

# Contexts for bilingualism among US-born Latinos

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## Abstract

This paper focuses on the contextual determinants of bilingualism among Latino adults who were born in the US or are members of the '1.5 generation' of Latinos who immigrated to the US when they were 10 or younger. We model the broader contexts reflecting contemporary developments that influence *change* in both the real and the perceived value of bilingualism. Using US census data for metropolitan areas in 1990 and 2000, we find that the replenishment of an immigrant population is a strong predictor of higher bilingualism among US-born Latinos. We draw on ethnographic data on later-generation Mexican Americans as well as field-work in dual-language immersion schools to explain our findings. The variables measuring the size and growth of the foreign-born Latino population in the MSA/PMSAs in our models capture the factors that encourage bilingualism that we identify in our ethnographic research: institutional contact with Spanish, labour-market rewards, cosmopolitanism.

**Keywords:** Bilingualism; Spanish; language; Latinos; Hispanics; assimilation.

## Contexts for bilingualism among US-born Latinos

Historically, immigrants in the United States have been discouraged from using their native tongue and passing it on to their children. Immigration for most groups took place during a compressed period, and opportunities to speak the mother tongue of the immigrant generation dwindled after immigration ceased (Alba 1988; Massey 1995). The dominance of English in government, industry, education and popular culture has made language 'the single most important element in construction of national identity, both positively as a communicative instrument shared by members of the nation and as a boundary marker affirming their distinction from others' (Zolberg and Long 1999, p. 22). It is thus not surprising that the vast majority

of sociological research on language in the United States focuses on English acquisition and use rather than other-language maintenance. The prevailing assumption is that bilingualism is a transitional state on the way to English monolingualism – maybe not for new immigrants, but definitely across generations.

Though the majority of third-generation Latinos are English monolinguals, Spanish has far greater generational longevity than other non-English languages in the United States (Rumbaut 2002; Alba 2004; Linton 2004a; Rumbaut, Massey and Bean 2006). Spanish speakers comprise over half of those who speak a language other than English at home. A continuous flow of Latin American immigrants makes it more practical for US Hispanics<sup>1</sup> to retain Spanish now than it was in the past, providing greater opportunities and incentives for bilingualism. A change in dominant ideology from a near-exclusive emphasis on Americanization to a rise in multiculturalism has elevated the status of Spanish relative to a previous time. Furthermore, globalizing economies and the emergence of communities that span national borders have altered the costs and benefits of English monolingualism and bilingualism (Levitt 2001; Smith 2005).

This paper models how contextual factors shape the level of bilingualism in a metropolitan area, focusing on bilingualism among Latino adults who were born in the US or are members of the ‘1.5 generation’ – immigrants who were 10 or younger when they arrived. We ask: under what contextual circumstances does bilingualism thrive among US-born and 1.5-generation Hispanics? This research adds to micro-level explanations based on individual- and household-level circumstances (Alba *et al.* 2002; Bean and Stevens 2003) of bilingualism by putting forth a macro-level model of the contexts within which individuals and families make choices about language. We are interested in broader contexts that could influence the ease of Spanish maintenance as well as its cultural and/or economic utility because these contexts reflect contemporary developments that could influence *change* in both the real and perceived value of bilingualism.

We employ 1990 and 2000 US Census data to model how the dynamics of demographic, socio-cultural and economic change affect the level of bilingualism among US-born and 1.5-generation Latinos living in metropolitan areas. We also draw on in-depth interviews with later-generation Mexican Americans and interviews with parents and teachers affiliated with Spanish/English dual-immersion schools in Chicago, Los Angeles and five other Southern California school districts. We harness survey data and interviews in order to provide a complete analysis, one that specifies relationships between contextual factors and levels of bilingualism and that posits mechanisms that explain these relationships.

### Bilingualism as a possible *endpoint* of linguistic assimilation

Bilingualism may not just be a transition stage prior to English monolingualism. It has the potential to be an endpoint of language change. Stevens (1985) suggests that bilingualism could be a stable outcome of linguistic assimilation among groups characterized by high rates of ethnic endogamy and non-English linguistic homogamy. One of her later studies establishes the importance of the demographic context in determining whether US-born adults with a non-English mother tongue continue to use that language alongside English (Stevens 1992).

The case for why bilingualism may become an endpoint of language shift becomes clear in recent research that measures the advantages of bilingualism for integration into American society. Portes and Rumbaut (2001) observed a high rate of shift away from the non-English mother tongue among children of immigrants in San Diego and Miami, but found that the fluently bilingual teenagers in their sample did better in school, had higher aspirations for the future, enjoyed better mental health, and family relations and were more likely to have friends from abroad. Second-generation Latino youths were more likely to belong to this group than youths from other backgrounds, especially if their parents used Spanish at home and they have co-ethnic friends (Portes and Rumbaut 2001, p. 141). Rumbaut's analysis of data from the third wave of the same survey, in which the respondents had reached adulthood, showed that Latinos' ability to speak and read Spanish 'did not atrophy but rather improved appreciably from their teen to their twenties' (2002, p. 67). About 25 per cent reported fluent bilingualism, and over 75 per cent of the respondents expressed the wish to raise their own children in Spanish and English.

Alba *et al.* (2003, p. 480) also find evidence for some 'staying power' for Spanish, especially in supportive familial and community contexts. They find that the rate of intergenerational language shift is lower for Spanish-speakers, compared to other immigrant groups or to Spanish-speakers in times past.

Recent research shows that later-generation Mexican Americans, who by virtue of their later-generation status would seem most likely to see their Spanish-language skills enter a twilight, are maintaining Spanish alongside English (Alba 2004). Jiménez's (2005) ethnographic research shows that the replenishment of a Mexican-immigrant population creates a linguistic context that maintains and in some cases resuscitates bilingualism among later-generation Mexican Americans. The large size of the Mexican immigrant population allows for frequent interpersonal interactions between Mexican Americans and their immigrant co-ethnics, facilitating the use of Spanish in Mexican

Americans' daily life, and marriages and romantic partnerships between Mexican Americans and immigrants bring the Spanish language close to home for Mexican Americans. The proliferation of Spanish-language media and the demand for bilingual employees further supports the use of Spanish alongside English. The opportunities for Spanish-language use for these later-generation Mexican Americans operate within a larger multicultural ideological context that, relative to an earlier era when Americanization dominated, tolerates and even supports bilingualism.

This multicultural context is also evident in Linton's (2004b) research on dual-language school programmes in which native English- and Spanish-speaking children are educated together, bilinearly. Her qualitative case studies show that parents and education professionals choose the dual-language option not only because they believe it will improve students' academic performance and future college and employment options, but also because they highly value multiculturalism and want children to grow up knowing how to get along with people who are different from themselves. For parents this value holds regardless of race, ethnicity and Spanish or English ability.

### **Theorizing language choice**

Sociologists have historically treated language shift as a central component of immigrant acculturation, Gordon's (1964) first sub-process of assimilation. The canonical theory of language shift is based on European-origin groups that came to US shores around the turn of the last century. It asserts that the first generation speaks primarily, if not exclusively, in a non-English mother tongue. The second generation maintains the use of their parents' native language, but adds to it English fluency. The third generation, born in the United States to US-born parents, speaks only English (Gordon 1964; Fishman 1965, 1972).

New theories of assimilation point to more nuanced patterns of acculturation, particularly between the first and second generations. In their research on the new second generation in the United States, Portes and Rumbaut (1996, 2001) develop three typologies of immigrant acculturation that in turn help determine the trajectory of assimilation. The first, consonant acculturation, involves both parents and children learning English and seeking to integrate into the American mainstream. With time, English becomes the dominant household language. The second generation adopts mainstream American customs, speaks mostly or only English, and is upwardly mobile. A second typology, dissonant acculturation, involves poorer, less-educated parents' near-exclusive use of their non-English mother tongue while their second-generation children make the transition to

English dominance and assimilate not into the mainstream, but to inner-city subcultures. In contrast to consonant acculturation, dissonant acculturation leads to poor educational and labour-market outcomes for the children of immigrants. But the linguistic outcome is the same in both cases: English monolingualism.

A third course is *selective acculturation*. In this process, ethnic networks and strong communities support children as they learn to deal with prejudice, navigate the education system and find a place in the labour market. The outcome is upward assimilation combined with bilingualism and biculturalism: 'While such a path may appear inimical to successful adaptation in the eyes of conventional assimilationists, in fact it can lead to better psychosocial and achievement outcomes because it preserves bonds across immigrant generations and gives children a clear reference point to guide their future lives' (Rumbaut and Portes 2001, p. 309). Selective acculturation offers a scenario in which maintaining a language other than English makes sense for Americans. In terms of contextual factors' influence on Spanish maintenance in the United States, one would expect that – to the extent that bilingualism among native-born Hispanics is a result of selective acculturation – there will be proportionally more bilinguals in places where Latino populations are concentrated and where Latinos have a visible, positive economic and social presence.

Other theories offer predictions about when and where the linguistic aspect of selective acculturation, bilingualism, will be maintained. Neoclassical economic (e.g. Pool 1991), human capital (e.g. Chiswick 1991; Chiswick and Miller 2002) and functionalist (Gellner 1983) theories posit that bilingualism will be practical or desirable only to the extent that it represents a significant labour-market advantage. In the first cases, the advantage is to individuals in society. In the last case it is to a particular society within a world of societies.<sup>2</sup>

Language choice also depends on the durability of language options. The theoretical canon of language shift (Gordon 1964; Fishman 1965) was built on the study of European-origin immigrant groups that came to the United States before and after the turn of the last century. As Waters and Jiménez (2005) point out, this wave of immigration took place during a temporally compressed period (roughly 1880–1920), and each new generation born in the US after the immigrant generation had less contact with a sizeable co-ethnic immigrant population (also see Massey 1995) and thus diminished opportunities to speak the mother-tongue of their immigrant ancestors (Alba 1988). Waters and Jiménez also point out that the forces that initiate and perpetuate migration appear to be well entrenched, making the continual replenishment of immigrants from particular countries, like Mexico, a feature of American immigration into the foreseeable future. Immigrant replenishment already has (Alba 2004) and will

likely continue to increase the durability of non-English language options (most especially Spanish), and therefore bilingualism, by making opportunities to speak Spanish even more pervasive.

### **Modelling contexts for bilingualism**

Drawing on the above discussion of theory and previous studies of language use and assimilation, we test the following hypotheses:

*H1:* There will be more Spanish-English bilingualism among US-born/1.5-generation Latinos in metro areas where there is a relatively large and geographically concentrated Latino population.

*H2:* The proportion of US-born/1.5-generation Latinos who maintain Spanish alongside English will be higher in metro areas where bilingualism is rewarded in the labour market.

*H3:* The proportion of US-born/1.5-generation Latinos who maintain Spanish alongside English will be higher in metro areas where there is a strong Spanish-language media presence.<sup>3</sup>

*H4:* Influxes of Spanish-speaking immigrants will positively influence the metro-area proportion of US-born/1.5-generation Latinos who maintain Spanish alongside English.

We also explore several other factors that may be related to the level of bilingualism among a metro area's US-born and 1.5-generation Latinos: the relative size of an area's foreign-born Latino population, whether or not Latino settlement is a new phenomenon in a metro area and a metro area's location within three states that have long and diverse histories of Latino immigration.

### **Data, variables and measures**

Our units of analysis are metropolitan statistical areas [MSAs] or primary metropolitan statistical areas [PMSAs] and the native-born and 1.5-generation Hispanic adults (age 18–75) who live in them. Our analysis is limited to MSA/PMSAs that were at least 5 per cent Hispanic in 2000 and are represented in the 2000 Census 5-per cent Public Use Microdata Sample [PUMS]. Data about general characteristics of the Hispanic population come from the 1990 and 2000 censuses. Data about bilingualism or English monolingualism and some contextual variables come from the 1990 and 2000 PUMS (Ruggles et al. 1997). We gathered data on municipal

government bilingual pay by phoning municipalities' human resource specialists and asking whether or not their city provides additional pay to bilingual employees. Data about the presence or absence of Spanish-language network television come from the *Television and Cable Factbook* (Warren 1991, 2001). Table 1 provides additional details about the variables; Appendix A shows Pearson correlations.

### *Dependent variable*

The dependent variable is the 2000 proportion of native-born or 1.5-generation Hispanics, fluent in English, who retain Spanish. The Census asks respondents which language they speak at home, and how well they speak English. Here, Spanish-English bilinguals are those who report that they speak Spanish at home *and* speak English 'very well'. This measure by no means encompasses all bilinguals, and it does not provide information about a respondent's competency or literacy in Spanish. However, it is the best indicator available at the

**Table 1.** *Descriptive statistics for US metro areas*

	N	Minimum	Maximum	Mean	SD
US-born/1.5-gen. proportion bilingual 2000	119	0.17	0.94	0.59	0.16
US-born/1.5-gen. proportion bilingual 1990	117	0.17	0.91	0.61	0.16
proportion of Latinos foreign born, 2000	119	0.05	0.71	0.35	0.15
proportion of Latinos foreign born, 1990	117	0.03	0.73	0.28	0.14
1990–2000 change in proportion foreign-born	117	–0.08	0.41	0.08	0.09
Latino isolation index 2000	119	0.02	0.95	0.39	0.21
Latino isolation index 1990	119	0.02	0.95	0.30	0.21
1990–2000 change in isolation index	119	–0.44	0.22	0.08	0.07
proportion Latino 2000	119	0.05	0.94	0.20	0.19
proportion Latino 1990	116	0.01	0.94	0.16	0.18
new Latino destination	119	0.00	1.00	0.24	–
municipal gov't. pays a bilingual premium	119	0.00	1.00	0.41	–
network TV in Spanish, 2000	119	0.00	1.00	0.42	–
California	119	0.00	1.00	0.18	–
Florida	119	0.00	1.00	0.12	–
Texas	119	0.00	1.00	0.18	–

Sources: 1990 and 2000 Census and 5% PUMS; Television and Cable Factbook; municipal governments; Suro and Singer (2002)

macro-level, and well worth using (Bills 1989; Hart-Gonzalez and Feingold 1990; Solé 1990). Speaking Spanish at home reflects a preference for using the language, and – where applicable – a desire for one’s children to know and use it.

### *Independent variables*

We control for the proportion of a metro-area’s Hispanic population that belong to the 1.5 generation since these individuals are most likely to have been raised in a Spanish-speaking home. We also control for the proportion of a metro area’s Hispanics who are foreign-born. Foreign-born Hispanics – even those who speak English well – are likely to use Spanish in their daily lives. Thus, immigrants expand the community within which it is useful or desirable, and sometimes necessary, to speak Spanish. As Stevens (1992) points out, in such places Hispanics are more likely to marry other Hispanics, possibly increasing the prevalence of bilingual households (also see Qian and Lichter 2007).

Perhaps the most obvious factor to influence Spanish retention across generations is the presence of other speakers in one’s area of residence (Stevens 1992; Schrauf 1999). Lacking a community of speakers – or at least of people for whom the Spanish language constitutes a part of a shared cultural heritage – it is improbable that many people who are fluent in English will actively maintain Spanish. To represent potential communities of speakers we employ a distance-decay isolation index (Morgan 1983): the probability that the next person a Hispanic individual encounters will also be Hispanic. The Hispanic isolation index is very highly correlated with a metro area’s proportion Hispanic ( $r = .868$ ), but in addition reflects the degree to which it is likely that Latinos interact with each other on a regular basis.

As Suro and Singer (2002) show, some metro areas in our study, such as Albuquerque, Chicago, Los Angeles, Miami and New York City, are ‘established Latino metros’ – places where Latinos have resided for quite some time and that still experience, in numeric terms, the largest increases in the Latino population. Others are ‘new Latino destinations’, where the growth rate of the Latino population is highest although the 1980 base population was quite low, such as Atlanta, Charlotte, Fort Lauderdale, Milwaukee and New Haven (2002, pp. 2–5, 15–16). We mark ‘new Latino destinations’ in order to explore ways in which this emergent demographic trend might influence Latino’s language choices.

Bilingualism is often a benefit to workers in neighbourhoods, regions or occupational areas where more than one language is regularly spoken. The existence of this economic benefit and the

good jobs and high incomes that accrue to it should positively influence the prevalence of bilingualism. To test our second hypothesis, we include a marker indicating that municipal governments within a MSA/PMSA pay a premium to bilingual workers.<sup>4</sup> Ideally we would have a way to measure the presence of a monetary reward for bilingualism in private-sector employment, but it is virtually impossible to survey all employers in each city within the MSAs/PMSAs we study. We thus treat the pay provided to bilingual workers in municipal government jobs as a proxy for a premium on bilingualism in a given municipality.

Our third hypothesis posits that the presence of Spanish language media will encourage Spanish maintenance among Latino Americans. Spanish-language radio and television offer US-born and 1.5-generation Latinos access to Spanish and a way to reinforce their skills in the language even when they are not in direct contact with immigrants. To test this hypothesis we include the availability of Spanish-language network television in our models.<sup>5</sup>

In our final models we mark MSAs/PMSAs in states where historical and/or political factors that we cannot directly measure might influence the level of bilingualism there. California and Texas were once part of Mexico and a long history of immigration means that a substantial number of Latinos in these states have histories that go back many generations. This could mean less bilingualism among the US-born because proportionally more of them will come from families that have been in the US for several generations. After the First World War and before civil rights legislation established some linguistic rights for non-English speakers, American schools discouraged or even forbade speaking anything but English. Civil rights legislation did not remove the stigma attached to speaking Spanish and high schools did not commonly offer it as a foreign language option until the 1980s. Yet Texas shares a large border with Mexico and border cities are largely populated by Latino Americans who feel equally at home on both sides.

Florida is unique because its primary Latino population is Cuban. Some Cubans migrated to avoid the Spanish regime, but those who disagreed with Castro (and expected to return to Cuba soon after leaving) and their descendants are still the dominant Latino group in Florida, where Cuban Americans' prosperity was never linked to Spanish language loss. Because the US government immediately recognized Cuban asylees as allies in opposition to Castro's regime, Cubans did not have to demonstrate their commitment to America by giving up Spanish (Crawford 1992). Later influxes of new Spanish-speaking immigrants (including the Mariel boatlift of 1980) probably promoted Spanish maintenance.

Finally, we test our fourth hypothesis, that immigrant replenishment – influxes of new immigrants from Latin America – will encourage bilingualism among US-born and 1.5-generation Latinos, by modeling changes in immigration and in levels of bilingualism between 1990 and 2000.

### **Analysis and findings**

We report the OLS results of cross-sectional models using 2000 data (Table 2) as well as lagged models (Table 3) that incorporate 1990–2000 change.<sup>6</sup> Coefficients represent the effect of a one-unit change in the independent variable on the proportion of bilingual US-born and 1.5-generation Latinos in a metro area. As expected, the models in Table 2 show a robust, positive relationship between the proportion 1.5-generation Latinos in the dependent variable and the level of bilingualism we observe. Hispanic residential clustering (the isolation index) is also strongly associated with bilingualism. With spatial proximity accounted for, the proportion of Hispanics who are foreign-born exerts no significant effect on bilingualism among the US-born or 1.5 generation in these cross-sectional models. This is not surprising given that the isolation index does not differentiate between foreign- and US-born individuals, and a substantial proportion of individuals captured by the isolation index are likely to be foreign-born.

Model 2 indicates that the US-born and 1.5-generation Latinos in ‘new destinations’ are more likely to be bilingual than elsewhere. This is probably because there are very few later-generation Latinos in these places (Lichter and Johnson 2006); the 1.5 and second generations are more likely to be bilingual than third- or higher-generation individuals.

Models 3 and 4 show a negative relationship between bilingual pay premiums and the relative presence of bilinguals. We suspect that this finding can be explained by the fact that cities offer extra pay when the skill is in demand but in short supply. To explore this idea further, in Appendix D we report the logistic regression results of an analysis of pay premiums for bilingualism. The variables most importantly related to pay premiums by municipal governments are the Latino isolation index and location in California, where twenty-one of the twenty-two MSA/PMSAs pay bilingual premiums. We think this has to do with the sheer number of foreign-born Latinos in California – almost 5 million in 2000. The state with the second-highest number of foreign-born Latinos is Florida, with fewer than 1.5 million. In California, 53 per cent of 1.5-generation and US-born Latino adults reported bilingualism on the 2000 Census, compared to 72 per cent in Florida. In the California context, fluent Spanish-English bilingualism is in relatively short supply, as the public-sector labour market reflects. In other places, the presence of financial incentives for bilingualism may

**Table 2.** *Coefficients for regression of the proportion bilingual among US-born and 1.5-generation Latino adults in US MSAs/PMSAs, 2000 (N = 118)*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Proportion 1.5-generation	0.898*** (.152)	1.020*** (0.053)	0.931*** (0.154)	0.931*** (0.155)	0.981*** (0.131)	0.946*** (0.123)
Proportion Latinos foreign-born	-0.048 (.071)	-0.106 (0.072)	-0.075 (0.071)	-0.076 (0.072)	-0.037 (0.058)	
Latino isolation index (residential clustering)	0.497*** (.050)	0.558*** (0.052)	0.584*** (0.052)	0.583*** (0.060)	0.506*** (0.051)	0.532*** (0.042)
New Latino destination		0.076** -0.026	0.067** -0.025	0.067** (0.026)	0.066** (0.022)	0.061** (0.021)
Municipal gov't pays a bilingual premium			-0.051* (0.021)	-0.051* (0.022)	-0.007 (0.009)	
Network TV in Spanish				0.001 (0.025)	0.026 (0.021)	
California					-0.084** (0.027)	-0.081*** (0.023)
Florida					0.106*** (0.026)	0.111*** (0.025)
Texas					0.110*** -0.025	0.107*** (0.024)
Constant	0.309*** (0.034)	0.273*** (0.035)	0.285*** (0.035)	0.286*** (0.036)	0.251*** (0.029)	0.241*** (0.026)
Adjusted R2	0.505	0.537	0.556	0.552	0.718	0.720
F	41.132***	35.171***	30.501***	25.193***	34.326***	51.690***

\*p &lt; 0.05.

\*\*p &lt; 0.01.

\*\*\*p &lt; 0.001.

Standard errors are shown in parentheses.

**Table 3.** Lagged models: coefficients for regression of the 2000 proportion bilingual among US-born and 1.5-generation Latino adults in US MSAs/PMSAs on 1990 and 1990–2000 change variables ( $N=116$ )

	Model 1	Model 2	Model 3	Model 4	Model 5
Proportion bilingual, 1990	0.867*** (0.043)	0.873*** (0.043)	0.869*** (0.042)	0.809*** (0.051)	0.831*** (0.044)
Proportion Latinos foreign-born, 1990	0.098** (0.036)	0.131** (0.042)	0.121** (0.041)	0.114* (0.044)	0.086* (0.036)
Latino isolation index, 1990	0.052 † (0.030)	0.060 † (0.031)	0.085** (0.032)	0.113** (0.0360)	0.117*** (0.033)
1990–2000 change in proportion foreign born		0.141* (0.066)	0.126 † (0.064)	0.150* (0.165)	0.132* (0.061)
1990–2000 change in Latino isolation		–0.071 (0.086)	–0.071 (0.084)	–0.067 (0.084)	
New Latino destination			0.031* (0.012)	0.031* (0.013)	0.029* (0.012)
California				–0.001 (0.016)	
Florida				0.044* (0.017)	0.042* (0.017)
Texas				0.017 –0.015	
Constant	0.015 (0.023)	–0.005 (0.026)	–0.014 (0.025)	0.005 (0.028)	–0.002 (0.025)
Adjusted R2	0.877	0.880	0.886	0.890	0.891
F	277.677***	171.464***	150.611***	105.294***	159.282***

† $p < .10$ .\* $p < 0.05$ .\*\* $p < 0.01$ .\*\*\* $p < 0.001$ .

Standard errors are shown in parentheses.

simply be too new a phenomenon to create a significant response among employers or workers.

We do not observe a significant relationship between the presence of one or more Spanish-language network television stations in a metro area and the level of bilingualism among US-born or 1.5-generation Latinos there. In part this is because the availability of network TV in Spanish and the Latino isolation index are correlated ( $r = 0.58$ ). Also, our measure of access to Spanish-language media is not as comprehensive as we would like.

Models 5 and 6 include markers for MSA/PMSAs within California, Florida and Texas. We find relatively less bilingualism among US-born and 1.5-generation Latinos in California and more bilingualism in Florida and Texas. Besides the reasons discussed in the previous section, high Latino political representation may be part of the explanation for the higher level of bilingualism in Texas. In 2000, there were 1,885 Latino elected officials in Texas – almost one for every 10,000 people – while in California there were 785 Latino elected officials, 0.2 for every 10,000 people (NALEO 2000).<sup>7</sup> This is relevant because, to the extent that they can, Hispanic voters glean information and discuss their concerns in two languages, and Hispanic politicians court voters in two languages.

Table 3 explores the ‘replenishment’ hypothesis that more US-born Latinos will be bilingual in places where there has been a relatively continuous and long-standing influx of Spanish-speaking immigrants. Here we look at relationships between metro-area characteristics in 1990 and bilingualism in 2000. We examine the degree to which bilingualism in 2000 can be predicted by its level in 1990, by 1990 measures of the variables that were significant in the final model of Table 2 and 1990–2000 change. Of course, the 1990 level of bilingualism in an MSA/PMSA is a robust predictor of bilingualism in 2000. More interestingly, the 1990 proportion of foreign-born Hispanics and *change* in that proportion are positively related to bilingualism among the US-born and 1.5 generation in 2000. This finding supports the ‘replenishment’ hypothesis and invites further exploration of how immigration trends relate to the language choices of Latinos who are not immigrants themselves. The California and Texas markers are not significant when we control for demographic dynamics, but a positive relationship remains between residence in Florida and Spanish maintenance. Characteristics of the Miami-Dade County area, such as its predominantly Cuban-origin Hispanic population, are undoubtedly driving this result. In addition, Spanish is a powerful language in the Miami business community (Anderson 1998). These factors ‘have made it possible to abandon the majority description of Spanish as a *static characteristic* of a minority with a *problem*. Instead, the language minority has been able to engage the

majority in viewing Spanish as a *negotiable* factor in a *relationship* that could be a *resource* for all' (García 1995: 154–5, italics in original).

### **Contexts for bilingualism: views from the ground floor**

We now turn our attention to a 'ground-floor' view of the contextual determinants of bilingualism using ethnographic research among later-generation Mexican Americans in Kansas and California and ongoing research in dual-language immersion schools in southern California and Chicago. We use this ethnographic research to propose mechanisms that explain our quantitative findings.

Our first source of ethnographic data is 123 in-depth interviews with later-generation Mexican Americans and observation in Garden City, Kansas, and Santa Maria, California, in 2001 and 2002. All respondents' ancestors have been in the US since 1940 or earlier, are of Mexican descent on both their mother's and father's sides of the family and lived in their respective city for most of their lives. Both cities have a long history of Mexican immigration and a substantial number of residents who trace their immigrant roots in the United States to the early part of the twentieth century. Both cities have also seen a substantial increase in the number of Mexican immigrants between 1990 and 2000. In Finney County, where Garden City is the seat, the number of Mexican immigrants grew from 2,104, or 6.4 per cent of the total population in 1990, to 7,349, or 22.2 per cent of the population, in 2000. Santa Barbara County, where Santa Maria is located, experienced similarly dramatic growth. Mexican immigrants accounted for 34,157, or 9.2 per cent of all residents in 1990, but by 2000 the county's foreign-born Mexican population grew to 55,785, or 14 per cent of the total population. Garden City and Santa Maria are small cities whose size allows for frequent contact between Mexican immigrants and later-generation Mexican Americans.

It is important to note that these interviews were conducted with later-generation Mexican Americans who are most likely to be English monolinguals (Fishman 1965; Rumbaut, Massey and Bean 2006; Telles and Ortiz 2008). There are no 1.5-generation individuals in the sample, and the few second-generation individuals in the sample tend to be much older than the rest of the sample. It is, however, reasonable to expect that the processes influencing bilingualism among later-generation Mexican Americans are equally, if not more strongly, at work among 1.5- and second-generation individuals.

Our second source of ethnographic data is interviews with administrators, educators and parents involved with Spanish/English dual-language education (also called two-way immersion, dual-immersion and two-way bilingual immersion). The original purpose of this

research was to learn why – given an anti-bilingual education political climate, increased standardized testing under No Child Left Behind and other challenges – dual-language education is a growing phenomenon. In other words, what (or who) is behind the dual-language movement?

Results from our analysis of census data represent an accumulation of the micro-processes. Our ethnographic data thus elucidate the micro-processes that are ultimately reflected in the proportion of US-born and 1.5-generation Latinos in a metropolitan area that is bilingual. We begin by explaining why the relative size of the foreign-born Hispanic population in 1990 and the 1990–2000 change in size increase the level of bilingualism among 1.5-generation and US-born Latinos ten years later. Recall that the lagged regression models in Table 3 indicate that immigrant replenishment – the continual influx of immigrants from the same country – exerts a positive effect on the level of bilingualism in metro areas. Our ethnographic data suggest that the increase in the foreign-born Latino population fuels opportunities for 1.5-generation and native-born Latinos to speak Spanish.

Findings from Garden City and Santa Maria show that the presence of a large immigrant population facilitates Spanish-language use even among those whose ancestors came to the United States three and four generations ago. Opportunities to speak Spanish come from interactions in public spaces, in the workplace, and through both romantic and platonic relationships. A 56-year-old retired salesman in Garden City, who is married to a foreign-born Mexican woman, explained:

[My wife's] dominant language is Spanish, so that's where I'm learning all of mine from. And her parents are from there too, so I speak to them in Spanish. I've gotten much better at it than I used to be. I'm just not totally fluent yet, but I'm getting there.

Interactions between Mexican Americans and their immigrant and second-generation friends often turn into *de facto* Spanish lessons where Mexican Americans receive informal tutoring from their bilingual peers.<sup>8</sup> The comments of a 16-year-old high school student in Santa Maria illustrate:

This girl in my algebra class, she was speaking it to me and I was like, "I don't understand Spanish." She's just like, "You don't?!" So now every time I see her and we talk, she talks to me in Spanish because she wants to help me learn. And she'll tell me what stuff means. And if I ask her a question about my Spanish homework she'll help me.

Interviews from Garden City and Santa Maria suggest that the opportunities for Spanish-language use depend not just on the size and growth of the immigrant population, but also on the frequency of contact that the native-born has with immigrants. Recall from our first regression model (Table 2, Model 1) that the proportion of foreign-born Latinos in a metro area exerts no statistically significant effect on the level of bilingualism when we control for Latino residential clustering, which has a strong, positive and statistically significant effect on the proportion of bilinguals in a metro area. Mexican Americans in Garden City and Santa Maria have frequent contact with immigrants partly because of the small size of each city. The frequency of contact between native-born Latinos and immigrants is probably more variable in large metro areas, where native-born Latinos may or may not live near Spanish-speaking immigrants. Interviews with Mexican Americans in these two small cities are thus likely to resemble the nature of contact between native-born and foreign-born Latinos in areas of high Latino concentration (Duarte 2008; Telles and Ortiz 2008).

Immigration also provides exposure to Spanish by infusing the use of the language into institutions that are part of daily life. Churches, restaurants, retail stores and the media serve as sites of Spanish immersion for later-generation Mexican Americans. For example, a 59-year-old retired teacher in Santa Maria said that he enjoys the Spanish-language masses because it allows him to maintain greater contact with the Spanish language, and hence his ethnicity:

I like to go to the Spanish Mass even though I don't understand it as well as I do if I went to an English service. So it's one of my few connections to Spanish . . . I guess I want to hang on to the fact that I am Mexican and that's one way to do it. I want to keep the language, even though I'm not anywhere [near] fluent. That helps to maintain some of the Spanish. I guess that's the reason, just hang on to the little Spanish that I do have, the little Mexican that I do have.

Others mentioned their use of Spanish language media as part of a larger context in which they are able to maintain use of both Spanish and English. In both cities, Spanish-language television and radio fill the airwaves, allowing later-generation Mexican Americans to access Spanish even when they are not in direct contact with immigrants. Although we did not find that the presence of bilingual media exerts an independent effect on the level of bilingualism, the presence of media is certainly part of the larger context that works in conjunction with direct contact with immigrants to facilitate bilingualism.

Likewise, dual-language programmes allow for regular access to both languages for Latino and non-Latino students alike. Spanish- and English-speaking pupils learn together, instructed by one or more teachers, from the time they begin school through at least the fifth grade. Programme objectives include high academic achievement, bilingual proficiency, bi-literacy and multicultural understanding (Christian 1994). Dual-language programmes are an example of schools institutionalizing the idea that newcomers to the United States are 'remaking the mainstream' (Alba and Nee 2003) and that immigrant acculturation is a two-way process that involves members of the receiving and sending societies.

Our qualitative research points to important factors shaping the desirability of bilingualism that the census data do not directly measure. Though the proliferation of Spanish instils fear about disunity in American society among some (Huntington 2004; Buchanan 2006), there is growing acceptance of bilingualism not just as a valuable aspect of human capital, but as part of a larger cosmopolitan identity. Interviews with educational professionals at dual-language schools reflect new, more cosmopolitan attitudes towards bilingualism. The initial impetus to begin a dual-language programme may come from parents or from education professionals in a school or district. Why do they make the effort? The quotes below, from California educators, illustrate three common reasons: dual-language education helps children excel; it is important to know Spanish; children should grow up in a multicultural environment (Linton 2007).

Our Spanish language parents, I think for the most part they might not be empowered so to speak, but they are into what works. They are dedicated to the program. So I think we have that mix of a strong base of English-only parents who want this for their kids; they're advocates for bilingual education, and they've shown through history that they'll stick with the program.

One of our parents is a reporter . . . .She's a fluent Spanish-speaker. Other parents in the program probably have a grandparent or a parent who speaks Spanish fluently, or maybe they've grown up in Los Angeles and speak Spanish and see the positive side of being bilingual and biliterate. Maybe some of the parents just speak Spanish but are not literate in Spanish. Or they might have a nanny who speaks Spanish. Or they might think it's a great thing for their kid to be bilingual and biliterate and nobody speaks Spanish. But they value language. They're making it a priority.

[Diversity] was a really good selling point from the beginning. It was not just selling the fact that children would learn two languages but

would understand two cultures, and how important that is in a world where we need to have more cultures getting along.

While our variable measuring a bilingual pay premium in municipal government jobs showed no effect in the full model in Table 2, our ethnographic research suggests that there are informal labour-market rewards that encourage people to speak two languages. In areas with a large Spanish-speaking population, there is a ‘common-sense’ understanding that bilingualism is helpful for getting a job. According to a 17-year-old high school student in Garden City, his ability to communicate with Spanish-speaking customers made him an attractive job applicant at the grocery store where he now works:

[Speaking Spanish is] one of the reasons I got a job at [the grocery store]. A lot of Hispanic people live on that side of town and they tend to shop at that store. And I put on my application that I was a good translator and sometimes people back in pharmacy or grocery department need me to translate for them and I do that.

Likewise, parents who choose dual-language education for their children see bilingualism as an advantageous skill in the twenty-first-century economy. A Long Beach, California parent expressed it this way: ‘Your child can get out of school and go to the AAA and get a job. I work there, and we have a lot of people who call and ask for someone who speaks Spanish. And nobody does.’ Similarly, the bilingual coordinator of a dual-language school in upscale Newport Hills, California, where (white) parents had asked for the programme, said that parents believed that Spanish was ‘a good [economic] ticket to a good future’. The principal of a dual-language magnet school in Chicago noted that whites and African Americans often express economic reasons for wanting their children to be bilingual. Multi-cultural awareness, travel to Spanish-speaking countries and future academic advantages are on these parents’ minds as well, but not nearly as much as the competitive advantage that bilingualism provides in a global economy.

Of course, Spanish-English bilingualism is primarily relevant because there is a sizeable Spanish-monolingual immigrant population that provides access to and creates a demand for Spanish-language use. Thus, the factors that encourage bilingualism that we identify in our ethnographic research – interpersonal and institutional contact with Spanish, cosmopolitanism, labour-market rewards – are probably captured by variables measuring the size and growth of the foreign-born Latino population in the MSAs and PMSAs in our statistical models.

## Discussion and conclusion

This study has specified contextual circumstances under which bilingualism is most likely to be a stable feature of Hispanic American identity rather than a step along the way to English monolingualism. In doing so, it has demonstrated a strong relationship between macro-level incentives and individual choices. The United States is probably not moving towards a bilingual norm, but our findings provide evidence that, where the context is favourable, selective acculturation could persist into future generations. This is largely due to the fact that continuing immigration is replenishing US-born Latinos, making Spanish a more vibrant, accessible and desirable part of US-born Latinos' identity repertoire.

Our findings suggest that demographics matter: the influx of a large, Spanish-speaking immigrant population contributes to bilingualism among US-born Latinos and the 1.5 generation. In places where Latin American immigration is replenished, so too are the opportunities for Spanish-language use among US-born and 1.5-generation Latinos, and persons of other ethnicities as well. The mechanisms that account for how immigrant replenishment encourages bilingualism are highlighted in our research among later-generation Mexican Americans and in dual-language schools. As illustrated above, serendipitous encounters, friendships and even romantic relationships with Mexican immigrants provides later-generation Mexican Americans with ample opportunity to maintain and even re-learn Spanish, while at the same time schools in areas with substantial Latino immigrant populations are institutionalizing Spanish alongside English as an option for *all* students. We suspect these same opportunities account for the effect of the growth of Latino immigration on bilingualism among US-born and 1.5-generation Latinos in our quantitative study.

If a supply of Spanish language comes from immigration, there is also a demand that further supports the persistence of bilingualism reflected in both labour-market rewards and a positive evaluation of bilingualisms prevalent in American society. Employers increasingly seek out bilingual employees who can make goods and services more accessible to both Spanish monolinguals *and* an American-born English monolingual clientele. Employers incentivize available positions by expressing preference for bilingual job applicants and by remunerating bilingual employees. In 41 per cent of the metro areas we surveyed, city government workers are paid more if they are Spanish-English bilinguals.

The context that shapes bilingualism in the United States is not bounded by national borders. As others have shown (Levitt 2001; Smith 2005), transnational ties expand the context that facilitates bilingualism across national boundaries, facilitating bilingualism

among US-born and 1.5 generation Latinos. Of course, return trips to the ethnic homeland can also reveal how migration and assimilation change the way people speak Spanish north of the border as compared to southern ethnic homelands. This linguistic ‘dissimilation’ (Fitzgerald 2008; Jiménez and Fitzgerald 2008) from sending communities is also at play in shaping bilingualism. Data limitations prevent us from modelling this transnational context, but its effects are no doubt helping to determine levels of bilingualism in the United States.

There are forces that work against bilingualism, reacting directly to the conditions that make bilingualism a more real and enduring possibility. Anti-immigrant groups, policies that aim to slow immigration, anti-bilingual-education measures and loudly voiced fears about non-English languages tearing at the American national fabric are important parts of the context that shapes language patterns. Yet our research shows that the forces that might work against bilingualism are counterbalanced by conditions that encourage bilingualism as a durable part of the American linguistic landscape.

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### Notes

1. We use the designations ‘Hispanic’ and ‘Latino’ interchangeably. We recognize the vast diversity within these categories. However, given our interest in Spanish-English bilingualism, the fact that the various subgroups (i.e. Cubans, Mexicans and Salvadorans) share a common language makes these categories quite relevant for the purposes of this paper.

2. Other scholars such as Hobsbawm (1990), Anderson (1991), Greenfeld (1992), Macias (2006) and Telles and Ortiz (2008) downplay economic incentives, instead pointing to ethnic identities and their meanings for members of various groups as the salient factors that inform official language policy and individual decisions about language acquisition and maintenance. We believe that these factors are important determinants of language choice, but the present analysis does not allow us adequately to incorporate hypotheses derived from theories of identity formation and maintenance.

3. In analyses not reported here, we tested the relationship between bilingualism and bilinguals’ status in the community by looking at bilinguals’ socioeconomic status [SES] relative to that of English monolinguals. Using 1990 data, Linton (2004a) found that there was more bilingualism among US-born/1.5-generation Latinos in places where bilinguals’ SES was high compared to that of English monolinguals. We were not able to replicate this finding using 2000 data. This is probably because, in 2000, there was significantly less variation in bilinguals’ and English monolinguals’ SES. Here we reason that Spanish-language media reflect not only a metro area’s demographics, but also the cultural and economic importance of the area’s Latino population.

4. Two MSAs encompass cities that do and do not pay a premium for bilingualism: Charlotte/Gastonia/Rock Hill NC-SC-MS and Salt Lake City/Ogden UT. These are both coded ‘1’ because there is a bilingual premium in the majority of the MSA.

5. The poor availability of data on the presence of Spanish-language radio for each of the metro areas we studied prevented us from including a variable for Spanish-language radio.
6. Appendices B and C show the final models in Tables 2 and 3 with MSA/PMSA proportion bilingual instead of the isolation index (Appendix B) and standardized regression coefficients (Appendix C).
7. This is at least in part due to the fact that, compared to other states, Texas has many more elected offices.
8. To be sure, language use can highlight boundaries which become apparent when later-generation Mexican Americans are deemed ethnically inauthentic by peers who are Spanish/English bilingual (also see Menchaca 1995; Ochoa 2004; Jiménez 2008).

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## Appendix A. Pearson correlations

		US-born/1.5- gen. proportion bilingual 2000	US-born/1.5-gen. proportion bilingual 1990	proportion of Latinos foreign born, 2000	proportion of Latinos foreign born, 1990	1990-2000 change in proportion foreign-born	Latino isolation index 2000	Latino isolation index 1990
US-born/1.5-gen.proportion bilingual 2000		1	0.933 ***	0.091	0.257 **	-0.281 **	0.607 ***	0.636 ***
	N	119	117	119	117	117	119	119
US- born/1.5-gen. proportion bilingual 1990		0.933 ***	1	-0.020	0.184	-0.334 **	0.593 ***	0.639 ***
	N	117	117	117	117	117	117	117
proportion of Latinos foreign born, 2000		0.091	-0.020	1	0.818 ***	0.352 ***	0.057	-0.118
	N	119	117	119	117	117	119	119
proportion of Latinos foreign born, 1990		0.257 **	0.184	0.818 ***	1	-0.251 **	0.235 *	0.096
	N	117	117	117	117	117	117	117
1990-2000 change in proportion foreign-born		-0.281 **	-0.334 ***	0.352 ***	-0.251 **	1	-0.299 ***	-0.362 ***
	N	117	117	117	117	117	117	117
Latino isolation index 2000		0.607 ***	0.593 ***	0.057	0.235 *	-0.299 ***	1	0.944 ***
	N	119	117	119	117	117	119	119
Latino isolation index 1990		0.636 ***	0.639 ***	-0.118	0.096	-0.362 ***	0.944 ***	1
	N	119	117	119	117	117	119	119
1990-2000 change in isolation index		-0.170	-0.225 *	0.519 ***	0.390 ***	0.232 *	0.037	-0.296 ***
	N	119	117	119	117	117	119	119
proportion Latino 2000		0.530 ***	0.517 ***	-0.077	0.110	-0.317 ***	0.868 ***	0.871 ***
	N	119	117	119	117	117	119	119
proportion Latino 1990		0.516 ***	0.505 ***	-0.134	0.058	-0.320 ***	0.833 ***	0.857 ***
	N	116	116	116	116	116	116	116
new Latino destination		-0.125	-0.220 *	0.176 †	0.056	0.198 *	-0.341 ***	-0.386 ***
	N	119	117	119	117	117	119	119
municipal gov't. pays a bilingual premium		-0.050	-0.053	0.104	0.244 **	-0.224 *	0.300 **	0.239 **
	N	119	117	119	117	117	119	119
network TV in Spanish, 2000		0.292 ***	0.260 **	0.135	0.327 ***	-0.306 ***	0.580 ***	0.552 ***
	N	119	117	119	117	117	119	119
California		-0.178 †	-0.191 *	0.132	0.266 **	-0.200 *	0.249 **	0.207 *
	N	119	117	119	117	117	119	119

## Appendix A (Continued)

		US-born/1.5- gen. pro portion bilingual 2000	US-born/1.5-gen. proportion bilingual 1990	proportion of Latinos foreign born, 2000	proportion of Latinos foreign born, 1990	1990-2000 change in proportion foreign-born	Latino isolation index 2000	Latino isolation index 1990
Florida		0.310 ***	0.259 **	0.156 †	0.261 **	-0.168 †	-0.084	-0.083
	N	119	117	119	117	117	119	119
Texas		0.349 ***	0.382 ***	-0.249 **	-0.169 †	-0.156 †	0.308 ***	0.323 ***
	N	119	117	119	117	117	119	119

† p &lt; .10.

\* p &lt; 0.05.

\*\* p &lt; 0.01.

\*\*\* p &lt; 0.001.

## Appendix A. (cont'd.)

		1990–2000 change in isolation index	proportion Latino 2000	proportion Latino 1990	new Latino destination	municipal gov't. pays a bilingual premium	network TV in Spanish, 2000	California	Florida	Texas
US-born/1.5-gen.proportion bilingual 2000	N	-0.170	0.530 ***	0.516 ***	-0.125	-0.050	0.292 ***	-0.178 †	0.310 ***	0.349
US- born/1.5-gen. proportion bilingual 1990	N	-0.225 *	0.517 ***	0.505 ***	-0.220 *	-0.053	0.260 **	-0.191 *	0.259 **	0.382
proportion of Latinos foreign born, 2000	N	0.519 ***	-0.077	-0.134	0.176 †	0.104	0.135	0.132	0.156 †	-0.249
proportion of Latinos foreign born, 1990	N	0.390 ***	0.110	0.058	0.056	0.244 †	0.327 ***	0.266 **	0.261 **	-0.169
1990–2000 change in proportion foreign-born Latino isolation index 2000	N	0.232 *	-0.317 ***	-0.320 ***	0.198 *	-0.224 *	-0.306 ***	-0.200 *	-0.168 †	-0.156
Latino isolation index 1990	N	0.037	0.868 ***	0.833 ***	-0.341 ***	0.300 ***	0.580 ***	0.249 **	-0.084	0.308
1990–2000 change in isolation index proportion Latino 2000	N	-0.296 ***	0.871 ***	0.857 ***	-0.386 ***	0.239 **	0.552 ***	0.207 *	-0.083	0.323
proportion Latino 1990	N	1	-0.124	-0.193 *	0.183 *	0.146	0.008	0.093	0.006	-0.086
new Latino destination	N	-0.124	1	0.981 ***	-0.351 ***	0.265 **	0.532 ***	0.225 *	-0.006	0.373
municipal gov't. pays a bilingual premium	N	-0.193 *	0.981 ***	1	-0.334 ***	0.241 **	0.523 ***	0.160 †	0.026	0.390
network TV in Spanish, 2000	N	0.183 *	-0.351 ***	-0.334 ***	1	-0.157 †	-0.245 **	-0.270 **	0.096	-0.263
	N	0.146	0.265 **	0.241 **	-0.157 †	1	0.360 ***	0.525 ***	-0.147	0.016
	N	0.008	0.532 ***	0.523 ***	-0.245 **	0.360 ***	1	0.428 ***	0.059	0.008
	N	119	119	116	119	119	119	119	119	119

## Appendix A (Continued)

	1990–2000 change in isolation index	proportion Latino 2000	proportion Latino 1990	new Latino destination	municipal gov't. pays a bilingual premium	network TV in Spanish, 2000	California	Florida	Texas
California	0.093	0.225 *	0.160 †	–0.270 **	0.525 ***	0.428 ***	1	–0.174 †	–0.220
N	119	119	116	119	119	119	119	119	119
Florida	0.006	–0.006	0.026	0.096	–0.147	0.059	–0.174 †	1	–0.101
N	119	119	116	119	119	119	119	119	119
Texas	–0.086	0.373 ***	0.390 ***	–0.263 **	0.016	0.008	–0.220 *	–0.101	1
N	119	119	116	119	119	119	119	119	119

† p &lt; .10.

\* p &lt; 0.05.

\*\* p &lt; 0.01.

\*\*\* p &lt; 0.001.

**Appendix B.** *Best models of bilingualism among US-born and 1.5-generation Latinos, proportion Latino substituted for Latino Isolation Index*

	2000	1990–2000
Proportion US-born/1.5-generation bilingual, 1990		0.882*** (0.039)
Proportion 1.5-generation, 2000	1.071*** (0.047)	
Proportion Latinos foreign-born, 1990		0.093* (0.037)
Proportion Latino	0.522*** (0.057)	
Proportion Latino, 1990		0.093** (0.033)
New Latino destination	0.061* –0.025	0.025* –0.012
California	–0.072** (0.027)	
Florida	0.079** (0.030)	0.027† (0.016)
Texas	0.105*** –0.029	
constant	0.328*** (0.028)	–0.011 (0.026)
Adjusted R2	0.612	0.884
F	32.003***	147.765***

†p &lt; .10.

\*p &lt; 0.05.

\*\*p &lt; 0.01.

\*\*\*p &lt; 0.001.

Standard errors are shown in parentheses.

**Appendix C.** *Standardized regression coefficients for best models of bilingualism among US-born and 1.5-generation Latinos*

	2000	1990–2000
Proportion US-born/1.5-generation bilingual, 1990		0.835***
Proportion 1.5-generation, 2000	0.420***	
Proportion Latinos foreign-born, 1990		0.079*
Latino isolation index, 2000	0.700***	
Latino isolation index, 1990		0.162**
1990–2000 change in proportion foreign born		0.074*
New Latino destination	0.168*	0.082*
California	–0.203***	
Florida	0.231**	0.088*
Texas	0.263***	
Adjusted R2	0.720	0.891

\*p &lt; 0.05.

\*\*p &lt; 0.01.

\*\*\* p &lt; 0.001.

Standard errors are shown in parentheses.

**Appendix D.** *Log odds for regression of pay premiums for Spanish-English bilingualism in US MSAs/PMSAs, 2000 (N=118)*

	Model 1	Model 2	Model 3
Latino isolation index	23.407**	682.593***	56.234*
Proportion Latinos foreign-born	3.967	9.756	3.303
Proportion US-born/1.5-generation bilingual		0.001***	0.154†
California constant	0.124**	1.047	28.753** 0.337
-2 log likelihood	149.206	135.945	117.630
Percentage correct	67.2	72.3	73.1

†p &lt; .10.

\*p &lt; 0.05.

\*\*p &lt; 0.01.

\*\*\*p &lt; 0.001.

Standard errors are shown in parentheses.