Intermarriage and the Intergenerational Transmission of Ethnic Identity and Human Capital for Mexican Americans

Brian Duncan

Department of Economics
University of Colorado at Denver
Campus Box 181
Denver, CO 80217-3364
(303) 556-6763
bduncan@carbon.cudenver.edu

Stephen J. Trejo

Department of Economics University of Texas at Austin 1 University Station C3100 Austin, TX 78712-0301 (512) 475-8512 trejo@eco.utexas.edu

April 2007

Abstract

Dramatic improvements in educational attainment and earnings occur between Mexican immigrants and their U.S.-born children. Intergenerational progress seems to stall after the second generation, however, with only modest gains observed for later generations. The end result is that even third- and higher-generation Mexicans (i.e., the grandchildren and later descendants of Mexican immigrants) trail the average American in economic status by a disturbing amount. The validity of these intergenerational comparisons, however, rests on assumptions about ethnic identification that have received relatively little scrutiny for Mexican Americans. In particular, analyses of intergenerational change typically assume, either explicitly or implicitly, that the ethnic choices made by the descendants of Mexican immigrants do not distort outcome comparisons across generations. For example, if the most successful Mexicans in later generations are more likely to intermarry or for other reasons cease to identify themselves or their children as Mexican-origin, then available data may understate human capital and earnings gains between the second and third generations.

Using microdata from the 2000 U.S. Census and from recent years of the Current Population Survey (CPS), we explore for Mexican Americans these issues that lie at the intersection of immigration, ethnic identification, and intergenerational assimilation. In

particular, we investigate whether selective intermarriage and endogenous ethnicity interact to obscure some of the intergenerational progress achieved by the Mexican-origin population in the United States. First, using 2000 Census data for U.S.-born youth ages 16-17 who have at least one Mexican parent, we estimate how the Mexican identification, high school dropout rates, and English proficiency of these youth depend on whether they are the product of endogamous or exogamous marriages. Second, we analyze the extent and selectivity of ethnic attrition among second-generation Mexican-American adults and among U.S.-born Mexican-American youth. Using CPS data, we directly assess the influence of endogenous ethnicity by comparing an "objective" indicator of Mexican descent (based on the countries of birth of the respondent and his parents and grandparents) with the standard "subjective" measure of Mexican self-identification (based on the respondent's answer to the Hispanic origin question).

I. Introduction

One of the most important and controversial questions in U.S. immigration research is whether the latest wave of foreign-born newcomers (or their U.S.-born descendants) will ultimately assimilate into the mainstream of American society, and whether the pace and extent of such assimilation will vary across immigrant groups. In terms of key economic outcomes such as educational attainment, occupation, and earnings, the sizeable differences by national origin that initially persisted among earlier European immigrants have largely disappeared among the modern-day descendants of these immigrants (Neidert and Farley 1985; Lieberson and Waters 1988; Farley 1990). There is considerable skepticism, however, that the processes of assimilation and adaptation will operate similarly for the predominantly non-white immigrants who have entered the United States in increasing numbers over the past thirty years (Gans 1992; Portes and Zhou 1993; Rumbaut 1994). In a controversial new book, Huntington (2004) voices a particularly strong version of such skepticism with regard to Hispanic immigration.

Mexicans assume a central role in current discussions of immigrant intergenerational progress and the outlook for the so-called "new second generation," not just because Mexicans make up a large share of the immigrant population, but also because most indications of relative socioeconomic disadvantage among the children of U.S. immigrants vanish when Mexicans are excluded from the sample (Perlmann and Waldinger 1996, 1997). Therefore, to a great extent, concern about the long-term economic trajectory of immigrant families in the United States is concern about Mexican-American families.¹

¹ By providing an historical and comparative perspective, two recent studies offer interesting and informative insights into the progress of Mexican Americans. Perlmann (2005) carefully compares the intergenerational mobility experienced by low-skill European immigrants arriving in the United States around 1900 with that experienced by modern-day Mexicans. Perlmann concludes that "Mexican economic assimilation may take more time—four or five generations rather than three or four" (p. 124), but that such assimilation is nonetheless occurring. MacKinnon and Parent (2005) document the slow but eventual assimilation of the descendants of French Canadian immigrants in the United States. For our purposes, French

Several recent studies compare education and earnings across generations of Mexican Americans (Trejo 1997, 2003; Fry and Lowell 2002; Farley and Alba 2002; Grogger and Trejo 2002; Livingston and Kahn 2002; Blau and Kahn 2005; Duncan, Hotz, and Trejo 2006). Table 1 illustrates the basic patterns that emerge for men. Between the first and second generations, average schooling rises by almost three and one-half years and average hourly earnings grow by about 30 percent for Mexicans. The third generation, by contrast, shows little or no additional gains, leaving Mexican-American men with an educational deficit of 1.3 years and a wage disadvantage of about 25 percent, relative to whites. Similar patterns emerge for women, and also when regressions are used to control for other factors such as age and geographic location (Grogger and Trejo 2002; Blau and Kahn 2005; Duncan, Hotz, and Trejo 2006).

The apparent lack of socioeconomic progress between second and later generations of Mexican Americans is surprising. Previous studies have consistently found parental education to be one of the most important determinants of an individual's educational attainment and ultimate labor market success (Haveman and Wolfe 1994; Mulligan 1997). Through this mechanism, the huge educational gain between first- and second-generation Mexican Americans should produce a sizable jump in schooling between the second and third generations, because on average the third generation has parents who are much better educated than those of the second generation. Yet the improvement in schooling we expect to find between the second and third generations is largely absent.

- I'

Canadians are a particularly interesting group because their migration to the United States had several of the same features that Huntington (2004) identifies as important obstacles to the past and future assimilation of Mexican Americans.

² These averages are calculated from March 1998-2002 Current Population Survey data, with standard errors shown in parentheses. The samples for the earnings data are limited to individuals who worked during the calendar year preceding the survey. The "white" ethnic group is defined to exclude Hispanics, as well as blacks, Asians, and Native Americans. The first generation consists of immigrants: foreign-born individuals whose parents were also born outside the United States. The second generation denotes U.S.-born individuals who have at least one foreign-born parent. The so-called "third generation," which really represents the third and all higher generations, identifies U.S. natives whose parents are also natives.

The research summarized in Table 1 suggests that intergenerational progress stalls for Mexican Americans after the second generation. As noted by Borjas (1993) and Smith (2003), however, generational comparisons in a single cross-section of data do a poor job of matching immigrant parents and grandparents in the first generation with their actual descendants in later generations. Indeed, Smith (2003) finds evidence of more substantial gains between second- and third-generation Mexicans when he combines cross-sectional data sets from successive time periods in order to compare second-generation Mexicans in some initial period with their third-generation descendants twenty-five years later. Yet even Smith's analysis shows signs of intergenerational stagnation for Mexican Americans. In his Table 4, for example, five of the six most recent cohorts of Mexicans experience no wage gains between the second and third generations. Moreover, all studies conclude that large education and earnings deficits (relative to whites) remain for third- and higher-generation Mexicans.

These findings—that the economic disadvantage of Mexican Americans persists even among those whose families have lived in the United States for more than two generations, and that the substantial progress observed between the first and second generations seems to stall thereafter—raise doubts whether the descendants of Mexican immigrants are enjoying the same kind of intergenerational advancement that allowed previous groups of unskilled immigrants, such as the Italians and Irish, to eventually enter the economic mainstream of American society. Such conclusions could have far-reaching implications, but the validity of the intergenerational comparisons that underlie these conclusions rests on assumptions about ethnic identification that have received relatively little scrutiny for Mexican Americans. In particular, analyses of intergenerational change typically assume, either explicitly or implicitly, that the ethnic choices

³ Borjas (1994) and Card, DiNardo, and Estes (2000) investigate patterns of intergenerational progress for many

made by the descendants of Mexican immigrants do not distort outcome comparisons across generations.

Ethnic identification is to some extent endogenous, especially among people at least one or two generations removed from immigration to the United States (Alba 1990; Waters 1990). Consequently, the descendants of Mexican immigrants who continue to identify themselves as Mexican in the third and higher generations may be a select group. For example, if the most successful Mexican Americans are more likely to intermarry or for other reasons cease to identify themselves or their children as Mexican, then available data may understate human capital and earnings gains between the second and third generations. In other words, research on intergenerational assimilation among Mexicans may suffer from the potentially serious problem that the most assimilated members of the group under study eventually fade from empirical observation as they more closely identify with the group they are assimilating toward.

For other groups, selective ethnic identification has been shown to distort observed socioeconomic characteristics. American Indians are a particularly apt example, because they exhibit very high rates of intermarriage, and fewer than half of the children of such intermarriages are identified as American Indian by the Census race question (Eschbach 1995). For these and other reasons, racial identification is relatively fluid for American Indians, and changes in self-identification account for much of the surprisingly large increase in educational attainment observed for American Indians between the 1970 and 1980 U.S. Censuses (Eschbach, Supple, and Snipp 1998). In addition, Snipp (1989) shows that those who report American

different national origin groups, including Mexicans.

⁴ For groups such as Mexicans with relatively low levels of average schooling, Furtado (2006) shows that assortative matching on education in marriage markets can create a situation whereby individuals who intermarry tend to be the more highly-educated members of these groups.

Indian as their race have considerably lower schooling and earnings, on average, than the much larger group of Americans who report a non-Indian race but claim to have some Indian ancestry.

To cite another example, Waters (1994) observes selective ethnic identification among the U.S.-born children of New York City immigrants from the West Indies and Haiti. The teenagers doing well in school tend to come from relatively advantaged, middle-class families, and these kids identify most closely with the ethnic origins of their parents. In contrast, the teenagers doing poorly in school are more likely to identify with African Americans. This pattern suggests that self-identified samples of second-generation Caribbean blacks might overstate the socioeconomic achievement of this population, a finding that potentially calls into question the practice of comparing outcomes for African Americans and Caribbean blacks as a means of distinguishing racial discrimination from other explanations for the disadvantaged status of African Americans (Sowell 1978).

Using microdata from the U.S. Census and from recent years of the Current Population Survey (CPS), we explore these issues for Mexican Americans. In particular, we investigate what factors influence whether individuals choose to identify themselves (or their children) as Mexican-origin, and how these ethnic choices may affect inferences about the intergenerational progress of Mexican Americans. To date, analyses of ethnic responses and ethnic identification employing large national surveys have focused primarily on whites of European descent (Alba and Chamlin 1983; Lieberson and Waters 1988; 1993; Farley 1991), and therefore much could be learned from a similar analysis that highlights ethnic choices among the Mexican-origin population.

Existing studies (Stephan and Stephan 1989; Eschbach and Gomez 1998; Ono 2002)

⁵ Bean, Swicegood, and Berg (2000) raise this possibility in their study of generational patterns of fertility for

demonstrate that the process of ethnic identification by Mexican Americans is fluid, situational, and at least partly voluntary, just as has been observed for non-Hispanic whites and other groups. These studies, however, do not directly address the issue that we will focus on: the selective nature of Mexican identification and how it affects our inferences about intergenerational progress for this population. Though previous research has noted the selective nature of intermarriage for Hispanics overall (Qian 1997, 1999) and for Mexican Americans in particular (Fu 2001; Rosenfeld 2001), this research has not examined explicitly the links between intermarriage and ethnic identification, nor has previous research considered the biases that these processes might produce in standard intergenerational comparisons of economic status for Mexican Americans. Closer in spirit to our analysis is recent work by Alba and Islam (2005) that tracks cohorts of U.S.-born Mexicans across the 1980-2000 Censuses and uncovers evidence of substantial declines in Mexican self-identification as a cohort ages. In contrast with our work, however, Alba and Islam (2005) are able to provide only limited information about the socioeconomic selectivity of this identity shift, and they focus on the identity shifts that occur within rather than across generations of Mexicans.

Ideally, if we knew the family tree of each individual, we could identify which individuals are descended from Mexican immigrants and how many generations have elapsed since that immigration took place. It would then be a simple matter to compare outcomes for this "true" population of Mexican descendants with the corresponding outcomes for a relevant reference group (e.g., non-Hispanic whites) and also with those for the subset of Mexican descendants who continue to self-identify as Mexican-origin.⁶ Such an analysis would provide

Mexican-origin women in the United States.

⁶ Detailed ancestry information of this sort would raise complicated issues about how to define ethnic groups. For example, should calculations for the Mexican-American population differentially weight individuals according to their

an unbiased assessment of the relative standing of the descendants of Mexican immigrants in the United States, and it would show the extent to which selective ethnic identification distorts estimated outcomes for this population when researchers are forced to rely on standard, self-reported measures of Mexican identity.

Following the 1970 Census, unusually detailed information of this sort was collected for a small sample of individuals with ancestors from a Spanish-speaking country. After each decennial U.S. Census, selected respondents to the Census long form are reinterviewed in order to check the accuracy and reliability of the Census data. The 1970 Census was the first U.S. Census to ask directly about Hispanic origin or descent, and therefore a primary objective of the 1970 Census Content Reinterview Study (U.S. Bureau of the Census 1974) was to evaluate the quality of the responses to this new question. For this purpose, individuals in the reinterview survey were asked a series of questions regarding any ancestors they might have who were born in a Spanish-speaking country. Among those identified by the reinterview survey as having Hispanic ancestors, Table 2 shows the percent who had previously responded on the 1970 Census long form that they were of Hispanic "origin or descent."

Overall, 76 percent of reinterview respondents with ancestors from a Spanish-speaking country had self-identified as Hispanic in the 1970 Census, but the correspondence between Hispanic ancestry in the reinterview and Hispanic identification in the Census fades with the

"intensity" of Mexican ancestry? In other words, among third-generation Mexicans, should those with four Mexican-born grandparents count more than those with just one grandparent born in Mexico? The answer might depend on the question of interest. For the questions of intergenerational assimilation and progress that we study here, our view is that all descendants of Mexican immigrants should count equally, regardless of how many branches of their family tree contain Mexican ancestry. This conceptualization allows intermarriage to play a critical role in the process of intergenerational assimilation for Mexican Americans, as it did previously for European immigrants (Gordon 1964; Lieberson and Waters 1988). As we note below, however, some of our analyses can shed light on the direction, but not the ultimate magnitude, of measurement biases arising from selective intermarriage and ethnic identification by Mexican Americans. Our conclusions about the direction of these measurement biases require only that persons of mixed ancestry—i.e., the products of Mexican intermarriage—be included with some positive weight in whatever definition is adopted for the Mexican-American population.

⁷ The information in Table 2 is reproduced from Table C of U.S. Bureau of the Census (1974, p. 8).

number of generations since the respondent's Hispanic ancestors arrived in the United States. Virtually all (99 percent) first-generation immigrants born in a Spanish-speaking country identified as Hispanic in the Census, but the rate of Hispanic identification dropped to 83 percent for the second generation, 73 percent for the third generation, 44 percent for the fourth generation, and all the way down to 6 percent for higher generations of Hispanics. Interestingly, intermarriage seems to play a central role in the loss of Hispanic identification. Almost everyone (97 percent) with Hispanic ancestors on both sides of their family identified as Hispanic in the Census, whereas the corresponding rate was only 21 percent for those with Hispanic ancestors on just one side of their family. Given the small number of Hispanics in the reinterview sample (369 individuals reported having at least one ancestor from a Spanish-speaking country), the percentages in Table 2 should be regarded with caution, especially those for the very small samples of Hispanics who are fourth generation or higher. Nonetheless, these data do suggest that self-identified samples of U.S. Hispanics might omit a large proportion of later-generation individuals with Hispanic ancestors, and that intermarriage could be a fundamental source of such intergenerational ethnic attrition.

Unfortunately, the microdata underlying Table 2 no longer exist, so we cannot use these data to examine in a straightforward manner how selective ethnic attrition affects observed measures of intergenerational progress for Mexican Americans.⁸ Out of necessity, we instead adopt less direct strategies for trying to shed light on this issue. In a recent paper (Duncan and

⁸ Starting in 1980, the Census has included an open-ended question asking for each person's "ancestry" or "ethnicity," with the first two responses coded in the order that they are reported (Farley 1991). For the purposes of identifying individuals with Mexican or Hispanic ancestors, however, the Census ancestry question is not a good substitute for the detailed battery of questions included in the 1970 Census Content Reinterview Study. Indeed, many 1980-2000 Census respondents who identified as Hispanic in response to the Hispanic origin question failed to list an Hispanic ancestry in response to the ancestry item that comes later on the Census long form questionnaire, perhaps because they thought it redundant and unnecessary to indicate their Hispanic ethnicity a second time. Comparatively few respondents listed an Hispanic ancestry after identifying as non-Hispanic when answering the Hispanic origin question, so the ancestry question actually produces a lower overall count of Hispanics than does the Hispanic origin question (Lieberson and Waters 1988; del Pinal 2004).

Trejo 2005), we investigate the extent and selectivity of intermarriage by Mexican Americans and how such intermarriage influences the ethnic identification of resulting children. Using 2000 Census data, we show that U.S.-born Mexican Americans who marry non-Mexicans are substantially more educated and English proficient, on average, than are Mexican Americans who marry co-ethnics (whether they be Mexican Americans or Mexican immigrants). In addition, the non-Mexican spouses of intermarried Mexican Americans possess relatively high levels of schooling and English proficiency, compared to the spouses of endogamously married Mexican Americans. The human capital selectivity of Mexican intermarriage generates corresponding differences in the employment and earnings of Mexican Americans and their spouses. Moreover, the children of intermarried Mexican Americans are much less likely to be identified as Mexican than are the children of endogamous Mexican marriages. These forces combine to produce strong negative correlations between the education, English proficiency, employment, and earnings of Mexican-American parents and the chances that their children retain a Mexican ethnicity. Such findings raise the possibility that selective ethnic attrition might bias observed measures of intergenerational progress for Mexican Americans.

Our finding of positive educational and economic selectivity for intermarried Mexican Americans is not unexpected (Qian 1999). First of all, opportunities for meeting and interacting with people from other racial/ethnic groups are better for more educated Mexican Americans, because highly-educated Mexican Americans tend to live, study, and work in less segregated environments. Second, given the sizeable educational deficit of the average Mexican American, better-educated Mexican Americans are likely to be closer in social class to the typical non-Mexican (Furtado 2006). Third, attending college is an eye-opening experience for many students that may work to diminish preferences for marrying within one's own racial/ethnic

group. Finally, the theory of "status exchange" in marriage formulated by Davis (1941) and Merton (1941) predicts that members of lower-status minority groups (such as Mexican Americans) would tend to need higher levels of socioeconomic attainment to attract spouses who are members of higher-status majority groups.

Our previous paper (Duncan and Trejo 2005) provides insights regarding the selectivity in human capital and labor market performance of Mexican Americans who intermarry and whose children are therefore less likely to retain a Mexican ethnic identification. That paper, however, does not directly examine how much of the intermarriage selectivity gets passed from Mexican-origin parents to their children. The current paper will focus explicitly on the critical role that intermarriage plays in the intergenerational transmission of human capital and ethnic identification for Mexican Americans. First, using 2000 Census data for U.S.-born youth ages 16-17 who have at least one Mexican parent, we estimate how the Mexican identification, high school dropout rates, and English proficiency of these youth depend on whether they are the product of endogamous or exogamous marriages. Second, we analyze the extent and selectivity of ethnic attrition among second-generation Mexican-American adults and among second- and third-generation Mexican-American youth. Using CPS data, we directly assess the influence of endogenous ethnicity by comparing an "objective" indicator of Mexican descent (based on the countries of birth of the respondent and his parents and grandparents) with the standard "subjective" measure of Mexican self-identification (based on the respondent's answer to the Hispanic origin question).

II. Census Analyses of Youth

Our initial analyses employ the five-percent microdata sample from the 2000 U.S.

Census. Among other things, the Census provides detailed information regarding nativity, race, ethnicity, marital status, English proficiency, education, earnings, and labor supply. For our purposes, a crucial advantage of Census data is the huge sample sizes that allow for precise inferences to be made even about relatively small segments of the overall U.S. population (e.g., boys ages 16 and 17 from families in which one parent is a U.S.-born Mexican and the other parent is non-Mexican). The primary disadvantage of these data is the absence of questions about the birthplace of each respondent's parents (such information was dropped from the Census beginning in 1980), making it impossible to distinguish among U.S.-born adults between the children of immigrants (i.e., the so-called "second generation") and later generations of immigrant descendants.

To investigate the role that intermarriage plays in the intergenerational transmission of human capital and ethnic identification for Mexican Americans., we adapt the approach used by Hirschman (2001) in his study of immigrant youth. We construct samples from the 2000 Census of U.S.-born youth ages 16 and 17 living in intact families in which at least one of the parents is Mexican-origin (i.e., at least one parent either was born in Mexico or else is a U.S.-born individual identified as Mexican by the Census question regarding Hispanic origin). Given our interest in ethnic identification, we exclude families in which the parents or youth have allocated information about Hispanic origin. Finally, to the extent possible with the information available in the Census, we exclude families in which the relevant youth are suspected of being stepchildren. For comparisons purposes, we construct analogous samples of U.S.-born youth living in intact families in which both parents are U.S.-born, non-Hispanic whites, and of U.S.-born youth living in intact families in which both parents are U.S.-born, non-Hispanic blacks. We choose to study youth ages 16 and 17 because they are old enough for persistent patterns in

educational attainment, English proficiency, and ethnic identification to emerge, yet they are young enough to still be living with their parents so that parental information is available in the Census.

Our previous research (Duncan and Trejo 2005) indicates that, in terms of nativity and ethnicity, the marital choices of Mexican Americans can be usefully classified into three fundamental categories of spouses: foreign-born Mexicans, U.S.-born Mexicans, and non-Mexicans. Based on this insight, we construct a simple typology of marriages involving Mexican Americans. For our samples U.S.-born youth who have at least one Mexican parent, Table 3 shows the nativity/ethnicity distributions of the parents. Patterns are similar for boys and girls. Overall, about 30 percent of these youth are the products of mixed marriages between a Mexican and a non-Mexican. Among those families in which neither parent is a Mexican immigrant, the rate of intermarriage is much higher, exceeding 50 percent (i.e., families with two U.S.-born, Mexican parents are slightly less prevalent than families with one U.S.-born, Mexican parent and one non-Mexican parent). As has been documented previously (Rosenfeld 2002; Duncan and Trejo 2005), intermarriage is widespread among Mexican Americans.

Table 4 reports average outcomes for the U.S.-born youth in our samples, differentiated by the nativity and ethnicity of their parents. Standard errors are shown in parentheses. We focus on three youth outcomes: (1) the percentage of high school "dropouts," with dropouts defined here as youth who are not attending school and who have not yet completed high school (either through classes or by exam); (2) the percentage who are "deficient" in English, defined here as those who speak a language other than English at home and report speaking English worse than "very well;" and (3) the percentage identified as Mexican by the Hispanic origin question in the Census.

In the marriage typology used here, the first three rows of Table 4 represent endogamous Mexican marriages in which both parents are Mexican-origin, with these marriages distinguished by whether both parents are foreign-born Mexicans, both are U.S.-born Mexicans, or one Mexican parent is foreign-born and the other is U.S.-born. The next two rows represent intermarriages between a Mexican and a non-Mexican, with these marriages distinguished by whether the Mexican is foreign-born or U.S.-born. Finally, for purposes of comparison, the last two rows represent endogamous white and black marriages.

Table 4 shows that youth who are the products of Mexican intermarriages enjoy large and statistically significant attainment advantages over their counterparts who are the products of endogamous Mexican-American marriages. Consider first the patterns for boys. The high school dropout rate is almost 50 percent higher for boys with two U.S.-born Mexican parents rather than one (4.5 percent versus 3.1 percent, respectively), and the dropout rate for this latter group of boys approaches the rate for white boys from endogamous marriages (this "white" dropout rate is 2.8 percent). In addition, Table 4 reveals that boys with one U.S.-born Mexican parent (and one non-Mexican parent) are much more likely to either speak English exclusively or else speak it "very well" than are boys from endogamous Mexican marriages. Finally, these data exhibit a strong correlation between Mexican intermarriage and ethnic identification: virtually all of the boys with two Mexican-origin parents are identified as Mexican by the Census question regarding Hispanic origin, whereas the corresponding rate drops below two-thirds for boys with only one Mexican-origin parent. For girls, the patterns are similar, although the human capital advantages arising from Mexican intermarriage are somewhat smaller than those observed for boys.

Table 5 indicates that a likely source of the human capital advantages enjoyed by

Mexican-American youth with intermarried parents is the higher human capital of these parents themselves. For example, the mothers and fathers in families with one U.S.-born Mexican parent (and one non-Mexican parent) average over a year more schooling than do the mothers and fathers in families with two U.S.-born Mexican parents. Not surprisingly, the mothers and fathers in these intermarried families are also much less likely to be deficient in speaking English.

The least squares regressions reported in Table 6 show how the human capital of U.S.born, Mexican-American youth differs by family type, after conditioning on the influence of various controls. The dependent variables are dummies identifying youth who are dropouts and those who are deficient in English. Here, the samples are limited to youth with at least one Mexican parent, and the key independent variables are dummies identifying the type of family that each youth comes from (i.e., the parental nativity/ethnicity combinations listed in Table 3), with the reference group consisting of endogamous marriages in which both parents are U.S.born Mexicans. In addition to these dummies for family type, the first regression specification (i.e., the columns labeled (1) in Table 6) includes controls for the age of the youth, the ages of his mother and father, and geographic location (dummy variables identifying the nine Census divisions, the individual states of California and Texas, and whether the family resides in a metropolitan area). The second regression specification (i.e., the columns labeled (2)) adds variables describing the human capital of each youth's parents (either parents' completed years of schooling or dummies indicating their English proficiency, depending on the youth outcome being considered). This specification enables us to estimate directly the parent-child transmission of these outcomes and also to measure how much of the impact of Mexican intermarriage on youth outcomes works through the selectivity of intermarriage in terms of

parental characteristics. Standard errors of the estimated regression coefficients are shown in parentheses.

The estimates in Table 6 confirm the earlier evidence of significant human capital advantages for Mexican-American youth produced by intermarriages. Specification (1) implies that, for boys, having one rather than two U.S.-born Mexican parents lowers dropout rates by 2.2 percentage points and reduces English deficiency by 4.4 percentage points. Specification (2) reveals that, although parental human capital is an important determinant of youth outcomes, conditioning on parental human capital attenuates (by about a third) but does not eliminate the advantages associated with intermarriage. This finding suggests that much of the impact of Mexican intermarriage on youth human capital derives from factors that are independent of observable parental human capital. The patterns are similar for girls, except that in this case the effect of Mexican intermarriage on dropout rates is not statistically significant. Overall, these findings provide further support for the notion that selective intermarriage and ethnic attrition might bias observed measures of intergenerational progress for Mexican Americans. 9

III. CPS Analyses of Ethnic Attrition

For our remaining analyses, we employ microdata from the Current Population Survey (CPS) for all months from January 1994 through December 2006. The CPS is a monthly survey of about 50,000 households that the U.S. government administers to estimate unemployment rates and other indicators of labor market activity. In addition to the detailed demographic and

⁹ We should emphasize that our goal in Table 6 is *not* to estimate the causal effects of parental education or English proficiency on child outcomes. Instead, we seek only to describe the linkages between Mexican intermarriage and the human capital of parents and their children, in order to better understand the selectivity of ethnic attrition among Mexican Americans and its potential implications for measuring their intergenerational progress. See Oreopoulos, Page, and Stevens (2006) and Bleakley and Chin (2007) for recent attempts to estimate the causal effects of parental education and English proficiency, respectively, on child outcomes.

labor force data reported for all respondents, the CPS collects earnings information each month from one-quarter of the sample, the so-called "outgoing rotation groups." The data we analyze come from these outgoing rotation group samples. The CPS sampling scheme is such that surveys for the same month in adjacent years have about half of their respondents in common (e.g., about half of the respondents in any January survey are re-interviewed the following January). To obtain independent samples, we use only data from the first time a household appears in the outgoing rotation group samples (i.e., we use only data from the fourth month that a household appears in the CPS sample). By pooling together these 13 years of monthly CPS data, we substantially increase sample sizes and improve the precision of our estimates. A key feature of recent CPS data is their inclusion of the information about parental countries of birth that is currently missing from the Census. As a result, the CPS is now the best large-scale U.S. data set for investigating how outcomes vary by immigrant generation.

A. Second-Generation Mexican-American Adults

Our next set of analyses will focus on second-generation Mexican Americans. Because the CPS provides information regarding country of birth for the respondent and each of his parents, with these data we can construct for U.S.-born individuals an "objective" indicator of Mexican descent—namely, whether at least one of the respondent's parents was born in Mexico—and compare this indicator with the standard "subjective" measure of Mexican self-identification based on the respondent's answer to the Hispanic origin question. This empirical strategy is adopted from Rumbaut (2004), who used it to show that a large and highly-selective segment of the population of second-generation Cubans is missed by the self-reported measure of Cuban ethnic affiliation available in CPS data.

Table 7 reports the results. From the 1994-2006 CPS data described above, we extract all U.S.-born individuals between the ages of 25-59 who have at least one parent born in Mexico (after first excluding individuals with missing or imputed information about Hispanic origin or the country of birth of themselves or either parent). These individuals comprise a sample of second-generation Mexicans in which ethnicity is based on parents' countries of birth. For these individuals, Table 7 shows the percentage who self-identify as Mexican and how average years of schooling varies with such self-identification. Standard errors are shown in parentheses. To increase sample sizes, Table 7 pools together men and women, but results that distinguish by sex are similar.

The bottom row of Table 7 indicates that the vast majority, 90 percent, of U.S.-born individuals with a parent born in Mexico self-report as Mexican. Those who do *not* self-identify as Mexican, however, average over a half year more schooling than those who do so self-identify (i.e., 12.9 versus 12.3 years of schooling). These data thus provide some direct evidence of the kind of selective ethnic attrition among Mexican Americans that our previous work (Duncan and Trejo 2005) could only suggest indirectly. Note that the rate of Mexican self-identification is highest when both parents are Mexican-born, somewhat lower when one parent is Mexican-born and the other parent is U.S.-born (which includes U.S.-born Mexican Americans as well as non-Mexicans), and substantially lower in the small number of cases when we can be all but certain that one parent is non-Mexican (because this parent was born in a foreign country other than Mexico).

For our purposes, an analysis of second-generation Mexicans using CPS data has some important advantages over Census-based analyses such as those in our previous paper (Duncan and Trejo 2005) or in the preceding section. First, as noted above, for second-generation

individuals the CPS provides an objective indicator of Mexican descent (i.e., whether either parent was born in Mexico), and therefore we can use self-reported Mexican identification to directly measure the extent and selectivity of ethnic attrition for this population. Second, because the CPS analysis employs information on ethnic self-identification and socioeconomic outcomes for *adults*, it avoids measurement problems that could arise in Census analyses if the information reported for children and youth conveys a misleading forecast of their adult outcomes. Key limitations of the CPS analysis, however, are the smaller sample sizes and the fact that individuals with a foreign-born parent are likely to retain relatively strong ethnic attachments (as evidenced by the high rate of Mexican self-identification in Table 7), so by focusing on the second generation we miss the more extensive ethnic attrition that occurs in later generations. Given the different strengths and weaknesses of the two types of analyses, our Census and CPS analyses complement one another.

B. U.S.-born Mexican-American Children

By matching first- and second-generation Mexicans in the CPS with their relevant family members, we can push this analysis one step further and try to learn something about selective ethnic attrition in the third generation. For children living with both parents, the CPS data reveal how many grandparents were born in Mexico. By examining how the ethnic identification of these children varies with the numbers of parents and grandparents born in Mexico, we can directly estimate the extent of ethnic attrition among second- and third-generation Mexican children.

Here, the analysis sample consists of U.S.-born children ages 17 and below who live in intact families and who have some identifiable Mexican ancestry. We describe as "second-

generation Mexicans" those U.S.-born children with at least one parent born in Mexico, and we designate as "third-generation Mexicans" those U.S.-born children with no parents but at least one grandparent born in Mexico. For comparison purposes, we create one final category of U.S.born Mexicans, the "fourth-and-higher generation," which denotes U.S.-born children with no parents or grandparents born in Mexico but with at least one parent identified as Mexican by the CPS question regarding Hispanic origin. For expositional convenience, we will refer to this group as the "fourth generation." Note that, whereas second- and third-generation Mexican children can be identified using "objective" criteria (i.e., the countries of birth of their parents and grandparents), fourth-generation Mexican children are revealed only by "subjective" indicators (i.e., whether either parent self-identifies as Mexican). Consequently, for our purposes, the fourth-generation category is flawed, because it misses children descended from Mexican immigrants if neither parent self-identifies as Mexican. Data from the 1970 Census Content Reinterview Study, presented earlier in Table 2, indicate that we could be missing a large share of later-generation Mexican-origin families. Nonetheless, we think it informative to include statistics for this flawed fourth-generation category in the tables that follow, but interpretation of these statistics should take into account the incomplete and potentially selective nature of this category.

For the U.S.-born children of Mexican descent in our CPS sample, Table 8 shows their distribution by generation and the rates at which these children subjectively identify as Mexican. Given our definitions, the vast majority (61 percent) of these U.S.-born Mexican-American children are second generation, 13 percent are third generation, and the remaining 26 percent are higher generation. The heterogeneity *within* generations of Mexican Americans is striking, however, and perhaps somewhat surprising. Almost a third of second-generation Mexicans have

a parent who was *not* born in Mexico, and only 17 percent of third-generation Mexicans have a majority of their grandparents born in Mexico. Among so-called fourth-generation Mexicans, 57 percent have a parent who does *not* self-identify as Mexican.

Moreover, this generational complexity is closely related to the children's subjective Mexican identification. Children are virtually certain of identifying as Mexican if both parents or three or more grandparents were born in Mexico, or if both parents self-identify as Mexican. In contrast, rates of Mexican identification fall to 81 percent for second-generation children with only one Mexican-born parent, 79 percent for third-generation children with two grandparents born in Mexico, 58 percent for third-generation children with just one Mexican-born grandparent, and 50 percent for fourth-generation children with only one parent who identifies as Mexican. Among all U.S.-born children in the CPS with some identifiable Mexican ancestry, 16 percent do not subjectively identify as Mexican, and this rate of ethnic attrition rises to almost 30 percent for children in the third generation and beyond.

Table 9 reports how children's rates of Mexican identification vary with which household member answered the CPS questionnaire (father, mother, or other household member) and with which parent has Mexican ancestry (father, mother, or both). For the most part, these distinctions do not greatly matter. Reported rates of Mexican identification for children do tend be somewhat higher, however, when a household member other than the child's parents responds to the survey. Also, among fourth-generation children from interethnic marriages, rates of Mexican identification are higher if it is the mother rather than the father who reports being Mexican, but the subjective and selective nature of the fourth-generation makes it difficult to interpret this finding.

Table 10 begins to explore the selectivity of Mexican identification. In all generations,

children of Mexican descent who identify as Mexican have parents with much lower levels of educational attainment than do the corresponding children who fail to identify as Mexican. Our preceding analyses of Census data in Section II suggest that much of these differentials in parental education will be transmitted to the children.

Table 11 provides an initial glimpse at the human capital of the children. For U.S.-born youth ages 16-17, we undertake an analysis of their Mexican identification and high school dropout rates that is similar in spirit to the Census analysis described in Section II (unfortunately, the CPS does not also provide information about English proficiency). Information about school enrollment pertains to the CPS survey week, so we exclude observations from the months of June, July, and August when students typically are on summer vacation. Table 11 reports how dropout rates vary by generation and Mexican identification. For comparison purposes, Table 9 also displays the corresponding dropout rates for U.S.-born, non-Hispanic white and black youth (with two U.S.-born parents of the same race).

When we do not limit the sample to those who subjectively identify as Mexican, the dropout rate falls sharply from 5.6 percent for second-generation Mexicans to 2.7 percent for the third generation. These data thus suggest that by the third generation, Mexican-American youth have converged to the same dropout rate observed for third-and-higher-generation non-Hispanic white youth. Moreover, the dropout rate of third-generation Mexican youth is 20 percent higher (3.4 percent versus 2.7 percent) when the sample is limited to those youth who self-identify as Mexican. Though the sample sizes are small and the estimates are therefore imprecise, Table 11 provides some direct evidence that selective ethnic attrition could produce sizeable downward bias in standard measures of attainment for later-generation Mexicans which typically rely on ethnic self-identification rather than objective indicators of Mexican ancestry. Certainly, the

apparent extent of such ethnic attrition—in our CPS sample, 31 percent of third-generation Mexican youth fail to self-identify as Mexican—creates the potential for endogenous ethnicity to affect our inferences about the progress of Mexican Americans.

IV. Conclusion

In this paper, we investigate the role that intermarriage plays in the intergenerational transmission of human capital and ethnic identification for Mexican Americans. First, using 2000 Census data for U.S.-born youth ages 16-17 who have at least one Mexican parent, we estimate how the Mexican identification, high school dropout rates, and English proficiency of these youth depend on whether they are the product of endogamous or exogamous marriages. We find that youth who are the products of Mexican intermarriages enjoy large and statistically significant human capital advantages over their counterparts who are the products of endogamous Mexican-American marriages. In addition, only Mexican-American youth with intermarried parents face a significant risk of *not* being identified as Mexican by the Census question regarding Hispanic origin.

Second, we analyze the extent and selectivity of ethnic attrition among second-generation Mexican-American adults and among U.S.-born Mexican-American youth. Using CPS data, we directly assess the influence of endogenous ethnicity by comparing an "objective" indicator of Mexican descent (based on the countries of birth of the respondent and his parents and grandparents) with the standard "subjective" measure of Mexican self-identification (based on the respondent's answer to the Hispanic origin question). For second-generation Mexican-American adults, we find direct evidence of the kind of selective ethnic attrition that our previous work (Duncan and Trejo 2005) could only suggest indirectly. For third-generation

Mexican-American youth, we find some indications that ethnic attrition could be substantial and capable of producing significant downward bias in standard measures of attainment which typically rely on ethnic self-identification rather than objective indicators of Mexican ancestry.

References

- Alba, Richard D. *Italian Americans: Into the Twilight of Ethnicity*. Englewood Cliffs, NJ: Prentice-Hall, 1986.
- _____. Ethnic Identity: The Transformation of White America. New Haven, CT: Yale University Press, 1990.
- Alba, Richard D., and Chamlin, Mitchell B. "A Preliminary Examination of Ethnic Identification among Whites." *American Sociological Review*, April 1983, 48(2), pp. 240-47.
- Alba, Richard D., and Islam, Tariqul. "The Case of the Disappearing Mexican Americans: An Ethnic-Identity Mystery." Manuscript. Albany, NY: SUNY, 2005.
- Bean, Frank D.; Swicegood, C. Gray; and Berg, Ruth. "Mexican-Origin Fertility: New Patterns and Interpretations." *Social Science Quarterly*, March 2000, 81(1), pp. 404-20.
- Bean, Frank D., and Tienda, Marta. *The Hispanic Population of the United States*. New York: Russell Sage Foundation, 1987.
- Blau, Francine D., and Kahn, Lawrence M. "Gender and Assimilation among Mexican Americans." Manuscript. Ithaca, NY: Cornell University, 2005.
- Bleakley, Hoyt, and Chin, Aimee. "What Holds Back the Second Generation? The Intergenerational Transmission of Language Human Capital Among Immigrants." Manuscript. Houston, TX: University of Houston, March 2007.
- Borjas, George J. "The Intergenerational Mobility of Immigrants." *Journal of Labor Economics*, January 1993, Part 1, 11(1), pp. 113-35.
- _____. "Long-Run Convergence of Ethnic Skill Differentials: The Children and Grandchildren of the Great Migration." *Industrial and Labor Relations Review*, July 1994, 47(4), pp. 553-73.
- Brito, Dagobert L. "Education and Asymmetric Hispanic Assimilation: A Preliminary Exploration." Manuscript. Houston, TX: Rice University, 2004.
- Card, David; DiNardo, John; and Estes, Eugena. "The More Things Change: Immigrants and the Children of Immigrants in the 1940s, the 1970s, and the 1990s," in George J. Borjas, ed., *Issues in the Economics of Immigration*. Chicago: University of Chicago Press, 2000, pp. 227-69.
- Couch, Kenneth A., and Dunn, Thomas A. "Intergenerational Correlations in Labor Market

- Status: A Comparison of the United States and Germany." *Journal of Human Resources*, Winter 1997, 32(1), pp. 210-32.
- Davis, Kingsley. "Intermarriage in Caste Societies." *American Anthropologist*, July-September 1941, 43(3, part 1), pp. 376-95.
- del Pinal, Jorge H. *Race and Ethnicity in Census 2000*. Census 2000 Testing, Experimentation, and Evaluation Program: Topic Report No. 9, U.S. Census Bureau. Washington, DC: U.S. Government Printing Office, 2004.
- Duncan, Brian; Hotz, V. Joseph; and Trejo, Stephen J. "Hispanics in the U.S. Labor Market," in Marta Tienda and Faith Mitchell, eds., *Hispanics and the Future of America*. Washington, DC: National Academies Press, 2006, pp. 228-90.
- Duncan, Brian, and Trejo, Stephen J. "Ethnic Identification, Intermarriage, and Unmeasured Progress by Mexican Americans." Working Paper 11423. Cambridge, MA: National Bureau of Economic Research, June 2005.
- Eschbach, Karl. "The Enduring and Vanishing American Indian: American Indian Population Growth and Intermarriage in 1990." *Ethnic and Racial Studies*, January 1995, 18(1), pp. 89-108.
- Eschbach, Karl, and Gomez, Christina. "Choosing Hispanic Identity: Ethnic Identity Switching among Respondents to High School and Beyond." *Social Science Quarterly*, March 1998, 79(1), pp. 74-90.
- Eschbach, Karl; Supple, Khalil; and Snipp, C. Matthew. "Changes in Racial Identification and the Educational Attainment of American Indians, 1970-1990." *Demography*, February 1998, 35(1), pp. 35-43.
- Farley, Reynolds. "Blacks, Hispanics, and White Ethnic Groups: Are Blacks Uniquely Disadvantaged?" *American Economic Review*, May 1990, 80(2), pp. 237-41.
- _____. "The New Census Question about Ancestry: What Did It Tell Us?" *Demography*, August 1991, 28(3), pp. 411-29.
- Farley, Reynolds, and Alba, Richard. "The New Second Generation in the United States." *International Migration Review*, Fall 2002, 36(3), pp. 669-701.
- Fry, Richard, and Lowell, B. Lindsay. "Work or Study: Different Fortunes of U.S. Latino Generations." Report. Washington, DC: Pew Hispanic Center, 2002.
- Fu, Vincent Kang. "Racial Intermarriage Pairings." *Demography*, May 2001, 38(2), pp. 147-59.
- Furtado, Delia. "Human Capital and Interethnic Marriage Decisions." Discussion Paper no. 1989. Bonn, Germany: IZA, February 2006.

- Gans, Herbert J. "Second-Generation Decline: Scenarios for the Economic and Ethnic Futures of the Post-1965 American Immigrants." *Ethnic and Racial Studies*, April 1992, 15(2), pp. 173-92.
- Gordon, Milton M. Assimilation in American Life: The Role of Race, Religion, and National Origins. New York: Oxford University Press, 1964.
- Grogger, Jeffrey, and Trejo, Stephen J. Falling Behind or Moving Up? The Intergenerational Progress of Mexican Americans. San Francisco: Public Policy Institute of California, 2002.
- Haveman, Robert, and Barbara Wolfe. Succeeding Generations: On the Effects of Investments in Children. New York: Russell Sage Foundation, 1994.
- Huntington, Samuel P. Who Are We?: The Challenges to America's Identity. New York: Simon and Schuster, 2004.
- Jaeger, David A. "Reconciling the Old and New Census Bureau Education Questions: Recommendations for Researchers." *Journal of Business and Economics Statistics*, July 1997, 15(3), pp. 300-09.
- Lieberson, Stanley, and Waters, Mary C. From Many Strands: Ethnic and Racial Groups in Contemporary America. New York: Russell Sage Foundation, 1988.
- _____. "The Ethnic Responses of Whites: What Causes Their Instability, Simplification, and Inconsistency?" *Social Forces*, December 1993, 72(2), pp. 421-50.
- Livingston, Gretchen, and Kahn, Joan R. "An American Dream Unfulfilled: The Limited Mobility of Mexican Americans." *Social Science Quarterly*, December 2002, 83(4), pp. 1003-12.
- MacKinnon, Mary, and Parent, Daniel. "Resisting the Melting Pot: The Long Term Impact of Maintaining Identity for Franco-Americans in New England." Manuscript. Montreal: McGill University, August 2005.
- Merton, Robert K. "Intermarriage and the Social Structure: Fact and Theory." *Psychiatry*, 1941, 4, pp. 361-74.
- Mulligan, Casey B. *Parental Priorities and Economic Inequality*. Chicago: University of Chicago Press, 1997.
- Neidert, Lisa J., and Farley, Reynolds. "Assimilation in the United States: An Analysis of Ethnic and Generation Differences in Status and Achievement." *American Sociological Review*, December 1985, 50(6), pp. 840-50.

- Ono, Hiromi. "Assimilation, Ethnic Competition, and Ethnic Identities of U.S.-Born Persons of Mexican Origin." *International Migration Review*, Fall 2002, 36(3), pp. 726-45.
- Oreopoulos, Philip; Page, Marianne E.; and Stevens, Ann Huff. "The Intergenerational Effects of Compulsory Schooling." *Journal of Labor Economics*, October 2006, 24(4), pp. 729-60.
- Perkins, R. Colby. "Evaluating the Passel-Word Spanish Surname List: 1990 Decennial Census Post Enumeration Survey Results." Working Paper no. 4. Washington, DC: U.S. Bureau of the Census, Population Division, August 1993.
- Perlmann, Joel. "Mexicans Now, Italians Then: Intermarriage Patterns." Working Paper no. 376. Annandale-on-Hudson, NY: Jerome Levy Economics Institute, April 2003.
- ______. Italians Then, Mexicans Now: Immigrant Origins and Second-Generation Progress, 1890-2000. New York: Russell Sage Foundation, 2005.
- Perlmann, Joel, and Waldinger, Roger. "The Second Generation and the Children of the Native Born: Comparisons and Refinements." Working Paper no. 174. Annandale-on-Hudson, NY: Jerome Levy Economics Institute, November 1996.
- _____. "Second Generation Decline? Children of Immigrants, Past and Present—A Reconsideration." *International Migration Review*, Winter 1997, 31(4), pp. 893-922.
- Portes, Alejandro, and Rumbaut, Ruben G. *Legacies: The Story of the Immigrant Second Generation*. Berkeley, CA: University of California Press, 2001.
- Portes, Alejandro, and Zhou, Min. "The New Second Generation: Segmented Assimilation and Its Variants Among Post-1965 Immigrant Youth." *Annals of the American Academy of Political and Social Science*, November 1993, 530, pp. 74-96.
- Qian, Zhenchao. "Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990." *Demography*, May 1997, 34(2), pp. 263-76.
- _____. "Who Intermarries? Education, Nativity, Region, and Interracial Marriage, 1980 and 1990." *Journal of Comparative Family Studies*, Autumn 1999, 30(4), pp. 579-97.
- Rosenfeld, Michael J. "The Salience of Pan-National Hispanic and Asian Identities in U.S. Marriage Markets." *Demography*, May 2001, 38(2), pp. 161-75.
- _____. "Measures of Assimilation in the Marriage Market: Mexican Americans 1970-1990." *Journal of Marriage and Family*, February 2002, 64(1), pp. 152-62.
- Rumbaut, Ruben G. "The Crucible Within: Ethnic Identity, Self-Esteem, and Segmented Assimilation Among Children of Immigrants." *International Migration Review*, Winter 1994, 28(4), pp. 748-94.

- Smith, James P. "Assimilation across the Latino Generations." *American Economic Review*, May 2003, 93(2), pp. 315-319.
- Snipp, C. Matthew. *American Indians: The First of this Land*. New York: Russell Sage Foundation, 1989.
- Sowell, Thomas. "Three Black Histories," in Thomas Sowell, ed., *Essays and Data on American Ethnic Groups*. Washington, DC: Urban Institute, 1978, pp. 7-64.
- Stephan, Cookie White, and Stephan, Walter G. "After Intermarriage: Ethnic Identity among Mixed-Heritage Japanese-Americans and Hispanics." *Journal of Marriage and the Family*, May 1989, 51(2), pp. 507-19.
- Trejo, Stephen J. "Why Do Mexican Americans Earn Low Wages?" *Journal of Political Economy*, December 1997, 105(6), pp. 1235-68.
- _____. "Intergenerational Progress of Mexican-Origin Workers in the U.S. Labor Market." *Journal of Human Resources*, Summer 2003, 38(3), pp. 467-89.
- U.S. Bureau of the Census. 1970 Census of Population and Housing, Evaluation and Research Program: Accuracy of Data for Selected Population Characteristics as Measured by Reinterviews. Washington, DC: U.S. Government Printing Office, 1974.
- Waters, Mary C. *Ethnic Options: Choosing Identities in America*. Berkeley, CA: University of California Press, 1990.
- _____. "Ethnic and Racial Identities of Second-Generation Black Immigrants in New York City." *International Migration Review*, Winter 1994, 28(4), pp. 795-820.
- White, Michael J., and Sassler, Sharon. "Judging Not Only by Color: Ethnicity, Nativity, and Neighborhood Attainment." *Social Science Quarterly*, December 2000, 81(4), pp. 997-1013.
- Xie, Yu, and Goyette, Kimberly. "The Racial Identification of Biracial Children with One Asian Parent: Evidence from the 1990 Census." *Social Forces*, December 1997, 76(2), pp. 547-70.

Table 1: Average Years of Education and Log Hourly Earnings, Men Ages 25-59

		3^{rd} +		
	1 st	2 nd	3 rd +	Generation
	Generation	Generation	Generation	Whites
Years of education	8.8 (.04)	12.2 (.06)	12.3 (.04)	13.6 (.007)
Log hourly earnings	2.244 (.006)	2.560 (.015)	2.584 (.010)	2.837 (.002)

Source: March 1998-2002 Current Population Survey data.

Note: Standard errors are shown in parentheses. Sampling weights were employed in these calculations. The samples include men ages 25-59. The samples for the hourly earnings data are further limited to individuals who worked during the calendar year preceding the survey. The "white" ethnic group is defined to exclude Hispanics, as well as blacks, Asians, and Native Americans. The first generation consists of immigrants: foreign-born individuals whose parents were also born outside the United States. The second generation denotes U.S.-born individuals who have at least one foreign-born parent. The third generation identifies U.S. natives whose parents are also natives. Excluded from the samples are foreign-born individuals who have at least one U.S.-born parent, as well as individuals for whom generation cannot be determined because birthplace data are missing for themselves or either parent.

Table 2: Hispanic Identification of Individuals with Ancestors from a Spanish-Speaking Country, as Reported in the 1970 Census Content Reinterview Study

	Percent Who Identified as Hispanic in	
Hispanic Ancestry Classification in Reinterview	the Census	Sample Size
Most recent ancestor from a Spanish-speaking country:		
Respondent (i.e., 1 st generation)	98.7	77
Parent(s) (i.e., 2 nd generation)	83.3	90
Grandparent(s) (i.e., 3 rd generation)	73.0	89
Great grandparent(s) (i.e., 4 th generation)	44.4	27
Further back (i.e., 5 th + generations)	5.6	18
Hispanic ancestry on both sides of family	97.0	266
Hispanic ancestry on one side of family only	21.4	103
Father's side	20.5	44
Mother's side	22.0	59
All individuals with Hispanic ancestry	75.9	369

Source: Table C of U.S. Bureau of the Census (1974, p. 8).

Note: Information regarding the generation of the most recent ancestor from a Spanish-speaking country was missing for 68 respondents who nonetheless indicated that they had Hispanic ancestry on one or both sides of their family.

Table 3: Nativity/Ethnicity Distributions of the Parents of U.S.-Born, Mexican-American Youth Ages 16-17

	Percent	of Sample
Nativity/Ethnicity of Parents	Boys	Girls
Two Mexican parents: Both foreign-born	40.9	39.7
Foreign-born and U.Sborn	11.3	10.4
Both U.Sborn	19.2	20.1
One Mexican parent: Foreign-born	9.0	9.5
U.Sborn	19.6	20.3
	100.0%	100.0%

Note: The samples include U.S.-born youth ages 16 and 17 living in intact families in which at least one parent is identified as Mexican by the Census question regarding Hispanic origin. Suspected stepchildren are excluded. The sample sizes are 7,314 boys and 6,913 girls.

Table 4: Human Capital and Mexican Identification of U.S.-Born Youth Ages 16-17, by Nativity/Ethnicity of Parents

		E	Boys		Girls			
	Dropout	Deficient	Identified	Sample	Dropout	Deficient	Identified	Sample
Nativity/Ethnicity of Parents	Rate	English	as Mexican	Size	Rate	English	as Mexican	Size
Two Mexican parents:								
Both foreign-born	4.18	14.43	97.03	2,994	2.88	13.14	96.07	2,747
	(.37)	(.64)	(.31)	,	(.32)	(.64)	(.37)	,
Foreign-born and U.Sborn	3.64	11.76	97.33	825	4.44	11.93	96.39	721
Č	(.65)	(1.12)	(.56)		(.77)	(1.21)	(.69)	
Both U.Sborn	4.48	9.88	98.22	1,407	3.52	9.06	98.20	1,391
	(.55)	(.80)	(.35)		(.49)	(.77)	(.36)	•
One Mexican parent:	, ,		. ,		, ,		, ,	
Foreign-born	3.65	12.77	61.25	658	2.75	8.72	57.49	654
-	(.73)	(1.30)	(1.90)		(.64)	(1.10)	(1.93)	
U.Sborn	3.08	3.85	65.73	1,430	2.79	4.93	68.43	1,400
	(.46)	(.51)	(1.26)		(.44)	(.58)	(1.24)	
Two non-Mexican parents:								
Both U.Sborn, non-Hispanic white	2.76	1.58	.10	76,180	2.11	2.14	.09	70,057
	(.06)	(.05)	(.01)		(.05)	(.05)	(.01)	
Both U.Sborn, non-Hispanic black	3.17	1.42	.10	5,772	2.45	2.73	.14	5,746
_	(.23)	(.16)	(.04)		(.20)	(.22)	(.05)	

Note: Standard errors are shown in parentheses. The samples include U.S.-born youth ages 16 and 17 living in intact families. Suspected stepchildren are excluded. The "dropout rate" represents the percentage of youth who are not attending school and have not yet completed high school (either through classes or by exam). "Deficient English" represents the percentage of youth who speak a language other than English at home and report speaking English worse than "very well." "Identified as Mexican" represents the percentage of youth who are identified as Mexican by the Census question regarding Hispanic origin.

Table 5: Parental Human Capital of U.S.-Born Youth Ages 16-17, by Nativity/Ethnicity of Parents

	Boys				Girls			
	Mo	ther	Father		Mother		Father	
Nativity/Ethnicity of Parents	Avg. Yrs. of Educ.	Deficient English						
Two Mexican parents:								
Both foreign-born	7.09	77.69	6.97	77.56	7.11	78.09	7.08	78.09
-	(.08)	(.76)	(.08)	(.76)	(.08)	(.79)	(.08)	(.79)
Foreign-born and U.Sborn	10.32	34.06	9.53	41.09	10.10	32.59	9.46	45.77
-	(.13)	(1.65)	(.15)	(1.71)	(.14)	(1.75)	(.15)	(1.86)
Both U.Sborn	11.63	16.56	11.72	17.13	11.74	15.74	11.74	15.10
	(.08)	(.99)	(.08)	(1.00)	(.07)	(.98)	(.08)	(.96)
One Mexican parent:								
Foreign-born	10.46	41.34	9.66	50.46	10.28	38.69	9.45	44.50
-	(.16)	(1.92)	(.19)	(1.95)	(.16)	(1.91)	(.19)	(1.94)
U.Sborn	12.93	4.90	12.91	5.17	12.86	6.07	13.01	5.43
	(.06)	(.57)	(.07)	(.59)	(.06)	(.64)	(.07)	(.61)
Two non-Mexican parents:								
Both U.Sborn, non-Hispanic white	13.51	.65	13.61	.52	13.50	.63	13.66	.48
	(800.)	(.03)	(.009)	(.03)	(.008)	(.03)	(.009)	(.03)
Both U.Sborn, non-Hispanic black	12.93	.69	12.57	.38	12.92	.66	12.53	.45
-	(.03)	(.11)	(.03)	(.08)	(.03)	(.11)	(.03)	(.09)

Note: Standard errors are shown in parentheses. The samples include U.S.-born youth ages 16 and 17 living in intact families. Suspected stepchildren are excluded. "Avg. yrs. of educ." represents the average completed years of schooling of parents. "Deficient English" represents the percentage of parents who speak a language other than English at home and report speaking English worse than "very well."

Table 6: Human Capital Regressions for U.S.-Born, Mexican-American Youth Ages 16-17

		Во	oys			G	rls	
	Dro	pout	Deficien	t English	Dro	pout	Deficien	t English
Regressor	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Two Mexican parents:								
Both foreign-born	.0003	0202	.0579	0217	0030	0198	.0487	0252
č	(.0065)	(.0072)	(.0104)	(.0123)	(.0059)	(.0067)	(.0102)	(.0122)
Foreign-born and U.Sborn	0072	0150	.0223	0040	.0096	.0028	.0318	.0046
	(.0085)	(.0086)	(.0136)	(.0137)	(.0800)	(.0081)	(.0138)	(.0140)
Both U.Sborn (reference group)	,	,		, ,	, ,	,		` ,
One Mexican parent:								
Foreign-born	0100	0172	.0454	.0074	0072	0139	.0057	0260
	(.0093)	(.0093)	(.0149)	(.0151)	(.0084)	(.0085)	(.0144)	(.0147)
U.Sborn	0217	0161	0442	0306	0098	0059	0316	0221
	(.0075)	(.0075)	(.0120)	(.0120)	(.0068)	(.0068)	(.0117)	(.0117)
Parental education (in years):	,	, ,	,	,		,		,
Mother		0021				0023		
		(.0007)				(.0007)		
Father		0024				0014		
		(.0007)				(.0006)		
Parental English deficiency:								
Mother				.0759				.0657
				(.0101)				(.0100)
Father				.0543				.0526
				(.0099)				(.0099)

Note: The reported figures are estimated coefficients from least squares regressions. Standard errors are shown in parentheses. The samples include U.S.-born youth ages 16 and 17 living in intact families in which at least one parent is identified as Mexican by the Census question regarding Hispanic origin. Suspected stepchildren are excluded. The sample sizes are 7,314 boys and 6,913 girls. The dependent variable "dropout" is a dummy identifying youth who are not attending school and have not yet completed high school (either through classes or by exam). The dependent variable "deficient English" is a dummy identifying youth who speak a language other than English at home and report speaking English worse than "very well." In addition to the regressors listed above, all specifications include variables describing the age of the youth, the ages of the mother and father, and geographic location (dummy variables identifying the nine Census divisions, the individual states of California and Texas, and whether the family resides in a metropolitan area.

Table 7: Educational Attainment of Second-Generation Mexican Adults, by Mexican Identification

	Percent of All 2 nd Gen.	Percent Identified	Avg. Yrs. of Ethnic Self-	Sample	
Parents' Countries of Birth	Mexicans	as Mexican	Mexican	Not Mexican	Size
Both parents born in Mexico	50.9	95.8 (.3)	12.07 (.04)	11.97 (.20)	4,877
One parent born in Mexico and other parent:					
Born in Hispanic country other than Mexico	2.0	60.3	12.65	13.15	189
		(3.6)	(.25)	(.32)	
Born in non-Hispanic foreign country	1.4	68.4	13.31	13.87	136
		(4.0)	(.32)	(.32)	
Born in United States	45.7	86.3	12.43	13.16	4,380
		(.5)	(.04)	(.10)	
All 2 nd generation Mexicans	100.0	90.4 (.3)	12.25 (.03)	12.92 (.08)	9,582

Note: Standard errors are shown in parentheses. The sample includes U.S.-born men and women ages 25-59 who have at least one parent born in Mexico. "Identified as Mexican" represents the percentage of adults who are identified as Mexican by the CPS question regarding Hispanic origin.

Table 8: Generation and Mexican Identification of U.S.-born Children of Mexican Descent

	Percent of	5	Percent	0 1
	All U.Sborn	Percent of	Identified	Sample
Generation	Mexicans	Generation	as Mexican	Size
2 nd generation Mexicans:				
Both parents born in Mexico	41.9	68.4	97.9	17,235
One parent born in Mexico	19.3	31.6	80.6	7,959
All 2 nd generation Mexicans	61.2	100.0	92.4	25,194
3 rd generation Mexicans:				
Neither parent born in Mexico and				
Four grandparents born in Mexico	1.3	10.0	96.2	524
Three grandparents born in Mexico	0.9	7.1	95.2	375
Two grandparents born in Mexico	4.4	34.5	78.7	1,815
One grandparent born in Mexico	6.2	48.5	58.4	2,551
All 3 rd generation Mexicans	12.8	100.0	71.8	5,265
4 th + generation Mexicans:				
No parents or grandparents born in Mexico and				
Both parents identified as Mexican	11.2	42.9	98.4	4,592
One parent identified as Mexican	14.8	57.1	50.1	6,112
All 4 th ⁺ generation Mexicans	26.0	100.0	70.8	10,704
All U.Sborn Mexicans	100.0		84.2	41,163

Note: The sample includes U.S.-born children ages 17 and below who live in intact families and either have at least one parent or grandparent born in Mexico or else have at least one parent identified as Mexican in response to the CPS question regarding Hispanic origin. Suspected stepchildren are excluded. "Identified as Mexican" represents the percentage of these children who are identified as Mexican by the CPS Hispanic origin question.

Table 9: Generation and Mexican Identification of U.S.-born Children of Mexican Descent, by Who Responded to Survey and Which Parent Has Mexican Ancestry

		Percent Identified as Mexican					
	Percent of	All	Household N	Member Respond	ing to Survey		
Generation	Generation	Respondents	Father	Mother	Other		
2 nd generation Mexicans:							
Parent born in Mexico on							
Both sides of family	68.4	97.9	97.9	97.8	97.8		
Father's side only	18.9	80.8	80.4	80.5	84.0		
Mother's side only	12.7	80.4	78.4	82.0	78.8		
All 2 nd generation Mexicans	100.0	92.4	92.2	92.0	94.6		
3 rd generation Mexicans:							
Grandparent born in Mexico on							
Both sides of family	21.2	94.5	95.1	93.8	96.3		
Father's side only	41.1	65.7	65.1	65.0	75.3		
Mother's side only	37.6	65.5	62.0	66.6	74.4		
All 3 rd generation Mexicans	100.0	71.8	70.5	71.5	79.7		
4 th + generation Mexicans:							
Parent identified as Mexican on							
Both sides of family	42.9	98.4	98.6	98.4	97.8		
Father's side only	28.6	45.0	45.8	45.0	39.3		
Mother's side only	28.5	55.2	55.1	55.4	54.2		
All 4 th + generation Mexicans	100.0	70.8	70.4	70.6	76.3		
All U.Sborn Mexicans		84.2	83.3	83.6	90.4		

Note: The sample includes U.S.-born children ages 17 and below who live in intact families and either have at least one parent or grandparent born in Mexico or else have at least one parent identified as Mexican in response to the CPS question regarding Hispanic origin. Suspected stepchildren are excluded. "Identified as Mexican" represents the percentage of these children who are identified as Mexican by the CPS Hispanic origin question.

Table 10: Parental Education of U.S.-born Children of Mexican Descent, by Child's Generation and Mexican Identification

	P	Parental Education, by Mexican Identification of Child					
	Averag	ge Years	Percent	Percent without		nt with	
	of Edu	ıcation	High Scho	ol Diploma	Bachelor's Degree		
		Not		Not		Not	
	Mexican	Mexican	Mexican	Mexican	Mexican	Mexican	
Father's Outcomes							
Child's generation:							
2 nd generation Mexicans	9.00	11.04	63.61	37.31	4.22	11.36	
	(.03)	(80.)	(.32)	(1.11)	(.13)	(.73)	
3 rd generation Mexicans	12.36	13.26	22.02	11.90	11.36	23.40	
	(.04)	(.06)	(.67)	(.84)	(.52)	(1.10)	
4 th + generation Mexicans	12.31	13.20	21.09	9.77	12.17	21.72	
	(.03)	(.04)	(.47)	(.53)	(.38)	(.74)	
Mother's Outcomes							
Child's generation:							
2 nd generation Mexicans	9.24	11.26	62.28	36.05	3.84	10.78	
	(.02)	(.08)	(.32)	(1.10)	(.13)	(.71)	
3 rd generation Mexicans	12.36	13.05	20.30	11.97	10.35	18.63	
	(.04)	(.05)	(.65)	(.84)	(.50)	(1.01)	
4 th + generation Mexicans	12.21	13.04	21.52	9.96	10.56	16.63	
	(.03)	(.03)	(.47)	(.53)	(.35)	(.67)	

Note: Standard errors are shown in parentheses. The sample includes U.S.-born children ages 17 and below who live in intact families and either have at least one parent or grandparent born in Mexico or else have at least one parent identified as Mexican in response to the CPS question regarding Hispanic origin. Suspected stepchildren are excluded.

Table 11: Dropout Rates of U.S.-Born Youth Ages 16-17, by Generation and Mexican Identification

	Percent	Dropo	Dropout Rate		
	Identified		Identified	Sample	
Generation/Ethnicity	as Mexican	All Youth	as Mexican	Size	
and	02.6	5 57	E 7.5	1 220	
2 nd generation Mexicans	92.6	5.57	5.75	1,238	
	(.7)	(.65)	(.69)		
3 rd generation Mexicans	68.9	2.70	3.43	296	
	(2.7)	(.94)	(1.28)		
4 th + generation Mexicans	70.6	3.71	4.13	755	
	(1.7)	(.69)	(.86)		
No parents or grandparents born in Mexico and					
Both parents U.Sborn, non-Hispanic whites		2.78		25,334	
		(.10)			
Both parents U.Sborn, non-Hispanic blacks		2.70		1,924	
•		(.37)			

Note: Standard errors are shown in parentheses. The sample includes U.S.-born youth ages 16 and 17 living in intact families. Suspected stepchildren are excluded. "Identified as Mexican" represents the percentage of youth who are identified as Mexican by the CPS question regarding Hispanic origin. The "dropout rate" represents the percentage of youth who are not attending school and have not yet completed high school (either through classes or by exam).