

# LANGUAGE INSTRUMENTALITY IN SOUTHERN NEW MEXICO: IMPLICATIONS FOR THE LOSS OF SPANISH IN THE SOUTHWEST

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ABSTRACT. U.S. Census data indicate that the majority of those of Spanish-speaking descent in this country continue to speak Spanish. At the same time, many researchers have documented the shift from Spanish to English in this group, and have suggested that the apparent vitality of Spanish in the U.S. may be due more to migration than to intergenerational language maintenance. Many of such studies utilize an approach that documents the transmission of Spanish from one generation to the next. The present study proposes to examine this phenomenon from a different perspective, investigating what Gal (1979) defines as 'intervening processes'. In particular, the instrumental value of Spanish in a border region of the Southwest is studied. This research, then, seeks to contribute to an understanding of how economic factors, such as wages and their relation to bilingual job skills, may have an impact on the shift from Spanish to English in one region of the U.S./Mexico border.\*

INTRODUCTION. U.S. Census data indicate that those of Spanish-speaking descent (often labeled 'Hispanics' by the U.S. Census Bureau)<sup>1</sup> are the fastest growing ethnic segment of the United States population, and now form the largest minority group in the nation (<http://www.census.gov>). The majority of this group speaks Spanish; indeed, after English, Spanish is the second most widely spoken language in this country, with the U.S. being the fifth largest Spanish-speaking nation in the world (Villa 2000).

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\*The authors wish to thank María Elena Becerra for her invaluable work on gathering and organizing the data for this study. Any errors and inaccuracies are, of course, their own.

<sup>1</sup>The problem of what label to use for those of Spanish-speaking descent in the U.S. is a thorny one. Speakers of U.S. varieties of Spanish represent a highly heterogeneous group, and even within a particular sub-group labels will vary due to generational differences, among other

At the same time, many researchers have documented the shift from Spanish to English among U.S. Hispanics, e.g. López (1978), Veltman (1988), Bills (1989), Solé (1990), Pease-Álvarez (1993), Bills, Hernández Chávez, and Hudson (1995), and Rivera-Mills (2001), among others. In spite of the apparent vitality of Spanish, research inevitably points to an inexorable intergenerational loss of the language among those of Spanish-speaking origin. Thus, a major motivation of this study is to work toward a better understanding of what might contribute to that loss, in particular if economic factors might have an impact on the choice of one language over another.

It would seem credible that sharing a 2,000 mile border with the largest Spanish speaking country in the world would have a positive impact on the maintenance of Spanish in this nation, especially in U.S.-Mexico border regions. For example, Grosjean (1982:101), discussing one segment of the U.S. Hispanic population, states that 'Mexican Americans are extremely attached to their language and culture and have NO PROBLEM MAINTAINING THEM' (emphasis added).

However, despite the appealing notion that proximity to a Spanish speaking country promotes Spanish retention, language loss has been and continues to be documented in the population Grosjean describes above. The apparent vitality of U.S. Spanish seems to be due principally to migration; the language is in a state of flux between two extremes, one favoring the abandonment of the mother tongue, and the other a constant renewal due to the arrival of hispanophones. This study proposes to contribute to an understanding of the language loss side of this dynamic, why it is that research on this topic consistently shows a loss of Spanish among U.S. Hispanics.

The principal focus here is on economic factors and how they might impact language loss. Bills' (1989) and Bills' et al. (1995) research in part motivates this approach; these authors, using demographic information from the U.S. Census, have demonstrated strong correlations between the self-reported use of Spanish and income and educational level. Bills (1989:23), for example, states that '[The] association with Spanish retention with the poor and uneducated agrees with what virtually all researchers have found regarding language maintenance in the US ...'. However, Hamel, citing Gal (1979), points out that such correlations do not necessarily provide insights into the CAUSE of the shift. He states that

... more and more scholars agree that causality could not simply be derived from correlations and that research should focus instead on the 'intervening

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factors. The term 'Hispanic' or 'hispano/a' is considered an insult by some, who prefer the label 'Latino/a'. Others opt for terms that reflect their country of origin, such as *mexicano/a*, *cubano/a*, *puertorriqueño/a*, *salvadoreño/a*, etc., while still others opt for a hyphenated variant such as Mexican-American, Cuban-American, and so on. The term 'Hispanic' is used in this paper for the simple reason that it is a commonly used in-group label in the region studied, southern New Mexico.

processes' (Gal 1979:3) that make people redefine and redistribute their value system across their linguistic repertoire, and in certain cases abandon their native language (1996:65).

It is for this reason that economic factors, often mentioned but not focused on in language shift studies, are examined here as 'intervening processes' in language attrition.

Regarding the relationship between economics and language use, Edwards (1985) proposes a cost-benefit explanation for the shift from a heritage language to English; he observes that 'the essence of group identity is individual identity and the essence of individual identity, ultimately, is survival, personal security and well being. To the extent that a language hinders these things, it will be deemed a negotiable commodity' (98). He later states that criticism of his original discussion as overly simplistic is well taken, noting 'I ... would not wish to be seen as endorsing some simple economic reductionism as an explanation for language shift and cultural adaptation' (12). At the same time, he does not abandon economic factors as explanators in understanding language choice. Similarly, Grin is mindful of the danger of simplistic generalizations regarding such relationships. He notes, '...[as] just about any aspect of human behavior could be appreciated from an economic perspective, it must be clear that no aspect of human behavior can be adequately understood using economics alone. The combined contribution of several disciplines remains the best way to take stock of its complexity' (1999:11). Bearing these caveats in mind, the present study focuses on the relationship between the economic instrumentality and the loss of Spanish in the U.S.

1. THE CONCEPT OF INSTRUMENTALITY. The term INSTRUMENTALITY is employed here in a fairly restricted sense, reflecting a definition used in the field of sociology. For that discipline, Gordon and Barthel state:

The study of orientation to work has developed only recently and is especially associated with research carried out in the late 1960s and 1970s. ... [It is] concerned with the values, purposes, expectations, and sentiments that workers bring to the work situation. Employees with an instrumental orientation see work as a means to an end (the need to acquire income); have a primarily calculating attitude to the employing organization; and do not carry their work experiences and relationships over into other areas of their lives (1994:568-69).

It is necessary to carefully separate the use of Spanish in the workplace as a means of obtaining employment and acquiring income from other social functions of the language. As Grosjean (1982) notes (among many others), Spanish exists in a diglossic relationship with English in the U.S., and tends to be a home language often used for affective purposes. This article compares the instrumental use of English and Spanish; that is, what is the relative VALUE of these two lan-

guages in the U.S. for obtaining work and having access to higher salaries, better housing, a better diet, education, more disposable income, among other tangible economic benefits. This particular view of language validity differs rather sharply from other values that may be assigned to the use of one language or the other. The present study examines only this particular language function, and will not enter into an analysis of other types of linguistic dimensions, such as affective factors of English and Spanish language use.

2. INSTRUMENTALITY AND THE MYTH OF THE GLOBAL ECONOMY. The invocation of a GLOBAL COMMUNITY and a GLOBAL ECONOMY has reached an almost mantra-like status, permeating the popular press and political discourse. Indeed, publications such as the *Wall Street Journal* or *Forbes* view the existence of a global economy as an unquestionable given. While it may be the case that international borders are beginning to blur and that cultures impact each other in previously impossible ways, due in part to the explosion in electronic and communication technologies, the notion of a global economy, one in which the economies of the world's nations are increasingly interdependent and intimately intertwined, may be greatly exaggerated, at least with regard to the U.S. and other countries.

To support this assertion, we cite the work of the economist Paul Krugman. This researcher writes that the importance of the global economy as a market for goods and services produced in the U.S. is vastly inflated, basing his claims on indicators of economic activity as published by the Congressional Budget Office, the World Bank and the International Monetary Fund, among others. Krugman notes that total U.S. exports to the rest of the world form about ten percent of the nation's Gross Domestic Product (GDP). This level of activity is undeniably important for certain niche economic sectors; however, it must be recognized that ninety percent of goods and services produced in the U.S. are consumed here. In other words, the U.S. is its own most important market.

In order to understand the popular emphasis on the global economy as a cure-all for whatever economic woes the U.S. economy might face in the future, Krugman identifies those he terms STRATEGIC TRADERS, who promote a myth of an overarching global economy. He states, 'Turning to factual issues, what the rhetoric of strategic traders seems to imply is both that the typical American business or worker is now producing for global markets, and that the extent of "globalization" is historically unprecedented. In fact, neither is true' (1994:257). Krugman's analysis underscores the relatively minor impact of the sum of other nations' economies on that of the U.S.

Regarding Mexico in particular, the U.S. Agency for International Development (<http://www.info.usaid.gov>), drawing its information from the U.S.- LAC [Latin America and Caribbean] Trade Section of the LAC Databook, provides the most recent export data available, for the year 2004. The figure for that year runs to approximately 111 billion dollars. While this is by no means an insignificant

sum, it represents only a little under 1% of the 11.9 trillion dollars the U.S. economy generated in 2004 (<http://www.bea.doc.gov/>). This figure is further reduced when one takes into account that a portion of those 111 billion dollars in exports were in reality components that the maquiladora industry assembled into semi-finished or finished products and returned to the U.S.; those supposed exports never entered the Mexican economy. (For further information on the maquiladora industry's export activity, see the U.S. Department of Commerce's information site at <http://www.mac.doc.gov>).

In order to put this level of economic activity into perspective, South Carolina's economy is roughly the same size as exports to Mexico (<http://www.economagic.com/em-cgi/data.exe/beagsp/c45>). It is surely far more attractive for those concerned with economic issues to invoke the mystique of a global economy, as opposed to pegging the nation's economic future on increased consumption of goods and services in South Carolina. However, the fact remains that most economic activity in the U.S. encompasses a national market, with relatively little of an international scope.

A major point we wish to make here lies in the fact that, based on economic factors, the INSTRUMENTAL value of Spanish as an international trade language is relatively reduced. We must emphasize here that we recognize the many other values that Spanish has, and that at no point do we wish to imply that its international instrumental value as a trade language has any sort of impact on those other values. However, turning to the border region under study here, the reality that English constitutes the de facto national language of this country establishes a very high instrumental value for English, and a relatively reduced instrumental value for other languages in general, and Spanish in particular. The impact of this reality is discussed in the following section.

3. THE INSTRUMENTALITY OF SPANISH IN A U.S.-MEXICO BORDER REGION. The preceding discussion seeks to provide a background for understanding the instrumentality of Spanish in a border region. The reason for this is that the relatively recent implementation of the North American Free Trade Agreement (NAFTA) has raised expectations in certain sectors of an increased instrumental value of Spanish as an important trade language. For example, one firm that advertises language training states, 'There are great opportunities for Americans who can overcome the challenges that Mexico offers, but going it alone is scary. The Spanish Language Business Program is especially designed to remove obstacles for Americans in Mexico' ([http://www.solutionsabroad.com/d\\_businessmexico.asp](http://www.solutionsabroad.com/d_businessmexico.asp)). In another instance, the Thunderbird American Graduate School of International Management states that, as part of its history, 'By 1951, Thunderbird was recognized by leading corporations and was requested to add special conversational language training to the curriculum' ([http://www.thunderbird.edu/about\\_us/tbird\\_info/tbird\\_history.htm](http://www.thunderbird.edu/about_us/tbird_info/tbird_history.htm)). Indeed, given the economic pressures in academia,

it is tempting for language programs in general to tout the global economy as one reason for justifying their continued existence.

At any rate, much public debate was generated as to NAFTA's impact on jobs in the U.S., whether there would be a net gain or loss, and what the nature of those jobs might be. No matter which stance one might take toward this issue, pro or con, it would certainly seem reasonable to assume that, with increasing trade between the U.S. and Mexico, there would be a strong demand for bilingual employees, especially in a border region. Given this demand, one might also reasonably expect that a premium would be paid to bilinguals who can function in both English- and Spanish-speaking professional environments, that is, that the instrumentality of Spanish for employment would increase. The following explores these issues.

3.1. CHARACTERISTICS OF THE REGION STUDIED. The geographic area studied comprises the Mesilla Valley, located in Doña Ana County of southern New Mexico, which has approximately 182,165 residents of whom some 74,000 live in the area's principal city, Las Cruces (figures from the most recent census data available at the time of writing, <http://www.census.gov>, for 2003). This region is one of the fastest growing in the state, and directly borders Mexico. It possesses a new international port of entry, Santa Teresa, which provides a gateway to the nearby maquiladora industry in Ciudad Juárez, Chihuahua. Important transportation access to U.S. markets is through major interstate highways that run north, west and east. A direct gateway south to interior Mexico is through a newly constructed toll road just south of Juárez, accessible through the port of entry. Rail service is available to points throughout the nation and to Mexico, and major air access is through the El Paso International Airport, approximately 20 miles from the port of entry. The valley has five major high schools, and is home to a land-grant institution, New Mexico State University; these schools all offer formal training in Spanish. In short, the present infrastructure is adequate for market distribution both to and from Mexico, as well as for supporting an educated bilingual workforce to facilitate international trade and communication.

3.2. METHODOLOGY. In order to measure the economic instrumentality of bilingual skills, a convenience sample of 146 institutions in the area was contacted, including large and small private sector businesses, federal, state, county and city offices, and academic institutions. The instrument used to elicit data is based on one developed by Lila Waldman for gathering information for her 1994 article 'Bilingual administrative support personnel in United States corporations'. Certain portions of the instrument were modified to reflect a major change in geographic scope, from national to regional. One example of this modification was inquiring what language is used on the job; while Waldman (1994:330) found a variety of idioms used for conducting company business, initial research indicated that Spanish is almost exclusively employed as the second language in the Mesilla Valley, and as a result that particular item was eliminated from the survey. An-

other important difference is that Waldman specifically studied support personnel; the instrument used in this study expanded that scope to include employees in general, such as in fire, police, utilities, military, educational, governmental and personnel services, among others. The following specific research questions, patterned on Waldman's (1994:328), guide the analyses of the data:

- (1) Is the economic emphasis in a border region international or domestic in scope?
- (2) Are bilingual employees paid more for their language skills?
- (3) Is the current supply of bilingual employees meeting the needs of institutions in a border region?
- (4) Do institutions REQUIRE bilingual skills for the job, or rather are these skills PREFERRED but not necessary for employment?
- (5) What are the educational backgrounds in Spanish for bilingual employees, i.e. where did they learn Spanish and what level of formal education is necessary to perform their duties?

The answers to these questions will then lead to a discussion of economic factors that have an impact on the data.

Following Waldman's procedures, data elicitation was through telephone interviews, with the results then tabulated and analyzed. Of 180 institutions initially contacted, a total of 146 chose to respond, ranging in size from 1 to 975 employees. These include private sector firms such as large chain department and grocery stores, small mom and pop shops, hotels, auto parts distributors, banks and credit unions, agribusinesses, book stores and car dealers, among others. Federal, state, county, and city offices were called, representing activities such as health and social welfare, taxation, employment services, law enforcement, fire protection, property management, utilities and parks and recreation services, among others.

#### 4. FINDINGS.

4.1. RELIABILITY OF THE DATA. As with all reported data, there exists the distinct possibility of the respondents not providing accurate information. This is an unavoidable situation in carrying out this type of research. However, as Bills (1989:11) notes in discussing Census information, '... perceived inadequacies have led many language scholars to believe that the censuses have no value whatsoever. This belief is open to question. As pointed out by Fasold (1984:120) and numerous other sociolinguists, these language data, however limited, are very important'. We assert that the data presented here, on a parallel basis, are important as well, as they provide a window into an economic and linguistic environment that is important for understanding the dynamics that affect the Spanish language in the U.S. In order to control, to the degree possible, the validity of the responses, information on the position of the person who provided the information, specifically if s/he directly or indirectly supervised bilingual employees, was

elicited. Of the 146 respondents, 6 did not provide an answer. Of the remainder, 103 indicated that s/he directly supervised employees, with the remaining 37 reporting indirect or no employee supervision. That is, 73% of the interviewees are in direct contact with the bilingual employees. This proxy is used to indicate that, while there is every possibility of erroneous information, almost three quarters of the respondents are those in the best position to provide as accurate data as possible.

4.2. DOMESTIC/INTERNATIONAL CHARACTERISTICS. As noted above, the geographic region studied directly borders Mexico. Given this immediate proximity, the type of interaction with that nation is of interest. Respondents were asked if the activities of their institutions are national or international in nature. As shown in Table 1, 145 interviewees responded to this item. 128 indicated that their business was domestic in nature, with 17 reporting international activity. Thus, some 88% of the institutions in the sample employ bilinguals to serve a domestic market, with the remaining 12% using those skills for international trade and communication. These figures are similar to the national percentages for international versus domestic trade. Of the 146 institutions, 10 were not able to provide the number of bilingual employees; the rest reported an aggregate of 4,761 workers. Of this number, a total of 1,734 employees work for an organization engaged in international activities, or 36% of the workforce in the survey. This is noted as Waldman (1994:327-28) states ‘Findley et al. projected that the expansion of the Hispanic population would result in more Spanish-speaking consumers of goods and services. They also predicted that increased business development with Latin American countries would expand the need for bilingual oral and written communications in business involved with international trade’. The distribution noted above indicates that, in at least one border region, domestic needs for bilingual skills outweigh those needed for international purposes.

	NUMBER OF COMPANIES	NUMBER OF BILINGUAL EMPLOYEES IN THOSE COMPANIES
INTERNATIONAL	17 (11.64%)	1734 (36.42%)
DOMESTIC	128 (87.67%)	3023 (63.50%)
UNSURE	1 (0.68%)	4 (0.08%)
TOTAL	146	4761

TABLE 1. *Is the Majority of the Business in Your Firm International or Domestic in Nature?*

4.3. WAGE DIFFERENTIAL. Respondents were asked whether bilingual employees earned a higher wage than comparable monolingual employees in the institution. As shown in Table 2, of the 146, 6 did not know if a differential was paid for bilingual skills. Only 4% of all those contacted reported that they paid a premium for bilingual skills. The vast majority of institutions, over 91%, pay the same wage



to a monolingual employee as to a bilingual one. The aggregate number of employees in firms that pay a premium for Spanish in this study is 103. This results in only 2% of the total workforce of the institutions contacted receiving a wage increase for its bilingual skills. It would appear that for a few, small, specialized firms a need exists to pay a bonus in order to attract employees with bilingual skills; the majority of employers, especially medium and large firms, find no such need.

This contrasts with what Waldman finds; on a national level, there are institutions that pay a premium for bilingual skills. At the same time, she writes that an earlier study showed a higher percentage of companies paying a wage differential; she then notes, ‘This finding indicates that the practice of giving extra payment administrative support personnel [sic] for bilingual skill seems to be declining’ (1994:334). A comparison of a border region versus a national area indicates that, apparently, proximity to Mexico has an overall negative impact on the ability to earn a higher wage with bilingual skills. We return to this issue below.

	NUMBER OF COMPANIES	NUMBER OF BILINGUALS IN THOSE COMPANIES
NO	134 (91.78%)	4588 (96.37%)
YES	6 (4.11%)	103 (2.16%)
DON'T KNOW	6 (4.11%)	70 (1.47%)
TOTAL	146	4761

TABLE 2. *Is a Differential Paid for Bilingual Skills?*

4.4. AVAILABILITY OF BILINGUAL EMPLOYEES. Respondents were asked what degree of difficulty they encountered in finding bilingual employees. Ten institutions were not able to provide this information. Table 3 indicates that 90% of the remaining 136 respondents reported having no difficulty in hiring bilingual employees. 13 of 136 entities, or 10%, stated that finding bilingual employees is a challenge.

For two firms who had a difficult time finding bilingual employees, respondents indicated that the positions were high-stress ones, such as dispatcher and emergency medical technician. This may suggest that it is not so much bilingual skills but the combination of stress and language skills that contributed to the degree of difficulty. The aggregate number of employees in the institutions having difficulty finding bilinguals is 146; this represents 3% of the total number of employees in the data. This further underscores the special needs of these firms, which lends credence to the suggestion that there are skills other than bilingualism which make it difficult to find qualified employees. Finally, the 10% difficulty figure is a lower percentage than what Waldman finds on a nation-wide basis, of which the lowest percentage in her data is 16% (1994:330).

	NUMBER OF COMPANIES	NUMBER OF BILINGUAL EMPLOYEES IN THOSE COMPANIES
No	123 (91.78%)	4109 (86.31%)
Yes	13 (8.90%)	146 (3.07%)
DON'T KNOW	10 (6.85%)	506 (10.63%)
TOTAL	146	4761

TABLE 3. *Does Your Company Have Difficulty in Finding Bilingual Employees?*

4.5. BILINGUAL SKILLS REQUIRED OR PREFERRED. In responding to the survey item asking if having bilingual skills was a requisite for employment, three institutions did not respond. Table 4 demonstrates that of the remaining 143 organizations, 14 indicated that bilingual skills are a job requirement, while 129 responded that they did not use these skills as a hiring criterion. The 14 firms indicating a bilingual hiring requirement employ a total of 581 personnel, 12% of the total workforce represented in the data. Of the 129 institutions which indicated that bilingual skills are not required, 76 reported that bilingual skills are preferred, with 53 indicating no preference given for such skills.

The data show that 12% of the total workforce represented in the data could not have entered the position they have without being bilingual; this represents a definite employment advantage over monolinguals. This advantage, however, is not shared by the majority of the sample. 56% of the employees may have received some preference in hire but were still competing with monolinguals for the position. Bilinguals have an advantage in obtaining employment in firms that prefer bilingual skills; those organizations reporting no preference for bilinguals employed only 23% of the aggregate population in the study. So, having bilingual skills does create a distinct edge for obtaining employment in the geographic region studied.

	NUMBER OF COMPANIES	NUMBER OF BILINGUAL IN THOSE COMPANIES
REQUIRED	14 (9.66%)	581 (12.20%)
PREFERRED	76 (52.05%)	2670 (56.08%)
NEITHER	53 (36.30%)	1109 (23.29%)
NOT REQUIRED, DON'T KNOW IF PREFERENCE IS GIVEN	3 (2.05%)	401 (8.42%)
TOTAL	146	4761

TABLE 4. *Is Bilingualism Required or Preferred When Hiring Employees?*

4.6. LANGUAGE BACKGROUND OF BILINGUAL EMPLOYEES. As indicated in Table 5, 128 of the 146 respondents answered the inquiry regarding where the employees had learned Spanish. Of the 128 respondents who indicated that they knew where their employees acquired Spanish, 126, or 98% indicated that the employees use Spanish at home. This measure is used as a proxy for identifying these

employees as ‘native speakers’ of Spanish, basing this relationship on Bills’ (1989) and Bills’ et al. (1995) use, among others, of those who report speaking Spanish at home as a means for determining how Spanish was acquired. That is, there were extremely few employees in this study who grew up speaking only English and then learned Spanish, for example, in school.

	NUMBER OF COMPANIES	NUMBER OF BILINGUAL EMPLOYEES IN THOSE COMPANIES
SPOKEN IN HOME	73 (50.00%)	2639 (55.43%)
STUDIED IN SCHOOL	2 (1.37%)	2 (0.04%)
BOTH HOME AND SCHOOL	53 (36.30%)	1250 (26.25%)
DON'T KNOW	18 (12.33%)	870 (18.27%)
TOTAL	146	4761

TABLE 5. *How Have Employees Acquired Spanish?*

4.7. EDUCATIONAL LEVEL OF BILINGUAL EMPLOYEES. Of the employees in the data, 44% were reported to have had some formal training in the language. Table 6 indicates that the average educational level of the employees was reported to be rather high, resulting in an average having two years of college education. Thus, broadly speaking, the employees reported on in the survey have relatively strong Spanish language skills (being native speakers), almost half have some formal language training in Spanish, and are relatively well educated in general. This could serve to indicate that the community and the school system have in a certain sense cooperated in producing a work force capable of supporting an infrastructure that meets bilingual communicative needs for both domestic and international purposes.

	NUMBER OF COMPANIES*
LESS THAN HIGH SCHOOL	15
HIGH SCHOOL OR GED	70
1 YEAR BEYOND HS	35
2 YEARS BEYOND HS	52
4 YEAR DEGREE	67
MORE THAN BA/BS	26
DON'T KNOW	30

\*These numbers sum to more than 146 as many companies indicated that their employees typically fit into more than one educational level.

TABLE 6. *What Is the Educational Level of Your Bilingual Employees?*

To summarize, answering the specific research questions posed above, the research described here results in the following:

- (1) The economic activities requiring bilingual skills in this border region are of a principally domestic nature;
- (2) Bilingual employees are rarely paid a premium for their language skills;

- (3) The current supply of bilingual employees adequately meets the needs of institutions in this area;
- (4) Institutions tend to prefer bilingual skills for the job, with a reduced number, 12% of the total, requiring such skills for employment;
- (5) 98% of the respondents in this study who were aware of the origin of their employees' language skills indicate that their bilingual employees use Spanish at home, and appear to be relatively well educated.

5. DISCUSSION. In presenting certain economic constructs that are useful for understanding the relationship between ethnicity and language use, Grin introduces the rationality hypothesis, stating that

What this assumption comes down to is, quite simply, that actors will generally use their limited resources in the most efficient way to achieve their goals, whatever the latter might be—or, in plainer terms, that actors will make the most of what they have. This process is known as efficient resource allocation, where individuals maximize their well-being (or in economic jargon, 'utility') ... (1999:10).

As noted above, this is essentially what Edwards (1985) asserts in discussing the move from one language to another, and it is such a construct that has led to the criticism of using of this type of economic analysis for understanding language loss. There can be no doubt that a language is used for many other purposes than just earning one's daily bread; further, the majority of bilinguals quite probably do not sit down and ponder how many hours a day they plan to use one language or another in order to maximize their economic opportunities.

At the same time, certain factors can motivate individuals to behave in certain communicative patterns. For example, a bilingual employee who works with a monolingual client will be motivated to use the language of the client. While in school, she will be motivated to speak the language most commonly used in the educational system in order to have access to the opportunities a better education promises. In advancing her career, she will often use the dominant language of the institution she works for in order to obtain a higher paying position.

The data presented above reflect certain norms that influence the choices, be they conscious or not, that a bilingual employee makes in selecting which language to use. A Spanish/English bilingual employee in the Mesilla Valley may have an advantage in getting a job, often at the entry level, as there is a sufficiently large monolingual Spanish-speaking population in the area to warrant the valuing of bilingual skills, particularly in positions requiring customer interactions. At the same time, the number of bilingual employees competing for such jobs results in the fact that businesses or institutions generally do not need to pay a premium for specialized language skills. As there is relatively little international trade with Mexico, i.e. a large monolingual Spanish market, there is generally no salary increase for such advanced skills as the ability to use formal written Spanish for business or other communication.

Bilingual employees work side-by-side with monolingual colleagues, and cannot fail to be aware of the fact that the special skills they possess do not generally result in a higher wage or salary. Indeed, being bilingual may in fact be a hindrance in maximizing economic opportunities. Anecdotal evidence encountered by the authors drives this last observation; many of their students who have graduated with a double degree in Spanish and another area and obtained employment in the area often mention that they feel they have a greater workload due to their bilinguality than do their monolingual colleagues, yet receive no extra pay. Further, being bilingual may impact advancement opportunities. Language skills are difficult to acquire, as noted in the fact that the vast majority of the bilingual employees in the sample have acquired the language at home and in community, not through formal education. It is the entry-level jobs, those in direct contact with the monolingual Spanish-speaking population, that require bilingual skills. These positions are, of course, lower paid than managerial positions.

Indeed, there may exist a certain resistance to promote a bilingual employee to management, as that employee is most valuable to the institution in the contact job. At the same time, there is relatively little need for bilingual managers, who tend not to be in direct contact with the monolingual Spanish-speaking public. This would be expected, as bilingual employees are perfectly capable of interacting with monolingual English-speaking managers. We offer this assertion based on follow-up calls to the institutions that preferred bilingual employees; we verified that there was no preference for bilingual skills for entering the managerial tiers. As there is little need for bilingual skills at administrative levels, the employment edge created by bilingualism would appear to be nullified.

These last observations represent surmises, and not empirically based findings (with the exception of the follow-up calls). However, the data presented in this paper do point to the fact that, even in a border region whose principal population center is some 50 miles from an important Spanish-speaking metropolis, there appears to be little economic benefit afforded by bilingual skills in terms of increase in pay. Despite the Mesilla Valley's proximity to Mexico, Bills et al. (1995) note that Census data for the area studied here (Doña Ana County) indicate language shift from Spanish to English; the 1990 Census indicated that about 20% of the self-identified Hispanic population reported speaking no Spanish. With regard to this shift, data from the 2000 are even bleaker, indicating that some 24% of the Hispanic population does not speak Spanish (<http://www.census.gov>).

The authors assert that pressures brought about by the economic realities found in this study represent intervening processes, causative elements, in the shift from Spanish to English found in this region. That is, whether consciously or not, in the region studied bilingual individuals constantly engage in the choice of which language to use, and there can be little doubt that economic variables influence that choice. The overwhelming economic pressure is to speak English, and as individuals advance up the economic ladder, that pressure can only increase. Finally,

there can be no doubt that this study represents but an exploratory foray into the extremely complex interrelationships between economic activity and language choice; however, it does offer evidence that research of this type will be useful in better understanding such dynamics.

6. CONCLUSION. The above discussion may represent to some a rather gloomy prognosis for the possibilities of maintaining heritage varieties of Spanish in U.S. border regions. As noted above, language shift in this border region is occurring and has increased over a ten-year period. However, if it is indeed the case that economic factors are intervening processes in the shift from Spanish to English, then it may be the case that important shifts in the economic presence of Hispanics in the Southwest in particular and in the U.S. in general will have an impact on the loss of Spanish. Humphreys (2004) notes that Hispanics in general are rapidly increasing their economic presence in this nation. He writes,

The immense buying power of the nation's Hispanic consumers is reshaping the retail and commercial landscape of the United States, and Selig Center projections reveal that Hispanics will control about \$686 billion in spending power in 2004' (2004:6) He continues, 'In sheer dollar power, Hispanics' economic clout will rise from \$222 billion in 1990, to \$504 billion in 2000, to \$686 billion in 2004, and to \$992 billion in 2009. The 2009 value will exceed the 1990 value by 347.1 percent ... (2004:6).

The motivation for including this extensive citation is to underscore the fact that economic presence of Hispanics in general, and of U.S. Spanish speakers in particular, currently experiences rapid and highly dynamic growth. This may lead to what Carreira (2002), citing Strubell (2001), identifies as the Catherine Wheel Model. She writes,

The Catherine Wheel model proposed by Strubell (1998, 2001) lays out a circular, self-priming mechanism of language maintenance. According to this model, positive linguistic perceptions result in greater interest and motivation to learn and use a language. This, in turn, leads to more demand for goods and services in that language. As the supply and consumption of goods and services in that language increase, so does the perception of its usefulness. This leads back to a greater interest and motivation to learn and use that language.

Again, if economic factors have some impact on language loss and maintenance, then a Catherine Wheel model would predict there exist, and will remain present, conditions favorable to language maintenance, currently and for the rest of this decade. Research carried out by Mora et al. (2003) indicates that Spanish speaking migrants to the U.S. are far more likely to pass Spanish on to their children than other non-English speaking migrant groups. Work done by Villa (2001) predicts the continued arrival to the U.S. of Spanish speakers throughout the rest of

this century, due to economic factors. These studies indicate a growing demographic presence of Spanish speakers throughout the nation and that changes in the social conditions favorable to the maintenance of Spanish may be under way. In sum, does Spanish continue to be lost in the border regions? Undoubtedly. Is it reasonable to assert that changes in patterns of language loss may be occurring? Further research into this phenomenon, which includes monitoring economic dynamics, will provide insights into that question.

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