

**NOT SO BIG AFTER ALL?  
GENERATIONAL DIFFERENCES IN FERTILITY  
BETWEEN MEXICAN-AMERICAN AND ANGLO WOMEN**

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**Abstract**

New research shows that recent period estimates of the fertility of Mexican-American women are too high (Parrado 2011). The present research adds to the re-assessment of Mexican-origin fertility by examining the childbearing of later generations using a new data source that allows the isolation of a true third generation. We use children ever born from the Immigration and Intergenerational Mobility in Metropolitan Los Angeles (IIMMLA) survey as well as LA data from the Current Population Survey (CPS). While the CPS requires reliance on a “third-plus” generational aggregation, this is not the case with IIMMLA. Using IIMMLA data, we find that fertility among Mexican-Americans sharply drops between the second and third generations. The magnitude of this decline is completely masked when the comparison group is the “third-plus” generation, leading us conclude that using a “-plus” generation category in research results in misleading findings. The true third-generation measure used here indicates that fertility levels in the Mexican-origin population converge with those of non-Hispanic whites by the third generation, taking into account socioeconomic status and sociocultural differences between the two groups.

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The incorporation of Mexican immigrants in the United States constitutes a critical issue for public policy and an important question for social science research. Fertility incorporation is particularly significant. Because both immigration and immigrant group fertility are major determinants of U.S. population growth (Preston and Hartnett 2010), their magnitude carries implications both for the financial health of public programs and for the likely emergence of hostile U.S. intergroup relations stemming from “demography is destiny” fears. While many analysts have observed that relatively "high" Mexican origin fertility exerts positive effects on future Social Security funding in country (e.g., Jonsson and Rendall 2004), others, including the media, have often invoked negative images and crisis metaphors about levels of fertility and unauthorized Mexican migration (see Chavez' [2008] documentation of examples). Whether positive or negative, such claims about fertility and population growth underscore the importance of ascertaining the true overall level of childbearing among Mexican-Americans. They also point to the need to gauge the extent to which fertility across Mexican-American generations may be changing the longer the members of the group live in the United States.

In 2006, the National Center for Health Statistics (NCHS) estimated a Total Fertility Rate (TFR) for the U.S. Mexican origin population of 3.11 (Martin et al. 2009). When used in population projections, a rate of this magnitude results in quite large population totals for Hispanics by the year 2050 (and for Mexicans who make up a substantial majority of Hispanics) (U.S. Bureau of the Census 2008). Similarly, lower but still relatively high period rates for both foreign-born and native-born Hispanics have been assumed to hold in the future in government, public-policy think tank, and scientific population projections (Jonsson and Rendall 2004, Passel

and Cohn 2008, U.S. Bureau of the Census 2008) (See Parrado [2011] for details about these). But just as there are reasons to think the overall TFRs used as a starting point in such projections may be too high, there are also reasons to think the fertility of today's later-generation Mexican-Americans may be overestimated. Third-generation fertility is particularly important in this regard because certain theories suggest this constitutes exactly the point at which substantially lower childbearing begins. But third-generation fertility has been difficult to assess because only information for "third-plus" members of immigrant groups has been available since the Current Population Survey (CPS) started collecting data on country of birth of parents of the foreign-born in 1994. Since that time it has been possible to approximate third-generation fertility, but only based on a "third-plus" generation measure rather than a "third-only" measure.

Parrado (2011) has recently noted that current period estimates of the level of Mexican-American fertility are generally too high because of increases over the past thirty years in Mexican immigration. In particular, the resumption of childbearing among immigrant women soon after migration has boosted the tempo components of such measures even though their quantum components have held constant or even declined. In this paper, we seek to contribute further to the re-assessment of Mexican-origin fertility by examining childbearing among the third generation, which may be lower than implied by the rough measures of fertility heretofore available only from highly aggregated groups of later-generation Mexican Americans. Below we present new evidence that third generation childbearing is be low enough to suggest near convergence with white fertility, a conclusion we reach by investigating the extent and pattern of fertility differences among three generations of Mexican-origin women in Los Angeles compared to non-Hispanic whites. Such differences, when interpreted with caution, carry the

potential for revealing the degree of fertility change the longer the descendants of Mexican immigrants have resided in the country.

The pattern of generational change in Mexican-origin fertility, particularly how close third-generation childbearing comes to the non-Hispanic white fertility, is of considerable demographic and social-science importance. Much debate, both scholarly and policy-oriented, has revolved around the nature and extent of the incorporation of Mexican immigrants and their descendants into the U.S. “mainstream” (Alba and Nee 2003; Huntington 2004; Telles and Ortiz 2008). Three theoretical perspectives are particularly relevant. One is conventional assimilation theory, which expects immigrants and their descendants’ fertility gradually to converge with that of the mainstream population (Alba and Nee 1997). An overall decrease in Mexican origin fertility across generations would thus indicate acculturation and assimilation towards U.S. family-size norms and childbearing (Parrado and Morgan 2008). An alternative hypothesis -- from ethnic disadvantage, segmented assimilation, or racial hierarchy perspectives (Portes and Rumbaut 2001; Telles and Ortiz 2008) -- would predict instead the maintenance of higher levels of childbearing as a result of the persistence of either sub-cultural norms or economic disadvantage, or both (Frank and Heuveline 2005). Still a third hypothesis, from a delayed incorporation perspective (Bean, Stevens and Wierzbicki 2003; Brown 2007; Brown and Bean 2006), would predict fertility declines are impeded until the third generation because either sociocultural norms and values toward work and family or the obligations of labor migration foster only inchoate incorporation through the second generation. In this regard, the predictions of this hypothesis, if not the mechanisms it points to, are consistent with the ethnic disadvantage or racial hierarchy hypothesis. But the delayed incorporation perspective predicts third-generation fertility will fall considerably compared to the level of the second generation.

The present research thus looks at Mexican origin fertility and whether it diminishes across generations and converges with that of whites. Where differences occur, we explore the patterns in the differences and the factors that account for them. We use data from the Immigration and Intergenerational Mobility in Metropolitan Los Angeles (IIMMLA) survey because it permits the identification of, through questions regarding grandparents' place of birth, a more homogenous and precisely delineated third generation than is possible with other data sources. To our knowledge, no other demographic surveys offer such information. Thus, IIMMLA allows a unique analysis across multiple generations of Mexican-origin respondents. First, we attempt to replicate past cross-generational research that has found differences in fertility from the 1<sup>st</sup> to the second generation but often little if any childbearing difference from the second to the third-plus generation. Second, we use a true third-generation category to assess the degree to which this generation experiences lower fertility than in the second generation. Third, we examine earlier generation fertility to see if declines occur gradually or happen mostly in the third generation, which would be the pattern most consistent with a delayed incorporation model.

## **BACKGROUND AND THEORY**

The United States exhibits higher birth rates than other modernized countries, in large part because of higher fertility levels among immigrant groups, particularly the Mexican-origin group (Lesthaeghe and Neidert 2006). As immigration flows slow (L.A Times 2010), understanding the fertility trend among immigrants and their descendants becomes important for determining population trends as well for assessing incorporation. The Mexican-origin group constitutes by far the largest share of Hispanics in the United States (Pew Hispanic Center 2008).

It also shows one of the highest levels of fertility compared to other Hispanic groups (Landale and Oropesa 2007), and also has a longer history of U.S. migration. Thus, the size of the 3<sup>rd</sup> and later generation is much larger than for other recent immigrant groups (Bean and Stevens 2003). For decades, data have shown that Mexican-origin women average more children than most other immigrant groups and more than native-born blacks and whites in the United States (Bustamente et al. 1998; Ford 1990; Landale and Oropesa 2007; Martin et al. 2009; Stephen 1989).

Standard assimilation hypotheses would expect high Mexican immigrant fertility gradually to decline as both acculturation and structural incorporation occur. Higher fertility levels among Mexican Americans are often characterized as being influenced by historically pro-natalist family orientations (Flores et al. 2004). Based on this historical pro-natalism, *subculture theory* would suggest that, all else equal, the immigrant members of such historically high fertility groups will manifest higher fertility than non-Hispanic whites. This higher fertility is attributable to the overriding emphasis placed on family, as well as a focus on the collective rather than the individual (Bean et al. 1977; Bean and Tienda 1987). The theory expects that even with the attainment of better structural positions in U.S. society, Mexican-Americans may retain higher fertility norms because of the historical legacy of high fertility in Mexico, where the TFR was around seven as recently as 1970, resulting even in higher levels of later-generation fertility compared to peers in the majority group. Research also suggests that Mexican-Americans are more oriented to family formation than whites and even other Hispanic groups (Vega 1995). Landale and Oropesa (2007) note that the Mexican-origin population has among the highest marriage rates for those 20 to 24 years old, as well as increasing non-marital birth rates. Further, by separating Mexican immigrants from their descendants, Ventura and Bachrach

(2000) find that Mexican-American women have more out-of-wedlock births than Mexican immigrant women.

In addition to these sociocultural elements, structural reasons suggest high fertility among those of Mexican origin. Their low education levels (Bean and Stevens 2003) are associated with earlier and higher fertility (Anderson 1999; Edin and England 2005; Rindfuss et al. 1988; Rindfuss et al. 1996; Rindfuss and Sweet 1977). While some argue that education has a larger effect on fertility for whites than for Hispanics (Forste and Tienda 1992; Glick et al. 2005), education has repeatedly been found to lead to substantial reductions in fertility among women of Mexican origin (Hill and Johnson, 2004; Parrado and Morgan 2008; Telles and Ortiz 2008). Parrado and Morgan (2008) go as far as to say the relationship between years of education and fertility is actually greater for 2<sup>nd</sup> and 3<sup>rd</sup> generation women than it is for white women. A structural incorporation/social characteristics hypothesis consistent with assimilation ideas is that education differences will be largely responsible for fertility differences between whites and Mexican-Americans.

These fertility differences occur within a context of nearly worldwide drops in childbearing. At the nation-state level, fertility has been found to decline in less developed countries after nearby advanced countries began their fertility decline (Bongaarts and Watkins 1996), indicating the importance of proximity to developed countries. Further, Rindfuss et al. (2004) show that knowing even a handful of people who have different family or childbearing norms can positively impact personal attitudes towards non-traditional family and childbearing practices. Given the history of return migration between Mexico and the United States, people probably have been exchanging ideas about ideal family sizes for decades. Barber and Axinn (2004) show that media can influence fertility and family values and norms. So, exposure to U.S.



fertility norms, return migration by those who have spent time in the United States, as well as access to American media, could also affect fertility norms, potentially starting the process of acculturation even before migrants depart for the United States. Fertility trends within Mexico since 1970 support such arguments. Mexican fertility decline has been among the most dramatic in the world. Since the early 1960s, Mexican fertility declined from a high of 7.2 children per woman to its currently estimated level of 2.4 children per woman (Tuiran, Partida, Mojarro and Zuniga 2003). Some have suggested that this current total fertility is lower than that of Mexican immigrants within the United States (Frank and Heuveline 2005), leading to questions about the selectivity of the Mexico-U.S. immigration stream as well as the discrimination that Mexicans encounter in the United States.

An alternative theoretical paradigm to the assimilation model is the ethnic disadvantage (and segmented assimilation) model, often associated with Portes and Bach (1985), Portes and Zhou (1993) and Portes and Rumbaut (2001). These scholars focus on how, despite increasing knowledge and interaction with the host country, native-born descendants of immigrants do not show evidence of complete incorporation. Instead, structural disadvantages keep at least some immigrants and their descendants from incorporating (Portes and Zhou 1993). Disadvantage and fertility indeed appear to be related. Brewster (1994) found that teens with blocked opportunities are more likely to engage in early family formation. Anderson (1999) discusses how young black women in Philadelphia with few career prospects bear children in the desire for something meaningful. Likewise, Edin and Kefalas (2005) discuss how poor women place a high value on children and face relatively lower opportunity costs to childbearing because they are forgoing only low-wage jobs. Other research on Mexican origin women's fertility also shows signs of incomplete incorporation and structural disadvantage in the 3<sup>rd</sup> plus generation group. Using the

1986 and 1988 Current Population Survey (CPS) Bean et al. (2000) found that, while fertility rates were lower from the 1<sup>st</sup> to the second generation, fertility rates were higher from the 2<sup>nd</sup> to 3<sup>rd</sup> plus generations. Similarly, Frank and Heuveline (2005) find the same trend, and emphasize the early fertility of the 3<sup>rd</sup> plus generation as the source of its elevated fertility.

A recent alternative theoretical perspective applied to the Mexican-origin group is that of delayed incorporation (Bean, Stevens and Wierzbicki 2003). This perspective views the labor migration and working-class experiences of many Mexican migrants, especially their undocumented status, as entailing constraints that inhibit many kinds of first and second generation incorporation and thus also longer-term inter- and intra-generational fertility consequences. Further treatments are given in Brown (2007; Brown and Bean 2006, and Bean et al 2011), which note the impact of obligations that individuals in the 1<sup>st</sup>, 1.5 and second generations have to kin both in the United States and in Mexico. Individuals themselves or their kin are likely to at some point to have been undocumented immigrants, and individuals must use their limited resources to help parents and others who have been undocumented in a number of ways. It is not until the third generation when, by definition, an individual must have two U.S.-born parents, that the constraints from the legacy of undocumented status loosen, with individuals incurring fewer family obligations and the pace of incorporation thus accelerating. Delayed incorporation in the third generation can result from either cultural or structural factors creating disjunctures between the 2<sup>nd</sup> and 3<sup>rd</sup> generations. An example is the second generation's maintenance of working-class norms and/or values that constrain the use of resources to attain such outcomes as spatial mobility before the third generation (Brown 2007). The perspective would thus predict the maintenance of higher fertility through the second generation, followed by lower fertility in the third generation.

## DATA AND METHODS

Data for the research come from the 2004 Immigration and Intergenerational Mobility in Metropolitan Los Angeles (IIMMLA) survey. Los Angeles is a major U.S. immigration hub and has been the main receiving center for generations of Mexicans (Grebler, Moore & Guzman 1970). With nearly a population of 6 million, Mexican origin people of Mexican ancestry account for over one-third of the Los Angeles population and give the city, outside of Mexico City, the largest urban Mexican-origin conglomeration in the world (Bean et al. 2006). With a large number of Mexican immigrants across multiple generations, Los Angeles provides an important location for studying Mexican origin fertility. For all Mexican-origin and white and black groups in the five-county LA metropolitan area (Los Angeles, Orange, Riverside, San Bernardino and Ventura counties), the IIMMLA survey drew a random sample of adult respondents for telephone interviews. The survey sampled all generations of Mexican origin, so 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> plus generation respondents are included.

To identify national origin, IIMMLA asked respondents about their country of birth as well as their parents' and grandparents' countries of birth. Of those initially contacted who were born in the U.S. the survey also asked whether they had any ancestors from non-U.S. locations, in this case Mexico. Because the survey obtained information about age of arrival to the United States among the foreign-born respondents, we can define a first generation group distinguished a "1.0" generation group from a "1.5" group. The former are those who came from Mexico and arrived at age thirteen or older, while the latter is defined as those arriving before age thirteen. The second generation is defined as those who were born in the U.S. with at least one parent born in Mexico. The third generation is defined as those who have two native-born parents and

at least one grandparent born in Mexico. The fourth-plus generation consists of those with all U.S. born parents and grandparents, but also report Mexican ancestry. Persons who do not identify as Hispanic, both of whose parents' are native born, and who identify as white or black, are included in third-plus non-Hispanic white and black comparison groups, respectively.

We stress that the use of a “plus” generation is inherently problematic for Mexican-Americans, for several reasons. First, Mexicans are an immigrant group with a long history of out-marriage, particularly among women and the highest status members of the group (Cazares, Murguia and Frisbie 1985; Mittelbach and Moore 1968). Out-marrying women are likely to adopt their husbands' non-Hispanic surnames. Especially after three or more generations in the United States, selectivity issues involving who remains in the group become ever more important. Using data from three censuses, researchers (Alba and Islam 2009; Bean Swicegood and Berg 2000; Duncan and Trejo 2008) have documented larger than demographically expected declines in the size of birth cohorts of U.S.-born Mexican-Americans, especially females, leading to the inference that many respondents of Mexican ancestry must be choosing not to identify as Mexican. Evidence from qualitative research also finds that the children of Mexican/Anglo intermarriages are less likely to identify as Mexican-American (Lee and Bean 2010). Even in data sets like IIMMLA, in which respondents are asked whether they have ancestors from Mexico, selectivity bias may occur because the children of intermarriages may be less likely to know the origins of all of their great- or great-great grandparents.

Second, it is all too easy to conflate cross-sectional analyses of immigrant generations with true parent-child mobility, a particular problem when the immigrant streams vary in their human capital and contexts of reception (Alba et al. 2011; Bean, Brown, and Bachmeier 2010; Smith 2003). Mexican immigrants and their children faced greater discrimination in the early and

middle part of the 20<sup>th</sup> century than today, and particularly in Texas and the education levels of those in Texas lagged behind those of Mexican Americans in California (Grebler, Moore, and Guzmán 1970). Such historical factors suggest that the status of those who are “fourth-plus” generation now may bear widely varying relationships to the behaviors and attainments of the children of today’s third generation. For all of the above reasons, research results for all generational aggregations that involve more than one generation are less useful than results from a single immigrant generation. Moreover, as we detail below, the finding of the present research that the “pure third” generation differs from the “third-plus” generation itself casts prima facie empirical doubt on the usefulness of “plus-generation” information.

The IIMMLA sample consists of young adults aged 20 to 40 years old, as based on the “most recent birthday” method of determining the age of respondents. The survey was administered either in English or Spanish using a computer assisted telephone interview system (see Bean, Brown and Rumbaut 2006; Rumbaut, Massey and Bean 2006; and Bean, Brown and Bachmeier 2010; for further discussion of IIMMLA). The full survey includes 4,780 respondents, with 3,448 from the 1.5 and second generation and 1,215 in third and later generations. In addition to Mexicans, whites and blacks, the sample included 1.5 and 2.0 generation Salvadorans, Guatemalans, Chinese, Vietnamese, Filipino and other birth/ancestries. These groups are not included in the present analyses. Also, we examine only females in order to allow comparisons with similar CPS fertility supplement data. We limit the Mexican sample to these respondents who report Mexican origin in the first through the third generation and the white and black respondents who serve as comparison groups (a total of 1,038 and 944 respondents, respectively). To assess the representativeness of the IIMMLA data and to supplement the analyses, we pool together data from several CPS June fertility supplements for

women in the LA metropolitan area (the 2000, 2002, 2004, 2006 and 2008 surveys). So the data will correspond with the IIMMLA sample, we restrict the age range in the CPS data to those between twenty and forty years old.

It is important to assess the degree to which IIMMLA provides a representative portrait of the Mexican origin population of Los Angeles. The IIMMLA survey involved a random-digit-dialing (RDD) approach with targets for the sizes of various immigrant sub-groups and for certain Mexican American generational groups, as well as for comparison groups of Anglos and blacks. This means that the Mexican generational groups we examine are randomly selected but the total sample does not reflect the Mexican American generational composition in the metropolitan area because the target sizes for the generations varied (125 for the first generation, 800 for the second generation, 200 for the third generation and 200 for the fourth-plus generation). As a result, the data are weighted to achieve the LA metropolitan area Mexican-origin generational composition. When we compare average education and age for each of IIMMLA's generation groups with its counterpart from the June fertility supplements of the Current Population survey (CPS), the resulting averages across the two data sets were very similar (see Table 1). The average age and education for the Mexican origin and white samples are nearly identical, and only two of the eight generational comparisons, which are based on much smaller sample sizes for the IIMMLA data, showed slightly statistically significant differences. Overall, the IIMMLA survey appears to provide a satisfactorily representative picture of Los Angeles' Mexican origin population.

The June CPS collects information on the total number of live births a woman has had, not including still births or adopted children. It also collects demographic data on country of birth, age of arrival, parental country of birth as well as race and ethnicity, which allows us to

construct comparable first generation, 1.5 generation, second generation and non-Hispanic white and black groups as in IIMMLA. The “third plus” generation in the CPS, however must be based on identification as “Mexican” rather than either grandparent’s country of birth of ancestry from Mexico as in IIMMLA, because questions on grandparents’ places of birth are not included in the CPS. The CPS provides questions on education attainment, marital status and some household composition questions such as whether the respondent is a student that are comparable to IIMMLA. It also inquires as to the language spoken in the household, but the only available response is “Spanish only language spoken by those 15 and older”, a more limited response than in IIMMLA. The CPS provides representative data with more observations based for the same geographic region and, save the “third plus” generation, equivalent ways to measure immigrant status and race/ethnicity, as well as fertility, education and marital status.

*Measures:* The dependent variable is cumulative fertility. The survey asks whether the respondent is the parent of child/children under the age 18 living in the household, and if so, how many. It also asks whether the respondent is the parent of a child under 18 who does not live in the household, and if so, how many. By combining these, we obtain an ordinal total number of children the respondent has that are under 18 years of age. By limiting it to children under 18, there is a chance some number of children will not be reported, some older women may have had children at a young age who are now over 18. To correct for this, we added an additional child to the fertility count for the 37 cases whose current age and age at first birth indicate a child could be over 18 years old (e.g., as in the case of a 40 year old woman who reports a first birth when she is 20). This does not resolve the situation completely, since it is possible respondents had twin births or additional children who are over 18; however, only 10 of the cases have more than a two year window of what could be considered censored information, limiting the degree of this

kind of bias. It should also be noted that each generation group has roughly the same frequency of respondents for whom this adjustment was needed<sup>1</sup>.

Age is used as a control variable to adjust for differences among the groups. To capture sociocultural impacts on fertility, we include variables on marital or cohabiting status, number of siblings and whether the respondent had a white partner. Marital status is included based on a question with responses that include never married, married, divorced, separated, cohabitating and widowed. Also, a category of remarried is included based on a question of number of times one has been married. These categories are represented by a dummy variable for ever married (married, remarried, divorced, widowed or separated) and never married (single or cohabiting). The number of siblings is included to capture parental fertility. Finally, intermarriage is considered an indicator of incorporation, and a dummy code for having a white partner is included if the partner is non-Hispanic and is identified as white by the respondent. Female education is included to adjust for differences in social structural standing. The variable is based on degree attainment, which consists of less than high school, high school graduate, vocational training, some college, or having an Associate Degree, College, M.A or PhD. These have been aggregated into less than high school, high school/vocational, some college/Associates degree and college/advanced degree. Again, these are the education levels of the women. Finally, a dummy variable coded 1.0 if respondent had ever sent remittances is included, which taps the extent to which family financial obligations are acted upon.

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<sup>1</sup> The first generation has 5 such respondents, the 1.5 generation 7 such respondents, the second generation 8 such respondents, and the third generation 4 such respondents. Whites have 6 such respondents. Overall fertility in the IIMMLA sample also appears to be slightly upwardly biased, but only statistically significantly so for second generation women ages 25-29. Given that this significance remains even after controlling for education, marital status and other characteristics associated with increased childbearing among the second generation, the childbearing measure for this group is adjusted using the comparable CPS estimate.



*Methods:* The empirical analysis focus on the differences between Mexican-origin generational groups and with the white majority. First, descriptive statistics and their relationship between fertility and generations are examined. Next, a series of Poisson regressions, controlling for baseline (age and gender), socio-cultural (marital status, number of siblings & white partner), social structure (female education) and delayed incorporation (remittances) is conducted. The Poisson regression is preferred over OLS due to the ordinal count data that measures fertility. A likelihood ratio test indicated over-dispersion was not an issue, making the Poisson preferable to a negative binomial regression. The results are presented as incidence rate ratios (IRR), which can be interpreted similarly as odds ratios. For example, the 2.23 IRR for the first generation in the baseline model would be interpreted as the first generation having one hundred and twenty-three percent higher fertility than the white reference group.

## RESULTS

The limitations of using information limited to "plus-generation" measures (e.g., to data on the third-plus generation, which means information on the third, fourth, fifth, and higher generations combined) are dramatically evident in the right-hand side of Table 2, which shows average unadjusted numbers of children ever born for the Mexican origin generational groups that can be constructed from the information available in CPS data. The first, or immigrant, or 1.0 generation reports 2.1 children per woman, a figure that drops to 1.6 by the 1.5 generation, and then to 1.1 by the second generation. Without controlling for the influence of other factors on fertility, this would seem to indicate that assimilation-type sources of influence operate up through the second generation. However, when we look at fertility in the third-plus generation, childbearing appears to have increased considerably, rising to 1.5 children per woman, a level

that is not only about half-a-child more than that of Anglos, but also one whose rise from the second generation, if taken at face value, would contradict totally the precepts of conventional assimilation hypotheses. When we examine childbearing in the IIMMLA data on the left-hand side of the table, we observe exactly the same pattern, with children-ever-born rising from 1.3 in the second generation to 1.5 in the third-plus. Such results invite explanations in terms of theories that emphasize barriers to socioeconomic mobility and mechanisms that make for higher levels of childbearing. These are most prominently featured in theoretical perspectives like ethnic disadvantage, racial hierarchy, and ethnic resilience which highlight the influence of discrimination and structural obstacles to incorporation in American society.

However, such conclusions may be pre-mature because the pattern displayed in both IIMMLA and CPS data may be an artifact of the third-plus-generation aggregation. Fortunately, while the CPS data do not permit us to disaggregate further, the IIMMLA data do, as we noted above. When we isolate the third generation of Mexican origin women in IIMMLA, that is when we construct a 3.0 generation category and separate it from the 3+ category, we find that the 3.0 generation shows only 1.2 children per woman. In other words, the pattern from the first to the third generations now goes from high to low (for example, see Figure 1, which shows the pattern expressed as differences from Anglo fertility), or one that resembles what one would expect based on assimilation kinds of hypotheses. Exactly similar findings emerge in the case of years of schooling. If nothing else, such findings make clear the risks involved in basing interpretations of research results on measures that are agglomerations of multiple generations. As a consequence, we focus in the rest of the paper on results for generational groups only through the true third generation of Mexican-origin women.

We show the descriptive statistics for the variables included in the analyses in Table 4. Particularly notable are the generational patterns with respect to certain variables. Some show the conventional assimilation pattern of gradual decline, as in the case of the number of siblings, the proportion ever married, and the proportion having a birth before age 25, all of which run from higher to lower across generations. Several, however, reveal a different pattern of dramatic changes from the second to the third generation, in accordance with the delayed incorporation theoretical perspective. For example, through the second generation, over 9 in 10 respondents report Spanish being spoken in their households while growing up, but this then drops precipitously in the third generation to only 3 in 10 reporting household Spanish. Similarly, fewer than 1 in 10 report having an Anglo spouse or partner through the second generation, while over 4 in 10 do so in the third generation. And the average maternal age at first birth shows only modest (and statistically insignificant) change through the first two generations (as well moving in the opposite direction from assimilation expectations), before rising markedly in the third generation. In sum, evidence emerges that both relatively gradual assimilation and sharp second/third delayed incorporation change is taking place when we are able to examine the isolated third generation category.

Table 5 presents the incidents rate ratios (IRR) from the Poisson regressions with robust standard errors in parenthesis. In the baseline model, controlling for age, we note a similar pattern to what we have seen in the descriptive statistics, namely declining fertility differences across the Mexican origin generations compared to whites. Without adjusting for the influence of other factors, this supports a pattern of assimilation across the generations but suggests that three generations are not enough time for Mexican-origin fertility to converge with that of whites.

In an attempt to reveal the pattern of fertility differences that reflect the influence of social structural variables, the second model includes socio-cultural variables. By controlling for the latter, we in effect remove from the coefficient that part of the difference that is attributable to sociocultural factors, leaving in the coefficient the part owing to factors not removed (i.e., structural factors). The sociocultural variables included are cohabiting and marital status, being a full-time student, number of siblings, exposure to household Spanish while growing up, and whether the partner/spouse is white. Taking out the influence of these variables leaves a notable but diminished effect of social structural factors on fertility across the Mexican origin generations in comparison to whites. Among the sociocultural variables, ever having been in a formal union, despite the literature on high and increasing levels of non-marital childbirth, remains salient in the Mexican origin population, with those reporting such situations showing ninety-five percent higher fertility. The number of siblings, which serves as a proxy for parental fertility, is also significant, as is having a white partner, which reduces fertility by almost twenty. With these and sociocultural factors removed, the structural related pattern of gradual decline that remains is consistent with an assimilation hypothesis.

Model three includes a social structural educational attainment variable in order to reveal any pattern left in differences due to sociocultural factors. In this case, a clustering occurs among the first, 1.5 and second generations in fertility difference with whites. All show substantially higher childbearing (from 35 to almost 50 percent) than whites. However, moving from the second to the third generation, the difference between Mexican-Americans and whites declines to statistical non-significance, providing evidence consistent with delayed incorporation. Such a sharp disjuncture between the second and the third generation is something that neither sub-cultural nor segmented assimilation hypotheses would expect in their current formulations.

The fourth model takes into account both socio-cultural and social structural variables. Such controls again show a clustering of fertility differences from whites among the first, 1.5 and second generations together as in model three, although none are now statistically significant.

The final model incorporates the remittance variable for the 1<sup>st</sup>, 1.5 and second generations. Given the fertility differences among the first, 1.5 and second generations between those who send remittances and those who do not, it is no surprise that controlling for remittances has the largest effect among the first and 1.5 generations, and only minimally impacts the second generation. Like in models three and four, there is clustering of the fertility differences among the first, 1.5 and second generations differ from that of the third generation. The remittances variable itself is not significant and alters only one of the socio-culture or social structure variables. However, it does have a notable effect on the first, and to a lesser extent, the 1.5 generation, even after controlling for education.

## **DISCUSSION AND CONCLUSIONS**

In the baseline model, and even after controlling for socio-cultural variable, the decline in fertility differences with whites across Mexican origin generations is consistent with the Alba and Nee's (2003) recent formulation of incorporation theory. While it is not a classic straight-line pattern, there is evidence of across generational convergence towards that of whites. It does not appear that there is then some sub-cultural element to maintaining high fertility vis-à-vis whites, and, while there could be some elements of a segmented assimilation, given the stagnation between the 1.5 and second generations, it is unable to account for the drop in fertility differences among the third generation. Given the significant difference between the third

generation and the remaining Mexican origin generational groups, there may be some delayed incorporation processes, which are not mutually exclusive to a standard incorporation process.

However, when “taking out” the influence of educational attainment, a clustering of IRR’s involving the first, 1.5 and second generations emerges, with the third generation being distinctly different and closer to that of whites. This clustering of fertility differences among the first, 1.5 and second generations continues through models three, four and five and suggests a pattern of delayed incorporation processes at work among these earlier generations. Because the sharp drop between the second and third generation is a pattern neither sub-cultural nor segmented assimilation hypotheses is able to explain.

In all, the results of this analysis support the hypothesis that, with greater exposure to the U.S., as measured by generation, a decrease in fertility will occur. However, this process is not as gradual as even the more recent formulations of incorporation would predict. Higher fertility is maintained in the 1.5 and second generations followed by a significant decline into the third generation. This is a compelling finding that differs from recent investigations into this topic using national as well as California specific datasets that employ a “3<sup>rd</sup> plus” generation category instead of an isolated third generation category (Bean et al. 2000; Frank and Heuveline 2005; Hill & Johnson 2004). In addition, preliminary research pooling together CPS data for the equivalent geographic area that IIMMLA covers from 2000, 2002, 2004, 2006 and 2008 suggests a pattern of “third plus” generation fertility increase in the Los Angeles metro area as well. Given that the “fourth plus” generation in IIMMLA experiences an increase in fertility, a potential explanation for the discrepancies between the data are that there is a greater number of “fourth plus” generation respondents in the CPS that cause the heterogeneous “third plus” generation to look as if it has higher fertility.

Limitations of this research include its regional focus on the L.A. context, the small number of observations which does not allow for more nuanced research as well as the cross-sectional nature of the research. Past research that has found fertility increases across Mexican origin generations has focused on national-level fertility (Bean et al. 2000; Frank and Heuveline 2005) or the California context (Hill and Johnson 2002). Second, the number of observations does not allow for more nuanced generational groups, such as a second generation member having one U.S. parent and one Mexican parent versus two Mexican parents. The assumption of this paper is there is no difference for those people with one versus three Mexican born grandparents,' which may not be the case. Finally, as is discussed by Smith (2003) and further brought to light by Parrado and Morgan (2008), cross sectional data does not provide a true test of incorporation, since the second generation cannot be the children of the first generation in this data. Further, these are not completed fertility histories. If a particular group enters into fertility earlier or later but come to have the same completed fertility in the end, this could lead to the interpretation that differences exist between groups when in reality they do not.

Immediate future research includes using data on the L.A. context to see whether a 3<sup>rd</sup> plus generation fertility increase exists as it does in both the national and the California data. Also, additional delayed incorporation variables are being explored in an attempt to identify the processes that are keeping the second generations fertility elevated after controlling for social structure elements. More broadly, this project contributes to the growing body of research that suggests the importance of identifying a third generation based on questions of grandparents' country of birth rather than a heterogeneous 3<sup>rd</sup> plus generation through self-identification. Finally, if education levels continue to rise, Mexican origin fertility may not be as large as currently predicted, and the group may not grow as large as quickly as previously thought.

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**Figure 1. Unadjusted Percentage Fertility Differences Between Mexican-Americans and Whites: Comparing 3.0 and 3rd+ Generations**

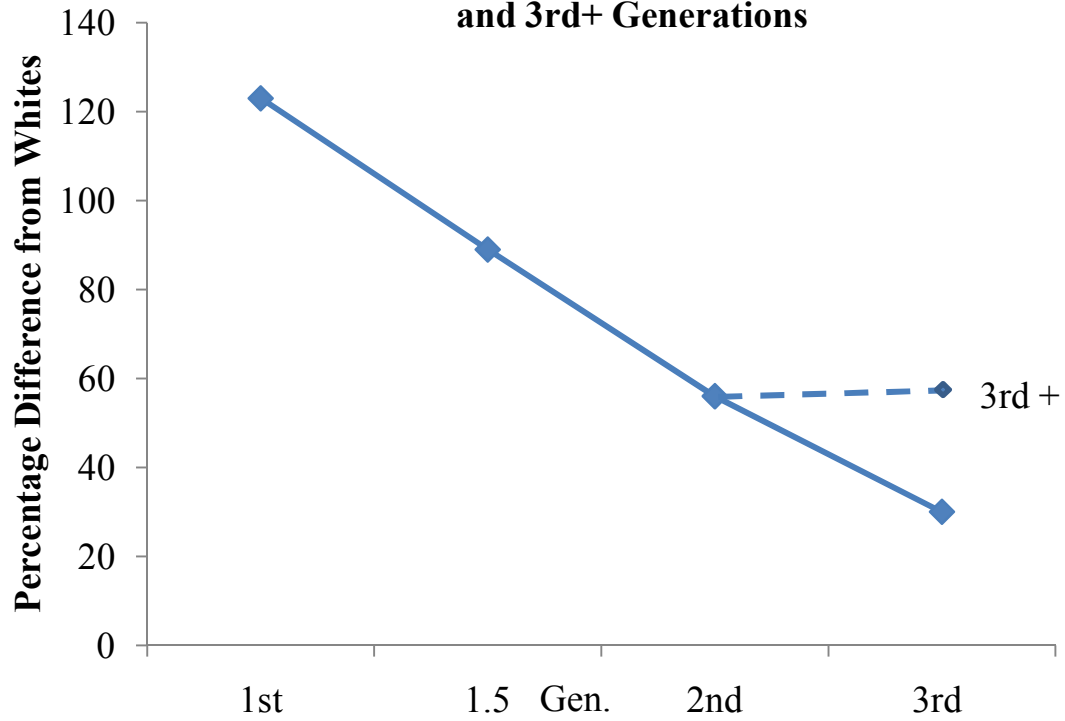


Table 1: Mean Education and Age for Mexican Generational Groups, Whites and Blacks, IIMMLA and CPS-LA Samples

| I: Education   |                     |       |           |       |
|----------------|---------------------|-------|-----------|-------|
|                | IIMMLA <sup>1</sup> |       | CPS       |       |
|                | $\bar{x}$           | n     | $\bar{x}$ | n     |
| Mexican-Origin | 11.3                | 644   | 11.4      | 1627  |
| 1st Gen        | 8.9                 | 66    | 9.5       | 709   |
| 1.5 Gen        | <b>12.4</b>         | 132   | 11.7      | 222   |
| 2nd Gen        | 13.4                | 302   | 13.1      | 381   |
| 3rd + Gen      | 13.4                | 144   | 13.1      | 298   |
| Native Born    |                     |       |           |       |
| White          | <b>14.9</b>         | 205   | 14.4      | 1,156 |
| Black          | 13.8                | 189   | 13.6      | 266   |
| Total          | 12.5                | 1,038 | 12.8      | 3,041 |

| II: Age        |             |       |           |       |
|----------------|-------------|-------|-----------|-------|
|                | IIMMLA      |       | CPS       |       |
|                | $\bar{x}$   | n     | $\bar{x}$ | n     |
| Mexican-Origin | 29.6        | 644   | 29.8      | 1627  |
| 1st Gen        | 31.1        | 66    | 31.5      | 709   |
| 1.5 Gen        | 29.3        | 132   | 29.4      | 222   |
| 2nd Gen        | <b>27.6</b> | 302   | 26.8      | 398   |
| 3rd + Gen      | 29.4        | 144   | 29.8      | 298   |
| Native Born    |             |       |           |       |
| White          | 30.7        | 205   | 30.6      | 1,156 |
| Black          | 31.2        | 189   | 30        | 266   |
| Total          | 30.1        | 1,038 | 30.1      | 3,041 |

Source: IIMMLA and June CPS fertility supplement for Metropolitan Los Angeles (2000, 2002, 2004, 2006, 2008)

**Bold-face:**  $p < .05$

<sup>1</sup> IIMMLA results are weighted to reflect the generational composition of the Mexican-origin population as indicated by the CPS-LA data.

Table 2: Mean Number of Children Ever Born for Mexican-Origin Generational Groups, Whites and Blacks, IIMMLA and LA-CPS Samples

|                | IIMMLA    |       | CPS       |       |
|----------------|-----------|-------|-----------|-------|
|                | $\bar{x}$ | n     | $\bar{x}$ | n     |
| Mexican-Origin | 1.81      | 644   | 1.67      | 1,627 |
| 1st Gen        | 2.23      | 66    | 2.08      | 709   |
| 1.5 Gen        | 1.72      | 132   | 1.61      | 222   |
| 2nd Gen        | 1.26      | 302   | 1.12      | 381   |
| 3rd + Gen      | 1.43      | 144   | 1.48      | 298   |
| Native Born    |           |       |           |       |
| White          | 1.00      | 205   | 0.96      | 1,156 |
| Black          | 1.50      | 189   | 1.45      | 266   |
| Total          | 1.57      | 1,038 | 1.37      | 3,041 |

Source: IIMMLA and June CPS fertility supplement for Metropolitan Los Angeles (2000, 2002, 2004, 2006, 2008)



Table 3: Mean Education and Fertility Comparisons between 3<sup>rd</sup> and 3<sup>rd</sup>-plus Generation Mexican Women, IIMMLA

| Generation        | Years of Education | Fertility | n   |
|-------------------|--------------------|-----------|-----|
| 3 <sup>rd</sup>   | 13.6               | 1.26      | 75  |
| 3 <sup>rd</sup> + | 13.4               | 1.43      | 144 |
| 4 <sup>th</sup> + | 13.1               | 1.65      | 69  |

Table 4: Descriptive Statistics for Selected Characteristics for Mexican Generational Groups, Whites and Blacks

|  | <i>1<sup>st</sup> Generation</i> | <i>1.5 Generation</i> | <i>2<sup>nd</sup> Generation</i>           | <i>3<sup>rd</sup> Generation</i>    | <i>White</i>   | <i>Black</i>   |
|--|----------------------------------|-----------------------|--|-------------------------------------|--|--|
| Generation Defined                           | Arrive in U.S.>=12               | Arrive in U.S. <12    | U.S.-born with 1 or 2 Mexican-born parents | At least 1 Mexican born grandparent | No Hispanic or Asian ancestry & self-identified as white | No Hispanic or Asian ancestry & self-identified as black |
| Proportion ever Married                      | .68                              | .56                   | .54  | .52                                 | .56  | .40  |
| Proportion cohabitating                      | .14                              | .14                   | .08  | .12                                 | .08  | .05  |
| Proportion with white partner <sup>1</sup>   | .02                              | .05                   | .10  | .42                                 | .79  | .04  |
| Proportion full-time students                | .03                              | .10                   | .17  | .12                                 | .14  | .20  |
| Average # Siblings                           | 7                                | 4.9                   | 4.3  | 4.1                                 | 2.9  | 5.2  |
| Proportion sending remittances               | .71                              | .42                   | .25  | -                                   | -  | -  |
| Proportion speaking Spanish at home as child | .98                              | .97                   | .91  | .31                                 | .03  | .05  |
| Age at 1st birth <sup>2</sup>                | 21.6                             | 21.1                  | 20.7                                       | 23                                  | 24.8   | 21.8   |
| Proportion w/ birth before 25                | .68                              | .52                   | .53  | .33                                 | .25  | .47  |
| n  | 66                               | 132                   | 302  | 75                                  | 205  | 189  |

Source: IIMMLA

<sup>1</sup> Of those who are married or cohabiting

<sup>2</sup> Of those who report having a partner

Table 5: Negative Binomial Regression of Fertility on Mexican-Origin Generational Groups, Whites and Blacks, with select characteristics

|                                       | <i>Model 1</i>    | <i>Model 2</i>           | <i>Model 3</i>        | <i>Model 4</i>                        | <i>Model 5</i>           |
|---------------------------------------|-------------------|--------------------------|-----------------------|---------------------------------------|--------------------------|
|                                       | Baseline          | Baseline + Sociocultural | Baseline + Structural | Baseline + Sociocultural + Structural | Full Model + remittances |
| 1st Generation                        | 2.23**<br>(7.59)  | 1.57**<br>(2.68)         | 1.48*<br>(2.23)       | 1.23<br>(1.03)                        | 1.14<br>(0.65)           |
| 1.5 Generation                        | 1.89**<br>(5.82)  | 1.45*<br>(2.35)          | 1.49**<br>(3.28)      | 1.26<br>(1.48)                        | 1.21<br>(1.18)           |
| 2nd Generation                        | 1.56**<br>(4.51)  | 1.27+<br>(1.68)          | 1.35**<br>(2.86)      | 1.18<br>(1.19)                        | 1.15<br>(0.98)           |
| 3rd Generation                        | 1.30+<br>(1.86)   | 1.17<br>(1.17)           | 1.14<br>(0.92)        | 1.08<br>(0.58)                        | 1.08<br>(0.60)           |
| Non-Hispanic black                    | 1.46**<br>(3.58)  | 1.47**<br>(3.23)         | 1.30*<br>(2.46)       | 1.42**<br>(2.96)                      | 1.43**<br>(2.99)         |
| Non-Hispanic white                    | --                | --                       | --                    | --                                    | --                       |
| Age of respondent                     | 1.07**<br>(10.75) | 1.05**<br>(6.46)         | 1.07**<br>(10.26)     | 1.05**<br>(6.94)                      | 1.05**<br>(6.91)         |
| Ever in a formal union                | -                 | 1.95**<br>(4.55)         | -                     | 1.89**<br>(4.43)                      | 1.89**<br>(4.45)         |
| Cohabiting                            | -                 | 1.98**<br>(4.31)         | -                     | 1.86**<br>(4.10)                      | 1.85**<br>(4.03)         |
| Married/cohabiting with white partner | -                 | 0.82<br>(-1.45)          | -                     | 0.93<br>(-0.60)                       | 0.93<br>(-0.56)          |
| Spanish spoken in childhood HH        | -                 | 1.07<br>(0.57)           | -                     | 1.09<br>(0.77)                        | 1.08<br>(0.76)           |
| Full time student                     | -                 | 0.69*<br>(-2.51)         | -                     | 0.78<br>(-1.57)                       | 0.78<br>(-1.56)          |
| Siblings                              | -                 | 1.02*<br>(2.35)          | -                     | 1.01<br>(1.46)                        | 1.01<br>(1.40)           |
| Less than HS                          | -                 | -                        | 1.48**<br>(3.13)      | 1.39**<br>(2.60)                      | 1.38*<br>(2.50)          |
| HS/VoTech                             | -                 | -                        | 1.15<br>(1.51)        | 1.14<br>(1.40)                        | 1.15<br>(1.46)           |
| College graduate plus                 | -                 | -                        | 0.72**<br>(-2.60)     | 0.77*<br>(-2.11)                      | 0.77*<br>(-2.15)         |
| Sent Remittances                      | -                 | -                        | -                     | -                                     | 1.12<br>(1.11)           |
| <b>Observations</b>                   | 969               | 969                      | 969                   | 969                                   | 969                      |

Source: IIMMLA

Incidence Rate Ratio, t statistics in parentheses + p&lt;0.10 \*p&lt;0.05 \*\* p&lt;0.01