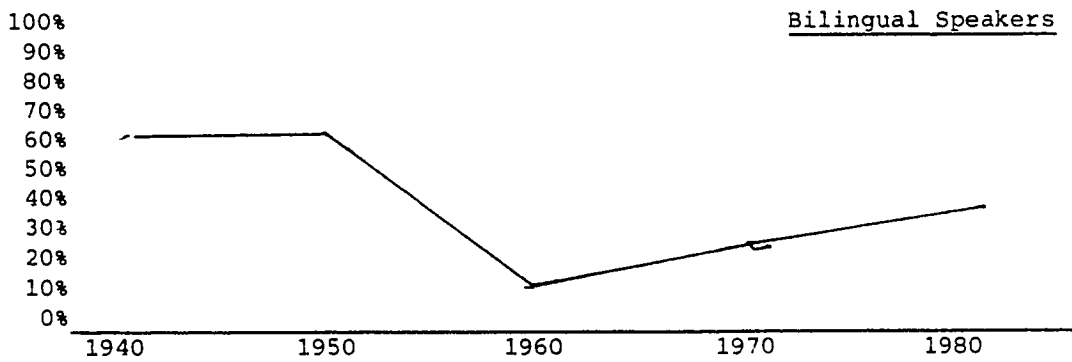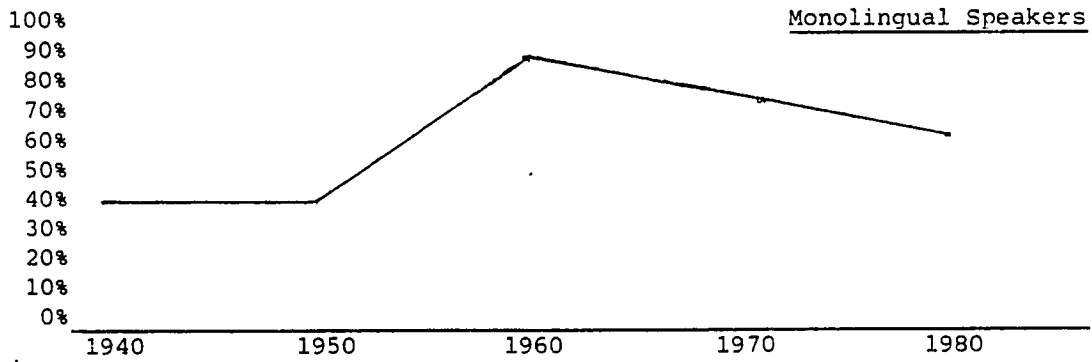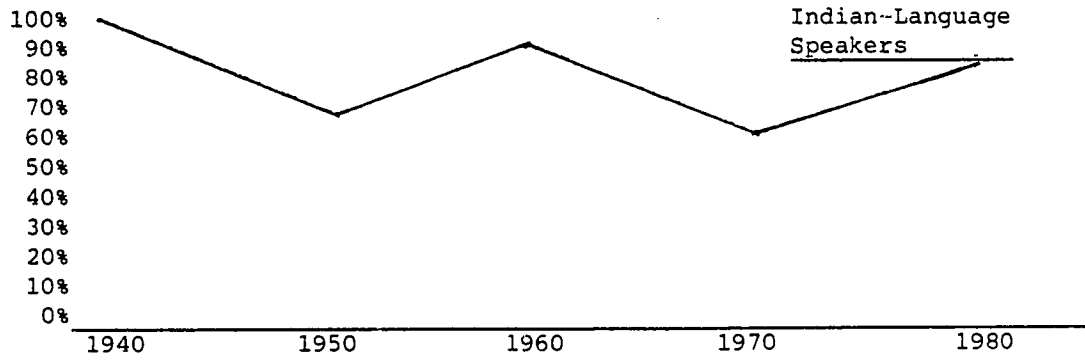
Table No. 6

Situation of Monolinguals and Bilinguals in the Montaña de Guerrero 1940 [17]

County	Population	Percentage of Indian-Language Speakers	Number of Indian Language Speakers	Monolingual Indian Speakers Under 5	Percentage of Indian Language Speakers	Bilingual Indian Language Speakers Under 5	Percentage Bilingual Indian Language Speakers
Ahuacotzingo	6461	35	2287	1085	47	1202	53
Alcozauca	6029	47	2858	2345	82	513	18
Alpoyeca	----	---	----	----	---	----	---
Atlamajalcingo	3362	99	3360	2998	89	362	11
Atlixtac	3970	98	3897	3136	81	761	19
Copalillo	4004	78	3121	2331	75	790	25
Copanatoyac	4135	98	4047	3683	90	364	10
Cualac	4127	19	781	683	88	98	10
Chilapa	26789	50	13477	8356	62	5121	38
Huamuxtitlán	4292	24	1013	583	58	430	42
Malinaltepec	7596	97	7351	662	10	6689	90
Metlatónoc	6037	99	6006	5754	96	252	4
Olinalá	5263	32	1669	1339	80	330	20
Tlacoapa	1873	95	1788	1734	97	54	3
Tlalixtaquilla	----	---	----	----	---	----	---
Tlapa	9180	55	5043	3935	78	1108	22
Xalpatláhuac	5653	95	5373	4509	84	864	16
Xochihuehuetlán	4753	8	372	167	45	205	55
Zapotitlán Tablas	4971	99	4953	1922	39	3031	61
Zitlalá	4897	63	3078	2401	78	677	22
Totals	113,392		70,474	47,683		22,851	

Table No. 7

Situation of Monolinguals and Bilinguals in the Montaña de Guerrero 1950 [18]

County	Population	Percentage of Indian-Language Speakers	Number of Indian Language Speakers	Monolingual Indian Speakers Under 5	Percentage of Indian Language Speakers Under 5	Bilingual Indian Language Speakers Under 5	Percentage Bilingual Indian Language Speakers
Ahuacotzingo	9080	16	1445	5	--	1440	100
Alcozauca	5935	69	4107	3206	78	901	22
Alpoyeca	2015	--	----	---	--	---	--
Atlamajalcingo	3074	81	2493	1267	51	1226	49
Atlixtac	6278	66	4115	1419	35	2696	65
Copalillo	4599	59	2714	2513	93	201	7
Copanatoyac	6532	78	5106	2328	46	2778	54
Cualac	3502	21	720	106	15	614	85
Chilapa	37404	29	10850	3344	31	7506	69
Huamuxtitlán	5413	15	800	---	--	800	100
Malinaltepec	11149	83	9211	3756	41	5455	59
Metlatónoc	8273	89	7325	5069	69	2256	31
Olinalá	9012	30	2685	1538	57	1147	43
Tlacoapa	3053	82	2496	2267	91	229	9
Tlalixtaquilla	5285	23	1190	88	7	1102	93
Tlapa	14513	55	7923	4155	52	3768	48
Xalpatláhuac	4936	77	3794	2837	75	957	25
Xochihuehuetlán	6512	11	735	719	99	16	1
Zapotitlán Tablas	6599	79	5203	2175	42	3028	58
Zitlalá	7743	67	5220	2771	53	2449	47
Totals	160,907		78,132	41,262		36,870	

18 VII Censo 1950.

Table No. 8

Situation of Monolinguals and Bilinguals in the Montaña de Guerrero 1960 [19]

County	Population	Percentage of Indian-Language Speakers	Number of Indian Language Speakers	Monolingual Indian Speakers Under 5	Percentage of Indian Language Speakers Under 5	Bilingual Indian Language Speakers Under 5	Percentage Bilingual Indian Language Speakers
Ahuacotzingo	12010	13	956	823	86	133	14
Alcozauca	8068	78	6274	4638	74	1636	26
Alpoyeca	2653	--	1	---	--	---	--
Atlamajalcingo	2733	77	2144	2058	96	86	4
Atlixtac	8273	84	6915	4276	62	2639	38
Copalillo	5858	62	3646	850	23	2796	77
Copanatoyac	9692	83	7993	7258	91	735	9
Cualac	4238	26	1084	376	35	708	65
Chilapa	43016	56	24224	2200	9	22024	91
Huamuxtitlán	8499	18	1532	722	47	810	53
Malinaltepec	14585	65	9496	6861	72	2635	28
Metlatónoc	11831	88	10458	10404	99	54	1
Olinalá	11545	45	5153	3053	59	2100	41
Tlacoapa	3730	63	2354	2235	95	119	5
Tlalixtaquilla	5372	25	1326	695	52	631	48
Tlapa	19354	72	13891	7386	53	6505	47
Xalpatláhuac	6406	82	5233	4659	89	574	11
Xochihuehuetlán	6378	--	---	---	--	---	--
Zapotitlán Tablas	8956	84	7514	7237	96	277	4
Zitlala	8909	79	7037	4222	60	2815	40
Totals	202,106		117,231	69,953		47,278	

19 VIII Censo 1960.

Table No. 9

Situation of Monolinguals and Bilinguals in the Montaña de Guerrero 1970 [20]

County	Population	Percentage of Indian-Language Speakers	Number of Indian Language Speakers	Monolingual Indian Speakers Under 5	Percentage of Indian Language Speakers	Bilingual Indian Language Speakers Under 5	Percentage Bilingual Indian Language Speakers
Ahuacotzingo	13848	12	1719	998	58	721	42
Alcozauca	9060	54	4912	3461	71	1451	29
Alpoyeca	3251	1	176	13	7	163	93
Atlamajalcingo	3011	73	2195	1047	48	1148	52
Atlixtac	10734	43	4523	2448	54	2075	46
Copalillo	7455	49	3670	2034	55	1636	45
Copanatoyac	9331	71	6637	4581	69	2056	31
Cualac	4340	27	1161	215	19	946	81
Chilapa	55352	28	15720	8671	55	7049	45
Huamuxtitlán	9612	10	969	353	36	616	64
Malinaltepec	17042	61	10435	5403	52	5032	48
Metlatónoc	14809	80	11886	9453	80	2433	20
Olinalá	13527	33	4404	1707	39	2697	61
Tlacoapa	6065	63	3838	2602	68	1236	32
Tlalixtaquilla	5563	14	779	434	56	345	44
Tlapa	23294	46	10673	3213	30	7460	70
Xalpatláhuac	7898	43	3383	2253	67	1130	33
Xochihuehuetlán	6112	1	43	12	28	31	72
Zapotitlán Tablas	13599	64	8744	6818	78	1926	22
Zitlala	11310	36	4012	1698	42	2314	58
Totals	244,853		99,879	57,413		42,466	

20 IX Censo 1970.

Table No. 10

Situation of Monolinguals and Bilinguals in the Montaña de Guerrero 1980 [21]

County	Population	Percentage of Indian-Language Speakers	Number of Indian Language Speakers	Monolingual Indian Speakers Under 5	Percentage of Indian Language Speakers	Bilingual Indian Language Speakers Under 5	Percentage Bilingual Indian Language Speakers
Ahuacotzingo	15632	20	3065	981	32	1961	64
Alcozauca	11765	77	9082	5540	61	3178	35
Alpoyeca	4259	8	328	30	9	279	85
Atlamajalcingo	3581	82	2943	1265	43	1530	52
Atlixtac	13239	57	7483	3517	47	3367	45
Copalillo	9007	67	6014	1684	28	3789	63
Copanatoyac	9823	83	8182	3682	45	3682	45
Cualac	5532	26	1416	127	9	1232	87
Chilapa	73335	34	25113	11552	46	12305	49
Huamuxtitlán	12245	13	1589	286	18	1225	77
Malinaltepec	22231	80	17832	7133	40	9808	55
Metlatónoc	18005	83	14993	12444	83	2399	16
Olinalá	16302	35	5743	1493	26	3963	69
Tlacoapa	6040	77	4639	2180	47	2320	50
Tlalixtaquilla	5867	17	987	415	42	523	53
Tlapa	33581	55	18449	4981	27	12361	67
Xalpatláhuac	9931	77	7685	3305	43	4150	54
Xochihuehuetlán	6056	3	184	24	13	147	80
Zapotitlán Tablas	20627	80	16430	9858	60	5751	35
Zitlalá	13629	53	7273	2982	41	3855	53
Totals	310,687		159,430	73,479		77,824	

21 X Censo 1980.

Table, in 1940 monolinguals constituted more than double the number of

bilinguals (47,683 vs. 22,851). In 1950 the gap closed considerably

(41,278 vs. 36,870); in 1960 the numerical difference increased (69,953

vs. 47,278) but with the monolinguals continuing to predominate. By 1970

the difference was reduced between the two groups (57,413 who claimed to

be monolinguals versus 42,466 who claimed to be bilinguals); however, by

1980 for the first time (and this provides statistical data for a

commonly observed phenomenon), the bilinguals dominate the monolinguals

(77,824 vs. 73,479).

While it is too early to speak of a trend without the 1990 census

data, researchers and other professionals have been reporting this

tendency for some years now.

In the final table, Table No. 12, there is a breakdown by ethnic

group, which in turn is a breakdown by language, of the three predominant

groups in the Montaña Region by county. The difference between the

column which refers to 'Total Number of Indian-language Speakers in the

Montaña Region' and the 'Total Number of Speakers in the Three Groups' is

due to the fact that the Amuzgo group is also present, as are small

numbers of diverse groups from neighboring areas. Although final sums do

not appear in the table, one can readily observe that in order of number

of speakers the Nahuatls are in first place with about 70,000 speakers,

the Tlapanecs are 40,000 strong as the Mixtecs. The questionable column

means that the census taker believes that the individuals belong to that

ethnic group.

Table No. 11

Trends for Monolinguals and Bilinguals in the Montana Region 22

County	1940		1950		1960		1970		1980	
	Monos	Bil.	Monos	Bil.	Monos	Bil.	Monos	Bil.	Monos	Bil.
Ahuacotzingo	1085	1202	5	1440	823	133	998	721	981	1961
Alcozauca	2456	513	3206	901	4638	1636	3461	1451	5540	3178
Alpoyeca	---	---	---	1	---	1	13	163	30	279
Atlamajalcingo	2998	362	1267	1226	2058	86	1047	1148	1265	1530
Atlixtac	3136	761	1419	2696	4276	2639	2448	2075	3517	3367
Copalillo	2331	790	2513	201	850	2796	2034	1636	1684	3789
Copanatoyac	3683	364	2328	2778	7258	735	4581	2056	3682	3682
Cualac	683	98	106	614	376	708	215	946	127	1232
Chilapa	8356	5121	3344	7506	2200	22024	8671	7049	11552	12305
Huamuxtitlán	583	430	---	800	722	810	353	616	286	1225
Malinaltepec	1622	6689	3756	5455	6861	2635	5403	5032	7133	9808
Metlatónoc	5754	252	5069	2256	10404	54	9453	2433	12444	2399
Olinalá	1339	330	1538	1147	3053	2100	1707	2697	1493	3963
Tlacoapa	1754	54	2267	229	2235	119	2602	1236	2180	2320
Tlalixtaquilla	---	---	88	1102	695	631	434	345	415	523
Tlapa	3935	1108	4155	3768	7386	6505	3213	7460	4981	12361
Xalpatláhuac	4509	864	2837	957	4659	574	2253	1130	3305	4150
Xochihuehuetlán	167	205	719	16	---	---	12	31	24	147
Zapotitlán Tablas	1922	3031	2175	3028	7237	277	6818	1926	9858	5751
Zitlalá	2401	677	2771	2449	4222	2815	1698	2314	2982	3855
Totals	47,683	22,851	41,262	36,870	69,953	47,278	57,413	42,466	73,479	77,824

22 Census data from 1940 - 1980.

Table No. 12

Population in 1980 for the Three Ethnic Groups with Respect
to Total Indian Population in the Montaña Region [23]

County	al ian akers taña Region	Total Groups	Nahuatl Speakers Mono-lingual	Nahuatl Speakers Bi-lingual	Nahuatl Speakers Question-able	Mixtec Speakers Mono-lingual	Mixtec Speakers Bi-lingual	Mixtec Speakers Question-able	Tlapanec Speakers Mono-lingual	Tlapanec Speakers Bi-lingual	Tlapanec Speakers Question-able
Ahuacotzingo	3065	2994	945	1935	111	---	---	---	1	2	---
Alcozauca	9082	9012	103	109	3	5385	3023	369	1	19	---
Alpoyeca	328	310	12	189	10	9	52	4	2	32	---
Atlamajalcingo	2943	2922	30	43	---	710	890	56	528	574	91
Atlixtac	7483	7414	1004	1797	159	---	2	---	2481	1569	402
Copalillo	6014	5951	1681	3763	507	---	---	---	---	---	---
Copanatoyac	8182	8053	1386	2516	396	2234	1094	343	32	44	8
Cualac	1416	1393	121	1220	46	---	5	---	---	1	---
Chilapa	25113	24820	11528	12168	1047	2	25	1	6	71	2
Huamuxtitlán	1589	1526	258	1131	62	9	52	4	1	9	---
Malinaltepec	17832	17638	161	340	---	1660	537	122	5216	8879	723
Metlatónoc	14993	14952	161	51	---	11864	1797	183	384	484	28
Olinalá	5743	5640	1430	3947	262	1	---	---	---	---	---
Tlacoapa	4639	4615	22	37	---	2	68	1	2132	2193	160
Tlalixtaquilla	987	957	11	71	---	395	442	35	1	2	---
Tlapa	18449	18225	3167	7871	564	1115	3432	262	632	1043	169
Xalpatlahuác	7685	7658	729	1987	93	2595	2167	77	---	10	---
Xochihuehuetlan	184	160	11	131	6	2	3	---	---	7	---
Zapotitlán Tablas	16430	16275	368	288	18	---	3	---	9420	5408	775
Zitlala	7273	7182	2938	3811	433	---	---	---	---	---	---
Totals	159,430	157,727	26,061	43,505	3,687	25,983	13,592	1,457	20,837	20,347	2,358

[31]

23 X Censo 1980.

IV. THE SOCIO-ECONOMIC BACKGROUND OF THE MONTAÑA REGION

The Montaña Region is an integral part of the State of Guerrero. To understand the current socio-economic situation of the Montaña Region requires a study of statistics for the entire State and also for this particular Region. The most relevant information is given in sections on environmental, demographic, economic, educational and historical aspects, as well as living standards.

The State of Guerrero

Environmental Aspects

The State of Guerrero is located in the southwestern part of México, between 16°18' and 18°48' North latitude and 98°03' and 102°12' West longitude. Guerrero is surrounded by the States of Morelos, México, Puebla and Michoacán to the north, by the Pacific Ocean to the south, by the States of Oaxaca and Puebla to the east, and by the State of Michoacán to the west. Guerrero covers some 64,458 sq. km. of national territory, which represents 3.2% of México. It is a state with very rugged topography, having extensive mountain ranges and peaks, as well as many streams and gullies. Climate and rainfall vary considerably, according to altitude and other geographical factors (almost one-half of the state is covered with some type of woods and minerals, although often

undertapped). The state is usually broken down into six major regions:
1) La Costa Grande, 2) La Costa Chica, 3) Tierra Caliente, 4) El
Centro, 5) La Montaña, and 6) La Región Norte, which in turn are made up
of 74 counties. Twenty of these belong to the Montaña, the region under
study in this dissertation. The geographical position of the State of
Guerrero and the Montaña Region is clearly indicated in Map 1.

Demographic Aspects

According to the 1980 Census there are some 2,174,162 inhabitants
in the State of Guerrero, which represents a population increase with
respect to 1970. The rate of growth is slightly above the national
average. Distribution of the population by age shows a very young
population in the State. Youth is a characteristic of the Mexican
population as a whole.

TABLE NO 13 [24]

Population of the State of Guerrero

Year	Total Population	Men	Women
1940	792,910	361,884	71,026
1950	919,386	452,730	466,656
1960	1,186,716	595,417	593,299
1970	1,597,360	796,417	800,413
1977	2,046,100	-	-
1980	2,174,164	-	-

Due to serious economic problems, the State has long had one of the highest rates of migration (both temporary and permanent) in the country. In 1970 some 93,954 people left for Mexico City; 65,970 for the neighboring State of Morelos and 23,403 for the nearby State of México. Life expectancy at birth in 1970 was 60.5 years for men and 64.9 for women. Both figures are very close to national averages.

As can be seen from Table 14, the ratio of sexes is the same, although numerically there are more women. The state is predominately rural (almost two-thirds). There are some 3,368 settlements in the rural areas, only 197 of which are classified as towns, 426 as villages and hamlets, 1,513 as large ranches and haciendas, and another 1,232 as disperse settlements with under 99 inhabitants.

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24 Manuel Ríos Morales, Régimen capitalista e indígenas en la Montaña de Guerrero, Chilpancingo, Guerrero: Universidad Autónoma de Guerrero, 1983, p. 40.

MAP 1

The Republic of Mexico
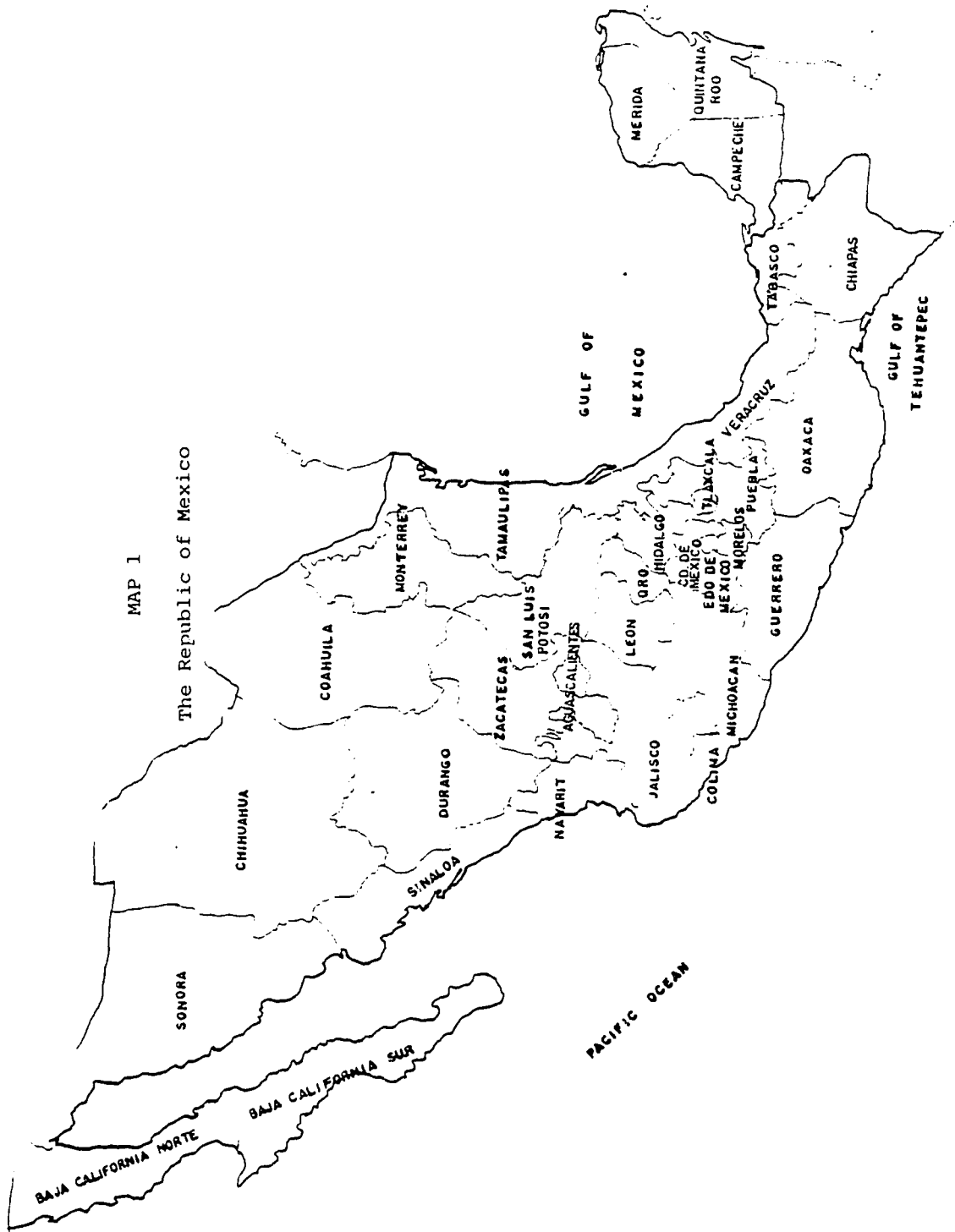
TABLE NO 14 [25]

Key Indicators of the Population and their Economic Activities in the

State of Guerrero 1970

Indicator	Number	Percentage
Total population	1,597,360	100%
Men	769,947	50%
Women	800,413	50%
Urban	569,145	36%
Rural	1,928,215	64%
Under 12	640,144	40%
Economically active population	383,027	24%
Employed	373,053	23%
Unemployed	9,974	1%
Economically inactive population	574,180	36%
Domestic chores	377,894	24%
Students	113,229	7%
Others	83,066	5%
Primary sector	238,314	62%
Secondary sector	44,259	12%
Tertiary sector	74,076	19%
Non-specified	26,378	7%

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[25] Ibid, p. 51.

There are four important languages other than Spanish which are spoken in the State, which are Nahuatl, Mixtec, Tlapanec and Amusgo. These figures do not exactly agree with those presented in the previous chapter, but they do give the reader a fairly accurate idea of the relative importance of the Indian languages on a State level.

The statistics show that Nahuatl is the most widely used language in the State of Guerrero. It is spoken in 22 counties (11 in the Montaña Region), followed by Mixtec, which is spoken in 12 counties throughout the State (8 in the Montaña Region). Tlapanec follows in order of importance with 10 counties (7 in the Montaña Region), while Amusgo is spoken only in 3 counties, which are not in the Montaña Region proper. In some counties three languages are spoken, particularly in the Montaña Region, where 101,897 out of 160,182 inhabitants (about 64%) spoke an Indian language in 1970.

TABLE NO 15 [26]

Indian Languages Spoken in the State of Guerrero in 1980

Language	Speakers	Percentage
Nahuatl	75,861	47%
Mixtec	40,330	25%
Tlapanec	28,831	18%
Amusgo	11,426	7%
Other Indian Tongues	3,734	3%
Total	160,182	100%

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[26] Ibid., p. 41.

Economic Aspects

Various studies of the State of Guerrero have shown that, according to many economic indicators, it is one of the most backward states in all of México. Except for tourism in Acapulco and the production of a few forestry, fish, mineral and agricultural products, Guerrero does not offer much economically.

In what follows we examine some of the most revealing indicators of Guerrero's economic condition. With respect to occupation, in 1970 the State of Guerrero had an overall population of 1,597,360, of whom only 383,027 were economically active (about 24% of the population support more than a million and a half inhabitants). As though this were not revealing enough, 62% of the economically active population belongs to the primary sector, most of whom are unproductive communal farmers who raise barnyard animals and cultivate corn, copra, sesame seed, squash and coffee on rain-fed lands.

With respect to industry, Guerrero is one of the least industrialized states in México, with an almost insignificant participation on the national level. The most important activity is the transformation industry, which indiscriminately includes manufacturing processes, industrial manual labor and family handicrafts. In the case of Guerrero a lot of subsistence farmers complement their sparse income from farming by means of handicrafts, such as weaving palm hats for example.

Regarding commerce and services, in 1970 some 20% of the people worked in this sector, particularly in services (mainly due to tourism in Acapulco and along the coast), while only a few were employed in commerce, government and transportation. These service activities, such as the preparation and sale of food in restaurants and street stands, maintenance work, domestic service, repair of vehicles, etc. is often sporadic or serves to complement another economic activity.

With regard to other employment categories, it is very revealing that 75% of the workers receive a daily wage instead of a weekly or monthly salary and only 6% receive more than the minimum wage for this area.

Living Standards

From diverse sources we learn that Guerrero, together with Oaxaca, Chiapas, San Luis Potosí, Tlaxcala, Hidalgo and Puebla are the poorest and most backward states, and consequently have the lowest indexes with respect to 'per capita' income, nutritional habits, degree of illiteracy, and other indicators of under-development. According to Ríos, these manifestations are not derived solely from Guerrero's geographical location or lack or integration into commercial centers, but are mainly due to the unequal distribution and the nature of the most important production factors. Only a few individuals own important stretches of land with adequate topsoil, capital and suitable conditions to work the land, while the majority do not have even the bare necessities and are forced to sell their labor cheaply to the capitalist sector.

They only have a small plot of poor land which requires the labor of the whole family just to subsist, often with no monetary income whatsoever.

A consequence of such low income is its repercussions on food consumption. In 1970 some 64% of the population did not eat fish, 51% did not drink milk, and 28% never touched meat or eggs. The population most affected by low nutritional levels are mothers, children and breast-fed babies in rural areas.

As for housing, we will see that Guerrero is in a disadvantageous position with respect to the three main indicators: number of housing units, size of the unit, and number of occupants. In the first area Guerrero increased the absolute number of units from 1960 to 1970 by over 50,000, but this increase did not keep pace with the growth in population. It is also important to point out that 85% of these housing units only have one or two rooms. If we take into account that the average size of the family that occupies them is six to eight people, regardless of the number of rooms, overcrowding and unsanitary conditions prevail. Except in large towns and the few cities that exist, most of the houses are made of adobe or local vegetation, sticks and stones with dirt floors, where barnyard animals tend to roam and cohabitate with the people. An average of 75% of the homes have no running water, bathrooms or drainage systems.

A quick look at public health statistic reveals what we might have been expected. Most illnesses are caused by unsanitary conditions and a lack of preventive care. Childhood diseases, parasites, intestinal

flus, respiratory diseases, anemia and so on are prevalent.

Table 16 gives us a better idea of government-supported health care available, which accounts for about 90% of all related services. Only the few well-to-do can afford private doctors and hospitals.

TABLE NO 16 [27]

Indicators of Available Health Services in the State of Guerrero 1970

Indicators for government-sponsored health facilities and services	Figures and Percentages
Number of persons per doctor	3,713
Number of hospital beds per 10,000 people	4
Number of medical units (outposts, small clinics, dispensaries)	450
Number of doctors	430
Births with medical attention per 100	14%
Population entitled to medical services	9%
Hospitals in urban areas	4
Clinics with beds (both urban and rural)	29

Education

According to the 1970 Census, the State of Guerrero continues to head the list of illiterates, as in 1960, although the percentage did drop from 60% to 45%. Table 17 provides us with a solid idea of the educational lag that exists in the state.

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[27] Consejo Nacional de Población (CONAPO) Estudio sociodemográfico del Estado de Guerrero, versión preliminar. México, D.F., 1979, p. 47.

Moving to the level of the states we find that in 1970 (see

Tables 17 and 19) some 8,166 primary school-age children were attending

the Indian bilingual-bicultural schools and 248,697 (256,859 - 8,166)

regular Federal or state schools where Spanish is the language of

instruction. The 1980 Census calculates the number of children enrolled

in primary schools at 334,246, from which we would have to subtract

41,501 to arrive at the number outside the bilingual system (292,745).

It is obvious that the bilingual-bicultural system is expanding at a much

faster pace than the regular system. One reason for this is that in 1970

the bilingual-bicultural system was only a pilot project established at

the beginning of President Luis Echeverría's term. Since then, there

have been more funds and personnel available for this effort to emphasize

the importance of a plurilingual-pluricultural country. Another reason

is that statistical compilation was on shaky grounds at the beginning and

has steadily improved. The addition of some 3,000 children each year

could simply be a reflection of the growth rate or of better recruitment

and availability of close-by schools, or it could be a true conviction

that the bilingual system is better. One of the objectives of this

dissertation is to shed light on this feature.

Another important fact to point out is that with the exception of

the Amusgos, the other three Indian groups are located mostly in the

Montaña Region, although a couple of thousand are scattered outside the

20 counties that make up the Montaña Region.

TABLE NO 17 [28]

Indicators of Formal Schooling in the State of Guerrero 1970

Indicators	1940	1950	1960	1970	1980
Population over 10 years of age	505,708	636,369	801,630	1,047,768	1,449,164
literate	109,073	233,976	326,333	580,506	-
illiterate	396,635	402,393	475,297	467,262	-
Population over 10 years of age	100%	100%	100%	100%	100%
literate	22%	37%	41%	55%	65%
illiterate	78%	63%	59%	45%	35%
Population over 15 years of age	411,440	518,646	646,655	830,269	1,147,108
with primary school	-	-	24,282	58,316	-
	-	-	4%	7%	-
School-age population between 6-14 years of age	210,615	229,894	303,963	432,572	576,651
Population between 6-14 years of age that attends primary school	-	46,478	79,056	256,859	334,246
	-	20%	26%	59%	-

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28 Ibid.

Table No. 18 [29]
Statistics for Indian Bilingual-Bicultural Education in the
State of Guerrero Compared to National Statistics ( ) 1983-1985

Service	Number of Centers		Number of Personnel		Number of Recipients	
Pre-school	412	(4572)	592	(6643)	12786	(163784)
Primary School	483	(5551)	1737	(16388)	46631	(454083)
Rural Boarding Schools	96	(1250)	288	(3750)	5200	(63900)
Scholarships for Secondary Schools	--	(----)	---	(----)	2316	(28000)
Centers of Social Integration	3	(32)	79	(660)	450	(4260)
Brigades	4	(32)	23	(255)	10000	(80000)
Legal Offices	3	(57)	6	(99)	7500	(142500)
Program for Indian Wome	5	(93)	15	(300)	231	(4064)
Total	1,006	(11,767)	2,740	(28,095)	85,114	(940,591)

[29] Dirección General de Educación Indígena. Protuario de
estadística educativa indígena 1984, México, D.F., SEP, p. 1 and 7.

TABLE NO 19 [30]

Enrollment Statistics for the Indian Bilingual-Bicultural Program in

Primary School in the State of Guerrero 1970-1985

School Year	First Grade	Second	Third	Fourth	Fifth	Sixth	Total
1970-71	-	-	-	-	-	-	8,166
1971-72	--	-	-	-	-	-	10,923
1972-73	-	-	-	-	-	-	13,679
1973-74	-	-	-	-	-	-	16,436
1974-75	-	-	-	-	-	-	19,193
1975-76	-	-	-	-	-	-	21,949
1976-77	-	-	-	-	-	-	24,706
1977-78	-	-	-	-	-	-	28,070
1978-79	-	-	-	-	-	--	35,978
1979-80	-	-	-	-	-	-	43,320
1980-81	-	-	-	-	-	-	41,501
1981-82	-	-	-	-	-	-	-
1982-83	-	-	-	-	-	-	-
1983-84	17,127	10,929	7,441	5,040	3,507	2,587	46,631
Classroom Groups	652	516	371	265	196	160	2,160
Directors equal to number of schools							483
1984-85	-	-	-	-	-	-	49,826

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[30] Internal statistics from the Dirección General de Educación Estadística.

To briefly summarize statistical data, Table 17 clearly demon-
strates a trend toward a numerical and a percentage increase in those who
are literate or who have a primary school education or who at least are
attending primary school. Also of importance is the increase in the
percentage of individuals being reached by educational services. This
percentage jumped from 26% to almost 60% between 1960 and 1970. Undoub-
tedly this percentage continued to increase in 1980, although probably
not so significantly.

More relevant to the present discussion are the statistics
related to Indian education. Table 18 provides, statistics for the
different items in the table on a national scale as a point of reference.
Of greater interest are the Guerrero statistics. At a pre-school or
kindergarten level it is obvious that most of the centers are staffed by
one teacher or at best by one teacher and an assistant. With respect to
primary school we must remember that there is not just one group, as is
the case with most of the rural kindergartens, but that this educational
process covers anywhere from one grade to six grades, often with teachers
"doubling up", teaching two grades simultaneously. Some schools do
not cover all grades in smaller communities, offering only the first
three years.

As is apparent in Table 18, other services are offered. There
are rural boarding schools, where children live in a modest shelter from
Monday to Friday and are provided with bunkbeds, bed clothes and three
skimpy meals a day. They come from outlying communities and usually

return to their native villages over the week-end, walking form 2-8 hours
each way on the average. They attend local schools, which are usually
bilingual, but they might be under a different system where only Spanish
is used. Each boarding school has an average of three staff members - a
supervisor for the 50 boarders, a cook and an assistant who is a handy-
man, supply purchaser, security guard, etc.

As shown in Table 18, over 6,000 students receive some kind of
financial aid through the Dirección General de Educación Indígena, either
by living at the rural boarding schools or through a monthly stipend for
school supplies or a small amount to allow them to continue their
secondary education in a larger community. The amounts are almost
negligible, but they do cover the bare necessities.

The Centers of Social Integration are unique institutions and are
a combination of boarding schools where room and meals are provided,
together with on-site primary schooling at an intensive level. The
principle behind this arrangement is not to provide education for those
who have schools in their communities or who are within the regular
school systems (any other modality), but to cover exceptional cases, such
as orphans, older drop-outs who want to return to school, etc. The
students are enrolled in academic subjects in the morning and handicrafts
or trade workshops in the afternoon. Most of the teachers are live-ins
during the week and return to their villages over the week-ends. In
general they have the highest level of preparation of all teachers in the
bilingual-bicultural service and do have a working knowledge of the

Indian tongue (s) of the ares.

The Brigades mentioned in Table 18 basically work in community development and are mobile. They tour the Montaña Region, promoting vaccination campaigns, improving public health standards, agricultural extension work, etc. As can be seen, in 1983-84 only 23 people were available for help or orientation for over 300,000 who live in the Montaña Region. They, in actuality, reached about 10,000 people.

There are three legal offices which serve the Indians in this area and are basically designed to protect them, or at least to advise them legally since their rights as Mexican citizens are often infringed upon. Usually the Indian's level of proficiency in Spanish is so low and their knowledge of their legal rights so rudimentary that they spend considerable periods of time in jail for unclear reasons.

Lastly, the Program for Indian Women is very limited in scope. In 1984 there were only five centers with fifteen staff members, who were involved with 300 Indian women participants. The nature of the programs involves the teaching of literacy to adult women, child care routines, weaving, handicrafts, hygiene, and so forth.

Table 19 is incomplete because statistics either were not available for the years preceding 1983-84 or they were withdrawn after first published due to gross inaccuracies. In spite of these short-comings an increase of 3,000-4,000 per year between 1970 and 1977 is apparent, as is a much sharper increase from 1978-1984, with the

exception of 1980, which might have been due to a change of adminis-

tration. Although there are only complete data available for the 1983-84

school year, the high rate of attrition is obvious. Of some 17,127 who

started first grade, only 2,587 finished primary school. This is on a

state-wide level, but once again it must be emphasized that most of the

Indians are in the Montaña Region.

In Table 20 we notice that there are 107 Amusgo teachers and

3,082 Amusgo students and 59 Spanish teachers and 1,335 Spanish-speaking

students. In the first case they are Indian students who simply reside

outside of the Montaña Region proper. In the second case there are

native Spanish-speaking teachers and students in predominately Indian

areas for a number of reasons: as government officials, full-time

teachers or local merchants. It is also obvious, however, that the

Nahuatls, Mixtecs and Tlapanecs clearly dominate the percentage of

teachers and students enrolled in the bilingual-bicultural programs in

the State of Guerrero, accounting for some 90% of all those matriculated.

A very similar phenomenon occurs at the pre-school level (see Table 21).

If we look at Table 22, that contains information on the

teacher's educational background, we will see that most of the teachers

have a junior high school (secundaria) education - complete or not). Not

many have the equivalent of high school, or six years of secondary school

(preparatoria), but a large number of them did do some time at a

teacher's college for primary school and 113 actually finished. Of those

who attended teacher's college for secondary education (52) none fin-
ished. It is clearly obvious that no teacher had a college education.
If we synthesize these results, in the best of cases we could say that
the teachers in the bilingual-bicultural educational system in the State
of Guerrero have the equivalent of a high school education (teacher's
college in México does not come after high school, but in lieu of),
although numerically about half only have three years of secondary
education, or the equivalent of junior high school. There is no special
training or methodology for teaching in the Indian languages or in
teaching Spanish as a second language in formal schooling. As the need
has arisen the General Dirección of Indian Education (DGEI) has sponsored
summer workshops and seminars to superficially confront these problems.

Historical Aspects

Guerrero was settled around 2400 B.C. by different ethnic groups
along the coast and around lake areas. It was only during the first few
centuries A.C. that these groups were identified as Chichimecs. Later on
they were joined by the Chontals to the north of the Balsas River and
other settlements were populated by Buitlatecs, Tepoztecs, Matlazincs,
Yopes, Tlapanecs, Mixtecs, Amusgos and Mazatecs, all of whom lived
together in harmony until about the 11th century, when there were
important streams of migration by the Nahuas and the Tarascans, who
conquered the other ethnic groups. Four centuries later, the Aztecs, at
the height of their civilization, conquered most of the State, which was

TABLE NO 20 [31]

Teachers and Student in the Federal Bilingual-Bicultural Primary School Programa in the State of Guerrero by Native Language, 1983-84

Language	Number of Teachers	Number of Students
Spanish	59	1,335
Amusgo	107	3,082
Nahuatl	516	14,379
Mixtec	461	12,439
Tlapanec	594	15,396
Total	1,737	46,631

TABLE NO 21 [31]

Teachers and Students in the Federal Bilingual-Bicultural Pre-School Program in the State of Guerrero by Native Language, 1983-84

Language	Number of Teachers	Number of Students
Spanish	-	-
Amusgo	47	979
Nahuatl	185	4,668
Mixtec	188	3,763
Tlapanec	172	3,376
Total	592	12,786

[31] Internal Statistics from the Dirección General de Educación Indígena.

Table No. 22 [32]

Educational Background of the Teachers in the Indian
Federal Bilingual Bicultural School System in the
State of Guerrero 1979-1980

Number of Teachers and their level of
formal schooling

Regional Supervisor	Primary Incomplete/ Complete	Junior High School Inc./Comp.	Senior High School Inc./Comp.	Teacher's College for Primary level Inc./Comp.	Teacher's College for Secondary level Inc./Comp.	Totals
Alcozauca	-- / 5	95 / 62	-- / --	99 / 33	12 / --	306
Chilapa	-- / 4	65 / 24	-- / 2	50 / 15	6 / --	166
Olinala	-- / 5	27 / 28	-- / --	33 / 1	-- / --	94
Ometepec	-- / 24	55 / 79	-- / 2	61 / 1	2 / --	224
Tlapa	-- / 5	36 / 30	-- / 1	63 / 19	13 / --	167
Zapotitlán Tablas	-- / 11	121 / 82	-- / 3	182 / 44	-- / --	462
Total	0 / 54	399 / 305	0 / 8	488 / 113	52 / 0	1,419

32 Estadística education indígena, p. 17.

subdivided into seven provinces, each of which had to pay trib.te to the
Aztecs.

After the Spanish Conquest in 1521 noteworthy changes occurred:
Guerrero was important because of its sea outlets and long coastline and
because of mineral deposits which enticed the Spanish; consequently,
several mayorships were immediately established. The Indian population
was quickly subjected to the Spanish language and the Catholic religion
and was forced to work the land almost as though they were slaves for the
Spanish or mestizo owners. Sometimes the Indians were forced to leave
their homes to populate larger towns on the plains; however, due to the
mountaineous terrain, the complete conquest of Guerrero was not an easy
task.

During the struggle for Independence, Guerrero was the scene of
numerous battles under the leadership of Morelos and Vicente Guerrero.
The liberation of the Port of Acapulco in 1813 and the drafting of the
first constitution for an independent México were two outstanding events
of this time period.

Once Independence was achieved, Guerrero officially became a
state in 1849. In 1863 French troops occupied most of the major towns in
the State, but they were liberated soon afterwards by Porfirio Diaz.
Even since the 1910 Revolution the State has been the scene of social
discontent and guerrillas devoted to various causes of social justice.

Communications

Infrastructure in the state of Guerrero is poor. For example, in 1973 Guerrero had only 1,153 km. of paved roads out of 7,000 km. - the rest were either roughly blacktopped and the great majority stone or dirt. The road network has one main highway from Mexico City to Acapulco, a coastal highway from north to south, and two major state roads that cross the area. Railroads are almost non-existent (104 km.), and only Acapulco and Zihuatanejo can be considered full-fledged ports and international airports. Only about half of the population has mail and telegraph services, both of which are quite deficient. There are telephones (often only one community phone) in barely 47 towns. Major radio stations do reach most of the communities.

The Montana Region

Environment Aspects

The Montaña is located in the northeastern part of the State of Guerrero, between 16°15' North latitude and 98°12' and 99°30' West longitude. The area is surrounded by the States of Puebla and Oaxaca on the northeast and southeast and the rest of the State of Guerrero in the other directions. This particular area covers some 10,885 sq. km., which in turn represents about 17% of the total surface area of the State. Politically it is subdivided into three districts: Alvarez, Morelos and Zaragoza, which in turn are further subdivided into 20 counties: Ahuacotzingo, Alcozauca, Alpoyeca, Atlamajalcingo, Atlixtac,

Copalillo, Copanatoyac, Cualac, Chilapa, Huamuxtitlán, Malinaltepec,
Metlatónoc, Olinalá, Tlacoapa, Tlalixtaquilla, Tlapa, Xalpatlahuác,
Xochihuehuetlan, Zapotitlán Tablas and Zitlalá. Going from north to
south, there are three basic ecological zones: the first is located
between 1,000 and 2,000 meters and tends to be dry, with little
vegetation and land which does not lend itself to agriculture. Then
there is a zone of relative humidity, between 2,000 and 3,000 meters,
which is an area favorable for the sowing of corn and some fruits. The
third area, near or along the coast, is between sea level and 2,000
meters and is semi-tropical, with humid soil and good conditions for cash
crops. In general the area is very rugged, with high mountain ranges,
deep gullies, and fast-moving streams. According to the V Agriculture
Census of 1970, only 13% of the land was suitable for agriculture,
another 2% for pastures, while another 67% of the land is totally
unsuitable for production. The remaining 18% includes grassy hilltops
and wooded areas, which are potentially useful.

Demographic Aspects

According to the 1980 Census there are approximately 310,625
inhabitants in the Montaña Region (244,853 in the 1970 Census). There
are some 483 settlements, whether they be small towns, villages,
haciendas, etc. - most are under 2,500 inhabitants. Chilapa and Tlapa
are the only real centers of population with more than 10,000 inhabitants
each.

TABLE NO 23 [33]

Population in the Montaña Region

Year	Total Population	Men	Women
1950	160,907	79,690	81,217
1960	202,103	100,925	101,177
1970	244,853	122,110	122,743
1980	310,625	154,794	155,657

As can be seen from Table 23, the growth rate in the Montaña is about 20% every ten years, which is the case for the State as a whole. There are more women than men.

What is of particular relevance to this dissertation is the fact that the Montaña is a densely Indian-populated area, comprised of three important ethnic groups: the Nahuatls, the Mixtecs and the Tlapanecs. The following table offers a breakdown of the 20 counties and the distribution of the three ethnic groups.

As shown in Table 24, there are counties with only a few Indian-language speakers, while others have literally thousands. Percentagewise in the Montaña Region, the Nahuatls constitute the most important group, with some 47% of the three ethnic groups. The Mixtecs represent 26% and the Tlapanecs 27%. If we consider that the overall population of the Montaña Region was 310,625 in 1980, then the 165,565 native speakers of the Indian language constitute an important percentage

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[33] X Censo 1980.

of the population, 53% to be exact.

It is not sufficient to know that 53% of the Montaña Region's population speaks an Indian tongue. We must also ascertain whether they are monolingual in that tongue or whether they speak Spanish in addition to it. The following tables present this breakdown by several variables.

For the Nahuatl group the counties with the highest percentage of Indian-language speakers were Copalillo (66%), Zitlalá (53%) and Copanatoyac (44%). Not only were the percentage high in these counties, but the populations were also high in absolute numbers.

For the Mixtec group, Metlatónoc led the percentages with 77%, followed by Alcozauca with 75%, Xalpatláhuac with 49% and Atlamajalcingo with 46%. The first three have a considerable number of Indian-language speakers.

Lastly, for the Tlapanec group, Zapotitlán Tablas had the highest percentage of native speakers of the Indian tongue (76%), followed closely by Tlacoapa (74%) and Malinaltepec with (67%), all with high numbers of population.

As has been mentioned before, the numbers of Indian language speakers and the percentages they represent in each county were two of the criteria for selecting the three counties (Copalillo, Alcozauca and Zapotitlán Tablas) under study in this dissertation.

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Table No. 24 [34]

Indian-Language Speakers in the 20 Counties
of the Montaña Region, 1980

| County | Population over 5 Years of Age | | | | Total | |
	Nahuatls	Mixtecs	Tlapanecs	Non-Specified Indian Tongue	1970	1980
Ahuacotzingo	2991	--	3	111	3105	1719
Alcozauca	215	8777	20	372	9384	4912
Alpoyeca	211	65	34	14	324	176
Atlamajalcingo	73	1656	1193	147	3069	2195
Atlixtac	2960	2	4452	561	7975	4523
Copalillo	5951	--	--	507	6458	3670
Copanatoyac	4298	3671	84	747	8800	6637
Cualac	1387	5	1	46	1439	1161
Chilapa	24713	28	79	1020	25840	15720
Huamuxtitlán	1451	65	10	66	1592	969
Malinaltepec	501	2319	14818	845	18483	10435
Metlatónoc	212	13844	896	851	15803	11886
Olinalá	5639	1	--	262	5902	4404
Tlacoapa	59	71	4485	161	4776	3838
Tlalixtaquilla	82	872	3	35	992	779
Tlapa	11602	4809	1844	995	19250	10673
Xalpatláhuac	2809	4839	10	170	7828	3383
Xochihuehuetlán	148	5	7	6	166	43
Zapotitlán Tablas	669	3	15603	789	16764	8744
Zitlala	7182	--	--	433	7615	6012
Totals	73,253	41,032	43,532	8,238	165,565	101,879

34   x Censo 1980.

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MAP 2 [35]

Distribution of Indian Languages in the Montaña

NAHUATL

MIXTEC

TLAPANEC

AMUSGO

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35   Programa integrado de la Montaña de Guerrero COPLAMAR, p. 121.
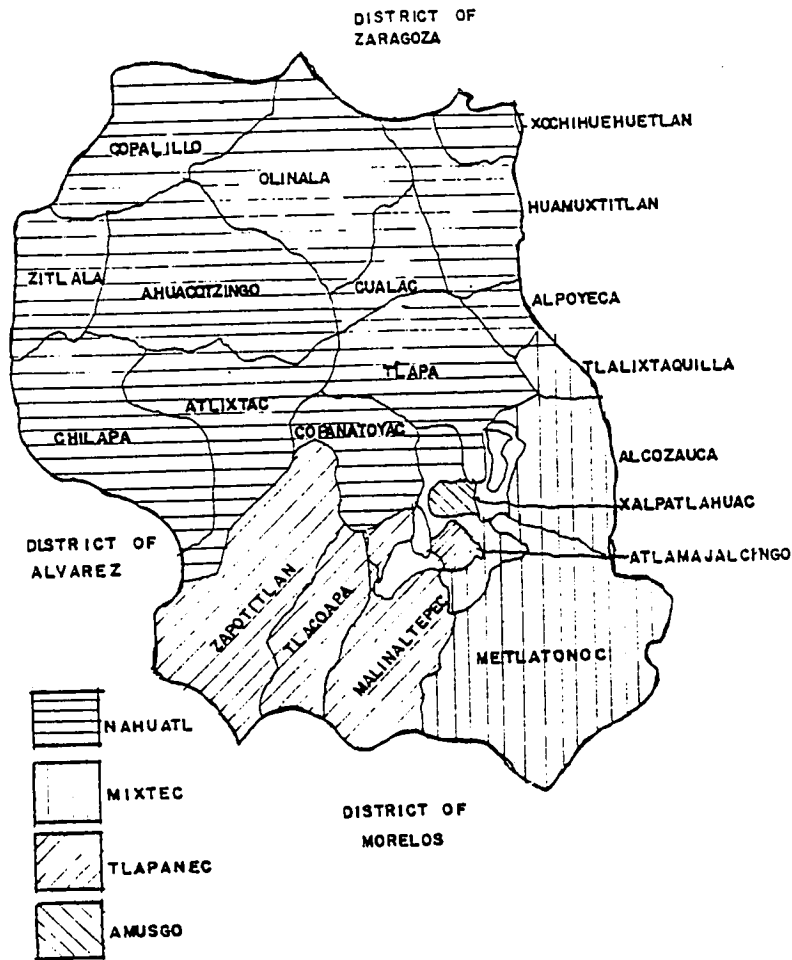
Table No. 25 [36]

Monolingual Nahuatl-Speakers and Bilingual Nahuatl-Spanish Speakers
in the Montaña Region, 1980

County	Total Population	Population 5 years or older Indian Speakers	Percentage	Monolinguals No.	Percentage	Bilinguals No.	Percentage
Ahuacotzingo	15632	2991	19	945	32	1935	65
Alcozauca	11765	215	1	103	48	109	51
Alpoyeca	4259	211	5	12	6	189	90
Atlamajalcingo	3581	73	2	30	41	43	59
Atlixtac	13239	2960	22	1004	34	1797	61
Copalillo	9007	5951	66	1681	28	3763	63
Copanatoyac	9823	4298	44	1386	32	2516	59
Cualac	5532	1387	25	121	9	1220	88
Chilapa	73335	24713	34	11528	47	12168	49
Huamuxtitlán	12245	1451	12	258	18	1131	78
Malinaltepec	22231	501	2	161	32	340	68
Metlatónoc	18005	212	1	161	76	51	24
Olinalá	16302	5639	35	1430	25	3947	70
Tlacoapa	6040	59	1	22	37	37	63
Tlalixtaquilla	5867	82	1	11	13	71	87
Tlapa	33581	11602	35	3167	27	7871	68
Xalpatláhuac	9931	2809	28	729	26	1987	71
Xochihuehuetlán	6056	148	2	11	7	131	89
Zapotitlán Tablas	20627	669	3	363	54	288	43
Zitlala	13629	7182	53	2938	41	3811	53
Totals	310,687	73,153		26,061		43,405	

* Census, 1980

36 x Censo 1980.

Table No. 26 [37]

Monolingual Mixtec-Speakers and Bilingual Mixtec-Spanish Speakers
in the Montaña Region, 1980

County	Total Population	Population 5 years or older Indian Speakers	Percentage	Monolinguals No.	Percent age	Bilinguals No.	Percent age
Ahuacotzingo	15632	---	--	---	--	---	--
Alcozauca	11765	8777	75	5365	61	3023	34
Alpoyeca	4259	65	2	9	14	52	80
Atlamajalcingo	3581	1656	46	710	43	890	54
Atlixtac	13239	2	--	---	--	2	100
Copalillo	9007	---	--	---	--	---	--
Copanatoyac	9823	3671	37	2234	61	1094	30
Cualac	5532	5	--	---	--	5	100
Chilapa	73335	28	--	2	7	25	89
Huamuxtitlán	12245	65	1	9	14	52	80
Malinaltepec	22231	2319	10	1660	72	537	23
Metlatónoc	18005	13844	77	11864	86	1797	13
Olinalá	16302	1	--	---	--	1	100
Tlacoapa	6040	71	1	2	3	68	96
Tlalixtaquilla	5867	872	15	395	45	442	51
Tlapa	33581	4809	14	1115	23	3432	71
Xalpatláhuac	9931	4839	49	2595	54	2167	45
Xcchihuehuetlán	6056	5	--	2	40	3	60
Zapotitlán Tablas	20627	3	--	---	--	3	100
Zitlala	13629	---	--	---	--	---	--
Totals	310,687	41,032		25,982		13,593	

37 Idem.

Table No. 27 [38]

Monolingual Tlapanec-Speakers and Bilingual Tlapanec-Spanish Speakers
in the Montaña Region, 1980

County	Population 5 years or older Total Population	Indian Speakers	Percentage	Monolinguals No.	Percentage age	Bilinguals No.	Percentage age
Ahuacotzingo	15632	3	--	1	33	2	67
Alcozauca	11765	20	--	1	5	19	95
Alpoyeca	4259	34	1	2	6	32	94
Atlamajalcingo	3581	1193	33	528	44	574	48
Atlixtac	13239	4452	34	2481	56	1569	35
Copalillo	9007	--	--	--	--	--	--
Copanatoyac	9823	84	--	32	38	44	52
Cualac	5532	1	--	--	--	1	100
Chilapa	73335	79	--	6	8	71	90
Huamuxtitlán	12245	10	--	1	10	9	90
Malinaltepec	22231	14818	67	5216	35	879	6
Metlatónoc	18005	896	5	384	43	484	54
Olinalá	16302	--	--	--	--	--	--
Tlacoapa	6040	4485	.74	2132	48	2193	49
Tlalixtaquilla	5867	3	--	1	33	2	67
Tlapa	33581	1844	5	632	34	1043	57
Xalpatláhuac	9931	10	--	--	--	10	100
Xochihuehuetlán	6056	7	--	--	--	7	100
Zapotitlán Tablas	20627	15603	76	9420	60	5408	35
Zitlala	13629	--	--	--	--	--	--
Totals	310,687	43,532		20,837		12,347	

38 Idem.

It is also very important to look at the percentages of monolinguals in the Indian tongue and bilinguals (Indian tongue/Spanish). Background information and fluctuations over the past decades can be found in the introductory chapters.

If we take a second look at the Nahuatls, we will see from the preceding table that in the counties with over 1,000 native speakers those with the highest percentages of monolinguals were Chilapa (47%), Zitlalá (41%), Atlixtac (34%) and Copanatoyac (32%), Copalillo (28%), Tlapá (27%) and Olinalá (25%). Following the same criteria of more than a thousand native speakers, quite a few counties have high percentages of bilinguals: Cualac (88%), Huamuxtitlán (78%), Xalpatláhuac (71%), Olinalá (70%), Tlapa (68%), Ahuacotzingo (65%), Copalillo (63%) and Atlixtac (61%).

In taking a closer look at the Mixtecs, those counties with the highest percentage of monolinguals and well over a thousand speakers were Metlatónoc (86%), Malinaltepec (72%), Alcozauca (61%) and Copanatoyac (61%). The only counties with about a thousand speakers and a high percentage of bilinguals is Tlapa (71%); Atlamajalcingo in second place with 54%.

If we examine the distribution patterns of the Tlapanecs, we will find that Zapotitlán Tablas has 60% monolinguals, followed by Atlixtac (56%), Tlacoapa (48%) and Atlamajalcingo (44%). With respect to bilinguals, the patterns are quite different, with Tlapa heading the list (57%), followed by Tlacoapa (49%) and Atlamajalcingo (48%).

As was stated in an earlier chapter, and as can be learned from the preceding tables, the counties chosen (Copalillo, Alcozauca and Zapotitlán Tablas) figure among those with high numeric and percentage values for of Indian language speakers and which also have varying but high percentages of both monolinguals and bilinguals. One of the main objectives of this dissertation is to look at the factors behind existing monolingualism and bilingualism and to study this situation over time.

Economic Aspects

The Montaña is undoubtedly the lowest-income area in the State of Guerrero. Some 78% of the economically active population belong to the primary sector, comprised of subsistence or unproductive agriculture and livestock raising, another 12% to the secondary sector, 5% to the tertiary sector and the remaining 5% to activities not sufficiently specified. About 96% of the lands are rain-fed and therefore production is largely dependent on natural phenomena. Most of the lands are communal but broken down into small plots which are worked by individual families or rented out in the unusual case that the family cannot cover them. This is truly unusual since corn, beans and squash are grown mostly as subsistence agriculture, and only during years of relative abundance is the surplus sold on the local market. Most of the efforts to diversify crops have failed, either because of unsuitable natural conditions, a lack of timely technical assistance or due to certain resistance by the farmers against growing non-traditional crops in fear of misusing their land and not having enough basic food to survive, not

to mention the difficulty of transporting the harvest to the market.

Some additional income is derived from the weaving of palm or straw hats

or other handicrafts such as hammocks, shawls, clay pots, and ornaments.

Most of the profit, however, is lost to middlemen.

According to the V Agricultural and Livestock Census in 1970,

only 12% of the surface area in the Montaña was considered suitable for

agriculture, 2% as pasturelands, 2% as commercial wooded areas, another

2% as non-commercial woodlands, and 2% that could be turned into profit-

able areas. Seventy-six percent of the land does not lend itself

to any profitable activity.

Due to the rapid devaluation of the Mexican peso, it is almost

impossible to present coherent data in dollars at present, but in 1970,

when the dollar was worth 12.50 Mexican pesos, 93% of the economically-

active population (26% of all the people in the Montaña) earned less than

$40 U.S. a month, which is deplorable by any standard.

Living Standards

As had already been stated, the State of Guerrero is one of the

most backward in all of México. Since the Montaña is considered to be

the poorest area in the State, it goes without saying that living

standards border on the inhumane. Statistics given in the section on

living standards for the whole State are averages, and the Montaña

undoubtedly on the negative side in all cases, although there are no

exact figures to support such a claim. From personal experience the

researcher can attest to the fact that the basic diet consists of
tortillas, beans, chile, and coffee, complemented on special occasions by
rice, squash, various pods, wild fruit and nuts, and exceptionally by
eggs, pork and chicken. In the county seats, for those who have pur-
chasing power, one can usually find limited quantities of all staples
and some perishables (except for fresh vegetables and fruits which are
seasonal and climate specific), and even grain alcohol and milk products.

The 'houses' in the area of the Montaña covered in this study
range from lean-to's to mud and stick huts. Sometimes the control group
lived in exactly the same conditions, while at other times they occupied
an adobe hut or even a brick or concrete with plaster house with a solid
roof. It is highly unusual for the dwellings to be divided into rooms.
Generally, there are mats or 'beds' (often frames with padding) in those
families who have been able to enter into the cash economy. They
have a table which is usually handmade and some type of seat; which may
actually be a chair, an upright trunk, a bench, etc. The kitchen is
nearly always inside and the cooking apparatus ranges from a gas stove
(in very exceptional cases) to what would be considered a campfire with a
metal strip over it, grill-fashion, to bake tortillas or on which to heat
beans. It is very common to find barnyard animals inside the dwelling,
mixing freely with barefooted naked children.

According to CONAPO, poor health standards are rampant and in
1979 there were only 7 medical units with 68 beds and 58 posts with one
bed each, which are not evenly distributed throughout the Montaña Region.

In 1976 there were only 14 doctors, all of whom were covering what is known as 'servicio social', which in turn provided an average of one doctor per 6,625 people. Most medical attention is in the form of emergencies, and preventative health care is almost non-existent, even though the researcher personally witnessed the presence of disposable needles, bandages, and antibiotics in clinics in the most remote areas, all of which of course, went unused.

In 1978 only 9% of all establishments (private and public) had drinking water and/or public sewage facilities. Water comes from surface wells, streams, and rivers, receiving no treatment whatsoever; as a matter of fact, a settlement with a nearby source of water is considered to be extremely fortunate. In exceptional cases (mostly in the county seats) outhouses are available (also in all government schools), but most needs are covered simply in open air facilities - under trees, behind bushes, or along the river.

Education

If the general educational indicators for the State as a whole are depressing, the situation in the Montaña is much more so, partly due to the fact that it is the poorest area in the whole State and partly due to the fact that most of the Indian population is concentrated in this area, which in turn involves two major complications for understanding the situation and the statistics which supposedly reflect the status quo: 1) it is difficult when looking at certain indicators, such as drop-out rates, poor achievement, illiteracy, etc., how much to attribute to

language interference with the native Indian tongue, and how much to attribute to general socio-economic conditions, distance, etc. and 2) there are three major educational systems, with a whole array of variations, present in the areas the Federal State systems and the Federal Bilingual-Bicultural Education system for the Indian population, where the programs are quite different, as are the teachers and materials. They report to different offices and directors, although at the very top, the Under-Secretary for Basic Education is in charge.

In-depth analysis of the three counties (Copalillo, Alcozauca and Zapotitlán Tablas) and the peculiarities of their particular situation among the Indian groups under study will be taken up in other chapters. Most of the background information for education in the Montaña is contained in the present chapter under the State of Guerrero section since the Montaña accounts for an extremely high percentage of the bilingual-bicultural services offered. A few additional tables are found on the next pages regarding attendance and absenteeism in the schools.

In Table 28 we can see that of all overall population of 81,917 students between 6-14 (primary school age in rural areas), only a little over half (45,725) actually attend school in the 20 counties in the Montaña. We also immediately notice a high drop-out rate, with only 2,575 actually finishing the first six grades, or about 3%, much lower than the State figure.

Table No. 28 [39]

6 - 14 Year Olds School Attendance by County and Grade

Municipio	Population 6-14	A T T E N D A N C E								did not attend	non-specified
		Total	1°	2°	3°	4°	5°	6°	non-specified		
Ahuacotzingo	4322	2734	479	686	609	390	182	125	263	1263	325
Alcozauca	2784	1502	252	430	345	186	112	53	124	1067	215
Alpoyeca	1209	837	19	112	154	107	62	67	316	268	104
Atlamajalcingo	906	628	148	165	117	80	46	24	51	193	85
Atlixtac	3582	1803	355	408	301	195	98	71	375	1286	493
Copalillo	2055	921	92	201	181	96	42	33	276	759	375
Copanatoyac	2612	887	109	235	219	101	45	19	159	1206	519
Cualac	1632	1087	165	237	232	178	117	63	86	397	157
Chilapa	18317	9878	1656	2558	1771	1250	789	576	1278	6550	1889
Huamuxtitlán	3450	2208	206	449	465	326	292	248	222	952	290
Malinaltepec	6102	3698	391	821	809	643	375	210	449	1589	815
Metlatónoc	4481	2085	697	506	379	224	76	42	161	2173	223
Olinalá	4778	2659	249	558	545	430	322	195	360	1631	488
Tlacoapa	1636	1144	167	269	256	189	122	63	89	352	140
Tlalixtaquilla	1709	1093	101	249	213	163	134	103	130	406	210
Tlapa	9255	5233	631	1207	991	704	526	406	768	2695	1327
Xalpatláhuac	2639	1676	234	502	498	249	125	66	62	744	219
Xochihuehuetlán	1691	892	89	186	180	107	97	61	172	519	280
Zapotitlán Tablas	5222	2976	527	781	675	447	211	91	244	1497	749
Zitlala	3535	1784	273	440	355	199	203	59	355	1253	498
Totals	81,917	45,725	6,840	10,997	9,285	6,253	3,976	2,575	5,940	26,800	9,401

39 Idem.

MAP 3 [40]

Index of Literacy in the Montaña in 1970

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40   Programa Integrado de la Montaña de Guerrero/COPLAMAR, p. 245.
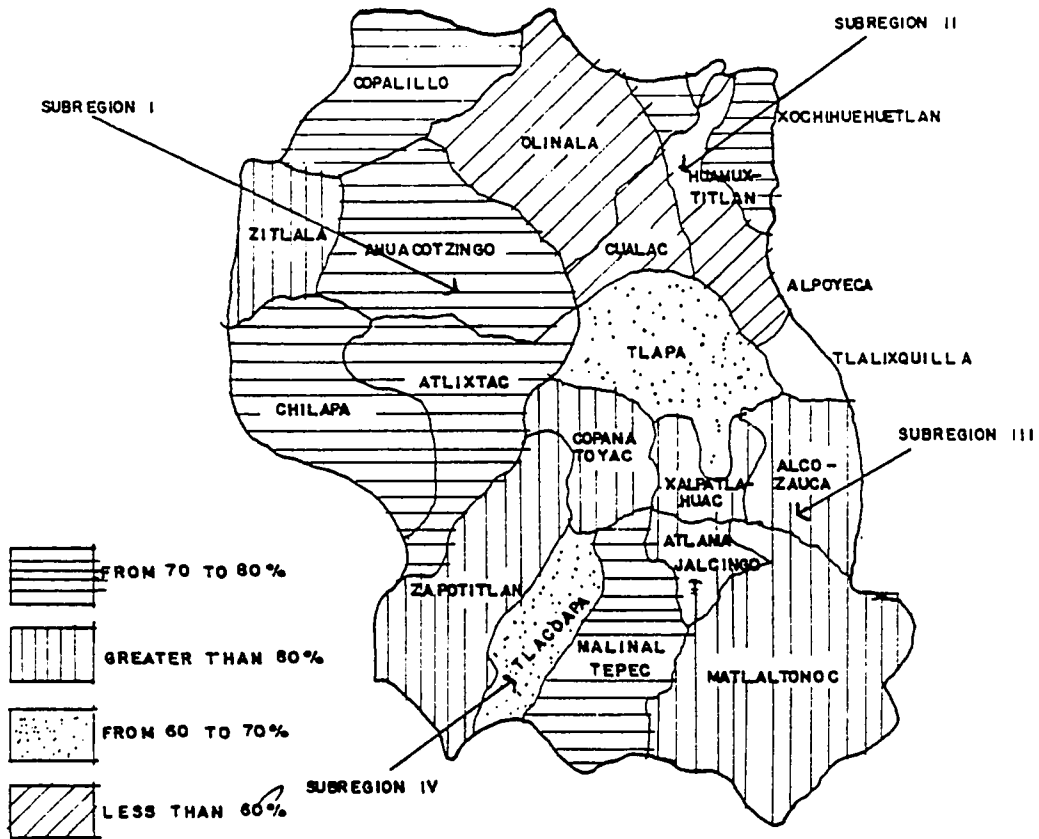
Table 29 tells us more about those who are not attending school and the reasons behind those decisions, which is often the decision made by the parents. Of the 26,800 between the ages of 6 and 14 who do not go to school, some 6,624 (25%) claim they do not attend because they have to help their families at home or out in the fields. According to this table, 3,172 do finish (there is a discrepancy with the figure 2,575 that appears in the previous table). Another 1,847 do not finish because the full six years of schooling are not available in their community, while yet another 1,352 have to go too far to attend school. Fortunately, only 212 claim that there was no space available. Unfortunately, some 1,112 have some kind of physical or mental impairment that does not allow them to pursue their studies and the alarming figure of 12,476 who do not study for 'other reasons'. The Census or the people themselves did not specify more, yet this reason represents almost half of the children who are not attending, which does not allow us to fully explain the phenomenon.

History

The most important feature in the evolution of the Montaña has been the presence of diverse Indian groups throughout history. Many centuries back there were various nomad tribes, such as the Cuicatlecs, the Chontals, the Matlazincs, the Mixtecs, the Nahuas, the Olmecs, the Tepuztecs, the Tolimecs, the Tlapanecs, the Tuztecs and the Yopes.

Table No. 29 [41]

6 - 14 Year Olds Who do not Attend School and their Justification

County	Population 6-14 not attending	Primary School finished	Primary School not finished	No school or far off	Not enough room	Works or helps family	Physical or mental impairment	Other causes
Ahuacotzingo	1263	80	82	87	4	329	38	643
Alcozauca	1067	60	129	33	5	323	61	456
Alpoyeca	268	87	4	--	--	46	10	119
Atlamajalcingo	193	31	56	--	--	9	2	94
Atlixtac	1286	64	143	108	11	345	20	595
Copalillo	759	25	43	39	8	124	17	503
Copanatoyac	1206	38	77	65	28	231	29	738
Cualac	397	105	11	3	2	72	24	180
Chilapa	6550	943	266	125	16	2213	175	2812
Huamuxtitlán	952	287	23	16	5	107	52	462
Malinaltepec	1589	169	214	167	11	261	107	660
Metlatónoc	2173	17	151	282	32	705	111	875
Olinalá	1631	279	113	105	11	276	86	761
Tlacoapa	352	41	47	41	1	73	44	105
Tlalixtaquilla	406	82	31	--	9	39	27	218
Tlapa	2695	604	151	118	22	572	74	1154
Xalpatláhuac	744	25	20	5	3	183	40	466
Xochihuehuetlán	519	74	7	13	2	93	33	297
Zapotitlán Tablas	1497	91	238	105	31	254	115	663
Zitlala	1253	70	41	40	11	369	47	675
Totals	26,800	3,172	1,847	1,352	212	6,624	1,112	12,476

41 X Censo 1980.

According to Orozco y Berra[41], it has never been determined exactly who the first settlers were, but it is known that the Mixtecs settled in the eastern part of the Montaña, bordering on the State of Oaxaca, while the Tlapanecs settled in the area between Tlapa and Atlixtac, and the Nahuatls in the northern and western parts bordering along the States of Puebla and Morelos.

Apparently the Nahuatls of Mexica or Aztec origin invaded the area around what is Taxco today, coming from the present-day State of Michoacan and from what is now Mexico City (Tenochtitlan), and gradually they extended their power and the worship of their God of War Huitzilopochtli into most of what is the Montaña today. During the 15th century they reached all the way to Tlapa, Chilapa, Olinalá and Malinaltepec. Their influence can still be seen on language distribution maps, while the other two languages (Mixtec and Tlapanec) are much more restricted geographically.

Although the Nahuatls were primitive farmers and hunters during their early invasions, later incursions were made by a civilization which was flourishing in Tenochtitlán, and they were the first outsiders to introduce both bartering as well as many products new to the Montaña.

There was a sharp decrease in the Indian-speaking population in the Montaña as a result of the Spanish Conquest and the outbreak of the diseases they brought with them, such as smallpox, measles and typhus.

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[41] Manuel Orzoco y Berra. _Historia antigua y de la conquésta de Mexico_. Vol. III. México, 1880.

Hunger has always played an important role in diminishing the number of survivors. There was not much resistance from the local people to the Spanish Conquest, since they were simply passed from conqueror (the Aztecs) to conqueror (the Spanish). The Aztecs provided the only resistance, which was fierce. The conquest of this area was difficult basically for geographical reasons, and it was not until around 1650 that the Spanish really settled in the Tlapa area. The settlers were mostly from Asturia and were merchants. The local Indians continued to be exploited by the Spanish for two centuries more and this same exploitation continues today with Mexican mestizos.

Some economic-historical cultural features of the Spanish colonization were the implanting of a tax system - not a monetary one, but rather Montaña natives were forced to give a hen or a pig, for example, every so many days and were also obliged to work free for the Spanish hacendados a certain number of hours a week in bondage. They were regularly underpaid for whatever they produced on their own land and were in constant debt with the Spanish when they entered into the capitalist system and bought or traded with them. A very serious consequence, which is still in progress at present, was the destruction of their culture, their way of life, and their religion. Just as in other parts of the world and the State of Guerrero, the Montaña people suffered all of these consequences of colonization probably to a much greater degree than many other areas due to their isolation, ignorance and poverty.

V. THEORETICAL FRAMEWORK

Due to the fact that the scope of this dissertation is quite
broad, this chapter is a particularly difficult one to write. It is my
contention that the two major concerns dealt with in this study (a
qualitative evaluation of proficiency and the outlook for language
maintenance and shift in the area in the future) do not stem directly
from linguistic considerations, such as important structural differences
between two languages or the fact that one language has more or less
phonemes than another (BOAS: 1963; SUAREZ: 1983), but rather from
socio-economic ones.

This chapter is organized around several major themes:
ethnicity, marginality, philosophy of bilingual education, the
equilibrium-conflict paradigms, language policy in Mexico and language
maintenance and shift, and hopefully will lead the reader to better
understand the forces that interact in the formation of self-identity and
attitudes toward one's place in society. Language is an integral part of
both. The proficiency question will not be dealt with until the next
chapter, together with methodological and evaluation aspects.

Ethnicity

There are constant references in this study to the Nahuatls, the

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Mixtecs and the Tlapanecs who co-exist with the Spanish-speaking majority in the Mexican mestizo society and to the fact that they are minorities in every sense of the word. What does it mean to be an ethnic minority in México?

According to Schermerhorn an 'ethnic group' is a collectivity within a larger society having real or putative common ancestry, memories of a shared historical past, and a cultural focus on one or more symbolic elements defined as the epitome of their peoplehood (kinship patterns, physical contiguity, religious affiliation, language or dialect in common, tribal affiliation, nationality, phenotypical features, etc.); a 'dominant group' is a collectivity within a society which has pre-eminent authority to function both as guardians and sustainers of the controlling value system and as prime allocators of rewards in the society; and a 'minority group' is the subordinate one, minimum in size and without power, such as most ethnic groups.[42]

What might be the conditions that foster or prevent the integration of ethnic groups into their contiguous societies? We must understand that integration is not an end-state, but rather a process whereby certain parts of society are brought into active and coordinate compliance with the ongoing activities and objectives of the dominant group in that society.

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42 Comparative Ethnic Relations: A Framework for Theory and Research, R.A. Schermerhorn, Random House, N.Y., 1969, p. 12.

Integration, according to Schermerhorn, depends on three independent and three dependent variables: The independent variables are: 1) repeatable sequences of interaction between subordinate ethnic and dominant groups, such as annexation, migration or colonization; 2) the degree of enclosure of the subordinate groups from the society-wide network of institutions and associations and 3) the degree of control exercised by dominant groups over access to scarce resources by subordinates groups in a given society. The dependent variables are: 1) differential participation rates of subordinates in institutional and associational life; 2) the extent of satisfaction or dissatisfaction of subordinates and dominants with different patterns of participation, together with accompanying ideologies and cultural values and 3) overt or covert behaviour patterns.[43]

The situation in the Montaña Region is a prime example of Schermerhorn's view of integration. As we will see in the opinion of other authors, particularly Mexican ones, Indians continue to be considered to be under internal Colonial rule, with the mestizo society replacing the Spanish. Enclosure is a key factor in avoiding the Indians' participation in the national political process - Indians are not only deprived or access to natural resources, but there has been a systematic take-over of these important resources by the capitalist elements in society over the past five centuries.

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[43] Ibid., p. 15.

Schermerhorn also offers a capsule version of systems analysis. He claims that for this type of analysis the whole is over its parts, that societies are maintained by their constituent elements, which are needs (physiological, shared goals and perspectives), socialization processes, communication, organization of roles, control and regulation of deviance of acts in society. According to Schermerhorn, by applying systems analysis to comparative ethnic relations we center attention on the functions that the ethnic group performs for the entire system, viewing the ethnic group itself as a subsystem within the entire society; this fit is achieved by a series of adaptive adjustments regulated by the norms and values of its institutions. If we look at the theory of power conflict, then each ethnic group is in an embattled position, fighting for its life, its identity or its prestige. The higher the degree of enclosure and the higher the degree of control over the ethnic groups source rewards, the greater the conflict.[44]

Schermerhorn points to several major differences between modern societies and their predecessors which will be useful to us in the ensuing discussion: 1) the most powerful government positions are no longer a function of hereditary privileges; 2) productive activities are either moving away from or generally divorced from domestic work; 3) a money economy is displacing or has fully displaced a subsistence economy; 4) forms of labor are increasingly or wholly rewarded by wages and salaries; 5) increases in transportation facilities spread a network of

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[44] Ibid., p. 51.

connections between sectors of the population formerly separated or isolated, which makes for greater accessibility of central zones to peripheral areas; 6) mass media have made some forms of instantaneous communication possible, which in turn has furnished common symbolic or ideological perspectives for increasingly large segments of the population; 7) there has been a penetration of national influences, both political and economic, into all regions and local sectors, particularly through urban centers which are growing in both size and importance; 8) the provision of educational facilities for the population is widely recognized as a responsibility of government and extension of such facilities continues; 9) extensive linkage with other countries through foreign trade, transportation, and communication networks is a prominent feature, reproducing on an international scale what is already taking place on the national.[45]

Among other authors, Frideres and Goldenbarb, claim that ethnicity stems from a sense of common origins or common values and beliefs and has long been of great concern to individuals trying to unite aggregates of people into 'self-defining' groups. They see ethnicity as a set of attitudes related to a sense of ancestral identification with a segment of the world's population.[46]

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[45] Ibid., p. 165.

[46] J. Frideres and S. Goldenbarb, "Ethnic Identity" in International Journal of Intercultural Relations, N.Y., Pergamon Press, Vol. 6, No. 2, 1982, p. 145.

Similar concepts are held by Jeffres and Hur, who state "The term 'ethnicity' refers to 'the socialization process by which individuals in involuntary groups inherit and share the common culture of their group' and 'ethnic group refers to a cultural subsystem of larger societies in which a group of people share a common and distinctive culture".[47]

Continuing with the discussion of what constitutes an ethnic group, Fredrik Barth claims that

"An ethnic group is a community that 1) autoperpetuates itself biologically to a great extent; 2) shares basic cultural values in a unified fashion which are manifest in cultural forms; 3) integrates a field of communication and interaction; 4) has members which self-identify and which are identified by others as constituting a distinguishable category separate from other categories of the same order."[48]

In his excellent article on related problems Fishman claims that

"ethnicity is rightly understood as an aspect of a collectivity's self-recognition as well as an aspect of its recognition in the eyes of outsiders. It differs from other kinds of group-embedded recognition in that it operates basically in terms of paternity rather than in terms of patrimony and exegesis, but is also an avenue whereby individuals are linked to society, social norms and values. Language is the symbol of ethnicity, the recorder of paternity, the expresser of patrimony and the carrier of phenomenology".[49]

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[47] Leo W. Jeffres and K. Kyoon Hur, "Communicative Channels within Ethnic Groups" in *International Journal of Intercultural Relations*, Vol. 5, No. 2, 1981, Pergamon N. Y. Press, p. 116.

[48] Fredrik Barth, *Los grupos étnicos y sus fronteras*, México, D.F., Fondo de Cultura Economica, 1976, p. 11.

[49] Joshua Fishman, "Language and Ethnicity" in *Language, Etnicity and Intergroup Relations* (H. Giles, ed.), London, Academic Press, 1977, p. 16.

According to Fishman, there are three major roadblocks that have plaqued

considerations of ethnicity in modern social theory; a) a modern politi-

cal theory, which relegates ethnicity to the role of despoiler of

civility and modernity, thereby purportedly leading to non-rational

extremism in political life; b) an ideological outlook, which is found in

classical Marxist theory, in which ethnicity is viewed, at best, as a

mere byproduct of more basic factors and as a survival of barbarism at

worst, with scorn placed on the powerless (those who have no

state-apparatus of their own); c) a conceptual level, which fosters the

view that ethnicity is pertinent to minority groups alone related to

issues of discrimination and inter-group relations.[50]

Andrés Medina, a noted Mexican anthropologist, has also written

extensively on the subject of ethnicity. In one of this articles he

mentions that to be a member of an Indian community one has to have been

born there. Membership is validated by the 'sistema de cargos' (a reli-

gious concept whereby in each community a patron saint and his followers

constitute the nucleus or the base around which all religious activities

in the community evolve, that all members of the community believe and

support throughout life and which in turn gives them a particular vision

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[50] <u>Ibid.</u>, p. 43.

of the world) which is a synthesis of the ethnic specificity of the history of their people.[51]

Medina claims that 'Indian' is a colonial category which, together with 'ethnic group' and 'community' have become units of study for anthropologists (and I might add for linguists as well). One of his main points is that on a national level the real process of disintegration of these Indian communities has not been appreciated: it is not just a process of social and/or cultural change, but an aspect of the process of proletarization, which has become much more accelerated since the implantation of capitalism in México, which has been the economic philosophy in vogue for mainstream Mexicans over the past centuries, particularly in the 20th century. In addition to the "sistema de cargos", other characteristics common to most Indian groups are communal rather than individual land ownership, jointly worked with benefits shared on an equal basis with the other members of the community. Equality, without classes, also constitutes the base for the social structure of these communities. Medina claims that temporary migration, together with capitalist exploitation, has transformed many Indians into mestizos after learning the Spanish language and being exposed to a capitalist society, which in turn has led to a differentiation in the social strata of society. He points to the specific cases of bilingual teachers, to those who set up small corner stores, etc.

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[51] Andrés Medina, "Los grupos étnicos y los sistemas tradicionales de poder en México" in Nueva antropologia, No. 20, Vol. V, Jan, 1983, p. 8.

In the search for a definition of 'Indian' Antonio Caso, the first Director of the National Institute for Indian Affairs (INI), claims that an Indian is a person who feels Indian, where somatic, non-European traits are present physically, who speaks an Indian tongue, who has a high percentage of Indian culture and spirit, and who feels different from Whites and mestizos that surround him.[52]

Bate also considers ethnicity to be related to historical peculiarities in the reproduction of social beings and subcultures within a nation's culture and considers that "an ethnic group is characterized by being a social group which has developed a strong degree of solidarity and social identity based on ethnic components, while other social groups might be present but develop different forms of identity, emphasizing dimensions of another order".[53]

Lagarde has written specifically on the concept of the Indian and mentions the discovery of the American race(s), their conquest and exploitation during the Colonial Period. During this Period the Indian was viewed as unworthy and unfaithful according to the Christian religion. Destruction of their cultures was to ease their incorporation into the lowest stratum within the new social order. In mid-20th century an 'indigenist' policy was developed, which tried to eliminate the

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[52] Javier Guerrero. "La cuestión indígena y el indigenismo" in Indigenismo, modernización y marginalidad: una revisión critica, México, D.F., Juan Pablos/CIIS, 1979, p. 58.

[53] Luis F. Bate. Cultura, clase y cuestión étnico-nacional. Colección Principios. México, D.F., Juan Pablos Ed., 1985, p. 75.

difference between what is Indian and not Indian, in its claim for the search of legal equality without the necessary socio-economic changes to back it, only leading to further exploitation.[54]

Bonfil clarifies several overlapping concepts in his article on Indians in the Americas, arguing for a difference between Indians and ethnics. "'Indians' is an analytical category that allows us to understand the position of this sector and defines the group as one submitted to a relationship of colonial domination and a category capable of explaining a colonial process not just a static situation, but rather a historical process, while ethnia identifies socio-cultural units which are more descriptive than analytic and refers to their distinctive traits and their position in the societies of which they form a part. Many of these groups have disappeared or become fragmented as a result of historical processes."[55] Indigenism seems to consider cultural pluralism an obstacle for national consolidation.

In a famous journal on political science, both Darcy Ribeiro and Díaz Polanco affirm that traditions are preserved longer in the country than in the city. Díaz Polanco claims that ethnicity is a dimension of classes, and that all classes or social groups have their own ethnic dimension, while an ethnic is characterized by being a social group that

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[54] Marcela Lagarde. "El concepto histórico de indio: algunos de sus cambios". Anales de Antropología, Vol. XI, México, D.F. UNAM, 1974, p. 216.

[55] Guillermo Bonfil. "El concepto de indio en América: Una categoría de la situasión colonial". Anales de Antropología. vol. IX, 1972, p. 122.

has developed a high degree of solidarity or social identity that makes

them different from all others; nationality involves a complex structure

of social classes in reciprocal assymetrical relations but with a common

ground of solaridarity that leads to a particular form of identity.[56]

Several other Mexican authors feel that there are definite

economic overtones to the concepts of 'Indian' and 'ethnic'.

In his Master's thesis Ríos blames the present situation of the

Montaña, particularly the Indians' plight, on capitalism. He claims that

the concept of 'Indian' or 'Indians' originally stemmed from a geogra-

phical mistake that arose when the Spanish thought they had arrived in

the West Indies, but at present is a perjorative description of

aboriginal people, most of whom were exterminated. Those who survived

were incorporated into certain social and productive processes which over

the centuries led to, a situation of marginality, exploitation, domina-

tion and impotence., including the imposition of customs, language,

social organization, the exploitation of natural resources, etc.[57]

Valinas, a Mexican linguist with years of experience working with

different ethnic groups, states "the most severe problems of the differ-

ent ethnic groups are not of a linguistic nature, but rather the role

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56 Hector Díaz Polanco. "Etnia, clase y cuestión nacional".
Revista mexicana de Ciencias Políticas y Sociales. No. 102, XXVII, nueva
epoca, Jan-March, 1981, p. 109.

57 Manuel Ríos Morales. Régimen capitalista e indígenas en la
Montaña de Guerrero. p. 98.

they play in production relations, as hand labor for the market, with respect to property ownership".[58]

Stavenhagen offers a solid description of what traditional societies are: 1) the monetary economy is not well-developed; 2) the power systems are rigidly hierarchical, and controlled by a few; the class structure, as a base of political power, rests on the relationship between people and land; 4) social stratification is rigid; 5) social relationships are determined by family, community and religious structures; 6) ethnic and social value systems do not easily lead to change and development; 7) traditional elements do not only intervene in economic aspects, but also in the type of education, and the way of thinking with respect to health measures, etc.[59]

A group known as ANADEGES (Red Cooperativa de Análisis, Desarrollo y Gestión, A.C.), based in Mexico City, has studied another area of the Montaña de Guerrero which is more progressive and Spanish dominant. This research group is basically concerned with qualitative social change, which they define as greater pertinent participation in political processes, along the lines of what Germani proposes. They claim that one must forget about the motto "let's try to be like them" and instead turn to endogenous development, or development which stems from within, with a high degree of autonomy. They are strong proponents

[58] Leopoldo Valiñas. "Alfabetización y sociedad" in Nueva Antropología Lingüística y Sociedad, 22, México, D.F., 1983, p. 8.

[59] Rodolfo Stavenhagen. Sociología y desarrollo. México, D.F. Ed. Nuestro Tiempo, 1971, p. 198.

of the theory that Indian groups continue to be under internal colonial

control and are exploited, and that the only way out is to recover and

exploit for themselves the internal market, becoming autonomous through

non-conventional formulas.

Marginality

Now that the concept of ethnicity has been clarified, or at least

expanded upon, I would like to comment on the concept of marginality. In

his book on the subject, Germani points out that in Latin America this

term was coined after the spread of urban areas and specifically refers

to that sector of the population segregated from the central areas with

urban services which lives in improvised housing and usually occupies the

ground lived on illegally. Soon afterward, the concept was extended to

include poor working and living conditions in general and is perceived as

a disadvantageous position within the socio-economic production system,

the consumer system of goods and services, as well as participation or

lack of it, on a formal or informal level, in the decision-making

process.[60]

Three relationships are of particular interest in his theory: 1)

participation versus exclusion, 2) domination versus subordination, and

3) exploitation of victims, all with varying degrees of pertinence. He

does not consider poverty as synonomous with marginality. The common

underlying supposition in all types of marginality is not just the lack

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[60] Gino Germani, El concepto de marginalidad, Buenos Aires, Ed.
Nueva Visión, 1973, p. 14.

of participation in those spheres where one should be active and included
--in other words, marginality is based on the difference between the real
situation and what it ideally should be.

Bearing this description in mind, Germani proceeds to explain
what he considers to be the causal factors, which are: 1) socio-economic
in nature, 2) socio-political considerations, 3) cultural aspects, 4)
psychosocial factors and 5) demographic circumstances. Without going
into each of these factors in depth, the first refers to the structural
socio-economic characteristics which present unsurpassable barriers
leading to unemployment or underemployment for marginal populations.
When we speak of socio-political considerations, we are referring both to
the inter-relationship and inter-dependence between politics and econo-
mics, as well as restricted participation in politics, be it in elections
and legislative matters, in labor unions, or just being heard. Many
researchers have pointed to cultural differences as the third factor, in
the sense of cultural domination of ethnic minorities. The psychosocial
aspects refer to the process of modernization, the process of socializa-
tion. It is closely related to cultural aspects, particularly at an
early stage and the marks these processes leave. The demographic aspect
is important in the sense that the demographic explosion has led more
quickly to an imbalance in the distribution of scarce resources, with
marginal populations on the losing end.[61]

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[61] Ibid., p. 22.

Toward the end of his book Germani includes a theoretical and methodological scheme for studying marginality suggested by Carlos Delgado,[62] which encompasses extreme cases of marginality such as nomad tribes on the lower end, and the White ruling class in urban areas on the opposite end of the scale. Of particular interest to this study is his analysis of rural and Indian sectors, for he defines the 'fully dominated' group as unsalaried rural nuclei, such as miners and other rural workers from mountaineous areas who are not unionized; 'partially dominated' as those who work along the coast and who are 'transitionally dependent' as rural employees with low income, such as small farmers, urban craftsmen and skilled workers, etc. The population under study here clearly falls under the category of 'fully dominated'.

While Germani places great emphasis on economic disadvantages and lack of opportunity, he also refers to participation or non-participation as the subsystems of consumption, culture, education and access to scientific, literary and artistic patrimony. All of these concepts are valuable to the analysis of the incursion of Spanish into the Montaña Region.

The word 'socialization' has already been mentioned several times, and linguists often speak of the language of socialization, usually refering to the mother tongue, but when the school language is different from the home language, there can be two languages of

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[62] Carlos Delgado, Problemas sociales del Perú contemporáneo. Lima, Ed. Campodónico, 1971, p. 51-53, in Germani p. 66-69.

socialization, and it is here where the amalgamation of language and culture comes into play.

Bernstein claims that "socialization is the process whereby a child acquires a specific cultural identity and his responses to such an identity."[63] He considers social class to be the most important single item in socialization. Bernstein argues that the language of a culture is a function of that society's social structure, so that social structure rather than language is the determining factor.

Bilingual Education

Bilingual education means many different things to people from different walks of life. If we are thinking of a French-English bilingual program for the upper-middle class in New England, undoubtedly an enrichment program comes to mind; however, most bilingual programs are conceived as a way to compensate for the fact that the home language is one other than the language of instruction of mainstream society in a public school. Bratt Paulston has stated the various goals of bilingual education in a very straightforward way by saying that the implicit goals of bilingual education are:

> "1) to assimilate individuals or groups into the mainstream of society, to socialize people for full participation in the community; 2) to unify a multilingual community, to bring unity to a multi-ethnic, multi-tribal or multi-national linguistically diverse policy and 3) to enable people to communicate with the outside world, to introduce a language of wider communication in addition to the unifying national language so as to make it possible for nations

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[63] Basil Berstein. Social Relationships and Language. Buckinghamshire, The Open University Press, Walton Hall Bletchley, 1983, p. 21.

to interact with foreigners; 4) to gain economic advantage; 5) to preserve ethnic or religious ties; 6) to reconcile different politically or socially separate communities; 7) to spread and maintain the use of a colonial language; 8) to embellish or strengthen the education of elites; 9) to give equal status to languages of unequal prominence in society; 10) to deepen understanding of language and cultures."[64]

While the above-mentioned are the possible goals of bilingual education, the underlying concepts are of much more significance for this theoretical framework.

In the same book Bratt Paulston presents two major paradigms: the equilibrium (functional) and the conflict models. Within the equilibrium paradigm we find evolutionary theory, which is characterized by notions of progress, by stages of development from lower to higher-order forms. Thus education is an integrative structure, which functions to maintain stability and changes from simple to more complex modern forms in response to change in other structures - for example, lack of school achievement by students from minority groups is due to their inferior genetypical traits. This hereditary approach has been complemented by the 'cultural deprivation' theory, which explains any hereditary inferiority by a weakness in the upbringing and socialization of the children (nature versus nurture). To quote Bratt Paulston, "the educational system legitimates economic inequality by providing an obstensible open, objective and meritocratic mechanism for assigning individuals to unequal economic positions. Indeed the more meritocratic

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64 Christina Bratt Paulston. Bilingual Education: Theories and Issues, Rowley, Mass., Newbury House, 1980, p. 18.

the educational process appears to be, the better it serves to legitimate inequality, for the educational system fosters and reinforces the belief that economic success depends on the possession of technical and cognitive skills - skills which it has organized to provide an efficient, equitable and unbiased manner on the basis of the meritocratic principle."

The structural-functional theory is a 20th century version of evolutionary theory, but with emphasis on the linked stages between socio-economic and cultural development. Theorists focus on the homeostatic or balancing mechanisms by which societies maintain a 'uniform state'. Structural-functional theory has been the dominate theory of social change in American social sciences and has had a strong influence on the interpretation of educational systems and valid educational reform. It is closely related to a theory of bilingual education. Some of the most important assumptions are: 1) the lack of social and economic success by minority groups is due to unequal opportunity manifest through different language, different culture, and different learning styles and a lack of scholastic success as a group because of poor English-speaking ability, and 2) the provision of English skills, merit and IQ will lead to scholastic skills gained in a 'meaningful education' to social and economic success. An equilibrium is maintained by the educational institution when the major function is the socialization of youth, the provision of technical competence, and a normative

orientation in harmony with the values of society.[65]

According to the second paradigm, group conflict theory, the
evolutionists' and functionalists' image of society as a system of benign
self-regulating mechanisms where maintenance of social equilibrium and
harmony is 'functional' and disruption is 'dysfunctional', is wrong.
Here formal education is viewed as a part of the ideological structure
which a ruling class controls to maintain it dominance over the masses,
and since formal education is dependent on the dominant economic and
political institutions, it cannot be a primary agent of social transfor-
mation--it can only follow changes in the imperatives of the economic
and political social order.[66] Now the perspective is no longer unequal
opportunity per se but structured inequity, persistence of poverty,
inequality of incomes and inequality of socio-economic opportunities.
Under this type of framework solutions to education problems in bilingual
education are rarely sought within the programs themselves but rather are
seen to lie outside the programs, and bilingual education is understood
only in terms of the relationship between the various interest groups,
and that relationship is seen as basically one of a power conflict.[67] As
we will see later on, the Mexican Government's bilingual education
policy falls almost totally under the equilibrium paradigm, since this
opportunity is seen as a way to 'even things up', to make up for cultural

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[65] Ibid., p. 21.

[66] Ibid., p. 39.

[67] Ibid., p. 40

dependence, to socialize them in the value system of the larger mestizo society.

Language Policy

So far we have said a great deal about ethnicity, marginality, and bilingual education, but perhaps it is not yet clear what these ethnic and theoretical considerations have to do with language policy, attitudes and language maintenance and shift. Let us now turn to the problem of what language policy is in México at a governmental level and what the Indians as a collective group want to support in Latin America and México.

On a national level México has a Director General of Indian Education, who himself is bilingual in two Indian tongues and a fluent speaker of Spanish, combined with a long history of teaching and public service in his native State of Oaxaca and in México City. What are the major aspects of Indian educational policy at present and what have they been in the past?

A brief historical overview of Indian education policy in México is as follows:

1. Conquest 1510: basically the Indian tongues were used by the evangelizers, with the hope that the Indians would understand the teachings of the Bible

2. Colonial Period until 1810: discrimination against the Indians and admiration for the Spanish

3. Independence 1810: inversion, only 10% speak Indian tongues with different degrees of bilingualism

4. Méxican Revolution 1910: two basic ideas - to teach directly in Spanish or to teach literacy in the vernacular and then teach Spanish

5. Misiones Culturales 1923: teachers were sent out on foot to reach Indians in remote areas and the Casas del Estudiante Indígena were built as fellowship places to attract the Indians to mestizo institutions

6. Centros de Educación Indígena 1928: 33 rural boarding houses were built in predominately Indian areas for adolescents

7. Depto. de Asuntos Indígenas 1936: established under President Cardenas to solve land and other problems urgent in Indian areas

8. Asamblea de Filólogos y Linguistas 1939: examined in México City the problem of Indian education and the languages of instruction for the first time

9. Primer Congreso Indígenista Interamericano 1940: in Patzcuaro, which lead to reflexions and concern on a regional level, which will be outlined in greater detail further on in this chapter

10. Dirección General de Educación Indígena 1946: the first real agency to take charge of the problem of Indian education

11. Instituto Nacional Indígenista 1948: the implementation arm of the Dirección General and the most important agency for Indian affairs in México to date

12. Centros Coordinadores with Promotores Bilingues-Biculturales 1950:

the branch of the INI which implements policy on a regional level in intercultural areas, such as bilingual radio broadcasts, school breakfasts, puppet shows, bedding and food for boarding schools, etc., at well as interdisciplinary community development work and overseeing bilingual-bicultural education extension workers

13. Programa Nacional de Alfabetización en Lenguas Indígenas 1960's: an effort was made to teach literacy, first in the native tongue, and then in Spanish, employing bilingual teachers instead of monolingual Spanish-speaking teachers

14. Presidency of Luis Alvarez Echeverría (1970-76): the Centros Coordinadores received considerable support and were expanded; funds became available for the first time to encourage Indian handicrafts and cultural activities on a regional and national level through the establishment of the Subsecretaría de Cultura Popular y Educación Extraescolar; in 1975 ANPIBAC (Alianza Nacional de Profesionistas Bilingues-Biculturales, A.C.) was founded, with the idea that the Indians themselves, especially those with formal education, take a more prominent role in guiding Indian policy. This was a political administration where anthropologists, sociologists and linguists were deeply involved in studying Indians and Indian policy, and several research centers (INAH, CIS-INAH and CIIS) were particularly involved in advising on language policy, writing new textbooks for teaching Spanish as a second language, and so forth.

15. Presidency of José López Portillo (1976-82): two important policy decisions were forthcoming during this six-year period, which were the

establishment of the Educación para Todos (Education for All) Program and

the creation of the Dirección General de Educación Indígena (General

Direction for Indian Education). The Education for All Program was the

first true effort to make primary school available to all Mexicans, no

matter where they lived, which meant that considerable effort and funds

were allocated for Indian areas. A second characteristic was that some

3,000 bilingual-bicultural pre-school teachers were also assigned to

Indian areas to provide pre-school education in these areas for the first

time. With the establishment of the DGEI, which directly depends on the

Under-Secretary for Primary Education and is considered special educa-

tion, which means that Indian education is now an integral part of the

national educational system. The mandates of the DGEI are to provide

bilingual-bicultural primary school education to Indian children in

accordance with the Federal Law of Education, which stipulates that

linguistic and cultural pluralism is the desired policy for México.

The INI has been relieved of any direct policy-making in Indian

education but is still charged with the administrative duties of policy

implementation and is very active in predominately Indian areas.[68]

Earlier in the chapter we said that we would not only outline

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68 Jorges Hernández Moreno and Alba Guzmán. "Trayectoria y
proyección de la educación bilingue y bicultural en México." in México
pluricultural (Scanlon and Lezama, eds.), México, D.F., Ed. Porrua, 1982,
p. 86-95.

México's official policy, which has been 'indigenista'[*] for over 30 years now, but that we would also provide the reader with what the Indians, or at least their most outspoken leaders, want Indian educational policy to be. Franco Gabriel Hernández, a recognized leader at a national level, expressed the following conclusions in a Congress on Indian Affairs held in Oaxtepec, Morelos, in June, 1979, shortly after the establishment of ANPIBAC:

1. That education given to the Indians since colonial days, to date, has been to maintain and reproduce colonial domination

2. That it is the right time for Indians to implement their own education

3. That to achieve this it is necessary to resort to Indian families and communities as sources of knowledge

4. That education be bilingual/bicultural

5. That text books and workbooks be available in the Indian languages with a bilingual content

6. That there be a systematized pedagogy for Indian education

7. That regional and technical councils be organized

8. That professionals of Indian descent be given the opportunity for further training

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[*] The indigenista' policy was basically drawn up by Antonio Caso and Gonzalo Aguirre Beltràn when they directed the INI and was particularly strong during te 1950's and 1960's. This policy stressed regional integration, the role of education in the national integration and acculturation processes, and the gradual changeover of the Indian from a caste to a social class system.

9. That Indian organizations such as ANPIBAC be used to greater advantage[69]

In the same congress in 1979 important criticia were established with respect to teaching activities and the degree of awareness of the bilingual-bicultural teachers regarding what their task consisted of, stating that school education and the teaching of Spanish in themselves are not the means to achieve social mobility; schools represent the main ideological apparatus at the service of the State and masks the role of education to train skilled labor for material and intellectual production indispensable for the State; these teachers have been trained to serve the interests of the State and not of the communities. It is necessary to define concrete measures to achieve ethnic identity, as well as to classify their socioeconomic and political aspirations as an oppressed and exploited social class; in spite of its position as middlemen between the interests of national society and ethnic groups, the members of ANPIBAC believe it possible to contribute to the attainment of an education which will satisfy the interests of Indian groups and they would like to use this institutional moment to help the State to remedy the programs inherent in the Colonial situation in which they live.[70]

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69 Franco Gabriel Hernández. "De la educación indígena tradicional a la educación indígena bilingue-bicultural" in México Pluricultural, p. 27.

70 Felix Baez-Jorge and Amado Rivera Balderas. "La educación bilingue-bicultural, encrucijada de las lealtades etnicas y los conflictos de clase" in México Pluricultural, p. 455.

In the same book, Natalio Hernández expounds a more personal view that the following points are important for the Indians to achieve:

1) To strengthen the historical, material, cultural and spiritual roots of México

2) To enrichen and strengthen the national culture

3) To destroy the myth of White and mestizos that the Indians are a burden for society and to go back to the autosufficiency of the past

4) To demand and defend Indians lands, culture and history

5) To be seen with dignity and have better relations within society

6) To write the Indians' own history - who they are, how they think, what they feel and to have their own literature

7) To better defend México from foreign cultural penetration through mass media.[71]

Researchers who have worked for many years with Indian groups in Oaxaca share many of the views expressed on previous pages and propose the following:

1) That 56 languages exist, but that there are not enough communication devices in these languages

2) Teaching literacy in Indian language has served to attain objectives other than promoting language

3) That these ethnic Indian groups and their cultures be made known on a national level, but on a plane of civic and moral equality with the rest

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[71] Natalio Hernández, "Nuestra lucha por la educación bilingue-bilcultural: reflexiones de un maestro náhuatl" in México Pluricultural, p. 487.

of society, without a folkloric connotation.

4) Any policy or cultural program should be carried out jointly with the communities and be in accordance with the social and economic situation of each one of them. Additional suggestions were made in the sense that there should be more materials available and broadcast in Indian tongues by local radios; support and promotion of graphic materials to disseminate Indian languages and cultures support for local presses; to stimulate oral and written expression among children and adults; to disseminate collective memory; and not to hinder initiatives by the Indians themselves oriented toward cultural and linguistic development.[72]

Other researchers follow the same general lines of thinking. Nahmad claims that internal colonialism has not allowed the Indians to organize as ethnic groups and that the type of civil government which exists in México has imposed a complex social system on their more simple one. Medina lashes out against indigenist policy of the past for not implementing the suggestions made at the 1939 and 1940 meetings in México, D.F. and Patzcuaro respectively, nor the ones the Indians have called for. He suggests that the Constitution be amended to have representatives in Congress from the various Indian groups, that the Indian tongues be declared official, that a Mexican Linguistics Institute directed by Indians be established; that existing political parties

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[72] "Proposiciones para una alternativa a la política nacional del lenguaje" in Dominación y resistencia lingüística en el Estado de Oaxaca (L. Aubague, E. Díaz Couder, Ma. T. Pardo y P. Lewis Fischer, ed), SEP-UABJO 1983, p. 198-200.

define their position with respect to Indian policy, that the State have

a policy to preserve and disseminate Indian tongues, history and

patrimony, that bureaucratic paperwork be expedited, especially in

agrarian reform; and there be greater participation in federal

institutions such as CONASUPO, FONART, etc.[73]

Finegold, in her master's thesis, found that in other parts of

the Montaña (Nahuatl areas) the role of the school was the most important

factor in learning Spanish. This factor was closely followed by the

family.[74]

Pardo also agrees and claims that the schools are institutions of

linguistic penetration . In Oaxaca learning the national language means

access through a common language which will allow for a better balanced

exchange between the students and national society. She feels that the

Indian tongues are undervalued and that Spanish is overvalued;. The role

of the teacher is a key one.[75]

The desires of many Indian leaders and researchers in México are

not unlike what Indian leaders in Latin America clamor for on a regional

level. Several important resolutions and recommendations stemmed from

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[73] Andrés Medina "Los indios" in 7 Ensayos sobre indígenismo,
INI, Serie Cuadernos de Trabajo, 1977, p. 22.

[74] Lynda Finegold Un estudio exploratorio del programa del educa-
ción bilingue-bicultural pre-escolar en la Montaña de Guerrero Master's
thesis, CIIS, México, 1982, p. 47.

[75] Ma. Teresa Pardo "La institución escolar: un espacio de
confrontación lingüistica" in Dominación y resistencia, p. 78.

the meeting on ethnodevelopment and etnocide in Latin America held in San José, Costa Rica in 1981. Space does not allow us to go into all the declarations, but those regarding language considerations follow and will give the reader an idea of the tone of the meeting. These recommendations were made to UNESCO.

1) To urge governments to make Indian languages official languages on a national and/or regional level, according to each individual case

2) To jointly establish, with national governments, bilingual education in Indian-populated areas in those countries where this policy is not already in force, with the participation of Indian movements and organizations that already exist

3) To propose that responsibility of educational policy with respect to Indian people be in their own hands with support from the State

4) To establish that the Member States support the right of the Indian peoples to write in their own languages when they so desire, for which it would have to be borne in mind that the Indian population itself (themselves) be those who decide the method and pedagogical aspects.[76]

Language Maintenance and Shift

In previous chapters we have seen the trend over time from monolingualism to bilingualism for Náhuatl, Mixtec and Tlapanec in the Montaña Region. Displacement of the Indian language in favor of Spanish has not happened over night, nor at the same speed for all the languages.

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[76] Guillermo Bonfil, Domingo Verissimo, Mario Ibarra, Julio Tumiri, Stefano Varese. América Latina: Etnodesarrollo y etnocidio. Flasco colección. San José, 1982, p. 34.

What determines how fast an ethnic group becomes and remains bilingual? What does 'bilingual' mean? Hopefully this section will shed some light on these and other related questions.

In her article on bilingualism McCollum cites several well-known authors in the field to illustrate the wide array of definitions of bilingualism. Weinrich says that a bilingual is one who is able to use two languages alternately, while Haugen states that a bilingual is a person who can produce meaningful sentences in a second language. Macnamara considers that a bilingual must possess at least one of the language skills in a second language even to a minimal degree, but Fishman considers a bilingual to be an individual who demonstrates ability to engage in communication via more than one language.[77] It is immediately obvious that no one definition can be accepted as universal. More will be said on what constitutes bilinguality and the ranges of proficiency in the next chapter.

In a study done in the Mezquital Valley in México, researchers claim that a communicative experience includes two aspects: the linguistic ability that the interlocutors have in both languages, and the information they previously had regarding the communicative situation and the language appropriate for each situation. They list 4 facts which are pertinent to the development of intercultural conflict between the Otomi

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77 Pamela A. McCollum "Concepts in Bilingualism and Relationship to Language Assessment" in Communication Assessment for the Bicultural Child: Issues and Guidelines (Erickson and Good, eds) Baltimore: The University Park Press, p. 26.

and the Spanish languages: 1) a great density of Otomi population, 2) the educational system is under official bilingual-bicultural policy; 3) the natives experience a persistent process of temporary migration to urban centers and 4) there is a growing diglossia with partial bilingualism.[78]

Weinrich speaks of the psychological and socio-cultural setting in language contact and mentions among the non-structural factors: 1) the speaker's facility of verbal expression in general and his ability to keep two languages apart; 2) relative proficiency in each language, 3) specialization in the use of each language by topic and interlocutors; 4) manner of learning each language; 5) attitudes toward each language; 6) size of bilingual group and its socio-cultural homogeneity or heterogeneity; 7) prevalence of bilingual individuals with given characteristics of speech behavior; 8) stereotyped attitudes toward each language; 9) attitudes toward the culture of each language community; 10) attitudes toward bilingualism as such; 11) tolerance or intolerance with regard to mixing languages and to incorrect speech; 12) relations between bilingual groups and each of two language communities.[79]

Diglossia is obviously a key word. Fishman understands it as a socially patterned intra-group bilingualism and says that the socio-

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[78] Bilingüismo y educación en el Valle del Mezquital (Gabriela Coronado de Caballero, Victor Manuel Franco Pellotier and Héctor Munoz Cruz) México D.F., CIS-INAH, Cuadernos de la Casa Chata 42, 1981, p. 84.

[79] Uriel Weinreich, Languages in Contact, Hague, The Mouton, 1963, p. 3.

linguistic study of bilingualism must focus upon the functionally
different contexts of verbal interaction in diglossic speech
communities. [80]

Ferguson claims that diglossia is a relatively stable language
(which may include a standard or regional standards), where there is a
very divergent, highly codified variety which is often grammatically more
complex and is the vehicle of a larger and respectful body of written
literature, either of an earlier period or in another speech community,
which is learned largely by formal education and is used for most written
and formal spoken purposes, but is not used by any sector of the com-
munity for ordinary conversation.[81]

Fishman has a somewhat different view of diglossia. He says
it differs from bilingualism in that it represents an enduring societal
arrangement, extending at least beyond a three generation period such
that "languages each have their secure, phenomenologically legitimate and
widely implemented functions".[82] In other words, he extends Ferguson's
definition to include two different languages and not two varieties of
the same language. For my purposes this is the more suitable definition,
and, as can be seen from previous descriptions, a diglossic situation

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[80] Fishman, Bilingualism in the Barrio, Bloomington, Indiana
University Press, 1971, p. 575.

[81] Charles A. Ferguson "Diglossia" in Language in Culture and
Society (Dell Hymes, ed) New York, Harper & Row, 1964, p. 435.

[82] Joshua A. Fishman, "Bilingualism and Biculturalism" in Journal
of Multilingual and Multicultural Development, Vol. 1, No. 1, 1980, p. 3.

does exist in the Montaña Region, where L (the Indian tongue) is basic-
ally acquired at home and in the community, while H (Spanish) is learned
at school or acquired informally as the language of wider communication
in a predominately Spanish-speaking nation.

In another study on the Mezquital area, Hamel and Muñoz speak of
a replacive diglossia, where the dominant language gradually replaces the
dominated language, both geographically and functionally. There is a
conflict in the successive reduction of the communicative functions of
the Indian language. It is the objective of bilingual-bicultural
education to stabilize the diglossic situation through functional
bilinguals that fosters both the retention of the Indian tongue, as well
as the learning of Spanish, although schools tend to accelerate the
replacement of Otomi by Spanish.[83]

Mackey insists that bilingualism is not a phenomenon of language,
but a characteristic of its use, and that a bilingual community is a
dependent collection of individuals who have reasons for being
bilingual.[84]

In an interpretation of diglossia Fasold states that broad
diglossia can be interpreted as a set of predictions:
1) Most of all societies have a verbal repertoire that includes a

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[83] Rainer Enrique Hamel and Héctor Muñoz Cruz El conflicto
lingüistico en la zona bilingüe de México, Mexico D.F., CIESAS, Cuadernos
de la Casa Chata 65, 1982, p. 25-29.

[84] William F. Mackay. "The Description of Bilingualism" in
Readings in the Sociology of Language, The Hague, Mouton, 1968, p. 555.

substantial range of variation

2) Some parts of this repertoire are more highly valued than others by the community .

3) The lower-valued parts are learned earlier and informally; the higher valued ones are learned later and more formally

4) An important subset of the language functions in a society can be ordered along a continuum from formal and guarded to informal and relaxed

5) The more highly-valued segments of the community repertoire will be used for the formal and guarded functions and conversely.[85]

Once again, referring to the Mezquital, Muñoz speaks of Indian languages compared to Spanish where there are unequal situations and practically no materials available in Indian tongues; incompatibility between the social functions of the languages where Indians have become bilingual through instrumental acquisition of Spanish due to migration (temporary or permanent), commercial trade, incomplete primary school, and contact with political structures, establishing an assymetrical interdependence which has generated an expansive diglossia that assigns to Spanish the functions of resocialization. It operates as a language of instruction, economics, the supply of salaried work and prestigious ceremonies (political, educational and juridical acts); dominance of concepts and expectations of modernization and cultural assimilation.

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[85] Ralph Fasold The Sociolinguists of Society, Basil Blackwell, Oxford, 1984, p. 71.

They see Spanish as the language of social mobility.[86]

In his study on the Huave Indians along the Oaxaca coast Diebold found that some 81% were monolinguals in Huave, after the 1950 census, in the sense of being unable to produce complete meaningful utterances. Some of his more significant data are: 1) that Spanish was acquired relatively late in life and rarely in childhood, often leading to interference; 2) that speaking Spanish was predominantly a male skill (80%); 3) that all bilinguals had greater contact with the outside world than monolinguals through marketing or residence; 4) that Huave is rarely learned as anybody's second language; 5) that Spanish is never the language of the home; 6) that poverty, the feeling of being a second-class citizen and tight community structure in economics binds the individual to his fellow villagers. With respect to the 81% monolinguals, he prefers to call them "incipient bilinguals", defined as those knowing lexical items but who lack of ability to combine words into larger phrase construction.[87]

In another study on México, the Hills affirm that evidence has been found for a functional split between Náhuatl and Spanish among Náhuatl speakers in the Malinche Volcano area of Central México. They increasingly use Náhuatl only as a language of solidarity and Spanish as a language of power. They insist that this is due to the increasing

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86 Héctor Muñoz. "Asimilación o igualdad lingüística en el Valle del Mezquital" en Nueua Antropología 22, p. 29.

87 A. Richard Diebold "Incipient Bilingualism" in Language in Culture and Society, p. 499-500.

proletarianization and dependency on the world system by Nahuatl-speaking communities.[88]

In a study done on the Nahuatl population of the State of Puebla close to where the Hills worked, Knab found that temporary and irregular work does not have a major effect on language shift, but that regular employment does speed up the process, since it implies a permanent change in one's communicative network. The death of a language is perhaps one of the most important linguistic processes. As Dorian mentions, there are 'speakers', 'semi 'speakers' and 'recallers'.[89]

Knab's second article states that the first stage of the extinction process begins when the functions of Nahuatl are reduced (children only speak it in the family, for example); the second stage is when most of, or all, the speakers are adults (are 30 years or older); the third stage is when less than 10% of the population of a community speaks Nahuatl and all are over 50; the fourth stage is when there are no native speakers, but only people with a passive memory of the language.[90]

Fishman mentions 5 major instances of language shift which, while they do not directly impinge on the circumstances covered in this dissertation, are pertinent. First of all, he claims that this

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[88] Jane and Kenneth Hill "Language Attitutdes in Modern Nahuatl" in Language and Society9, p. 342.

[89] Tim Knab "La muerte del lenguaje" in Ciencia 1980 No. 31, p. 151.

[90] Tim Knab "Vida y muerte del Nahuatl" in Anales de Antropologia, Vol. XVI, 1979, p. 346.

phenomenon is common when huge population adopt a new language or variety

into their repertoires, whether or not at same time they also give up a

language or variety they had previously used: a) the vernacularization

of European governments, technology, education and cultural activity; b)

the Anglification/Hispanization of the population in North/South America;

c) the adoption of English and French as language of wider communication;

d) the Russification of Soviet-controlled populations; e) growing

displacement of imported languages of wider communication and the

parallel vernacularization[91] in Africa and Asia. Language maintenance

and shift is basically concerned with the relationship between degree of

change or stability in language usage patterns and the ongoing psycho-

logical, cultural or social processes in the populations that utilize

more than one speech variety for intra or intergroup purposes.

Fishman has defined 'domains' as "institutionally relevant

spheres of social interaction in which certain value clusters are

behaviorally implemented".[92] In multilingual situations this concept

provides good understanding of language usage because it involves the

implementation of the rules of social behavior which are derived from the

value clusters of the rules of social behavior. Situations identify the

interaction of individuals who stand in particular role relationships to

each other at times and places appropriate for their socio-culturally

recognized purposes. There is a difference between momentary choices

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[91]   Joshua Fishman, The Sociology of Language Rowley, Mass.
Newbury House, 1972, p. 107.

[92]   Ibid., p. 17.

and relatively stable patterns of choice that exist in multilingual communities.

Marcellesi and Gardin mention several concepts of interest to us: 1) language is thought; 2) language is a manifestation of the people who speak it; 3) language conditions provide understanding of the outside world.[93]

For the purpose of this dissertation Lieberson's views on language diversity and contact are quite pertinent for language mainten- ance and shift. He claims that three broad solutions are possible in a multilingual society for those whose native tongue is subordinate to evolve toward the dominant group, to give up the native language and to reduce or eliminate the ethnic identity it often symbolizes; to reduce the handicaps facing speakers of a given language by reforming societal institutions; to abandon the existing nation through outmigration, revolution, separatism or expulsion of the dominant group.[94]

Obviously language provides an important shield against assimilation, and the behavior of bilinguals will determine whether a multilingual society will become unilingual or remain pluralistic for generations or even centuries. Bilingualism can be an end product of linguistic contact or an intermediate stage in the transition from

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[93] Jean Baptiste Marcellesi and Bernard Gardin. Introducción a la sociolingüística, Madrid Ed. Gredos, 1974, p. 69.

[94] Stanley Lieberson. Language Diversity and Language Contact. Stanford, Stanford University Press, 1981, p. 2.

linguistic pluralism to unilingualism. The strongest motive for language learning is the need to associate with the speakers of the language. Lieberson speculates that the spatially less concentrated native speakers of various lesser tongues are the first to shift, with respect to the speed of change. He claims that there are four distinguishable groups, the last two of which show relatively rapid rates of mother-tongue shift: indigenous superordinate; migrant superordinate; indigenous subordinate and migrant subordinate.[95]

Regarding intergeneration maintenance, several factors have to be taken into account, such as: 1) the proportion in each mother-tongue group that is bilingual clearly influences what we might call the "exposure to risk"; 2) the degree to which each bilingual group passes on the acquired non-mother-tongue language to their offspring, since mother-language change occurs largely in the shift between parents and child; and 3) fertility rates for the monolingual and bilingual subpopulation in each mother-tongue group.[96]

Another aspect that influences language maintenance and shift is occupations, such as: 1) the linguistic composition of co-workers; 2) the importance of communication with co-workers; 3) the linguistic composition of customers and relevant outsiders; and 4) the importance of communication with customers and outsiders.[97]

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[95] Ibid., p. 69.

[96] Idem.

[97] Ibid., p. 174.

While Lieberson has designed his categories basically for the capitalist society, we will see that these observations hold true for the Indians from the Montaña, especially with respect to variable 39 (contact with outsiders).

He summarizes in seven propositions the major ways through which existing patterns of language usage are altered:

1) The origin of a given language pattern need not be found in the forces currently operating to maintain the pattern

2) There is a conservation of language usage: once practices are established they will tend to perpetuate themselves

3) The conservation of language usage is abetted by "third parties", namely groups for whom neither the existing dominant language nor its potential competitor is a native language   .

4) An existing language usage pattern can be altered through changes in the frequency and nature of the interaction within and between language groups

5) Two basic distinctions are necessary in analyzing the role of interaction: distinguish between changes in potential as opposed to actual influence

6) There are certain inherent mechanisms in language shift which, when operating by themselves, would tend to convert linguistic pluralities into linguistic majorities

7) Changes in the technology of transportation and communication will

alter the levels of interactions[98]

Many of these considerations are applicable to the Montana Region. As a matter of fact, his first solution (to evolve toward the dominant group, to give up the native language and to reduce or eliminate the ethnic identity it often symbolizes) is the de facto solution at present in Mexico, although both the State and Indian leaders insist, after Germani, that solution number two (to reduce the handicaps facing speakers of a given language by reforming the societal institutions) is the one sought.

Cooper basically looks at language spread from the point of view of acquisition, but his fundamental questions of who adopts what, when, where, how and why are the key ones for any study of language maintenance and shift. He also claims that different degrees of adoption can be distinguished in the study of language spread, such as: 1) the awareness of what can be used for a particular communicative function; 2) personal evaluation which is a favorable or unfavorable attitude toward the personal usefulness of the language for a particular function; 3) proficiency, which is whether or not the speaker is able to use the language for a given communicative function and 4) usage - he uses the language for a given function.[99]

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98 Ibid., p. 373-74.

99 Robert L. Cooper "Language Spread as a Perspective for the Study of Second Language Acquisition" in Roger W. Andersen (ed), New Dimensions in Second Language Research, Rowley Newbury House, 1981, p. 133-34.

Cooper defines language spread as an increase, over time, in the proportion of a community network that adopts a given language or language variety for a given communicative function.[100] He claims that language maintenance and shift usually studies the threatened language, while studies of language spread focus on the language that is taking over. Cooper cites several propositions of language spread: 1) the origin of a given language pattern need not be found in the forces currently operating to maintain the pattern, but a language pattern has a life of its own; 2) there is a conservation of language usage, and languages will tend to perpetuate themselves; 3) the conservation of language usage is abetted by third parties, namely groups for whom neither the existing dominant language not its potential competitor are native languages; 4) an existing language usage pattern can be altered through changes in the frequency and nature of the interaction within and between language groups; 5) two basic distinctions in analyzing the role of interaction: distinguish between changes in potential as opposed to actual influence and second, recognize that interaction ranges on a continuum from the purely demographic form to an aggregate form in which each unit has equal participation regardless of the underlying population represented; 6) inherent mechanisms in language shift which would tend to convert linguistic pluralities into linguistic majorities; 7) changes in the technology of transportation and communication will alter the levels

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[100] _Ibid._, p. 131.

of interaction.[101]

Fasold takes a slightly different stance from the previous
authors, but he goes back to Fishman's concept of domains as the key to
maintaining functions apart. He claims that language maintenance and
shift is the long-term, collective consequences of consistent patterns of
language choice. Regarding predictions, language shift will occur only
if, and to the extent that a community desires to give up its identity as
an identifiable sociocultural group--almost impossible to predict in
time, but there are signs: the distinction between 'us' and 'them' means
shift is not in progress; a virtual prerequisite for language shift is
bilingualism, but many bilingual communities are perfectly stable; the
earliest sign of shift is the movement of one language into the domains
that were reserved for the other; at later stages the language from which
the shifting occured will probably be considered inferior. Certain
large-scale socio-economic phenomena that favor shift are urban,
commercial or industrial areas, while agriculture and rural areas tend to
maintain their languages. The influence of mass communication devices or
an influx of people who speak another language are also factors which can
speed up the process of language shift.[102]

Finally, to relate the major points of this chapter to the

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[101] Stanley Lieberson "Forces Affecting Language Spread: Some
Basic Propositions in Language Srpead: Studies in Diffusion and Social
Change (Robert L. Cooper ed.). Bloomington, Indiana University Press,
1982, p. 59-60.

[102] The Sociolinguistics of Society, p. 240-41.

purposes of this dissertation, throughout this study we have seen that the three Indian groups under study (Nahuatls, Mixtecs and Tlapanecs) basically are non-participants in the social-economic-political processes in México, precisely in the way Germani explains the phenomenon. Not only are they isolated geographically, due to original settlement patterns, but we must also bear in mind that these particular ethnic groups were not conquerors themselves, but rather the conquered in pre-Colonial times, reconquered by the Spanish, and consequently they have remained subservient to the predominant mestizo society since Independence in 1810, a situation which anthropologists call 'internal colonialism'. What is particularly saddening is that although the Indians were the first inhabitants of what now is México, added to the fact that their blood mixed with Spanish blood formed the mestizo race (or what the Mexican people are today), over the centuries they have not been able to pass on their cultural values (including religious, economic and political organizations) or to convince the majority of the virtues of their system; however, this is not the question at hand. Historical processes are complex and often hard to understand, but the fact that today México is a 'free democratic republic with a capitalist economic system' means that this is the way of life chosen by the majority or the way of life that a clever minority has been able to convince the rest of accepting. How has this been achieved? The answer is mostly through government institutions and mass media - in this particular case, government institutions such as schools, health facilities, public works and transportation, land reform and agricultural supports are the

authorities who have contact with these groups. Unfortunately they often act more as middlemen who exploit the purchase of primary agricultural, forestry and fishery production at extremely low prices than as promotors of development. Naturally these institutions purport to help the Indians integrate into mestizo society by giving them access to a better life, which is undoubtedly true in many cases, as when they supply drinking water to larger communities which definitely cuts down on infant mortality, or in those rare cases where gas tanks are taken to the county seats less time and back-breaking effort is spent in gathering sticks and firewood. However, all of this progress also leads to forcing people into a money economy since, bills have to be paid and that, in turn, means selling their labor at cheap prices to meet the expenses of modern society. The major problem is their lack of participation in general in the decision-making process, as Germani has so correctly pointed out. They seldom decide when the road will be built, what materials will go into its construction, where it will go, or what will be taught at school, what their crops are really worth, and so on.

In addition to all of this, their ethnicity or quality of being an Indian, sets them apart from the rest of society by definition, almost as though they were foreigners in their own native land, since the most important manifestations of their ethnicity (dress, language, phenological characteristics, etc.) distinguish them by definition from all others, including other Indian groups; however, Mexican mestizo society tends to groups all Indians together in one derogatory category belonging to the lowest caste of society.

The institution which has the greatest impact on the ethnic

groups is undoubtedly the school, which purports to offer the necessary

opportunity so that the disadvantaged Indian groups can learn to speak

Spanish and acquire the necessary knowledge to enter into and compete in

the mestizo society. The results, (backed by statistics), have been

extremely poor over the centuries. It is still too early to determine

the merits of the new system of bilingual education, where the Indians

would or do have a part in the decision-making process as to course

content and school instructional method. Of course the idea is that

education be in their hands and not in the hands of the Ministry of

Public Education except for the necessary paperwork and school records,

but one must also recognize that those Indians who are participating in

the determination of bilingual education are themselves leaders or are

working for the Mexican Government as teachers or educational

administrators and are products of the equilibrium (structural-functional

approach) paradigm. What I consider important to understand is that the

whole Indian situation falls under the conflict paradigm. The usual lack

of success at school functions to reaffirm their inferiority and to deter

them from further access to mainstream society.   Where can one go with

only a couple of years of formal schooling, with a minimum command of the

national language, with subsistence agriculture and large, unhealthy and

undernourished families to tend to? Once again, without participation in

the political institutions that keep them in this subservient situation,

it is practically impossible to stop being an exploited producer of raw

materials. In the section on statistical analysis, we will see there the

Indians are in formal schooling and how the process of socialization
affects language and attitudes.

It is vital that these (and other) Indian groups discover a new
way of functioning in a capitalist society, a way that is compatible with
their past but which will also be compatible with modern society.
Obviously they must be more active in their search for self-determination
in religious-social-political-cultural and economic areas. I think the
right steps are being taken by implementing several of the ideas proposed
by Indian leaders in the articles mentioned in this chapter .
Unfortunately a key element is missing--basic studies on where the
different Indian groups are in terms of language and attitude and as to
what direction they would like to go in the future. One of the basic
goals of this dissertation is to provide this type of information for
three ethnic groups of the Montaña Region, yet how generalizable the
findings of this particular study are to other groups in the Montaña
and/or to other ethnic groups in México remains in doubt. Prospects for
language maintenance and shift in this area can be found in the
statistical analysis.

VI. PROFICIENCY TESTING

This chapter deals with four major aspects: 1) the design, application and evaluation of the sociolinguistic instruments and questionnaires, 2) the theoretical constructs of language proficiency; 3) the theoretical aspects of language testing and the methodological considerations before, during and after the fieldwork.

Up to this point we have discussed the pertinence to this dissertation of basic statistics on monolingualism and bilingualism in México, the State of Guerrero, and the Montaña Region and have reviewed the socio-economic background of the area. In the chapter on theory the concepts of ethnicity, marginality, bilingual education, language policy and langauge maintenance and shift were examined and related to the Montaña Region's particular situation. This chapter addresses the 'how' questions (methodology), constitutes the original work behind the dissertation, and provides the data necessary for the statistical crosstabs that follow in the next chapter.

Design, Application and Evaluation of the Instruments and Questionnaires.

The language instruments and questionnaires were drawn up in México City and pre-tested in the Mazahua area, about two hours to the northwest of México City, in July and August of 1984. After making certain adjustments in these instruments and application techniques, the final versions were decided upon (see Appendixes 1-9) before fieldwork during the months of September, October and November, 1984. For reasons previously discussed, fieldwork was carried out in the counties of Copalillo (Náhuatl-speaking), Alcozauca (Mixtec-speaking) and Zapotitlán Tablas (Tlapanec-speaking). The number of interviewees (722) and their sex and age distribution were based on the 1980 census for these areas. Approximately ten per cent of the 722 interviewed constituted the control group of native Spanish speakers from each county, also statistically distributed by sex and age. The possible communities were determined prior to departure and were always located in the county seat, in addition to one of the larger communities (between 500 and 1500 inhabitants) and one of the smaller ones (less than 500 people). The exact towns were not determined until I arrived at the county seat. Decisions depended on political considerations, availability of local staff, physical limitations and so on. Once the proper contacts were made, it took about three weeks in each county to complete fieldwork. Certain portions of the interviewing were done at kindergarten, primary and secondary schools, but it was also important to interview children and youth from those age groups who were not in school so as not to bias the sample. Most of the interviewing was done by going door-to-door,

starting with the most immediate neighbors or friends of the teachers and 'playing it by ear' from there so as not to interview only those who somehow had contact with the better educated people in the community. An effort was made not to 'over-interview' certain groups such as the above-mentioned, or all the members of one family. While no one was interviewed against his or her will, a special effort was made to include some of those who preferred not to be interviewed because they were not proficient in Spanish. The same type of effort was made in the schools not to take just those who quickly volunteered or those chosen by the teachers because, in both cases, one is more likely to get the most proficient children. The average interview lasted 20 minutes to one-half hour for older children and adults and was limited to about ten minutes for young children.

It was decided that there would be one basic questionnaire (Cuestionario Individual, Appendix 1) to be administered to all those interviewed, in addition to three complementary ones which were applied with discretion. The three complementary questionnaires were: the Head of Family (Jefe de Familia-Appendix 2), the Community Leaders (Lideres de Opinion-Appendix 3) and the School Teacher or Principle (Maestro/Director de Escuela-Appendix 4). The complementary questionnaires have not yet been analyzed; therefore the discussion will be limited to the individual questionnaire, where all the basic information, such as name, code number, community, county, sex, mother tongue and age appear in the upper

section of the questionnaire, while in the lower section there are some

24 questions on attitudes and language background, which constitute the

variables for the crosstabs to be presented in the next chapter.

In addition to the one basic questionnaire, a language instrument

was also administered to all subjects. The instrument varied according

to the subject's age group, and in essence was a guideline for a struc-

tured, but open-ended, interview with those people who participated in

the study. While the ideal situation, perhaps, would be to adapt each

interview to the individual, one has no way of knowing beforehand what

constitutes an individual's interests, nor would this system allow for

comparison with others in a certain age group. Therefore I drew up a

checklist of questions which ranged from closed (yes-no and specific

answer) questions to open-ended ones (how and why). In the case of the

first age group (0-6) there are also questions which allow them to point

to or name objects on Flashcards. In addition to having different types

of questions, a major effort was made to have topic categories (two per

age group) which were pertinent to their real world and topics about

which they would be in a position to talk about in Spanish.

All questions were put to the subjects of that age group unless,

after having been warned that they spoke little or no Spanish, I was able

to confirm that opinion after exploring only a few of the questions under

each topic, or it was obvious that they chose not to enter into the

conversational exchange. In some cases (the native Spanish-speaking, the

native bilinguals and the native Indian-language speakers who were most proficient in Spanish) the subjects were creative with the lead questions, and it was not necessary to adhere to the guidelines. All the guidelines have the individual's basic information at the bottom of the sheet and to the right of each question (R = respuesta: answer; L = limitada: short; and A = amplia: extended) was a self-check during the interview to have a visual count of how the interview was progressing and for checking against the recording after the interview.

The interviews were conducted by the author, who was always accompanied by a bilingual teacher, and a serious attempt was made to make the interview a real-life communicative event, in spite of the fact that an interview situation is not particularly conducive to natural spontaneous conversation. The naturalness and openness of a conversation vary greatly according to the proficiency, personality, and congeniality of the interlocutors, as well as the social situation in which it takes place. The site was usually the personal dwelling, a school, a patio, a corral, pastures, or another natural settings, most often with many onlookers. All interviews were recorded for evaluation in México City at a later date (January to June, 1986). Some of the more subjective concerns are presented in the latter part of this chapter under methodological considerations.

The age divisions and the topics put forth are as follows (For specifics see Appendices 5-9):

<u>0 - 6 years old:</u>	pre-school age - they basically speak their native language and have had little or no contact with Spanish before formal schooling begins at age of 6-7; their topics were complemented by flash cards with figures of objects from their world such as barnyard animals
<u>7 - 14 years old:</u>	primary school age - normally the children are in the formal school system, be it bilingual-bicultural or the regular State or Federal systems; their topics were school and what they want to be when they grow up
<u>15 - 24 years old:</u>	secondary school or marriageable age - a small percentage of the youth continue with their secondary school education at the county seat or in the closest community with a secondary school or remain in their home town and help around the house or get married; their topics were transportation and the annual religious celebrations in their hometown
<u>25 - 44 years old:</u>	full adulthood - mature and stable language development coupled with strong community attachment; some temporary migration by men; their topics were sales and purchases and travel to other towns

45 years and over: the later stages of adulthood - most people seldom

leave their hometown and opportunities for contact

with Spanish diminish; their topics were changes

over the years in their villages and remembrances

It is difficult to score or evaluate the results of

the administration of a language proficiency

instrument. The integrative-sociolinguistic

testing approach chosen for this evaluation

is not only concerned with the linguistic aspects

of proficiency, but rather with functional profi-

ciency in real-life communicative situations.

The first step in the evaluation process was to listen to the
tapes of all the native Spanish speakers from the various areas to
determine what the norm was for this particular type of social interac-
tion in these rural areas. Although these native speakers of Spanish
performed at different proficiency levels, as is the case with native
speakers of any language, it was expected that non-native speakers would
perform at similar or lower levels of proficiency, allowing for indivi-
dual variation. This was in fact the case and is borne out by the
ensuing statistical results.

The evaluation sheet for each of the two general themes was
(Appendix 10) was filled out as the tape was listened to. Parts of the
tape were heard a second time a) if there was a lot of exchange and
conversation was too fast to evaluate the left-hand side of the sheets on

the first time around and b) by a Mexican linguist when I had any doubts as to the score to choose on the right-hand side of the sheets. The evaluation system I designed is described in the next paragraph and in most cases took the same amount of time to score as the time the taped interview lasted, in addition to a few more minutes to fill in basic information and special comments. Time was of the essence, and no transcription was done for this evaluation, since 722 individual interviews had to be listened to and evaluated as only one part of this dissertation. A more detailed system of evaluation would have turned this aspect of the study into an overwhelming task, and it was not deemed necessary for the qualitative measure I required.

From left to right on the evaluation sheet, column A refers to the number of questions the interviewer asked altogether, while column B refers to the number of times the interviewee answered the questions put to him; while column C is an indication of whether or not the answer was pertinent (not necessarily accurate) to the question. This is in keeping with the concerns of several authors and my own feeling that one of the basic tenets of language proficiency, particularly the communicative competence aspect, is that of turn-taking, since under most conversational circumstances, especially in an asymmetrical interview situation, Spanish requires an answer to a question. Along the same lines, and according to Grice's (1975) cooperative principles,[103] one would expect

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103 H.P. Grice. "Logic and Conversation" in Syntax and Semantics: Speech Acts Vol. 3 (Cole and Morgan, eds.) New York: Academic Press, 1975, p. 45.

an answer to be suitable or pertinent to the question. In other words, if the question were 'What is your favorite subject at school' and the interviewee answered 'mathematics', he would get a check in columns B and C since he both answered the question (took his turn) and also provided a suitable answer, whether or not it was true.

In an effort to assist the reader in understanding the evaluation sheet, a checkmark or diagonal line was drawn progressively through the questions set forth by the interviewer (column A), and another checkmark or line was ticked off in column B each time the subject answered and also in column C if the answers were appropriate. The number of questions asked (column A) should always be greater than or the same as those answered appropriately (column C). The percentages at the bottom of the page between the columns represents the percentage of B to A and C to B - for example, if 20 questions were put to an interviewee and he answered 15, 12 of which were pertinent, the percentage between columns A and B would be 75% and between B and C 80%. When converted to numerical grades for proficiency, they would both be an '8' to simplify computer coding.

While the left side of the evaluation sheet refers to communicative competence (to be discussed later in this chapter), the right side refers to the more traditional concept of linguistic competence.

Column D titled 'phonology' includes pronunciation, intonation and flow of speech. The second column (E), titled 'morphology-syntax' covers concordance and word order, and column F, which I have called 'expansion' in English, is an index of communication in a semantic sense, i.e., the development of an explanation, through use of supporting evidence or originality, breadth of vocabulary, or asking questions of the interviewer. After listening to each tape the subject was assigned a score from one (low proficiency) to five (native proficiency) for each column to the right. This procedure was carried out for the scoring of both topics.

On page three of this Appendix (10) there are spaces to write down particular modes of speech, lexical items from certain areas or peculiar uses of Spanish for further studies. Basic information and the individual's self-evaluation of how well he speaks Spanish was also filled in at the time the tape was listened to.

The Theoretical Constructs of Language Proficiency

Once a topic such as 'language proficiency' is chosen, one is faced with the problem of how to define it and how it fits in with other linguistic and socio-political considerations. The topic "Bilingualism and the Inroads of the Spanish Language into the Montaña Region" suggests the need to clarify what is meant by 'Bilingualism' and 'Inroads', as well as a way of measuring or evaluating these concepts. This task is not an easy one, and in this particular case it took considerable work to conceptualize what it was that I wanted to measure and how to design and administer oral instruments to such a large number of subjects (722)..

Scholars in the field of language testing are not in agreement as to what language proficiency is, and several definitions have been proposed. As a matter of fact, most authors use the term without even defining it, apparently assuming that everybody else knows what it is. In layman's terms we could think of it as the 'command' one has of a language, although this immediately raises the question of 'written or oral command', 'listening or speaking ability', etc. A closer look at some of the more common definitions of language proficiency is therefore in order, before a definition of proficiency for the purpose of this study can be offered.

One of the broadest definitions is that of Wilga Rivers, who affirms that proficiency is the level of ability one has in a language,[104] while Burt and Dulay say that

> "Proficiency refers to the degree to which an individual exhibits control over the use of the rules of a language for one, some, or all of its numerous and diverse aspects. These include phonological, syntatic, lexical and semantic systems, in addition to discourse and style rules for oral and written communication for different varieties of a given language in various domains and social circumstances."[105]

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[104] Wilga Rivers, _Teaching Language Skills_. Chicago: University of Chicago Press, 1968, p. 287.

[105] Marina Burt and Heidi Dulay. "Some Guidelines for the Assessment of Oral Language Proficiency and Dominance" in _TESOL Quarterly_ 12, 1978, p. 178.

Hinofotis, Bailey and Stern consider that language proficiency

has the following components: vocabulary, grammar, pronunciation and

flow of speech.[106] Vollmer and Sang say that in measuring language

proficiency we are not concerned with any particular syllabus or

curriculum to which a candidate has been exposed, but with the extent and

adequacy of the learner's control of the language skills in social

interaction, acquiring and giving information, etc., and his or her use

of them as a necessary instrument for non-linguistic purposes in the

broader sense.[107]

One of the authors who has done the most work on the subject of

language proficiency is Jim Cummins, who proposes that language profi-

ciency can be conceptualized along two continua. First is a continuum

relating to the range of contextual support available for expressing or

receiving meaning. The ends of this continuum are 'context-embedded'

versus 'context-reduced' communication. They are distinguished by the

fact that in context-embedded communication the participants can actively

negotiate meaning (e.g. by providing feedback that the message has not

been understood), and the language is supported by a wide range of

meaningful paralinguistic and situational cues. Context-reduced communi-

106 Frances Hinofotis, Kathleen Bailey and Susan Stern. "Assessing the Oral Proficiency of Prospective Foreign Teaching Assistants: Instrument Development" in The Construct Validation of Tests of Communicative Competence (Palmer, Groot and Trosper, eds.). Washington, D.C.: TESOL, 1981, p. 122.

107 Helmut Vollmer and Fritz Sang. "Competing Hypotheses about Second Language Ability: A Plea for Caution" in Issues in Language Testing Research (Oller, ed.). Rowley: Newbury House, 1983, p. 31.

cation, on the other hand, relies on linguistic cues to meaning and may, in some cases, involve suspending knowledge of the 'real' world in order to interpret (or manipulate) the logic of the communication appropriately.

In general, context-embedded communication derives from interpersonal involvement in a shared reality which obviates the need for explicit linguistic elaboration of the message. Context-reduced communication, on the other hand, derives from the fact that this shared reality cannot be assumed, and thus linguistic messages must be elaborated precisely and explicitly so that the risk of misinterpretation is minimized. It is important to emphasize that this is a continuum and not a dichotomy. The vertical continuum (see Figure 1) is intended to address the developmental aspects of communicative proficiency in terms of the degree of active cognitive involvement in the task or activity. Cognitive involvement can be conceptualized in terms of the amount of information that must be processed simultaneously or in close succession by the individual in order to carry out the activity.[108]

Canale and Swain provide another definition which is also very useful. They claim that language proficiency has three dimensions, which in turn cover their four types of linguistic competence (grammatical,

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[108] Jim Cummins. "Language Proficiency and Academic Achievement" in Issues in Language Testing Research (Oller, ed.). Rowley: Newbury House, 1983, p. 120.

sociolinguistic, discourse and strategic). These three dimensions are

basic language proficiency, which is concerned with the biological

universals required for any language development and use; communicative

language proficiency where the focus in on social, interpersonal uses of

language through spoken or written channels; and autonomous language such

as problem solving, monitoring one's thoughts, verbal play, poetry or

creative writing.[109]

```
                         COGNITIVELY
                         UNDEMANDING
                              |
                              |
           A                  |           C
                              |
                              |
CONTEXT-      _____|_____    CONTEXT-
EMBEDDED                      |                     REDUCED
                              |
                              |
           B                  |           D
                              |
                         COGNITIVELY
                         DEMANDING
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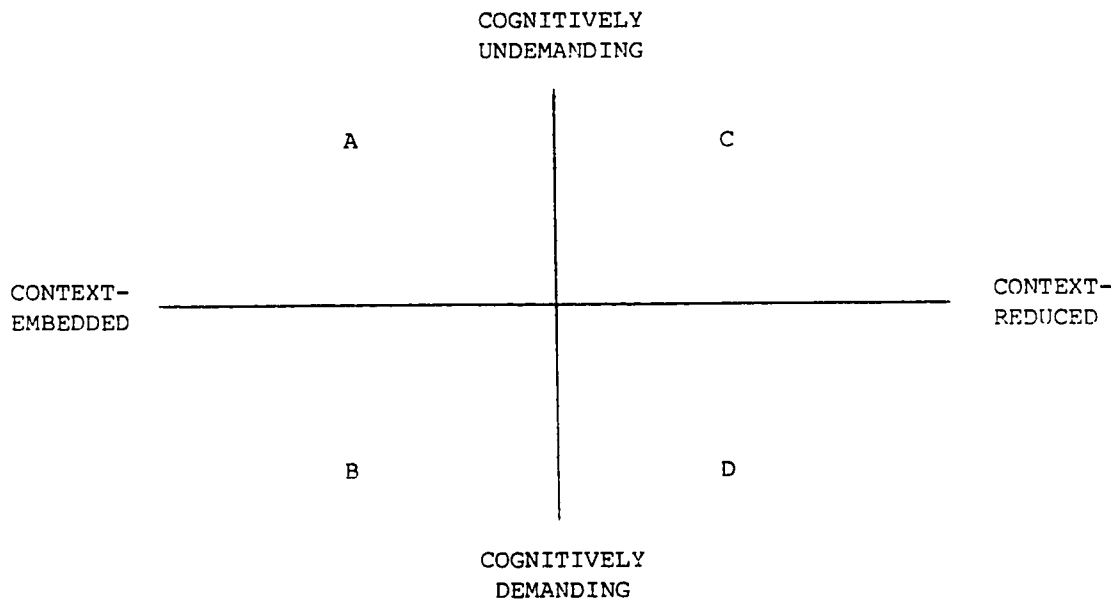
[109] Michael Canale and Merrill Swain. "A Theoretical Framework for Communicative Competence" in The Construct Validation of Tests of Communicative Competence (Palmer, Groot and Trosper, eds.). Washington, D.C.: TESOL, 1981, p. 4.

For the purposes of this study Cummin's theory seems to provide
more explanatory power. His view of language proficiency as a continuum,
horizontally between context-embedded and context-reduced communication,
and vertically between cognitively undemanding and cognitively demanding
tasks, encompasses the whole array of communicative events in which my
subjects and I participated. In general, those with a higher level of
education, who had traveled or left their home community for long
stretches of time, as well as those who were native speakers of Spanish
were all likely to show a high degree of language proficiency and were at
the context-embedded end of the continuum. Conversely, those with whom I
had the least in common, and for whom the interview was undoubtedly
difficult and a less desirable event in general demonstrated a low level
of language proficiency and were at the context-reduced end of the
continuum.

In this study, when the interview was apparently not cognitively
demanding, there was more spontaneity and more time for active participa-
tion in the communicative event, since less effort was spent on language
processing. The opposite was true in the case of those with a lower
level of proficiency, where halting speech and short, uninformative

answers were the rule. Cummins characterizes 'negotiation of meaning'

(requests for clarification and repetition) as a typically context-

embedded task but, in this study, I would classify negotiation of meaning

as a context-reduced task, since most of these requests came about as a

need to make up for a lack of shared context (Weller, in preparation).

To be able to communicate with outsiders who come to the village for a

specific purpose and who do not speak the Indian tongue does represent a

typical communicative event for which Spanish is needed, especially if

the outsider is on official business. Lantolf and Frawley, quite

correctly I think, point out that communication involves two parties and

that success in communicative performance is not absolute, but will

always depend upon the abilities of the people involved. They also

allude to the important point that perhaps the term 'language profi-

ciency' should be reserved for test language, in contrast to spontaneous

language which describes language performance of speakers in face-to-face

communicative situations,[110] which of course was precisely what I was

attempting to evaluate in this study to provide a qualitative measure for

the quantitative census data.

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[110] James Lantolf and William Frawley. "Oral-Proficiency Testing:
A Critical Analysis" in Modern Language Journal Winter, 1985, p. 5.

The term 'communicative competence' has been used several times in this study, particularly with respect to the turn-taking and the suitability of the answers on the evaluation sheets. I am using it after Hymes,[111] who is generally accepted as having coined the term, to mean all aspects of competence (not just linguistic) that go into communication: general knowledge, fitting sociolinguistic rules to a particular social situation, body language, social distance, discourse rules, etc.

Theoretical Aspects of Language Testing

According to Spolsky, one of the distinguishing features of Western education in the twentieth century has been the emphasis on testing. He claims that there have been three major trends within language testing. During the pre-scientific period there was a lack of concern for statistical matters or for such notions as objectivity and reliability. Most tests were open-ended, written examinations or translations, and teachers' judgments were subjective and arbitrary; during the psychometric-structuralist period there was concern for objectivity and reliability, with great concern for standardized tests, typically of the multiple choice and discrete-point items kind; for the third period, the integrative-sociolinguistic era, emphasis has shifted to the total communicative effect of an utterance.[112]

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111 Dell Hymes. "On Communicative Competence" in Sociolinguistics (Pride and Holmes, eds.). London: Penguin Press, 1972, p. 271.

112 Bernard Spolsky. Advances in Language Testing Series 2. Washington, D.C.: Center for Applied Linguistics, 1978, p. v.

The major tenet of the discrete-point approach involved testing each aspect of language separately, e.g., grammar, vocabulary, pronunciation. Supposedly, testing a representative sample of these structures would provide an accurate estimate of examinees' language proficiency. Integrative tests, on the other hand, tap global communicative abilities of second language learners. Farhady has noted that integrative tests assess the skills involved in normal communication and that the two types of tests, however different theoretically, can be placed along a continuum from highly integrative to highly discrete-point.[113]

According to Clark, the purpose of proficiency testing is to determine the student's ability to use the test language effectively for real-life purposes. Proficiency testing focuses on the individual's capability to utilize his knowledge of, and facility in, the language to accomplish some communicative purpose. In contrast to achievement testing, which is explicitly based on the nature and content of the student's language learning history, proficiency testing focuses entirely on the examinee's ability to perform pragmatic tasks in the language, without regard to the manner in which that ability was acquired. Within proficiency testing, it is possible to distinguish direct and indirect procedures. The most direct procedure would be to follow an individual surreptitiously over an extended period of time, observing and judging

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[113] Hossein Farhady. "The Disjunctive Fallacy between Discrete-point and Integrative Tests" in Issues in Language Testing Research (Oller, ed.) Rowley: Newbury House, 1983, p. 312.

his performance in the situations in question, e.g., buying train tickets, ordering a meal and so forth. Such a procedure is not practical, however. The development of proficiency measurement procedures that can properly be considered 'direct testing' must, of necessity, be designed within the constraints of testing objectives and time and facilities available.[114]

Indirect proficiency tests are thus intended to assess the extent to which a person is able to function appropriately in realistic situations. However, unlike direct proficiency tests, these indirect measures do not necessarily reflect authentic language-use contexts. Close testing is an example of indirect testing.

The kind, format and procedure of the test are only a few considerations that have to be taken into account before constructing a language test. Validity and reliability are also important considerations. We will now turn out attention to different aspects of validity, since reliability is more pertinent as a scoring consideration, and try to relate them to the design of the instruments used in this particular study:

a)   Content validity: the content of the test should sample and
        reflect the kind of situations or subject matter about which
        conclusions are to be drawn. In the present case, content
        validity reflects how a non-native speaker of Spanish handles

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114   John Clark. "Psychometric Considerations in Language Testing" in Advances in Language Testing 2. Washington, D.C.: Center for Applied Linguistics, 1978, p. 23.

himself in an asymmetrical interview situation with a teacher-researcher from Mexico City.

b)   Construct validity: the test should evaluate and measure a distinct property in the manner specified in the operational definition of that property. In this test, for example, turn-taking is distinguished from other properties, and it is claimed that this is a specific aspect of communicative competence.

c)   Concurrent or congruent validity: this aspect refers to the substitutability of a new test for one already in use in order to save time and costs in administration and/or scoring. In this particular case, if there is a high degree of correlation between different measures, I might decide not to analyze those aspects which lead to repetitive results.

d)   Predictive validity: a test has predictive validity when it can be used to make a prediction about as future event or state (College Entrance Exams purportedly have high predictive value regarding success at college). The language instruments used in this study should be predictive of subjects' ability to operate functionally in Spanish.

e)   Face validity: this concept refers not to what the test actually measures, but rather to the formal correspondence between the setting and the testing procedure and the setting and comparable real-life situations. This is the most judgmental type of validity. In this case, the use of flash cards with objects

familiar to pre-schoolers should provide strong face validity since the children use similar cards at school or see them at home through older brothers and sisters.

Even though factors such as those mentioned above are taken into account during test construction, it is difficult to obtain both content and affective components in a formal testing situation that closely approach those of the real-life situations that these tests attempt to reflect. It has often been said that all participants know that it is a test and not a tea-party and act accordingly.

In addition to the validity of the test setting and administration procedures, there is also the question of validity of the scoring procedures used. The degree of scoring validity depends on the extent to which the scoring system represents examiner judgments of the student's ability to convey information in an efficient and situationally appropriate way, rather than the grammatical accuracy, correctness of vocabulary, etc. It is, however, often difficult to separate 'communication' and 'linguistic accuracy' in scoring practice since they intermingle, as has already been seen.

In addition to the question of validity for scoring procedures is the problem of scoring reliability. Although scoring reliability is not a significant problem in testing procedures based on multiple choice or short response format, it is of considerable consequence in situations where human judges must assign numerical ratings to longer and less highly structured samples of language behavior. Two types of scoring

reliability are at issue: intra-rater, which refers to the extent to which a given rater is able, repetitively, to assign the same score to a given test performance, and inter-rater reliability, which refers to the extent to which two or more raters assign the same score to a given performance. I was basically concerned with the first type in an effort to given similar performances similar ratings. It was only when uncertainty set in that another rater was called upon to assure inter-rater reliability.

Methodological Considerations

For the sake of brevity I will mention only the most noteworthy factors that directly impinged on the study. These basically fall into three major divisions: 1) physical hardships, 2) interpersonal relations and 3) types of questions that could not be sustained as originally envisaged.

With respect to hardships, there is no doubt whatsoever that after hours on foot or beast to arrive in remote communities with extremely austere living conditions does take its toll on the physical stamina and cheerful initiative needed to fully exploit interview situations, although it must be borne in mind that the study was not designed to fully explore language proficiency, but rather to quantify and qualify the interviewee's functional proficiency in a relatively expedient fashion. Unfortunately, as a linguist, I often felt that instead of encouraging and providing an opportunity to tap linguistic

ability, my time constraints put a damper on rich conversational offshoots.

Regarding interpersonal relations, it was often morally frustrating to attempt to sustain a conversation with a person who obviously could barely speak the language in order to cover the sample. It was not flattering to recognize that often the people who accepted to be interviewed did so only at the request or insistence of their teacher, neighbor, etc., with no real desire to participate, while they were frequently losing time needed for daily activities. It can also be very uncomfortable when, as a result of the protocol questioning, the inter-viewees relate their almost unbearable living conditions or request the interviewer's help to solve unsurmountable problems far beyond her control.

Most pertinent to the impact of the language instrument are the questions that could not be sustained in the way they were originally envisaged, and I think here it is not a language problem per se, but rather a sociolinguistic and/or educational, cognitive psychological one. For example, in each of the two topics for the different age groups, there were yes-no questions, 'which' questions, questions of preference, and several open-ended questions introduced by ; 'how', 'what', or 'why', in an effort to explore different levels of proficiency; however, and much to my dismay, I often found that it was necessary to narrow down open-ended questions. An ice-breaker for the oldest age group was "tell me about what you normally do during the day". Their days are very

routine, so the wide array one might expect in a different type of society where a person's activities vary greatly from day-to-day did not exist, but they would often respond "like what?" or "Oh, senorita, nothing that's very interesting", or "the usual". I would most often have to restate the question in a more specific manner, defeating the original purpose of having asked an open-ended question. In addition to this complication, which I understand from other researchers is fairly common, topics about which one can talk under these circumstances do not abound. We must bear in mind that these people lead a very simple, rustic life and are not at all versed on city life, academia or world events.

I also wonder if these open-ended questions were hard to answer because they involve subjects that the interviewees could not imagine would be of interest to an outsider, or that they felt that such common-place experiences do not lend themselves to questions since the people with whom they normally converse share the same reality, and there is no reason to ask questions for which their normal interlocutors already know the answer. Perhaps this question-answer routine is a product of formal schooling, and those who have not been exposed to these linguistic routines are not aware of the role that they are expected to play. Another aspect is that small children (under six) were usually shy and difficult to interview, especially if they were not enrolled in kinder-garten. Due to their young age, many of the questions had to be asked of their parents or were simply not pertinent, such as their reply to whether or not they spoke Spanish on the 1980 census survey. These

are only a few of the reflections that come to mind when recalling some of the difficulties faced in the field during the application of what pretended to be carefully planned protocols.

In this chapter we have examined how the field work was actually carried out and what instruments were used to collect the data necessary for an evaluation of language proficiency. It should be borne in mind that my evaluation of the 722 subjects' proficiency only refers to how well they performed during this particular situation--a structured, but open-ended interview, with a teacher they did not know from Mexico City. It says nothing about proficiency in a formal classroom setting nor in other informal situations with other interlocutors.

A statistical analysis of the major variables taken from the Individual Questionnaire (Appendix 1) have been crosstabbed with the scores derived from the language proficiency instruments and will be decisive in determining the two major issues discussed in this disserta-tion: 1) what is the level of language proficiency in Spanish among the Nahuatls, Mixtecs, and Tlapanecs of the Montaña Region in the State of Guerrero, México, and 2) what are the prospects for language maintenance and shift between the Indian languages and Spanish in the future?

VII. STATISTICAL ANALYSIS

In this chapter the results from crossing chosen variables listed in Appendix 11 (Individual Questionnaires Codesheet) are presented. Due to time constraints and economic considerations, it was not possible to do crosstabs for all 44 variables--only those considered most pertinent to the two main research questions addressed in this dissertation (Spanish proficiency and language maintenance and shift) are discussed. To this end the chapter is divided into three major headings: basic frequencies for all 44 variables, language proficiency in Spanish, and attitudes toward the Indian and Spanish languages. In an effort to facilitate reading, many of the supporting tables can be found in the Appendices, and only those which directly illustrate the most important points are included in the text. All the information in the tables in the text or as Appendices are taken directly or in abbreviated form from the computer print-outs done at the National Autonomous University of México (UNAM), and are statistically valid at a .005 level of confidence.

The easiest way to get an overview of the statistical results before delving into the specific and most pertinent aspects of the study is to look at frequencies for the 44 variables and the 722 subjects.

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Basic Frequency Data

Variable 1 (community)

	Code	Absolute Frequency	Relative Frequency %
Copalillo	1	122	16.9
Tlalcozotitlán	2	43	6.0
El Cascalote	3	60	8.3
Tlahuapa	4	60	8.3
Alcozauca	5	144	19.9
Amolongá	6	40	5.5
Zapotitlán Tablas	7	145	20.1
Escalerilla Lagunas	8	68	9.4
Ahuixotitla	9	40	5.5
Total	9	722	100.0

The three communities with the largest population (Copalillo, Alcozauca and Zapotitlán Tablas) are the county seats. El Cascalote, Tlahuapa and Escalerilla Lagunas were the large towns sampled, and Tlalcozotitlán, Amolonga and Ahuixotitla the small towns included in the sample.

Variable 2 (county)

	Code	Absolute Frequency	Relative Frequency %
Copalillo	1	227	31.4
Alcozauca	2	243	33.7
Zapotitlán Tablas	3	252	34.9
Total	3	722	100.0

The three county seats are known by the same name as the communities. The number in the sample from each county is quite similar and was based on population statistics from that particular area. Zapotitlán Tablas represented almost 35% of the sample, Alcozauca 34% and Copalillo about 31%.

Variable 3 (sex)

	Code	Absolute Frequency	Relative Frequency %
Male	1	351	48.6 .
Female	2	371	51.4
Total	2	722	100.0

There are slightly more females than males in the sample (51% versus 49%), which reflects the population structure by sex in these areas.

Variable 4 (mother tongue)

	Code	Absolute Frequency	Relative Frequency %
Nahuatl	1	182	25.2
Mixtec	2	208	28.8
Tlapanec	3	208	28.8
Bilinguals	4	59	8.2
Spanish	5	65	9.0
Total	5	722	100.0

The Nahuatls, Mixtecs and Tlapanecs speak their language natively and have learned or acquired Spanish as a second language at some stage of life. Those classified as 'bilinguals' have always spoken both languages at home since early childhood. This was not a separate category when the sample was designed since I did not know if there were native bilinguals in these areas, but as their questionnaires and proficiency were evaluated, it became obvious that they were a separate group. The Spanish speakers are the control group and represent about 10% of all subjects interviewed. They know no Indian tongue but have acquired a low level of proficiency by living in predominately Indian areas over the years.

Variable 5 (age)

	Code	Absolute Frequency	Relative Frequency %
0 - 6 years	1	133	18.4
7 - 14 years	2	181	25.1
15 - 24 years	3	145	20.0
25 - 44 years	4	163	22.6
45 and older	5	100	13.9
Total	5	722	100.0

This breakdown reflects the age structure of the three counties. As can readily be seen, 44% of the population is under 15 years of age and 64% under 25 years of age, reflecting a very young population, which is typical of Mexico nationwide.

Variable 6 (do they speak an Indian language)

	Code	Absolute Frequency	Relative Frequency %
yes	1	672	93.1
no	2	50	6.9
Total	2	722	100.0

This question was asked to confirm that the population under study was in reality being sampled. The 'no's' basically are the Spanish speaking population.

Variable 7 (how well they speak an Indian language)

	Code	Absolute Frequency	Relative Frequency %
well	1	637	88.2
poorly	2	12	1.7
average	3	23	3.2
other or no answer	4	50	6.9
Total	4	722	100.0

Most of those interviewed claimed to speak the Indian language of the area well, confirming that in fact native speakers of Indian tongues were being interviewed. The other 85 individuals are the 65 native speakers of Spanish and bilinguals who are more proficient in Spanish than in the Indian tongue.

Variable 8 (do they speak Spanish)

	Code	Absolute Frequency	Relative Frequency %
yes	1	622	86.2
no	2	97	13.4
other or no answer	3	3	0.4
Total	3	722	100.0

It is also obvious that the overwhelming majority speak Spanish, although 14% claim not to speak Spanish at all or did not answer.

Variable 9 (how well do they speak Spanish)

	Code	Absolute Frequency	Relative Frequency %
well	1	304	42.1
poorly	2	125	17.3
average	3	196	27.2
other or no answer	4	97	13.4
Total	4	722	100.0

These results confirm the answers to the previous question, with 97 individuals who did not claim even to speak Spanish poorly. The remaining 625 individuals (86%) were divided on self-evaluation of their ability to speak Spanish--42% claimed to speak it well (the native Spanish Speakers and bilinguals are in the sample), while another 27% said they were average speakers of Spanish, and 17% felt they spoke the language poorly.

Variable 10 (did they say they spoke Spanish in the 1980 Census)

	Code	Absolute Frequency	Relative Frequency %
yes	1	394	54.6
no	2	216	29.9
I don't know	3	112	15.5
Total	3	722	100.0

While the majority claimed to have answered 'yes' to this question in 1980 (55%), another 30% answered 'no'. It must be borne in mind that most of these 'no's' can be attributed to the fact that the Census only takes into account children over five years of age. Since the Census data were collected in 1980 and these statistics in 1984, all children under nine in 1984 would not have been asked this question in

1980. The remaining individuals are undoubtedly those who also answered question number 8 with a 'no'.

Variable 11 (do they understand the Indian language)

	Code	Absolute Frequency	Relative Frequency %
yes	1	691	95.7
no	2	29	4.0
I don't know	3	2	0.3
Total	3	722	100.0

It is to be expected that more people understand the Indian languages than speak them, since even the weaker bilinguals would be in this category. Many of the native Spanish speakers have a passive but not active knowledge of the Indian tongues.

Variable 12 (how well do they understand the Indian language)

	Code	Absolute Frequency	Relative Frequency %
well	1	651	90.2
poorly	2	22	3.0
average	3	19	2.6
other or no answer	4	30	4.2
Total	4	722	100.0

Fewer individuals claim to understand the Indian language well (90% versus 96% who simply said they understood it). The difference is most likely attributable to the Spanish speakers.

Variable 13 (do they understand Spanish)

	Code	Absolute Frequency	Relative Frequency %
yes	1	663	91.8
no	2	51	7.1
I don't know	3	8	1.1
Total	3	722	100.0

The percentage of those individuals who claim to understand Spanish (92%) is nearly as high as those who say they understand the Indian language (96%). This confirms the empirically well-known fact that most of the Mexican Indian groups do at least have some degree of a passive knowledge of Spanish. In the next breakdown we will see how well they claim to understand it.

Variable 14 (how well they understand Spanish)

	Code	Absolute Frequency	Relative Frequency %
well	1	360	49.9
poorly	2	165	22.9
average	3	144	19.9
other or no answer	4	53	7.3
Total	4	722	100.0

As could be expected, in spite of the fact that 92% said they understood Spanish, only 50% claim to understand it well; another 23% understand it poorly and about 20% say they have an average passive command of the Spanish language.

Variable 15 (how well can they understand news over the radio)

	Code	Absolute Frequency	Relative Frequency %
well	1	271	37.5
poorly	2	310	43.0
average	3	140	19.4
no answer	4	1	0.1
Total	4	722	100.0

More individuals said that they could not understand news well over the radio (43%) than those whose said they could (38%), although 20% of the people interviewed were able to understand some. While this is an indication of proficiency, I can also attest to the fact that the broadcasts are not always clear, nor are the radio receptors in good condition.

Variable 16 (do they know if their Indian language can be written)

	Code	Absolute Frequency	Relative Frequency %
yes, it can	1	384	53.2
no, it can't	2	49	6.8
I don't know	3	289	40.0
Total	3	722	100.0

It is very interesting to note that more than half (53%) of the sample knew that their Indian language could be written. This is undoubtedly due in part to the Dirección General de Educación Indígena's campaign to make this fact known in an effort to enhance the prestige of the Indian languages. Very few (7%) affirmed that they could not be written, while 40% did not know. This fact is not surprising since there are many children in the sample.

Variable 17 (do they know how to read or write in their Indian language)

	Code	Absolute Frequency	Relative Frequency %
yes	1	114	15.8
no	2	568	78.7
a little	3	40	5.5
Total	3	722	100.0

Of course the overwhelming majority (79%) do not know how to read or write in their native Indian tongue. This information is logical since until very recently it was not possible to learn the Indian language at school, even for those who did attend. The 16% who said 'yes' were generally involved in the bilingual-bicultural education system as teachers or first-grade students who had only recently learned how to read and write a little.

Variable 18 (if not, would they like to learn to read or write in the native language)

	Code	Absolute Frequency	Relative Frequency %
yes	1	436	60.4
no	2	91	12.6
I don't know	3	97	13.4
other or no answer	4	98	13.6
Total	4	722	100.0

The results are both positive and somewhat surprising. Once again they are probably the result of the impact of fostering bilingual-bicultural education in these areas. Some 60% claimed that they would like to learn to read and write in their native language. Only 13% said 'no' and another 13% were undecided. The 14% who gave another or no answer were basically those individuals who had said that they already

knew how to read or write.

Variable 19 (do they know how to read and write in Spanish)

	Code	Absolute Frequency	Relative Frequency %
yes	1	353	48.9
no	2	340	47.1
a little	3	29	4.0
Total	3	722	100.0

Obviously many more people know how to read and write in Spanish since they have been to public schools in México where Spanish is the language of instruction and literacy (49%); however, the fact that 47% of the individuals interviewed said 'no' is a clear indication of the low levels of literacy that prevail in rural Indian areas in México.

Variable 20 (would they like to learn to read and write in Spanish)

	Code	Absolute Frequency	Relative Frequency %
yes	1	269	37.3
no	2	63	8.7
I don't know	3	70	9.7
other or no answer	4	320	44.3
Total	4	722	100.0

The 'other or no answer' category was the largest because they had already stated that they knew how to read and write in Spanish. Of the remaining individuals, the majority (37%) expressed a desire to learn, while only 19% were undecided or definitely did not want to learn to read and write in Spanish.

Variable 21 (would they like to speak their Indian language better)

	Code	Absolute Frequency	Relative Frequency %
yes	1	518	71.8
no	2	97	13.4
I don't know	3	98	13.6
other or no answer	4	9	1.2
Total	4	722	100.0

Once again, there is a strong positive reaction to their native language since nearly 72% of these interviewed want to speak it better. Only 13% said 'no', while another 15% were undecided or gave no answer.

Variable 22 (would they like to speak Spanish better)

	Code	Absolute Frequency	Relative Frequency %
yes	1	584	80.9
no	2	41	5.7
I don't know	3	95	13.1
other or no answer	4	2	0.3
Total	4	722	100.0

The percentage of individuals who said 'yes' to this question (81%) was even higher than those who said 'yes' to the question of whether or not they would like to speak their Indian language better (72%), indicating a greater desire to improve their Spanish, although the two questions are be no means exclusive. Very few (6%) did not want to speak Spanish better.

Variable 23 (how many hours a day do they speak their Indian tongue)

	Code	Absolute Frequency	Relative Frequency %
0 - 2	1	71	9.8
2 - 5	2	47	6.5
6 - 9	3	199	27.6
10 - 13	4	146	20.2
more than 13	5	257	35.6
I don't know	6	2	0.3
Total	6	722	100.0

An overwhelming percentage of the individuals interviewed speak their Indian language for most of their waking hours. About 83% spent between six and nine or more than thirteen hours using their native tongue. The less-than-two-hours group was undoubtedly constituted by the native Spanish speakers and, the two-five-hours-a-day group by the bilinguals.

Variable 24 (how many hours a day do they speak Spanish)

	Code	Absolute Frequency	Relative Frequency %
0 - 2	1	237	32.8
2 - 5	2	47	6.5
6 - 9	3	262	36.3
10 - 13	4	95	13.2
more than 13	5	74	10.2
I don't know	6	7	1.0
Total	6	722	100.0

Except for the six to nine hours category with 36% of the individuals interviewed, the next largest category is the zero to two hours group. Only 23% versus 56% (Indian languages) spoke Spanish for more than ten hours. These results make sense since you normally do not speak two languages at the same time. It should be clear that even though the

percentages are high for those who speak an Indian language and those who speak Spanish for six-nine hours a day, these are most likely not the same people. The title 'How many hours a day do you speak Spanish' is also somewhat misleading. It was expressed this way to avoid unnecessary complications in the field, but very few people in the world, unless they are lecturing or carrying out a speechoriented activity actually talk more than a few hours a day. These hours are a more accurate measure of use (active or passive). Many school children are in the six-nine hour category, since they spend this amount of time at school, but as is always the case, they do not speak the whole time--quite the opposite, most time at school is spent listening to the teacher or reading and writing.

Variable 25 (what should be the language of instruction at school)

	Code	Absolute Frequency	Relative Frequency %
Spanish	1	296	41.0
Indian language	2	15	2.1
Both	3	348	48.2
I don't know	4	63	8.7
Total	4	722	100.0

Once again, probably as a direct result of the DGEI's campaign to promote the importance of the preservation of the Indian tongues, we find a very high percentage of individuals who want bilingual education (48%), closely followed by education in Spanish (41%). It should be noted that only 2% are in favor of teaching exclusively in the Indian language at school, which indirectly proves the Indian population's recognition of the importance of learning Spanish at school.

Variable 26 (should they be taught in both languages)

	Code	Absolute Frequency	Relative Frequency %
yes	1	495	68.6
no	2	68	9.4
I don't know	3	157	21.7
other or no answer	4	2	0.3
Total	4	722	100.0

This question was asked to confirm or cast doubt on the results of the previous one, since this controversy is a key issue for language policy in México. In effect it did confirm the results obtained from variable 25, since 69% of the subjects in the study showed a preference for bilingual education, while 22% were undecided. Another 9% seemed to be against this modality.

Variable 27 (years of formal schooling)

	Code	Absolute Frequency	Relative Frequency %
0 - kindergarten	1	293	40.6
incomplete primary	2	274	38.0
complete primary	3	69	9.6
incomplete junior high	4	48	6.5
complete junior high	5	20	2.8
past junior high	6	18	2.5
Total	6	722	100.0

It is quite obvious the overwhelming majority (79%) fall into the categories of no formal schooling up to less than six years of education. The second largest group (16%) either finished elementary school or went a year or two beyond this level. Only 6% finished the equivalent of three years of secondary education (junior high school) or went beyond. The only individuals I found who had more formal education than junior

high school were the teachers, many of whom had attended a teacher's training school in lieu of going to senior high school. No one had what would normally be considered higher education (after high school).

Variable 28 (where do they speak their Indian language - first usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	41	5.7
around town	1	667	92.4
at home	2	8	1.1
with visitors	3	4	0.5
at school	5	2	0.3
Total	5	722	100.0

Variable 29 (where do they speak their Indian language - second usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	72	10.0
at home	2	587	81.3
with visitors	3	24	3.3
on trips	4	2	0.3
at school	5	37	5.1
Total	5	722	100.0

Variable 30 (where do they speak their Indian language - third usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	200	27.7
at home	2	1	0.1
with visitors	3	458	63.4
on trips	4	15	2.1
at school	5	48	6.7
Total	5	722	100.0

Variable 31 (where do they speak their Indian language - fourth usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	302	41.8
around town	1	1	0.1
on trips	4	210	29.1
at school	5	209	29.0
Total	5	722	100.0

The four most common places to use the Indian language were listed for all subjects in the order in which they mentioned them in the interview. As can be gleaned from the four breakdowns, 92% mentioned 'around town' as their first usage, 'at home' (81%) in second place, 'with visitors' (63%) in third place, and 'on trips' and 'at school' tied at 29% for fourth place; however 'nowhere' is a prominent answer as third usage and is the first choice in fourth position.

Variable 32 (where do they speak Spanish - first usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	51	7.1
around town	1	320	44.3
at home	2	85	11.8
with visitors	3	96	13.3
on trips	4	10	1.4
at school	5	159	22.1
Total	6	722	100.0

Variable 33 (where do they speak Spanish - second usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	296	41.0
around town	1	1	0.1
at home	2	189	26.2
with visitors	3	48	6.7
on trips	4	40	5.5
at school	5	148	20.5
Total	6	722	100.0

Variable 34 (where do they speak Spanish - third usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	524	72.6
at home	2	2	0.3
with visitors	3	170	23.5
on trips	4	2	0.3
at school	5	24	3.3
Total	5	722	100.0

Variable 35 (where do they speak Spanish - fourth usage)

	Code	Absolute Frequency	Relative Frequency %
nowhere	0	557	77.2
at home	2	1	0.1
with visitors	3	1	0.1
on trips	4	87	12.1
at school	5	76	10.5
Total	5	722	100.0

These results are quite different from the results obtained for where they use their Indian language. With respect to where they use Spanish, 'around town' was in first place with 44%, but hardly appeared again. 'At home' and 'with visitors' were more prominent as the second and third usage. As could be expected, 'at school' is present in all

four slots but never is a top choice. The most frequently repeated

category 'nowhere' is the most frequent answer for the second, third and

fourth usage, with 41%, 73% and 77% respectively. In other words, many

people only use Spanish for one purpose or two at the most.

Variable 36 (what they do for a living - primary activity)

	Code	Absolute Frequency	Relative Frequency %
none	0	18	2.5
farming	1	223	31.0
household	2	110	15.2
trade	3	23	3.2
handicrafts	4	19	2.6
school	5	284	39.3
other	6	45	6.2
Total	7	722	100.0

Variable 37 (what they do for a living - secondary activity)

	Code	Absolute Frequency	Relative Frequency %
none	0	432	59.9
farming	1	19	2.6
household	2	72	10.0
trade	3	11	1.5
handicrafts	4	74	10.2
school	5	82	11.4
other	6	32	4.4
Total	6	722	100.0

Variable 38 (what they do for a living - tertiary activity)

	Code	Absolute Frequency	Relative Frequency %
none	0	701	97.1
farming	1	1	0.1
trade	3	1	0.1
handicrafts	4	18	2.6
school	5	1	0.1
Total	5	722	100.0

It is easy to observe that the primary occupation of the people form the Montaña Region is farming and related activities, such as raising small livestock (male activity), household activities (female activity) and school (mostly children)--31%, 15% and 39% respectively. It is almost certain that nearly all the men had 'farming' as their one and only activity since only 3% have put it in second place and an overwhelming 60% claim to have no secondary activity (women also help). Household and school are still represented as secondary activities and handicrafts is obviously an additional activity for some. Very few people are in commerce or other activities. As can be seen from Variable 38, a third activity is practically non-existent (97%).

Variable 39 (contact with Spanish outside the home community)

	Code	Absolute Frequency	Relative Frequency %
a lot	1	251	34.9
a little	2	342	47.4
average	3	129	17.9
Total	3	722	100.0

The largest percentage (47%) was composed of individuals who said to have 'little' (none or a few weeks) outside contact with the Spanish

language. Another 35% claimed to have had 'a lot' (several months or years) of contact, while about 18% had only experienced 'average' (a couple of months) contact.

Variable 40 (turn-taking)

Code	Absolute Frequency	Relative Frequency %
0	1	0.1
1	2	0.3
2	14	1.9
3	67	9.3
4	29	4.0
5	32	4.4
6	48	6.7
7	73	10.1
8	73	10.1
9	383	53.1
Total 10	722	100.0

The scores were in the upper range (7-8 or 9) for 73% of the interviewees. As a matter of fact, 53% received the highest score possible, indicating that knowing when to take a turn is not a problem for these Indian groups.

Variable 41 (pertinence of answer to the question asked)

Code	Absolute Frequency	Relative Frequency %
0	1	0.1
1	2	0.3
2	1	0.1
3	1	0.1
4	1	0.1
5	9	1.3
6	3	0.4
7	8	1.1
8	8	1.1
9	688	95.4
Total 10	722	100.0

Similar and even more precise results are found in this breakdown

by scores. An overwhelming 95% of the subjects interviewed gave an

answer which logically followed the question asked and scored a '9', the

top grade. As stated previously, no attempt was made to check the

veracity of the answer, nor does the answer take into account grammatical

correctness.

Variable 42 (phonology component)

Code	Absolute Frequency	Relative Frequency %
0	1	0.1
1	100	13.9
2	95	13.2
3	183	25.3
4	255	35.3
5	88	12.2
Total 6	722	100.0

Scores were well-spread, from one to five., with most individuals

scoring either a '4' (35%) or a '3' (25%). The other scores were evenly

distributed between the '1', '2' and '5' categories, at approximately 13%
each.

Variable 43 (morphosyntactic component)

Code	Absolute Frequency	Relative Frequency %
0	2	0.3
1	102	14.1
2	102	14.1
3	202	28.0
4	223	30.9
5	91	12.5
Total 6	722	100.0

The results are very similar to the ones found for variable 42.
In this case approximately 14% received a score of either '1', '2' or '5'
as opposed to 13% in the previous case, while the '3' and the '4' scores
were closer with 28% and 31% respectively, compared to 25% and 35% for
the phonology component.

Variable 44 (expansion component)

Code	Absolute Frequency	Relative Frequency %
0	1	0.1
1	101	14.0
2	113	15.7
3	179	24.8
4	213	29.5
5	115	15.9
Total 6	722	100.0

Once again, the three linguistic evaluations produce similar
results. Those who scored a '1', '2' or '5' were close to 15% in all
cases, while the '3' and '4's amounted to 25% and 30% respectively. Such
strikingly similar results lead us to believe that in effect proficiency

is being measured with a satisfactory degree of reliability.

Indications of Proficiency in Spanish

Self-evaluations

As has been previously said, not all variables that might impinge on proficiency are analyzed in this chapter--only those which have been considered most relevant after having studied the frequencies outlined in the first pages of this chapter are included. For example, we will not analyze the passive command of Spanish; only the active. The variables chosen are 9 (how well they speak Spanish), variable 24 (how many hours a day they speak it), variable 27 (formal schooling) and variable 39 (outside contact).

To refresh the reader's memory, in their self-evaluation 622 individuals (86%) said they spoke Spanish, while only 13% said they did not. If we go back to how well they speak Spanish, we find that some 42% said they spoke Spanish 'well', while another 27% felt they spoke it only 'average', yet 17% of those interviewed felt they spoke it 'poorly'. It is not enough to have these figures--it is also important to know who these individuals are, where they live, their age, etc.

On a community level (variable 1), in Ahuixotitla, Copalillo and Alcozauca over 53% of those interviewed claimed to speak Spanish well. In Tlalcozotitlán, Zapotitlán Tablas and El Cascalote this percentage fell to around 45%. Escalerilla Lagunas followed with 31%, Tlahuapa

with 12% and Amolonga had <u>no</u> speakers who felt they spoke Spanish well.

More detailed information is available in Appendix 12.

TABLE NO 30

Variable 9 (how well they speak Spanish) by Variable 2 (the county)

County	1-well	2-poorly	3-average	another or 4-no answer	5-row total
1 - Copalillo	113	47	40	27	227
	49.8%	20.7%	17.6%	11.9%	31.4%
2 - Alcozauca	82	32	78	51	243
	33.7%	13.2%	32.1%	21.0%	33.7%
3 - Zapotitlán Tablas	109	46	78	19	252
	43.3%	18.3%	31.0%	7.5%	34.9%
Column	304	125	196	97	722
Total	42.1%	17.3%	27.1%	13.4%	100.0%

In spite of the fact that on a community level we saw great discrepancies, on a county level the picture is somewhat different. In the county of Copalillo about 50% stated they spoke Spanish 'well', while another 18% felt they only spoke it 'average'. More individuals (21%) thought they spoke it 'poorly' and 12% gave none of these answers. The distribution was different in the county of Alcozauca, where only 34% claimed to speak Spanish 'well', while 32% had an 'average' command and 13% felt they spoke it 'poorly'. Some 21% provided to answer at all. In the third county, Zapotitlán Tablas, the pattern was a combination of the previous two. About 43% claimed to speak Spanish 'well', another 31% felt they spoke it 'average', while 18% self-evaluated themselves as 'poor' speakers of Spanish. Only 8% did not answer. Many individuals appear not to have answered this question, but we must remember that if on the previous question they had already stated that they did not speak Spanish, they cannot respond 'well', 'poorly' or 'average' to this question.

If we refer to the results of variable 10 (did you say you spoke Spanish in the 1980 census), approximately 55% said 'yes', while 30% said 'no' and 15% could not recall what they had said. If we compare their 1980 self-evaluation to their more qualitative 1984 self-evaluation, we find that about 87% claim to speak it to some degree. A word of warning --the ''o's' (30%) in the census question are undoubtedly biased, since they include children who were not old enough in 1980 to be included in the census; however, even with this consideration, I feel that the Indians do speak more Spanish than they are often given credit for and that the statistics which show a trend toward increasing bilingualism do reflect reality. More will be said later in this chapter about my evaluation of their ability to speak Spanish.

The results obtained when crosstabbing how well they spoke Spanish (variable 9) by sex (variable 3) were strikingly similar. Men constituted 49% and women 51% of those who spoke 'well'; 54% versus 46% of those who spoke 'average', and 48% in comparison to 52% of those who spoke 'poorly'. What is more interesting is the fact that 35% of those who did not answer were men, while 63% were women. This is an indication that many more women than men do not speak Spanish at all; however, when they do speak it, the levels of proficiency according to their self-evaluations are not very different between the sexes. Detailed information is available in Appendix 13.

TABLE NO 31

Variable 9 (how well they speak Spanish) by Variable 4 (mother tongue)

Mother Tongue	1-well	2-poorly	3-average	another or 4-no answer	5-row total
1 - Nahuatl	69	47	40	40	182
	37.9%	25.8%	22.0%	14.3%	25.2%
	22.7%	37.6%	20.4%	26.8%	
	9.6%	6.5%	5.5%	3.6%	
2 - Mixtec	47	32	78	51	208
	22.6%	15.4%	37.5%	24.5%	28.8%
	15.5%	25.6%	39.8%	52.6%	
	6.5%	4.4%	10.8%	7.1%	
3 - Tlapanec	70	46	75	17	208
	33.7%	22.1%	36.1%	8.2%	28.8%
	23.0%	36.8%	38.3%	17.5%	
	9.7%	6.4%	10.4%	2.4%	
4 - Bilingual	56	0	2	1	59
	94.9%	0.0%	3.4%	1.7%	8.2%
	18.4%	0.0%	1.0%	1.0%	
	7.8%	0.0%	0.3%	· 0.1%	
5 - Spanish	62	0	1	2	65
	95.4%	0.0%	1.5%	3.1%	9.0%
	20.4%	0.0%	0.5%	2.1%	
	8.6%	0.0%	0.1%	0.3%	
Column	304	125	196	97	772
Total	42.1%	17.3%	27.1%	13.4%	100.0%

The results of this table are very logical and coherent with previous results (the county of Copalillo is basically Nahuatl-speaking; Alcozauca Mixtec-speaking; and Zapotitlán Tablas Tlapanec-speaking). As was to be expected, 95% of the native Spanish speakers said they spoke Spanish well, as did 95% of the bilinguals. The Nahuatl group followed with 38%, the Tlapanecs with 34% and the Mixtecs with 23%. It is important to note that the bilinguals and native Spanish speakers account for 118 of the 304 individuals who say they speak Spanish well.

TABLE NO 32

Variable 9 (how well they speak Spanish) by Variable 5 (age)

Age	1-well	2-poorly	3-average	another or 4-no answer	5-row total
1 - 0-6 years	33	24	19	57	133
	24.8%	18.0%	14.3%	42.9%	18.4%
2 - 7-14	91	35	51	4	181
	50.3%	19.3%	28.2%	2.2%	25.1%
3 - 15 - 24	84	10	44	7	145
	57.9%	6.9%	30.3%	4.8%	20.1%
4 - 25 - 44	64	30	49	20	163
	39.3%	18.4%	30.1%	12.3%	22.6%
5 - 45 and over	32	26	33	9	100
	32.0%	26.0%	33.0%	9.0%	13.9%
Column	304	125	196	97	722
Total	42.1%	17.3%	27.1%	13.4%	100.0%

For the first age group (0-6) 43% of the children did not know how well they spoke Spanish, which is not surprising given their young age. The others were divided among 'well' (25%), 'average' (14%) and 'poorly' (18%). In the second age group (7-14) half (50%) of the children said they spoke Spanish 'well' (50%), while another 28% spoke it 'average' and 19% 'poorly'. These results are logical since most of these children are in the school system where they are exposed to Spanish. In the 15-24 age group, over half (50%) claimed to speak Spanish 'well', and another 30% 'average'. In the fourth age group (25-44), the majority were in the 'well' category (39%) or the 'average' category (30%), although another 18% said they spoke Spanish 'poorly'. In the oldest group (45 and over), the percentages were nearly the same for the 'well' group (32%) and the 'average' group (33%). Once again,

there was a substantial percentage (26%) who said they did not speak

Spanish well.

TABLE NO 33

Variable 9 (how well they speak Spanish) by Variable 27 (formal schooling)

Formal Schooling	1-well	2-poorly	3-average	another or 4-no answer	row 5-total
1 - none to Kindergarten	70 23.9% 23.0% 9.7%	68 23.2% 54.4% 9.4%	71 24.2% 36.2% 9.8%	84 28.7% 86.6% 11.6%	293 40.6%
2 - incomplete primary	124 45.3% 40.8% 17.2%	52 19.0% 41.6% 7.2%	85 31.0% 43.4% 11.8%	13 4.7% 13.4% 1.8%	274 38.0%
3 - complete primary	46 66.7% 15.1% 6.4%	3 4.3% 2.4% 0.4%	20 29.0% 10.2% 2.8%	0 0.0% 0.0% 0.0%	69 9.6%
4 - incomplete junior high	30 62.5% 9.9% 4.2%	2 4.2% 1.6% 0.3%	16 33.3% 8.2% 2.2%	0 0.0% 0.0% 0.0%	48 6.6%
5 - complete junior high	16 80.0% 5.3% 2.2%	0 0.0% 0.0% 0.0%	4 20.0% 2.0% 0.6%	0 0.0% 0.0% 0.0%	20 2.8%
6 - past junior high	18 0.0% 5.9% 2.5%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	18 2.5%
Column Total	304 42.1%	125 17.3%	196 27.1%	97 13.4%	722 100.0%

The results of this table are very eloquent, both horizontally

and vertically, and show a definite relationship between formal schooling

and command of Spanish. For the first group (no formal schooling to kindergarten), the percentages were in essence the same for the four choices: those who speak Spanish 'well' (24%), 'average' (24%), 'poorly' (23%) and 'no answer' (29%), which is consonant with the previous tables. For the second group (incomplete primary school), 45% claimed to speak Spanish 'well', while another 31% thought they were only 'average' and 19% claimed to speak Spanish 'poorly'. Only 5% provided no answer. Those individuals who had finished primary school were clearly more proficient according to their self-evaluation: 67% said they spoke Spanish 'well', while another 29% claimed to have an 'average' command. Only 4% had a 'poor' command. In the next category (unfinished junior high school) the results were even more persuasive regarding the relationship between formal schooling and proficiency in Spanish—63% claimed to speak it 'well' and another 33% 'average'. In the next-to-last category (finished junior high school), an overwhelming 80% said they spoke Spanish 'well', and the remaining 20% claimed to have an 'average' command. Even more conclusive was the affirmation of those who went beyond junior high school 100% claimed to have a good command of the Spanish language. With the exception of the first two categories (no formal schooling up to unfinished primary school), all individuals provided an answer to the question.

Another ingredient in the Spanish proficiency formula is the number of waking hours a subject speaks a language. According to data collected, 36% of the subjects interviewed claimed to speak Spanish from six to nine hours a day, while another 33% spoke it less than two hours.

Most of the remaining 31% spoke the language more than ten hours a day.
It is important to know who these individuals are.

At a community level (variable 1) Spanish is spoken with greatest
frequency (more than six to nine hours a day) in: Escalerilla Lagunas
(81%), Alcozauca (81%), Ahuixotitla (75%), Copalillo (63%), Zapotitlán
Tablas (62%) and Tlalcozotitlán (54%). More details are available in
Appendix 14.

TABLE NO 34

Variable 24 (how many hours a day they speak Spanish)
     by Variable 2 (county)

County	1- 0/2	2- 2/5	3- 6/9	4- 10/13	more 5-than 13	I do not 6-know	row total
1 - Copalillo	80 35.2%	16 7.0%	77 33.9%	24 10.6%	24 10.6%	6 2.6%	277 31.4%
2 - Alcozauca	110 45.3%	0 0.0%	84 34.6%	19 7.8%	29 11.9%	1 0.4%	243 33.7%
3 - Zapotitlán Tablas	47 18.7%	31 12.3%	101 40.1%	52 20.6%	21 8.3%	0 0.0%	252 34.9%
Column Total	237 32.8%	47 6.5%	262 36.3%	95 13.2%	74 10.2%	7 1.0%	722 100.0%

In Copalillo the highest percentages were represented by subjects
who either spoke Spanish 0 to 2 or 6 to 9 hours a day (35% and 34%
respectively). The same was true for the other two counties, with
varying percentages. In Alcozauca some 45% claimed to speak Spanish from
0 to 2 hours a day and another 35% from 6 to 9 hours a day, while in
Zapotitlán Tablas the percentages were 19% and 40%. It is likely that
the 6 to 9 hours a day group is mostly constituted by school children,

while bilinguals and native Spanish speakers form the groups who use

Spanish more than ten hours a day.

When variable 24 is crosstabbed with sex (variable 3) we find

that the results are nearly identical for the two sexes. More details

can be found in Appendix 15.

TABLE NO 35

Variable 24 (how many hours a day they speak Spanish) by Variable 4
(mother tongue)

Mother Tongue	1- 0/2	2- 2/5	3- 6/9	4- 10/13	13 or 5-more	I don't 6-know	row total
1 - Nahuatl	79	16	64	13	4	6	182
	43.4%	8.8%	35.2%	7.1%	2.2%	3.3%	25.2%
	33.3%	34.0%	24.4%	13.7%	5.4%	85.7%	
	10.9%	2.2%	8.9%	1.8%	0.6%	0.8%	
2 - Mixteco	109	0	80	16	2	1	208
	52.4%	0.0%	38.5%	7.7%	1.0%	0.5%	28.8%
	46.0%	0.0%	30.5%	16.8%	2.7%	14.3%	
	15.1%	0.0%	11.1%	2.2%	0.3%	0.1%	
3 - Tlapaneco	47	30	90	33	8	0	208
	22.6%	14.4%	43.3%	15.9%	3.8%	0.0%	28.8%
	19.8%	63.8%	34.4%	34.7%	10.8%	0.0%	
	6.5%	4.2%	12.5%	4.6%	1.1%	0.0%	
4 - Bilingual	1	0	26	23	9	0	59
	1.7%	0.0%	44.1%	39.0%	15.3%	0.0%	8.2%
	0.4%	0.0%	9.9%	24.2%	12.2%	0.0%	
	0.1%	0.0%	3.6%	3.2%	1.2%	0.0%	
5 - Spanish	1	1	2	10	51	0	65
	1.5%	1.5%	3.1%	15.4%	78.5%	0.0%	9.0%
	0.4%	2.1%	0.8%	10.5%	68.9%	0.0%	
	0.1%	0.1%	0.3%	1.4%	7.1%	0.0%	
Column Total	237	47	262	95	74	7	722
	32.8%	6.5%	36.3%	13.2%	10.2%	1.0%	100.0%

A clear pattern can be detected for the breakdown by mother

tongue. Some 79% of the native speakers of Spanish, as could be

expected, speak Spanish all day (more than 13 hours), while a second

group (15%) speak it for 10 to 13 hours. The bilinguals are mostly found

in the 6 to 9 group (44%) or the 10 to 13 group (39%)--in other words

83% - 94% of both the native speakers of Spanish and the native

bilinguals spend most of their waking hours speaking Spanish, which in

turn should be synonomous with a high level of proficiency.

With respect to the Indian speakers, as has already been stated,

most of them are in the 0 to 2 hours a day group or in the 6 to 9 hours

group. The Tlapanecs did have more individuals in the 10 to 13 hours a

day group (16%) than the Nahuatls (7%) or the Mixtecs (8%). Very few

individuals speak Spanish for 2 to 5 hours, no matter what their language

group may be.

TABLE NO 36

Variable 24 (how many hours a day they speak Spanish) by Variable 5 (age)

Age	1- 0/2	2- 2/5	3- 6/9	4- 10/13	13 or 5-more	I don't 6-know	row total
1 - 0/6 years	56	13	38	15	9	2	133
	42.1%	9.8%	28.6%	11.3%	6.8%	1.5%	18.4%
2 - 7/14	23	13	89	37	18	1	181
	12.7%	7.2%	49.2%	20.4%	9.9%	0.6%	25.1%
3 - 15/24	25	10	67	26	17	0	145
	17.2%	6.9%	46.2%	17.9%	11.7%	0.0%	20.1%
4 - 25/44	80	5	43	10	23	2	163
	49.1%	3.1%	26.4%	6.1%	14.1%	1.2%	22.6%
5 - 45 and over	53	6	25	7	7	2	100
	53.0%	6.0%	25.0%	7.0%	7.0%	2.0%	13.9%
	237	47	262	95	74	7	722
Total	32.8%	6.5%	36.3%	13.2%	10.2%	1.0%	100.0%

The results from these crosstabs are very cogent. The youngest age group (0-6) mainly uses Spanish for 0 to 2 hours a day (42%), although another 29% speak it from 6 to 9 hours a day (undoubtedly the six-year olds who are in school, the bilinguals and the native Spanish speakers). For the 7 to 14 year old group, 49% speak Spanish for 6 to 9 hours (most likely in school) and another 20% from 10 to 13 hours a day. For the young group from 15 to 24 years of age the most prominent categories were the same with an additional two categories which were well represented: the 0 to 2 hours group (17%) and the 13 or more hours group (12%). More spread is found in this group and is quite possibly due to the fact that their activities are more diverse--some continue with secondary school, while others are temporarily employed as migrant workers; yet others remain in their community and settle down. The two oldest age groups (25 to 44 and 45 and older) show similar patterns to the youngest age group (0 to 6), with 49% and 53% in the 0 to 2 hours a day category and 26% and 25% in the 6 to 9 hours a day category respectively.

TABLE NO 37

Variable 24 (how many hours a day they speak Spanish)
by Variable 27 (formal schooling)

Formal Schooling	1- 0/2	2- 2/5	3- 6/9	4- 10/13	13 or 5-more	I don't 6-know	row total
1 - none to	164	21	63	27	14	4	293
kindergarten	56.0%	7.2%	21.5%	9.2%	4.8%	1.4%	40.6%
	69.2%	44.7%	24.0%	28.4%	18.9%	57.1%	
	22.7%	2.9%	8.7%	3.7%	1.9%	0.6%	
2 - incomplete	68	16	126	38	23	3	274
primary	24.8%	5.8%	46.0%	13.9%	8.4%	1.1%	38.0%
	28.7%	34.0%	48.1%	40.0%	31.1%	42.9%	
	9.4%	2.2%	17.5%	5.3%	3.2%	0.4%	
3 - complete	4	6	38	11	10	0	69
primary	5.8%	8.7%	55.1%	15.9%	14.5%	0.0%	9.6%
	1.7%	12.8%	14.5%	11.6%	13.5%	0.0%	
	0.6%	0.8%	5.3%	1.5%	1.4%	0.0%	
4 - incomplete	1	2	21	12	12	0	48
secondary	2.1%	4.2%	43.8%	25.0%	25.0%	0.0%	6.6%
	0.4%	4.3%	8.0%	12.6%	16.2%	0.0%	
	0.1%	0.3%	2.9%	1.7%	1.7%	0.0%	
5 - complete	0	2	8	4	6	0	20
secondary	0.0%	10.0%	40.0%	20.0%	30.0%	0.0%	2.8%
	0.0%	4.3%	3.1%	4.2%	8.1%	0.0%	
	0.0%	0.3%	1.1%	0.6%	0.8%	0.0%	
6 - past junior	0	0	6	3	9	0	18
high	0.0%	0.0%	33.3%	16.7%	50.0%	0.0%	2.5%
	0.0%	0.0%	2.3%	3.2%	12.2%	0.0%	
	0.0%	0.0%	0.8%	0.4%	1.2%	0.0%	
Column	237	47	262	95	74	7	722
Total	32.8%	6.5%	36.3%	13.2%	10.2%	1.0%	100.0%

With respect to formal schooling and Spanish language use, the

majority of individuals who have little or no schooling only speak

Spanish for 0-2 hours a day (56%), although a smaller percentage (22%)

speak it from 6-9 hours a day. Percentages are almost inverted for the

subjects who attended by but did not finish primary school, since 46%

claimed to speak Spanish from 6-9 hours a day and another 25% from 0-2
hours a day. If we look at those who did finish elementary school, we
see that the majority (55%) say they speak Spanish from 6-9 hours a day
and another 30% speak it for a longer time span. For those who continued
with secondary education the shift is more to the right of the table.
While 44% say they speak Spanish from 6-9 hours a day, another 50% claim
to use it during more waking hours. For these with the highest level of
schooling (past junior high), all subjects said they spoke Spanish at
least 6-9 hours a day. The highest percentage (50%) claimed to speak it
more than 13 hours a day.

Thus far in this section on proficiency in the Spanish language
we have looked at variables 9 (how well they think they speak Spanish)
and 24 (how many hours a day they speak Spanish). Now it is time to turn
our attention to formal schooling. The importance of this variable has
already been pointed out. It should be borne in mind that 41% of the
sample has no schooling at all or just kindergarten (41%) and another 38%
went to primary school but did not graduate from sixth grade. The
remaining 21% is distributed throughout the other four categories and
decreases as the years of formal schooling increase.

At a community level (variable 1), only two communities have more
individuals with a incomplete primary school education than kindergarten
level (Alcozauca and Ahuixotitla). The three county seats (Copalillo,
Alcozauca and Zapotitlán Tablas) all have 10% or more (12%, 18% and 10%
respectively) individuals who did finish primary school, but only

Zapotitlán Tablas (17%) was relatively well-represented in the column

headed 'complete primary'. More details are available in Appendix 16.

TABLE NO 38

Variable 27 (formal schooling) by Variable 2 (county)

County	1-0-Kinder	incom-plete 2-primary	complete 3-primary	incom-plete secon-4-dary	com-plete secon-5-dary	past junior 6-high	Row total
1 - Copalillo	102	84	19	12	6	4	227
	44.9%	37.0%	8.4%	5.3%	2.6%	1.8%	31.4%
2 - Alcozauca	90	100	28	10	5	10	227
	37.0%	41.2%	11.5%	4.1%	2.1%	4.1%	33.7%
3 - Zapotitlán	101	90	22	26	9	4	252
Tablas	40.1%	35.7%	8.7%	10.3%	3.6%	1.6%	34.9%
Column	293	274	69	48	20	18	722
Total	40.6%	38.0%	9.6%	6.6%	2.8%	2.6%	100.0%

The same general pattern can be seen from the above table and

holds true across counties. For all columns the individual percentages

of the three counties are similar to the average percentage at the bottom

of the columns. Zapotitlán Tablas had a slightly higher number of

individuals in the last three columns (39) than Copalillo (22) or

Alcozauca (25).

If we crosstab variable 27 with sex (variable 3), contrary to

what occurred with similar patterns for the number of hours spent

speaking Spanish, there is a difference in formal schooling between the

sexes at the lower levels. More men have attended primary school than

women (41% versus 36%), while fewer men have only a kindergarten or no

formal education than women (35% versus 46%). In the higher categories

the patterns are similar, which is interesting to note. Additional

information can be found in Appendix 17.

TABLE NO 39

Variable 27 (formal schooling) by Variable 4 (mother tongue)

Mother tongue	0 - 1-Kinder	incomplete 2-primary	complete 3-primary	incomplete secon- 4-dary	complete secon- 5-dary	past junior 6-high	Row Total
1 - Nahuatl	86	63	16	10	5	2	182
	47.3%	34.6%	8.8%	5.5%	2.7%	1.1%	25.2%
	29.4%	23.0%	23.2%	20.8%	25.0%	11.1%	
	11.9%	8.7%	2.2%	1.4%	0.7%	0.3%	
2 - Mixtec	84	88	22	6	3	5	204
	40.4%	42.3%	10.6%	2.9%	1.4%	2.4%	28.8%
	28.7%	32.1%	31.9%	12.5%	15.0%	27.8%	
	11.6%	12.2%	3.0%	0.8%	0.4%	0.7%	
3 - Tlapanec	87	76	15	20	8	2	208
	41.8%	36.5%	7.2%	9.6%	3.8%	1.0%	28.8%
	29.7%	27.7%	21.7%	41.7%	40.0%	11.0%	
	12.0%	10.5%	2.1%	2.8%	1.1%	0.3%	
4 - Bilingual	20	22	5	9	0	3	59
	33.9%	37.3%	8.5%	15.3%	0.0%	5.1%	8.2%
	6.8%	8.0%	7.2%	18.8%	0.0%	0.4%	
	2.8%	3.0%	0.7%	1.2%	0.0%	0.4%	
5 - Spanish	16	25	11	3	4	6	65
	24.6%	38.5%	16.9%	4.6%	6.2%	9.2%	9.5%
	5.5%	9.1%	15.9%	6.3%	20.0%	33.3%	
	2.2%	3.5%	1.5%	0.4%	0.6%	0.8%	
Column Total	293 40.6%	274 38.0%	69 9.6%	48 6.6%	20 2.8%	18 2.5%	722 100.0%

The results presented in this table are not surprising since the

three Indian tongues coincide with county boundaries. In addition to the

already known fact that most individuals (567 - 79%) have never finished

primary school, it is important to note that low levels of schooling are

not restricted to Indian language speakers. Some 71% of the bilinguals

and 63% of the Spanish speakers have similar levels of education.

Limited education is pervasive in these remote areas.

TABLE NO 40

Variable 27 (formal schooling) by Variable 5 (age)

Age	0 – 1-Kinder)	incomplete 2-primary)	(complete 3-primary)	incomplete secon- 4-dary)	complete secon- 5-dary)	past junior 6-high)	Row Total
1 – 0-6 years	106 79.7%	26 19.5%	1 0.8%	0 0.0%	0 0.0%	0 0.0%	133 18.4%
2 – 7-14	13 7.2%	136 75.1%	22 12.2%	10 5.5%	0 0.0%	0 0.0%	181 25.1%
3 – 15-24	20 13.8%	40 27.6%	33 22.8%	30 20.7%	13 9.0%	9 6.2%	145 20.1%
4 – 25-44	81 49.7%	51 31.3%	10 6.1%	7 4.3%	6 3.7%	8 4.9%	163 22.6%
5 – 45 and over	73 73.0%	21 21.0%	3 3.0%	1 1.0%	1 1.0%	1 1.0%	100 13.9%
Column Total	293 40.6%	274 38.0%	69 9.6%	48 6.6%	20 2.8%	18 2.5%	722 100.0%

While these results might seem somewhat disconcerting at first

glance, since the 7-14 and the 15-24 age groups show more years of formal

schooling, this is a logical consequence of the time and energy spent by

the Mexican Government to have all children attend school. Naturally the

youngest group has kindergarten or less. The two oldest groups (25-44

and 45 and over) show low levels of formal schooling--50% of the 25-44

age group has kindergarten or less and 31% unfinished elementary school,

while for the 45 and over group 73% had kindergarten or less and 21% had

not completed primary school.

In addition to schooling, another factor that potentially impinges on language proficiency is informal contact with the language outside the classroom, such as visits to other areas, Spanish-speaking visitors in their communities, buying and selling in markets where the language is spoken, administrative matters that must be handled in Spanish, etc. If we return to the frequency data, about 47% of the people interviewed said they had 'little' (none or a few weeks) contact with Spanish, 35% said they had 'a lot' (several months or years) and 18% claimed to have 'average' contact (a couple of months) with the language.

It was surprising to find that on a community level (variable 1), in Alcozauca some 46% claimed to have 'a lot' of outside contact with Spanish, since this town is a very isolated one. It will be important to investigate who these 46% are in the crosstabs that follow. All of the other communities (except Amolonga) had figures in the 30th percentile. Except for Alcozauca all communities had more individuals who claimed to have only 'a little' outside contact with Spanish than those who had 'a lot'. More detailed information is available in Appendix 18.

TABLE NO 41

Variable 39 (outside contact with Spanish) by Variable 2 (county)

County	1 - lot	2 - little	3 - average	row total
1 - Copalillo	79	112	36	227
	34.8%	49.3%	15.9%	31.4%
2 - Alcozauca	88	96	59	243
	36.2%	39.5%	24.3%	33.7%
3 - Zapotitlán	84	134	34	252
Tablas	33.3%	53.2%	13.5%	34.9%
Column	251	342	129	722
Total	34.8%	47.4%	17.9%	100.0%

Almost the same number of individuals in all three counties claimed to have 'a lot' of contact with Spanish (79 in Copalillo, 88 in Alcozauca and 84 in Zapotitlán). It immediately comes to light that although Alcozauca as county seat had more contact with Spanish, the other two smaller communities did not and have lowered the overall percentage on a county level. Figures were very similar for Copalillo, Alcozauca and Zapotitlán Tablas for the categories of little contact (50%, 41% and 53%) and 'average' contact (16%, 24% and 14%) respectively.

If we examine what occurred when we crosstabbed outside contact with sex (variable 3) a couple of interesting observations arise. Even though the percentages are very similar in each contact category (category 1:   38% versus 32%; 2:   42% versus 52%; and 3:   20% versus 15%) for males and females, there are more males in the 'lot of contact' and 'average contact' categories. Additional information can be found in Appendix 19.

TABLE NO 42

Variable 39 (outside contact with Spanish) by Variable 4 (mother tongue)

Mother tongue	1 - lot	2 - little	3 - average	Row total
1 - Nahuatl	39	109	34	182
	21.4%	59.9%	18.7%	25.2%
	15.5%	31.9%	26.4%	
	5.4%	15.1%	4.7%	
2 - Mixtec	54	96	58	208
	26.0%	46.2%	27.9%	28.8%
	21.5%	28.1%	45.0%	
	7.5%	13.3%	8.0%	
3 - Tlapanec	66	113	29	208
	31.7%	54.3%	13.9%	28.8%
	26.3%	33.0%	22.5%	
	9.1%	15.7%	4.0%	
4 - Bilinguals	35	17	7	59
	59.3%	28.8%	11.9%	8.2%
	13.9%	5.0%	5.4%	
	4.8%	2.4%	1.0%	
5 - Spanish	57	7	1	65
	87.7%	10.8%	1.5%	9.0%
	22.7%	2.0%	0.8%	
	7.9%	1.0%	0.1%	
Column Total	251	342	129	722
	34.8%	47.4%	17.9%	100.0%

Once again, the 'little' contact category prevails for the three Indian groups. Some 59% of the Nahuatl speakers chose this category, as did 46% of the Mixtec speakers and 54% of the Tlapanecs interviewed. The opposite occurred with the bilinguals, 59% of whom said they had 'a lot' of contact, as did the Spanish speakers (88%).

TABLE NO 43

Variable 39 (outside contact with Spanish) by Variable 5 (age)

Age	1 - lot	2 - little	3 - average	Row total
1 - 0-6 years	9	118	6	133
	6.8%	88.7%	4.5%	18.4%
2 - 7-14	38	103	40	181
	21.0%	56.9%	22.1%	25.1%
3 - 15-24	79	30	36	145
	54.5%	20.7%	24.8%	20.1%
4 - 25-44	82	58	23	163
	50.3%	35.6%	14.1%	22.6%
5 - 45 and over	43	33	24	100
	43.0%	33.0%	24.0%	13.9%
Column	251	342	129	722
Total	34.8%	47.4%	17.9%	100.0%

The age factor is also an important consideration when looking at outside contact with Spanish. The youngest age group (0-6) has had practically no outside contact, as would be expected (89%); nor has the next age group (7-14), where 57% had very limited outside contact. The middle age group, from 15-24, was the sector with the highest percentage of outside contact (55%), followed by the next age group from 25-44 with 50% and the oldest individuals (over 45) who had experienced 'a lot' of contact over the years (43%).

TABLE NO 44

Variable 39 (outside contact with Spanish)
by Variable 27 (formal schooling)

Formal Schooling	1 - lot	2 - little	3 - average	Row total
1 - none to Kindergarten	73 24.9% 29.1% 10.1%	188 64.2% 55.0% 26.0%	32 10.9% 24.8% 4.4%	293 40.6%
2 - incomplete primary	91 33.2% 36.3% 12.6%	124 45.3% 36.3% 17.2%	59 21.5% 45.7% 8.2%	274 38.0%
3 - complete primary	28 40.6% 11.2% 3.9%	19 27.5% 3.6% 2.6%	22 31.9% 17.1% 3.0%	69 9.6%
4 - incomplete secondary	27 56.3% 10.8% 3.7%	7 14.6% 2.0% 1.0%	14 29.2% 10.9% 1.9%	48 6.6%
5 - complete secondary	14 70.0% 5.6% 1.9%	4 20.0% 1.2% 0.6%	2 10.0% 1.6% 0.3%	20 2.8%
6 - past junior high	18 100% 7.2% 2.5%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	18 2.5%
Column Total	251 34.8%	342 47.4%	129 17.9%	722 100.0%

This table overlaps to a certain degree with the previous one since, for example, for the first age group, it is impossible to have more than one year of primary school and it is unusual for a child to have traveled at such a young age. Some 64% said they had 'little' contact, although another 25% had 'a lot' of contact (we must remember

that the bilinguals and native Spanish speakers are in this percentage).

The next group, which has not finished primary school, shows the same

general pattern, but with closer percentages--45% claimed 'little'

contact with Spanish, but 33% had 'a lot' of contact. For the group that

had completed primary school it was a quite different situation--41% had

'a lot' of contact with Spanish, 28% 'little' and another 32% 'average'.

Similar results were found for the group that had continued with their

education, going on to secondary school, but with lower percentages in

the less contact categories; for example, 56% had 'a lot' of contact, 15%

'little' contact and 29% 'average' contact. A considerable difference

was found for those who had finished secondary education (three years in

México): 70% claimed 'a lot' of contact with Spanish , and for those who

went past these three years (the equivalent of junior high school) 100%

claimed they had 'a lot' of contact with Spanish.

There is no doubt whatsoever that outside contact with the

Spanish language is related to formal schooling, undoubtedly due to a

large degree to the fact that it is usually necessary to leave your

native village to continue with formal schooling, which at the same time

awakens your interest in exploring other interests that often require a

command of Spanish.

Up to this point we have looked at the basic frequencies of all

44 variables in the study and the interviewees' self-evaluation of the

following, all considered to be components of their language proficiency

in Spanish: variable 9 (how well they spoke Spanish), variable 24 (how

many hours a day they spoke Spanish), variable 27 (formal schooling) and variable 39 (outside contact with Spanish). Since one of the major theoretical questions in research of this nature is whether or not a second language can be acquired informally or must be learned in a formal classroom setting, I decided to do multiple crosstabs on variables 27 and 39. The following table, which is much more complicated than the previous ones, is a crosstab between informal contact with Spanish (variable 39) and formal schooling (variable 27), controlling for the specific community (variable 1), sex (variable 3), mother tongue (variable 4) and age (variable 5). Hopefully this will shed some light on the interaction of these variables and will help us to understand the components of language proficiency in Spanish in these areas.

TABLE NO 45

An Analysis of Contact with Spanish (39) by Formal Schooling (27),
Controlling for Community (1), Sex (3), Mother Tongue (4) and Age (5)

Community   A   L o t   o f   C o n t a c t

1-Copalillo Mother Tongue		Spanish					Bilinguals					Nahuatls				
Schooling	Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to		-	-	-	(1)	-	-	-	(1)	-	-	-	-	-	(2)	(3)
kindergarten		1	-	-	1	1	-	-	2	-	1	-	-	1	-	-
2 - incomplete primary		-	(1)	(1)	-	-	-	-	-	-	-	-	-	-	(3)	(3)
		1	1	-	3	1	-	-	-	1	1	-	-	-	1	-
3 - complete primary		-	-	-	-	(1)	-	-	(1)	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete		-	-	-	-	-	-	-	-	-	-	-	-	(2)	-	-
secondary		-	-	1	-	-	-	-	-	-	-	-	-	1	-	-
5 - complete secondary		-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
6 - past junior high		-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
		-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Total		2	2	2	5	3	0	0	5	2	2	0	0	7	7	6

( ) indicates male subjects

L i t t l e   C o n t a c t

Mother Tongue	Spanish					Bilinguals					Nahuatls				
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 – none to	–	–	–	–	–	–	–	–	–	–	(6)	–	(1)	(1)	(1)
kindergarten	–	–	–	–	–	–	–	–	–	–	10	–	1	5	5
2 – incomplete	–	–	–	–	–	–	–	–	–	–	–	(6)	–	(1)	(1)
primary	–	–	–	–	–	–	–	–	–	–	–	3	–	1	–
3 – complete	–	–	–	–	–	–	–	–	–	–	–	(2)	(2)	–	–
primary	–	–	–	–	–	–	–	–	–	–	–	5	1	–	–
4 – incomplete	–	–	–	–	–	–	–	–	–	–	–	–	(1)	–	–
secondary	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–
5 – complete	–	–	–	–	–	–	–	–	–	–	–	–	(1)	–	–
secondary	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
6 – past junior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
high	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	0	0	0	0	0	0	0	0	0	0	16	16	10	8	7

( ) indicates male subjects

A v e r a g e   C o n t a c t

	Mother tongue	Spanish					Bilinguals					Nahuatls				
Schooling	Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to		–	–	–	–	–	(1)	–	–	–	–	–	–	–	–	(6)
kindergarten		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 - incomplete		–	–	–	–	–	–	–	–	–	–	–	(2)	(2)	–	(1)
primary		–	–	–	–	–	–	–	–	–	–	–	2	1	–	–
3 - complete		–	–	–	–	–	–	–	–	–	–	–	(1)	–	(2)	–
primary		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4 - incomplete		–	–	–	–	–	–	–	–	–	–	–	–	(3)	–	–
secondary		–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
5 - complete		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
secondary		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6 - past junior		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
high		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total		0	0	0	0	0	1	0	0	0	0	0	5	7	2	7

( ) indicates male subjects

In Copalillo all native Spanish speakers and all bilinguals except one are in the 'lot of contact' group, as could be expected. Quite the opposite happens with the native Nahuatl speakers, of whom only 20 claimed to have a lot of contact, another 21 who claimed average contact, and a majority (57) who said they had little contact outside their community with Spanish speakers. Most of those with greater contact were older speakers, which could be expected. In all cases formal schooling seems to be independent of outside contact. Men predominate in the 'lot of contact' group and women in the 'little contact' group.

Community						A Lot of Contact										
Tlalcozotitlán	S	p	a n	i s	h	B i l	i	n g	u a l	s	N a h	u	a t	l	s
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none of	-	-	-	-	(1)	-	-	-	-	-	-	-	-	(1)	-
kindergarten	-	-	-	-	-	-	-	-	-	1	-	-	-	3	1
2 - incomplete	-	(1)	-	-	-	-	-	-	-	-	-	(1)	-	-	-
primary	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Total	0	1	0	1	1	0	3	0	1	1	0	2	1	4	1

( ) indicates male subjects

Little Contact

Tlalcozotitlán Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Nahuatls 1	2	3	4	5
1 - none to kindergarten	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	(6) 6	- -	- 1	- 1	- -
2 - incomplete primary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3 - complete primary	- -	- -	- -	. -	- -	- -	- -	- -	- -	- -	- -	- -	(1) -	- -	- -
4 - incomplete secondary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5 - complete secondary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
6 - past junior high	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	0	0	0	0	0	0	0	0	0	0	14	6	3	0	0

Average Contact

Tlalcozotitlán Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Nahuatls 1	2	3	4	5
1 - none to kindergarten	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	(1) -	1 -	- -	- -	- -
2 - incomplete primary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 -	- -	- -	- -
3 - complete primary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
4 - incomplete secondary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
5 - complete secondary	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
6 - past junior high	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0

( ) indicates male subjects

A Lot Of Contact

El Cascalote Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Nahuatls 1	2	3	4	5
1 - none to		-	-	-	-	-	-	-	-	2	-	-	-	(1)	(1)	-
kindergarten		-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
2 - incomplete		-	-	-	-	-	-	-	-	-	-	-	(2)	(1)	(2)	(1)
primary		-	-	-	-	-	-	3	1	-	-	-	1	-	1	-
3 - complete		-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
primary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	(1)	-	-	-	-	-	-	-	-	-	-	-
5 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	2	0	0	3	1	0	2	0	4	3	4	1

Little Contact

El Cascalote Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Nahuatls 1	2	3	4	5
1 - none to		-	-	-	-	-	(1)	-	-	-	-	(5)	-	-	-	-
kindergarten		-	-	-	-	-	-	-	-	-	-	6	-	1	3	2
2 - incomplete		-	-	-	-	-	-	-	-	1	-	-	(5)	(1)	-	-
primary		-	-	-	-	-	-	-	-	-	-	-	3	-	2	-
3 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	0	0	1	0	0	1	0	11	8	2	5	2

( ) indicates male subjects

Average   Contact

La Cascalote	Spanish					Bilinguals					Nahuatls				
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(3)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
2 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	1	(4)	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	5	4

The same pattern holds true for the other two communities with regard to Spanish speakers and bilinguals. It is worth mentioning those who respond 'a lot' (Nahuatls) are mostly women in Tlalcozotitlán, but this is not the case in El Cascalote, where there is a greater age spread. Once again, degree of contact seems to be independent of formal schooling. For both communities most of the Nahuatl speakers fall into the 'little contact' or 'average contact' categories.

( ) indicates male subjects

A Lot of Contact

Tlahuapa Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to kindergarten		-	-	-	-	-	-	-	-	-	-	-	-	(1)	(5)	(1)
		-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
2 - incomplete primary		-	-	-	-	-	-	-	-	-	-	(1)	(1)	(1)	(2)	(2)
		-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
3 - complete primary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	0	0	0	0	0	0	0	1	2	5	9	3

Little Contact

Tlahuapa Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to kindergarten		-	-	-	-	-	-	-	-	-	-	(6)	-	-	(2)	(3)
		-	-	-	-	-	-	-	-	-	-	7	-	-	3	2
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 - incomplete primary		-	-	-	-	-	-	-	-	-	-	-	(3)	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	6	-	-	-
3 - complete primary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	0	0	0	0	0	0	0	13	9	0	5	5

( ) indicates male subjects

Average Contact

Tlahuapa Schooling Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	(2)	-
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 - incomplete	-	-	-	-	-	-	-	-	-	-	-	(2)	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	(1)	1	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	0	0	0	0	1	4	0	2	0

A Lot of Contact

Alcozauca Schooling Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to	-	(1)	-	-	(2)	-	-	-	1	2	-	-	1	(3)	(2)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
2 - incomplete	2	(2)	-	(1)	-	2	-	-	(1)	-	-	(2)	(1)	-	-
primary	-	2	1	1	-	-	-	-	-	-	-	2	5	-	-
3 - complete	-	(1)	(1)	-	(1)	-	-	(1)	-	-	-	(2)	(2)	-	(1)
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	(1)	-	-	-	(1)	(1)	-	-	-	(3)	1	-
secondary	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
5 - complete	-	-	-	1	-	-	-	-	-	-	-	-	(2)	(1)	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	(1)	(2)	(1)	-	-	-	-	-	-	-	(1)	(2)	-
high	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	6	4	6	4	2	0	2	4	2	0	6	15	8	3

( ) indicates male subjects

Little   Contact

Alcozauca Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to		-	-	-	-	-	-	-	-	-	-	-	-	1	(5)	(2)
kindergarten		-	-	-	-	-	-	-	-	-	-	-	-	-	7	-
2 - incomplete		-	-	-	-	-	-	-	-	-	-	(3)	(6)	-	-	-
primary		-	-	-	-	-	-	-	-	-	-	1	5	-	-	-
3 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondar		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	0	0	0	0	0	0	0	4	11	1	12	2

Average   Contact

Alcozauca Schooling	Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 - none to		-	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(3)
kindergarten		-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
2 - incomplete		-	-	-	-	-	-	-	-	-	-	(1)	(5)	(3)	(1)	-
primary		-	-	-	-	-	-	-	-	-	-	2	2	3	1	1
3 - complete		-	-	-	-	-	-	1	-	-	-	-	-	(8)	-	-
primary		-	-	-	-	-	-	-	-	-	-	-	-	4	1	-
4 - incomplete		-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
5 - complete		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		0	0	0	0	0	0	1	0	0	0	3	7	20	5	5

( ) indicates male subjects

A Lot of Contact

Amolonga Schooling Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 – none to kindergarten	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 – incomplete primary	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
3 – complete primary	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
4 – incomplete secondary	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5 – complete secondary	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6 – past junior high	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

Little Contact

Amolonga Schooling Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Mixtecs 1	2	3	4	5
1 – none to kindergarten	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 – incomplete primary	–	–	–	–	–	–	–	–	–	–	(3) / 7	–	2	4	3
3 – complete primary	–	–	–	–	–	–	–	–	–	–	–	(7) / 4	2	2	–
4 – incomplete secondary	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5 – complete secondary	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6 – past junior high	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	0	0	0	0	0	0	0	0	0	0	10	11	2	6	3

( ) indicates male subjects

A v e r a g e   C o n t a c t

Amolonga Schooling	Age	S p a n i s h					B i l i n g u a l s					M i x t e c s				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to		-	-	-	-	-	-	-	-	-		-	-	-	-	-
kindergarten		-	-	-	-	-	-	-	-	-		-	-	-	-	-
2 - incomplete		-	-	-	-	-	-	-	-	-		-	-	1	-	(1)
primary		-	-	-	-	-	-	-	-	-		-	-	-	-	-
3 - complete		-	-	-	-	-	-	-	-	-		-	-	(1)	-	-
primary		-	-	-	-	-	-	-	-	-		-	-	1	-	-
4 - incomplete		-	-	-	-	-	-	-	-	-		-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-		-	-	-	-	-
5 - complete		-	-	-	-	-	-	-	-	-		-	-	-	-	-
secondary		-	-	-	-	-	-	-	-	-		-	-	-	-	-
6 - past junior		-	-	-	-	-	-	-	-	-		-	-	-	-	-
high		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Total		0	0	0	0	0	0	0	0	0	0	0	0	3	0	1

( ) indicates male subjects

In the county seat of Alcozauca nearly all native Spanish-speakers and bilinguals are in the group of 'much contact' with Spanish outside their community. There are no Spanish-speakers nor bilinguals in the other two communities. Of those who speak Mixtec natively and claim to have a lot of contact with Spanish in Alcozauca (15) most are in the 15-24 age group, although the next lowest and next highest age groups are also well-represented with 6 and 8 individuals respectively. There are twice as many men as women (22 versus 10), but in all cases they are concentrated in the 0-K or incomplete primary school category.

An almost identical pattern can be found in Tlahuapa, the next largest town studied in this county and the same can be said for

Amolonga, which is barely represented in this group with only two speakers.

With respect to those who say they have 'average contact', this was the category most Mixtecs from Alcozauca belong to, especially for the 15-24 age group, which is represented by 20 individuals--most of these individuals have finished primary school. Once again, there are more men than women (23 versus 17). There were very few individuals in this category in the other two communities.

Referring exclusively to the native Mixtec-speaking group, there are numerous individuals in the 'little contact' group in Alcozauca, in spite of the fact that it is the county seat. While there were some 32 people in the 'lot of contact' group and another 41 in the 'average contact' section, 31 claim to have 'little contact' with Spanish. There the same number of individuals in the 25-44 age range as in the 7-14 age group, and there is not much difference in sexes (16 men versus 14 women). They all have minimum formal schooling.

A Lot of Contact

Zapotitlán Tablas Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Tlapanec 1	2	3	4	5
1 - none to	-	1	-	-	-	-	-	-	-	-	(1)	-	-	(4)	(1)
kindergarte	-	-	-	-	-	-	-	-	-	-	-	2	-	2	1
2 - incomplete	-	-	-	-	(1)	-	-	-	(1)	1	1	1	-	(2)	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
3 - complete	-	-	1	3	-	-	-	-	(1)	-	-	-	(1)	(1)	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
4 - incomplete	-	1	-	-	-	-	-	(1)	-	-	-	-	(3)	(1)	(1)
secondary	-	-	-	-	-	-	-	1	-	-	-	-	4	-	-
5 - complete	-	-	-	(1)	-	-	-	-	-	-	-	-	(3)	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	1	-	-	-	(1)	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Total	0	2	1	4	1	0	0	2	3	1	2	3	14	13	3

Average Contact

Zapotitlán Tablas Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Tlapanecs 1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	2	(1)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
2 - incomplete	-	-	-	-	-	-	-	-	-	-	-	(1)	-	(2)	-
primary	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	3	-	-	-	-	(1)	1	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	3	0	0	0	0	7	3	6	4

( ) indicates male subjects

L i t t l e   C o n t a c t

Zapotitlán Tablas	S p a n i s h					B i l i n g u a l s					T l a p a n e c s				
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	(1)	-	-	-	-	(1)	-	-	(1)	-	(6)	(1)	-	6	(1)
kindergarten	2	-	-	-	-	2	-	-	-	-	8	1	-	-	5
2 - incomplete	-	(1)	-	-	1	-	(2)	-	-	-	(2)	(5)	(1)	(1)	(4)
primary	-	-	-	-	-	-	1	-	-	-	-	4	1	2	1
3 - complete	-	1	-	-	-	-	-	-	-	-	-	(1)	-	1	(-)
primary	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	2	(1)	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3	2	0	0	1	3	3	0	1	0	16	15	6	10	11

County   A   L o t   o f   C o n t a c t

Escalerilla lagunas	S p a n i s h					B i l i n g u a l s					T l a p a n e c s				
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	(1)	2	2	(2)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
2 - incomplete	-	-	-	-	-	-	-	-	-	-	6	2	(2)	(3)	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	0	0	0	0	6	3	8	6	4

( ) indicates male subjects

A v e r a g e   C o n t a c t

Escalerilla Lagunas Schooling / Age	Spanish					Bilinguals					Tlapanecs				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(1)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 - complete	-	-	-	-	-	-	-	(1)	-	-	-	-	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	0	0	1	0	0	0	0	1	2	1

L i t t l e   C o n t a c t

Escalerilla Langunas Schooling / Age	Spanish					Bilinguals					Tlapanecs				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	-	-	-	-	-	(1)	-	-	-	-	(5)	(1)	-	(1)	(1)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	5	-	2	1
2 - incomplete	-	-	-	-	-	-	-	-	-	-	(2)	(5)	(1)	2	-
primary	-	-	-	-	-	-	-	-	-	-	4	2	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	(1)	(1)	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	1	0	0	0	0	11	15	2	5	2

( ) indicates male subjects

County   A   L o t   o f   C o n t a c t

Ahuixotitla Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Tlapanecs 1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(1)
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
2 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(2)	(1)
primary	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
3 - complete	-	-	1	-	-	-	-	-	-	-	-	-	(1)	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	1	0	0	0	0	0	0	0	0	0	5	4	3

L i t t l e   C o n t a c t

Ahuixotitla Schooling / Age	Spanish 1	2	3	4	5	Bilinguals 1	2	3	4	5	Tlapanecs 1	2	3	4	5
1 - none to	-	-	-	-	-	(2)	-	-	1	-	(2)	-	1	1	(1)
kindergarten	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
2 - incomplete	-	-	-	-	-	-	3	-	-	-	(1)	(4)	-	2	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	0	0	0	0	2	3	0	1	0	5	4	2	3	1

( ) indicates male subjects

Average   Contact

Ahuixotitla	Spanish					Bilinguals					Tlapanecs				
Schooling Age	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 - none to	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 - incomplete	-	1	-	-	-	-	1	-	-	-	-	(1)	-	(1)	(1)
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
primary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 - incomplete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
secondary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - past junior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
high	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0	1	0	0	0	0	1	0	0	0	0	1	0	1	2

( ) indicates males subjects

Beginning with the Spanish speakers in the county seat, 8 of them claim to have 'a lot of contact' with Spanish, which is logical, but another 6, somewhat surprisingly claim to have only 'little contact' outside of their community with Spanish. A similar pattern is found with bilinguals. In both cases formal schooling is varied in the case of 'a lot of contact' and restricted to primary schooling or less in the case of those individuals who have 'little contact'. There are more women than men in most categories, apparently due to the number present in the sample. This is also the case of the two smaller communities.

With respect to native Tlapanec speakers, as has occurred in the past, most of the population either fell within the 'little contact' or

±a lot of contact' groups. Of those who had a lot of contact in the county seat of Zapotitlán Tablas (35), most were in the 25-24 or 25-44 age groups (27), of which 16 were men and 11 women. Of the 35 in this group the predominant schooling categories were less than kindergarten (11) and unfinished junior high school (9), showing a higher degree of formal schooling than in most cases.

Another large group is found in ±little contact', claimed by some 57 Speakers. The predominant age groups were under 6, between 7-14 and over 45 years of age, almost equally divided between the sexes. Most of the individuals have less than a primary school education.

Researcher's Evaluation

Thus far we have studied the results of the interviewees' answers and self-evaluations. In this section we will look at their scores for variables 40 (turn-taking), 43 (morphosyntaxic) and 44 (expansion) as evaluated by the researcher. In general, the subjects did very well on the turn-taking section. Some 53% received the highest score possible (9), while an additional 20% received the next best scores (7 and 8). The only other important category were those who received a '3' (9%).

By community, (variable 1) there were a few important considera-tions. Of the 9% who received a '3', most individuals were in Tlahuapa or Amolonga in the county of Alcozauca, while those who scored a '9' came from the county seats (Copalillo - 18%, Zapotitlán Tablas - 25%, and Alcozauca - 24%). More details are available in Appendix 20.

TABLE NO 46

Variable 40 (turn-turning) by Variable 2 (county)

Score	1 - Copalillo	2 - Alcozauca	3 - Zapotitlán Tablas	Row Total
0	0 0.0%	1 100.0%	0 0.0%	1 0.1%
1	1 50.0%	0 0.0%	1 50.0%	2 0.3%
2	9 64.3%	4 28.6%	1 7.1%	14 1.9%
3	7 10.4%	48 71.6%	12 17.9%	67 9.3%
4	11 37.9%	8 27.6%	10 44.5%	29 4.0%
5	11 34.4%	11 34.4%	10 31.3%	32 4.4%
6	19 39.6%	17 35.4%	12 25.0%	48 6.6%
7	26 35.6%	24 32.9%	23 31.5%	73 10.1%
8	21 30.1%	25 34.2%	27 35.6%	73 10.1%
9	121 31.6%	105 27.4%	157 41.0%	383 53.2%
Column Total	227 31.4%	243 33.7%	252 34.9%	722 100.0%

On a county level most of the lower scores ('2' and '3') came from Copalillo and Alcozauca, while the other scores were fairly evenly distributed. Zapotitlán Tablas had more in the '8' and '9' categories (36% and 41% respectively) than the other two counties.

There were no important differences between the sexes (variable 3) for variable 40 (turn-taking) with scores '6', '7' and '8'; however, most of the lower scores (1-5) were attributed to females, while a higher percentage of the highest scores ('9') were attributed to males. For further details see Appendix 21.

TABLE NO 47

Variable 40 (turn-taking) by Variable 4 (mother tongue)

Score	Nahuatls	Mixtecs	Tlapanecs	Bilinguals	Spanish	Row total
0	0	1	0	0	0	1
	100.0%	100.0%	0.0%	0.0%	0.0%	0.1%
	0.0%	0.5%	0.0%	0.0%	0.0%	
	0.0%	0.1%	0.0%	0.0%	0.0%	
1	1	0	1	0	0	2
	50.0%	0.0%	50.0%	0.0%	0.0%	0.3%
	0.5%	0.0%	0.5%	0.0%	0.0%	
	0.1%	0.0%	0.1%	0.0%	0.0%	
2	9	4	1	0	0	14
	64.3%	28.6%	7.1%	0.0%	0.0%	1.9%
	4.9%	1.9%	0.5%	0.0%	0.0%	
	1.2%	0.6%	0.1%	0.0%	0.0%	
3	7	48	11	0	1	67
	10.4%	71.6%	16.4%	0.0%	1.5%	9.3%
	3.8%	23.1%	5.3%	0.0%	1.5%	
	1.0%	6.6%	1.5%	0.0%	0.1%	
4	10	8	10	1	0	29
	34.5%	27.6%	34.5%	3.4%	0.0%	4.0%
	5.5%	3.8%	4.8%	1.7%	0.0%	
	1.4%	1.1%	1.4%	0.1%	0.0%	
5	11	11	9	1	0	32
	34.4%	34.4%	28.1%	3.1%	0.0%	4.4%
	6.0%	5.3%	4.3%	1.7%	0.0%	
	1.5%	1.5%	1.2%	0.1%	0.0%	
6	18	17	11	1	1	48
	37.5%	35.4%	22.9%	2.1%	2.1%	6.6%
	9.9%	8.2%	5.3%	1.7%	1.5%	
	2.5%	2.4%	1.5%	0.1%	0.1%	
7	23	23	21	4	2	73
	31.5%	31.5%	28.8%	5.5%	2.7%	10.1%
	12.6%	11.1%	10.1%	6.8%	3.1%	
	3.2%	3.2%	2.9%	0.6%	0.3%	
8	16	21	23	7	6	73
	21.9%	28.8%	31.5%	9.6%	8.2%	10.1%
	8.8%	10.1%	11.1%	11.9%	9.2%	
	2.2%	2.9%	3.2%	1.0%	0.8%	
9	87	75	121	45	55	383
	22.7%	19.6%	31.6%	11.7%	14.4%	53.0%
	47.8%	36.1%	58.2%	76.3%	84.6%	
Total	182	208	208	59	65	722
	25.2%	28.8%	28.8%	8.2%	9.0%	100.0%

Once again, the dominating score is '9' for all language groups, followed by '7' and '8', which when combined constitutes about 75% of all the grades; however, within each language group there is a difference between the percentages the '9' represented. For the Spanish-speaking group, 85% of all individuals in the survey received a '9'; in the bilingual group 76% received the same score. It was considerably lower for the Indian groups: 58% for the Tlapanecs, 48% for the Nahuatls and 36% for the Mixtecs. This information does point to a clear difference in native and non-native communicative competence.

TABLE NO 48

Variable 40 (turn-taking) by Variable 5 (age)

Score	1 - 0-6	2 - 7-14	3 - 15-24	4 - 25-44	45 and 5 - over	Row total
0	0	0	0	1	0	1
	0.0%	0.0%	0.0%	100.0%	0.0%	0.1%
1	2	0	0	0	0	2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.3%
2	11	1	2	0	0	14
	78.6%	7.1%	14.3%	0.0%	0.0%	1.9%
3	15	11	5	22	14	67
	22.4%	16.4%	7.5%	32.8%	20.9%	9.3%
4	17	7	2	2	1	29
	58.6%	24.1%	6.9%	6.9%	3.4%	4.0%
5	21	8	1	2	0	32
	65.6%	25.0%	3.1%	6.3%	0.0%	4.4%
6	19	22	3	3	1	48
	39.6%	45.2%	6.3%	6.3%	2.1%	6.6%
7	14	33	8	6	12	73
	19.2%	45.8%	11.0%	8.2%	16.4%	10.1%
8	15	29	12	9	8	73
	20.5%	39.7%	16.4%	12.3%	11.0%	10.1%
9	19	70	112	118	64	383
	5.0%	18.3%	29.2%	30.8%	16.7%	53.0%
Total	133	181	145	163	100	722
	18.4%	25.1%	20.1%	22.6%	13.9%	100.0%

If we analyze the turn-taking results by age groups we will see that 53% of all individuals got a '9', as reported in previous tables. There were important differences in who received the lowest and highest scores however. The youngest age range (0-6) received 100% of the '1' scores and 79% of all '2's, 59% of all '3's and 66% of all '5's but

represented only 5% of all individuals is awarded a '9'.

For the second age group (7-14) a low percentage got a '1', '2'
or '3' but received 46% of the '6' scores 45% of the '7' scores and 40%
of the '8's. The third group (15-24) was not particularly strong in any
category but did have 29% of the '9' scores.

The last two age groups (25-44 and over 45) show similar
patterns. Although 33% and 21% respectively received only a '3', nearly
the same percentage received a '9' (31% and 17%).

TABLE NO 49*

Variable 40 (turn-taking) by Variable 27 (formal schooling)

Scores	1 0-Kinder	2 incomplete primary	3 complete primary	4 incomplete secondary	5 complete secondary	6 past junior high	Row total
0	1	0	0	0	0	0	1
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
1	2	0	0	0	0	0	2
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	
	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
2	13	1	0	0	0	0	14
	92.9%	7.1%	0.0%	0.0%	0.0%	0.0%	1.9%
	4.4%	0.4%	0.0%	0.0%	0.0%	0.0%	
	1.8%	0.1%	0.0%	0.0%	0.0%	0.0%	
3	52	15	0	0	0	0	67
	77.6%	22.4%	0.0%	0.0%	0.0%	0.0%	9.3%
	17.7%	5.5%	0.0%	0.0%	0.0%	0.0%	
	7.2%	2.1%	0.0%	0.0%	0.0%	0.0%	
4	21	7	1	0	0	0	29
	72.4%	24.1%	3.4%	0.0%	0.0%	0.0%	4.0%
	7.2%	2.6%	1.4%	0.0%	0.0%	0.0%	
	2.9%	1.0%	0.1%	0.0%	0.0%	0.0%	
5	20	12	0	0	0	0	32
	62.5%	37.5%	0.0%	0.0%	0.0%	0.0%	
6	22	24	2	0	0	0	48
	45.8%	50.0%	4.2%	0.0%	0.0%	0.0%	6.6%
	7.5%	8.8%	2.9%	0.0%	0.0%	0.0%	
	3.0%	3.3%	0.3%	0.0%	0.0%	0.0%	
7	24	37	8	4	0	0	73
	32.9%	50.7%	11.0%	5.5%	0.0%	0.0%	10.1%
	8.2%	13.5%	11.6%	8.3%	0.0%	0.0%	
	3.3%	5.1%	1.1%	0.6%	0.0%	0.0%	
8	29	34	6	3	1	0	73
	39.7%	46.6%	8.2%	4.1%	1.4%	0.0%	10.1%
	9.9%	12.4%	8.7%	6.3%	5.0%	0.0%	
	4.0%	4.7%	0.8%	0.4%	0.1%	0.0%	
9	109	144	52	41	19	18	383
	28.5%	37.6%	13.6%	10.7%	5.0%	4.7%	53.0%
	37.2%	52.6%	75.4%	85.4%	95.0%	100.0%	
	15.1%	19.9%	7.2%	5.7%	2.6%	2.5%	
Column Total	293	274	69	48	20	18	722
	40.6%	38.0%	9.6%	6.6%	2.8%	2.5%	100%

* In this table 2 lines of data of score 5 were missing by the computer.

The results from this crosstab are very clear: there is a strong relationship between the degree of formal schooling and turn-taking ability. Of those individuals who had more than a junior high school education, the highest category, all of them received a '9'. Of those who had finished secondary school the case was nearly the same--95% received a '9' and 5% an '8'. Of the subjects who had not yet completed secondary school, 85% received a '9', 6% an '8' and 8% a '7'. The table has more diverse and lower percentages for these with higher grades but less education. If we look at the group that finished primary school, we will see that 75% received a '9', 9% an '8' and 12% a '7'. For the lowest educational categories (incomplete primary and no schooling or kindergarten) the percentages were 53%, 12% and 14% For those who did not graduate, and 37%, 10% and 8% For those with the least education for the '9', '8' and '7' scores respectively. The remaining percentages in the case of less schooling were distributed in the lower scores, as can be seen in the table.

TABLE NO 50

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable 27 (formal schooling) and Variable 40 (turn-taking)

Age	0 - 6	7 - 14	15 - 24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	15 - 9	29 - 10	49 - 8	29 - 13	19 - 12
	20%	25%	23%	40%	41%
2 - Mixtec	13 - 9	26 - 10	39 - 11	13 - 16	13 - 9
		27 - 10			
		29 - 10			
	30%	18% x 3	23%	35%	41%
3 - Tlapanec	16 - 7	29 - 11	29 - 10	29 - 18	19 - 15
			49 - 10		
	18%	23% ·	25% x 2	36%	48%
4 - Bilingual	19 - 3	29 - 10	49 - 3	29 - 3	19 - 6
				49 - 3	
	27%	59%	27%	25% x 2	75%
5 - Spanish	29 - 4	29 - 5	39 - 3	29 - 3	19 - 3
					29 - 3
	45%	31%	43%	29%	30% x 2

* An explanation of how to read such a complicated table is in order. For example, for Nahuatls, in the 0-6 age group 9 individuals have a '1-5' combination, where the '1' refers to the lowest category of formal schooling on a scale of 1-6 and the '5' refers to an average turn-taking score on a scale of 1-9. The 20% means that this was the combination with the highest percentage of individuals for this age and language group. Supporting data can be found in Appendix 22.

With respect to the crosstabs between mother tongue by age, by schooling, and by turn-taking in the interview, we see the following results based on the combination with the highest number of individuals in each group determined by a crosstab between the four variables. Back-up data compiled from computer print-outs can be found in Appendix 22. Similar findings result if we look at all combinations with more than eight individuals in each block, but these data are not presented for the sake of economy.

As can be seen from first table, in the 0-6 age range all groups have little formal schooling. The Mixtec children were poor turn-takers, but the Nahuatl and Tlapanec children did better. Both the bilingual children and the native Spanish speakers were excellent turn-takers in spite of their young age. In the 7-14 age group most have incomplete primary school but their score is high in all cases for turn-taking, which leads us to believe that formal schooling does have an impact on the sociolinguistic aspects of language, Spanish in this case. In the 15-24 age group we find a higher level of schooling in all cases and once again all received high scores on the turn-taking section. For the 25-44 age group formal schooling drops once again mainly to incomplete primary school, most likely due to the fact that it was harder to go to school when the people in this age range were school-age. Turn-taking remained high except for the Mixtec group, which has the lowest degree of schooling and is also the most isolated group geographically. In the last age group, 45 and older, formal schooling drops to kindergarten or less in all cases, but, with the exception of the Mixtecs once again

turn-taking remains extremely high.

On the basis of the data, one can conclude that the schools do have an impact on school-age children and socialize them in proper turn-taking behavior, but that those people with little formal schooling acquire these rules in informal contact with Spanish-speakers. The data stemming from crosstabs with variable 39 (contact) should shed more light on this subject.

TABLE NO 51

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable 39 (outside contact with Spanish) and Variable 40 (turn-taking)

Age	0 - 6	7 - 14	15 - 24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	25 - 10	26 - 9	19 - 12	19 - 12	19 - 8
	24%	21%	35%	36%	32%
2 - Mixtec	23 - 9	23 - 9	19 - 17	23 - 18	23 - 9
	28%	16%	34%	41%	36%
3 - Tlapanec	26 - 7	29 - 14	19 - 25	19 - 21	19 - 9
	28 - 7				
	18% x 2	29%	63%	42%	29%
4 - Bilingual	29 - 3	29 - 5	19 - 8	19 - 10	19 - 8
		39 - 5			
	27%	30% x 2	73%	83%	100%
5 - Spanish	19 - 4	19 - 7	19 - 9	19 - 19	19 - 10
	43%	44%	100%	91%	100%

* This table is to be interpreted just as Table 50 for variable 27 (formal schooling), except for the fact that the scale for outside contact is from 1-3 (1 = a lot, 2 = little and 3 = average). Supporting data can be found in Appendix 23.

With respect to the crosstabs between mother tongue by age, by
outside contact with Spanish and by turn-taking using only the
combination with the highest number of individuals in each group
determined by crossing the four variables, lead to the following results.
Back-up data can be found in Appendix 23.

If we look at the 0-6 age range we see almost identical results
for the three Indian groups as with schooling/turns, which is understand-
able since very young children do not normally spend much time outside
their villages. Both the bilinguals and the Spanish speakers have
frequent contact, which is also logical and undoubtedly important for the
bilinguals to maintain their proficiency in Spanish. In the 7-14 age
group, with the exception of the Tlapanecs, who are always good
turn-takers, the Nahuatls and the Mixtecs both have little contact and
either low or average turn-taking ability, in spite of the fact that when
we crosstabbed their turn-taking ability with formal schooling there was
a much stronger relationship. Perhaps their contact is on visits with
their parents where they do not enter into conversations themselves and
do not master the rules through informal contact. In the 15-24 age group
all the groups claim to have a lot of outside contact with Spanish and
also scored high in turn-taking. Undoubtedly this is the case since they
often leave their villages for further schooling, to do seasonal migrant
work, to sell their wares, etc. In the 25-44 age group the same pattern
repeats itself with the exception of the mixtecs, who parallel their
behavior in formal schooling, which undoubtedly has repercussions on
their turn-taking ability. The same situation is true of the group 45

years and older, which lends support to the observation that the sociolinguistic rules of turn-taking can be acquired informally as well as learned in the classroom.

The next variable chosen for analysis is morphosyntax (variable 43). If we return to the frequency data we will see that a '4' was the most frequent score (31%), followed by a '3' with 28%. The other scores were almost evenly divided among '1's (14%), '2's (14%) and '5's (13%) and were lower in general than scores for turn-taking (even if we take into account that the scales are different.)

On a community level (variable 1) Copalillo and Zapotitlán Tablas achieved the highest percentage of the top score ('5') with 31% and 46% respectively. Alcozauca, the third county seat, had 20% of the subjects interviewed in this category as well. Most of the smaller towns were in the '2', '3' and '4' categories. For further information see Appendix 24.

TABLE NO 52[*]

Variable 43 (morphosyntax) by Variable 2 (county)

County	1	2	3	4	5	Total
1 - Copalillo	32	25	60	69	39	225 .
	14.1%	11.0%	26.4%	30.4%	17.2%	31.4%
	31.4%	24.5%	29.7%	30.9%	43.3%	
	4.4%	3.5%	8.3%	9.6%	5.4%	
2 - Alcozauca	56	42	61	51	32	243
	23.0%	17.3%	25.1%	21.0%	13.2%	33.7%
	54.9%	41.2%	30.2%	22.9%	35.6%	
	7.8%	5.8%	8.4%	7.1%	4.4%	
3 - Zapotitlán Tablas	14	35	81	103	19	252
	5.6%	13.9%	32.1%	40.9%	7.5%	34.9%
	13.7%	34.3%	40.1%	46.2%	21.1%	
	1.9%	4.8%	11.2%	14.3%	2.6%	
Column	102	102	202	223	90	722
Total	14.1%	14.1%	28.0%	30.9%	12.5%	100%

On a county level similar results were found, but with some important variations. Of the 313 individuals who received a '4' or a '5', 122 were in Zapotitlán, 108 in Copalillo and only 83 in Alcozauca. Quite the contrary is true if we look at the lowest grades ('1' and '2'), where 98 are from Alcozauca, 57 from Copalillo and only 49 from Zapotitlán Tablas.

With respect to how these data vary between the sexes (variable 3), once again we see that there are more women in the lowest scoring categories, but more women than men got a '5'. Details can be found in Appendix 25.

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[*] In this table 3 individuals are missing due to a computer error.

TABLE NO 53[*]

Variable 43 (morphosyntax) by Variable 4 (mother tongue)

County	1	2	3	4	5	row total
1 - Nahuatl	30	25	59	57	9	182
	16.5%	13.7%	32.4%	31.3%	4.9%	25.2%
	29.4%	24.5%	29.2%	25.6%	10.0%	
	4.2%	3.5%	8.2%	7.9%	1.2%	
2 - Mixtec	56	42	62	46	1	208
	26.9%	20.2%	29.8%	22.1%	0.5%	28.8%
	54.9%	41.2%	30.7%	20.6%	1.1%	
	7.8%	5.8%	8.6%	6.4%	0.1%	
3 - Tlapanec	13	34	76	83	2	208
	6.3%	16.3%	36.5%	39.9%	1.0%	28.8%
	12.7%	33.3%	37.6%	37.2%	2.2%	
	1.8%	4.7%	10.5%	11.5%	0.3%	
4 - Bilingual	2	1	4	27	25	59
	3.4%	1.7%	6.8%	45.8%	42.4%	8.2%
	2.0%	1.0%	2.0%	12.1%	27.8%	
	0.3%	0.1%	0.6%	3.7%	3.5%	
5 - Spanish	1	0	1	10	53	65
	1.5%	0.0%	1.5%	15.4%	81.5%	9.0%
	1.0%	0.0%	0.5%	4.5%	58.9%	
	0.1%	0.0%	0.1%	1.4%	7.3%	
Column Total	102	102	202	223	90	719
	14.1%	14.1%	28.0%	30.9%	12.5%	100.0%

As has been previously stated, there is basically only one Indian language per county, so the results are similar to the county findings in many respects. The main purpose of this table is to look at the pattern for the bilinguals and native Spanish speakers. As was to be expected, 90% of the bilinguals received either a '4' or a '5' and an overwhelming

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[*] In this table 3 individuals are missing due to a commputer error.

97% of the Spanish speakers were awarded the highest grades. The Mixtecs performed the poorest.

TABLE NO 54[*]

Variable 43 (morphosyntax) by Variable 5 (age)

Age	1	2	3	4	5	row total
1- 0-6 years	45	40	24	14	9	132
	33.8%	30.1%	18.0%	10.5%	6.8%	18.4%
2 - 7-14	10	29	63	62	17	181
	5.5%	16.0%	34.8%	34.3%	9.4%	25.1%
3 - 15-24	8	7	37	72	20	144
	5.5%	4.8%	25.5%	49.7%	13.8%	20.1%
4 - 25-44	23	14	43	54	28	162
	14.1%	8.6%	26.4%	33.1%	17.2%	22.6%
5 - 45 and over	16	12	35	21	16	100
	16.0%	12.0%	35.0%	21.0%	16.0%	13.9%
Column	102	102	202	223	90	719
Total	14.1%	14.1%	28.0%	30.9%	12.5%	100.0%

There is considerable dispersion for the youngest age group (0-6), although most were in the '1' or '2' scores. For the next age group (7-14) it is likely that the school's impact is detected since most of them are in the '3' or '4' score categories. A large percentage (50%) of the individuals in the 15-24 age range scored a '4', which is undoubtedly school-related also. For the last two age categories (25-44 and 45 and over), most individuals scored a '3' or a '4'.

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[*] In this table 3 individuals are missing due to a computer error.

TABLE NO 55[*]

Variable 43 (morphosyntax) by Variable 27 (formal schooling)

Schooling	1	2	3	4	5	row total
1 - none to kindergarten	86	63	73	50	19	291
	29.4%	21.5%	24.9%	17.1%	6.5%	40.6%
	84.3%	61.8%	36.1%	22.4%	21.1%	
	11.9%	8.7%	10.1%	6.9%	2.6%	
2 - incomplete primary	16	39	96	90	33	274
	5.8%	14.2%	35.0%	32.8%	12.0%	38.0%
	15.7%	38.2%	47.5%	40.4%	36.7%	
	2.2%	5.4%	13.3%	12.5%	4.6%	
3 - complete primary	0	0	20	36	13	60
	0.0%	0.0%	29.0%	52.2%	18.8%	9.6%
	0.0%	0.0%	9.9%	16.1%	14.4%	
	0.0%	0.0%	2.8%	5.0%	1.8%	
4 - incomplete secondary	0	0	12	27	8	47
	0.0%	0.0%	25.0%	56.3%	16.7%	6.6%
	0.0%	0.0%	5.9%	12.1%	8.9%	
	0.0%	0.0%	1.7%	3.7%	1.1%	
5 - complete secondary	0	0	1	13	6	20
	0.0%	0.0%	5.0%	65.0%	30.0%	2.8%
	0.0%	0.0%	0.5%	5.8%	6.7%	
	0.0%	0.0%	0.1%	1.8%	0.8%	
6 - past junior high	0	0	0	7	11	18
	0.0%	0.0%	0.0%	38.9%	61.1%	2.5%
	0.0%	0.0%	0.0%	3.1%	12.2%	
	0.0%	0.0%	0.0%	1.0%	1.5%	
Column Total	102	102	202	223	90	719
	14.1%	14.1%	28.0%	30.9%	12.5%	100.0%

There is obviously a very close relationship between formal schooling and the score for this variable. With a kindergarten education or less the scores are very spread out, with most of them at the lower end of the scale. With incomplete elementary school most of the scores

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[*] In this table 3 individuals are missing due to a computer error.

fall under the '3' or '4' categories. If an individual actually finished

primary school he scored at least '3', although a '4' was the predominate

score, as was the case for incomplete or complete junior high school who

achieved a '5' in more than 50% of the cases. It is extremely inter-

esting that once primary school was finished or beyond that stage, no

individual scored under a '3'.

TABLE NO 56

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable
27 (formal schooling) and Variable 43 (morphosyntax)

Age	0 - 6	7 - 14	15-24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	11 - 20	23 - 14	44 - 6	13 - 8	13 - 10
	65%	33%	18%	24%	35%
2 - Mixtec	11 -16	23 - 23	24 - 8	11 - 16	11 - 9
			34 - 8		
	50%	40%	16% x 2	35%	41%
3 - Tlapanec	12 - 11	23 - 13	44 - 9	24 - 13	13 - 14
	28%	28%	23%	26%	45%
4 - Bilingual	13 - 3	24 - 9	34 - 2	25 - 3	14 - 3
			44 - 2	45 - 3	15 - 3
			15 - 2		
	27%	53%	18% x 3	25% x 2	38% x 2
5 - Spanish	25 - 4	25 - 7	35 - 3	25 - 5	15 - 3
			65 - 3		25 - 3
	40%	44%	33% x 2	25%	30% x 2

This table is to be read as the previous ones of a similar

nature. For example, of the Nahuatls in the 0-6 age group, 20 indivi-

duals have a '1-1' combination, where the first '1' refers to the lowest

category of formal schooling on a scale of 1-6 and the second '1' refers

to the lowest score for morphosyntax on a scale of 1-5. The 65% means
that his was the combination with the highest percentage of individuals
for this age and language group. Supporting data can be found in
Appendix 26.

With respect to the crosstabs between mother tongue by age, by
formal schooling and by their morphosyntax score, we see the following
results based on the combination with the highest number of individuals
in each group determined by crosstabing the four variables. Back-up data
can be found in Appendix 27.

In the 0-6 age group schooling is low of course, as is the
morphosyntax score for all the Indian groups. It is better for the
bilinguals and high for the native Spanish speakers, confirming that they
have learned or acquired it at home. For the 7-14 age group there is
little formal schooling, but the score for morphosyntax is average (for
turns it was high) for the three Indian groups and high for the bilin-
guals and native speakers. In the next age group, 15-24, schooling is
average for all the groups, and the score is a '4' for all groups except
the native Spanish speakers, who scored a '5', implying a strong rela-
tionship between formal schooling and the morphosyntax evaluation. For
the 25-44 year age group there is minimum formal schooling once again for
the Nahuatls and Mixtecs, who had either low or average score. The
Tlapanecs had a little more formal schooling, as did the bilinguals and
Spanish speakers (incomplete primary), and in all cases they had high
grades, once again showing a relationship between schooling and

morphosyntax. The last group, those over 45 years of age, all had little formal schooling. The Mixtecs had the lowest scores of age, The Nahuatls and Tlapanecs had average scores, and the bilinguals and native Spanish speakers received the highest score on this variable.

TABLE NO 57

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable 39 (outside contact with Spanish) and Variable 43 (morphosyntax)

Age	0 - 6	7 - 14	15 - 24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	21 - 20 49%	23 - 12 31%	23 - 7 21%	23 - 9 27%	14 - 7 26%
2 - Mixtec	21 - 17 63%	22 - 17 31%	14 - 16 32%	21 - 18 39%	21 - 8 36%
3 - Tlapanec	22 - 17 44%	23 - 15 31%	14 - 22 32%	14 - 18 36%	13 - 9 29%
4 - Bilingual	23 - 4 36%	24 - 5 30%	14 - 5 15 - 5 46% x 2	15 - 10 83%	14 - 4 15 - 4 100% x 2
5 - Spanish	15 - 5 46%	15 - 11 69%	15 - 9 100%	15 - 16 76%	15 - 10 100%

* This table is to be read just as Table 50 for variable 27 (formal schooling) except for the fact that the scale for outside contact is from 1-3 (1 = a lot, 2 = a little and 3 = average). Supporting data can be found in Appendix 27.

With respect to the crosstabs between mother tongue by age, by outside contact with Spanish by their morphosyntax score, we see the following results; once again, based on the combination with the highest number of individuals in each group determined by crosstabbing the four variables. Back-up data can be found in Appendix 27.

In the youngest age category there is little contact with Spanish with the exception of native speakers. In the case of the Indian language speakers all of them had low scores in morphosyntax. The bilinguals had average scores and the native speakers of Spanish high scores—this is exactly the same pattern for formal schooling and morphosyntax. In the next age group (7-14) there is still little outside contact with Spanish except for the Spanish-speaking group. The Mixtec children in this age group had low scores, while the Nahuatls and Tlapanecs had average scores and the bilinguals and Spanish speakers had high scores. The relationship was stronger with formal schooling. For the 15-24 year old age group the Nahuatls claim little contact and had average scores. The Mixtecs, Tlapanecs, bilinguals and Spanish speakers all reported a high incidence of contact and received high scores. In the 25-44 age range the Mixtecs reverted to their usual situation of little/low; the Nahuatls reported infrequent contact but had average scores, while the Tlapanecs, bilinguals and Spanish all claimed considerable outside contact and received high scores. The same was found to be the case for those over 45 except that the Nahuatls generally scored higher than the Tlapanecs.

The main conclusion with respect to these variables is that when there is infrequent outside contact with Spanish the score is always low or average, with the low score predominating. When there is frequent contact the score is always high. These observations lend support to the claim that one can informally acquire morphosyntactic proficiency, usually associated with formal schooling. This proficiency does appear at a somewhat later stage however.

The last variable we will analyze under language proficiency in Spanish is expansion (variable 44). If we review the frequency data we will see that 30% of the individuals interviewed received a '4', while a similar percentage (25%) received a '3'. The other scores were almost equally divided among the '1's, '2's and '5's at 14%, 16% and 16% respectively.

If we look at the data on a community level (variable 1), we will see that both Copalillo and Alcozauca had 24% of the whole sample with a score of '5', as county seats. The third county seat, Zapotitlán Tablas, was not well-represented in the '5's but did accumulate 39% of the '4's awarded, only 1% behind Ahuixotitla with 40%. A detailed table of row and column figures are given in Appendix 28.

TABLE NO 58[*]

Variable 44 (expansion) by Variable 2 (county)

County	1	2	3	4	5	Row total
1 - Copalillo	32	28	63	63	41	227
	31.7%	24.8%	35.2%	29.6%	35.7%	31.4%
2 - Alcozauca	55	44	50	59	34	242
	54.5%	38.9%	27.9%	27.7%	29.6%	33.7%
3 - Zapotitlán Tablas	14	41	66	91	40	252
						34.9%
Column	101	113	179	213	115	722
Total	14.0%	15.7%	24.8%	29.5%	15.9%	100.0%

For the county of Copalillo the scores were quite divided, with 32% scoring a '1', 25% a '2', 35% a '3', 30% a '4' and 36% a '5'; in the county of Alcozauca the scores were concentrated at the lower end of the grading scale--55% scored a '1', 39% a '2', 28% a '4' and 30% a '5'; in Zapotitlán Tablas the scores were spread out, with only 14% scoring a '1', while another 36% scored a '2', 37% a '3', 43% a '4' and 35% a '5'.

With respect to sex variation (variable 3) and expansion, we can see from the table in Appendix 29 that the percentages that represented a '3', '4' or '5' were similar, but many more women than men had the lowest score ('1'): 64% versus 36%.

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[*] In this table one individual was misclassified by the computer.

TABLE NO 59[*]

Variable 44 (expansion) by Variable 4 (mother tongue)

Mother tongue	1	2	3	4	5	Row total
1 - Nahuatl	30	28	57	51	16	182
	29.7%	24.8%	31.8%	23.9%	13.9%	25.2%
	16.5%	15.4%	31.3%	28.0%	8.8%	
	4.2%	3.9%	7.9%	7.1%	2.2%	
2 - Mixtec	55	44	50	48	10	207
	54.5%	38.9%	27.9%	22.5%	8.7%	28.8%
	26.4%	21.2%	24.0%	23.1%	4.8%	
	7.6%	6.1%	6.9%	6.6%	1.4%	
3 - Tlapanec	13	30	58	72	26	208
	12.9%	34.5%	32.4%	33.8%	22.6%	28.8%
	6.3%	18.8%	27.9%	34.6%	12.5%	
	1.8%	5.4%	8.0%	10.0%	3.6%	
4 - Bilingual	2	1	10	21	25	59
	2.0%	0.9%	5.6%	9.9%	21.7%	8.2%
	3.4%	1.7%	16.9%	35.6%	42.4%	
	0.3%	0.1%	1.4%	2.9%	3.5%	
5 - Spanish	1	1	24	21	38	115
	1.0%	0.9%	2.2%	9.9%	33.0%	15.9%
	1.5%	1.5%	6.2%	32.3%	58.5%	
	0.1%	0.1%	0.6%	2.9%	3.5%	
Column Total	101	113	179	213	115	721
	14.0%	15.7%	24.8%	29.5%	15.9%	100.0%

From the results of the previous table it is obvious that mother tongue does impinge on the ability to expand on a conversation in Spanish. Approximately 91% of the native Spanish speakers received a '4' (32%) or a '5' (59%). A similar pattern can be detected for the bilinguals, with 36% receiving a '4', and 42% receiving a '5', while the Indian groups had fewer individuals in the high scores. The Tlapanecs had 47%, the Mixtecs 31% and the Nahuatls 37% in the upper scores. As

[*] In this table one individual was misclassified by the computer.

has frequently been the case, the Mixtecs had more individuals in the

lower ranges.

TABLE NO 60[*]

Variable 44 (expansion) by Variable 5 (age)

Age	1	2	3	4	5	Row total
1 - 0-6 years	44	47	22	13	7	133
	43.6%	41.6%	12.3%	6.1%	6.1%	13.4%
2 - 7-14	10	34	75	51	11	181
	9.9%	30.1%	41.9%	23.9%	9.6%	25.1%
3 - 15-24	8	8	40	62	27	145
	7.9%	7.1%	22.3%	29.1%	23.6%	20.1%
4 - 25-44	23	14	28	60	37	162
	22.8%	12.4%	15.6%	28.2%	32.2%	22.6%
5 - 45 or over	15	10	14	27	33	100
	15.8%	8.8%	7.8%	12.7%	28.7%	13.9%
Column Total	101	113	179	213	115	721
	14.0%	15.7%	24.8%	29.5%	15.9%	100.0%

If we examine the table it can readily be seen that the youngest age group got the lowest scores (85% received a '1' or a '2'), while the next age group (7-14) improved on the first group's scores considerably by achieving '2's, '3's, and '4's (30%, 42% and 24%), while the next age group's (15-24) scores were concentrated in the three highest scores (75%). For individuals in the 25-44 age group the highest percentages were in the '4' and '5' score columns, while for the oldest age group (over 45), the largest percentage (29%) was also in score column '5', which leads one to believe that there is a definite relation between age and the ability to expand on a conversation. This finding is not surprising since cognitive development and a command of sociolinguistic rules common to most languages progress over the years.

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[*] In this table one individual was misclassified by the computer.

TABLE NO 61

Variable 44 (expansion) by Variable 27 (formal schooling)

Schooling	1	2	3	4	5	Row total
1 - none to	85	68	50	51	38	292
Kindergarten	84.2%	60.2%	27.9%	23.9%	33.0%	40.6%
	29.0%	23.2%	17.1%	17.4%	13.0%	
	11.8%	9.4%	6.9%	7.1%	5.3%	
2 - incomplete	16	44	93	93	28	274
primary	15.8%	38.9%	52.0%	43.7%	24.3%	38.0%
	5.8%	16.1%	33.9%	33.9%	10.2%	
	2.2%	6.1%	12.9%	12.9%	3.9%	
3 - complete	0	1	24	33	11	69
primary	0.0%	0.9%	13.4%	15.5%	9.6%	9.6%
	0.0%	1.4%	34.8%	47.8%	15.9%	
	0.0%	0.1%	3.3%	4.6%	1.5%	
4 - incomplete	0	0	10	21	17	48
secondary	0.0%	0.0%	5.6%	9.9%	14.8%	6.6%
	0.0%	0.0%	20.8%	43.8%	35.4%	
	0.0%	0.0%	1.4%	2.9%	2.4%	
5 - complete	0	0	2	10	8	20
secondary	0.0%	0.0%	1.1%	4.7%	7.0%	2.8%
	0.0%	0.0%	10.0%	50.0%	40.0%	
	0.0%	0.0%	0.3%	1.4%	1.1%	
6 - past junior	0	0	0	5	13	118
high	0.0%	0.0%	0.0%	2.3%	11.3%	15.9%
	0.0%	0.0%	0.0%	27.8%	72.2%	
	0.0%	0.0%	0.0%	0.7%	1.8%	
Column	101	113	179	213	115	721
Total	14.0%	15.7%	24.8%	29.5%	16.0%	100.0%

There is an almost perfect relationship between formal schooling and the score for expansion. All individuals with more than a junior high school education scored a '4' or a '5'; those with junior high finished all scored a '4' or a '5' except two individuals who received a '3'; of those who had not finished junior high school, all scored a '4' or a '5' except ten subjects who received a '3', while the three lowest

categories of schooling gradually increased their numbers in the lower

scores ('1', '2' and '3').

TABLE NO 62[*]

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable 27 (formal schooling) and Variable 44 (expansion)

Age	0 - 6	7 - 14	15 - 24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	11 - 20	23 - 16	44 - 5	14 - 7	13 - 8
				24 - 7	
	48%	49%	14%	21% x 2	28%
2 - Mixtec	11 - 15	23 - 21	24 - 8	11 - 16	11 - 9
	25%	37%	16%	3535%	41%
3 - Tlapanec	12 - 15	23 - 15	44 - 7	24 - 12	14 - 7
	39%	31%	18%	24%	23%
4 - Bilingual	13 - 4	24 - 8	15 - 2	45 - 3	15 - 5
			45 - 2		
	50%	50%	25% - 2	23%	50%
5 - Spanish	25 - 3	24 - 5	34 - 3	24 - 4	15 - 3
	14 - 2		65 - 3	15 - 4	25 - 3
	33%	28%	33% x 2	21% x 2	30% x 2

With respect to the crosstabs between mother tongue by age, by

formal schooling (variable 27) by expansion (variable 44), the same

general guidelines as for the other crosstabs in this section have been

followed.

The 0-6 age group had little formal schooling and the children

form the three Indian groups all had low scores in expansion just as in

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[*] This table is to be interpreted just as Table 56 for variable 43 (morphosyntax), with the same 1 - 5 scale. Formal schooling involved a scale from 1 - 6. Supporting data can be found in Appendix 30.

morphosyntax. The next age (7-14) has more formal schooling and the same pattern as for morphosyntax is present--the three Indian groups had average scores, while the bilingual and Spanish groups obtained high scores. For the 15-24 age group formal schooling varied widely among the five language groups, but in all cases a high score in elaboration was in order, which was precisely the case for morphosyntax, showing considerable independence of the score for formal schooling, although we will have a better idea once we look at outside contact with Spanish. In the 25-44 age range formal schooling falls within the lower ranges, but with the exception of the Mixtecs, scores were high. The same holds true with the exception of average scores for the Nahuatls.

TABLE NO 63[*]

Variable 4 (mother tongue) by Variable 5 (age), Controlling for Variable 39 (outside contact with Spanish) and Variable 44 (expansion)

Age	0 - 6	7 - 14	15 - 24	25 - 44	45 and over
Mother tongue					
1 - Nahuatl	21 - 20	23 - 16	14 - 8	14 - 9	23 - 4
					14 - 4
					15 - 4
	47%	38%	23%	27%	14% x 3
2 - Mixtec	21 - 16	22 - 18	34 - 12	21 -18	21 - 8
	50%	32%	24%	39%	36%
3 - Tlapanec	22 - 20	23 - 16	14 - 16	14 - 13	15 - 6
	51%	33%	42%	26%	19%
4 - Bilingual	23 - 5	24 - 4	15 - 6	15 - 8	15 - 5
		34 - 4			
	46%	24% x 2	55%	67%	63%
5 - Spanish	15 - 3	15 - 6	15 - 6	15 - 12	15 - 10
	34%	38%	60%	57%	100%

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[*] This table is to be interpreted just as the previous table with this same format. The scale for variable 39 is 1 = a lot of contact, 2 = little contact and 3 = average contact. Supporting data can be found in Appendix 31.

With respect to the crosstabs between mother tongue by age, by contact with Spanish, by expansion, we see the following results, based on the combination with the highest number of individuals in each group.

In the 0-6 age group we see that all the children except the native Spanish speakers have had little contact with Spanish outside their communities; the three Indian groups scored low on the expansion scale, the bilinguals received an average score and not surprisingly the native speakers a high score. For the 7-14 age group the same situation prevailed with respect to contact. The Mixtecs continued to get low scores, but the Nahuatls and the Tlapanecs improved their performance. The bilinguals and native speakers had acceptable scores. In the next age group (15-24), except for the Mixtecs, all other groups claimed to have a great deal of contact with Spanish and in all cases received high scores on this variable. For the 25-44 age group, with the exception once again of the Mixtecs, all groups continued to report extensive contact with Spanish and performed well on this sense. The same held true in general for the oldest age group.

If we look at these results compared to those for the same variable crosstabbed with formal schooling, the ability can apparently be acquired just as well outside the classroom as inside. One must also bear in mind that other factors such as cognitive development, social maturity, etc. are parallel to age and independent of Spanish. What we are looking at is a transfer of other processes to expansion in Spanish in an interview situation.

Indications of Language Attitudes

This the third major section in the chapter on Statistical

Analysis and hopefully will shed light on language maintenance and shift.

The variables that have been chosen for this purposes are variable 7 (how

well do you speak the Indian language), variable 21 (would you like to

speak it better), variable 22 (would you like to speak Spanish better),

variable 25 (what should be the language of instruction at school) and

variable 26 (would you like the children to be taught in both languages).

To continue with the methodology chosen for the proficiency

section, first we will look at the basic frequencies for the attitudinal

questions. While it might appear that variable 7 (how well do you speak

your Indian language) is superfluous, it was asked to assure that the

individuals interviewed were, in effect, the population under study,

i.e., native speakers of Nahuatl, Mixtec or Tlapanec (with the exception

of the native speakers of Spanish who served as a control group). Only

selected crosstabs (community, county, sex, mother tongue, age and formal

schooling) will be presented for this variable. It should be kept in

mind that 88% of those interviewed claimed to speak an Indian language

'well', while another 2% said they spoke it 'poorly' and 3% only

'average'. The remaining 7% who gave another or no answer were basically

the native speakers of Spanish.

TABLE NO 64

Variable 7 (how well do you speak the Indian language) by Variable 2 (county)

County	1 - well	2 - poorly	3 - average	another or 4 - no answer	row total
1 - Copalillo	203	4	3	17	227
	89.4%	1.8%	1.3%	7.5%	31.4%
	31.9%	33.3%	13.0%	34.0%	
	28.1%	0.6%	0.4%	2.4%	
2 - Alcozauca	213	5	1	24	243
	87.7%	2.1%	0.4%	9.9%	33.7%
	33.4%	41.7%	4.3%	48.0%	
	29.5%	0.7%	0.1%	3.3%	
3 - Zapotitlán Tablas	221	3	19	9	252
	87.7%	1.2%	7.5%	3.6%	34.9%
	34.7%	25.0%	82.6%	18.0%	
	30.6%	0.4%	2.6%	1.2%	
Column Total	637	12	23	50	722
	88.2%	1.7%	3.2%	6.9%	100.0%

The most striking result of these crosstabs is the similarity

between the three counties in all three an overwhelming percentage of the

speakers claim to speak their Indian tongue 'well' (Copalillo - 89%,

Alcozauca - 88%, Zapotitlán Tablas - 88%), which means that these

languages certainly are not "an endangered species".

TABLE NO 65

Variable 7 (how well do you speak the Indian language) by Variable 27
(formal schooling)

Schooling	1 - well	2 - poorly	3 - average	another or 4 - no answer	row total
1- none to kindergarten	267 91.1% 41.9% 37.0%	3 1.0% 25.0% 0.4%	10 3.4% 43.5% 1.4%	13 4.4% 26.0% 1.8%	293 40.6%
2 - incomplete primary	244 89.1% 38.3% 33.8%	5 1.8% 41.7% 0.7%	4 1.5% 17.4% 0.6%	21 7.7% 42.0% 2.9%	274 38.0%
3 - complete primary	58 84.1% 9.1% 8.0%	2 2.9% 16.7% 0.3%	2 2.9% 8.7% 0.3%	7 10.1% 14.0% 1.0%	69 9.6%
4 - incomplete secondary	38 79.2% 6.0% 5.3%	2 4.2% 16.7% 0.3%	7 14.6% 30.4% 1.0%	1 2.1% 2.0% 0.1%	48 6.6%
5 - complete secondary	18 90.0% 2.8% 2.5%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	2 10.0% 4.0% 0.3%	20 2.8%
6 - past junior high school	17 66.7% 1.9% 1.7%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	6 33.3% 12.0% 0.8%	18 2.5%
Column Total	637 88.2%	12 1.7%	23 3.2%	50 6.9%	722 100.0%

The ability to speak the Indian language well decreases with the
degree of formal schooling (91% speak it 'well' with the lowest degree of
schooling, 89% 'well' with incomplete primary school, 84% 'well' with
complete primary school, 79% 'well' with incomplete secondary school, 90%
speak it 'well'--an exception--with complete secondary school and 67%

with further education speak it 'well'. Of those who said they spoke it 'poorly' or 'average', none had completed secondary education (junior high school).

If we look at basic frequencies we will see that 72% of the people interviewed claimed to want to speak the Indian language better, while only 13% said they did not want to do so; 14% gave another answer or said they did not know. While this is not as large a percentage as those who want to speak Spanish better (81%), 72% is a very high percentage.

As we examine the percentages for communities (variable 1), an average of 72% want to speak it better. The highest percentages (96-97%) were in the two smaller communities in the county of Zapotitlán Tablas, while the lowest percentage was in Amolonga, in the county of Alcozauca, with 45%. All the other communities had intermediate percentages. For more information, see Appendix 32.

TABLE NO 66

Variable 21 (would you like to speak the Indian language better) by
Variable 2 (county)

County	1 - yes	2 - no	3 - I don't know	another or 4 - no answer	Row total
1 - Copalillo	155	31	40	1	227
	68.3%	13.7%	17.6%	0.4%	31.4%
	29.9%	32.0%	40.8%	11.1%	
	21.5%	4.3%	5.5%	0.1%	
2 - Alcozauca	171	28	42	2	243
	70.4%	11.5%	17.3%	0.8%	33.7%
	33.0%	28.9%	42.9%	22.2%	
	23.7%	3.9%	5.8%	0.3%	
3 - Zapotitlan Tablas	192	38	16	6	252
	76.2%	16.1%	6.3%	2.4%	34.9%
	37.1%	39.2%	16.3%	66.7%	
	26.6%	6.3%	2.2%	0.8%	
Column Total	518	97	98	9	722
	71.7%	13.4%	13.6%	1.2%	100.0%

Once again, a large majority of individuals in all three counties
said they wanted to speak their Indian language better (Copalillo - 68%,
Alcozauca - 70% and Zapotitlán - 76%), showing a very positive attitude.
The remaining percentages were distributed among those who did not want
to speak the Indian language better, the undecided or subjects who
answered otherwise.

With respect to the distribution by sexes (variable 3), slightly
more males (74%) showed a desire to speak the Indian language better than
females (70%). More details are available in Appendix 33.

TABLE NO 67

Variable 21 (would you like to speak the Indian language better) by
Variable 4 (mother tongue)

Mother tongue	1 - yes	2 - no	3 - I don't know	another or 4 - no answer	Row total
1 - Nahuatl	123	24	35	0	182
	67.6%	13.2%	19.2%	0.0%	25.2%
	23.7%	24.7%	35.7%	0.0%	
	17.0%	3.3%	4.8%	0.0%	
2 - Mixtec	145	20	41	2	208
	69.7%	9.6%	19.7%	1.0%	28.8%
	28.0%	20.6%	41.8%	22.2%	
	20.1%	2.8%	5.7%	0.3%	
3 - Tlapanec	161	33	9	5	208
	77.4%	15.9%	4.3%	2.4%	28.8%
	31.1%	34.0%	9.2%	55.6%	
	22.3%	4.6%	1.2%	0.7%	
4 - Bilingual	49	4	6	0	59
	83.1%	6.8%	10.2%	0.0%	8.2%
	9.5%	4.1%	6.1%	0.0%	
	6.8%	1.6%	0.8%	0.0%	
5 - Spanish	40	16	7	2	65
	61.5%	24.6%	10.8%	3.1%	9.9%
	7.7%	16.5%	7.1%	22.2%	
	5.5%	2.2%	1.0%	0.3%	
Column Total	518	97	98	9	722
	71.7%	13.4%	13.6%	1.2%	100.0%

It is important to note that 67% of the Nahuatls interviewed
want to speak Nahuatl better, 70% of the Mixtecs showed interest in
speaking Mixtecs better and 77% of the Tlapanecs also wanted to improve
their native language. It is particularly interesting to observe of
that 83% of the bilinguals and 62% of the native Spanish speakers also
want to learn the Indian languages. Another 25% of the native Spanish
speakers do not want to learn more of the local Indian tongue. The

reasons behind these attitudes would undoubtedly prove to be quite

interesting.

TABLE NO 68

Variable 7 (would you like to speak the Indian language better) by
Variable 27 (formal schooling)

Schooling	1 - yes	2 - no	3 - I don't know	another or 4 - no answer	Row total
1 - none to	170.0	44.0	74.0	5.0	293
Kindergarten	58.0%	15.0%	25.3%	1.7%	
	32.8%	43.4%	75.5%	55.6%	
	23.5%	6.1%	10.2%	0.7%	
2 - incomplete	217.0	33.0	23.0	1.0	274
primary	79.2%	12.0%	8.4%	0.4%	
	41.9%	34.0%	23.5%	11.1%	
	30.1%	4.6%	3.2%	0.1%	
3 - complete	60.0	8.0	1.0	1.0	70
primary	87.0%	11.6%	0.0%	1.4%	
	11.6%	8.2%	0.0%	11.1%	
	8.3%	1.1%	0.0%	0.1%	
4 - incomplete	39.0	9.0	0.0	0.0	48
secondary	81.3%	18.9%	0.0%	0.0%	
	7.5%	9.3%	0.0%	0.0%	
	5.4%	1.2%	0.0%	0.0%	
5 - complete	15.0	3.0	0.0	2.0	20
secondary	75.0%	15.0%	0.0%	10.0%	
	2.9%	3.1%	0.0%	22.0%	
	2.1%	0.4%	0.0%	0.3%	
6 - past junior	17.0	0.0	1.0	0.0	18
high school	94.4%	0.0%	5.6%	0.0%	
	3.3%	0.0%	1.0%	0.0%	
	2.4%	0.0%	0.1%	0.0%	
Column	518.0	97.0	98.0	1.0	722
Total	71.7%	13.4%	13.6%	1.2%	100.0%

Apparently there is an inverse relationship between the desire to
speak the Indian language better and formal schooling, but this is not
necessarily the conclusion that should be drawn, since nearly everyone
said they would like to speak the language better and since a low level

of formal education is prevalent, it is natural that these two factors appear to have a strong relationship.

One last, but complicated table is in order before leaving the matter of command of the native Indian language and a desire to speak it better and how these characteristics are influenced by outside informal contact with the Spanish language. In this analysis we have only examined three groups of native Indian speakers with three different combinations: 1) those who say they speak their native language well, who want to speak it better and who have had a lot of contact with Spanish (combination 1-1-1); 2) those who have had some contact with Spanish (combination 1-1-3); and 3) those who have had very little contact with the language (combination 1-1-2). The breakdown by community is given below:

TABLE NO 69

The Breakdown by Community

1. Copalillo (Nahuatl)

Age groups	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(-)	-	(-)	-
7 - 14	(-)	-	(6)	4	(1)	2
15 - 24	(4)	3	(3)	3	(5)	2
25 - 44	(2)	2	(2)	4	(2)	-
45 on	(6)	-	(-)	4	(6)	-
	(12) + 5 = 17		(11) + 15 = 26		(14) + 4 = 18	

( ) = males
1 - many months or years of contact
2 - only occasional contact
3 - weeks or a few months of contact on a regular basis

2. Tlalcozotitlán (Nahuatl)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6 years	(1)	1	(3)	2	(1)	-
7 - 14	(-)	1	(4)	-	(-)	2
15 - 24	(-)	1	(2)	1	(-)	-
25 - 44	(1)	3	(-)	1	(-)	-
45 on	(-)	1	(-)	-	(-)	-
	(2)	+ 7 = 9	(9)	+ 4 = 13	(1)	+ 2 = 3

3. El Cascalote (Nahuatl)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6 years	(-)	-	(-)	-	(-)	-
7 - 14	(2)	2	(5)	3	(-)	-
15 - 24	(3)	-	(1)	1	(-)	1
25 - 44	(2)	1	(-)	-	(4)	-
45 on	(1)	-	(-)	6	(2)	-
	(8)	+ 3 = 11	(6)	+ 10 = 16	(6)	+ 2 = 8

With the exception of El Cascalote, the youngest age group has no contact with Spanish. Perhaps this is due to the fact that Atenango del Río, a Spanish-speaking town, is only half an hour by foot and they often go with their parents for minor purchases, although their interaction is nil. In the 7-14 age group the predominant category is also 'little contact'. In the next three groups we see an almost equal distribution among the three combinations, borne out in fieldwork, although I found that the older the people are, especially women, the less contact there is.

If we look at the vertical sums by sex we will see that in Copalillo and El Cascalote there are many more men in the 1-1-1 group than women. The same pattern occurs with the 1-1-2 group, while for the 1-1-3 group (some contact), women tend to dominate, with the exception of Tlalcozotitlán.

4. Tlahuapa (Mixtec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(1)	-	(-)	-	(1)	-
7 - 14	(1)	1	(1)	3	(1)	2
15 - 24	(1)	3	(-)	-	(-)	-
25 - 44	(7)	-	(1)	2	(3)	-
45 on	(4)	-	(3)	2	(-)	-
	(14) + 4 = 18		(5) + 7 = 12		(5) + 2 = 7	

5. Alcozauca (Mixtec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(1)	-	(-)	2
7 - 14	(2)	4	(4)	3	(5)	7
15 - 24	(8)	6	(-)	1	(11)	7
25 - 44	(4)	2	(-)	1	(3)	2
45 on	(3)	-	(2)	-	(2)	2
	(17) + 12 = 29		(10) + 9 = 19		(21) + 20 = 41	

6. Amolonga (Mixtec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(-)	-	(-)	-
7 - 14	(-)	-	(3)	1	(-)	-
15 - 24	(-)	2	(-)	2	(1)	1
25 - 44	(-)	-	(-)	3	(-)	-
45 on	$\frac{(-)}{(-)} + \frac{-}{2} = 2$		$\frac{(-)}{(3)} + \frac{3}{9} = 12$		$\frac{(2)}{(3)} + \frac{-}{1} = 4$	

Once again, the age group 0-6 is practically non-existent since they seldom leave their hometowns. With the exception of Alcozauca, the county seat, the 7-14 year olds do not have much contact either, but the 15-24 year old groups have more frequent contact with Spanish, which is understandable since they leave their communities for further schooling, are migratory workers, etc. Contact decreases once again with the oldest group. Vertically there is a strong predominance (with the exception of Amolonga) of males in the 1-1-1 group and they also dominate, to a much lesser degree, the 1-1-3 category, while women are mostly found in the 1-1-2 (little contact) group.

7. Zapotitlán Tablas (Tlapanec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(3)	3	(-)	-
7 - 14	(-)	1	(7)	6	(2)	4
15 - 24	(4)	6	(1)	2	(-)	2
25 - 44	(5)	3	(1)	2	(2)	3
45 on	(2)	1	(-)	-	(1)	1
	(11) + 11 = 22		(12) + 13 = 25		(5) + 10 = 15	

8. Escalerilla Lagunas (Tlapanec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(7)	10	(-)	-
7 - 14	(-)	2	(6)	7	(-)	-
15 - 24	(4)	4	(2)	-	(-)	1
25 - 44	(4)	2	(1)	4	(1)	1
45 on	(2)	2	(1)	1	(1)	-
	(10) + 10 = 20		(17) + 22 = 39		(2) + 2 = 4	

9. Ahuixotitla (Tlapanec)

Age group	comb. 1-1-1		comb. 1-1-2		comb. 1-1-3	
0 - 6	(-)	-	(2)	2	(-)	-
7 - 14	(-)	-	(4)	2	(1)	-
15 - 24	(3)	2	(-)	-	(-)	-
25 - 44	(3)	1	(-)	3	(1)	-
45 on	(2)	1	(1)	-	(1)	1
	(8) + 4 = 12		(7) + 7 = 14		(3) + 1 = 4	

It is interesting that all the 0-6 age group is in the 1-1-2 (little contact) category; even more surprising is the number of individuals in Escalerilla. People do travel a lot to Tlapa and Chilapa, but it is surprising that this age group does. Contact is infrequent even with the advance of age (7-14). Definitely the 15-24 year old groups have the most contact (1-1-1), dominating the 1-1-1 category. After 45 there are fewer individuals. Vertically the 1-1-1 category between the sexes is even. This is also true for the 1-1-2 group and for the 1-1-3 group.

Having looked closely at the subjects' attitude toward their native Indian language, it is also important to see what their attitude is toward the Spanish language. If we return to the frequency data it can be seen that 81% stated that they would like to speak Spanish better. Only 6% said that they would not like to speak it better, while another 13% were undecided.

On the community level (variable 1) there was a lot of uncertainty in the two small communities in the county of Alcozauca (Tlahuapa with 27% who were uncertain and Amolonga with 45%). With the exception of Amolonga, more than 68% answered 'yes' to the question of whether or not they would like to speak Spanish better. For further details see Appendix 34.

TABLE NO 70

Variable 22 (would you like to speak Spanish better) by Variable 2
(county)

County	1 - yes	2 - no	3-I don't know	another or 4 - no answer	Row total
1 - Copalillo	177	12	38	0	227
	78.0%	5.3%	16.7%	0.0	31.4%
2 - Alcozauca	184	16	42	1	243
	75.7%	6.6%	17.3%	0.4%	33.7%
3 - Zapotitlán Tablas	223	13	15	1	252
	88.5%	5.2%	6.0%	0.4%	34.9%
Column	584	41	95	2	722
Total	80.9%	5.7%	13.2%	0.3%	100.0%

All three counties had between 76% (Alcozauca) and 89%

(Zapotitlán Tablas) of the individuals interviewed who claimed to want to

speak Spanish better. There was not much variation.

With respect to sex, (variable 3) more men than women (83% versus

79%) stated that they wanted to learn Spanish. More details can be found

in Appendix 35.

TABLE NO 71

Variable 22 (would they like to speak Spanish better) by Variable 4
(mother tongue)

Mother tongue	1 - yes	2 - no	3 - I don't know	another or 4 - no answer	Row total
1 - Nahuatl	137	11	34	0	182
	75.3%	6.0%	18.7%	0.0%	25.2%
	23.5%	26.8%	35.8%	0.0%	
	19.0%	1.5%	4.7%	0.0%	
2 - Mixtec	152	14	41	1	208
	73.1%	6.7%	19.7%	0.5%	28.8%
	26.0%	34.1%	43.2%	50.0%	
	21.1%	1.9%	5.7%	0.1%	
3 - Tlapanec	186	12	9	1	208
	89.4%	5.8%	4.3%	0.5%	28.8%
	31.8%	29.3%	9.5%	50.0%	
	25.8%	1.7%	1.2%	0.1%	
4 - Bilinguals	53	0	6	0	59
	89.8%	0.0%	10.2%	0.0%	8.2%
	9.1%	0.0%	6.3%	0.0%	
	7.3%	0.0%	0.8%	0.0%	
5 - Spanish	56	4	5	0	65
	86.2%	6.2%	7.7%	0.0%	9.0%
	9.6%	9.8%	5.3%	0.0%	
	7.8%	0.6%	0.7%	0.0%	
Column Total	584 80.9%	41 5.7%	95 13.2%	2 0.3%	722 100.0%

If we look at the results by native language, there are three
groups above 80%--the bilinguals (89%), the Tlapanecs (89%) and the
native Spanish speakers (86%). Of these three the Tlapanecs interest us
most since this is an indication of language shift. The Nahuatls (75%)
and the Mixtecs (73%) show a very positive attitude toward Spanish, but
not to the extent the other three groups do.

TABLE NO 72

Variable 22 (would they like to speak Spanish better) by Variable 5 (age)

Age	1 - yes	2 - no	3 - I don't know	another or 4 - no answer	Row total
1 - 0-6 years	56 42.1%	2 1.5%	75 56.4%	0 0.0%	133 18.4%
2 - 7-14	154 85.1%	11 6.1%	15 8.3%	1 0.6%	181 25.1%
3 - 15-24	139 95.9%	5 3.4%	1 0.7%	0 0.0%	145 20.1%
4 - 25-44	147 90.2%	13 8.0%	3 1.8%	0 0.0%	163 22.6%
5 - 45 and over	88 88.0%	10 10.0%	1 1.0%	1 1.0%	100 13.9%
Column Total	584 80.9%	41 5.7%	95 13.2%	2 0.3%	722 100.0%

Except for the youngest age group (0-6 years), where a higher percentage (56%) said they did not know whether or not they wanted to speak Spanish better versus 42% who said 'yes', all the other age groups were most specific in expressing their desire to speak Spanish better. The percentages ranged from 85% for the 7-14 age group to 95% for the 15-24 age group.

TABLE NO 73

Variable 22 (would they like to speak Spanish better) by Variable 27
(formal schooling)

Schooling	1 - yes	2 - no	I don't 3 - know	another or 4 - no answer	row total
1 - none to kindergarten	195 66.6% 33.4% 27.0%	24 8.2% 58.5% 3.3%	74 25.3% 77.9% 10.2%	0 0.0% 0.0% 0.0%	293 40.6%
2 - incomplete primary	236 86.1% 40.4% 32.7%	15 5.5% 36.6% 2.1%	21 7.7% 22.1% 2.9%	2 0.7% 100.0% 0.3%	274 38.0%
3 - complete primary	68 98.6% 11.6% 9.4%	1 1.4% 2.4% 0.1%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	69 9.6%
4 - incomplete secondary	48 100.0% 8.2% 6.6%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	48 6.6%
5 - complete secondary	19 95.0% 3.3% 2.6%	1 5.0% 2.4% 0.1%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	20 2.8%
6 - past junior high school	18 100.0% 3.1% 2.5%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	0 0.0% 0.0% 0.0%	18 2.5%
Column Total	584 80.9%	41 5.7%	95 13.2%	2 0.3%	722 100.0%

As could be expected, the results are very similar to those of
the different age groups, but they show an even stronger relationship.
Even subjects with no formal education whatsoever or at a kindergarten
level were in favor of learning more Spanish (67%).

For all other educational levels the percentages varied from 86% to 100% at the highest educational levels.

The following table is included to give the reader more detailed information on the interaction of several key variables. The analysis is divided into three parts, excluding native Spanish speakers and native bilinguals: 1) those who say they speak Spanish well, who want to speak it better and who got a '4' or a '5' on evaluation (category 1/1; 2) those who say they speak Spanish poorly, who do not want to speak it better and who got a '1' or a '2' on my evaluation (category 2/2; and 3) those who speak it poorly but who want to speak it better and who got a '1' or a '2' on my evaluation (category 2/1).

TABLE NO 74

Variable 9 (command of Spanish) by Variable 22 (desire to speak it better), Controlling for Variable 4 (mother tongue), Variable 5 (age) and Variable 44 (expansion)

age	Nahuatl 1/1	2/2	2/1	Mixtec 1/1	2/2	2/1	Tlapanec 1/1	2/2	2/1
0 - 6	1	-	4	-	-	-	2	-	3
7 - 14	7	-	1	4	1	6	10	1	5
15 - 24	16	-	1	18	-	4	14	-	-
25 - 44	13	1	1	8	-	4	14	-	-
45 on	5	-	4	4	-	3	2	2	-
	42	2	11	34	1	17	37	3	10

Once again, the overwhelming majority both speak Spanish well and show a favorable attitude toward learning more, especially in the 15-44 age groups. This is true of all three ethnic groups, although the

phenomenon can be detected at an earlier age for the Tlapanec group. Practically no one speaks Spanish poorly yet wants to know more; however, there are many more subjects who speak it poorly but who would like to speak it better, indicating a very positive attitude toward the language.

Although the information is not in the table, there were more men in the 1/1 group and more women int he 2/2 and the 2/1 groups.

The next table is also illustrative of the interaction of key variables in this study.

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TABLE NO 75

Variable 9 (command of Spanish) by Variable 22 (desire to speak better),
Controlling for Variable 4 (mother tongue), Variable 5 (age), Variable 27
(formal schooling) and Variable 44 (expansion)

Mother tongue		1 - Nahuatl				2 - Mixtec				3 - Tlapanec				
	Grade	1	2	4	5	1	2	4	5	1	2	4	5	
a) Schooling														
b) Age														
1 a)		/1//1//1/		-		-	/1//1/		-	/1//2//2/		-		= 10
		-	-	8	2	-	-	1	2	-	4	6	3	= 26
b)		-	/1/	-	-	-	-	-	-	-	-	-	-	= 1
		-	-	1	-	-	-	-	-	-	5	2	1	= 9
2 a)		-	-	-	-	-	/1/	-	-	-	-	-	-	= 1
		1	3	13	2	-	-	9	1	-	3	11	3	= 46
b)		-	-	-	-	-	/1/	-	-	-	/1/	-	-	= 2
		1	4	6	1	-	-	4	-	-	2	10	-	= 28
3 a)		-	1	2	2	-	-	7	1	-	-	7	-	= 20
b)		-	-	11	4	-	-	10	4	-	-	9	2	= 40
4 a)		-	-	5	1	-	-	3	2	-	-	1	1	= 13
b)		/1/	-	-	-	-	/1//1/		-	-	-	/1/	-	= 4
		-	-	11	3	-	-	10	1	-	-	7	5	= 37
5 a)		-	-	2	3	-	-	2	1	-	-	3	1	= 12
b)		-	-	/1/	-	-	-	-	-	/1//1//1/		-		= 4
		-	-	2	3	-	-	1	3	-	-	1	1	= 10
6 a)		-	-	1	1	-	-	3	1	-	-	1	1	= 8
a) Total		/2//2//2//-/				/-//4//2//-/				/2//4//4//-/				= 22
b) Total		2	8	62	22	0	0	50	16	0	14	58	18	= 250

* All of these subjects belong to the 1/1 category (speak Spanish well

and want to speak it better except those in brackets, who belong to the

2/2 category (those who speak it poorly and do not want to speak it

better), a rare category as can be seen from the data. Only native

Indian speakers are found in this table and, on a scale of 1-5, only the

lowest grades (1 and 2) and the highest grades (4 and 5) are included. ·

For this analysis we chose only native Indian language speakers
(not native bilinguals or native Spanish-speakers) who have learned or
acquired Spanish as a second language. Of these speakers, for one
analysis (variable 27, years of formal schooling) we took only those who
answered 'well' to question 9 and 'yes' to question 22 (category 1/1) and
those who answered 'poorly' and 'no' to the same question regarding how
they spoke Spanish and whether they would like to speak it better or not.
These answers were matched against years of formal schooling and age
(variable 5) as well as against my scores for 'expansion' in both
cases.

As can be seen from the tables, those who claim to speak well and
who want to speak better score very high. For this analysis only the
very low grades (1 and 2) and the very high grades (4 and 5) were taken
into account. As can readily be seen, for all three ethnic groups only
1-14 individuals with a 1/1 classification independent of age scored a 1
or a 2 according to my evaluation, while the overwhelming majority
(40-62) scored a '4'. Another 16-22 in each ethnic group scored the
maximum value of '5', the equivalent of native speakers, even though they
actually are not.

On the other hand, those who claim to speak poorly and who do not
want to speak better, mostly fall within the lower grade categories: of
the 11 individuals who belong to this category, 7 scored '1' or '2' on
expansion and the other four scored a '4'.

Sex was not taken into account, but there is no reason to believe

that it is different from other analysis which indicate a similar

distribution between the sexes, with women generally falling into the

lower score categories.

With respect to formal schooling (variable 27), all of those with

the 2/2 combination have had a kindergarten education or less, with the

exception of one who went to primary school. Interesting enough, the age

spread is much greater--only 3 are in the younger age groups (0-14),

while 8 are older than 25.

If we look at the larger group (1/1), the results are very inter-

esting: in formal schooling the leading category is incomplete primary

school with 46 individuals, followed by kindergarten or less (26

individuals) and complete primary school (20 individuals). The same

pattern is not the case with the analysis by age group, where we find

that most of the individuals (40) are in the 15-24 age group, closely

followed by 37 individuals in the 25-44 age group, with a considerable

number in the 7-14 age group. There is a clear indication that formal

schooling is independent of their performance on the expansion score

judged by the interviewer, which coincides with their self-evaluation of

speaking Spanish well and wanting to speak it better. If we look at age,

we see that those who fall within the 1/1 category are somewhat older

(15-44), which coincides with our hypothesis that the ability to sustain

and elaborate in an interview does not depend on formal schooling.

The last variables to consider under this section on attitudes

are 25 (preference for language of instruction) and 26 (are both Spanish

and the Indian language acceptable as languages of instruction). To refresh the reader's memory, 48% of the individuals interviewed stated that they preferred instruction to be in both languages. Another 41% preferred only Spanish.

With respect to particular communities' views (variable 1) all were strongly in favor of bilingual instruction except the three communities in the county of Zapotitlán Tablas, which will be evident in the next table. More details can be found in Appendix 36.

TABLE NO 76

Variable 25 (preferred language of instruction at school) by Variable 2 (county)

County	1 – Spanish	Indian 2 – language	3 – Both	I don't 4 – know	row total
1 – Copalillo	49 21.6%	7 3.1%	163 71.8%	8 3.5%	227 31.4%
2 – Alcozauca	34 14.0%	0 0.0%	179 73.7%	30 12.3%	243 33.7%
3 – Zapotitlán Tablas	213 84.5%	8 3.2%	6 2.4%	25 9.9%	252 34.9%
Column Total	296 41.0%	15 2.1%	348 48.2%	63 8.7%	722 100.0%

The data point very clearly to the fact that the Tlapanecs are not in favor of using their language as a language of instruction. They show a strong preference for Spanish only. The counties of Copalillo and Alcozauca were very much in favor of using both the local language and Spanish in the classroom.

The sexes were evenly divided on the subject. For further information consult Appendix 37.

TABLE NO 77

Variable 25 (preferred language of instruction at school) by Variable 4
(mother tongue)

Mother tongue	1 - Spanish	Indian 2 - language	3 - both	I don't 4 - know	Row total
1 - Nahuatl	35	7	132	8	182
	19.2%	3.8%	72.5%	4.4%	25.2%
	11.8%	46.7%	37.9%	12.7%	
	4.8%	1.0%	18.3%	1.1%	
2 - Mixtec	23	0	159	26	208
	11.1%	0.0%	76.4%	12.5%	28.8%
	7.8%	0.0%	45.7%	41.3%	
	3.2%	0.0%	22.0%	3.6%	
3 - Tlapanec	179	6	5	18	208
	86.1%	2.9%	2.4%	8.7%	28.8%
	60.5%	40.0%	1.4%	28.6%	
	24.8%	0.8%	0.7%	2.5%	
4 - Bilinguals	33	1	21	4	59
	55.9%	1.7%	35.6%	6.8%	8.2%
	11.1%	6.7%	6.0%	6.3%	
	4.6%	0.1%	2.9%	0.6%	
5 - Spanish	26	1	31	7	65
	40.0%	1.5%	47.7%	10.8%	9.0%
	8.8%	6.7%	8.9%	11.1%	
	3.6%	0.1%	4.3%	1.0%	
Column	296	15	348	63	722
Total	41.0%	2.1%	48.2%	8.7%	100.0%

In addition to the Tlapanec preference for instruction in
Spanish, another interesting fact has been detected in this breakdown by
mother tongue--the bilingual group also has a preference, although not
as strongly manifested, for instruction in Spanish (56%) as opposed to
instruction in both the Indian language and Spanish (36%). Interestingly
enough, the native Spanish speakers preferred bilingual instruction (48%)
to monolingual instruction in Spanish (40%).

TABLE NO 78

Variable 25 (preferred language of instruction at school) by Variable 5 (age)

Age	1 - Spanish	Indian ? - tongue	3 - Both	I don't 4 - know	Row total
1 - 0-6 years	24 18.0%	4 3.0%	72 54.1%	33 24.8%	133 18.4%
2 - 7-14	87 48.1%	4 2.2%	69 38.1%	21 11.6%	181 25.1%
3 - 15-24	73 50.3%	0 0.0%	72 49.7%	0 0.0%	145 20.1%
4 - 25-44	70 42.9%	7 4.3%	79 48.5%	7 4.3%	163 22.5%
5 - 45 on	42 42.0%	0 0.0%	56 56.0%	2 2.0%	100 13.9%
Column Total	296 41.0%	15 2.1%	348 48.2%	63 8.7%	722 100.0%

It is interesting to note that the school-age children and youth (7-14) showed a preference for Spanish as the language of instruction, (48% versus 38% for 'both'). The next age group (15-24), who are in secondary school or starting a family, were divided in opinion. Some 50% opted for each of the two alternatives. The last two age group (25-44 and 45 and older) showed a definite preference for bilingual instruction.

TABLE NO 79

Variable 25 (preferred language of instruction at school) by Variable 27
(formal schooling)

Schooling	1 - Spanish	Indian 2 - language	3 - Both	I don't 4 - know	Row total
1 - none to	91	4	165	33	293
kindergarten	31.1%	1.4%	56.3%	11.3%	40.6%
	3C.7%	26.7%	47.4%	52.4%	
	12.6%	0.6%	2.9%	4.6%	
2 - incomplete	123	7	114	30	274
primary	44.9%	2.6%	41.6%	10.9%	38.0%
	41.6%	46.7%	32.8%	47.6%	
	17.0%	1.0%	15.8%	4.2%	
3 - complete	34	3	32	0	69
primary	49.3%	4.3%	46.4%	0.0%	9.6%
	11.5%	20.0%	9.2%	0.0%	
	4.7%	0.4%	4.4%	0.0%	
4 - incomplete	33	0	15	0	48
secondary	68.8%	0.0%	31.3%	0.0%	6.6%
	11.1%	0.0%	4.3%	0.0%	
	4.6%	0.0%	2.1%	0.0%	
5 - complete	9	1	10	0	20
secondary	45.0%	5.0%	50.0%	0.0%	2.8%
	3.0%	6.7%	2.9%	0.0%	
	1.2%	0.1%	1.4%	0.0%	
6 - past junior	6	0	12	0	18
high school	33.3%	0.0%	66.7%	0.0%	2.5%
	2.0%	0.0%	3.4%	0.0%	
	0.8%	0.0%	1.7%	0.0%	
Column	296	15	348	63	722
Total	41.0%	2.1%	48.2%	8.7%	100.0%

A very interesting phenomenon can be observed in this table.
Those individuals who have less than a kindergarten education are in
favor of bilingual instruction by 56% to 31%. In the next three
categories the opposite phenomenon is the case, although the percentages
do not differ substantially except in the third case (incomplete

secondary school with a 69% to 31% preference for instruction only in Spanish). Once secondary school is completed, or the subjects have more than a junior high school education, there is a reversal once again and a preference is shown for instruction in both languages. This is particularly noteworthy in the most highly educated group (probably because they are bilingual teachers for the most part), where 67% prefer bilingual instruction and only 33% favor instruction in Spanish.

While it might seem repetitive to ask nearly the same question in different words this was deliberate to verify the answers to question 25. Since this was a directed question, it was expected that the results of variable 25 would be confirmed and that percentages indicating a preference for instruction in both languages would be higher. Such was the case, and an overwhelming 60% of the individuals interviewed claimed to prefer instruction in both the Indian language and Spanish. Another 22% was undecided and only 9% said that they were not in favor of bilingual instruction.

Since results are so similar it is not considered worthwhile including all the statistics, but it might be of interest to mention that the county of Zapotitlán Tablas remained firm in its conviction to only have instruction in Spanish (85%).

One last table is included and hopefully it will shed more light on the interaction among the different variables we are studying.

TABLE NO 80

Mother tongue by Sex, Controlling for Community, Age, Preference for Language at School and Contact

Age	1-1-1 Nahuatl Cop	Tl	El	Mixtec Tl	Al	Am	Tlapanec Zt	El	Ah	3-1-1 Nahuatl Cop	Tl	El	Mixtec Tl	Al	Am	Tlapanec Zt	El	Ah
	-	-	-	-	-	-	-	-	-	-	-	-	(1)	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	-	-	-	-	-	-	2	2	-	-	(1)	(1)	-	(2)	-	-	-	-
	-	-	-	-	-	-			-	-	1	1	1	4	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
	-	-	-	-	(1)	-	(5)	(4)	(3)	(4)	-	(3)	(1)	(6)	-	-	-	-
	-	-	-	-		-	5	4	2	3	1		3	4	1	-	-	-
3	(1)	-	-	-	-	-	-	-	-	-	-	-	(2)	-	-	-	-	-
	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
	-	(1)	(1)	(1)	-	-	-	(4)	(3)	(2)	-	(1)	(6)	(5)	-	-	-	-
	1	-	-	-	-	-	4	2	1	1	3	1	1	2	-	-	-	-
4	-	-	-	-	-	-	(1)	-	-	1	1	-	-	(1)	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
	(3)	-	-	-	-	-	-	(2)	(2)	(2)	-	(1)	(3)	(3)	-	-	-	-
	-	-	-	-	-	-	1	2	1	-	1	-	-	-	-	-	-	-
5	-	1	1	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-
	8	2	2	1	1	0	19	20	12	13	8	12	16	34	1	0	0	0

( ) = males

Those below the dotted line are bilinguals; those above are native speakers of Indian tongues.

With a slightly different criterion of not only including native
Indian speakers, but also native bilinguals, given we are more concerned
with their attitudes than their ability to speak, the following results
were found: of those who answered that they preferred that schooling be
in Spanish when asked for a specific preference (the possible answers
were given), but who answered 'yes' when asked whether or not they would
like instruction to be in both the Indian tongue and in spanish and who
have also had a good deal of contact with Spanish outside the classroom
(1-1-1), there were some 66 individuals altogether, approximately half of
whom were male and the other half female. Only two were Mixtec, twelve
Nahuatl and the overwhelming majority Tlapanec. These results are
supported by participant observation.

Obviously the picture changes if we look at a different combina-
tion: a marked preference for teaching in both, validated by the
question of whether they would like instruction to be in both languages
and frequent contact with Spanish outside the classroom (3-1-1).

The results are that 84 individuals fit into this category. The
distribution by sexes is almost equal. There were no Tlapanecs in this
classification, but there were 33 Nahuatls and more Mixtecs (51). This
can be interpreted as follows in terms of attitudes and language mainten-
ance and shift: the Mixtecs are solid in their position of wanting
bilingual education and are the least likely to shift to Spanish (borne
out by proficiency results in Spanish); the Nahuatls also favor
instruction in both languages and have a solid positive attitude toward

bilingual education; the Tlapanecs strongly favor instruction only in Spanish and not one single person with frequent outside contact with Spanish speakers was in favor of bilingual education. This group is the most likely to shift to Spanish.

If we look at ages, the predominant groups are three (15-24) and four (25-44), both for the 1-1-1 and the 3-1-1 combination. This fact is important because these groups are in the reproductive stages and therefore have the choice of passing on the Indian tongue as a native language or not, which lends even more support for a shift from Tlapanec to Spanish in this ethnic group.

VIII. CONCLUSIONS

This dissertation has been a long one. We have looked at the political and research reasons for carrying out a study of this nature and the socio-economic situation in the Montaña Region. We have also examined key concepts, such as ethnicity, marginality, bilingual education, language policy and language maintenance and shift and related them to the basic research questions addressed in the dissertation. Another whole section dealt with field work and methodology during data collection, as well as language testing constructs. Finally, immediately before these concluding words, we reviewed the frequency data for all the variables included in the study and examined the crosstabs for variables selected to shed light on the two major issues addressed in this dissertation: a qualitative evaluation of language proficiency in Spanish and hedged predications of language maintenance and shift in these areas.

What are the most important findings and conclusions that can be drawn from the study? The concerns mentioned in the previous paragraphs have been research interests of mine over the past few years as a result of related work carried out at the Centro de Investigaciones para la Integración Social (CIIS) from 1979-1985. At the same time, this work addresses some of the key issues for language policy in México. What exactly are these key issues?

As was mentioned in Chapter II, the fundamental information

needed for language policy decisions is missing at present for most of

the 55 Indian groups in Mexico. I am referring to information such as

the basic diachronic trends for monolingualism and bilingualism in

specific communities, the reasons that led to these trends and synchronic

information, such as how well the two languages are spoken at present by

different age groups, according to formal schooling, etc. What purposes

do the two languages cover and with what frequency are they used? How

deeply attached is language to culture? Do Indian-language speakers want

to learn more Spanish? If so, for what purpose? Does this mean a risk

of losing the native Indian tongue and culture, or are these independent

of each other? Do these particular groups expect to acquire more Spanish

through direct contact with the language, or are they willing to actively

support Spanish as the language of instruction at school? How do they

feel about the usefulness of their own native language?

The answers to these questions and many more on a community level

are key elements to have before trying to promote language maintenance

programs through bilingual education at school (this potentially means

having trained instructors who can teach in the Indian languages, text-

books, workbooks and supplementary readings in 55 different languages,

evaluation systems comparable to those of the Mexican national school

system or to achieve these goals through language revival programs, etc.

Another important piece of information to know is what the answers to the

census question "Do you speak Spanish" means qualitatively. An extensive

qualitative evaluation is offered for this region as one of the principal

goals of the dissertation.

This study sheds light on what a sample of 722 subjects from the Nahuatl, Mixtec and Tlapanec ethnic groups in the Montaña Region have to say about these questions. While hopefully the methodology and findings will be helpful as a pilot study for other regions, it is at best a valid reflection of what is taking place in this particular region and is not necessarily true for other areas.

Important data for language maintenance and shift in this area can be gleaned from studying census data and other research findings. According to the 1980 census, in the Montaña Region about half of the population speaks an Indian language (in 1980 there were 159,430 people, or about 51% of the total population). This percentage has remained high ever since statistics have been available, which confirms the fact that this region is densely Indian-populated. However, monolingualism and bilingualism is not as clear-cut regionally. For the first time in history there were slightly more bilinguals than monolinguals, which in turn indicates a shift in language that will probably (based on other trends and research results in countries with a similar situation) continue and possibly at a faster rate than to date. It must be borne in mind, however, that the three counties chosen have had a long history of Indian tongue maintenance and should be among the more reticent to switch to Spanish. The situation is not exactly the same for all three counties (see Graphs 4, 5 and 6). From 1970-1980 the percentages of both monolingualism and bilingualism increased in Alcozauca, while only the

percentage of bilingual speakers increased in Copalillo and Zapotitlán
Tablas, which in turn indicates a stronger propensity to shift toward
bilingualism in these two counties, while the situation is more stable in
Alcozauca.

Chapter IV is self-explanatory as to the reasons why this area is
a particularly backward one. We have seen that it occupies the most
rugged part of the State of Guerrero. Socio-economic indicators such as
health and educational services are extremely limited, and general living
standards are among the lowest in México. This situation is a two-edged
sword. On the one hand, these harsh conditions have ,limited the penetra-
tion of Spanish into the area due to its isolation (both geographical and
socio-economic) from rural mestizo society; yet, on the other hand,
the fact that it is so hard to earn a living is acting as a stimulus for
young men and sometimes for whole families to be migrant laborers or
itinerant vendors, which in turn brings them more into contact with
Spanish and mainstream society.

Some of the more theoretical concepts behind these phenomena can
be found in Chapter V. The concept of 'ethnicity' as a collective
within a larger society having a common ancestry, memories of a shared
past and a cultural focus on one or more elements of their peoplehood
(such as language) is important, since this view is what distinguishes
Nahuatls, Mixtecs and Tlapanecs from other Mexicans, and from each other
as well. In this case giving up their language is synonomous with losing
their self-identity. On a national level it has often been said that

México's Indian heritage is what makes México México. The present

language and educational policy of plurilingualism and pluriculturalism

pays tribute to this philosophy.

The concept of 'marginality' is also a key one for the purposes

of this dissertation. It is understood as a lack of participation in

those processes and spheres in which one should be active and included.

This is exactly what has happened in the Montaña Region throughout time.

These groups have been excluded from determining what they want to be and

how they want to live. One of the main reasons of a study such as this

one is to poll their opinions on language use, bilingual instruction,

etc., and to put this information in the hands of the decision-makers,

some of whom in the case of México are themselves Indians. Perhaps

self-determination is easier to attain in language-related fields than in

major political and economic processes which tend to be in the hands of

powerful mainstream figures.

Methodological considerations of bilingual education were not

touched upon in the dissertation--only the philosophy behind it. In

México the reasons for practicing bilingual education are 1) to assim-

ilate groups into the mainstream of society, to socialize people for full

participation in the mestizo community; 2) to bring unity to a multi-

ethnic and multi-lingual society and, to a lesser degree, 3) to give

status to language of unequal prominence in society and 4) to deepen

understanding of language and culture. In spite of these noble causes,

the results which stem from evaluation of other bilingual programs around

the world point to the fact that the school system proper seldom is the determining force--successful programs depend on the interaction of teachers, materials and methodology, parents' and communities' attitudes, and so forth. While the Mexican Government's policy falls under what has been called the equilibrium paradigm, in which the educational system socializes youth, provides it with technical competence, and orients it in harmony with the values of society, which 'equalizes' everyone, on the other hand, according to the conflict paradigm, formal education is viewed as a part of the ideological structure a ruling class controls to maintain its dominance over the masses. Since formal education is dependent on dominant economic and political institutions, it cannot be a primary agent of social transformation and can only follow changes in the imperatives of economic and political social order.

We have already described language policy and the importance of self-determination by the Indians. There has been a move in this direction by various Indian groups (particularly ANPIBAC) on a national and regional level. A few of the constant recommendations by these groups are that communities be seen as a source of knowledge, that bilingual education be bicultural as well, and that Indian organizations have more influence in self-determination.

At the end of the section on language maintenance and shift it became obvious that a diglossic situation does exist in this area. Stable bilingualism in favor of Spanish has gained strength over the last decade. Many Mexican colleagues feel that one of the objectives of

bilingualbicultural education is to stabilize the diglossic situation and certain domains of use for the Indian languages. Other ways to stabilize language shift are to reduce the handicaps facing speakers of a given language by reforming the societal institutions which subordinate the native tongue, to increase awareness of communicative functions, to sharpen attitudes toward usefulness, and to improve self-evaluation of proficiency and actual usage.

It is the statistical section (Chapter VII) that provides the data necessary to shed light on the basic questions of language proficiency in Spanish and language maintenance and shift in both languages. We saw that in answer to the 1980 census questions 'do you speak Spanish' that over half of the subjects interviewed claimed to have answered 'yes' at that time. The findings of this study quantitatively validate the 1980 census questions; however, one of the main purposes of this study was to provide qualitative data for this question. If we combine the percentage of the three ethnic groups who stated that they spoke Spanish 'well' or 'average', we find that according to their self-evaluations some 60% fall into this category.

My research evaluations lend support to the census data and the Indians' self-evaluations. If we take into the scores for turn-taking, morphosyntax and expansion, approximately 75% of the subjects attained scores equivalent to a good or average command of the Spanish language. In all cases the Mixtecs were the ethnic group with the lowest averages. These results coincide with previous research on these three Indian

groups in the Montaña Region (Godau and Politi: 1981) and (Finegold, López Chavez and Weller: 1983), which show the Tlapanecs alternating with the Nahuatls for first and second places in proficiency (according to the type of test) and the Mixtecs always in third place as the least proficient group.

Other important information stemming from both the Indians' self-evaluations and my research data were that there is a strong correlation between years of formal schooling, hours spent speaking or using Spanish and the amount of time one spends in informal contact with the Spanish language. In other words, Spanish both can be and is learned formally at school and acquired informally in daily encounters with the language. The impact of formal schooling is greatest on school-age children and youth, while informal acquisition comes at a slightly later age as opportunities for contact increase. There are more proficient men than women, but the data indicate that this is due to a lack of opportunity--under equal circumstances women perform as well or better than their male counterparts. Proficiency is usually greater in the county seats than in the smaller towns, but the size of the community is not the determining factor, but rather the amount of active exposure.

Regarding prospects for language maintenance and shift, some 70% or more of the three ethnic groups wnat to speak their language better. There is an inverse relationship between formal schooling and the desire to speak the native language better (the opposite occurs with Spanish).

With respect to the desire to improve their Spanish, over 75% of those interviewed mainifested this hope, which in turn shows a clear recognition of the value and importance they place on the role of Spanish; however, the Indian tongues are live and well, as has already been pointed out. The native speakers claimed to speak them well and show a very positive attitude toward them as the language of the home and community. According to sociolinguistic theory, as long as certain domains and functions are reserved for different languages, these languages will survive.

In addition to these attitudinal questions toward their native languages and Spanish, the questions regarding bilingual instruction were also very revealing. About 75% of the Nahuatls and Mixtecs want bilingual instruction, but the Tlapanecs are clearly in favor of instruction in Spanish only (86%), although they are willing to accept instruction in both languages. Use of the native languages at school is a new function for these languages.

In spite of the high level of proficiency and positive attitudes toward their native languages, we must bear in mind statistical trends concerning bilingualism over the past decades, which point to increasing bilingualism and decreasing monolingualism. This is a trend which I expect to continue and become even more accentuated from now to the year 2000, with certain variations according to the particular ethnic group. For example, in the Montaña Region it is likely that the Tlapanecs will be the first group to shift for the following reasons: a) they have the

highest degree fo proficiency in Spanish; 2) they are the group with the greatest desire to speak Spanish better; and 3) they prefer instruction in Spanish--this is particularly true of the groups in reproductive ages (15-24 and 25-44).

Finally, so much more could be said in a dissertation so wide in scope. Perhaps the only clear conclusion is the urgent need to pursue several of the lines of research indicated in this study--for example, we now know what the proficiency in Spanish of the Nahuatls, Mixtecs and Tlapanecs is, and what their attitudes are toward various phenomena, but nothing has been done to date to discover why this is the case. What factors are behind group differences in proficiency, for example. Once again, this study has only scratched the surface of what hopefully will be the subject of concern for many research endeavors on different Mexican ethnic groups in the future.

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APPENDICES

APPENDIX 1

CUESTIONARIO INDIVIDUAL

I. DATOS GENERALES

Nombre:_____ Clave: _____
Localidad: _____ Municipio: _____
Sexo: _____ Lengua materna: _____ Edad: _____

II. ACTITUDES Y DATOS LINGUISTICOS

1.   Habla ud. lengua indigena?   _____
2.   La habla bien ó mal?   _____
3.   Habla ud. español?   _____
4.   Lo habla bien ó mal?   _____
5.   En el censo de 1980 dijo ud. que hablaba
            español?   _____

6.   Entiende ud. su lengua indígena hablada?   _____
7.   Bien ó mal?   _____
8.   Entiende ud. el español hablado?   _____
9.   Bien ó mal?   _____
10.   Puede entender un noticiero por radio
            en español?   _____

11.   Sabe ud. si se puede escribir su lengua indígena? _____
12.   Sabe ud. leer y escribir en lengua indígena?   _____
13.   Le gustaría aprender?   _____
14.   Sabe ud. leer y escribir en español?   _____
15.   Le gustaría aprender?   _____

16.   Quisiera hablar mejor su lengua indígena?   _____
17.   Quisiera hablar mejor el español?   _____
18.   Cuantas horas al dia habla ud. su
            lengua indígena?   _____
19.   Cuantas horas al dia habla ud. el español?   _____
20.   De preferencia en que lengua deben enseñar
            en la escuela?   _____

21.   Le gustaría que se enseñara tanto en LI como
            en español?   _____
22.   Hasta que año de la escuela llegó?   _____
23.   En que circunstancias usa la lengue indígena
            (fuera de su casa)?   _____
24.   Y el español?   _____

APPENDIX 2

CUESTIONARIO JEFE DE FAMILIA

I. DATOS GENERALES

Nombre:_____ Clave: _____
Localidad: _____ Municipio: _____
Sexo: _____ Lengua materna: _____ Edad: _____

II. ACTITUDES Y DATOS LINGUISTICOS DE LA FAMILIA

Composición de la familia que vive bajo el mismo
    techo: _____ integrantes
Quienes son: _____

		Respuesta	Edad
1.	Habla ud. lengua indígena?		
2.	Habla ud. español?		
3.	Habla lengua indígena su esposa (o)?		
4.	Habla español su esposa (o)?		
5.	Cuántos hijos tiene?		
6.	Cuáles son bilingues?		
7.	Cuáles hablan solo lengua indígena?		
8.	Cuáles hablan solo español?		
9.	Habla ó hablaba lengua indígena su madre?		
10.	Habla ó hablaba español su madre?		
11.	Habla ó hablaba lengua indígena su padre?		
12.	Habla ó hablaba español su padre?		
13.	Hablan lengua indígena los otros parientes que comparten la casa?		
14.	Hablan español los otros parientes que comparten la casa?		
15.	Qué se habla más en la casa, lengua indígena o español?		
16.	En que circunstancias hablan en lengua indígena dentro da la casa?		
17.	En que circunstancias hablan en español dentro de la casa?		

Observaciones: _____

APPENDIX 3

CUESTIONARIO LIDERES DE OPINION EN LA COMUNIDAD

I.   DATOS GENERALES

Nombre: _____   Clave: _____
Puesto: _____   Población de la comunidad: _____

Localidad: _____   Municipio: _____
Centro rector mas cercano: _____   Horas a pie: _____

Horas en Vehiculo: _____   Lenguas: _____
Estabilidad de la población: _____

Principales actividades económicas: _____
Principales productos: _____

Quiénes emplean la lengua indígena?: _____
En qué ocasiones?: _____

II.   INFRAESTRUCTURA

1. Caminos de acceso   _____   2. Transporte foraneo _____

3. Transporte local   _____   4. Teléfono   _____

5. Telégrafo   _____   6. Correo   _____

7. Electricidad   _____   8. Agua potable   _____

9. Banco   _____   10. Tiendita   _____

11. Conasupo   _____   12. Oficina Gob. Fed. _____

13. Palacio Municipal   _____   14. Iglesia   _____

15. Zocalo/parque   _____   16. Cancha de deportes _____

17. Escuela pre-escolar   _____   18. Escuela primaria   _____

19. Escuela secundaria   _____   20. Otra escuela   _____

III. OBSERVACIONES

_____

APPENDIX 4

CUESTIONARIO MAESTRO/DIRECTOR DE ESCUELA

I.   DATOS GENERALES

Nombre: _____ Clave: _____

Nombre de la escuela: _____

Localidad: _____ Municipio: _____

Lengua materna: _____ Puesto: _____

II.   DATOS DE LA ESCUELA

Construcción: _____ Tipo: _____

Grados cubiertos: _____ Turnos: _____

Cuándo se inauguro?:_____ Grupos por turno: _____

Alumnos por grupo: _____ Maestros por turno: _____

Pertenece al sistema bilingue?:_____ Desde cuándo?:_____

Se alfabetiza en lengua indígena?:_____

Español en 2^0: _____ Completos por alumno: _____

Materiales didácticos en uso: _____

LLegan oportunamante: _____

III.   DATOS DEL ALUMNADO

Asistencia: _____ Causas de inasistencia: _____

            _____   _____

% de desercion: _____ % de reprobados: _____

Dominio del español al egresar: _____

Dominio de la lengua indígena al egresar: _____

Lengua de recreo: _____

Interés en aprender el español: _____

_____

IV.   DATOS DE LOS MAESTROS

Nivel de interés/participación: _____

Asistencia: _____ Preparación: _____

Cuántos son bilingües?:_____

Observaciones: _____

APPENDIX 5

GUIA INSTRUMENTO <u>EDAD PRE-ESCOLAR</u>   (0 - 6 ANOS)

		<u>R</u>	<u>L</u>	<u>A</u>
Tema 1:	Las cartas			

1.   Las cartas en general
     - De estas cartas cuáles son las mas
         bonitas para ti?   —   —   —
     - Qué colores ves aquí en las cartas?   —   —   ..
     _ Enséñame las cosas que tienes en tu casa.   —   —   —

2.   Algunas cartas específicas
     - Y para que usa el molcajete tu mamá?   —   —   —
     - Dónde está la silla?   —   —   —
     - Y tú tienes una silla como ésta?   —   —   —

3.   Las cartas con juguetes
     - Platícame de los juguetes que ves aquí
         en las cartas.   —   —   —
     - Has jugado con alguno de ellos?   —   —   —
     - Explícame como se juega con el balero.   —   —   —

Tema 2:   Los animales

1.   Los animales en las cartas
     - Enséñame los animales que ves en las cartas. —   —   —
     - Cómo es este cochino?   —   —   —
     - Y tú has visto algun cochinito como este?   —   —   —

2.   Los animales en la casá
     - Qué animalitos tienes en casa?   —   —   —
     - Quién los cuida?   —   —   —
     - Como los cuida?   —   —   —
     - Y van a comprar mas animales tus papas?   —   —   —

3.   Alguna experiencia con animales
     - Alguna vezte has encontrado con un animal
         peligroso?   —   —   —
     - Cuéntame que pasó.   —   —   —
     - Qué otros animales peligrosos hay por aqui? —   —   —

Nombre: _____   Edad: _____   Clave: _____
Localidad y Municipio: _____
Observaciones: _____

APPENDIX 6

GUIA INSTRUMENTO <u>EDAD ESCOLAR</u> (7 - 14 ANOS)

		<u>R</u>	<u>L</u>	<u>A</u>
Tema 1:	La escuela			

1. Datos generales
   - A que horas entras y sales de la escuela?
   - Descríbeme un dia típico en tu escuela.
   - Cuentame de los deportes que practicas en
     la escuela

2. Gustos
   - Qué es lo que mas te gusta de la escuela?
   - Cuentame lo que haces durante el recreo.
   - Y a dónde vas despues de clases?

3. Papel de las lenguas
   - Dónde aprendiste el español?
   - Y ya aprendiste a leer y escribir en___LI?
   - Por qué?

Tema 2:   Cuando seas grande

1. Aspiraciones
   - Qué quieres ser cuando seas grande?
   - Y por qué eso?
   - Y a quién conoces que se dedique a eso?

2. Preparación
   - Y vas a tener que preparte mucho?
   - Lo puedes aprender a hacer aquí ó tienes
     que lejos?
   - Qué materiales ó implementos de trabajo
     necesitas?

3. Lenguas
   - A ver, platícame un poco de lo bueno y lo malo
     de hablar _____LI.
   - Has podido estudiar alguna otro lengua?
   - En dónde podrías aprender mejor el español?

Nombre: _____   Edad: _____   Clave: _____

Localidad y Municipio: _____

Observaciones: _____

APPENDIX 7

GUIA INSTRUMENTO <u>EDAD JOVEN</u> (15 - 24 ANOS)

Tema 1: El Transporte	<u>R</u>	<u>L</u>	<u>A</u>

1. Los medios de transporte
   - Qué medios de transporte conoces?
   - En cuales te has subido?
   - Platícame de como puede uno transportarse
     de aqui a _____ .

   — — —
   — — —
   — — —

2. Experiencia personal
   - Oye, A dónde van las avionetas que pasan
     por aqui?
   - Cómo te imaginas que se siente volar
     en avioneta?
   - Descríbeme algún viaje que tu hayas hecho.
   - Que usaste más, español o _____ ?

   — — —
   — — —
   — — —
   — — —

3. Instrucciones
   - Oye, y tú has ido a _____ ?
   - Y si yo quiero ir a _____ por dónde
     me voy?
   - Platícame algo de lo que voy a ver en el
     camino.

   — — —
   — — —
   — — —

Tema 2:   La Fiesta

1. La fiesta del pueblo
   - Cuándo es la fiesta de aqui?
   - Platícame todo lo que puedas de la fiesta.
   - Y empezaste a ir a la fiesta desde chico?
   - Qué se oye mas, español o _____ ?

   — — —
   — — —
   — — —
   — — —

2. Gustos
   - Te gusta ir a la fiesta?
   - Por qué?
   - Cuéntame algo sobre el tipo de musica
     que tocan.

   — — —
   — — —
   — — —

3. Preparacion
    - Alguna vez tu has ayudado a organizar
        la fiesta?   —   —   —
    - Que preparativos hay que hacer desde antes?   —   —   —
    - Me puedes decir como se hace un castillo o
        el torito?   —   —   —

Nombre: _____ Edad: _____ Clave: _____

Localidad y Municipio: _____

Observaciones: _____

_____

APPENDIX 8

GUIA INSTRUMENTO <u>EDAD MADURA</u> (25 - 44 ANOS)

		<u>R</u>	<u>L</u>	<u>A</u>
Tema 1:	Compra/Venta			
1.	Compra			
	- Qué cosas compra para su famila?	-	-	-
	- En donde las compraas?	-	-	-
	- Normalmente regatea?	-	-	-
	- Platiqueme algo sobre como regatea.	-	-	-
2.	Venta			
	- Qué productos va a vender este año?	-	-	-
	- A qué mercado ó tienda los lleva?	-	-	-
	- Qué lengua usa para la venta?	-	-	-
3.	El trueque			
	- Ud. ha usado el sistema de trueque de productos en vez de dinero alguna vez?	-	-	-
	- Cómo funciona el trueque?	-	-	-
	- Con quiénes hace este intercambio de productos?	-	-	-
Tema 2:	Viajes			
1.	Otros pueblos			
	- Ha viajado alguna vez a otro pueblo?	-	-	-
	- A dónde fue?	-	-	-
	- Y por qué fue allá?	-	-	-
2.	El transporte			
	- Cómo llego allá?	-	-	-
	- Cuénteme de alguna experiencia que tuvo durante su viaje.	-	-	-
	- Y si yo quiero ir alla a pie, por dónde me voy?	-	-	-
3.	Vivencias			
	- En ese pueblo que lengua habla la gente?	-	-	-
	- Cuénteme algo sobre lo que hace la gente durante el dia.	-	-	-
	- Y sus _____ han venido para acá?	-	-	-

Nombre: _____ Edad: _____ Clave: _____

Localidad y Municipio: _____

Observaciones: _____

APPENDIX 9

GUIA INSTRUMENTO <u>EDAD MAYORES</u> (45 y MAS)

Tema 1:	Su vida	<u>R</u>	<u>L</u>	<u>A</u>

1. Un dia tipico
   - Platiqueme de lo que hace durante el dia. — — —
   - Sus hijos le ayudan en la casa? — — —
   - Cómo le ayudan? — — —

   mas

2. Cambios
   - Qué cambios ha notado en el pueblo en
     estos años? — — —
   - Como han afectado le lengua y la cultura
     indígenas? — — —
   - De todos estos cambios hay alguno que le
     haya gustado en particular? — — —

   mas

3. Mudanza
   - Ud. ha visitado la costa alguna vez? — — —
   - Platíqueme de su viaje — — —
   - Le gustaria ir a vivir en la costa? — — —
   - Que cosas se llevaria? — — —

Tema 2: Recuerdos   mas

1. El día mas importante
   - Qué diá de su vida recuerda en especial? — — —
   - Cuénteme por favor que pasó ese día. — — —
   - Quienes más estuvieron presentes? — — —

   mas

2. Los hijos
   - Qué recuerdos tiene de sus hijos cuando
     estaban chicos? — — —
   - Cuénteme alguna cosa chistosa que hizo
     alguno de ellos. — — —
   - Como aprendieron español sus hijos? — — —

   mas

3. Los deseos
   - Si tuviera un deseo, cuál sería? — — —
   - Por que pidío eso? — — —
   - Le gustaría hacer un viaje a México? — — —
   - Por qué? — — —

Nombre: _____ Edad: _____ Clave: _____

Localidad y Municipio: _____

Observaciones: _____

APPENDIX 10

Evaluacion del Instrumento Linguistico

A Pregunta del encuestador	B Respuesta del sujeto	C Lo adecuado de la respuesta al pie	D Calidad Componente Fonológico	E De Expresión Componente Morfosintáctico	F Expresión Componente Cognos-semantico
Tema 1					
1	1	1	1	1	1
1	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6			
7	7	7			
8	8	8			
9	9	9			
10	10	10			
11	11	11			
12	12	12			
13	13	13			
14	14	14			
15	15	15			
16	16	16			
17	17	17			
18	18	18			
19	19	19			
20	20	20			
21	21	21			
22	22	22			
23	23	23			
24	24	24			
25	25	25			
26	26	26			
27	27	27			
28	28	28			
29	29	29			
30	30	30			
%B/A ___	%C/B ___		___	___	___

Evalución del Instrumento Lingüístico

A Pregunta del encuestador	B Respuesta del sujeto	C Lo adecuado de la respuesta al pie	D Calidad Componente Fonológico	E De Expresión Componente Morfosintáctico	F Componente Cognos-semantic
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6			
7	7	7			
8	8	8			
9	9	9			
10	10	10			
11	11	11			
12	12	12			
13	13	13			
14	14	14			
15	15	15			
16	16	16			
17	17	17			
18	18	18			
19	19	19			
20	20	20			
21	21	21			
22	22	22			
23	23	23			
24	24	24			
25	25	25			
26	26	26			
27	27	27			
28	28	28			
29	29	29			
30	30	30			
%B/A	%C/B				

Instumento Lingüístico

Ruralismos, Indigenismos: _____

Observaciones sobre su uso del español: _____

_____

_____

Entrevistado: _____   Clave: _____

Localidad y municipio: _____   Edad: _____

Lengua Indígena: _____   Autoevaluacion del español: _____

APPENDIX 11

INDIVIDUAL QUESTIONNAIRE'S CODESHEET

Column	Variable	Subject	Codes
1 to 3	-	Individual code	001-722
4	1	Community	1 - Copalillo 2 - Tlalcozotitlán 3 - El Cascalote 4 - Tlahuapa 5 - Alcozauca 6 - Amolonga 7 - Zapotitlán Tablas 8 - Escalerilla Lagunas 9 - Ahuixotitla
5	2	County	1 - Copalillo 2 - Alcozauca 3 - Zapotitlán Tablas
6	3	Sex	1 - Male 2 - Female
7	4	Mother Tongue	1 - Nahuatl 2 - Mixtec 3 - Tlapanec 4 - Bilingual 5 - Spanish
8	5	Age	1 - 0-6 2 - 7-14 3 - 15-24 4 - 24-44 5 - 45 and older
9	6	Do you speak the Indian language	1 - yes 2 - no
10	7	How well do you speak it?	1 - well 2 - poorly 3 - average 4 - other or no answer
11	8	Do you speak Spanish?	1 - yes 2 - no 3 - other or no answer

Column	Variable	Subject	Codes
12	9	How well do you speak it?	1 - well 2 - poorly 3 - average 4 - other or no answer
13	10	Did you claim to speak Spaish in the 1980 Census?	1 - yes 2 - no 3 - I don't know
14	11	Do you understand spoken _____ (Indian Tongue)	1 - yes 2 - no
15	12	How well do you understand it?	1 - well 2 - poorly 3 - average 4 - other or no answer
16	13	Do you understand spoken Spanish?	1 - yes 2 - no
17	14	How well do you understand it?	1 - well 2 - poorly 3 - average 4 - other or no answer
18	15	How well can you understand news over the radio?	1 - well 2 - poorly 3 - average
19	16	Do you know if your Indian tongue can be written?	1 - yes, it can 2 - no, it can't 3 - I don't know
20	17	Do you know how to read or write in your Indian tongue?	1 - yes 2 - no 3 - a little
21	18	If not, would you like to learn?	1 - yes 2 - no 3 - I don't know 4 - other or no answer
22	19	Do you know how to read and write in Spanish?	1 - yes 2 - no 3 - a little

Column	Variable	Subject	Codes
23	20	If not, would you like to learn?	1 - yes 2 - no 3 - I don't know 4 - other or no answer
24	21	Would you like to speak your Indian tongue better?	1 - yes 2 - no 3 - I don't know 4 - other or no answer
25	22	Would you like to speak Spanish better?	1 - yes 2 - no 3 - I don't know 4 - other or no answer
26	23	How many hours a day do you speak your Indian tongue	1 - less than two 2 - from two to five 3 - from six to nine 4 - from ten to thirteen 5 - more than thirteen 6 - I don't know
27	24	How many hours a day do you speak Spanish?	1 - less than two 2 - from two to five 3 - from six to nine 4 - from ten to thirteen 5 - more than thirteen 6 - I don't know
28	25	In what language should children be taught at school?	1 - Spanish 2 - Indian tongue 3 - both 4 - I don't know
29	26	Would you like them to be taught in both languages?	1 - yes 2 - no 3 - I don't know 4 - other or no
30	27	How far did you get in school?	1 - no formal schooling or kindergarten 2 - incomplete primary 3 - complete primary 4 - incomplete Jr. High 5 - complete Jr. High 6 - High School or above

Column	Variable	Subject	Codes
31-34	28-31	Where do you speak your Indian tongue?	0 - nowhere 1 - in community 2 - at home 3 - with visitors 4 - on trips 5 - at school
35-38	32-35	Where do you speak Spanish?	0 - nowhere 1 - in community 2 - at home 3 - with visitors 4 - on trips 5 - at school
39-41	36-38	What do you do for a living?	1 - farmer, peasant 2 - housewife 3 - merchant, trader 4 - craftsman 5 - student 6 - other
42	39	How much contact have you had outside your community?	1 - a lot (several months or years) 2 - a little (none or a few weeks) 3 - average (a couple of months)
43-44	40	Score for turn-taking during the interview	1 - 3 low 4 - 6 average 7 - 9 high
45-46	41	Pertinence of answer to question	1 - 3 low 4 - 6 average 7 - 9 high
47-49	42	Phonology component	1 - very low 2 - low 3 - average 4 - high 5 - very high

Column	Variable	Subject	Codes
50-51	43	Morphosyntactic component	1 - very low 2 - low 3 - average 4 - high 5 - very high
52-53	44	Cognitive-semantic component	1 - very low 2 - low 3 - average 4 - high 5 - very high

APPENDIX 12

Variable 9 (how well they speak Spanish) by Variable 1 (community)

Community	1 - well	2 - poorly	3 - average	another or 4 - no answer	Row total
1 - Copalillo	65	14	29	14	122
	53.3%	11.5%	23.8%	11.5%	16.9%
	21.4%	11.2%	14.8%	14.4%	
	9.0%	1.9%	4.0%	1.9%	
2 - Tlalcozo-titlán	20	15	7	1	43
	46.5%	34.9%	16.3%	2.3%	6.0%
	6.6%	12.0%	3.6%	1.0%	
	2.8%	2.1%	1.0%	0.1%	
3 - El Cascalote	26	18	4	12	60
	43.3%	30.0%	6.7%	20.0%	8.3%
	8.6%	14.4%	2.0%	12.4%	
	3.6%	2.5%	0.6%	1.7%	
4 - Tlahuapa	7	5	27	21	60
	11.3%	8.3%	45.0%	35.0%	8.3%
	2.3%	4.0%	13.8%	21.6%	
	1.0%	0.7%	3.7%	2.9%	
5 - Alcozauca	76	12	50	6	144
	52.8%	8.3%	34.7%	4.2%	19.9%
	25.0%	9.6%	25.5%	6.2%	
	10.5%	1.7%	6.9%	0.8%	
6 - Amolonga	0	15	1	24	40
	0.0%	37.5%	2.5%	60.0%	5.5%
	0.0%	12.0%	0.5%	24.7%	
	0.0%	2.1%	0.1%	3.3%	
7 - Zapotitlán Tablas	64	27	43	11	145
	44.1%	18.6%	29.7%	7.6%	5.5%
	21.1%	21.6%	21.9%	11.3%	
	8.9%	3.7%	6.0%	1.5%	
8 - Escalerilla Lagunas	21	19	22	6	68
	30.9%	27.9%	32.4%	8.8%	9.4%
	6.9%	15.2%	11.2%	6.2%	
	2.9%	2.6%	3.0%	0.8%	

9 - Ahuixo-titla	25	0	13	2	40
	62.5%	0.0%	32.5%	5.0%	5.5%
	8.2%	0.0%	6.6%	2.1%	
	3.5%	0.0%	1.8%	0.3%	
Column	304	125	196	97	722
Total	42.1%	17.3%	27.1%	13.4%	100.0%

APPENDIX 13

Variable 9 (how well they speak Spanish) by Variable (sex)

Sex	1 - well	2 - poorly	3 - average	4 - ninguno	Row total
1 - masculine	150	60	105	36	351
	42.7%	17.1%	29.9%	10.3%	48.6%
	49.3%	48.0%	53.6%	37.1%	
	20.8%	8.3%	14.5%	5.0%	
2 - feminine	154	65	91	61	371
	41.5%	17.5%	24.5%	16.4%	51.4%
	50.7%	52.0%	46.4%	62.9%	
	21.3%	9.0%	12.6%	8.4%	
Column	304	125	196	97	722
Total	42.1%	17.3%	27.1%	13.4%	100.0%

APPENDIX 14

Variable 24 (how many hours a day they speak Spanish) by Variable 1
(community)

Community	1-0/2	2-2/5	3-6/9	4-10/13	more 5-than 13	I don't 6-know	Row total
1 - Copalillo	43	2	49	8	20	0	122
	35.2%	1.6%	40.2%	6.6%	16.4%	0.0%	16.9%
	18.1%	4.3%	18.7%	8.4%	27.0%	0.0%	
	6.0%	0.3%	6.8%	1.1%	2.8%	0.0%	
2 - Tlalcozo-titlán	9	9	13	7	3	2	43
	20.9%	20.9%	30.2%	16.3%	7.0%	4.7%	6.0%
	3.8%	19.1%	5.0%	7.4%	4.1%	28.6%	
	1.2%	1.2%	1.8%	1.0%	0.4%	0.3%	
3 - El Cascalote	28	5	14	8	1	4	60
	46.7%	8.3%	23.3%	13.3%	1.7%	6.7%	8.3%
	11.8%	10.6%	5.3%	8.4%	1.4%	57.1%	
	3.9%	0.7%	1.9%	1.1%	0.1%	0.6%	
4 - Tlahuapa	43	0	15	1	0	1	60
	71.7%	0.0%	25.0%	1.7%	0.0%	1.7%	8.3%
	18.1%	0.0%	5.7%	1.1%	0.0%	14.3%	
	6.0%	0.0%	2.1%	0.1%	0.0%	0.1%	
5 - Alcozauca	28	0	69	18	29	0	144
	19.4%	0.0%	47.9%	12.5%	20.1%	0.0%	19.9%
	11.8%	0.0%	26.3%	18.9%	39.2%	0.0%	
	3.9%	0.0%	9.6%	2.5%	4.0%	0.0%	
6 - Amolonga	39	0	1	0	0	0	40
	97.5%	0.0%	2.5%	0.0%	0.0%	0.0%	5.5%
	16.5%	0.0%	0.4%	0.0%	0.0%	0.0%	
	5.4%	0.0%	0.1%	0.0%	0.0%	0.0%	
7 - Zapotitlán Tablas	34	21	36	33	21	0	145
	23.4%	14.5%	24.8%	22.8%	14.5%	0.0%	20.1%
	14.3%	44.7%	13.7%	34.7%	28.4%	0.0%	
	4.7%	2.9%	5.0%	4.6%	2.9%	0.0%	
8 - Escalerilla Lagunas	5	8	46	9	0	0	68
	7.4%	11.8%	67.6%	13.2%	0.0%	0.0%	9.4%
	2.1%	17.0%	17.6%	9.5%	0.0%	0.0%	
	0.7%	1.1%	6.4%	1.2%	0.0%	0.0%	

9 - Ahuixotitla	8	2	19	11	0	0	40
	20.0%	5.0%	47.5%	27.5%	0.0%	0.0%	5.5%
	3.4%	4.3%	7.3%	11.6%	0.0%	0.0%	
	1.1%	0.3%	2.6%	1.5%	0.0%	0.0%	
Column	237	47	262	95	74	7	722
Total	32.8%	6.5%	36.3%	13.2%	10.2%	1.0%	100.0%

APPENDIX 15

Variable 24 (how many hours a day they speak Spanish) by Variable 3 (sex)

Sex	1-0/2	2-2/5	3-6/9	4-10/13	13 5-or more	I don't 6-know	Row total
1 - masculine	116	23	129	45	35	3	351
	33.0%	6.6%	36.8%	12.8%	10.0%	0.9%	48.6%
	48.9%	48.9%	49.2%	47.4%	47.3%	42.9%	
	16.1%	3.2%	17.9%	6.2%	4.8%	0.4%	
2 - feminine	121	24	133	50	39	4	371
	32.6%	6.5%	35.8%	13.5%	10.5%	1.1%	51.0%
	51.1%	51.1%	50.8%	52.6%	52.7%	57.1%	
	16.8%	3.3%	18.4%	6.9%	5.4%	0.6%	
Column	237	47	262	95	74	7	722
Total	32.8%	6.5%	36.3%	13.2%	10.2%	1.0%	100.0%

APPENDIX NO 16

Variable 27 (formal schooling) by Variable 1 (community)

Community	1-0-kinder	incomplete 2-primary	complete 3-primary	incomplete secondary 4-dary	complete secondary 5-dary	past junior 6-high	Row total
1 - Copalillo	51	37	15	11	5	3	122
	41.8%	30.3%	12.3%	9.0%	4.1%	2.5%	16.9%
	17.4%	13.5%	21.7%	22.9%	25.0%	16.7%	
	7.1%	5.1%	2.1%	1.5%	0.7%	0.4%	
2 - Tlalcozo-titlán	22	17	2	1	0	1	43
	51.2%	39.5%	4.7%	2.3%	0.0%	2.3%	6.0%
	7.5%	6.2%	2.9%	2.1%	0.0%	5.6%	
	3.0%	2.4%	0.1%	0.0%	0.0%	0.1%	
3 - El Cascalote	29	29	1	0	1	0	60
	48.3%	48.3%	1.7%	0.0%	1.7%	0.0%	8.3%
	9.9%	10.6%	1.4%	0.0%	5.0%	0.0%	
	4.0%	4.0%	0.1%	0.0%	0.1%	0.0%	
4 - Tlahuapa	35	21	2	0	0	2	60
	58.3%	35.0%	3.3%	0.0%	0.0%	3.3%	8.3%
	11.9%	7.7%	2.9%	0.0%	0.0%	11.1%	
	4.8%	2.9%	0.3%	0.0%	0.0%	0.3%	
5 - Alcozauca	33	62	26	10	5	8	144
	22.9%	43.1%	18.1%	6.9%	3.5%	5.6%	19.9%
	11.3%	22.6%	37.7%	20.8%	25.0%	44.4%	
	4.6%	8.6%	3.6%	1.4%	0.7%	1.1%	
6 - Amolonga	22	18	0	0	0	0	40
	55.0%	45.0%	0.0%	0.0%	0.0%	0.0%	5.5%
	7.5%	6.6%	0.0%	0.0%	0.0%	0.0%	
	3.0%	2.5%	0.0%	0.0%	0.0%	0.0%	
7 - Zapotitlán Tablas	54	42	14	24	8	3	145
	37.2%	29.0%	9.7%	16.6%	5.5%	2.1%	20.1%
	18.4%	15.3%	20.3%	50.0%	40.0%	16.7%	
	7.5%	5.8%	1.9%	3.3%	1.1%	0.4%	
8 - Escalerilla Lagunas	33	27	6	1	1	0	68
	48.5%	39.7%	8.8%	1.5%	0.0%	0.0%	9.4%
	11.3%	9.9%	8.7%	2.1%	5.0%	0.0%	
	4.6%	3.7%	0.8%	0.1%	0.1%	0.0%	

9 - Ahuixotitla	14	21	3	1	0	1	40
	35.0%	52.5%	7.5%	2.5%	0.0%	2.5%	5.5%
	4.8%	7.7%	4.3%	2.1%	0.0%	5.6%	
	1.9%	2.9%	0.4%	0.1%	0.0%	0.1%	
Column	293	274	69	48	20	18	722
Total	40.6%	38.0%	9.6%	6.6%	2.8%	2.5%	100.0%

APPENDIX NO 17

Variable 27 (formal schooling) by Variable 3 (sex)

Sex	1-0-Kinder	incom-plete 2-primary	complete 3-primary	incom-plete secon-4-dary	com-plete secon-5-dary	past junior 6-high	Row total
1 - masculine	124	142	40	23	12	10	351
	35.3%	40.5%	11.4%	6.6%	3.4%	2.8%	48.6%
	42.3%	51.8%	58.0%	47.9%	60.0%	55.6%	
	17.2%	19.7%	5.5%	3.2%	1.7%	1.4%	
2 - feminine	169	132	29	25	8	8	371
	45.6%	35.6%	7.8%	6.7%	2.2%	2.2%	51.4%
	57.7%	48.2%	42.0%	52.1%	40.0%	44.4%	
	23.4%	18.3%	4.0%	3.5%	1.1%	1.1%	
Column	293	274	69	48	20	18	722
Total	40.6%	38.0%	9.6%	6.6%	2.8%	2.5%	100.0%

APPENDIX NO 18

Variable 39 (outside contact with Spanish) by Variable 1 (community)

Community	1 - lot	2 - little	3 - average	row total
1 - Copalillo	43	57	22	122
	35.2%	46.7%	18.0%	16.9%
	17.1%	16.7%	17.1%	
	6.0%	7.9%	3.0%	
2 - Tlalcozo-titlán	16	24	3	43
	37.2%	55.8%	7.0%	6.0%
	6.4%	7.0%	2.3%	
	2.2%	3.3%	0.4%	
3 - El Cascalote	20	30	10	60
	33.3%	50.0%	16.7%	8.3%
	8.0%	8.8%	7.8%	
	2.8%	4.2%	1.4%	
4 - Tlahuapa	20	33	7	60
	33.3%	55.0%	11.7%	8.3%
	8.0%	9.6%	5.4%	
	2.8%	4.6%	1.0%	
5 - Alcozauca	66	30	48	144
	45.8%	20.8%	33.3%	19.9%
	26.3%	8.8%	37.2%	
	9.1%	4.2%	6.6%	
6 - Amolonga	2	34	4	40
	5.0%	85.0%	10.0%	5.5%
	0.8%	9.9%	3.1%	
	0.3%	4.7%	0.6%	
7 - Zapotitlán Tablas	50	71	24	145
	34.5%	49.0%	16.6%	20.1%
	19.9%	20.8%	18.6%	
	6.9%	9.8%	3.3%	
8 - Escalerilla Lagunas	21	42	5	68
	30.9%	61.8%	7.4%	9.4%
	8.4%	12.3%	3.9%	
	2.9%	5.8%	0.7%	

9 - Ahuixotitla	13	21	6	40
	32.5%	52.5%	15.0%	5.5%
	5.2%	6.1%	4.7%	
	1.8%	2.9%	0.8%	
Column	251	342	129	722
Total	34.8%	47.4%	17.9%	100.0%

APPENDIX NO 19

Variable 39 (outside contact with Spanish) by Variable 3 (sex)

Sex	1 - lot	2 - little	3 - average	row total
1 - masculine	134	148	69	351
	38.2%	42.2%	19.7%	48.6%
	53.4%	43.3%	53.5%	
	18.6%	20.5%	9.6%	
2 - feminine	117	194	60	371
	31.5%	52.3%	16.2%	51.4%
	46.6%	56.7%	46.5%	
	16.2%	26.9%	8.3%	
Column	251	342	129	722
Total	34.8%	47.4%	17.9%	100.0%

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APPENDIX NO 20

Variable 40 (turn-taking) by Variable 1 (community)

Score	1-Cop.	2-Tl	3-El	4-Tl	5-Al	6-Am	7-Zt	8-EL	9-Ah	Row total
0	0	0	0	1	0	0	0	0	0	1
	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	
	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
1	1	0	0	0	0	0	0	1	0	2
	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.3%
	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	
	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	
2	2	3	4	3	0	1	0	1	0	14
	14.3%	21.4%	28.6%	21.4%	0.0%	7.1%	0.0%	7.1%	0.0%	1.9%
	1.6%	7.0%	6.7%	5.0%	0.0%	2.5%	0.0%	1.5%	0.0%	
	0.3%	0.4%	0.6%	0.4%	0.0%	0.1%	0.0%	0.1%	0.0%	
3	4	1	2	19	10	19	4	5	3	67
	6.0%	1.5%	3.0%	28.4%	14.9%	28.4%	6.0%	7.5%	4.5%	9.3%
	3.3%	2.3%	3.3%	31.7%	6.9%	47.5%	2.8%	7.4%	7.5%	
	0.6%	0.1%	0.3%	2.6%	1.4%	2.6%	0.6%	0.7%	0.4%	
4	6	0	5	1	3	4	2	5	3	29
	20.7%	0.0%	17.2%	3.4%	10.3%	13.8%	6.9%	17.2%	10.3%	4.0%
	4.9%	0.0%	8.3%	1.7%	2.1%	10.0%	1.4%	7.4%	7.5%	
	0.8%	0.0%	0.7%	0.1%	0.4%	0.6%	0.3%	0.7%	0.4%	
5	3	4	4	6	1	4	5	5	0	32
	9.4%	12.5%	12.5%	18.8%	3.1%	12.5%	15.6%	15.6%	0.0%	4.4%
	2.5%	9.3%	6.7%	10.0%	0.7%	10.0%	3.4%	7.4%	0.0%	
	0.4%	0.6%	0.6%	0.8%	0.1%	0.6%	0.7%	0.7%	0.0%	
6	13	4	2	2	6	9	7	4	1	48
	27.1%	8.3%	4.2%	4.2%	12.5%	18.8%	14.6%	8.3%	2.1%	6.6%
	10.7%	9.3%	3.3%	3.3%	4.2%	22.5%	4.8%	5.9%	2.5%	
	1.8%	0.6%	0.3%	0.3%	0.8%	1.2%	1.0%	0.6%	0.1%	
7	16	3	7	10	13	1	16	6	1	73
	21.9%	4.1%	9.6%	13.7%	17.8%	1.4%	21.9%	8.2%	1.4%	10.1%
	13.1%	7.0%	11.7%	16.7%	9.0%	2.5%	11.0%	8.8%	2.5%	
	2.2%	0.4%	1.0%	1.4%	1.8%	0.1%	2.2%	0.8%	0.1%	

8	9	6	6	5	19	1	16	7	4	73
	12.3%	8.2%	8.2%	6.8%	26.0%	1.4%	21.9%	9.6%	5.5%	10.1%
	7.4%	14.0%	10.0%	8.3%	13.2%	2.5%	11.0%	10.3%	10.0%	
	1.2%	0.8%	0.8%	0.7%	2.6%	0.1%	2.2%	1.0%	0.6%	
9	22	30	13	92	1	95	34	24	383	
	17.8%	5.7%	7.8%	3.4%	24.0%	0.3%	24.8%	8.9%	7.3%	53.0%
	55.7%	51.2%	50.0%	21.7%	62.9%	2.5%	65.5%	50.0%	70.0%	
	9.4%	3.0%	4.2%	1.8%	12.7%	0.1%	13.2%	4.7%	3.9%	
Colunm	122	43	60	60	144	40	145	68	40	722
	16.9%	6.0%	8.3%	8.3%	19.9%	5.5%	20.1%	9.4%	5.5%	100.0%

APPENDIX NO 21

Variable 40 (turn-taking) by Variable 3 (sex)

Score	1 - masculine	2 - feminine	Row total
0	0 0.0% 0.0% 0.0%	1 100.0% 0.3% 0.1%	1 0.1%
1	0 0.0% 0.0% 0.0%	2 100.0% 0.5% 0.3%	2 0.3%
2	4 28.6% 1.1% 0.6%	10 71.4% 2.7% 1.4%	14 1.9%
3	27 40.3% 7.7% 3.7%	40 59.7% 4.6% 5.5%	67 9.3%
4	12 41.1% 3.4% 1.7%	17 58.6% 4.6% 2.4%	29 4.0%
5	8 25.0% 2.3% 1.1%	24 75.0% 6.5% 3.3%	32 4.4%
6	25 52.1% 7.1% 3.5%	23 47.9% 6.2% 3.2%	48 6.6%
7	36 49.3% 10.3% 5.0%	37 50.7% 10.0% 5.1%	73 10.1%

8	35	38	73
	47.9%	50.7%	10.1%
	10.0%	10.2%	
	4.8%	5.3%	
9	204	179	383
	53.3%	46.7%	53.0%
	58.1%	48.2%	
Column	351	371	722
Total	48.6%	51.4%	100.0%

APPENDIX NO 22

Supporting Data for Mother Tongue by Age, Controlling for Schooling and Turns-taking

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5(44 on)	Age
1 - Nahuatl	11-1	22-1	12-2	13-1	13-1	
	12-6	23-1	14-1	16-2	14-1	
	13-4	34-1	37-1	17-1	17-6	
	15-9=20%	25-1	47-1	27-1	27-1	
	25-1	26-8	28-1	19-12	18-3	
	16-6	36-2	48-1	29-13=40%	19-12=41%	
	17-2	27-6	19-3	39-2	29-5	
	27-1	18-1	29-6	59-1		
	37-3	28-7	39-5			
	18-3	29-10=25%	49-8=23%			
	19-2	39-2	59-4			
	14-7		69-2			
individuals in group	(45)	(40)	(35)	(33)	(29)	
2 - Mixtec	12-4	23-8	13-1	13-16=35%	13-9=41%	
	13-9=30%	24-4	23-3	23-2	16-1	
	14-2	25-4	14-1	15-1	17-2	
	24-1	26-10=18%	16-2	17-3	18-1	
	15-5	27-10=18%	26-1	18-4	19-5	
	16-2	37-1	17-1	19-10	29-3	
	26-1	28-6	27-1	29-4	39-1	
	17-1	38-2	37-1	39-1		
	27-2	29-10=18%	18-1	49-1		
	37-1	39-2	28-3	59-1		
	28-2		38-2	69-3		
	29-2		19-2			
			29-10			
			39-11=23%			
			49-5			
			59-2			
			69-2			
individuals in group	(30)	(57)	(49)	(46)	(22)	

	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
3 - Tlapanec	11-1 12-1 13-2 14-5 24-1 15-2 25-3 16-7=18% 26-1 17-3 27-2 18-5 28-2 19-3 29-1	13-1 13-1 14-2 15-1 25-2 26-2 17-2 27-6 47-2 28-5 48-2 19-4 29-11=23% 39-5	13-1 13-1 47-1 38-1 58-1 19-2 29-10 39-6 49-10=25% 59-6 69-1	13-2 24-1 15-1 26-1 17-1 18-2 28-1 19-15 29-18=36% 39-3 49-2 59-1 69-1	13-4 17-1 27-2 18-3 28-1 19-15=48% 29-4 49-1
individuals in group	(39)	(48)	(40)	(50)	(31)

	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
4 - Bilingual	14-1 15-1 16-1 17-1 27-1 18-2 19-3=27% 29-1	27-1 28-2 29-10=59% 39-1 49-3	37-1 18-1 38-1 19-2 29-1 39-1 49-3=27% 69-1	28-1 19-2 29-3=25% 39-1 49-3=25% 69-2	19-6=75% 29-2
individuals in group	(11)	(17)	(11)	(12)	(8)

	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
5 - Spanish	16-1 18-1 19-3 29-4=45%	27-2 18-1 28-3 19-1 29-5=31% 39-3 49-1	29-2 39-3=43% 49-1 69-1	13-1 18-1 19-4 29-6=29% 39-3 49-1 59-3 69-2	19-3=30% 29-3=30% 39-2 59-1 69-1
individuals in group	(9)	(16)	(7)	(21)	(10)

APPENDIX 23

Supporting Data for Mother Tongue by Age, Controlling for Contact and Turns

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
1 - Nahuatl	21-1	22-1	22-2	23-1	24-1
	22-6	23-1	24-1	26-1	27-2
	23-4	24-1	27-2	36-1	37-2
	24-7	15-1	38-2	27-2	18-1
	25-10=24%.	26-9=21%	19-12-35%	19-12=36%	38-2
	26-6	36-1	29-10	29-10	19-8=30%
	27-3	27-7	39-6	39-6	29-2
	28-3	37-2			39-7
	29-1	18-3			
	39-1	28-3			
		38-2			
		19-2			
		29-8			
		39-2			
individuals in group (42)		(43)	(34)	(33)	(25)
2 - Mixtec	22-4	23-9=16%	13-1	23-18=41%	23-8=36%
	23-9=28%	24-3	23-3	35-1	33-1
	24-3	34-2	24-1	17-1	36-1
	25-5	25-4	35-1	27-2	17-1
	26-2	26-7	16-1	18-1	27-1
	36-1	36-3	36-2	28-1	38-1
	27-2	17-1	17-2	38-2	19-5
	37-2	27-3	37-1	19-14	29-1
	28-2	37-7	18-1	29-2	39-3
	19-1	18-2	28-1	39-4	
	39-1	28-2	38-4		
		38-4	19-17=34%		
		19-5	39-15		
		39-3			
individuals in group (32)		(55)	(50)	(44)	(22)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
3 - Tlapance	21-1	23-2	23-1	23-2	23-4
	22-1	24-2	27-1	24-1	27-3
	23-2	25-3	37-1	34-1	18-1
	24-6	26-2	18-1	25-1	28-2
	25-5	17-1	28-1	26-1	38-1
	16-1	27-7	19-25=63%	17-1	19-9=29%
	26-7=18%	37-2	29-7	18-1	29-5
	17-1	18-1	39-3	28-2	39-6
	27-4	28-4		19-21=42%	
	28-7=18%	17-1		29-11	
	29-4	18-1		39-8	
		28-4			
		38-2			
		19-3			
		29-14=29%			
		39-5			
individuals in group	(39)	(48)	(40)	(50)	(31)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
4 - Bilin-gual	24-1	17-1	17-1	28-1	19-8=100%
	25-1	18-1	18-1	19-10=83%	
	36-1	28-1	38-1	29-1	
	27-2	19-4	19-8=73%		
	28-2	29-5=30%			
	19-1	39-5=30%			
	29-3=27%				
individuals in group	(11)	(17)	(11)	(12)	(8)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
5 - Spanish	26-1	17-2	19-9=100%	23-1	19-10=100%
	18-1	18-4		18-1	
	19-4=43%	19-7=44%		19-19=91%	
	29-3	29-2			
		39-1			
individuals in group	(9)	(16)	(9)	(21)	(10)

APPENDIX 24

Variable 43 (morphosyntax) by Variable 1 (community)

Community	1	2	3	4	5	row total
1 - Copalillo	12	13	27	40	28	122
	9.8%	10.7%	22.1%	32.8%	23.0%	16.9%
	11.8%	12.7%	13.4%	17.9%	31.1%	
	1.7%	1.8%	3.7%	5.5%	3.9%	
2 - Tlalco- zotitlán	6	8	9	12	8	43
	14.0%	18.6%	20.9%	27.9%	18.6%	6.0%
	5.9%	7.8%	4.5%	5.4%	8.9%	
	0.8%	1.1%	1.2%	1.7%	1.1%	
3 - El Cascalote	14	4	23	16	3	60
	23.3%	6.7%	38.3%	26.7%	5.0%	8.3%
	13.7%	3.9%	11.4%	7.2%	3.3%	
	1.9%	0.6%	2.2%	0.4%	0.4%	
4 - Tlahuapa	20	16	15	8	0	60
	33.3%	26.7%	25.0%	13.3%	0.0%	8.3%
	19.6%	15.7%	7.4%	3.6%	0.0%	
	2.8%	2.2%	2.1%	1.1%	0.0%	
5 - Alcozauca	11	13	45	43	32	144
	7.6%	9.0%	31.3%	29.9%	22.2%	19.9%
	10.8%	12.7%	22.3%	19.3%	35.6%	
	1.5%	1.8%	6.2%	6.0%	4.4%	
6 - Amolonga	25	13	2	0	0	40
	62.5%	32.5%	5.0%	0.0%	0.0%	5.5%
	24.5%	12.7%	1.0%	0.0%	0.0%	
	3.5%	1.8%	0.3%	0.0%	0.0%	
7 - Zapotitlán Tablas	5	14	44	67	15	145
	3.4%	9.7%	30.3%	46.2%	10.3%	20.1%
	4.9%	13.7%	21.8%	30.0%	16.7%	
	0.7%	1.9%	6.1%	9.3%	2.1%	
8 - Escalerilla Lagunas	6	17	28	17	0	68
	8.8%	25.0%	41.2%	25.0%	0.0%	9.4%
	5.9%	16.7%	13.9%	7.6%	0.0%	
	0.8%	2.4%	3.9%	2.4%	0.0%	

9 - Ahuixotitla	3	4	9	20	4	40
	7.5%	10.0%	22.5%	50.0%	10.0%	5.5%
	2.9%	3.9%	4.5%	9.0%	4.4%	
	0.4%	0.6%	1.2%	2.8%	0.6%	
Column	102	102	202	223	90	722
Total	14.1%	14.1%	28.0%	30.9%	12.5%	100.0%

APPENDIX 25

Variable 43 (morphosyntax) by Variable 3 (sex)

Sex	1	2	3	4	5	row total
1 - masculine	36	50	109	115	40	351
	10.3%	14.2%	31.1%	32.8%	11.4%	48.6%
	35.3%	49.0%	54.0%	51.6%	44.4%	
	5.0%	6.9%	15.1%	15.9%	5.5%	
2 - feminine	66	52	93	108	50	371
	17.8%	14.0%	25.1%	29.1%	13.5%	51.4%
	64.7%	51.0%	46.0%	48.4%	55.6%	
	9.1%	7.2%	12.9%	15.0%	6.9%	
Column	102	102	202	223	90	722
Total	14.1%	14.1%	28.0%	30.9%	12.5%	100.0%

APPENDIX 26
Supporting Data for Mother Tongue by Age, Controlling for Schooling and
Morphosyntaxis

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
1 - Nahuatl	11-20=65%	21-3	11-2	11-2	11-3
	12-4	22-4	12-1	22-1	12-3
	22-1	13-1	13-1	13-8=24%	22-1
	13-3	23-14=33%	23-5	23-7	13-10=35%
	23-1	33-2	33-3	14-6	23-1
	14-2	24-13	43-3	24-5	14-6
		34-5	14-2	34-2	24-4
		35-1	24-2	25-1	15-1
			34-2	55-1	
			44-6=18%		
			54-2		
			35-1		
			55-2		
			65-2		
individuals in group	(31)	(43)	(34)	(33)	(29)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
2 - Mixtec	11-16=50%	21-7	11-2	11-16=35%	11-9=41%
	21-1	22-19	21-3	21-2	12-4
	12-7	23-23=40%	12-4	12-6	13-3
	23-4	33-2	22-2	13-10	23-1
	33-1	24-3	13-1	23-3	14-2
	24-3	34-3	23-6	14-2	24-1
			33-6	24-1	34-1
			43-2	34-1	25-1
			14-1	44-1	
			24-8=16%	54-1	
			34-8=16%	64-3	
			44-3		
			54-2		
			64-2		
individuals in group	(32)	(57)	(50)	(46)	(22)

	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
3 - Tlapanec		12-4	11-1	11-2	11-4
	11-6	22-2	13-2	12-5	12-3
	12-11=28%	13-3	23-3	22-2	22-1
	22-6	23-13=28%	33-2	13-6	13-14=45%
	13-7	33-2	43-2	23-6	23-5
	23-3	43-3	53-1	33-2	43-1
	14-5	14-3	24-7	43-1	14-2
	25-1	24-12	34-5	14-9	24-1
		34-3	44-9=23%	24-13=26%	
		44-3	54-6	34-1	
			64-1	44-1	
			25-1	54-1	
				64-1	
individuals in group (39)		(48)	(40)	(50)	(31)
4 - Bilingual	11-2	24-9=53%	14-1	14-1	14-3=30%
	12-1	34-1	24-1	24-1	24-1
	13-3=27%	44-2	34-2=18%	15-1	15-3=30%
	23-1	25-4	44-2=18%	25-3=25%	25-1
	14-2	45-1	15-2=18%	35-1	
	24-1		35-1	45-3=25%	
	15-1		45-1	65-2	
			65-1		
individuals in group (11)		(17)	(11)	(12)	(8)
5 - Spanish	13-1	14-1	25-2	11-1	15-3=30%
	14-1	24-3	35-3=33%	14-1	25-3=30%
	54-1	34-1	45-1	24-1	35-2
	15-3	15-1	65-3=33%	34-1	55-1
	25-4=40%	25-7=44%		15-4	65-1
		35-2		25-5=25%	
		45-1		35-2	
				45-1	
				55-2	
				65-2	
individuals in group (10)		(16)	(9)	(20)	(10)

APPENDIX 27

Supporting Data for Mother Tongue by Age, Controlling for Contact and Morphosyntaxis

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
1. Nahuatl	21-2C=49%	21-3	21-2	21-2	21-3
	22-15	12-1	22-1	22-1	22-2
	23-4	22-3	13-2	13-2	13-2
	24-1	13-2	23-7=21%	23-9=27%	23-4
	34-1	23-12=31%	33-3	33-4	33-5
		33-3	14-6	14-8	14-7=26%
		14-3	24-4	24-2	34-3
		24-11	34-4	34-3	35-1
		34-4	15-4	15-2	
		25-1	25-1		

individuals in group (41)   (39)   (34)   (33)   (27)

2. Mixtec	21-17=63%	21-7	11-1	21-18=39%	21-8
	22-7	22-17=31%	21-4	22-4	31-1
	23-2	32-2	12-2	32-2	12-1
	33-3	13-2	22-1	13-8	22-1
	14-1	23-6	32-3	23-1	32-1
	24-1	33-15	13-3	33-4	13-1
	34-1	14-4	33-12	14-8	23-1
		24-1	14-16=32%	34-1	33-2
		34-1	34-8		14-4
					35-1

individuals in group (27)   (55)   (50)   (46)   (22)

3. Tlapanec	21-6	22-6	21-1	21-2	21-4
	22-17=44%	13-3	13-3	12-1	22-3
	13-2	23-15=31%	23-5	22-5	32-1
	23-8	33-3	33-2	32-1	13-9=29%
	24-5	14-2	14-22=55%	13-4	23-6
	25-1	24-13	24-4	23-6	33-5
		34-6	34-2	33-5	14-1
			15-1	14-18=36%	24-1
				24-5	34-1
				34-3	

individuals in group (39)   (48)   (40)   (50)   (31)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
4. Bilingual	21-1	14-3	14-5=46%	24-2	14-4=50%
	31-1	24-5=30%	34-1	15-10=93%	15-4=50%
	22-1	· 34-4	15-5=46%		
	23-4=36%	15-3			
	14-1	25-1			
	24-2	35-1			
	25-1				
individuals in group (11)		(17)	(11)	(12)	(8)
5. Spanish	32-2	14-2	15-9=100%	21-1	15-10=100%
	23-1	24-2		14-4	
	24-1	34-1		15-16=76%	
	15-5=46%	15-11=69%			
	25-2				
individuals in group (11)		(16)	(9)	(21)	(10)

APPENDIX 28[*]

Variable 44 (expansion) by Variable 1 (community)

Community	1	2	3	4	5	Total
1 – Copalillo	12	16	36	29	29	122
	11.9%	11.9%	14.2%	20.1%	13.6%	16.9%
	9.8%	12.1%	29.5%	23.8%	23.8%	
	1.7%	2.2%	5.0%	4.0%	4.0%	
2 – Tlalcozotitlán	6	8	9	12	8	43
	5.9%	7.1%	5.0%	5.1%	7.0%	6.0%
	14.0%	18.6%	20.9%	27.9%	18.6%	
	0.8%	1.1%	1.2%	1.7%	1.1%	
3 – El Cascalote	14	4	17	21	4	60
	13.9%	3.5%	9.5%	9.9%	3.5%	8.3%
	23.3%	6.7%	28.3%	35.0%	6.7%	
	1.9%	0.6%	2.4%	2.9%	0.6%	
4 – Tlahuapa	20	16	11	12	0	59
	19.8%	14.2%	6.1%	5.6%	0.0%	8.3%
	33.3%	26.7%	18.3%	20.0%	0.0%	
	2.8%	2.2%	1.5%	1.7%	0.0%	
5 – Alcozauca	11	13	40	46	34	144
	10.9%	11.5%	22.3%	21.6%	29.6%	19.9%
	7.6%	9.0%	27.8%	31.9%	23.6%	
6 – Amolonga	24	15	0	1	0	40
	23.8%	13.3%	0.0%	0.5%	0.0%	5.5%
	60.0%	37.5%	0.0%	2.5%	0.0%	
	3.3%	2.1%	0.0%	0.1%	0.0%	
7 – Zapotitlán Tablas	5	19	42	56	23	145
	5.0%	16.8%	23.5%	26.3%	20.0%	20.1%
	3.4%	13.1%	29.0%	38.6%	15.9%	
	0.7%	2.6%	5.8%	7.8%	3.2%	
8 – Escalerilla Lagunas	6	17	16	20	9	68
	5.9%	15.0%	8.9%	9.4%	7.8%	9.4%
	8.8%	25.0%	23.5%	29.4%	13.2%	
	0.8%	2.4%	2.2%	2.8%	1.2%	

[*] In this appendix one individual was missplaced by the computer.

9 - Ahuixotitla	3	5	8	16	8	40
	3.0%	4.4%	4.5%	7.5%	7.0%	5.5%
	7.5%	12.5%	20.0%	40.0%	20.0%	
	0.4%	0.7%	1.1%	2.2%	1.1%	
Column totals	101	113	179	213	115	721
	14.0%	15.7%	24.8%	29.5%	15.9%	100.0%

APPENDIX 29[*]

Variable 44 (expansion) by Variable 3 (sex)

Sex	1	2	3	4	5	Row total
1 - masculine	36	53	92	110	60	351
	35.6%	46.9%	51.4%	51.6%	52.2%	48.6%
	10.3%	15.1%	26.2%	31.3%	17.1%	
	5.0%	7.3%	12.7%	15.2%	8.3%	
2 - feminine	65	60	87	103	55	370
	64.4%	53.1%	48.6%	48.4%	47.8%	51.4%
	17.5%	16.2%	23.5%	27.8%	14.8%	
	9.0%	8.3%	12.0%	14.3%	7.6%	
Column	101	113	179	213	115	721
Total	14.0%	15.7%	24.8%	29.5%	15.9%	100.0%

APPENDIX 30

Supporting Data by Mother Tongue and Age, Controlling for Schooling and Expansion

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
1 - Nahuatl	11-20=48%	21-3	11-2	11-2	11-3
	12-15	22-5	12-1	22-1	12-2
	22-1	32-1	22-1	13-6	22-1
	13-3	13-1	23-4	23-5	13-8=28%
	23-1	23-16=49%	33-4	14-7=21%	14-4
	14-2	33-5	43-4	24-7=21%	24-4
		24-10	14-3	34-1	15-6
		34-1	24-2	15-1	25-1
		35-1	34-2	25-1	
			44-5=14%	35-1	
			54-2	55-1	
			64-1		
			45-1		
			55-2		
			65-1		
individuals in group (42)		(33)	(35)	(33)	(29)
2 - Mixtec	11-15=52%	21-7	11-2	11-16=35%	11-9=41%
	21-1	22-20	21-3	21-2	12-4
	12-8	23-21=37%	12-4	12-6	13-1
	23-4	33-2	22-2	13-7	14-2
	33-1	24-4	13-1	23-1	24-2
	24-3	34-3	23-6	14-4	34-1
			33-6	24-3	15-2
			14-1	34-1	25-1
			24-8=16%	54-1	
			34-7	64-2	
			44-4	15-1	
			54-1	45-1	
			64-1	65-1	
			35-1		
			45-1		
			55-1		
			65-1		
individuals in group (32)		(57)	(50)	(46)	(22)

Language	1(0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
3 – Tlapanec	11-6	12-4	11-1	11-2	11-4
	12-15=39%	22-4	13-1	12-5	12-2
	22-6	13-3	23-6	22-2	22-1
	13-5	23-15=31%	33-3	13-3	13-4
	23-3	33-1	43-1	23-4	23-1
	14-3	43-5	53-2	33-1	14-7=23%
	25-1	14-3	24-5	14-9	24-3
		24-7	34-3	24-12=24%	44-1
		34-3	13-1	34-2	15-6
		44-1	33-1	54-1	25-2
		25-1	44-7=18%	15-3	
			54-3	25-3	
			64-1	45-2	
			15-1	65-1	
			35-1		
			45-3		
			55-2		
individuals in group	(39)	(48)	(40)	(50)	(31)

Language	1(0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
4 – Bilin- gual	11-2	23-3	13-1	25-2	14-2
	12-1	24-8=50%	33-1	35-1	24-1
	13-4=50%	34-1	24-1	45-3=23%	15-4=50%
	23-1	44-2	34-1	65-2	25-1
	14-1	25-2	44-1		
	15-1	45-1	15-2=25%		
	25-1		35-1		
			45-2=25%		
individuals in group	(8)	(16)	(8)	(13)	(8)

Language	1(0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
5 – Spanish	12-1	13-1	34-3=33%	11-1	15-3=30%
	14-3=33%	23-2	25-2	13-1	25-3=30%
	24-1	24-5=28%	45-1	24-4=21%	35-2
	15-1	34-2	65-3=33%	34-1	55-1
	25-3=33%	54-2		15-4=21%	65-1
		15-1		25-2	
		25-3		35-2	
		35-1		45-1	
		45-1		55-1	
				65-2	
individuals in group	(9)	(18)	(9)	(19)	(10)

APPENDIX 31

Supporting Data by Mother Tongue and Age, Controlling for Contact and Expansion

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
1 - Nahuatl	21-20=47%	21-3	21-2	21-2	21-3
	22-16	12-1	22-1	22-1	22-1
	23-4	22-5	32-1	23-8	32-2
	24-1	13-1	13-2	14-9=27%	13-1
	34-1	23-16=38%	23-7	24-3	23-4=14%
	25-1	14-4	14-8=23%	34-3	14-4=14%
		24-5	24-4	15-3	24-1
		34-2	34-3	35-1	34-3
		33-5	15-2	33-3	15-4=14%
			25-1		35-3
			35-1		33-3
			33-3		
individuals in group	(43)	(42)	(35)	(33)	(29)

2 - Mixtec	21-16=50%	21-7	11-1	21-18=39%	21-8=36%
	22-8	22-18=32%	21-4	22-4	31-1
	23-2	32-2	12-2	32-2	12-1
	14-1	13-5	22-1	13-4	22-1
	24-1	23-5	32-3	23-1	32-2
	34-1	14-3	13-5	14-9	23-1 .
	33-3	24-1	14-10	34-2	14-3
		34-3	34-12=24%	15-3	34-2
		33-13	15-4	33-3	15-2
			33-8		35-1
individuals in group	(32)	(57)	(50)	(46)	(22)

3 - Tlapanec	21-6	22-8	21-1	21-2	21-4
	12-1	13-2	13-3	12-1	22-3
	22-20=51%	23-16=33%	23-8	22-5	23-3
	13-1	14-3	14-16=42%	32-1	14-4
	23-7	24-9	24-1	13-1	24-2
	24-3	34-3	34-2	23-4	34-5
	25-1	25-1	15-7	14-13=26%	15-6=19%
		33-6	33-2	24-7	25-2
				34-4	33-2
				15-8	
				35-1	
				33-3	
individuals in group	(39)	(48)	(38)	(50)	(31)

Language	1 (0-6)	2 (7-14)	3 (15-24)	4 (25-44)	5 (45 on)
4 - Bilin- gual	21-1 31-1 22-1 23-5=46% 24-1 15-1 25-1	13-1 23-2 14-3 24-4=24% 34-4=24% 15-2 35-1	13-2 14-2 34-1 15-6=55%	14-2 24-1 15-8=67% 25-1	14-3 15-5=63%
individuals in group (11)		(17)	(11)	(12)	(8)
5 - Spanish	22-1 14-2 24-2 15-3=34% 25-1	13-3 14-4 24-2 34-1 15-6=38%	14-4 15-6=60%	21-1 13-1 14-7 15-12=57%	15-10=100%
individuals in group (9)		(16)	(10)	(21)	(10)

APPENDIX 32

Variable 21 (would you like to speak the Indian language better) by
Variable 1 (community)

Community	1-yes	2-no	3-I don't know	another or 4-no answer	Row Total
1 - Copalillo	82	20	20	0	122
	67.2%	16.4%	16.4%	0.0%	16.9%
	15.8%	20.6%	20.4%	0.0%	
	11.4%	2.8%	2.8%	0.0%	
2 - Tlalco-zotitlán	32	3	8	0	43
	74.4%	7.0%	18.6%	0.0%	6.0%
	6.2%	3.1%	8.2%	0.0%	
	4.4%	0.4%	1.1%	0.0%	
3 - El Cascalote	39	8	12	1	60
	65.0%	13.3%	20.0%	1.7%	8.3%
	7.5%	8.2%	12.2%	11.1%	
	5.4%	1.1%	1.7%	0.1%	
4 - Tlahuapa	38	5	16	1	60
	63.3%	8.3%	26.7%	1.7%	8.3%
	7.3%	5.2%	16.3%	11.1%	
	5.3%	0.7%	2.2%	0.1%	
5 - Alcozauca	116	19	8	1	144
	80.6%	13.2%	5.6%	0.7%	19.9%
	22.4%	19.6%	8.2%	11.1%	
	16.1%	2.6%	1.1%	0.1%	
6 - Amolonga	18	4	18	0	40
	45.0%	10.0%	45.0%	0.0%	5.5%
	3.5%	4.1%	18.4%	0.0%	
	2.5%	0.6%	2.5%	0.0%	
7 - Zapotitlán Tablas	89	35	15	6	145
	61.4%	24.1%	10.3%	4.1%	20.1%
	17.2%	36.1%	15.3%	66.7%	
	12.3%	4.8%	2.1%	0.8%	
8 - Escalerilla Lagunas	65	3	0	0	68
	95.6%	4.4%	0.0%	0.0%	9.4%
	12.5%	3.1%	0.0%	0.0%	
	9.0%	0.4%	0.0%	0.0%	

Community	1-yes	2-no	3-I don't know	another or Row 4-no answer	Total
9 - Ahuixotitla	39	0	1	0	40
	97.5%	0.0%	2.5%	0.0%	5.5%
	7.5%	0.0%	1.0%	0.0%	
	5.4%	0.0%	0.1%	0.0%	
Column	518	97	98	9	722
Total	71.7%	13.4%	13.6%	1.2%	100.0%

APPENDIX 33

Variable 21 (would you like to speak the Indian language better) by
Variable 3 (sex)

Sex	1-yes	2-no	3-I don't know	another or 4-no answer	Row Total
1 - masculine	259	41	46	5	351
	73.8%	11.7%	13.1%	1.4%	48.6%
	50.0%	42.3%	46.9%	55.6%	
	35.9%	5.7%	6.4%	0.7%	
2 - feminine	259	56	52	4	371
	69.8%	15.1%	14.0%	1.1%	51.4%
	50.0%	57.7%	53.1%	44.4%	
	35.9%	7.8%	7.2%	0.6%	
Column	518	97	98	9	722
Total	71.8%	13.4%	13.6%	1.2%	100.0%

APPENDIX 34

Variable 22 (would they like to speak Spanish better) by Variable 1
(community)

Community	1-yes	2-no	3-I don't know	another or 4-no answer	Row Total
1 - Copalillo	98	5	19	0	122
	80.3%	4.1%	15.6%	0.0%	16.9%
	16.8%	12.2%	20.0%	0.0%	
	13.6%	0.7%	2.6%	0.0%	
2 - Tlalco- zotitlán	34	2	7	0	43
	79.1%	4.7%	16.3%	0.0%	6.0%
	5.8%	4.9%	7.4%	0.0%	
	4.7%	0.3%	1.0%	0.0%	
3 - El Cascolote	43	5	12	0	60
	71.7%	8.3%	20.0%	0.0%	8.3%
	7.4%	12.2%	12.6%	0.0%	
	6.0%	0.7%	1.7%	0.0%	
4 - Tlahuapa	41	2	16	1	60
	68.3%	3.3%	26.7%	1.7%	8.3%
	7.0%	4.9%	16.8%	50.0%	
	5.7%	0.3%	2.2%	0.1%	
5 - Alcozauca	125	11	8	0	144
	86.8%	7.6%	5.6%	0.0%	19.9%
	21.4%	26.8%	8.4%	0.0%	
	17.3%	1.5%	1.1%	0.0%	
6 - Amolonga	19	3	18	0	40
	47.5%	7.5%	45.0%	0.0%	5.5%
	3.3%	7.3%	18.9%	0.0%	
	2.6%	0.4%	2.5%	0.0%	
7 - Zapotitlán Tablas	118	12	14	1	145
	81.4%	8.3%	9.7%	0.7%	20.1%
	20.2%	29.3%	14.7%	50.0%	
	16.3%	1.7%	1.9%	0.1%	
8 - Escalerilla Lagunas	67	1	0	0	68
	98.5%	1.5%	0.0%	0.0%	9.4%
	11.5%	2.4%	0.0%	0.0%	
	9.3%	0.1%	0.0%	0.0%	

Community	1-yes	2-no	3-I don't know	another or 4-no answer	Row Total
9 - Ahuixotitla	39	0	1	0	40
	97.5%	0.0%	2.5%	0.0%	5.5%
	6.7%	0.0%	1.1%	0.0%	
	5.4%	0.0%	0.1%	0.0%	
Column	584	41	95	2	722
Total	80.9%	5.7%	13.2%	0.3%	100.0%

APPENDIX 35

Variable 22 (would they like to speak Spanish better) by Variable 3 (sex)

Sex	1-yes	2-no	3-I don't know	another or 4-no answer	Row total
1 - masculine	292	14	44	1	351
	83.2%	4.0%	12.5%	0.3%	48.6%
	50.0%	34.1%	46.3%	50.0%	
	40.4%	1.9%	6.1%	0.1%	
2 - feminine	292	27	51	1	371
	78.7%	7.3%	13.7%	0.3%	51.4%
	50.0%	65.9%	53.7%	50.0%	
	40.4%	3.7%	7.1%	0.1%	
Column	584	41	95	2	722
Total	80.9%	5.7%	13.2%	0.3%	100.0%

APPENDIX 36

Variable 25 (preferred language of instruction) by Variable 1 (community)

Community	1-Spanish	Indian 2-language	3-Both	4-I don't know	Row total
1 - Copalillo	33	3	83	3	122
	27.0%	2.5%	68.0%	2.5%	16.9%
	11.1%	20.0%	23.9%	4.8%	
	4.6%	0.4%	11.5%	0.4%	
2 - Tlalcozo-titlán	6	1	31	5	43
	14.0%	2.3%	72.1%	11.6%	6.0%
	2.0%	6.7%	8.9%	7.9%	
	0.8%	0.1%	4.3%	0.7%	
3 - El Cascalote	9	3	48	0	68
	15.0%	5.0%	80.0%	0.0%	8.3%
	3.0%	20.0%	13.8%	0.0%	
	1.2%	0.4%	6.6%	0.0%	
4 - Tlahuapa	4	0	49	7	60
	6.7%	0.0%	81.7%	11.7%	8.3%
	1.4%	0.0%	14.1%	11.1%	
	0.6%	0.0%	6.8%	1.0%	
5 - Alcozauca	24	0	97	23	144
	16.7%	0.0%	67.4%	16.0%	19.9%
	8.1%	0.0%	27.9%	36.5%	
	3.3%	0.0%	13.4%	3.2%	
6 - Amolonga	6	0	34	0	40
	15.0%	0.0%	85.0%	0.0%	5.5%
	2.0%	0.0%	9.8%	0.0%	
	0.8%	0.0%	4.7%	0.0%	
7 - Zapotitlán Tablas	118	5	3	19	145
	81.4%	3.4%	2.1%	13.1%	20.1%
	39.9%	33.3%	0.9%	30.2%	
	16.3%	0.7%	0.4%	2.6%	
8 - Escalerilla Lagunas	58	3	1	6	68
	85.3%	4.4%	1.5%	8.8%	9.4%
	19.6%	20.0%	0.3%	9.5%	
	8.0%	0.4%	0.1%	0.8%	

Community	1-yes	Indian 2-language	3-Both	4-I don't know	Row total
9 - Ahuixotitla	38	0	2	0	40
	95.0%	0.0%	5.0%	0.0%	5.5%
	12.8%	0.0%	0.6%	0.0%	
	5.3%	0.0%	0.3%	0.0%	
Column	296	15	348	63	722
Total	41.0%	2.1%	48.2%	8.7%	100.0%

APPENDIX 37

Variable 25 (preferred language of instruction) by Variable 3 (sex)

Sex	1 - Spanish	Indian 2-language	3-Both	4-I don't know	Row total
1 - masculine	146	7	167	31	351
	41.6%	2.0%	47.6%	8.8%	48.6%
	49.3%	46.7%	48.0%	49.2%	
	20.2%	1.0%	23.1%	4.3%	
2 - feminine	150	8	181	32	371
	40.4%	2.2%	48.8%	8.6%	51.4%
	50.7%	53.3%	52.0%	50.8%	
	20.8%	1.1%	25.1%	4.4%	
Column	296	15	348	63	722
Total	41.0%	2.1%	48.2%	8.7%	100.0%