

Research Article

How Are The Children Of Immigrants Assimilating? The Effects Of Individual, Neighborhood, Coethnic Community, And National Origin Group Characteristics On Education In San Diego

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Abstract. How immigrants' children will integrate to US society is of ongoing debate. This study examines which assimilation pathway immigrants' children are following. This study examines how four factors—individual, neighborhood, coethnic community, and national origin group—affect the children of immigrants' educational attainment. I analyze a unique data set that matches individual survey data from the Children of Immigrants' Longitudinal Survey (CILS) dataset with coethnic community, neighborhood, and group level data. The results indicate that coethnic community, group, and individual factors simultaneously influence the children of immigrants' education, showing evidence for the selective assimilation pathway.

Keywords: *Children of Immigrants, Coethnic Community, Contextual Effects, Educational Attainment, Assimilation.*

A. INTRODUCTION

Since the passage of the 1965 Immigration Act, the US has experienced mass migration from Latin American and Asian countries. The long-term consequences of post-1965 migration will not be determined by the immigrants themselves but by their children. Immigrants' children comprise nearly 20% of all US children under 18, so their educational attainment will have lasting effects on the social and economic fabric of the US.

Whether immigrants' children achieve high or low levels of education depends on a combination of factors. Educational attainment is largely determined by individual characteristics—such as sex, age, and parents' socioeconomic status—and the contextual environment where children grow up. One important context is the neighborhood; a neighborhood's socioeconomic and racial characteristics can shape children's educational attainment. Another context is the coethnic community; within neighborhoods, children may live closely with people from the same national origin, and the socioeconomic characteristics of these coethnics may influence their educational attainment. Still, another context is the parents' origin country. The socioeconomic characteristics of the countries that parents emigrate from can have enduring effects on their children's education. This study systematically analyzes four factors—individual, neighborhood, coethnic community, and national origin group—on educational attainment.

Assimilation theories suggest three educational pathways with distinct outcomes for immigrants' children. First, straight line assimilation theory posited that over time, the descendants of immigrants would obtain educational levels that resembled those of native-born Whites. With each successive generation, the educational attainment of immigrants' descendants would increase, thereby reducing native-born Whites' educational advantage over

time (Gans, 1992; Gordon, 1964; Warner & Srole, 1945). Second, the selective assimilation pathway, a hypothesis derived from segmented assimilation theory, posited that some children of immigrants would obtain higher education than native-born Whites by integrating aspects of the immigrant culture and the host society (Portes & Zhou, 1993). Third, the downward assimilation pathway, another hypothesis from segmented assimilation theory, posited that some children of immigrants would obtain lower education than native-born Whites by adopting the outlooks of the native-born and working class minorities (Portes & Zhou, 1993).

The three assimilation hypotheses above have been directly assessed by an individual-level study by Boyd (2002), who found that individual characteristics, such as sex, age, and parent's education, determined which one of the three educational pathways immigrants' children would follow. However, the three assimilation hypotheses have not been evaluated by empirical studies of contextual factors at different levels. For instance, contextual studies have examined the separate effects of the neighborhood (Fleischmann, Phalet, Deboosere, & Neels, 2012; Pong & Hao, 2007), coethnic community (Bygren & Szulkin, 2010; Grönqvist, 2006), and national origin group (Feliciano, 2005; 2006) on academic performance or educational attainment, but not on the three educational pathways directly.

While empirical studies suggest that individual, neighborhood, coethnic community, and national origin group characteristics influence the children of immigrants' education, these four levels have not been analyzed together or from the perspective of assimilation theories. Examining the four levels together offers a more comprehensive assessment of educational attainment by showing whether these effects remain when the factors are considered net of each other. The closest assessment of the four levels is by Perreira et al. (2006), who examined individual, school, and neighborhood characteristics on dropping out. They say they examine community characteristics, but they examine neighborhood characteristics, like the racial composition and socioeconomic characteristics of all individuals in the neighborhood rather than coethnics in the neighborhood. They also did not align the factors to the three educational pathways. Furthermore, Boyd (2002) argued that individual, neighborhood, coethnic community, and national origin group factors shaped the three educational pathways, but her analysis only examined the effects of individual level factors on education. Some theoretical studies of straight line assimilation theory and segmented assimilation theory indirectly discussed the effects of the four factors on the three assimilation pathways, but did not present empirical findings (Gordon, 1964; Portes & Zhou, 1993). Thus, no study has examined all four factors on the three educational pathways and aligned these empirical results toward an assimilation framework.

This is largely due to data limitations. First, information at small geographic areas, such as a census tract, are not widely available and require special access. In turn, contextual factors are underconceptualized and have been measured at different levels of aggregation, including the city or metropolitan level (Conger, Schwartz, & Stiefel, 2011; Fleischmann, Phalet, Neels, & Deboosere, 2011), neighborhood level (Perreira et al., 2006; Xie & Greenman, 2011), or national origin group level (Levels, Dronkers, & Kraaykamp, 2008). Second, there is limited data on immigrants' children. A lack of intergenerational data in the US and the absence of a census question on parent's place of birth has hampered quantitative research on this topic (Waters, Tran, Kasinitz, & Mollenkopf, 2010). The ideal dataset would include a large sample of immigrants' children from multiple national origins with information on their family, school, neighborhood, and community characteristics (Conger et al., 2011). To my knowledge, this dataset does not exist. The Children of Immigrants Longitudinal Study (CILS) comes the closest by offering a moderate sample of immigrants' children and information on their education, neighborhood, and community characteristics at the tract level. Although CILS does not include more extensive school and community information, such as school SES and the

SES of coethnic neighbors, CILS remains more advantageous than other datasets. For instance, the National Longitudinal Survey of Youth (NLSY) and the Sensitive General Social Survey (GSS) do not include school context information and have small samples of immigrants' children. The National Education Longitudinal Survey (NELS), High School and Beyond (HS&B), and High School Longitudinal Study (HSL) do not include census tract information. The National Longitudinal Study of Adolescent to Adult Health (Add Health) has a large sample of immigrants' children and includes contextual variables at the census tract (e.g., proportion of racial groups in tract, neighborhood SES), but it does not include information about coethnics in the census tract. Thus, Add Health does not allow me to assess coethnic community characteristics, making CILS more advantageous for this study.

This paper assesses the effects of four levels of factors on three educational outcomes to determine the children of immigrants' educational pathway. To orient the subsequent discussion, Table 1 lists the predictions offered by straight line assimilation, downward assimilation, and selective assimilation. For brevity, this paper focuses on the predicted effects (educational parity with native-born whites, higher educational attainment than native-born whites, lower educational attainment than native-born whites, or no prediction) for neighborhood and community characteristics, which are presented in Table 1 and throughout the text. Although the predictions are stated in terms of educational attainment relative to Whites, Table 1 presents the results as predicted regression coefficients (no effect, positive, negative, or no prediction).

Table 1
 Predicted Effects of Assimilation Theories

	Straight Line		
	Assimilation Theory	Segmented Theory	Assimilation
	Straight Line	Downward	Selective
	Assimilation	Assimilation	n
	Pathway	Pathway	Pathway
<i>Neighborhood</i>			
% Black	No Prediction	Negative	No Prediction
% White	Positive	Positive	Negative
% Hispanic	No Prediction	Negative	No Prediction
% Immigrants	Negative	No Prediction	No Prediction
<i>Neighborhood</i>			

		No Prediction	No Prediction	No Prediction
	Income	No Prediction	No Prediction	No Prediction
	<i>Coethnic Community</i>			
	% Own Coethnics	Negative	No Prediction	Positive
	% Own Coethnics *		No Prediction	Positive
	Bilinguals	No Prediction	No Prediction	Positive

Straight line assimilation theory stems from the works of classical assimilation theorists, such as Park (1950) and Burgess (1925), who viewed educational parity with native-born Whites as inevitable. In contrast, straight line assimilation theory posited that educational parity with Whites was conditional on neighborhood and coethnic community factors. Straight line assimilation viewed native-born Whites as largely middle class, so obtaining educational parity with Whites was more likely to occur when neighborhood and coethnic community characteristics resembled those of middle class Whites (Gordon, 1964; Massey, 1985).

Straight line assimilation theory provides predictions for neighborhood characteristics on whether the descendants of immigrants would obtain educational parity with native-born Whites. Neighborhood characteristics refer to the characteristics of all adults living together in small geographic areas (e.g., census tract) and indicators include average SES, immigrant composition, and racial composition. Although straight line assimilation theory did not frame its predictions as neighborhood effects, they can be interpreted as such because aggregate neighborhood characteristics, such as the composition of immigrant and native-born White populations, shaped whether immigrants' descendants attained educational parity with native-born Whites.

Straight line assimilation theory predicted the effects of two neighborhood characteristics: percent of immigrants and percent of native-born Whites. First, living in immigrant dominant neighborhoods were associated with lower education than native-born Whites because these were marginalized areas with poverty and crime (review in Alba, Logan, Stults, & Marzan, 1999; Child, 1943; Warner & Srole, 1945). Second, living in native-born White neighborhoods were associated with educational parity with Whites because they were suburban areas with greater amenities. White neighborhoods exposed immigrants and their descendants to mainstream culture and networks (Gordon, 1964). Thus, immigrant and White neighborhoods had opposing effects on achieving educational parity with Whites. The benefits of White neighbors were more associated with their socioeconomic resources and opportunities than their race.

Straight line assimilation theory's neighborhood predictions above have not been assessed in terms of parity with Whites. The closest empirical assessment is by Pong and Hao (2007), who found that the percent of immigrant neighbors had a negative effect on the children of immigrants' academic performance. Although this finding was not phrased in terms of parity with Whites, the negative effect of immigrant neighbors supports straight line assimilation's predictions that a greater percentage of immigrant neighbors would lead to lower educational

attainment than native-born Whites (Table 1, column 1, row 4) whereas a greater percentage of native-born White neighbors would lead to educational parity with native-born Whites (Table 1, column 1, row 2). Other neighborhood factors, such as neighborhood SES and racial composition, were not predicted by straight line assimilation theory but Fleischmann et al. (2011; 2012) found that neighborhood SES positively influenced secondary school completion whereas a higher percentage of minority neighbors negatively influenced secondary school completion. Their findings are consistent with straight line assimilation because it further suggests that educational parity with native-born Whites is associated with the characteristics of middle class Whites, such as higher SES neighborhoods and native-born White neighbors. Percent minority in the neighborhood and neighborhood income are included in Table 1, column 1, rows 1, 3, 5.

Straight line assimilation theory acknowledged that within neighborhoods, there could be coethnic communities—groups of persons from the same country of birth, or coethnics, living together in small neighborhoods (i.e., Little Italy, Chinatown, etc.) (Warner & Srole, 1945; review in Zhou, 1997). While neighborhood characteristics refer to all individuals in the neighborhood regardless of national origin, coethnic community characteristics refer specifically to the coethnics in the neighborhood. Indicators of the coethnic community include its size or density, mean education, and mean income (Bygren & Szulkin, 2010; Grönqvist, 2006). There are different interpretations of the coethnic community (Bygren & Szulkin, 2010; Fleischmann et al., 2011; Levels et al., 2008). This paper operationalizes the coethnic community within neighborhoods, as described by classical assimilation theorists (Burgess, 1925) and ethnographic studies (Gibson, 1988; Zhou & Bankston, 1998). Originally, straight line assimilation theory did not generate its predictions as coethnic community effects, but it can be thought of as such because the number of coethnics living together in a neighborhood influenced whether immigrants' descendants attained similar education levels as native-born Whites. Straight line assimilation posited that living in a coethnic community would result in lower education than native-born Whites because coethnics would participate in ethnic institutions that were isolated from the host population and have lower participation in mainstream institutions (i.e., English language schools) (review in Alba & Nee, 1997; Warner & Srole, 1945; review in Yancey, Erickson, & Juliani, 1976).

The coethnic community predictions set forth by straight line assimilation theory have not been empirically assessed in terms of education levels relative to Whites. The closest assessment of straight line assimilation's coethnic community predictions are by Bygren and Szulkin (2010) and Grönqvist (2006), who found that a higher concentration of coethnic neighbors led to lower educational attainment among immigrants' children. While these findings were not discussed in terms of parity with Whites, they support straight line assimilation's prediction that living with more coethnic neighbors resulted in lower educational attainment than native-born Whites (Table 1, column 1, row 6).

In contrast to straight line assimilation theory, which focused on whether immigrants' children would obtain educational parity with Whites, segmented assimilation theory posited three possible outcomes for immigrants' children: lower educational attainment than Whites (downward assimilation pathway), educational parity with Whites (straight line assimilation pathway), or higher education than Whites (selective assimilation pathway). The predictions and results associated with educational parity with Whites are identical to those described by straight line assimilation theory. The downward and selective assimilation pathways provided predictions for the neighborhood and the coethnic community. The downward assimilation hypothesis posited that attaining less education than Whites was more likely to occur when the children of immigrants' neighborhood and coethnic community characteristics resembled those of disadvantaged native-born minorities. Alternatively, the selective assimilation pathway

posited that obtaining higher education than Whites was more likely to occur when the children of immigrants' neighborhood and coethnic community characteristics reflected the values of the immigrant culture and the host society.

Downward assimilation offered predictions for two neighborhood effects: percent native-born White neighbors and percent native-born minority neighbors. Selective assimilation provided one neighborhood prediction: percent native-born White neighbors. Downward assimilation and selective assimilation pathways offer different predictions about the effect of White neighbors. Downward assimilation posited that living with White neighbors led to educational parity with Whites because children adopted mainstream norms and values (Portes & Zhou, 1993). Native-born White neighborhoods were higher quality, outside of the central city, had more educated and working adults, and had fewer adults on public assistance (review in Galster, Metzger, & Waite, 1999). In contrast, the selective assimilation pathway posited that living with more White neighbors led to lower educational attainment than native-born Whites because it encouraged children to lose their immigrant culture and adopt American traits that were antithetical to educational attainment (Gibson, 1988; Portes & Zhou, 1993). Children faced more discrimination and 'othering' than those in non-White neighborhoods (review in Fleischmann et al., 2011; 2012; review in Grönqvist, 2006).

Nonetheless, neither downward assimilation nor selective assimilation's predictions of percent White neighbors has been empirically assessed in terms of education relative to Whites. Louie (2001) offers the closest assessment and found an association between growing up in predominantly White neighborhoods and attending highly ranked universities among children of Chinese immigrants. Although Louie's (2001) finding was not phrased in terms of education relative to Whites, it supports downward assimilation's prediction that living with more native-born Whites led to educational parity with native-born Whites (Table 1, column 2, row 2), but does not support selective assimilation's prediction (Table 1, column 3, row 2).

Downward assimilation also posited that living with minority neighbors led to lower educational attainment than Whites because native-born minorities had an adversarial stance towards education and minority neighborhoods had lower SES and fewer resources (Portes & Rumbaut, 2001; Portes & Zhou, 1993). The selective assimilation pathway, however, did not provide a prediction about the effect of disadvantaged minority neighbors (Table 1, column 2, rows 1 and 3). It is unclear whether the omitted prediction suggests that the negative effect of disadvantaged minority neighbors is specific to downward assimilation or whether they are not important in selective assimilation.

Nonetheless, downward assimilation's prediction for minority neighborhoods has not been analyzed empirically in terms of educational attainment relative to Whites. The closest assessment is by Fleischmann et al. (2012), who found that neighborhoods with more minorities had a negative effect on secondary school completion in Belgium. Although this finding was not framed in terms of education relative to native-born Whites, it reinforces downward assimilation's prediction that more disadvantaged minority neighbors was associated with lower educational attainment than native-born Whites (Table 1, column 2, rows 1 and 3). Another neighborhood factor—neighborhood SES—was not predicted by the downward assimilation or selective assimilation pathways, but Fleischmann et al. (2011; 2012) found that it positively influenced educational attainment. Although not discussed in terms of education relative to Whites, Fleischmann et al.'s (2011; 2012) findings are consistent with the two hypotheses and further suggest that the children of immigrants' education relative to Whites is shaped by their neighbors' characteristics. I include neighborhood SES in Table 1, columns 2 and 3, row 5, respectively.

Additionally, the selective assimilation hypothesis posited that a larger coethnic community led to higher educational attainment than native-born Whites. Large coethnic

communities had more adult coethnics to enforce educational norms, monitor children, and share information, making it difficult for neighborhood children to engage in deviant behavior (Zhou & Bankston, 1998). Large communities provide access to ethnic resources and institutions that help low SES children (Portes & Zhou, 1993; Zhou & Kim, 2006). Thus, a larger coethnic community is associated with greater educational attainment than native-born Whites because it has more ethnic resources and institutions geared toward education. The downward assimilation pathway did not provide a prediction about the effect of the coethnic community (Table 1, column 2, row 6).

The coethnic community prediction posited by the selective assimilation pathway has not been empirically tested in terms of educational attainment relative to Whites. Fleischmann et al. (2012) comes the closest and found that living in a larger coethnic community had a positive effect on completing secondary education for Moroccans in Belgium. Their finding was not phrased in terms of education relative to Whites, but it is consistent with selective assimilation's prediction: a larger coethnic community leads to higher educational attainment than native-born Whites (Table 1, column 3, row 6).

The selective assimilation pathway predicts the independent, linear effects of factors at each level. It also implies an interactive relationship between the coethnic community and educational attainment that differs by language, namely for monolinguals and bilinguals (Bankston & Zhou, 1995; review in Golash-Boza, 2005; review in Mouw & Xie, 1999). Although it was not originally framed as an interaction, it can be thought of as such. Golash-Boza (2005) found that bilinguals had higher test scores than monolinguals because they benefitted from coethnic community resources and networks. While this has not been tested in terms of educational attainment relative to Whites, an implicit prediction of selective assimilation is that bilinguals living with coethnics are more likely than their monolingual counterparts to surpass Whites education (Table 1, column 3, row 7).

B. METHODS

This study analyzes data from the California portion of CILS in San Diego, which includes 1990 Census tract data on the social and economic characteristics of children's neighborhoods whereas the Miami data does not. This data is a nonrandom sample. Respondents are clustered by schools, which I adjust for with robust clustering in the regression analyses. In the first wave (1991), students were 14-15 and surveyed and interviewed from 17 schools in San Diego County. Students were re-interviewed in 1994 when they were 17-18 and from 2001-2003 when respondents were 24-25 (Feliciano & Rumbaut, 2005). This study focuses on a sample of 1,224 respondents from sixteen national origin backgrounds. Respondents were included in the sample based on their mother's country of birth. Foreign-born children are considered first generation and native-born children are considered second generation. There was some sample attrition in the third wave (Feliciano & Rumbaut, 2005). Female respondents with two-parent families, higher academic grade point averages in junior high school, and better English-speaking skills were more likely to be located and re-interviewed in the final wave.

C. RESULTS AND DISCUSSION

Table 2 presents the odds ratios of obtaining less than a high school degree, a high school degree, or college degree among immigrants' children, estimated by ordinal logistic regression. The odds ratios provide the odds that are associated with a unit change in the independent variable of being in a higher outcome category of the dependent variable compared to a lower outcome category. The standard errors for each variable are presented in parentheses underneath the odds ratios. The proportional odds assumption (assumption of parallel lines) for

ordinal logistic regression was not violated in Table 2 so proportional odds did not significantly vary across categories (Long, 1997).

Table 2 examines the effects of neighborhood and coethnic community characteristics on educational attainment net of group and individual controls. The logic of this model is to assess the different empirical studies of individual, neighborhood, coethnic community, and group factors together on educational attainment. The first set of variables in Table 2 are individual variables. The odds ratios for female, parent’s SES, and bilingualism are significant and increase the odds of being in the higher educational attainment categories versus lower educational categories among immigrants’ children. The second set of variables in Table 2 examines the effect of neighborhood characteristics on educational attainment. The odds ratio for a high percentage of Blacks (20-63%), Whites (37-98%), and Hispanics (26-94%) in the neighborhood were not significant. I considered two other aspects of neighborhood composition—a high percent of immigrant neighbors (35-65%) and neighborhood income—which were both not significant. The neighborhood variables show that net of controls, neighborhood composition does not significantly affect education.

Table 2 also assesses the effect of the coethnic community (vis-à-vis coethnic concentration) on educational attainment. The odds ratio for a high percentage (36-90%) of coethnics in a neighborhood is 0.76 and borders significance, net of controls. I also control for educational selectivity (2.19), which is significant. Thus, high educational selectivity is associated with higher educational attainment.

Table 2
 Odds Ratios of Obtaining Educational Attainment for the Children of Immigrants
 Estimated by Ordinal Logistic Regression

Independent Variables	Model 1
<i>Individual</i>	
Female	2.08***
(ref: male)	(0.33)
Parent's SES	2.02***
	(0.18)
Bilingual	1.38*
(ref: monolingual)	(0.20)
<i>Neighborhood</i>	
% Black (High 20-63%)	0.86
(ref: Low (0-19%))	(0.13)
% White (High 37-98%)	1.16
(ref: Low: 0-36%)	(0.34)
% Hispanic (High: 26-94%)	0.92

(ref: Low: 0-25%)	(0.18)
% Immigrants (High: 35-65%)	1.54
(ref: Low: 0-34%)	(0.42)
Neighborhood Income	1.16
	(0.14)
<i>Coethnic Community</i>	
% Own Coethnics (High 36-90%)	0.76+
(ref: Low 0-35%)	(0.12)
<i>National Origin Group</i>	
Educational Selectivity (High (.513-.94))	2.19***
(ref: Low: 0.2 to .49)	(0.41)

*** $P \leq .001$ ** $p \leq .01$ * $p \leq .05$ + $p \leq .1$ (two-tailed tests)

N=1224

Table 3 assesses the effects of neighborhood, coethnic community, group, and individual variables from the perspective of the assimilation theories, analyzed in three logistic regression models. In separate analyses, I analyzed the models with multilevel regression but the goodness of fit test (likelihood ratio test) indicated that several multilevel models were not superior to logistic regression models with clustered standard errors. Random effects for several models were not statistically significant from zero. Thus, I use the logistic regression models with clustered standard errors, which makes fewer assumptions than multilevel models. For each model, I examine three outcomes predicting educational parity with an average value of native-born Whites' education (versus lower or higher education than the average education of Whites), lower educational attainment than the average value of native-born Whites' education (versus the same or higher education than the average education of Whites), and higher educational attainment than the average value of native-born Whites (versus the same or lower education than the average education of Whites). The three outcomes are aligned with the three pathways: straight line assimilation, downward assimilation, and selective assimilation. Table 3 corresponds to the predictions in Table 1.

In the first model of Table 3, I examine the effects of five variables—percent Black in the neighborhood, percent White, percent Hispanic, percent immigrant, and percent own coethnics in the coethnic community—on attaining less education than Whites. Model 1 assesses the main predictions by straight line assimilation, downward assimilation, and selective assimilation. Model 1 is synonymous to ethnographic and theoretical studies of assimilation theory that examined the effects of neighborhood racial composition and coethnic concentration on educational attainment, without control variables.

In the first column of Table 3, Model 1, the odds ratio of living with a high percentage of one's own coethnics (36-90%) versus a low percentage (0-35%) is 1.32 and significant. Thus, living with more coethnics increases the odds of obtaining educational parity with native-born Whites. In Model 1, column 2, the odds ratio for a high percentage of Hispanics (26-94%) in a

neighborhood is 2.41 and significant, which suggests that living in a neighborhood with a high concentration of Hispanics increases the odds of obtaining lower education than native-born Whites by 2.41 times. In Model 1, Column 3, the odds ratios for a high percentage of Black neighbors (20-63%) and for a high percent of Hispanics are both significant. Model 1, Column 3, shows that living with a high concentration of Black and Hispanic neighbors decreases the likelihood of surpassing Whites' education. Overall, Model 1 shows that living with many coethnics increases the likelihood of obtaining educational parity with Whites and the percent of White and immigrant neighbors are not significant, showing evidence against straight line assimilation. Model 1 also shows that a higher concentration of disadvantaged minority neighbors is associated with lower education than Whites, which supports downward assimilation.

Table 3, Model 2, presents the full model, and includes the same variables as Table 2. This model tests whether the findings of ethnographic and theoretical studies remain, net of socioeconomic characteristics. There is no change in the odds ratio for percent own coethnics from Model 1 to Model 2, net of controls. In Model 2, Column 2, the odds ratio for females and parent's SES is significant. The odds ratio for a high percentage of Hispanics is no longer significant, net of controls. In separate analyses, I find that percent Hispanic is explained by neighborhood income. The odds ratio for high educational selectivity remains significant. Overall, Model 2, Column 2 shows that net of controls, a greater share of Hispanic neighbors has no effect on obtaining lower education than Whites. Similarly, group and individual factors decrease the likelihood of obtaining lower education than Whites.

In Model 2, Column 3, the odds ratio for females, parent's SES, bilingualism, and educational selectivity are significant, net of controls. The odds ratios for high percentages of Black and Hispanic neighbors are not significant, net of controls. In separate analyses, I find that both variables are explained by neighborhood income. The odds ratio for the coethnic community borders significance. Model 2 shows that living with more Black and Hispanic neighbors have no effect on education, once socioeconomic controls are considered, which counters the predictions of downward assimilation and straight line assimilation. However, the association between coethnic concentration and obtaining educational parity with Whites remains net of controls, showing support for selective assimilation.

Model 3 includes an interaction between bilingualism and percent coethnic. The interaction is significant, suggesting that the effect of coethnic neighbors on education relative to Whites depends on a respondent's language abilities. When an interaction term is included in the model, the interpretation of the odds ratio describes how the effect of a predictor variable depends on the value of another predictor variable. To simplify, I discuss the three variables associated with the interaction: the main effects (percent coethnic and bilingualism) and the interaction term between the two variables.

In Model 3, Column 3, the odds ratio for bilinguals is 1.71 and significant. This indicates that the odds that bilinguals surpass Whites' education as opposed to obtaining the same or lower levels are 1.71 times higher than the corresponding predicted odds for monolinguals, when the percent of coethnics is low (0-34%). For monolinguals living with a high percentage of coethnics, the odds of surpassing Whites' education is 1.67 times greater than the odds of obtaining the same or lower levels of education than Whites. For bilinguals living with a higher percentage of coethnics, the odds of surpassing Whites' education are 0.67 ($1.71 \times 0.39 = 0.67$) lower than the odds of obtaining the same or lower education levels. The odds ratio for the interaction term is 0.39 and significant. The interaction term suggests that among monolinguals, living with more coethnics has a stronger effect on surpassing Whites' education than for bilinguals.

Table 3
Odds Ratios of the Children of Immigrants' Educational Attainment Relative to Whites Estimated by Logistic Regression

Independent Variables	Model 1			Model 2			Model 3		
	Parity with Whites (vs. Less or Higher)	Less than Whites (vs. Parity or Higher)	Higher than Whites (vs. Parity or Less)	Parity with Whites (vs. Less or Higher)	Less than Whites (vs. Parity or Higher)	Higher than Whites (vs. Parity or Less)	Parity with Whites (vs. Less or Higher)	Less than Whites (vs. Parity or Higher)	Higher than Whites (vs. Parity or Less)
<i>Individual</i>									
Female (ref: male)			0.88 (0.11)	.60** (0.12)	2.02*** (0.34)	0.88 (0.11)	.60** (0.12)	2.03*** (0.35)	
Parent's SES			0.93 (0.11)	.57** (0.12)	1.90*** (0.17)	0.93 (0.11)	.57** (0.12)	1.92*** (0.18)	
Bilingual (ref: monolingual)			0.91 (0.12)	.66+ (0.14)	1.51** (0.22)	0.92 (0.13)	.59* (0.12)	1.71*** (0.24)	
<i>Neighborhood</i>									
% Black (High 20-63%) (ref: Low 0-19%)	1.12 (0.17)	1.25 (0.22)	.62*** (0.09)	1.08 (0.18)	1.1 (0.20)	0.78 (0.15)	1.08 (0.18)	1.11 (0.21)	0.77 (0.15)
% White (High 37-98%) (ref: Low: 0-36%)	1.03 (0.23)	1.04 (0.32)	0.86 (0.23)	1 (0.24)	0.97 (0.20)	1.09 (0.37)	1 (0.24)	1 (0.21)	1.07 (0.36)
% Hispanic (High: 26-94%) (ref: Low: 0-25%)	0.87 (0.14)	2.41*** (0.58)	.42*** (0.08)	0.81 (0.21)	1.25 (0.39)	0.95 (0.23)	0.82 (0.21)	1.22 (0.37)	0.97 (0.24)
% Immigrants (High: 35-65%) (ref: Low: 0-34%)	0.84 (0.16)	1.22 (0.36)	0.98 (0.19)	0.8 (0.17)	0.97 (0.22)	1.49 (0.47)	0.80 (0.17)	0.96 (0.22)	1.49 (0.47)

Neighborhood										
Income					0.94	0.92	1.15	0.94	0.93	1.14
					(0.08)	(0.11)	(0.14)	(0.08)	(0.11)	(0.14)
Coethnic										
Community										
% Own										
Coethnics										
(High 36-90%)	1.32*	0.93	0.70	1.35*	0.80	.72+	1.44	.20***	1.67**	
(ref: Low 0-35%)	(0.18)	(0.24)	(0.17)	(0.18)	(0.17)	(0.12)	(0.47)	(0.09)	(0.30)	
National										
Origin Group										
Educational (High)	Selectivity									
(.513-.94)					1.09	.47***	2.47***	1.09	.47**	2.44***
(ref: Low: 0.2 to .49)					(0.21)	(0.11)	(0.58)	(0.21)	(0.11)	(0.58)
Interaction										
Bilingual * %										
Own							0.93	4.39*	.39***	
							(0.36)	(2.55)	(0.09)	

***P<.001 **p<.01 *p<.05 +p<.1 (two-tailed tests)

N=1224

This study assesses the children of immigrants' assimilation process by examining their educational pathways. Assimilation theories propose that immigrants' children may follow three possible educational pathways relative to native-born Whites (higher, lower, or similar educational levels as Whites). These pathways are shaped by individual, neighborhood, coethnic community, and group factors, but the pathways have only been examined at the individual level (Bygren & Szulkin, 2010; Feliciano, 2005; 2006; Fleischmann et al., 2012; Grönqvist, 2006; Levels et al., 2008; Pong & Hao, 2007; Portes & Rumbaut, 2001; Waters et al., 2010). Although empirical studies show that separately, individual, neighborhood, coethnic community, and national origin group characteristics influence the children of immigrants' education, it is unclear whether these effects remain when the four factors are considered simultaneously. Since immigrants' children are embedded in multiple contexts, this study considers several contextual effects simultaneously on their educational pathways. This study examines the four levels of factors on the children of immigrants' education relative to Whites.

The straight line assimilation pathway posits that children will attain educational parity with Whites if they resemble Whites' neighborhood and coethnic community characteristics because children interact primarily with Whites, replicate their behaviors, and participate in mainstream institutions at comparable rates to Whites. My results do not support straight line assimilation's hypothesis because living with a high percentage of White neighbors has no effect on the children of immigrants' education relative to the average value of Whites' education. This differs from Gordon's (1964) argument that greater exposure to Whites provides access to mainstream culture and facilitates the process of becoming like Whites.

Additionally, straight line assimilation hypothesizes that living in predominantly immigrant neighborhoods impedes the process of becoming like Whites because children live in marginalized neighborhoods with poor quality role models. My findings do not support straight line assimilation's hypothesis because a high percentage of immigrant neighbors has no effect on the children of immigrants' educational attainment compared with the mean value of Whites' education. This differs from Pong and Hao's (2007) findings that greater contact with immigrant neighbors negatively affects the children of immigrants' academic performance.

Straight line assimilation also posits that living in a community with many coethnics hinders the process of becoming like Whites because children are confined to ethnic institutions and have lower participation in mainstream institutions. Contrary to straight line assimilation's predictions, my findings show that a high percentage of coethnic neighbors increases the likelihood of attaining the average value of Whites' education. Thus, coethnic adults facilitate—rather than hinder—mainstream success. This differs from Grönqvist (2006) and Bygren and Szulkin (2010), who found that higher concentrations of coethnic neighbors were associated with lower education among immigrants' children. Overall, my findings show no support for straight line assimilation because replicating Whites' neighborhood and community characteristics are not associated with attaining the same average value of education as Whites. Instead, my results reveal that maintaining ties to coethnic community adults increases educational attainment.

A second pathway, downward assimilation pathway, posits that immigrants' children will attain lower education than Whites if they resemble disadvantaged native-born minorities in their neighborhood characteristics. Minority neighborhoods encourage children to acquire minority outlooks and behaviors because children live in lower SES neighborhoods and interact primarily with minorities that are adversarial towards education. My results do not support this hypothesis because living with a high percentage of Hispanics or Blacks does not have an effect on the children of immigrants' education relative to the average value of Whites' education. This is in contrast with Fleischmann et al. (2012), who found that greater exposure to minority neighbors was associated with lower education among immigrants' children.

Additionally, downward assimilation hypothesize that living in predominantly White neighborhoods discourages immigrants' children from acquiring minority outlooks and behaviors because White neighborhoods have high SES adults that can establish mainstream norms and behaviors for children. My findings do not support this hypothesis because living with a high percentage of Whites does not have an effect on education relative to the average value of Whites' education. Thus, greater contact with Whites does not deter immigrants' children from adopting minority behaviors. My findings differ from Louie's (2001) argument that White neighbors were associated with greater education among immigrants' children. Overall, my findings show no support for downward assimilation because replicating the neighborhood characteristics of native-born minorities has no effect on the children of immigrants' education compared with an average value of Whites' education.

A third pathway, selective assimilation pathway posits that the children of immigrants attain higher education levels than Whites when they possess the norms and values of their immigrant culture and the host society. First, selective assimilation hypothesizes that living in White neighborhoods discourages the maintenance of both cultures and pressures immigrants' children to lose their cultural ways for American traits. My findings do not support this hypothesis because living with more White neighbors has no effect on the children of immigrants' educational attainment relative to the average value of Whites' education. This differs from Gibson (1988) and Portes and Zhou (1993), who found that greater exposure to Whites discouraged immigrant cultural preservation.

Second, selective assimilation hypothesizes that immigrants' children will attain higher education than Whites' education if they live in larger coethnic communities because they maintain the values of the immigrant culture and the host society. Coethnic adults supervise children and facilitate access to ethnic education institutions. My results show some support for this hypothesis because living with more coethnics has a borderline significant association with surpassing the average value of Whites' education. This is consistent with Gibson (1988); Portes and Zhou (1993); and Zhou and Bankston (1998), who argued that greater exposure to coethnic adults was associated with greater education among immigrants' children.

The selective assimilation pathway implies an interactive relationship between the coethnic community and educational attainment that differs by language. Specifically, it suggests that the coethnic community effect on educational attainment is stronger for bilinguals than monolinguals (review in Golash-Boza, 2005; review in Mouw & Xie, 1999; Zhou & Bankston, 1998). My findings confirm an interactive relationship between the coethnic community and language. However, the interaction works in the opposite direction, showing that a greater presence of coethnic neighbors offers an increased educational benefit for monolinguals. This implies that immigrants' children experience a greater educational benefit from the coethnic community by actively engaging with community members as opposed to speaking the same language. Thus, the coethnic community's influence on education extends beyond individuals who can communicate in the immigrant language. This is consistent with Romero (1988) and Edwards and Chisholm (1987), who found that speaking the ancestral language was not necessary to feel a sense of belonging to one's ethnic group. Rather, interacting with individuals was more crucial for community belonging. My results extend other works examining language and the coethnic community as these studies only implied that the relationship between the coethnic community and education differed by language, but did not test this interactive effect (Golash-Boza, 2005; review in Mouw & Xie, 1999; Zhou & Bankston, 1998). Furthermore, my results differ from studies showing that bilinguals experienced a greater benefit from the community as these studies focused on one or a few immigrant groups.

Overall, my findings show the most evidence for the selective assimilation pathway, but no support for the downward assimilation and straight line assimilation pathways. The coethnic community is central to the selective assimilation pathway, distinguishing it from the other two pathways. This is consistent with Gibson (1988) and Zhou and Bankston (1998), who argued that immigrants' children who were attached to the coethnic community were following the selective assimilation pathway. When coethnic adults were accessible, children were less likely to adopt Whites' behaviors or lose sight of parental aspirations because coethnic adults supervised and reinforced behavior (Zhou & Bankston, 1998).

Children living with more coethnic adults felt less discrimination or 'othering' and had more optimistic outlooks toward education (Fleischmann et al., 2011; review in 2012; review in Grönqvist, 2006; review in Levels et al., 2008). In sum, the strategy described by selective assimilation—integrating aspects of the immigrant culture and the host society—is the most effective for the children of immigrants' educational attainment.

D. CONCLUSION

This study finds that individual, national origin group, and coethnic community factors simultaneously influence the children of immigrants' educational pathway. Overall, immigrants' children who can integrate their immigrant culture with the host society are more likely to experience upward mobility. This is exemplified among females, bilinguals, individuals with higher parental SES, selective groups, and larger coethnic communities. In contrast, immigrants' children with characteristics resembling native-born minorities—notably

males, low SES families, less educationally select groups—are more likely to experience socioeconomic disadvantage. The coethnic community is an important resource for monolingual children and less so for bilinguals by offering some cultural connection or coethnic information exchange that monolingual children may be otherwise excluded from by not speaking the immigrant language. This study finds that individual and community factors interact in ways that have not been discussed when examined separately and thus, illustrates some mechanisms that lead immigrants' children to follow different educational pathways.

Some features of the data may influence why the downward assimilation and straight line assimilation pathways are less visible in this study. First, the data are specific to San Diego, which may be less conducive to downward assimilation because of its racial and suburban setting. San Diego does not have innercity neighborhoods with a large and racially identifiable underclass. In 1990, the Black population represented 8 percent of the San Diego metropolitan area, which may not be large enough to negatively influence immigrant offspring as described by Portes and Zhou (1993). Additionally, this study is more representative of immigrants' children in suburban neighborhoods than in inner cities, where Portes and Zhou (1993) argue that downward assimilation is more likely to occur. Nonetheless, suburban neighborhoods are increasingly common settlement areas for immigrants and their children. Nearly half of incoming immigrants in the 1980s settled in a metropolitan area outside of the city center (Alba et al., 1999). Future research may ascertain whether adaptation patterns differ in suburban versus innercity neighborhoods.

Second, the findings are based on aggregations of educational attainment of children from diverse national origin groups, which may conceal group differences. My sample consists primarily of Mexicans, Filipinos, and Vietnamese with smaller samples of other national origin groups that I cannot disaggregate for separate analyses. Therefore, this study is more representative of immigrants' children in smaller metropolitan areas that are dominated by a few immigrant groups rather than larger urban areas with many groups. This study represents a first attempt at understanding how several contextual effects influence the children of immigrants' educational pathways. Future research may distinguish across groups to highlight group-specific structures and explore group characteristics more comprehensively with other levels of factors.

Third, this study could not account for additional characteristics of the coethnic community, such as education or income, which could matter for these educational pathways. Instead, I control for neighborhood SES at the tract level, which accounts for some of the socioeconomic differences in coethnic communities. Future research may examine the effects of coethnic community SES.

Overall, there is reason to be optimistic about the children of immigrants' assimilation process in the US. However, this optimism is tentative because it is unclear whether this strategy of straddling the host society culture and the immigrant culture is feasible for future generations. Future research may ascertain whether the community matters for the third generation

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