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THE EFFECTS OF ACCULTURATION ON SECOND  
LANGUAGE PROFICIENCY IN A COMMUNITY WITH A  
TWO-WAY BILINGUAL PROGRAM

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**Abstract**

This is a study of why native Spanish speakers (NSSs) in a small town in northern Mexico with a sizable English-speaking minority population and a two-way bilingual program in the schools are developing native-like proficiency in English. A 9% sample of native Spanish-speaking households in the town were selected and members of each household were asked a series of questions relating to Schumann's acculturation variables. Each subject was also given an oral proficiency interview (OPI) in English. Results indicate that in spite of the favorable conditions for English language acquisition among NSSs on all variables except enclosure, the only NSSs acquiring much English are those attending the bilingual schools. It was concluded that the native-like proficiency being attained by the NSSs attending the bilingual schools was likely due to their favorable attitudes toward the English-speaking community and the fact that they developed close friendships with native English-speaking peers.

**Introduction**

Imagine attending a high school graduation exercise in which the valedictory addresses are given by students who speak for a few minutes in perfectly native-sounding English and then suddenly switch to perfectly native-sounding Spanish for the remainder of the talk. This is

what we experienced at the bilingual high school in Colonia Juarez, Chihuahua, Mexico.

While this high level of achievement in two languages may not be so unusual in communities where minority language students are learning a majority language, the literature on bilingual immersion programs and two way bilingual programs suggests that it is difficult to create programs where members of the language majority community learn a second language with perfect nativeness (Cohen, 1982; Cummins & Swain, 1986; Edelsky & Hudelson, 1980; Genesee, 1987; Tarone & Swain, 1995). The unusual thing about Colonia Juarez is not so much that the English-speaking minority would be developing high levels of competence in Spanish, but that the Spanish-speaking majority would be developing native-like ability in English.

The purpose of this study is to examine the social context in which the two-way bilingual program has functioned successfully in Colonia Juarez for over two decades and to ascertain 1) if there are social and affective variables which contribute to the development of such high levels of proficiency in English by native Spanish speakers, and 2) if those variables contribute to the development of English proficiency by Native Spanish speakers in the community independent of their participation in the bilingual school.

### **The Context of the Study**

#### *The Community*

For persons with special interest in bilingualism and bilingual education, Colonia Juárez, Chihuahua, Mexico presents itself as an ideal laboratory for study. It is a small community located about 30 miles from Nuevo Casas Grandes and about 170 miles southwest of El Paso, Texas (Mills, 1954). In 1885 the area was settled by a small group of Anglo settlers coming from Utah and other parts of the United States. Encouraged by the Mexican government, which was inviting immigration in order to develop the area economically, Anglo settlers also went to other areas in the states of Chihuahua and Sonora. The immigrants established farms and ranches which have continued to the present day, so that in recent years fruit growing and cattle raising have

become the economic mainstays of the area (Gutiérrez, Pasillas, Galván, & Rosas, 1981).

As the farming industry grew, more and more opportunities for work became available, and more Mexican nationals moved in from neighboring areas resulting in a stable population of approximately 400-500 descendants of the Anglos living in the community where approximately 4500 Hispanics live (Bixler-Márquez, 1985). Both groups hold Mexican citizenship so they refer to each other as "English-speakers" and "Spanish-speakers." For the purposes of this paper we shall refer to the Anglo-Mexicans as native English speakers (NESs) and the Hispanic-Mexicans as native Spanish speakers (NSSs).

### *The Schools*

Education was a high priority among the NES settlers; classes were started soon after their arrival in Mexico. At first these were conducted in people's homes but in 1897 the Juarez Stake Academy was founded with a principal and three teachers (Academia Juarez, 1977). In the beginning classes were conducted entirely in English since there were no NSSs among the settlers. However, as the Spanish speaking population in the area grew, Spanish was gradually added to the curriculum. Eventually, some classes began being taught entirely in Spanish much as is customary in language immersion programs. The exact date at which this happened is unclear, but in 1958 the high school became accredited by the University of Chihuahua as a recognized *escuela secundaria* in the Mexican school system (Academia Juarez, 1977, p. 72). This enabled students at the Academy to have their high school credits accepted by Mexican universities. This suggests that enough Spanish was being learned by the NESs that students could succeed in Mexican universities. In 1965 the Academy published as its goal that every graduate, whether intending to attend a university in Mexico or in the United States, should be bilingual (p. 93).

The Juarez Academy, currently known by its Spanish name, Academia Juarez, is the only secondary school in Colonia Juarez itself. It is attended by both NESs and NSSs, with students registering for certain classes which are conducted in English and certain others which are taught in Spanish. Secondary students who choose not to attend the

Academia must go about 18 miles to Nuevo Casas Grandes to attend a federally-run school conducted entirely in Spanish.

Currently, there are two primary schools in the Colonia Juarez community - a government-run school in which classes are conducted entirely in Spanish and a privately-run school which is an offshoot of the Juarez Academy described above. No NES children attend the government school, but the privately-run school is attended by a fairly even mixture of NES and NSS students, and the classes are conducted in both Spanish and English. Beginning in kindergarten, the children are instructed for half the day in English and half the day in Spanish. NSSs and NESs are mixed in each class in approximately equal numbers in a complete two-way bilingual program.

### **The Design of the Study**

#### *Social Models of L2 Acquisition*

There are three major models for examining the effects of social context on the acquisition of second languages: the Acculturation Model by Schumann (1978, 1986), the Inter-group Model by Giles and his associates (Beebe & Giles 1984; Giles & Byrne 1982), and the Socio-Educational Model by Gardner (Gardner, Lalonde & Pierson, 1983). While each of these models has certain strengths and weaknesses (see Ellis, 1994, for a more detailed discussion of each), Schumann's appears to be the one most suitable to our study, even though it has been applied mostly to situations unlike that of NSSs in Colonia Juarez in which the L2 is the majority language.

Schumann (1986) claims that acculturation, or the integration of the L2 learner into the target linguistic community, is not a direct cause of second language acquisition (SLA), but rather it is the first in a chain of factors which results in natural SLA. He proposes that "acculturation as a remote cause brings the learner into contact with TL-speakers and verbal interaction with those speakers as a proximate cause brings about the negotiation of appropriate input which then operates as the immediate cause of language acquisition" (p. 385).

His acculturation model includes seven social variables and four affective variables which presumably affect the quantity and quality of contact that second language learners have with the target language

community, thus affecting SLA. The claims which he makes for each of the sociocultural variables include the following:

1) *Social dominance*: If the second-language learning (2LL) group is politically, culturally, technically or economically dominant to or subordinate to the target language (TL) group, social contact between the two groups will tend not to be sufficient for optimal target language acquisition. If they are nearly equal in status, then there will be more contact between the two groups and thus, acquisition of the target language will be enhanced.

2) *Assimilation, preservation, and adaptation*: The best condition for L2 acquisition is obtained when the 2LL group wants to assimilate into the TL group. The second best condition occurs when the 2LL group wants to adapt to the TL culture for intragroup interaction without assimilating to it. The least favorable conditions obtain for acquiring the L2 when the 2LL group wishes to remain separated linguistically and culturally from the TL group.

3) *Enclosure*: The more the 2LL groups share social institutions such as schools, churches, workplaces, clubs, and others with the TL group, the more favorable the conditions will be for L2 acquisition.

4) *Cohesiveness and size*: The smaller and less cohesive the 2LL group, the more likely the contact with the TL group and the more favorable the conditions for L2 acquisition.

5) *Congruence*: The more similar the culture of the two groups, the more likely there will be social contact and thus language acquisition.

6) *Attitude*: The more positive the views of the 2LL group toward the TL group, the more favorable will be the conditions for L2.

7) *Intended length of residence*: The longer L2 learners plan to remain in the L2 environment, the more likely it is that they will feel the necessity of learning the TL.

The four affective variables included in Schumann's acculturation model are: 1) language shock, or the degree to which speaking the new language makes the learner feel foolish or comical; 2) culture shock, the extent to which the learner feels disoriented and uncomfortable with extended residence in a new culture; 3) ego permeability, the ability of the learner to accept a new identity associated with the belonging to a new speech community, and 4) motivation, the degree and type of desire

experienced by the learner to acquire the L2. Of these, only motivation seemed particularly applicable to the situation involved in this research and therefore it will be the only one included in the data collection. In Schumann's model high levels of motivation, both integrative and instrumental (Gardner, 1985; Gardner & MacIntyre, 1991), contribute positively to second language acquisition. Since attitudes toward the L2 community are closely related to integrative motivation we decided not to measure that aspect of motivation independently. Rather we have included an item to assess subjects' instrumental motivation (see Table 3) as discussed later in this paper.

Schumann argues that "the degree to which a learner acculturates to the TL group will control the degree to which he acquires the second language" (Schumann, 1978, p. 34), but he makes his claim only for the context of natural SLA, i.e., where learning takes place in the environment where the L2 is spoken and without direct language instruction (1986, p. 385).

Although Schumann makes his claims without regard to which language is the language of the majority group in the natural learning environment, most studies which have explored any aspect of the model have done so looking at the acquisition of a majority language by a minority group (e.g., the acquisition of English by Costa Rican immigrants, the acquisition of German by immigrant Italian and Spanish workers, etc.). By contrast, our study examines the applicability of these variables to L2 acquisition where the L2 is the minority language.

#### *Acculturation Variables and the Colonia Juárez Community*

Colonia Juárez is interesting as a community with regard to many of the acculturation variables. For example, with regard to social dominance, most of the ranches and farms in the immediate area are owned by the NESs, giving them a certain amount of socio-economic preeminence. On the other hand, beyond the immediate area, the NSSs own most of the farms. Both NESs and NSSs own part of the largest cooperative fruit-growing venture in the area, and the manager of the local bank is a NSS. Also, most federal, state and county political offices are held by NSSs, although both NESs and NSSs serve on the "Civic Committee," the governing board of Colonia Juárez itself (Stockton, 1986).

With regard to the assimilation, preservation, and adaptation variable, the situation is somewhat unclear in Colonia Juarez. The fact that the two groups have maintained their separate identities for over a hundred years suggests that the main strategy has not been assimilation. On the other hand, over the years there has been a gradual increase in the NSS enrollment in the bilingual schools and a slight increase in intergroup marriages. Virtually all of the NES and some of the NSS young people attend universities in the United States. There is periodic immigration of small numbers of monolingual English speakers, mostly as spouses or relatives of people living there. On the other hand, while the NES population has retained its language and cultural identity, they have also become a part of the social structure of the majority community. They have become functioning members of the linguistic and social milieu in which they reside.

The situation in Colonia Juarez with regard to the enclosure variable is mixed. Generally, business of all kinds is conducted in Spanish whether the participants are NES or NSS, but residents have access to both English and Spanish churches, schools, and mass media. The commercial establishments in the community include a post office, a small grocery store, a small branch of a national bank, and a service station. The same businesses serve the needs of NESs and NSSs alike. For goods and services beyond those available in these establishments, residents must go to Nuevo Casas Grandes, a city of approximately 70,000 inhabitants about 18 miles away from Colonia Juárez.

There is a Catholic church in the community attended primarily by the NSS population. There are two congregations of the LDS (Mormon) church, one whose meetings are conducted in English and the other with services in Spanish. Both of these congregations meet in the same building. The great majority of NESs attend the LDS congregation with meetings in English. When the congregations meet together, which occurs at least twice a year, the meetings are conducted principally in Spanish with some sermons given in English.

As was mentioned above, there are two elementary schools and the bilingual secondary school in Colonia Juarez. Virtually all of the NES young people attend the bilingual private schools. Many members of the NSS community attend the bilingual schools as well. Others choose to attend the federally-run monolingual schools.

Most local television and radio programs are in Spanish, although there is limited programming available in English. In addition many households in the area have satellite dishes through which a wide selection of English programs from the U.S. is available. The local newspaper is in Spanish.

With regard to the size of the 2LL community, the situation in Colonia Juarez is fairly clear. The NSSs constitute about 90% of the population in the area. However, within the town of Colonia Juarez itself NSSs live in about 75% of the households (210 of 280 households). An examination of the general cohesiveness of the NES and NSS groups in Colonia Juarez suggests that the two are quite cohesive within themselves, although there is an increasing amount of dating and intermarriage. Congruence between the two languages and cultures in Colonia Juarez is high given the fact that both are Western and Christian.

Attitudes of the two groups toward each other are hard to judge in a community sense. This variable will be examined on an individual level. Motivation of the two groups in Colonia Juárez has been partially illuminated by the work of Bixler-Márquez (1985). He states that the NSS community feels that "the acquisition of the English language and American culture can improve their children's upward socioeconomic mobility" (p. 9).

### *Research Design*

This study was undertaken in order to determine how the acculturating variables just listed relate to individual NSSs' acquisition of English in Colonia Juarez. The research design included the administration of two instruments to each subject. The first, administered orally in Spanish by a member of the NSS community, included 54 items designed to elicit three kinds of information: 1) a self-assessment of English ability in reading, writing, listening, and speaking, 2) basic personal demographic data, and 3) information on each of the acculturation variables mentioned above. The second was an oral proficiency interview administered in English. Data from these instruments were analyzed using correlational statistics and a step-wise regression analysis.

### *Instruments*

The first instrument mentioned above was a 54 item questionnaire containing the following:

- 1) six items requesting personal demographic kinds of information (age, sex, years of residence in Colonia Juarez, etc.);
- 2) four items assessing ability to comprehend, speak, read and write English;
- 3) seven items assessing the degree to which subjects were exposed to English in the community;
- 4) four items assessing the amount of exposure subjects had to English in the media;
- 5) five items designed to measure the degree of social dominance of the NES or NSS groups;
- 6) seven items designed to measure the desires for assimilation, adaptation, or preservation of the group;
- 7) two items designed to assess the cohesiveness of the group;
- 8) four items designed to assess the subjects' views of the degree of congruence between the two groups;
- 9) fourteen items assessing attitudes toward members of both the NES and NSS groups;
- 10) one item designed to assess subjects' degree of instrumental motivation to learn English.

The second instrument was an oral proficiency interview (OPI) administered to each subject in English by a trained OPI interviewer. This consisted of a 10-12 minute directed conversation designed to test the range of listening and speaking abilities of each subject (See Liskin-Gasparro, 1987, for a detailed description of this procedure.)

### *Subjects and Procedures*

Given that the purpose of the study was to examine the social context in which native Spanish speakers learned the minority language (English), a way had to be devised to get a general sense for who was learning English in the community and what the situation was in the community with regard to each of the social variables mentioned earlier. Because the community is small, it was possible to get a local map and, with the help of a life-long resident of the town, indicate the location of

each home. Those houses belonging to NES families (approximately 70) were identified and eliminated from the study. The remaining 210 or so homes were numbered and a 10% random sample was selected by using a table of random numbers. As it turned out, because of limitations in the availability of the NSS interviewer from the community, only a 9% sample (nineteen households) were actually surveyed.

All the people in each household who were 9 years of age or older and present when the researchers visited the home were given an oral proficiency interview in English and an acculturation survey in Spanish. A female NSS interviewer (who lived in the community) and a male Anglo, trained as an OPI tester (who did not live in the community), visited each selected household and explained that they were doing a study of the community and the influence of English in the community. They asked for permission to conduct a survey individually with each member of the household and to speak with each member for a few minutes in English. Thus, while one researcher was conducting the acculturation survey with one member of the household, the OPI tester was conducting an interview in English with another. The interviews and surveys were continued until each member of the household had completed both. The survey work was done principally on Saturday and during evenings in order to assure that more working adults would be at home. Some callbacks were made to households where the majority of the family was not at home. An attempt was made to return at least once to interview persons who were living in the home but not present at the time of the visit. Forty-eight persons were eventually interviewed and tested. Table 1 gives basic demographic information about this group.

**Table 1**  
*Personal Demographics of Subjects*  
(N=48)

Age:	range 9-76	mean 35.667
Gender:	25 female	23 male
Religion:	31 Catholic	17 LDS
Years Res. In Colonia:	range 0-71	mean 23.52
School Attended:	33 Spanish	15 Bilingual
Intend to move to U.S.:	4 yes	44 no

A total of 48 individuals (25 females and 23 males), or about 2.5 people per household, were interviewed and tested. The average age of the subjects was 36 years and the average length of residence in Colonia Juarez was 24 years. Fifteen of the participants had attended the bilingual school and 33 had attended monolingual Spanish-speaking schools. Only four of the 48 subjects intended to move to an English-speaking area in the foreseeable future.

### Results and Discussion

After the data were collected and entered into the computer, descriptive statistics for each variable were calculated. Table 2 presents the mean scores on the three proficiency measures.

**Table 2**  
*Mean Scores for Each of the English Language Proficiency Measures*

Instrument	Mean	S.D.
Oral Proficiency Interview (0=none, 5=native speaker)	.958	1.63
Oral Self-estimate (0=none, 5=proficient)	2.135	1.35
Overall Self-estimate (0=none, 5=proficient)	2.021	1.36

At first glance, Table 2 appears to show a major discrepancy between the average scores on the self-estimates as compared with the OPI. It actually turns out that there is considerable agreement between the two. The major difference is in the interpretation of the scales. The OPI has a much greater range than the self-estimates in that a "5" on the OPI indicates the proficiency level of an educated native speaker while the score of "5" on the self-estimate means "proficient." Thus a score of 5 on the self estimate scale would probably be about the same as a "2" (advanced proficiency in a foreign language class) on the OPI scale. A Pearson Product-Moment correlation between the OPI and the self-estimates of oral proficiency indicated  $p = .822$  (see Table 6).

Notice in Table 2 that the mean scores are very low. This is because 33 of the people interviewed scored "0" on the OPI scale. Of these, 18 reported no English language proficiency on the self-rating of oral skills and 24 reported no English literacy skills. On the other hand, of the fifteen participants who scored above a "0" on the OPI, four were rated at "4.5-5" (educated native speaker), four more were given the rating of 4 (superior plus in English ability), and two others were rated at 3 (superior). This great range in scores accounts for the high standard deviation shown in Table 2.

The means of the survey responses on five of the acculturation variables are presented in Table 3.

**Table 3**  
*Means of the Interview Responses for Each Social Variable*

Variables	Mean	S.D.
English Social Dominance (5 items)	1.833	0.42
Assimilation/Adaptation to NES Culture (7 items)	2.206	0.24
Congruence of NES and NSS Cultures (4 items)	2.401	0.51
Positive attitude toward NESs (14 items)	2.102	0.74
High Instrumental Motivation (1 item)	1.116	0.45

(1 highest, 5=lowest)

In the minds of the participants in this study, Native English speakers are seen to be slightly more socially dominant than Native Spanish speakers. As a matter of fact, approximately 80% of the participants agreed or strongly agreed with the two statements attributing social dominance to NESs and disagreed or disagreed strongly with the three statements attributing social dominance to the NSSs. Notice that the standard deviation for this variable is small, suggesting that the opinions are fairly homogeneous.

The responses to the seven items dealing with assimilation, adaptation and preservation also indicated a fairly positive opinion on

the part of NSSs about the benefits of having an English-speaking community in their midst and a negative opinion about the desirability of remaining separated from the NES group. This means that the great majority of subjects see the presence of the NES community and the bilingual school as positive, beneficial to the English speakers as well as to the Spanish speakers, and that none of the respondents felt that it was undesirable to have NESs living next door.

In a further examination of Table 3, the mean of 2.4 on the four items intended to measure congruence indicates that the respondents felt that the NES and NSS cultures are slightly more similar than dissimilar. On the fourteen-item semantic differential measure for assessing attitudes toward the NESs, subjects indicated an overall positive feeling with a 2.101 mean on a five point scale with 1 being most positive and 5 being most negative. The relative low standard deviation suggests that there was substantial agreement on the positive image the Spanish speakers have toward the NES minority.

The final variable presented in Table 3 is motivation. Because the questions designed to assess the assimilation, adaptation, preservation variable also seem to measure an integrative orientation toward the L2 community, we attempted to assess only the instrumental motivation of the subjects. A single question was designed to get at this variable: "In these days if a person learns English he or she can get a better job." The mean of the responses to this question (1.116) shows that almost all of the respondents strongly agree with this statement. This suggests a great deal of consensus in the community regarding the instrumental value of learning English.

Responses to all five variables listed in Table 3 suggest a fairly positive feeling among the NSS population toward their NES neighbors. In Schumann's terms, the conditions in the community are very favorable toward the acquisition of English by the Spanish-speaking community. One might expect, therefore, that members of the community would avail themselves of the opportunity to make friends and interact with members of the NES community, thus developing their English skills.

There are two additional social variables in the Acculturation Model which have not yet been analyzed. The first of these is cohesiveness, or the degree to which members of the groups socialize

within their own group or mix with the other group. This variable was measured by having subjects report the five friends to whom they would most likely go with a problem and the five with whom they most enjoy spending leisure time. Then they were asked if these ten people were English or Spanish speakers. Percentages of the people named who spoke English are presented in Table 4.

**Table 4**  
*Cohesiveness: Percentage of English-speaking Friends  
Reported by NSS Subjects*

# of S's	*% English-speaking Friends
0	100%
3	90%
2	80%
3	70%
3	60%
3	50%
6	40%
3	30%
4	20%
2	10%
14	0%

\*Five Subjects did not respond to this question.

Fourteen of the subjects reported that at least half of their close friends were English speakers. On the other hand thirteen individuals listed no English speakers among their ten close friends. This shows great variability in the social environment of individual learners and differences among learners regarding their cohesiveness with the native language group. Schumann would predict that those whose friends speak only the native language would have much less contact with the L2 and therefore be in a worse position as far as acquisition of the L2 is concerned.

The final acculturation variable is enclosure, or the degree to which the group learning the second language (in this case the NSSs) and the target group (the NESs) share the same social institutions. The items in the survey which were intended to assess this variable asked about the

degree to which participants used English in schools, churches, stores, governmental offices, clubs, doctors' offices, and work. It also asked the degree to which they used English-speaking media, e.g., television, radio, newspapers, and movies. Because the survey was done during vacation months and the question about schools was not clarified to mean when school is in session, the use of English at school is not included in the results. Obviously, during school sessions English was used on a daily basis by those who attended. Table S shows the results of the survey for the enclosure variable.

**Table 5**  
*Enclosure: Number of Subjects in Each Category of English Use  
in the Community and in the Media  
(N=48)*

	Never	Annually	Monthly	Weekly	Daily
Exposure to English In Community	10	22	14	1	1
Exposure to English in Media	12	17	11	6	2

Enclosure is fairly high for the great majority of participants in the survey. Only two subjects had contact with English speakers on a daily or weekly basis in the community and only eight people indicated that they were exposed to English media more than once a month. Thus, enclosure appears to be the only area discussed by Schumann for which the NSS subjects had unfavorable conditions for L2 acquisition.

#### *Correlations Among the Variables*

As mentioned earlier, Schumann does not contend that favorable conditions on the acculturation variables are a direct cause of second language acquisition. Rather he sees them as a secondary cause, i.e., they enhance the amount of L2 input received by the learner and thus enhance language acquisition. We should be cautious in inferring causality from correlation between the dependent variables and any given independent variable. However, from the correlational data given we may be able to see relationships among variables which support or disconfirm the predicted effects of the acculturation variables.



From Table 6, we can see the correlations among all the variables in the study. The variable having the strongest correlations with the three proficiency measures (the OPI, the self-assessment of oral proficiency, and the self-assessment of overall English proficiency) was school attended (-.829, -.841 and -.856). The negative correlation for "school" was due to the fact that attendance at the bilingual schools was given a value of one and attendance at the Spanish-only schools was given a value of two. No student who had not attended the bilingual school achieved higher than an intermediate level (1+) on the OPI.

The variable that showed the second strongest correlation with the proficiency measures was cohesion with English as measured by percentage of English-speaking friends (.706, .767, .734). While this cannot be inferred as a causal relationship ( i.e., that having more English-speaking friends caused greater language proficiency in the subjects) it was precisely those students who had the most friends who also achieved native or near-native proficiency in English.

Following the correlations a stepwise multiple regression analysis was run using the OPI as the dependent variable and all of the variables except the two self-estimates of proficiency as independent variables. The intent was to examine the degree to which independent variables shared variance and to see what set of factors best predicted English language proficiency. The results of this analysis are shown in Table 7 (see next page).

In Table 7, "school" appeared in the first step of the regression analysis as the best predictor of English proficiency, accounting for about 69% ( $r^2 = .68667$ ) of the variance. Those students who attended the bilingual schools at the elementary and/or secondary level were most likely to have greater oral proficiency in English. The F-value for this step was 87.66 with a significance value smaller than .0001. In the second step of the regression analysis "age" entered, adding only about 2.4 percent to the variance accounted for ( $r$  for step 2 = .73289). The F-value for this step was 53.50, which was also listed at the <.0001 level of significance. Following these two variables, none of the other eight remaining acculturation variables accounted for a significant amount of the variance.

**Table 7**

*Significant Results of a Stepwise Multiple Regression Showing Which Variables Are Most Likely to Have Explanatory Power for Oral English Proficiency*

Variable entered on Step Number 1: *School*  
 Multiple  $r=.82865$ ;  $r^2=.68667$ ; Adjusted  $r^2=.67883$ ;  
 Standard error =.96142

*Analysis of Variance*

SOURCE	df	SUM OF SQUARES	MEAN SQUARES	F-RATIO	Sig. of F
Regression	1	81.03	81.03	87.66	.0000*
Residual	40	36.97	.92		

Variable entered on Step Number 2: *Age*  
 Multiple  $r=.85609$ ;  $r^2=.73389$ ; Adjusted  $r^2=.71919$ ;  
 Standard error=.89899

*Analysis of Variance*

SOURCE	df	SUM OF SQUARES	MEAN SQUARES	F-RATIO	Sig. of F
Regression	2	86.48	43.24	53.50	.0000*
Residual	39	31.52	.81		

\*The computer program only calculated the significance level to the .0000 degree. The figures given here simply mean that the real level of significance is smaller than .0001.

This suggests that the other variables such as "exposure to English in the media," and "cohesiveness," which correlated strongly with the measures of English proficiency, may have been also highly correlated with the "school" variable. Thus they did not show up as significant in the regression analysis.

**Discussion and Conclusion**

This study began as an attempt to examine a community in which a two-way bilingual program has functioned successfully for over two decades; it sought answers to the following two questions:

1) Are the social conditions in the community such that members of the majority community are learning English as a second language independently of the bilingual school?

2) Do social conditions in the community contribute to the high levels of proficiency in a second language achieved by members of the majority community who attend the bilingual school?

The Colonia Juarez community is of special interest because not only do language minority students become fully bilingual, as is common in many areas of the world, but also many members of the language majority community become native or near-native speakers of a second language. From the data presented earlier, it is apparent that the social conditions in Colonia Juarez are very favorable for the acquisition of English by the NSS community. The NES group is perceived as slightly dominant in terms of social status in the community, although there are a number of regards in which the NSSs are dominant. In general, the NSS community has favorable attitudes toward the NESs as indicated by their responses on a fourteen item semantic differential instrument. Also their feelings about having English-speaking neighbors and a bilingual school in the community are fairly positive and their desire to associate with the NES community was relatively strong. All but eight of the NSS subjects indicated that they had one or more close NES friends. There is a strong instrumental motivation to learn English because of the perceived economic advantage afforded by proficiency in that language and the NES culture is perceived as quite congruent with the NSS culture.

Yet in spite of these favorable conditions for SLA the correlations between each of these variables and scores on English language proficiency are very low (-.135 to .088). The single variable in Schumann's acculturation model for which there was not a favorable condition for second language acquisition was the enclosure variable. Data on enclosure indicated that in spite of the sizable English-speaking group in the community (one in four households in the city proper) and despite the availability of English in the media, few of the Native Spanish speaking residents took advantage of the opportunity to speak English on a regular basis with the NES community or to watch TV or listen to the radio in English. This suggests that for Spanish speakers the

situation in Colonia Juarez functions in most ways as a foreign language environment rather than as a second language context.

Those who attended the bilingual school indicated a much greater use of English in the community and the media. Also, with regard to size variable, it is clear that the NSS group is several times as large as the NES group. Thus, for those not involved in the bilingual school, enclosure is very high and the NSSs can get along well in most areas of their lives without English. Only one person of the 48 surveyed had achieved above a novice level of proficiency in English without attending the bilingual school. So, despite the favorable social conditions for the learning of English, the data show that not much English is learned by those not attending the bilingual schools. It appears that the school is the catalyst through which the enclosure barrier is broken for those who wish to learn English.

If it is true that Colonia Juarez functions as a foreign language environment as far as English is concerned, then one puzzling fact remains: Why are the NSS students in the bilingual school achieving such high levels of proficiency in English?

Throughout the world where immersion programs have been reported, it has always been noted that the students rarely achieve native-like proficiency in the target language even after years of exposure in the schools (Cohen, 1982; Cummins & Swain, 1986; Genesee, 1987; Selinker, Swain & Dumas, 1975; Spika, 1976; Swain & Lapkin, 1982). Generally their progress in the use of many grammatical forms stabilizes well below true native language proficiency (Hammerly, 1988; Pawley, 1985). Cummins and Swain (1986) have attempted to explain this failure to achieve native competence in speaking and writing by the students' lack of opportunity to interact sufficiently in the target language. They have observed that in immersion programs, especially in the upper grades, the teacher does most of the talking and the students lack the opportunity to interact extensively in the L2. Furthermore, in informal contexts such as on the playground and after school, the students tend to speak their native language. Cummins and Swain argue that language acquisition may require not only comprehensible input, but opportunities to interact and produce sufficient amounts of language output (pp. 132-133).

More recently, Tarone and Swain (1995) have examined immersion classrooms from a sociolinguistic perspective and have confirmed that as youngsters participate over several years, the L2 takes on a role of the academic language and their L1 is used as the vernacular for informal interaction with peers. They have observed formally what many immersion teachers have mentioned informally over the years, that as participants get into the upper grades they speak the L2 less and less in informal situations. They have speculated that what develops in that social context is a form of diglossia in which the L2 is reserved for discussion of academic subjects.

A somewhat different but equally perplexing sociolinguistic situation seems to obtain in maintenance bilingual programs in the United States where native English-speaking learners are mixed in a classroom with large numbers of speakers of a non-English mother tongue and instruction is given in both English and the other mother tongue in approximately equal quantities. The English-speaking students have not been observed to progress rapidly nor acquire native-like competence in the second language. Edelsky and Hudelson (1981), for example, observed that the native English speakers in their first grade class in Arizona learned little Spanish, while the Spanish speakers were becoming fluent in English. They attributed the lack of progress in Spanish by native English speakers to the societal attitudes toward the two languages.

In recent years the two-way bilingual model has been proposed as a way of overcoming some of the immersion and maintenance models for developing high levels of L2 acquisition in majority as well as minority populations (Christian & Whitchler, 1995; Lambert & Gazabon, 1994; Lindholm, 1991). However, the limited research results reported so far on such programs in the US have not yet confirmed that majority language learners are becoming native-like in their L2 proficiency. Mahrer and Christian (1993) examine the Spanish language skill development of native English-speaking youngsters in 15 different programs in which a variety of oral and written language assessment instruments was used. While most of the reports did not give sufficient details to assess the overall achievement levels in Spanish, one report of youngsters in the 6th and 7th grades indicated that almost half of them were rated as "fluent in Spanish" on the SOPR instrument (p. 9).

Again, there may be some sociolinguistic influences which are limiting the level of language achievement in these programs for both language minority and language majority learners. In a brief report on an ethnographic study of a two-way bilingual program among Mexican-background students, McCollum (1994) reports that program implementers did many things which "unwittingly led Hispanic adolescents to choose not to speak their native language at school" (p. 9). Among those things cited were: 1) devaluing the Hispanic students' vernacular and insisting that they use a 'high' variety of Spanish for communication, especially in language arts classes; 2) always making announcements in English first; 3) having daily requirements that students learn a new vocabulary word in English but not in Spanish, and 4) emphasizing preparation for English-medium standardization tests but downplaying the importance of Spanish-medium ones. These kinds of cues subtly communicate to students that the languages are not truly of equal status; and such cues may reinforce already established societal attitudes toward the two languages. And, while McCollum emphasized the impact this has on the use and development of Spanish by Hispanics, by extension, the devaluing of Spanish reduces the likelihood that English speakers will have positive attitudes toward learning it.

In the Amigos two-way bilingual program in Cambridge, Massachusetts reported by Lambert and Gazabon (1994), a major effort has been made to attend to some of the influences that may work against the development of full bilingualism in both Spanish-speaking and English-speaking youngsters. In particular, program designers have placed a major emphasis on "providing children with the opportunity to cultivate friendships with children from different ethnic groups and with different values and outlooks on life, and to enrich (or develop, if necessary) knowledge about their own cultural distinctiveness" (p. 1). Lambert and Gazabon findings from a study examining the attitudes and personal estimates of progress of learners who had participated in the program for at least four years indicate that most native Spanish-speaking learners felt that their ability to speak English was at least on par with their Spanish, while most of the English-speaking learners felt that their English was a little better or much better than their Spanish.

So, it appears that in both foreign language immersion programs and many two-way bilingual programs, majority language youngsters

are not reaching native-like competency in speaking the target language. What accounts for the fact that many language majority learners in the Colonia Juarez bilingual schools are achieving native or near-native competence in the second language? Six of the fifteen people sampled were native or near native in their English-speaking ability (levels 4 and 5 on the OPI). Three more scored superior (levels 3-3+ on the OPI). All of them spoke Spanish as their first language and learned English in the bilingual school.

Perhaps one clue to their achievement, besides the favorable conditions reported on the acculturation variables mentioned above, lies in the fact that, in addition to attending the bilingual school, all nine of the learners indicated that at least half of their close friends were English speakers. Many of them reported daily or weekly contact with English in the media. The fact that these people reported very favorable attitudes toward learning English and toward the NES community, and the fact that they had established close friendships with many members of the NES community makes it likely that much of the informal contact between them and their friends (on the playground, in sports activities, and in social contexts) takes place in English. This would provide the opportunities for interaction which Cummins and Swain claim may be necessary for the full development of native like speaking ability. Also the favorable attitudes toward English and toward NESs would negate the influences which Edelsky and Hudelson found among native English speakers in Arizona.

Graham (1985) has proposed that one condition for the development of native ability in a second language may be high levels of assimilative motivation, a type of peer group motivation experienced primarily by young learners who desire to become members of a particular speech community by so conforming their speech patterns as to become indistinguishable from those of their peers. This would mean that in order to become native speakers of a second language, learners would not only need prolonged exposure at an early age to a peer group who spoke that language, but also they would have to have such favorable attitudes toward their target group peers that they would want to become a member of that speech community.

While these are only speculations regarding the causes based on correlational data, it would be interesting to do an in depth ethnographic

study of the students in the Colonia Juarez bilingual schools, both NES and NSS, to see exactly what is contributing to the high levels of second language proficiency observed in the language majority as well as the language minority communities.

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