**Immigrant Generational Status, Occupational Plans,
and Postsecondary Education in the United States***

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Abstract

Framed by alternative models of assimilation and acculturation, we use the 2002-2012 waves of the Education Longitudinal Study to model differences in postsecondary educational attainment for students sampled as high school sophomores in 2002. We focus on patterns observed for the growing Mexican immigrant population, analyzing separately the trajectories of 1st, 1.5^{th}, 2nd, and $3^{rd}+$ generation Mexican immigrant students, in comparison to $3^{rd}+$ generation students who self-identify as non-Hispanic whites and students who self-identify as non-Hispanic blacks or African Americans.

The results suggest that the dissonant acculturation mechanism associated with the segmented assimilation prediction is mostly unhelpful for understanding why concern is justified about the lifecourse prospects of recent Mexican immigrants and their children. Instead, patterns of family background can account for group differences in bachelor's degree attainment, with or without additional adjustments for behavioral commitment to schooling, occupational plans, and educational expectations. By implication, the broad structure of inequality in the United States, as well as the rising costs of postsecondary education, should be the primary source of concern when considering the prospects for the incorporation of the children immigrants into the mainstream.

Immigrant Generational Status, Occupational Plans, and Postsecondary Education in the United States

For scholars concerned about the relative standing of recent immigrants to the United States and their children, three common observations pose grave concerns, each of which is supported by enough literature to now constitute received wisdom in the social sciences. First, incorporation into the mainstream is typified by the standard of living associated with those who hold middle-class jobs. Second, middle-class jobs are increasingly reserved for those who hold bachelor's degrees. Third, the direct costs of obtaining a bachelor's degree have increased sharply, making college an increasingly expensive investment.

Although some immigrant groups have family resources that will enable them to meet the direct costs of higher education, the largest and fasting growing group – recent immigrants from Mexico and their children – are resource constrained. Furthermore, we know from the general literature on educational attainment that many students from families with limited financial resources are unaware of available financial aid programs. It seems unlikely that immigrants from Mexico and their children are any more aware of financial aid programs than students of similar socioeconomic standing.

Alongside consideration of these present realities, the literature on immigrant incorporation continues to debate the validity of more specialized narratives, most prominently the segmented assimilation thesis first proposed by Portes and Zhou (1993) and later developed in full form by Portes and Rumbaut (2001). In brief, this line of argument maintains that groups such as Mexican immigrants face a hostile reception and are insufficiently supported by ethnic enclaves. As a result, many adolescents young adults respond by engaging in "dissonant" patterns of acculturation, typified by a comparative devaluation of bilingualism, strained

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relationships with their Spanish-speaking parents, a faltering commitment to schooling in adolescence, and emergent interest in deviance. Because of these behavior patterns, a substantial proportion of 2nd generation Mexican immigrants (and perhaps 3rd+ generation immigrants as well) can be expected to assimilate downward to a subordinate status in American society, approaching standards of living more typical of those who self-identify as black or African-American.

The persuasiveness, and even the basic form, of the segmented assimilation prediction continues to be vigorously debated, with its current proponents focusing on results from the Children of Immigrants Longitudinal Study, which sampled students typically aged 14 in Ft. Lauderdale and San Diego in the early 1990s, with a follow-up survey ten years later [see Haller, Portes and Lynch (2011a, 2011b), Portes and Fernández-Kelly (2008), Portes and Hao (2002), Portes and Rumbaut (2006), Portes and Rivas (2011)]. Opponents of the prediction have considered broad historical patterns, national demographic data, and also local samples from other areas, such as a comprehensive set of results on children of immigrants resident in the New York City metropolitan area [see Alba and Nee (2003), Perlmann (2005, 2011), Waldinger and Feliciano (2004), Waters, Tran, Kasinitz, and Mollenkopf (2010), and Alba, Kasinitz, and Waters (2011)].

Beyond the dissonant acculturation conjecture about the children of Mexican immigrants, which is perhaps the most important claim embedded in the segmented assimilation prediction, a second stream of literature highlights an additional mechanism that impedes the acquisition of higher education among many prospective college students who self-identify as Hispanic or Latino/Latina (i.e., not just those who claim Mexican ancestry). Turley (2006, 2009) and Desmond and Turley (2009) argue that familism among Hispanic adolescents and young adults

may discourage them from taking advantage of available college opportunities and predisposing them to enroll in local community colleges from which comparatively few students then transition to and complete bachelor's degree programs. Ovink and Kalgorides (2014) challenge this conclusion, with more recent results using the same data source we will also consider in this article. Ovink (2014a, 2014b) makes the case, based on results from in-depth interviews, that familism operates in gender-differentiated fashion, such that Hispanic young women benefit from extra social support that encourages them to obtain bachelor's degrees.

A third stream of literature emphasizes the importance of considering the specific profile of recent cohorts of Mexican immigrants. Telles and Ortiz (2008) and Jiménez (2010) explain why generation and cohort effects are particularly difficult to parse for Mexican immigrants, suggesting that most generational effects are nonsensical when widely dispersed birth cohorts are analyzed together. Relatedly, and directly relevant for the present article, Feliciano (2005) presents evidence on the selectivity of recent Mexican immigrants, suggesting that the particular pattern of selection that has unfolded in recent decades has decreased rates of college entry since the 1960s.

In this article, we analyze the 2002-2012 waves of the Education Longitudinal Study to model differences in patterns of high school graduation and postsecondary education for students sampled as high school sophomores in 2002. We first offer results for the full cohort of students, estimating educational attainment patterns for 20 distinct groups of students formed by a constrained cross-classification of self-identified race-ethnicity and immigrant generation. We then focus on patterns observed for the growing Mexican immigrant population, analyzing separately the trajectories of 1st, 1.5th, and 2nd generation Mexican immigrant students, in comparison to each other and in comparison to three specific groups of students who are neither

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recent immigrants nor the children of recent immigrants. So-called "3rd+ generation" students, we consider separately students who self-identify as Mexican by ancestry, students who self-identify as non-Hispanic whites, and students who self-identify as non-Hispanic blacks or African Americans.

METHODS

Data

Data are drawn from the Education Longitudinal Study (ELS), 2002-2012. The ELS sample is representative of all tenth grade students in the United States, enrolled in public and private schools in spring of 2002. Unlike its predecessor the National Education Longitudinal Study of 1988, students with limited English proficiency were included in the sampling frame. Sampled students were judged eligible to take the achievement tests and complete the student questionnaire if they had received three years of instruction primarily in English or if the school staff "judged or determined that they were capable of participating" (ELS base year user's guide, p. 53). For the base-year sample, 17,591 students were sampled, and 87 percent of these students completed the student questionnaire. Only 44 sampled students were excluded from participation based on limited English proficiency.

Analytic Sample

The base-year wave of the ELS includes an oversample Asian and Hispanic students in order to enable more precise comparisons with non-Hispanic white and black students sampled

proportional to population representation.[1] Among the original 2002 base-year students, 84 percent participated in the 2012 third follow-up. Our models include the 10,895 respondents for whom third follow-up educational attainment data are available, although weighted to adjust for attrition and for item-specific non-response patterns for educational attainment.[2]

Measurement of Immigrant Generation

A parent questionnaire was completed by 85 percent of students' parents or legal guardians. The respondent, usually a parent (and most commonly the student's mother) was asked: "Was your tenth grader's mother born in the United States (that is, any of the fifty states or the District of Columbia), in Puerto Rico, or in another country or area?" Respondents who selected "in Puerto Rico" or "in another country or area" were then asked "How many years ago did she come to the United States to stay?" After answering these questions, respondents to the parent questionnaire were then asked the same questions about the tenth grader's biological father and about the tenth grader. With these questions, standard indicators of immigrant generation can be constructed. Across the full ELS sample, 2,838 students had mothers born outside of the United States, 2,794 students had fathers born outside of the United States, and 1,388 students were themselves born outside of the United States.

If both parents were born inside the United States, we coded the student as a 3rd+ generation immigrant. If either parent was born outside of the United States, but the student was

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[1] Sampled schools provided lists that designated students as "White," "Black," "Asian," "Native Hawaiian or Other Pacific Islander," "American Indian or Alaskan Native," "Hispanic," and "Other." The sampling strata were based on these lists but were collapsed for only four resulting strata: "Hispanic," "Asian," "Black," and "Other race/ethnicity."

[2] For all results, we exclude students who were "freshened" for the second senior-year follow-up (i.e., newly sampled students who were included in order to enable the analysis of twelfth grade students, including those who entered into schools in the United States between the tenth and twelfth grades. Although these students are more likely to be the children of recent immigrants, insufficient information on them is available to enable modeling.

born inside the United States, then we coded the student as a 2nd generation immigrant. If the

student and one or more of his or her parents was born outside of the United, then we coded the

student as a 1.5th generation immigrant if the student entered the United States by the age of 6

and a 1st generation immigrant if the student entered the United States after the age of 6.

For the 15% of the sampled students for whom a parent questionnaire was not completed,

the ELS also includes a series of questions posed to students that can be used to separate students

into those who are more and are less likely to be themselves immigrants or the children of

immigrants. On their own surveys, students were asked "Is English your native language (the

first language you learned to speak when you were a child)?" along with a follow-up question for

those who answered "yes": "What is your native language?" (20 response categories with

Spanish first, followed by 18 other languages or language groups, and an "other" category).

Although this question is indirect, we use it, as explained in the results section, to develop an

exhaustive coding of immigrant generation by race-ethnicity, mindful that what is deemed a

"native language" may be a poor indicator of immigrant status.

Measurement of Race-Ethnicity

Self-identified race-ethnic categories are comparatively extensive for the ELS, introduced by a

filter question "Are you Hispanic or Latino/Latina?" Students who answered yes to this question

were then asked, "If you are Hispanic or Latino/Latina, which one of the following are you?

(MARK ONE RESPONSE)": (1) Mexican, Mexican-American, Chicano, (2) Cuban, (3)

Dominican, (4) Puerto Rican, (5) Central American (Guatemalan, Salvadoran, Nicaraguan, Costa

Rican, Panamanian, Honduran), and (6) South American (Colombian, Argentinian, Peruvian,

etc.). Following this Hispanic ethnicity question, all students were asked "Please select one or

more of the following choices to best describe your race. (MARK ALL THAT APPLY)": (1)

White, (2) Black/African American, (3) Asian, (4) Native Hawaiian or Other Pacific Islander,

and (5) American Indian or Alaska Native. This question generated 64 distinct combinations of

responses.[3]

Given the range of response possibilities, we coded race-ethnicity by imposing a

hierarchy that reflects the focus of this article as well as the structure of the questionnaire.

Students who indicated that they were "Hispanic or Latino/Latina" were coded as Hispanic,

regardless of any other subsequent responses to the racial self-identification question that follows

it.[4] If students selected "Black/African American" and had not been designated Hispanic by

their responses to prior questions, we coded them as black, regardless of whether they expressed

a multiracial identity by selecting additional categories. We made analogous decisions for all

non-Hispanics who subsequently selected Asian, Native Hawaiian or Pacific Islanders, or

American Indian or Alaskan Native.

Although we will use broad categories of race-ethnicity in this article, Supplementary

Appendix Table S1 provides a breakdown across more specific racial-ethnic identities for our

focal groups. For example, of the 265 students we categorized as 2nd generation immigrants who

claimed Mexican ancestry, 144 chose Hispanic ethnicity but declined to choose a subsequent

racial category. Of the remaining students, 86 selected the racial category of "White," 18 chose

"American Indian or Alaskan Native," and 17 were spread across eight additional multiracial-

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[3] An ethnicity question for Asians was offered as a follow-up to the race question: "If you marked Asian in
Question 17, which one of the following are you? (MARK ONE RESPONSE)": (1) Chinese, (2) Filipino, (3)
Japanese, (4) Korean, (5) Southeast Asian (Vietnamese, Laotian, Cambodian/Kampuchean, Thai, Burmese), and (6)
South Asian (Asian Indian, Bangladeshi, Sri Lankan). We did not use these responses in this article because Asian
immigrants are not the focus of our analysis. In addition, we include Native Hawaiian and Other Pacific Islanders in
the Asian category, mindful that this decision is reductive but more reasonable than other possibilities.
[4] Many of these students, in fact, declined to answer the race question that followed the Hispanic ethnicity/ancestry
questions (see Supplementary Appendix Table S1).

multiethnic categories. The distributions in Table S1 make it clear that each of the categories for race-ethnicity that we utilize in this article should be interpreted as internally heterogeneous, but consistent with other broad categorizations adopted in this literature.

Additional Variables

We introduce the details of most of our additional measures as we utilize them in the subsequent analysis. Our outcome variables are standard measures used in the literature on educational attainment – timely high school graduation, postsecondary attendance, and bachelor's degree attainment.

Two predictor variables are unique to this paper and others produced by our research group. For both the tenth and twelfth grade questionnaires, students were presented with a traditional open-ended occupational plans prompt: "Write in the name of the job or occupation that you expect or plan to have at age 30." In this article, we eschew two typical codings of these plans. For the most standard coding, as produced by contractors to the U.S. Department of Education, the complexity of these free-form responses is reduced to a categorization of 17 broadly defined occupational groups (typically close to what are known as "major" occupational groups for federal statistical purposes). The second most common coding is to transform the occupational plans into a score on a unidimensional metric that reflects either the occupational prestige of one of the occupations listed or the average combined income and education of present incumbents of one of the occupations listed. In the status attainment tradition, this latter coding of occupational plans has typically been considered an operationalization of either latent achievement motivation or status aspirations tempered by realism (see Haller and Portes 1973; Sewell, Haller, and Portes 1969; Spenner and Featherman 1978).

Instead, we code occupational plans in a way that allows us to capture their inherent uncertainty and their relationship to modal patterns of educational requirements for specific jobs. As explained in Morgan, Leenman, Todd, and Weeden (2013a, 2013b) and Morgan, Gelbgiser, and Weeden (2013), verbatim responses to the plans prompt, when extracted from restricted-access data records, can be coded to 1,220 occupational categories in order to capture detailed information (specific job titles), extended information (the listing of multiple jobs), and contradictory information (the listing of multiple jobs with divergent characteristics). After performing this coding of the verbatim responses, we matched all jobs listed to the educational requirements of detailed jobs, as specified in the U.S. Department of Labor's O*NET database. For the tenth grade, this procedure yielded a five-category variable, which we label *Educational Requirements of Expected Jobs* (see Table 2 in the Results section for categories). For the twelfth grade, we created an analogous five-category measure of occupational plans, which we then elaborated using a measure only available for the twelfth grade student questionnaire: students' own perceptions of the educational requirements of their planned jobs, which were elicited in response to a follow-up question posed immediately after they provided their verbatim occupational plans. For the twelfth grade, we then have a seven-category variable labeled *Beliefs About the Educational Requirements of Expected Jobs* (see Table 2 in the Results section for categories).

Our additional predictor variables include 32 separate measures of behavioral commitment to schooling (in three scales based on independent reports from teachers, students, and parents) as well as family structure and the five standard dimensions of socioeconomic status. In our extended models, we also use standardized test scores from the tenth and twelfth

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grade, cumulative grade point average by the twelfth grade, and educational expectations in both the tenth and twelfth grade.

RESULTS

Patterns of Educational Attainment by Immigrant Generation and Race-Ethnicity

Table 1 presents patterns of educational attainment for all 10,895 respondents in the analytic sample, separately for 19 groups defined by immigrant generation and race-ethnicity (as well as a small 20th group of respondents with missing race-ethnicity). As shown in the final row of the table, 88 percent of 2002 tenth graders graduated high school on time in 2004. By 2012, 85 percent had enrolled in some form of postsecondary education, including trade schools, certificate programs, and traditional two-year and four-year colleges. Rates of bachelor's degree receipt were much lower. Only 35 percent of 2002 high school sophomores had received a bachelor's degree 10 years later (i.e., within 8 years of on-time high school graduation).

[Table 1 About Here]

Patterns of educational attainment are strongly related to immigrant generation and race-ethnicity. The 19 row labels indicate the specific composition of each group, and our six focal groups in this article are placed in boldface type. We will refer to these six groups with simplified labels in the remainder of the article. For example, respondents classified by the full label as "Mexican, Mexican-American, or Chicano, 1st generation" will be referred to as "1st generation Mexicans" hereafter, as is common in this literature.

Notice that the four focal groups of Mexican immigrants (groups 1-4) are separated from five other Hispanic immigrant groups differentiated by ancestry and generation (groups 5-8 and 11). Two additional groups were formed for all Hispanic students with missing parent reports of

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immigrant generation. These groups in rows 9 and 10, which include some students who claim

Mexican ancestry, are differentiated by whether students report that Spanish is their native

language. Without making what might be regarded as an arbitrary allocation assumption, we

cannot sort members of these two small groups into 1st, 1.5^{th} or 2nd immigrant generations

relative to the $3^{rd}+$ immigrant generation that is often referred to as "native." Instead, we have

decided to focus on six groups that we can precisely define.[5]

What differences do these six groups reveal? First, we have two $3^{rd}+$ generation groups

selected for comparison: white and black non-Hispanic students (groups 16 and 19). These two

groups represent attractor poles for the segmented assimilation literature. Black $3^{rd}+$ generation

students have levels of bachelor's degree receipt that are less than half as high as those of whites,

with similar but less substantial differences in on-time high school graduation and overall rates

of postsecondary enrollment of any type.

Now consider the four focal groups of students who claimed Mexican ancestry. Students

in the broad and heterogeneous $3^{rd}+$ generation have educational profiles very similar to the focal

comparison group of $3^{rd}+$ generation non-Hispanic blacks. Any variation between these two

groups (4 and 16) is consistent with sampling error, as revealed by the standard errors reported in

parentheses. A prudent interpretation of 2nd generation Mexican immigrants is that they too have

patterns of educational attainment that are equivalent to the comparison group of black

respondents, even though the point estimates of on-time high school graduation and bachelor's

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[5] Nonetheless, we should note that both of these groups have low levels of reported educational attainment that are closer to those of 1st and 1.5^{th} generation Mexican immigrants than to any other group of Hispanic students. Given that the majority of these two groups do in fact claim Mexican ancestry, it would be tempting to allocate them across immigrant generations based on student reports of socioeconomic status. We have decided not to do so, in part because our later claim that socioeconomic status is by far the most important predictor of between-group patterns of bachelor's degree attainment would be compromised in the eyes of a fair critic by allocating in this fashion. (Notice also that students who report that Spanish is their native language do not have appreciably lower levels of educational attainment, undermining prospects for a useful allocation strategy to generations based on language.)

degree receipt are lower. Finally, 1st and 1.5[th] generation Mexican immigrants have educational attainment patterns that suggest lower levels of attainment on each of the three measures, (although because these group are smaller, sampling errors are more of a concern, as reflected in the comparatively large standard errors).

Overall, all four groups of Mexican immigrants as well as the non-Hispanic black comparison group have lower levels of educational attainment, and especially bachelor's degree attainment, than the non-Hispanic white comparison group. Before carrying on to directly model bachelor's degree attainment in the remainder of this article, we should note one additional pattern in the table. Notice that for many comparisons by immigrant generation, recent immigrants attain higher levels of education (i.e., groups 12 and 13 versus 14, group 15 versus 16, and group 18 versus 19). As shown by Farley and Alba (2002) and Crosnoe and Turley (2011; see also Crosnoe 2005, 2006), this pattern is less pronounced for Mexican immigrants to the United States. And for Hispanic respondents to the ELS, the pattern is found only for a comparison of South and Central American immigrants (i.e., group 7 versus 8). For both Mexican immigrants and immigrants in the category of "Puerto Rican, Cuban, or Dominican," this pattern is reversed, although again sampling errors associated with the group estimates are substantial.

For the remainder of this article, we will focus on bachelor's degree attainment. Group differences are fully realized at this stage of educational attainment, which is also a common lifecourse stage when individuals destined for middle-class jobs enter the full-time labor force. Our primary question is the following: Can we predict, based on observed characteristics measured while ELS respondents were in high school, why the bachelor's degree attainment rate

of Mexican immigrants lags the rate of white ELS respondents and instead resembles the rate of black ELS respondents?

Table 2 presents group differences in two sets of measures that the literature suggests determine subsequent patterns of educational attainment, first behavioral commitment and engagement with schooling and second forward-looking beliefs about trajectories through the educational system and into occupations. The first three rows present group-specific means of behavioral commitment to schooling, reported separately by teachers, students, and parents at baseline data collection in the tenth grade. Each of these scales is based on underlying items, presented in Table 3, that are then factor scored. Each scale is internally consistent – with inter-item estimated reliabilities of .77, .70, .79, respectively – and is scaled to have a mean of 0 and standard deviation of 1 for the full analytic sample.[6]

[Tables 2 and 3 About Here]

Table 2 shows that all four groups of those who claim Mexican ancestry have levels of measured commitment that are closer to the observed levels of commitment of 3rd+ generation non-Hispanic blacks rather than 3rd+ generation non-Hispanic whites. This pattern is consistent with the dissonant acculturation conjecture, even though the measurement is indirect. In other words, the ELS does not provide direct measures of the strength of available enclaves to which ELS students have access, any apparent devaluation of bilingualism, overt parent-child conflict, interest in deviance, and so forth. Yet, if the stipulated mechanisms are at work, they will produce differences in everyday behavior to schooling, as measured by the commitment and

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[6] The scales are substantially left-skewed [teacher-reported (min -3.5, max 1.7), student-reported (min -3.5, max 1.7), and parent-reported (min -7.4, max .6). The scales are strongly related but sufficiently distinct to be worthwhile to consider apart. The pairwise product-moment correlations are .48 for teacher-student, .45 for teacher-parent, and .39 for student-parent.

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engagement indicators available for the ELS. The reasoning for the linkage is suggested by Portes and Zhou (1993:88) as follows:

> Seeing their parents and grandparents confined to humble menial jobs and increasingly aware of discrimination against them by the white mainstream, U.S.-born children of earlier Mexican immigrants readily join a reactive subculture as a means of protecting their sense of self-worth. Participation in this subculture then leads to serious barriers to their chances of upward mobility because school achievement is defined as antithetical to ethnic solidarity. Like Haitian students at Edison High, newly arrived Mexican students are at risk of being socialized into the same reactive stance, with the aggravating factor that it is other Mexicans, not native-born strangers, who convey the message. The principal protection of *mexicanos* against this type of assimilation lies in their strong identification with home-country language and values, which brings them closer to their parents' cultural stance.

In brief, students joining a reactive subculture where school achievement is antithetical to ethnic solidarity should demonstrate less commitment to behaviors that promote short-term school achievement and long-term educational attainment. The observed commitment differences in Table 2, which are typically between one quarter and one half of a standard deviation, follow the pattern implied by the dissonant acculturation prediction.

The CILS dataset that has been analyzed heavily by proponents of the segmented assimilation prediction do not contain such measures, because the CILS survey instrument was not focused on direct measures of school outcomes and did not include a teacher questionnaire. The CILS offers some measures of parent-child conflict and also some standard predictors from the status attainment tradition of modeling in sociology. We will discuss some comparable measures below – in particular educational aspirations and expectations – but for now we consider group differences in the specific coding of occupational plans detailed above. Table 2 shows that all four groups of those who claim Mexican ancestry were less likely than 3rd+ generation non-Hispanic whites and blacks to list verbatim occupational plans that included only

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jobs that typically required college degrees. With the exception of 1.5th generation immigrants, they were also more likely than whites and blacks to offer a response of "Don't know" to the occupational plans prompt. These differences are again present in the twelfth grade, perhaps strengthening very slightly.

Overall, the patterns presented in Table 2 are consistent with the dissonant acculturation conjecture. Regardless of their source, they suggest concern that the trajectory toward lower levels of postsecondary attainment among those who claim Mexican ancestry, as shown in Table 1, was well developed already in high school.

Table 4 presents group differences in an alternative set of potential causes that are, conceptually at least, distinct from those that are purported to generate dissonant acculturation: standard measures of family structure and socioeconomic status. Here, the pattern is stark, and the comparison to both 3rd+ generation non-Hispanic whites and blacks is more complex. First, ELS respondents who claim Mexican ancestry are more likely than black ELS respondents to be living in families with two parents, although 3rd+ generation Mexican immigrants have rates of "mother only" parenthood that are higher than for non-Hispanic whites. Second, for family income, 1st, 1.5th, and 2nd generation Mexican immigrants have substantially lower family income than all 3rd+ generation groups. Among these latter groups, 3rd+ generation Mexicans have higher family income than non-Hispanic blacks but still have substantially lower family income than non-Hispanic whites. Third, all four groups of those who claim Mexican ancestry have lower average levels of parental education, with the average education of 1st, 1.5th, and 2nd generation Mexicans between 1.5 to 2 years lower than that of the other three groups. Fourth, these differences in family income and parental education are then reflected in the SEI scores of

parents' occupations, with, for example, 3rd+ generation Mexican immigrants having higher levels of occupational attainment than all but 3rd+ generation non-Hispanic whites.

[Table 4 About Here]

Taken together, the family background differences presented in Table 4 suggest that the group differences in bachelor's degree attainment reported in Table 1 may reflect a more basic narrative of socioeconomic disadvantage, rather than or in addition to a more nuanced mechanism of dissonant acculturation. To assess the relative predictive power of the differences presented in Tables 2 and 4, we must offer models that assess the relative capacity of these characteristics of students and their families to account for patterns of bachelor's degree attainment. Before we do so, we must be clear about our aims. We assume that our estimates below are generated by causal effects, but not causal effects that we can directly estimate. Instead, our models attempt to discern the trace of such effects in statistical associations one or two steps removed from the genuine preferences and choices of individuals, as structured by opportunity constraints. Our reading of the extant literature on segmented assimilation is that all empirical research should be regarded as equally (or more limited) than what we can offer here. Too few of the quantitatively-oriented pieces in this tradition have conceded these limitations.

With this caveat clearly stated, we carry on to estimate logit models of bachelor's degree receipt, using alternative prediction sets. To simplify model specification by eliminating small groups that are not of central interest, we narrow the estimation sample to the 8,367 students who are members of the six focal groups placed in boldface type in Table 1 and subsequently examined in Tables 2 and 4.

Table 5 reports unadjusted and adjusted bachelor's degree attainment rates for each of seven models. Model fit statistics are provided at the bottom of each column, and full sets of

parameter estimates are offered in Supplementary Appendix Tables S2 and S3. For Model 1,

bachelor's degree attainment is regressed on five indicator variables for group, one main effect

for gender, and five cross-product interactions between group and gender. The group estimates

reported in the first six rows are standardized to the gender composition of non-Hispanic whites

for consistency with subsequent models. Given that gender varies only with group because of

sampling variability (as well as some very small differences that may be attributable to high

school dropout before the sophomore year), we label these estimates our baseline unadjusted

group estimates of the proportions of students who obtain bachelor's degrees. They are almost

exactly equivalent to the nonparametric, unstandardized rates presented in the third column of

Table 1.[7]

[Table 5 About Here]

Model 2 adds the three commitment scales to the set of predictors. The likelihood ratio

statistic summarized at the bottom of the second column indicates that, for only a loss of three

degrees of freedom, the change in the log-likelihood between Models 1 and 2 is large. The

sample-size-penalized and parameter-penalized BIC values also clearly favor Model 2 relative to

Model 1. The group differences across the six rows of the second column are properly

interpreted as adjusted group differences. We have chosen to standardize the estimates to the

marginal distribution of commitment that characterizes $3^{rd}+$ generation non-Hispanic whites,

which is an appropriate comparison group when analyzing modal patterns of educational

attainment. Accordingly, these are the group estimates of bachelor's degree receipt that,

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[7] The logit coefficients presented in Table S2 indicate that young men of all groups are less likely to obtain bachelor's degrees and that this effect is larger for all groups of students who claim Mexican ancestry. We will not focus on this gender difference in this article and will, hereafter, continue to marginalize over the distribution of gender without comment.

according to the parameters of the estimated model, would be observed if all groups had the same distribution of commitment as 3rd+ generation non-Hispanic whites.[8]

We will offer more targeted comparisons of groups below, and for now we carry on to a description of the models that we fit. The correct interpretation of the differences between the group estimates reported in Models 1 and 2 is the following. If all groups were given the commitment levels characteristic of 3rd+ generation non-Hispanic whites, Model 2 suggests that the unadjusted group differences estimated by Model 1 would narrow somewhat. For the most crucial comparison, the gap between the rate of bachelor's degree receipt for 2nd generation Mexicans and 3rd+ generation non-Hispanic whites would narrow by 27 percent [from .22 (.41 versus .19 for Model 1) to .16 (.41 versus .24 for Model 2)]. Other comparisons across groups decline similarly.[9]

Models 3 and 4 offer alternative adjustments, first for the educational requirements of expected jobs reported in the tenth grade and second for beliefs about the educational requirements of expected jobs reported in the twelfth grade. As with Model 2, these adjustment variables predict bachelor's degree receipt, as reflected in the likelihood ratio tests and the improved fits summarized by BIC values for Models 3 and 4 in comparison to Model 1. However, the adjusted group estimates reported in the first six rows are only very slightly smaller in comparison to those from the baseline Model 1, decreasing by only .01 for all four of

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[8] For comparison, adjusted group estimates from the same seven models are offered in the Supplementary Appendix with alternative choices of reference distributions of the predictors. The adjusted group differences are marginalized to the pooled distribution of predictors across all six groups in Table S4 and then to the distribution of predictors that characterize 2nd generation Mexicans in Table S5.

[9] Models that represent commitment as 32 separate predictor variables in an alternative to Model 2 yielded nearly identical adjusted group estimates of .18, .19, .24, .29, .31, and .41 reading from top to bottom (and with corresponding standard errors equal through the second decimal place). The BIC value favored the indicator-specific model, but we see no compelling rationale for heeding it (given the near invariance of the group estimates and the value of having interpretable dimensions and shorter tables in the Supplementary Appendix).

the groups that claim Mexican ancestry (again, when white, non-Hispanics are the reference group for the comparisons).

Taken together, Models 2 through 4 suggest that the group differences summarized in Table 2 that are consistent with the dissonant acculturation conjecture explain only a modest proportion of group differences. One could argue, and we would expect no less from proponents of segmented assimilation predictions, that the ELS measures deployed for adjustment in Models 2 through 4 are too indirect to inform the prediction. Although not an unreasonable position, this is not our position, as we will further explain in the discussion section.

Model 5 offers an adjustment for family structure and socioeconomic status. The adjusted group estimates reported for Model 5 suggest that differences in family background can account for a large portion of unadjusted group differences. When all groups are given the family background distributions of $3^{rd}+$ generation whites, the gap observed for 2nd generation Mexicans narrows, in a comparison of Model 1 to Model 5, from .22 to .02. The gap estimated for 1.5^{th} generation Mexican immigrants reverses direction from .28 to -.09 (although the standard error for the coefficient for the 1.5^{th} generation is comparatively large in Model 5). The decline in the gap for 1st generation Mexican immigrants is less substantial from .29 to .26 (but again the standard error is large, making it difficult to assess the size of the remaining adjusted difference).

Before considering Models 6 and 7, we should explain the specification choice for Model 5. In the course of analysis, we first fit a model that constrained the conditional associations between the six measures of family background and bachelor's degree attainment to be the same across all six groups. We then re-estimated the model allowing these associations to vary by

group. Model 5 in Table 5 is based on the latter unconstrained specification, which we favored for two reasons.

First, according to the fit statistics, the interactions were justified by a likelihood-ratio test, with a Chi-squared test statistic of 12,570 and for a loss of 30 degrees of freedom. Given the large sample size, we used a BIC value comparison, which yielded the same conclusion (based on a decline from 2,712,456 to 2,700,157 for the unconstrained model). Nonetheless, as shown by a comparison of Models 5-C in Table S2 and Model 5 in Table S3, most of the interactions are nonsignificant by conventional standards. This a combined result of the small cell sizes for some of these groups, but also the well-known consequence of fitting parameters across many dimensions that are related to each other. The data do not contain sufficient numbers of unusual combinations of students in each group in order to precisely estimate all of the conditional associations for the six family background variables.

Second, a few interactions aligned with concerns often expressed in this literature and could not be discounted based on substantive size. Although the coefficients for the interactions of group with mother's and father's occupation were trivially small, the coefficients for the interactions between group and the other four main effects were not. Net of all else, being in a "mother only" family had a negative association with bachelor's degree attainment for black, 3rd+ generation students but a net positive association for both 2nd and 3rd+ generation Mexican students.[10] The net associations of parental education with bachelor's degree attainment were slightly smaller for 1st, 1.5^{th}, and 2nd generation Mexicans immigrants, sometimes for mother's education and sometimes for father's education. At the same time, the net associations of logged

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[10] "Mother only" family had a zero net association, or the statistical equivalent thereof because of imprecise estimation, for all other groups. These associations, however, are net of simultaneous within-group adjustments for mother's level of education and family income.

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family income with bachelor's degree attainment were more predictive for 2nd and 3rd+ generation Mexican immigrants, in comparison with other groups.

Although one should be careful in trying to interpret conditional associations when they are so heavily parameterized and the cell sizes for the groups are small, the point estimates for these coefficients are consistent with ad hoc interpretations of the challenges of using socioeconomic status to adjust for differences between groups such as these. In particular, it is not surprising that the relevance of educational certification, often received in the "home" country, is less predictive of outcomes of all types in the United States. In addition, family income may be especially predictive of bachelor's degree receipt because immigrant families must pay college tuition from current income, having comparatively lower stocks of wealth to borrow against and, perhaps, fewer kin who can help defray costs. Assuming that coefficients for parents' education and family income are invariant by group would suppress narratives of this sort, opening up our adjusted estimates to the claim that adjustment for these variables has generated misleading estimates of group differences.[11]

The overall implication of Model 5 is that family background is a strong predictor of bachelor's degree receipt, which is consistent with abundant extant research. Even when allowed to have differential effects across groups, family background can also account for large portions, and perhaps all, of the gaps in attainment observed from 1.5[th] and 2nd generation Mexican students. The precise mechanisms by which differences in family background produce differences bachelor's degree attainment are not revealed by the analysis reported in Table 5.

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[11] This concern notwithstanding, the overall consequence of adopting the unconstrained specification is not consequential for the main interpretations and conclusions. For the constrained model (Model 5-C in Table S2), the adjusted group means would be slightly higher for the 1st generation (.32 with a standard error .06 instead of .21), the 2nd generation (.40 with standard error of .04 instead of .39), and 3rd+ generation blacks (.29 with a standard error of .02 instead of .27). The adjusted group mean would be slightly lower for the 1.5[th] generation (.35 with a standard error of .07 instead of .50) and the same for 3rd+ generation Mexicans (.30 with a standard error of .03).

The literature on college entry and persistence suggests many mechanisms, and three are especially important to note now. First, the children of recent Mexican immigrants are likely to attend K-12 schools that do not adequately prepare them for postsecondary education. Abundant research shows that mean parental socioeconomic status is strongly related to all observed measures of quality across schools, even after adjustments for differences in the racial and ethnic composition of schools. There is no basis for arguing that the children of recent immigrants are exempt from this broad pattern of educational opportunity in the United States. Second, the children of recent Mexican immigrants are more likely to have parents who are resource constrained and cannot provide college tuition assistance comparable to what the parents of non-Hispanic whites can, on average, furnish. Third, parents without college degrees have less information and fewer personal experiences that enable them to effectively guide their children into and through postsecondary educational trajectories. Table 4 shows that the parents of ELS students who we have identified as 1st, 1.5^{th}, and 2nd generation Mexicans have the lowest levels of parental education, and, furthermore, have comparatively little experience with higher education in the United States.

To complete our logit-based analysis, we offer two final models. Model 6 adds the adjustment variables from Models 2 through 4 to the family background variables specified for Model 5. The fit statistics, now for a comparison of Model 6 to Model 5, indicate that these variables are substantial predictors of bachelor's degree attainment, net of simultaneous adjustment for family background. Forcing the distributions for the predictors in Model 6 for all groups to be the same as the observed distributions for 3rd+ generation non-Hispanic whites, we obtain some further narrowing of the gaps of interest in adjusted rates of bachelor's degree attainment.

Model 7 is then the kitchen sink model that adds to the variables specified for Model 6 the additional variables that we present as group means in Table 6: educational expectations in the tenth and twelfth grade, standardized tests in the tenth and twelfth grades, and cumulative grade point average. Consider the patterns in Table 6 first. Consistent with group differences in our coding of occupational plans as the educational requirements of expected jobs, students who claim Mexican ancestry are less likely to report that they expect to obtain bachelor's degrees. They are more likely to expect lower levels of education and to express uncertainty by selecting the response option of "Don't know."

[Table 6 About Here]

Yet, all students are very optimistic about their likelihood of attaining bachelor's degrees. The educational requirements consistent with the jobs they expect are perhaps slightly optimistic as well, but far less so. We interpret this pattern as consistent with the increasingly common position, which we maintain in other work, that educational expectations are contaminated by the pervasive "college for all" culture that has dominated K-12 schooling in the United States since the early 1990s. At the time the Wisconsin model was developed (see Sewell, Haller, and Portes 1979 and Haller and Portes 1973), educational aspirations and expectations were not subject to this upward response bias, which reflects a type of social desirability bias in survey response (but which students themselves enact daily when professing to be college bound, even if they know their chances are at best uncertain and cannot easily project whether the occupation they may later enter will be one that requires a bachelor's degree). Notice also that educational expectations decline quite substantially between the tenth and twelfth grades, reflecting greater realism about likely trajectories. Yet, even in the spring of what is typically senior year for these respondents, a solid majority of all six groups of students expect to obtain bachelor's degrees.

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Finally, the measures of academic achievement follow expected patterns. They are ordered consistently across measure by year, and in the same patterns as socioeconomic status. White, non-Hispanic 3rd+ generation students have the highest levels of achievement, followed by 3rd+ generation Mexican students, then black, non-Hispanic 3rd+ generation students, then 2nd generation Mexican students, then 1.5^{th} generation Mexican students, and finally 1st generation Mexican students. We interpret these differences as consistent with the narratives offered above for the effects of socioeconomic status on bachelor's degree receipt, supplemented by two additional rich literatures on K-12 education in the United States: (a) how the home environment structures achievement in elementary and secondary schooling and (b) how differences in school quality tend to reproduce, rather than moderate, these differences.[12]

Returning to Model 7 in Table 5, the additional ten parameters further improve the model fit, as indicated by the likelihood-ratio test and the BIC values for the comparison of Model 7 to Model 6. If we again impose the observed distributions of the predictors that characterize 3rd+ generation non-Hispanic whites, we can produce a new set of adjusted rates of bachelor's degree attainment. The point estimates of these adjusted rates continue to vary slightly, but the level of variation is consistent with sampling error.

The tougher question is how to interpret the adjusted rates from Model 7, given the lack of consensus in this literature on which variables can be interpreted as baseline confounders, which variables can be interpreted as measures of factors within causal mechanisms, and which variables are neither of these two. In fact, it is hard to find in this literature a common set of

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[12] We also believe, consistent with Morgan et al. (2013a, 2013b) that these performance levels are endogenous with respect to beliefs about likely trajectories through the educational system, as picked up by our measures of the educational requirements of expected jobs. Any such effects may be small relative to those that flow from mechanisms mentioned in the main text.

definitions of the group contrasts of primary interest for an evaluation of the segmented assimilation prediction.

Our decisions on these matters are the following. Model 2 through 5 convey what is our major conclusion: socioeconomic status alone can account for large portions of unadjusted group differences. Model 6 is an interesting model because, as we show below, it can be a basis for evaluating alternative predictions that may be more consistent with segmented assimilation. Model 7, however, is of less interpretive value for models of bachelor's degree attainment because of the extent to which performance in the final two years of high school and beliefs about postsecondary educational trajectories strongly reflect accurate anticipation bachelor's degree attainment itself.

Predictive Simulations and Sensitivity of Results

We recognize that some readers will regard our embrace of Model 5, and the conclusion that socioeconomic status can account for most group differences, as incomplete (and perhaps even self-serving). We have one non-typical defense to offer. We concede that we had hoped that the measures we showed were predictive in Morgan et al. (2013a, 2013b) would show their mettle in this context too, lending support to the segmented assimilation prediction that many scholars had good reason to doubt. Instead, while they are predictive and in the same pattern as expected (see the coefficients in Tables S2 and S3), only commitment appears to account for any substantial portions of these between-group differences. Given our priors, we were genuinely surprised by this result.

Nonetheless, it is worthwhile to consider sets of alternative analysis assumptions that can give these predictors more capacity to account for between-group differences. To show what we

mean, consider Model 6, which we regard as a reasonable model between what we favor (Model 5) and the model that we regard as overfit (Model 7). For this model, family structure, socioeconomic status, commitment, and the educational requirements of expected jobs, as well as beliefs about them, are all given a chance to account for group differences in bachelor's degree attainment. For Table 5, we passed the distributions of these variables that were observed for $3^{rd}+$ generation non-Hispanic whites through each group's estimated coefficients from Model 6 to generate adjusted group estimates.

Consider now an alternative set of adjusted group estimates, presented in Table 7, which we will label predictive simulations because they are entirely synthetic (i.e., based on combinations of distributions that are not observed for any real groups of ELS respondents). For this final piece of analysis, we consider only what we regard as the comparison most relevant for evaluating the prospects that Mexican immigrants will join the mainstream in the coming decades: the gap in bachelor's degree attainment between 2nd generation Mexicans and $3^{rd}+$ generation non-Hispanic whites.

[Table 7 About Here]

For the first panel of Table 7, we use the same distribution of family background that we used to standardize the group estimates for Models 5 through 7 in Table 5. For the second panel, we use the distribution of family background that is observed for 2nd generation Mexicans (and which corresponds to the results in Supplementary Appendix Table S5).

The group estimate in the top right corner of the table, .41, is in fact the unadjusted group estimate for non-Hispanic whites, which we include in the table for comparison purposes. Just below it, the value of .27 is the predicted rate of bachelor's degree receipt for a synthetic group of respondents who have the family structure and socioeconomic status distributions of $3^{rd}+$

generation whites but the lower levels of commitment and beliefs about expected jobs that characterize 2nd generation Mexicans. For this estimated rate, we pass this synthetic group through the coefficients for Model 6 that apply to 3rd+ generation non-Hispanic whites. Accordingly, we can interpret the resulting estimate of .27 as the rate of bachelor's degree attainment that applies to a synthetic group of students who are given the high socioeconomic status characteristics of 3rd+ generation non-Hispanic whites but not the commitment and beliefs associated with higher levels of socioeconomic status. This adjusted rate is a reasonable prediction for 2nd generation Mexican students who are seized by an unshakeable pattern of dissonant acculturation that would not respond to hypothetical interventions in family background. In this case, their rate of bachelor's degree attainment would increase only from values between .19 and .21 (depending on the model) to .27 under such a hypothetical intervention.[13]

Now consider an alternative simulated prediction. Assume that the ELS sample does not include many of the 2nd generation Mexican students who are most prone to dissonant acculturation (e.g., students who dropped out before the tenth grade or sampled students who refused to participate but for whom nonresponse adjustments performed by the data distributors were ineffective). As a consequence, suppose that the observed mean commitment levels and beliefs about expected jobs are artificially and misleadingly high for 2nd generation Mexicans in the ELS. If we pick lower reasonable values – in our case, by shifting to values below the

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[13] Although we have not fully examined the pattern [in time for the PAA presentation], some of the gap between .27 and .41 reflects the different way in which the group estimate is calculated. The value of .41 is based on the mean of marginal predictions across the sample of 3rd+ generation whites, and hence matches our baseline rate from Model 1. The value of .27 is a conditional prediction based on setting the values of commitment and educational requirements of expected jobs at the mean values observed for 2nd generation Mexicans. Using the same procedure at all of the means of 3rd+ generation whites yields a prediction of .36, not .41, which is not the desired unadjusted rate for 3rd+ generation whites. The prediction at the means is not equal to the means of the predictions because of the non-linearity of the logit transformation, and yet this makes a choice of comparison difficult for this type of exercise.

observed means for 2nd generation Mexicans by an amount equal to the observed difference between 3rd+ generation non-Hispanic whites and 2nd generation Mexicans – we can use these lower means to generate a new synthetic prediction. Taking these lower levels, but still giving these synthetic students the family background distributions characteristic of 3rd+ generation non-Hispanic whites, as well as the coefficients from Model 6 that apply to these whites, we obtain a predicted bachelor's degree attainment rate of only .20. Given that the unadjusted rate is between .19 and .21 depending on the method of calculation, we have effectively undone what we assume above we could accomplish by eliminating group differences in family background.

We do not believe that .20 is a reasonable prediction, given our judgment about the quality of the ELS sample and our belief, consistent with extant research, that shifts in family background can be expected to produce changes in everyday behavior as well as beliefs about future educational and occupational trajectories. In other words, even if dissonant acculturation exists for these students, we do not believe that it is entirely unresponsive to changes in family background, picked up in the cross-section as variation across individuals with different levels of socioeconomic status. Proponents of segmented assimilation may not agree.

For completeness, Table 7 presents additional predictions for alternative combinations of family background distributions, means of commitment and beliefs, passed through the coefficients that pertain alternatively to 3rd+ generation non-Hispanic whites and 2nd generation Mexicans. Although differences emerge across these other 9 predictions, they follow the same basic patterns described above for our comparison of the predictions in the upper-right portion of Table 7. The lowest prediction we generate is at the bottom-right of Table 7, where we assume that 2nd generation Mexicans keep their family background distribution, have lower than observed levels of commitment, and yet move through the coefficients for 3rd+ generation non-

Hispanic whites. Only 9 percent of such simulated students will obtain bachelor's degrees. Although this value is far too pessimistic, according to our judgment, it does provide a useful conclusion. Even if these patterns of commitment and beliefs would be observed for an expanded ELS sample, and even if they are rigidly set in stone, our best guess is that we could still double the bachelor's degree rate from .09 to .20 if, as shown three cells above it in Table 7, we gave these simulated students a distribution of family background that characterizes $3^{rd}+$ generation non-Hispanic whites.[14] Altogether, we conclude that, regardless of whether dissonant acculturation is present, the socioeconomic status disadvantage that characterizes the lives of recent Mexican immigrants and their children is a strong predictor, and a likely cause, of their low levels of bachelor's degree attainment.

CONCLUSIONS

Consistent with an abundance of research on broad patterns educational achievement and attainment, we have shown that measures of socioeconomic status can account for group differences in bachelor's degree attainment between 1.5^{th} and 2nd generation Mexican immigrant students in comparison to $3^{rd}+$ generation non-Hispanic white students. The capacity of socioeconomic status to adjust for the differences observed for 1st generation and $3^{rd}+$ generation Mexicans is lower, but here imprecise estimation and inherent heterogeneity, respectively, degrade the capacity of the ELS data to assess the effectiveness of adjustment.

While developing this primary result, we also used detailed measures of individual orientations to schooling and beliefs about the future: (1) behavioral commitment in schooling,

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[14] And, we could do better, pushing the rate up to .24, if we assume that they passed through the logit coefficients that apply to them, as estimated under their observed distributions.

reported directly by students, their parents, and their teachers and (2) detailed forward-looking

measures of occupational plans and their implied educational requirements. Results utilizing

these measures offered little or no support for the segmented assimilation prediction that has

consistently cast 1.5[th] and 2nd generation Mexican immigrants as groups likely to experience

downward assimilation in part because of the behavioral orientations of students themselves.

With or without baseline adjustments for socioeconomic status, these student-level measures can

account for only a modest portion of group differences in bachelor's degree attainment.

In short, the extensive evidence on the important ways in which families and schools

structure pathways through the educational system in the United States furnishes a

straightforward explanation for group differences in patterns of educational attainment.[15]

Although conceptually appealing, and still worthy of future consideration, the ELS data we

analyze can provide no substantial support for the segmented assimilation prediction when

applied to 1.5[th] and 2nd generation Mexican students.

For our final results on bachelor's degree attainment, we assessed the sensitivity of these

conclusions by simulating the consequences of 2nd generation Mexican students having much

lower levels of commitment to schooling than measured for the ELS, as would perhaps be the

case if we had firm evidence (which we do not have) that students engaged in behavior

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[15] Although we have not developed our article in a way that makes it directly comparable to the following studies, it bears noting that other scholars have reached similar conclusions with national datasets. Pong and Hao (2007), for example, in an analysis of the National Longitudinal Study of Adolescent Health, show that the difference between the GPAs of non-Hispanic whites and Mexican immigrant students can be accounted for by differences in measured characteristics of families, schools, and neighborhoods. Relatedly, Bohon, Johnson, and Gorman (2006) show that the lower educational aspirations and expectations of Mexicans in the National Longitudinal Study of Adolescent Health can be accounted for by socioeconomic status. More directly related to our result, Ovink and Kalgorides (2014) show, with the ELS 2002-2006 waves, that family background can account for apparent negative effects of familism on rates of college application and college entry, when considering all Hispanic ethnic groups together (i.e., not separating out those who claim Mexican ancestry from others, even though analysis is performed with attention to immigrant generation).

consistent with dissonant acculturation are embedded in an unobserved group of respondents who either refused to participate in the ELS or dropped out of school before they could have been sampled in the spring of the tenth grade. We showed that one could indeed undo the support for our main conclusions by making assumptions that, although not implausible, are ones that we would regard as far too pessimistic. These results, however, may be encouraging to those who wish to find support in our analysis for the segmented assimilation prediction.

DISCUSSION

In this final section, we place the foregoing set of models and interpretations in the context of the original literature on the segmented assimilation prediction, where some related measures are used in quite different ways. We offer our interpretation of this original literature, and why we have approached our analysis in the way that we have, in order to make the case that our alternative measurement decisions are not consequential for our main conclusions.

Although Portes and his colleagues have continued to develop the segmented assimilation perspective in more recent work [see, in chronological order, Portes and Rumbaut (2006), Portes and Fernández-Kelly (2008), and Portes and Rivas (2011), and Haller et al. (2011a, 2011b)], we regard the articulation offered first in Portes and Zhou (1993) and then as developed in full detail in Portes and Rumbaut (2001) to be the set of ideas that are the subject to ongoing debate. In their 2001 book, Portes and Rumbaut offer a wide range of results, which we interpret as a set of tailored models and measures, growing out of the status attainment approach to modeling educational and occupational trajectories.

We think it is helpful to look back at the status attainment literature to identify connections and continuities that explain, from our view, why it appears that the segmented

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assimilation perspective was developed in the way that it was. A good starting point is the

overview piece of Haller and Portes (1973), and in particular the key passage where they

summarize the rationale for the central role of aspirations in the Wisconsin model of status

attainment:

> It is the last set of variables [educational and occupational aspirations] which
> constitutes the strategic center of the model. Aspirations mediate most of the
> influence of antecedent factors on status attainment. Even when educational
> attainment is taken into account, occupational aspirations still exercise a
> significant direct effect on occupational attainment.
> The execution of occupational and educational aspirations appears to be a
> central process in early adult status attainment, not only because it represents a
> clear expressive orientation toward desirable goals but also because it is likely to
> involve a realistic appraisal of possibilities conveyed to ego by significant others
> and his own self-evaluations. The hypothesized impact of aspirations on status
> attainment does not mean that all or most specific goals must be fulfilled but,
> more generally, that initial plans set limits to the range where eventual attainment
> levels are likely to be found. Haller and Portes (1973:68)

As we will show below, many of the core features of this older argument were adopted by Portes

and Rumbaut (2001), even while the segmented assimilation conjecture was elaborated with

ideas drawn from the literature on oppositional culture that was in its ascendance in the 1990s.[16]

Consider first the survey instruments for the CILS, on which the primary results of Portes

and Rumbaut (2001) are based [as well as some of the early results in Portes and Zhou (1993)].

For the 1991 CILS base-year student questionnaire, educational aspirations were elicited with a

variety of questions, the first three of which were: (1) "What is the highest level of education you

would like to achieve?" (2) "And realistically speaking, what is the highest level of education

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[16] There are important pieces that link these traditions as well, perhaps most important being Portes, McLeod, and
Parker (1978), which offered a comparison of the educational, occupational, and income aspirations of Mexican and
Cuban adult immigrants, sampled at ports of entry. They concluded that occupational aspirations are modest and
rational, and that many of the typical status attainment characteristics have the expected associations with elicited
aspirations. Past education and occupation were the strongest determinants of the occupational aspirations of
Mexican immigrants, with mother's level of education following next. Feliciano (2006) offers a similar result for
the educational expectations of children of immigrants who participated in the CILS.

that you think you will get?" (3) "What job would you like to have as an adult? (Please write

clearly)." The follow-up questionnaire for the CILS included similar questions, often exact

replicates (see Portes and Rumbaut 2001, Appendix A). Similarly, the parent questionnaire of

the CILS elicited status attainment predictors, including parental aspirations for students.

Beyond these status attainment items, the CILS also collected extensive information on

immigration histories, patterns of language usage, social psychological indicators of depression

and self-esteem, as well as attitudes toward bilingualism, other features of the assimilation

process, and the opportunity structure in the United States. Similar attitudinal items on the

parent questionnaire then allowed for measures of parent-child agreement on attitudes.

The CILS, did not, however, measure everyday commitment to schooling, nor did it have

a teacher component like the ELS. In fact, it is remarkably devoid of measures that would allow

one to directly model oppositional modes of behavior that are consistent with the dissonant

acculturation that is purported to be unfolding in adolescence. We also find it of interest that

occupational aspirations receive very little attention in any of the core pieces that proposed the

segmented assimilation conjecture.[17] Yet, the data were analyzed, and one can find small

references to some of their patterning. Portes and Zhou (1993, Table 2) report high levels of

occupational aspirations for the groups they analyze from the Florida component of the CILS,

which does not include in Mexicans. Portes and Rumbaut (2001:219) indicate that, in results

[17] One exception is Feliciano and Rumbaut (2005), which offers models of occupational expectations for the San
Diego portion of the third wave of the CILS. They show that young women who are identified as the children of
Mexican immigrants have lower expectations, net of socioeconomic status and schooling (although these are the
occupational expectations of 24-25 year-olds, looking forward to expected occupations at age 30). Moving beyond
the CILS, Portes, Aparicio, Haller, and Vickstrom (2010) align their analysis of immigrant generational effects in
Spain squarely with the status attainment tradition, offering a figure (see page 768) that includes a latent "ambition"
variable. They later measure use occupational-prestige-type PRESCA scores to scale occupational aspirations,
which is very similar to the original Level of Occupational Aspiration concept and SEI-scored operationalization of
the Wisconsin model.

"not shown," that 18 percent of all CILS respondents aspired to be physicians, but that young

women were more likely to be found among aspiring physicians "across almost all nationalities."

Although attention to occupational aspirations is scarce, educational aspirations and

expectations feature prominently in the data analysis, usually motivated directly by the status

attainment research. For example, Portes and Rumbaut (2001:226) write that "In modeling

determinants of educational aspirations and expectations, we follow past theories of the status

attainment process." At the conclusion of their analysis, they conclude that "the bearing of the

history and negative modes of incorporation of Mexican immigrants on the adaptation of their

young is evident in these findings where, independent of other factors, Mexican origin reduces

educational aspirations and expectations by almost 10 percent" (Portes and Rumbaut 2001). We

read this conclusion as a direct claim that negative modes of incorporation, which are a source of

dissonant acculturation, decrease educational aspirations and expectations.[18] These declines are

then accentuated by patterns of interaction in schools, where a generalized oppositional culture to

school achievement emerges, as first articulated in Portes and Zhou (1993:88) for Mexican

immigrants.

This refresher on the intellectual origins of, and fine points of analysis in, Portes and

Rumbaut (2001) suggests a reasonable objection to our results: we take a measure of ambition

that the originators of the segmented assimilation prediction would insist be in the foreground,

and we relegate it to our Model 7, which we then conveniently ignore. We agree that we have

indeed done this, but our goal was not at all driven by a desire to invalidate the segmented

assimilation prediction. Rather, for reasons stated in the results section, and for deeper

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[18] It is also notable that the ten percent difference highlighted in this claim is consistent with what we observed for
the ELS in 2002 and 2004 (see Table 6).

theoretical reasons detailed in Morgan et al. (2013a, 2013b) and the work on which those two articles are based, we think any decision to yoke a set of models of educational attainment to status attainment predictors conceptualized in the 1960s is a poor analysis choice, especially when direct measures of commitment and everyday engagement with schooling are now available. Even so, we should also note that we do not entirely discount models of forward-looking beliefs elicited in high school, but rather that we favor ones that represent uncertainty, and that are tied to forecasts about labor market position which themselves imply specific educational trajectories. These measures, we maintain, are far less afflicted by social desirability bias attributable to the "college for all" ethos of K-12 schooling in the United States.

Still, what would happen if we were to fully embrace a status attainment rationale for using educational expectations as a realistic measure of ambition that, through adaptation to negative modes of incorporation, generates dissonant acculturation? Doing so would bring the design of our analysis into closer alignment with that of Portes and Rumbaut (2001), but our main conclusions would remain unaltered. We conclude with the following results:

1. If we were to substitute into Model 3 the educational expectations variable in the tenth grade (see Table 6 for categories) instead of our variable for the educational requirements of students' expected jobs, the corresponding adjusted differences reported in Table 5 would be .14, .14, .21, .25, .21, and .41 rather than .14, .14, .20, .22, .20, and .41.

2. If we were to then substitute into Model 4 the educational expectations variable in the twelfth grade instead of our variable beliefs about the educational

requirements of students' expected jobs, the corresponding adjusted differences

reported in Table 5 would be .14, .14, .22, .25, .21, and .41 rather than .15, .14,

.21, .23, .21, and .41.

In other words, our measures of educational requirements of expected jobs capture the same,

quite low, capacity of forward-looking beliefs to account for group differences of interest. We

do not believe, therefore, that our decision to use an alternative measure of forward-looking

beliefs is consequential for our main conclusions. Objections to our results, therefore, need a

more compelling basis, perhaps centered on the sort of thinking we introduce for our predictive

simulations in Table 7. Here, we agree that additional research is very much called for.

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Table 1. Educational Attainment Patterns by Race-Ethnicity and Immigrant Generation, with Students' Self-Reported Native Language Used to Differentiate Respondents for Whom Parent-Reported Immigrant Generation is Missing

	Proportion completed high school on time	Proportion ever enrolled postsecondary education	Proportion received a bachelor's degree by 2012	Raw N	Weighted Percent
1. Mexican, Mexican-American, or Chicano, 1st generation	**.72** **(.04)**	**.64** **(.04)**	**.13** **(.03)**	**115**	**1.36**
2. Mexican, Mexican-American, or Chicano, 1.5th generation	**.76** **(.05)**	**.71** **(.05)**	**.14** **(.04)**	**78**	**.97**
3. Mexican, Mexican-American, and Chicano, 2nd generation	**.78** **(.03)**	**.82** **(.02)**	**.19** **(.02)**	**265**	**3.11**
4. Mexican, Mexican-American, Chicano, 3rd+ generation	**.81** **(.02)**	**.79** **(.02)**	**.21** **(.02)**	**408**	**4.21**
5. Puerto Rican, Cuban, or Dominican, 1st or 1.5th generation	.74 (.07)	.88 (.05)	.16 (.06)	43	.47
6. Puerto Rican, Cuban, or Dominican, 2nd generation	.79 (.04)	.87 (.04)	.31 (.05)	84	.75
7. South and Central American, 1st or 1.5th generation	.85 (.04)	.89 (.03)	.23 (.05)	84	.76
8. South and Central American, 2nd generation	.77 (.05)	.92 (.03)	.30 (.06)	64	.51
9. Hispanic ethnicity of some type (including Mexican, Mexican-American, and Chicano), Missing generational status, Spanish is the student's native language	.66 (.06)	.81 (.05)	.15 (.04)	66	.78
10. Hispanic ethnicity of some type (including Mexican, Mexican-American, and Chicano), Missing generational status, Spanish is not the student's native language	.67 (.05)	.73 (.05)	.15 (.04)	88	.92
11. Hispanic ethnicity other than Mexican, Mexican-American, or Chicano, 3rd+ generation	.81 (.03)	.86 (.03)	.19 (.03)	151	1.35
12. Asian or NHOPI non-Hispanic, 1st or 1.5th generation	.94 (.01)	.94 (.01)	.48 (.02)	407	1.61
13. Asian or NHOPI non-Hispanic, 2nd generation AND Generational status missing, English is not the student's native language	.92 (.01)	.93 (.01)	.54 (.02)	565	2.24
14. Asian or NHOPI non-Hispanic, 3rd+ generation AND Generational status missing, English is the student's native language	.86 (.02)	.81 (.03)	.42 (.03)	243	1.34
15. Black or African-American non-Hispanic, 1st, 1.5th, or 2nd generation AND Generational status missing, English is not the student's native language	.89 (.03)	.95 (.02)	.34 (.04)	156	1.42
16. Black or African-American non-Hispanic, 3rd+ generation AND Generational status missing, English is the student's native language	**.83** **(.01)**	**.82** **(.01)**	**.20** **(.01)**	**1,335**	**13.81**
17. American Indian or Alaskan Native non-Hispanic, All generations	.79 (.03)	.72 (.03)	.18 (.03)	219	2.45
18. White non-Hispanic, 1st, 1.5th, or 2nd generation AND Generational status missing, English is not the student's native language	.92 (.02)	.92 (.02)	.49 (.03)	294	2.52
19. White non-Hispanic, 3rd+ generation AND Generational status missing, English is the student's native language	**.92** **(<.01)**	**.87** **(<.01)**	**.41** **(.01)**	**6,166**	**58.9**
20. Missing race, all generations	.88 (.04)	.82 (.05)	.37 (.06)	64	.52
Total	.88	.85	.35	10,895	100.00

Table 2. Commitment and Beliefs About the Educational Requirements of Expected Jobs for Six Focal Groups Defined by Race-Ethnicity and Immigrant Generation

	Mexican ethnicity	Mexican ethnicity	Mexican ethnicity	Mexican ethnicity	Black, non-Hispanic	White, non-Hispanic
	1st generation	1.5th generation	2nd generation	3rd+ generation	3rd+ generation	3rd+ generation
Commitment (10th grade)						
Teacher-reported (12 indicators)	-.27	-.29	-.14	-.30	-.39	.15
Student-reported (13 indicators)	.05	-.26	-.09	-.34	-.21	.10
Parent-reported (7 indicators)	-.28	-.31	-.20	-.25	-.32	.13
Educational requirements of expected jobs (10th grade)						
College or more	.21	.31	.35	.36	.42	.45
High school or less	.07	.21	.09	.14	.11	.12
High school *and* college	.01	.03	.02	.03	.05	.04
Don't know occupation	.40	.29	.38	.35	.25	.31
Missing	.32	.16	.16	.12	.18	.08
Beliefs About the Educational Requirements of Expected Jobs (12th grade)						
Certain and correct						
College or more	.28	.39	.38	.33	.41	.43
High school or less	.04	.05	.03	.04	.03	.02
Uncertain but specific						
High school *and* college	.02	.05	<.01	.03	.03	.02
Uncertain						
Don't know occupation	.37	.28	.33	.31	.27	.29
Certain but possibly incorrect						
Expected job requires a high school degree or less, but the student believed college is required	.15	.12	.12	.17	.12	.14
Expected job requires a college degree or more, but the student believed only a high school degree is required	.05	.07	.09	.10	.11	.08
Missing	.09	.04	.05	.03	.04	.03
Unweighted N	115	78	265	408	1,335	6,166

Source: ELS 2002-2012.

Table 3. Indicators of Commitment in the Tenth Grade

Teacher reports of commitment (inter-item scale reliability .77)
 Does this student usually work hard for good grades in your class? (English Teacher)
 Does this student usually work hard for good grades in your class? (Math Teacher)
 How often does this student complete homework assignments for your class? (English Teacher)
 How often does this student complete homework assignments for your class? (Math Teacher)
 How often is this student attentive in class? (English Teacher)
 How often is this student attentive in class? (Math Teacher)
 Has this student fallen behind in school work? (English Teacher)
 Has this student fallen behind in school work? (Math Teacher)
 How often is this student absent from your class? (English Teacher)
 How often is this student absent from your class? (Math Teacher)
 How often is this student tardy to your class? (English Teacher)
 How often is this student tardy to your class? (Math Teacher)

Student reports of commitment (inter-item scale reliability .70)
 How many times did the following things happen to you in the first semester or term of this school year?
    I was late for school.
    I cut or skipped class.
    I got in trouble for not following school rules.
    I was transferred to another school for disciplinary reasons.
 How often do you spend time on the following activities outside of school?
    Visiting friends at a hangout
    Driving or riding around
 How much do you like school?
 How often do you come to class without these things?
    Pencil/pen or paper
    Books
    Homework done
 How many times did the following things happen to you in the first semester or term of this school year?
    I was absent from school.
    I was put on in-school suspension.
    I was suspended or put on probation.

Parent reports of commitment (inter-item scale reliability .79)
 Has your tenth grader ever been considered to have a behavior problem at school?
 Since your tenth grader's school opened last fall, how many times have you or your spouse/partner
   contacted the school about the following?
    Your tenth grader's problem behavior in school
    Your tenth grader's poor attendance record at school
    Your tenth grader's poor performance in school
 Since your tenth grader's school opened last fall, how many times have you or your spouse/partner
   been contacted by the school about the following?
    Your tenth grader's problem behavior in school
    Your tenth grader's poor attendance record at school
    Your tenth grader's poor performance in school

Notes: Scale reliabilities are reported for the 10,895 individuals in the full sample presented in Table 1.

Table 4. Family Background Measures for the Six Focal Groups

	Mexican ethnicity	Mexican ethnicity	Mexican ethnicity	Mexican ethnicity	Black, non-Hispanic	White, non-Hispanic
	1st generation	1.5th generation	2nd generation	3rd+ generation	3rd+ generation	3rd+ generation
Family structure						
Living with two parents	.73	.75	.82	.69	.50	.80
Mother only	.19	.16	.15	.23	.43	.15
Father only	.03	.05	.03	.03	.02	.03
Other	.01	.02	0	.01	.02	.01
Socioeconomic status						
Family income in 10th grade	30,820	23,970	35,600	48,910	42,160	69,520
Mother's education (in years)	11.5	11.0	11.3	13.0	13.4	13.9
Father's education (in years)	11.6	11.4	11.7	13.0	13.3	14.1
Mother's occupation (SEI score)	34.9	34.0	37.7	44.2	43.1	47.2
Father's occupation (SEI score)	35.8	36.7	37.7	42.4	41.7	46.2
Unweighted N	115	78	265	408	1,335	6,166

Source: ELS 2002-2012.

Table 5. Unadjusted and Adjusted Proportions of Students Enrolled in the 10th Grade in 2002 who Obtained a Bachelor's Degrees by 2012, Where the Adjustments are Standardized to the Distributions that Characterize 3rd+ Generation Non-Hispanic Whites

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mexican ethnicity							
1st generation immigrant	.12	.19	.14	.15	.21	.27	.36
	(.02)	(.03)	(.03)	(.03)	(.08)	(.10)	(.10)
1.5th generation immigrant	.13	.19	.14	.14	.50	.48	.55
	(.04)	(.05)	(.04)	(.04)	(.12)	(.08)	(.07)
2nd generation immigrant	.19	.24	.20	.20	.39	.43	.43
	(.03)	(.03)	(.03)	(.03)	(.05)	(.04)	(.04)
3rd+ generation immigrant	.21	.29	.22	.23	.30	.36	.40
	(.03)	(.03)	(.03)	(.02)	(.03)	(.03)	(.02)
Black, non-Hispanic							
3rd+ generation immigrant	.20	.31	.20	.21	.27	.36	.43
	(.01)	(.02)	(.01)	(.01)	(.02)	(.02)	(.02)
White, non-Hispanic							
3rd+ generation immigrant	.41	.41	.41	.41	.41	.41	.41
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Adjustment variables							
Commitment (10th grade)						✔	✔
Educational requirements of expected job (10th grade)			✔			✔	✔
Beliefs about requirements of expected job (12th grade)				✔		✔	✔
Socioeconomic status and family structure					✔	✔	✔
Educational expectations (10th grade and 12th grade)							✔
Reading test (10th grade)							✔
Math test (10th and 12th grade)							✔
Cumulative GPA							✔
Likelihood ratio test							
Model for comparison	Intercept only	Model 1	Model 1	Model 1	Model 1	Model 5	Model 6
Chi-squared test statistic for change in log-likelihood	127,983	439,186	66,554	279,319	375,987	456,168	312,297
Change in degrees of freedom	11	3	4	6	48	13	10
p-value	<.001	<.001	<.001	<.001	<.001	<.001	<.001
BIC	3,075,819	2,636,660	3,009,301	2,796,554	2,700,157	2,244,107	1,931,900

Source: ELS 2002-2012.

Table 6. Educational Expectations and Academic Achievement for the Six Focal Groups

Beliefs About the Educational Requirements of Expected Jobs	Mexican ethnicity 1st generation	Mexican ethnicity 1.5th generation	Mexican ethnicity 2nd generation	Mexican ethnicity 3rd+ generation	Black, non-Hispanic 3rd+ generation	White, non-Hispanic 3rd+ generation
Educational expectations, 10th grade						
Bachelor's degree or higher	.62	.66	.63	.62	.72	.74
Some college	.08	.13	.13	.14	.11	.10
High school diploma or lower	.12	.08	.12	.13	.09	.07
Don't know	.18	.13	.12	.11	.08	.09
Educational expectations, 12th grade						
Bachelor's degree or higher	.42	.49	.53	.53	.62	.68
Some college	.26	.30	.26	.24	.19	.19
High school diploma or lower	.14	.11	.08	.07	.08	.05
Don't know	.18	.10	.13	.15	.11	.08
Academic Achievement						
Standardized reading test (10th grade)	20.2	23.5	24.2	27.3	24.4	32.6
Standardized math test (10th grade)	31.8	33.0	35.8	37.8	33.8	46.7
Standardized math test (12th grade)	37.8	36.7	41.4	43.2	39.0	52.5
Cumulative GPA (12th grade)	2.3	2.2	2.4	2.4	2.1	2.8
Unweighted N	115	78	265	408	1,335	6,166

Source: ELS 2002-2012.

Table 7. Simulated Group Differences from Model 6 for Alternative Assumptions that Predispose Toward Acceptance of the Dissonant Acculturation Conjecture for 2nd Generation Mexican Students

		Model 6 coefficients for:	
Distribution of family structure and socioeconomic status:	At means of commitment and beliefs about expected jobs:	2nd generation Mexicans	3rd+ generation White, non-Hispanic
3rd+ generation White, non-Hispanic	3rd+ generation White, non-Hispanic	.43 (.04)	.41 (.01)
	2nd generation Mexican	.31 (.06)	.27 (.01)
	Below the means of 2nd generation Mexicans by an amount equivalent to the observed difference between 2nd generation Mexicans and 3rd+ generation white, non-Hispanics	.24 (.05)	.20 (.01)
2nd generation Mexican	3rd+ generation White, non-Hispanic	.19 (.03)	.18 (.01)
	2nd generation Mexican	.19 (.02)	.19 (.01)
	Below the means of 2nd generation Mexicans by an amount equivalent to the observed difference between 2nd generation Mexicans and 3rd+ generation white, non-Hispanics	.10 (.02)	.09 (.01)

Source: ELS 2002-2012.

Table S1. Distributions of Chosen Racial Identities within the Six Focal Groups

	Unweighted N	Weighted %
Mexican ethnicity, 1st generation		
Hispanic	56	48.0
Hispanic-White	42	36.8
Hispanic-Black	3	3.3
Hispanic-Asian	5	2.7
Hispanic-American Indian	6	5.8
Hispanic-NHOPI	1	1.5
Hispanic-White-American Indian	1	1.2
Hispanic-American Indian-NHOPI	1	0.8
Total	115	100.0
Mexican ethnicity, 1.5th generation		
Hispanic	47	61.2
Hispanic-White	20	23.1
Hispanic-American Indian	9	12.5
Hispanic-Black-Asian	1	2.0
Hispanic-White-American Indian-NHOPI	1	1.3
Total	78	100.0
Mexican ethnicity, 2nd generation		
Hispanic	144	52.4
Hispanic-White	86	33.9
Hispanic-Black	3	1.0
Hispanic-Asian	5	2.2
Hispanic-American Indian	18	7.5
Hispanic-Pacific Islander	3	0.8
Hispanic-White-Black	2	0.7
Hispanic-White-Asian	1	0.1
Hispanic-White-American Indian	1	0.4
Hispanic-Asian-NHOPI	1	0.8
Hispanic-White-Black-American Indian	1	0.2
Total	265	100.0
Mexican, 3rd+ generation		
Hispanic	160	39.1
Hispanic-White	176	43.2

Hispanic-Black	14	3.1
Hispanic-Asian	4	0.6
Hispanic-American Indian	26	7.3
Hispanic-Pacific Islander	6	2.3
Hispanic-White-Black	2	0.6
Hispanic-White-Asian	1	0.1
Hispanic-White-American Indian	11	2.5
Hispanic-Black-Asian	1	0.3
Hispanic-Asian-American Indian	1	0.2
Hispanic-White-Black-American Indian	1	0.5
Hispanic-White-American Indian-NHOPI	1	0.1
Hispanic-Black-Asian-American Indian	1	< 0.1
Hispanic-White-Black-American Indian-NHOPI	1	0.2
Hispanic-Black-Asian-American Indian-NHOPI	1	< 0.1
Hispanic-White-Black-Asian-American Indian-NHOPI	1	< 0.1
Total	408	100.0

Black, non-Hispanic, 3rd+ generation

Black	1,206	90.4
Black-White	60	4.0
Black-Asian	6	0.4
Black-American Indian	29	2.1
Black-NHOPI	4	0.5
Black-White-Asian	2	0.3
Black-White-American Indian	23	1.9
Black-White-NHOPI	2	0.2
Black-White-Asian-American Indian	1	0.1
Black-White-American Indian-NHOPI	2	0.3
Total	1,335	100.0

White, non-Hispanic, 3rd+ generation

White	6,166	100.0
Total	6,166	100.0

Source: ELS 2002-2012. *Notes*: NHOPI is Native Hawaiians and Other Pacific Islanders. American Indian includes Alaskan Native self-identification. Black includes African-American self-identification. Hispanic includes Latino/Latina self-identification.

Table S2. Logit Models for Bachelor's Degree Attainment

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5-C
Group						
[White, non-Hispanic, 3rd+ generation is the reference category]						
Mexican ethnicity, 1st generation	-1.56**	-1.42**	-1.07**	-1.25**	-1.31**	-0.27
	(0.267)	(0.298)	(0.276)	(0.305)	(0.276)	(0.356)
Mexican ethnicity, 1.5th generation	-1.51**	-1.35**	-1.05*	-1.31**	-1.48**	0.01
	(0.335)	(0.458)	(0.424)	(0.460)	(0.470)	(0.508)
Mexican ethnicity, 2nd generation	-1.05**	-0.81**	-0.58**	-0.83**	-0.94**	0.20
	(0.176)	(0.228)	(0.223)	(0.239)	(0.228)	(0.260)
Mexican ethnicity, 3rd+ generation	-0.93**	-0.67**	-0.28	-0.62**	-0.64**	-0.23
	(0.154)	(0.193)	(0.213)	(0.198)	(0.194)	(0.202)
Black, non-Hispanic, 3rd+ generation	-1.03**	-1.08**	-0.61**	-1.09**	-1.16**	-0.66**
	(0.088)	(0.118)	(0.130)	(0.118)	(0.122)	(0.124)
Gender						
Male		-0.30**	0.09	-0.22**	-0.16*	-0.39**
		(0.061)	(0.072)	(0.062)	(0.064)	(0.066)
Group by gender						
Mexican ethnicity, 1st generation * Male		-0.40	-0.48	-0.53	-0.53	-0.43
		(0.573)	(0.533)	(0.572)	(0.575)	(0.616)
Mexican ethnicity, 1.5th generation * Male		-0.49	-0.39	-0.32	-0.31	-0.59
		(0.902)	(0.899)	(0.919)	(0.918)	(0.901)
Mexican ethnicity, 2nd generation * Male		-0.60	-0.72+	-0.53	-0.39	-0.53
		(0.411)	(0.434)	(0.420)	(0.415)	(0.443)
Mexican ethnicity, 3rd+ generation * Male		-0.67*	-0.73*	-0.70*	-0.60*	-0.80**
		(0.293)	(0.318)	(0.298)	(0.293)	(0.295)
Black, non-Hispanic, 3rd+ generation * Male		0.13	0.20	0.17	0.18	0.06
		(0.174)	(0.182)	(0.177)	(0.178)	(0.188)
Commitment scales						
Teacher-reported commitment			0.90**			
			(0.045)			
Student-reported commitment			0.17**			
			(0.044)			
Parent-reported commitment			0.40**			
			(0.067)			
Educational requirements of expected job (10th grade)						
[College or more is the reference category]						
High school or less				-1.13**		
				(0.100)		
Mixed (some high school and some college)				-0.22		

					(0.150)	
Don't know occupation					-0.41**	
					(0.061)	
Missing					-0.68**	
					(0.104)	

Beliefs about educational requirements of expected job (12th grade) [Certain and correct: College or more is the reference category]

Certain and correct: High school or less					-3.01**	
					(0.318)	
Uncertain but specific: High school and college					-0.64**	
					(0.208)	
Uncertain: Don't know occupation					-0.83**	
					(0.066)	
Certain but incorrect:						
High school or less but believes college required					-1.58**	
					(0.097)	
College or more but believes only high school required					-2.52**	
					(0.166)	
Missing					-1.71**	
					(0.204)	

SES and family structure

Family structure: Mother only						0.03
						(0.094)
Mother's education (in years)						0.12**
						(0.016)
Father's education (in years)						0.16**
						(0.015)
Family income (natural log)						0.47**
						(0.056)
Mother's occupation (SEI score)						0.01**
						(0.003)
Father's occupation (SEI score)						0.01+
						(0.003)
Constant	-0.22**	-0.24**	-0.79**	0.04	0.37**	-0.49**
	(0.048)	(0.050)	(0.066)	(0.057)	(0.056)	(0.054)
Observations	8,367	8,367	8,367	8,367	8,367	8,367
Model chi-square (degrees of freedom)	243 (6)	253 (11)	992 (14)	419 (15)	832 (17)	865 (17)

Source: ELS 2002-2012. *Notes*: Heteroscedasticity-consistent standard errors in parentheses.
** p<0.01, * p<0.05, + p<0.1

Table S3. Additional Logit Models for Bachelor's Degree Attainment, Including Interactions between Group and Family Background, as well as Additional Adjustment Variables

	Model 5	Model 6	Model 7
Group			
[White, non-Hispanic, 3rd+ generation is the reference category]			
Mexican ethnicity, 1st generation	-0.62	-0.44	-0.03
	(0.481)	(0.606)	(0.579)
Mexican ethnicity, 1.5th generation	0.95	0.61	1.21
	(1.136)	(0.842)	(1.000)
Mexican ethnicity, 2nd generation	-0.17	-0.04	-0.16
	(0.304)	(0.287)	(0.298)
Mexican ethnicity, 3rd+ generation	-0.42+	-0.08	0.12
	(0.242)	(0.232)	(0.245)
Black, non-Hispanic, 3rd+ generation	-0.59**	-0.23	0.31+
	(0.139)	(0.153)	(0.164)
Gender			
Male	-0.40**	0.06	0.09
	(0.067)	(0.078)	(0.089)
Group by gender			
Mexican ethnicity, 1st generation * Male	-0.56	-0.51	-0.33
	(0.677)	(0.598)	(0.725)
Mexican ethnicity, 1.5th generation * Male	-1.17	-0.56	-0.61
	(1.012)	(0.982)	(1.145)
Mexican ethnicity, 2nd generation * Male	-0.49	-0.40	-0.04
	(0.456)	(0.512)	(0.545)
Mexican ethnicity, 3rd+ generation * Male	-0.83**	-0.97**	-0.98*
	(0.307)	(0.370)	(0.429)
Black, non-Hispanic, 3rd+ generation * Male	0.08	0.18	0.08
	(0.187)	(0.202)	(0.214)
Commitment scales			
Teacher-reported commitment		0.74**	0.14*
		(0.048)	(0.059)
Student-reported commitment		0.16**	0.05
		(0.050)	(0.052)
Parent-reported commitment		0.39**	0.14*
		(0.073)	(0.066)
Educational requirements of expected job (10th grade)			
[College or more is the reference category]			
High school or less		-0.54**	-0.25*
		(0.117)	(0.127)

Mixed (some high school and some college)		0.10	0.17
		(0.173)	(0.172)
Don't know occupation		-0.06	0.09
		(0.077)	(0.086)
Missing		-0.23+	0.07
		(0.130)	(0.145)

Beliefs about educational requirements of expected job (12th grade) [Certain and correct: College or more is the reference category]

Certain and correct: High school or less		-2.06**	-1.26**
		(0.325)	(0.363)
Uncertain but specific: High school and college		-0.29	0.04
		(0.246)	(0.246)
Uncertain: Don't know occupation		-0.56**	-0.20*
		(0.081)	(0.093)
Certain but incorrect:			
High school or less but believes college required		-1.09**	-0.40**
		(0.106)	(0.121)
College or more but believes only high school required		-1.93**	-0.82**
		(0.175)	(0.191)
Missing		-1.17**	-0.62*
		(0.246)	(0.265)

SES and family structure

Family structure: Mother only	0.05	0.19	0.33*
	(0.111)	(0.125)	(0.140)
Mother's education (in years)	0.13**	0.11**	0.04
	(0.018)	(0.021)	(0.023)
Father's education (in years)	0.16**	0.14**	0.09**
	(0.018)	(0.020)	(0.022)
Family income (natural log)	0.49**	0.45**	0.36**
	(0.064)	(0.069)	(0.071)
Mother's occupation (SEI score)	0.01*	0.00	0.00
	(0.003)	(0.003)	(0.004)
Father's occupation (SEI score)	0.01+	0.00	0.00
	(0.003)	(0.004)	(0.004)

Group by SES and family structure

Mexican ethnicity, 1st generation * Mother only	-0.60	-0.27	-0.60
	(0.862)	(0.783)	(0.797)
Mexican ethnicity, 1.5th generation * Mother only	-0.05	0.14	0.19
	(1.156)	(1.499)	(1.240)
Mexican ethnicity, 2nd generation * Mother only	1.13+	1.26+	1.17+
	(0.655)	(0.694)	(0.644)

Mexican ethnicity, 3rd+ generation * Mother only	0.64+	0.64	0.71+
	(0.388)	(0.395)	(0.380)
Black, non-Hispanic, 3rd+ generation * Mother only	-0.32	-0.37	-0.55*
	(0.208)	(0.227)	(0.231)
Mexican ethnicity, 1st generation * Mother's education	-0.10	-0.20	-0.19
	(0.124)	(0.127)	(0.143)
Mexican ethnicity, 1.5th generation * Mother's education	-0.03	-0.11	-0.18
	(0.252)	(0.202)	(0.241)
Mexican ethnicity, 2nd generation * Mother's education	-0.10	-0.10	-0.06
	(0.090)	(0.105)	(0.115)
Mexican ethnicity, 3rd+ generation * Mother's education	-0.07	-0.06	0.02
	(0.093)	(0.098)	(0.100)
Black, non-Hispanic, 3rd+ generation * Mother's education	-0.00	-0.03	0.00
	(0.047)	(0.053)	(0.057)
Mexican ethnicity, 1st generation *Father's education	0.18	0.16	0.29+
	(0.152)	(0.146)	(0.163)
Mexican ethnicity, 1.5th generation * Father's education	-0.01	-0.03	0.11
	(0.221)	(0.267)	(0.227)
Mexican ethnicity, 2nd generation * Father's education	-0.17*	-0.14+	-0.16+
	(0.074)	(0.084)	(0.090)
Mexican ethnicity, 3rd+ generation * Father's education	0.01	0.02	0.03
	(0.063)	(0.071)	(0.082)
Black, non-Hispanic, 3rd+ generation * Father's education	0.01	0.00	0.03
	(0.040)	(0.043)	(0.046)
Mexican ethnicity, 1st generation * Family income	-0.25	-0.24	-0.09
	(0.180)	(0.180)	(0.257)
Mexican ethnicity, 1.5th generation * Family income	-0.19	0.14	0.42
	(0.319)	(0.523)	(0.657)
Mexican ethnicity, 2nd generation * Family income	0.72+	0.81+	0.85*
	(0.412)	(0.442)	(0.404)
Mexican ethnicity, 3rd+ generation * Family income	0.52+	0.50	0.52+
	(0.279)	(0.305)	(0.302)
Black, non-Hispanic, 3rd+ generation * Family income	-0.26*	-0.23+	-0.29*
	(0.127)	(0.123)	(0.117)
Mexican ethnicity, 1st generation * Mother's occupation	-0.01	0.01	0.03
	(0.040)	(0.044)	(0.044)
Mexican ethnicity, 1.5th generation * Mother's occupation	0.11	0.07	0.08
	(0.078)	(0.062)	(0.087)
Mexican ethnicity, 2nd generation * Mother's occupation	-0.01	-0.00	-0.01
	(0.017)	(0.017)	(0.019)
Mexican ethnicity, 3rd+ generation * Mother's occupation	0.00	0.00	-0.01
	(0.017)	(0.016)	(0.020)

Black, non-Hispanic, 3rd+ generation * Mother's occupation	0.00	0.00	0.00
	(0.008)	(0.009)	(0.009)
Mexican ethnicity, 1st generation * Father's occupation	-0.05	-0.04	-0.07
	(0.043)	(0.049)	(0.059)
Mexican ethnicity, 1.5th generation * Father's occupation	-0.02	0.01	-0.03
	(0.056)	(0.056)	(0.052)
Mexican ethnicity, 2nd generation * Father's occupation	0.03	0.03	0.03
	(0.020)	(0.020)	(0.021)
Mexican ethnicity, 3rd+ generation * Father's occupation	-0.01	-0.02	-0.01
	(0.014)	(0.015)	(0.020)
Black, non-Hispanic, 3rd+ generation * Father's occupation	-0.01	0.00	-0.00
	(0.008)	(0.009)	(0.009)
Academic Achievement			
Math (10th grade)			-0.01*
			(0.007)
Read (10th grade)			0.01
			(0.006)
Math (12th grade)			0.03**
			(0.006)
GPA (12th grade)			1.14**
			(0.088)
Educational expectations at 10th grade **[College or more is the reference category]**			
Some college			-0.50**
			(0.178)
HS or less			-0.82**
			(0.292)
Don't know			-0.02
			(0.149)
Educational expectations at 12th grade **[College or more is the reference category]**			
Some college			-1.51**
			(0.154)
HS or less			-1.58**
			(0.384)
Don't know			-0.94**
			(0.186)
Constant			-4.89**
			(0.262)
Observations	8,367	8,367	8,367

| Model chi-square (degrees of freedom) | 1029 (47) | 1525 (60) | 1932 (70) |

Table S4. Unadjusted and Adjusted Proportions of Students Enrolled in the 10th Grade in 2002 who Obtained a Bachelor's Degree for Six Focal Immigrant Generational Status Groups, Where the Adjustments are Standardized to the Distributions that Characterize the Full Sample

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mexican ethnicity							
1st generation immigrant	.12	.17	.14	.14	.19	.24	.31
	(.02)	(.03)	(.03)	(.03)	(.07)	(.09)	(.08)
1.5th generation immigrant	.13	.17	.14	.13	.45	.42	.47
	(.04)	(.04)	(.04)	(.04)	(.11)	(.07)	(.07)
2nd generation immigrant	.19	.22	.20	.20	.36	.38	.36
	(.03)	(.03)	(.03)	(.03)	(.05)	(.04)	(.04)
3rd+ generation immigrant	.21	.27	.22	.23	.27	.31	.33
	(.03)	(.03)	(.03)	(.02)	(.02)	(.02)	(.02)
Black, non-Hispanic							
3rd+ generation immigrant	.20	.28	.20	.20	.25	.31	.37
	(.01)	(.02)	(.01)	(.01)	(.02)	(.02)	(.01)
White, non-Hispanic							
3rd+ generation immigrant	.41	.37	.40	.40	.37	.35	.34
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Adjustment variables							
Commitment (10th grade)		✓				✓	✓
Educational requirements of expected job (10th grade)			✓			✓	✓
Beliefs about requirements of expected job (12th grade)				✓		✓	✓
Socioeconomic status and family structure					✓	✓	✓
Educational expectations (10th grade and 12th grade)							✓
Reading test (10th grade)							✓
Math test (10th and 12th grade)							✓
Cumulative GPA							✓

Source: ELS 2002-2012.

Table S5. Unadjusted and Adjusted Proportions of Students Enrolled in the 10th Grade in 2002 who Obtained a Bachelor's Degree for Six Focal Immigrant Generational Status Groups, Where the Adjustments are Standardized to the Distributions that Characterize 2nd Generation Mexican Immigrants

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mexican ethnicity							
1st generation immigrant	.12	.15	.14	.14	.13	.16	.18
	(.03)	(.03)	(.03)	(.03)	(.03)	(.04)	(.03)
1.5th generation immigrant	.13	.15	.14	.13	.21	.21	.25
	(.04)	(.04)	(.04)	(.04)	(.06)	(.05)	(.05)
2nd generation immigrant	.19	.19	.19	.19	.19	.19	.19
	(.03)	(.02)	(.03)	(.02)	(.03)	(.02)	(.02)
3rd+ generation immigrant	.21	.24	.22	.23	.13	.16	.17
	(.03)	(.03)	(.03)	(.02)	(.02)	(.02)	(.02)
Black, non-Hispanic							
3rd+ generation immigrant	.20	.25	.20	.19	.13	.17	.22
	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)
White, non-Hispanic							
3rd+ generation immigrant	.41	.33	.40	.39	.19	.19	.19
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Adjustment variables							
Commitment (10th grade)		✔				✔	✔
Educational requirements of expected job (10th grade)			✔			✔	✔
Beliefs about requirements of expected job (12th grade)				✔		✔	✔
Socioeconomic status and family structure					✔	✔	✔
Educational expectations (10th grade and 12th grade)							✔
Reading test (10th grade)							✔
Math test (10th and 12th grade)							✔
Cumulative GPA							✔

Source: ELS 2002-2012.