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Children of Immigrants' Assimilation Pathways: Examining Community, Neighborhood, Group, and Individual Effects on Educational Attainment

How the children of immigrants will assimilate to US society is of ongoing debate. For the children of immigrants, whether they successfully integrate into society depends on their educational attainment—the greatest predictor of labor market outcomes and their eventual socioeconomic integration into the host society. Given that roughly one in five school age children in the US belong to an immigrant family (Zhou 1997; Suarez-Orozco & Suarez-Orozco 2001), how these children of immigrants perform educationally will undoubtedly have lasting effects on the US economy. Thus, this paper examines which pathway the children of immigrants will immigrant into. I answer this question by examining how four factors—individual, neighborhood, community, and national origin group—affects the children of immigrants' educational attainment?

Various assimilation theories have been used to explain the educational trajectories of the children of immigrants. Classical straight line assimilation describes a multi-dimensional and gradual process in which educational attainment increases over time and this process is influenced by several dimensions, such as individual and neighborhood factors. Segmented assimilation theory, on the other hand, suggests that educational trajectories are more varied and its outcome depends on several factors at the individual, community, neighborhood, and group levels. To understand whether the contemporary second generation are adopting outcomes that follow the canonical account of classical assimilation theory or follow a trajectory that is more in line with segmented assimilation requires an examination of individual, community, neighborhood, and group factors together. Thus, my study will provide a systematic analysis of four factors—community, neighborhood, group, and individual—on second generation educational attainment.

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Classical Assimilation Theory

Classical Assimilation theory posited that immigrants and their children would over time adopt the “middle-class patterns of, largely, white Protestant, Anglo-Saxon origins” (Gordon 1964:72). This could occur in several ways, but educational and occupational attainment were the most important indicators (Gordon 1964). This process would occur uniformly with each generation, in which the children of immigrants' socioeconomic levels would be more similar to the mainstream than their immigrant parents (Gans).

In this pathway, immigrants would initially settle in immigrant neighborhoods in the central city because they relied exclusively on coethnic networks (Burgess 1967 [1925]:56). These affordable neighborhoods were temporary settlements; once they obtained greater SES, immigrants would move to neighborhoods with more native born whites (Breton 1964; Massey 1985; Warner and Srole). Immigrants moved out of immigrant neighborhoods because they were viewed as disadvantageous (Child 1943; Massey 1985; Warner and Srole 1945; Wirth 1925/1956; Zhou 1997:977) in two ways. First, immigrants in these neighborhoods were isolated from the majority of the host society. This isolation led to lower participation in mainstream institutions such as education and the primary labor market, thus slowing educational and economic attainment (review in Alba et al. 1997:885; Yancey et al. 1976). Second, areas with many immigrant coethnics were often ‘slums’ or marginalized areas with social problems such as poverty, single-headed households, and crime (Burgess 1935). Moreover, these social problems were accompanied by limited resources and opportunities for mobility; thus, stalling educational attainment for the next generations.

Unlike immigrant neighborhoods, neighborhoods with more native born whites led to socioeconomic advancement (Burgess 1967[1925]; Gordon 1964; Massey 1985) for two reasons.

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First, neighborhoods with more whites were suburban residences with more amenities (Burgess 1967 [1925]:56; Massey 1985:324). Second, these neighborhoods provided immigrants exposure to mainstream culture and networks (Gordon 1964). Thus, for classic assimilation theory, increased contact with the white native born population, particularly in the neighborhood context, was seen as uniformly beneficial for socioeconomic outcomes whereas increased contact with immigrants had a negative effect on educational attainment.

Classical assimilation theory acknowledges that within immigrant neighborhoods, there are coethnic communities, groups of persons from the same national origin group living together in a small neighborhood (i.e., Little Italy, Chinatown, etc). However, classical assimilation theory emphasizes the increased presence of all foreign born individuals but does not distinguish between the foreign born and immigrant coethnics. Thus, it is unclear whether the predicted effect is driven from the presence of immigrants in the neighborhood or a coethnic community in the neighborhood. Thus, this paper will distinguish between immigrant neighborhoods and coethnic communities.

Group characteristics are largely ignored in classical assimilation theory. Classical assimilation theory suggests that group characteristics may shape outcomes though it makes no prediction about the effect of group characteristics. For instance, Gordon (1964) viewed group experiences, such as discrimination and prejudice, as influential to the assimilation process, but did not specify how they influence individual outcomes. As a result, classical assimilation theory largely ignores how group processes may affect individual attainment (review in Alba 1997:835).

Thus, according to classical assimilation theory, the percentage of native born whites in a neighborhood positively influences second generation educational attainment and the percentage

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of native born minorities and immigrants negatively affects second generation educational

attainment, net of individual controls.

Segmented Assimilation Theory

In contrast to classical assimilation theory's singular pathway to assimilation, segmented assimilation theory, an alternative theory, posits three pathways for today's children of immigrants. The first pathway is in line with classical assimilation theory's assimilation to the white middle class. The second pathway, selective assimilation, predicts that children of immigrants obtain socioeconomic advancement but purposely maintain ethnic networks and ties to their immigrant culture. In this pathway, children may move into disadvantaged and low SES neighborhoods with many native born minorities. In spite of these disadvantaged neighborhood conditions, children still obtain high educational attainment because they are shielded or protected by the coethnic community (Gibson 1989; Portes and Zhou 1993; Zhou and Bankston 1998). The third pathway, downward assimilation route, predicts that the children of immigrants experience downward mobility and assimilate to a native-born, minority working class. In this pathway, the children of immigrants live in disadvantaged and low SES neighborhoods with many native born minorities, have weak coethnic communities, and belong to disadvantaged groups.

A combination of factors determines which pathway the children of immigrants integrate into. Segmented assimilation theory incorporates two factors that classical assimilation ignored such as coethnic communities within neighborhoods and national origin group characteristics. The first is the coethnic community. For clarity, I define the coethnic community as a group of persons from the same national origin group living together in a small neighborhood or census

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tract. While there are different interpretations of the coethnic community (particularly at which level it should be defined), this paper adopts an operationalization of the coethnic community used by ethnographic studies describing the coethnic community at a small level, such as within a neighborhood (Gibson 1989; Portes and Zhou 1993; Zhou and Bankston 1998). The second is the national origin group. For clarity, I define group characteristics as the aggregate characteristics of people from the same country of origin (Feliciano 2005, 2006). For instance, persons born in China living in the US belong to the same national origin group and share similar group characteristics, such as the per capita GDP of the origin country, China. Some group characteristics are the same regardless of the destination country (e.g., origin country GDP) whereas others differ in different destinations (e.g., educational selectivity, group size). Group characteristics may vary across destination countries because people from the same origin country live in countries with different group characteristics. For instance, the Chinese living in the US and Canada are from the same origin country (China) but the total number of Chinese in the US differs from the total number of Chinese in Canada. Thus, for segmented assimilation, educational attainment is influenced by factors at the neighborhood, coethnic community, group and individual levels.

Living with more minorities leads to lower educational attainment among the children of immigrants in two ways. First, living among more native born minorities negatively influences the children of immigrants' educational outcomes because native born minorities have an adversarial stance toward education (Portes and Zhou 1993:83). A second explanation is that minority neighborhoods tend to have lower SES and lower resources that will negatively affect educational attainment. These neighborhood conditions are exacerbated by weak coethnic communities and disadvantaged group characteristics. Thus, if living in a neighborhood with

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more native born minorities and having lower group characteristics leads to lower educational attainment, net of community and individual controls, this would support segmented assimilation's downward assimilation pathway. Like classical assimilation, downward assimilation also sees that living with disadvantaged minorities leads to lower educational attainment. In this downward assimilation route, children live in low SES neighborhoods which leads to lower levels of educational attainment. For selective assimilation, there is no prediction about the effect of minority neighborhoods on educational attainment.

Living among more middle class whites also shapes educational outcomes (Zhou 1997:987). For instance, Perreira et al. (2008:530) found that second generation Latinos living in neighborhoods with more whites had lower dropout rates. Additionally, Louie (2001:446) found that for second generation Chinese, there was an association between attending Ivy League universities and growing up in predominantly white suburbs. Living in a neighborhood with more native born whites positively shapes second generation education because children adopt mainstream norms and values (Galster et al. 1999:100). Similarly white neighborhoods tend to be higher quality neighborhoods that are located out of the central city, have more educated adults, working adults, and fewer adults on public assistance (Galster et al. 1999:111).

In contrast, the selective assimilation pathway posits that living in neighborhoods with more whites has a negative effect on educational attainment. For selective assimilation, children of immigrants living in white neighborhoods would face more discrimination and othering than living in non-white neighborhoods. Additionally, more exposure to white neighbors would lead children of immigrants' to adopt American traits that were antithetical to educational attainment and be pressured to lose their cultural ways (Portes and Zhou 1993:90 ;Gibson 1998:623).

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Neighborhood SES has consistently shown a positive effect on the academic performance and educational attainment of the children of immigrants in the US (Perreria et al. 2008; Pong and Hao 2007:234) and Belgium (Fleischmann et al. 2011:418) where children living in high SES neighborhoods show higher educational attainment and children living in lower SES neighborhoods have lower education. For instance, Perreira et al. (2008:530) found that for second generation Latinos, living in poorer neighborhoods led to higher dropout rates. Living in a poor or low SES neighborhood negatively affects educational attainment because they have fewer resources (educational and financial) to support the educational outcomes of the second generation.

In addition to the neighborhood, segmented assimilation theory posits that the coethnic community positively influences educational attainment in two ways: supervision and resources. First, a larger coethnic community has more adult coethnics to help enforce educational norms, monitor children, and share information about children. The constant supervision of neighborhood children makes it difficult for youth to engage in deviant behavior and encourages academic achievement (Zhou and Bankston 1994:831; Zhou and Bankston 1998:106). Furthermore, these activities reinforce parents' control and aspirations for their children, which indirectly affect children's education (Pong and Hao 2006:209; Portes 1998:10). Thus, a large coethnic community positively affects educational attainment because there are more coethnic adults to help supervise childrens' behavior.

Second, a large coethnic community can provide children with access to ethnic resources and institutions. This can be particularly important for children of immigrants belonging to low SES families that lack resources they would need to accomplish goals, such as completing school (Fleischmann et al. 2011; Portes and Zhou 1993). For instance, Zhou and Kim (2006) found that

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Chinese and Korean ethnic communities had ethnic afterschool programs and test preparation

courses in the community (Zhou and Kim 2006:18-9). While many of the Chinese and Korean families were low SES themselves, the coethnic communities were able to provide educational resources to benefit the entire community. Thus, a large community positively affects educational attainment because it has more ethnic resources and institutions geared toward education.

For both the selective assimilation and downward assimilation pathways, the size of the coethnic community positively shapes educational attainment. A larger coethnic community leads to greater educational attainment. In the selective assimilation route, children belong to large and strong coethnic communities which leads to higher education. However, for the downward assimilation route, children belong to weak or non-existent coethnic communities. As a result, they do not have positive coethnic role models. Instead, they adopt the adversarial outlooks of native born minorities.

According to segmented assimilation theory, group characteristics also positively influence educational attainment. Selective assimilation posits that children of immigrants' educational attainment is also shaped by group characteristics, such as their position in the social structure in the home country (Feliciano 2006:283). Group characteristics may shape educational attainment in two ways: educational selectivity and group SES. First, educational selectivity (the educational difference between those who migrate (immigrants) and those who remain in the origin country (non-immigrants)) positively influences second generation educational attainment. The second generation of highly selective groups are more likely to obtain higher levels of education than the second generation of less selective groups (Borjas 1995; Feliciano 2005, 2006). Highly selective groups may positively influence second generation educational

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attainment by instilling high educational expectations in the second generation. Feliciano

(2005:295) found that second generation belonging to highly selective groups had higher

educational expectations and the effect of educational selectivity was more influential on second

generation academic aspirations than the group's SES in the destination country.

Furthermore, educational selectivity is important above and beyond that of group SES because groups may be of low class status in the destination country but were of high class status relative to non migrants in the home country. Thus, even if an immigrant group experiences downward mobility when they arrive in the destination country, they still maintain their view of being high status. In turn, highly selective adult coethnics are able to transmit some of this perception to the second generation and act as role models for the second generation. For instance, Gibson (1988) found that many Indian adults worked as farmers in the US but were viewed as positive role models by the second generation because of their high education and experience as high status in their home country (Gibson 1988). Thus, educational selectivity positively influences second generation educational attainment because the relative class position of the immigrant group or the context in which education is attained matters.

Second, a group's SES positively affects second generation education in which belonging to a higher SES group has a positive effect whereas belonging to a lower SES group has a negative effect on education (Borjas 1992, Feliciano 2005:854). For instance, Borjas (1992, 1993) measured the average earnings of the immigrant group and found that it was important predictor of second generation earnings. Borjas (1992, 1993) argued that ethnic capital, the average skills of the immigrant generation, works like intergeneration transmission and is transmitted to the second generation. Thus, group characteristics positively affect second

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generation educational attainment. Nonetheless, neither the downward assimilation pathway nor the selective assimilation pathways make predictions about educational selectivity or group SES.

There are two main approaches to testing assimilation theory. Studies have tested segmented assimilation theory by focusing on whether differences exist by a.) national origin group or racial groups (group approach); b.) individuals within one national origin group (the individual approach). The two approaches address different aspects of assimilation theory; the group approach controls for group level differences/broader contextual factors whereas the individual approach tends to focus on characteristics of individuals and families. First, the first approach uses national origin or racial groups to control for different group level characteristics, such as coethnic community, context of reception, etc. Thus, group differences in outcomes are attributed to differences in the characteristics of the group itself. One limitation of these studies is that they rarely discuss what the group differences are actually accounting for.

A second approach is to focus on individuals within one national origin group (review in Greenman and Xie 2008:2; Levels et al. 2008). These studies focus on different factors that may lead to differences in outcomes; the most common are individual and family variables, and occasionally school variables. These studies tend to view heterogeneity within a group to be more important in accounting for different outcomes. Individual factors, such as the length of residence, generation and language are the most commonly used indicators of assimilation (see review in Greenman and Xie 2008). One limitation of this approach is that the focus on individual factors tends to ignore broader factors, such as the group, community, or neighborhood.

This study integrates both approaches in two ways. First, this study will examine individual differences while controlling for group, neighborhood, and community variables.

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Second, instead of using national origin groups as a proxy for different contextual factors, this study will explicitly control for factors at the group, neighborhood, and community levels.

Combining Group, Community, and Neighborhood Effects

From the two approaches above, assimilation theories have suggested that individual, neighborhood, community, group, and school factors to be important. Thus, to fully examine the three assimilation pathways, my research combines four different factors: neighborhood (Perreira et al. 2006; Pong and Hao 2007), coethnic community (Bygren and Szulkin 2006; Conger et al. 2011; Fleischmann et al. 2011; Levels et al. 2008), national origin group (Borjas 1992; Feliciano 2005, 2006; Levels et al. 2008), and individual (Portes and Rumbaut 2001; Portes and Zhou 1993; review in Kao and Thompson 2003:431) to understand second generation educational attainment. These contextual effects have been examined either alone or as a combination of two factors (Borjas 1992; Bygren and Szulkin 2010; Conger et al. 2011; Feliciano 2005, 2006; Fleischmann et al. 2011; Levels et al. 2008) but all four factors (neighborhood, community, group, and individual) have not been examined all together. Thus, all three assimilation pathways have not been systematically examined.

One reason may be because the four contextual factors are underconceptualized and have been measured at different levels of aggregation. For instance, the coethnic community has been examined using characteristics at the city or metropolitan level (Conger et al. 2011; Fleischmann et al. 2011), neighborhood level (Greenman and Xie 2008; Perreira et al. 2006; Xie and Greenman 2011) or using characteristics at the national origin group level (Levels et al. 2008). Additionally, neighborhood characteristics have examined characteristics using census tracts (Pong and Hao 2007), postal codes, and metropolitan areas (Fleischmann et al. 2011). Because it is not explicitly stated in segmented assimilation theory, theoretically, the coethnic community

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can exist at all three levels of aggregation. This paper makes a distinction between four levels of aggregation—neighborhood, community, group, and individual—and examines their independent effects on second generation educational attainment.

Hypotheses:

Classical assimilation theory and segmented assimilation theory make different predictions about which factors affect educational attainment and the direction of the effect. These are summarized in Table 1. Table 1 includes neighborhood, community, group, and individual factors. Some factors come out of the assimilation theories and other factors are included as controls, such as percent married, neighborhood SES, parent's SES, foreign language at home, biological parents, and female.

Table 1, column 1 shows the predictions for straight line assimilation. Straight line assimilation predicts that percent white in the neighborhood positively affects educational attainment whereas percent foreign born negatively affects educational attainment. Straight line assimilation makes no prediction for the percent Black, percent Asian, percent foreign born, and community, and group variables. Column 2 shows the predictions for the selective assimilation pathway. Selective assimilation predicts that the percent foreign born in a neighborhood, the coethnic community, educational selectivity, and group size will positively affect educational attainment. Selective assimilation makes no prediction about the percent Black, percent Asian, percent White, and percent Hispanic in the neighborhood. Column 3 shows the predictions for the downward assimilation pathway. Downward assimilation theory predicts that the percent Black, percent Hispanic, and percent foreign born in a neighborhood will have a negative effect on educational attainment. Downward assimilation theory also predicts that the coethnic

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community and group characteristics will have a positive effect on educational attainment.

However, downward assimilation makes no prediction about the percent Asian and the percent White in a neighborhood.

Methodology

CILS Sample in Southern California

The data analyzed in this paper is retrieved from the California portion of the Children of Immigrants Longitudinal Study (hereafter CILS), a decade-long longitudinal study on the children of Immigrants in San Diego and Miami. The design of this study necessarily calls for a nonrandom sample in which respondents are clustered by schools.¹ In the first wave of this study (1991), students between the ages of 14-15, attending 8th or 9th grade were surveyed and interviewed from 17 different schools in the San Diego County. Students were re-interviewed in 1994 when they were approximately 17 or 18 years old. 1990 Census tract-level data was collected on the social and economic characteristics of the San Diego neighborhoods where these respondents grew up. In the last wave of this study (2001-2003), respondents were approximately age 24 to 25 (Feliciano and Rumbaut 2005;Rumbaut 2005). This study focuses on a sample of 1196 respondents from 16 different national origin backgrounds that have at least one parent born abroad. Respondents were included in the sample based on their mother's country of birth. Thus, in this study, children born abroad are considered first generation and those born in the US are considered second generation.²

¹To account for a nonrandom sample collection, I adjust for standard errors by using robust clustering in my ordinal logistic regression models.

² I acknowledge that the "second generation" is an ambiguous term that has been defined differently. I adopt Portes and Rumbaut's (2001:23-24) definition of the second generation which refers to US born children with at least on immigrant parent.

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Although the third wave of data collection had a retrieval rate of approximately 73 percent of the original sample, sample attrition remains a concern (Feliciano and Rumbaut 2005; Rumbaut 2005). Female respondents who belonged to two-parent families, had higher academic grade point averages in junior high school, had better English speaking skills, and were previously interviewed in the second wave of the study were more likely to be located and re-interviewed in the final wave of this study (Feliciano and Rumbaut 2005).

Variables and Measures

Dependent Variable

Educational Attainment

Educational attainment measures an individual's level of education (Mare 1980; Duncan 1994; Warren 1996). It can be operationalized as a continuous variable that gives the number of years of schooling an individual completed (Duncan 1994; Warren 1996) or as a categorical variable that either gives a range of levels (e.g., "some high school" to "Ph.D." (Alexander and Eckland 1975: 466)) or as some particular outcome (e.g., high school attrition (McNall, Dunnigan and Martimer 1994:53)) or high school graduation (Astane and McLanahan 1991:312-313).

In this study, one's highest level of educational attainment is measured in the third wave, as an ordinal variable with three categories: less than high school, high school graduate, and college graduate or higher.³ One disadvantage of this operationalization is that it may confound effects

³ Educational attainment in the third wave suffered from the sample attrition problem mentioned in the text, greatly reducing the sample size. For the three groups, there were 948 cases of missing data on educational attainment. However, final educational attainment wasn't imputed at all because imputing missing data on the dependent variable only inflates the sample size by creating more cases that have the same relationships as the cases with complete data. Rather, I imputed predictor variables with missing data. Thus, educational attainment in wave 3 was predicted using the independent variables with imputed data from waves 1 and 2.

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or overlook other considerable educational distinctions, because the educational categories are broad.

Independent Variables

Neighborhood Level Characteristics

I include five neighborhood characteristics: neighborhood SES, percent white in the neighborhood, percent black in the neighborhood, percent Latino in the neighborhood, and percent Asian in the neighborhood. This paper regards each census tract as a neighborhood. Neighborhood SES is operationalized using two 1990 U.S. Census variable at the census tract level, homeownership and income. The two variables were standardized, summed together, and then averaged. Neighborhood SES ranges from 0 to 1 where a value of 1 represents a neighborhood with the highest SES. The four racial composition variables were obtained from 1990 Census data on the proportion of each racial group in each tract.

Community Characteristics

I include a variable for the size of the coethnic community. Community variables were created using 1990 US Census tract level data. I used the census tract respondents were living in during T1 and matched this with 1990 census tract level data to create community size. Using the 1990 US Census, I use the percent same national origin per tract to construct percent coethnic concentration.⁴ The categories for all sixteen groups vary because of the different range of coethnics living in a neighborhood. For instance, the concentration of Mexican coethnics living in a neighborhood range from 1 percent to 90 percent whereas Vietnamese neighborhoods range from 0 to 15 percent.

⁴ For the ethnic concentration of Latino subgroups, I used numbers from the 2000 US Census because these estimates were not available in the 1990 US Census.

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National Origin Group Characteristics

I control for four national origin group characteristics: 1.) educational selectivity; 2.) political stability; 3.) economic development; and 4.) group size. First, I coded educational selectivity scores using Feliciano's (2005) published measures for all sixteen countries. Feliciano's (2005) measure calculates the differences between the average group education between immigrants in the destination country and non-migrants in the origin country. The educational selectivity of the national origin group in the destination country were calculated by aggregating individual level data from IPUMS International (1990-2001). The average education of the national origin group in the origin country were retrieved from published data from UNESCO Statistical Yearbooks, 1961-1992. Values ranged from 0.2 to 0.94. A value of .94 suggests that an immigrant's educational attainment will exceed that of a nonmigrant from the same country 94% more often than a nonmigrant's education will exceed an immigrant from the same country (Feliciano 2005:849; Lieberman 1980:201). I coded this variable as a dichotomous variable measuring "high" (.589 to .94) educational selectivity and "low" (0.2 to .588) educational selectivity, with low educational selectivity as the reference group.

Second, following Levels et al. (2008), I code political stability from the World Bank Government Indicator (Kaufmann, Kraay, and Mastruzzi 2005; World Bank 2004), which ranks each country's perceived chance that the government will be throwing by unconstitutional or violent means. The measure ranges from -2.5 to 2.5 with a high score reflecting a high level of political stability (Kaufmann, Kraay, and Mastruzzi 2005; World Bank 2004). I recoded political stability into a dichotomous variable of high (all positive values over 0) and low (all negative values less than 0) political stability, with low political stability as the reference group.

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Third, I measure economic development using the gross domestic product (GDP) per capita per US dollar (Levels et al. 2008:842; Van Tubergen 2004:712). I collected each country's GDP from published information from the World Bank. I code each country's GDP using the most recent year with available information (World Bank 2006). I recoded these into a dichotomous variable, indicating high GDP (ranging from 1403 to 34148) and low GDP (ranging from 538 to 1402). Fourth, to measure group size, I code the total population of each national origin group in the US using data from the 2000 US census.

Individual and Family Background Variables

I included five individual level control variables. I use three variables to control for family background: parent's SES, the frequency foreign language usage at home, and whether the respondent lives with both biological parents. First, using the criterion used by Portes and Rumbaut (2001), parental SES is a standardized unit weighted sum comprised of father and mother's education, occupational status and home ownership in 1992. This variable ranges from -2.00 to +2.00 and is statistically well-behaved as it proves to be more reliable than when measured independently (Portes and Rumbaut 2001:138). Living with natural parents is a dichotomous variable measuring whether individuals lived with both biological parents. The reference group represents any other living arrangement where respondents did not live with his/her two biological parents. Parental expectations are also powerful in shaping the educational expectations and trajectories of children (Feliciano 2005). Second, I include the frequency a foreign language is used at home. This variable is measure categorically ranging from 'English only' (coded as 0) to 'always' (coded as 5). Third, I include a dichotomous variable for whether

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the respondent lived with biological parents in both waves (T1 and T2). Last, I include two demographic controls such as sex and age.

RESULTS

How do the second generation vary in community and group characteristics?

TABLE 2 ABOUT HERE

Table 2 shows the community, neighborhood, and national origin group characteristics for the 1.5 and second generation from sixteen different national origin groups. The first column presents the percentage of coethnic members living in the tract in descending order. The data indicates that Mexicans are the most likely to live in concentrated coethnic neighborhoods (36 percent), followed by Filipinos (14 percent). Colombians live in the least coethnically concentrated neighborhoods (.01 percent). In contrast, column 2 shows that Mexicans tend to live in neighborhoods with the fewest college educated adults (12.51 percent) compared with Colombians, who live in neighborhoods where nearly half the neighbors are college educated. Column 4 shows the educational selectivity of the different national origin groups. Mexicans are the least educationally selective (0.2), whereas Indians are the most educationally selective (.858). Column 5 shows the size of the national origin group, as a proportion of the total US population. Mexicans are the largest national origin group in the sample, comprising approximately 3.26 percent of the US population. Thais are the smallest national origin group, making up less than 1 percent of the US population. In general, group size tends to correspond

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with the percentage of coethnics in the neighborhood in which larger national origin groups tend to have neighborhoods with more coethnics. This can be illustrated with Mexicans who are largest national origin group (3.26% of US population) and have the most concentrated neighborhoods (36.06%). Similarly, Filipinos are the second largest national origin group in the sample (1.59% of US population) and have the second most concentrated neighborhoods (13.94%). In contrast, Thais are the smallest national origin group (.06% of US population) and live in one of the least coethnically concentrated neighborhoods (.03%).

TABLE 3 ABOUT HERE

Table 3 presents the odds ratios of obtaining less than a high school degree, a high school degree, or graduating from college among children of immigrants estimated by ordinal logistic regression. The odds ratios give 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.

Table 3 examines the effect of neighborhood, coethnic community, group, and individual level factors on educational attainment. This model captures the effects of all four levels of variables, net of each other. The first set of variables in Table 3 examines the effect of neighborhood characteristics on educational attainment. The odds ratio for the percent of Blacks living in a neighborhood is 0.79 and is statistically significant at the .05 level. For a one percentage increase in percent Black in a neighborhood, the odds of being in a higher educational attainment category are 0.79 times lower than being in a lower educational attainment category,

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given the other variables are held constant in the model. Therefore, for every one percentage increase in percent black, the odds of obtaining a college degree is 0.79 times lower than the odds of combined high school degree and less than a high school degree. The odds ratio for the percent of Asians living in a neighborhood is 0.69 and statistically significant at the .05 level. The odds ratio for the percent of Whites and the percent of Hispanics in the neighborhood were not statistically significant. I considered two other aspects of neighborhood composition—percent foreign born and percent married couples in a neighborhood. The odds ratio for the percent foreign born in a neighborhood is 1.36 and borders statistical significance at the .05 level. The odds ratio for the percent married in a neighborhood is 1.37 and is statistically significant at the .05 level. Taken together, the neighborhood variables show that neighborhood composition influences second generation educational attainment. A greater percent of Black and Asian in the neighborhood is associated with lower educational attainment whereas a greater percent of foreign born individuals and married households is associated with greater educational attainment.

The second set of variables in Table 3 examines coethnic concentration as a measure of the coethnic community. Coethnic concentration is presented in three levels: medium, high, and none (as the reference group). A medium percentage (0-49.9%) of coethnics in a neighborhood is statistically insignificant. The odds ratio for a high percentage (50% or more) of coethnics in a neighborhood is 0.27 and is statistically significant at the .001 level. Thus, higher coethnic concentration is associated with lower educational attainment.

The third set of variables in Table 3 examines educational selectivity and group size as a measure of national origin group characteristics. Educational selectivity has an odds ratio of 2.19 and is statistically significant at the .001 level. The odds ratio for group size is 0.54 and borders

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statistical significance at the .05 level. Thus, higher educational selectivity is associated with higher educational attainment whereas belonging to a larger national origin group is associated with lower second generation educational attainment.

The final set of variables examines individual level variables as control variables. The odds ratio for parent's SES is 2.09 and is statistically significant at the .001 level. The odds ratio for speaking a foreign language at home is 1.23 and is statistically significant at the .01 level. The odds ratio for an individual living with both biological parents is 1.44 and is statistically significant at the .05 level. The odds ratio for a female is 2.07 and is statistically significant at the .001 level. Thus, the individual level controls show that parent's SES, foreign language, biological parents, and females are positively associated with increased odds of educational attainment among children of immigrants.

Discussion

The main finding of this paper is that neighborhood, community, group, and individual level factors all influence individual outcomes of the second generation. This suggests that second generation educational attainment is a complex process that incorporates different contextual factors. This finding supports segmented assimilation theory's emphasis on different contexts of reception that influence children of immigrants' individual outcomes. While segmented assimilation theory emphasizes different contexts of reception, it does not specify at which level these contexts are occurring. This paper extends segmented assimilation by distinguishing across three levels of context of reception—neighborhood, community, and national origin group—and empirically tests their effect on second generation educational attainment.

The finding that community characteristics shape second generation education supports segmented assimilation theory's emphasis on coethnic communities as an important context of

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reception. This project empirically tested the effect of community size for sixteen different

national origin groups and found that living in larger coethnic communities has a negative effect

on educational attainment. The coethnic community has a negative and resilient effect on

education net of all controls, suggesting that the coethnic community effect on education is

independent of that of the neighborhood, group, and individual characteristics.

There are two possible explanations why a larger coethnic community has a negative effect. The first pertains to the idea of negative social capital which can exist in the form of social norms, expectations, and obligations that actively reduce a youth's orientation towards education. While social capital has been more widely used to describe the positive accounts of social capital on education, social capital can also negatively influence educational attainment (Kao 2004; Portes and Sensenbrenner 1993). For instance, parents may shape expectations that discourage educational outcomes. Parents who have experienced financial success without educational attainment will illustrate to youth that schooling is not always essential for a comfortable lifestyle (Kao 2004:174).

A second possible explanation depends on the characteristics of the entire coethnic community. The characteristics of the entire coethnic community matters for education because it can shape aspirations for youth. If the coethnic community has high education, they will have high aspirations for youth. Conversely, if the community has a low average education, it is likely that they will exhibit low aspirations and the children, in turn, will also have low aspirations and low educational attainment (Bygren and Szulkin 2011; Farkas et al. 2002; Fordham and Ogbu 1986).

This study also finds that the segregation of racial and ethnic groups in the neighborhood negatively affects the educational attainment of the children of immigrants. This finding shows

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modest support for classical assimilation theory and segmented assimilation theory (Massey and Denton). On the one hand, living with more native born minorities has a negative effect on educational attainment. On the other hand, my findings also show that living with a higher proportion of white native borns has no effect, which is in contrast to the classical assimilation theory and segmented assimilation theory. Suarez (Portes and Hao 2004:11921) found that children from underprivileged backgrounds perform worse in competitive white middle-class schools.

Limitations and Future Research

One limitation of this study is that it pools all national origin groups together. Distinguishing across the different national origin groups is important given the emphasis that segmented assimilation places on group-specific structures (government reception, selectivity, etc.) and how these pathways may differ by group. Given that group characteristics have an effect on individual outcomes, future research should examine how individual outcomes may change depending on the national origin group they belong to.

A second limitation is that this study could not account for additional characteristics of the coethnic community, such as education or income. This is important given that other works (Bygren and Szulkin 2011; Cutler et al. 2007) have suggested the importance of the community characteristics in determining whether their effect on individual outcomes. Future research should also consider the characteristics of the coethnic community itself, not just the neighborhood.

Table 1. Predicted Effect of Assimilation Theories

	Straight Line Assimilation	Selective Assimilation	Downward Assimilation
<i>Neighborhood</i>			
% Black	No Prediction	No Effect	-
% Asian	No Prediction	No Effect	No Prediction
% White	+	No Effect	No Prediction
% Hispanic	No Prediction	No Effect	-
% Foreign born	-	+	-
% Married households	No Prediction	No Prediction	No Prediction
Neighborhood SES (income + home ownership)	No Prediction	No Prediction	No Prediction
<i>Coethnic Community</i>			
% Own- Medium (.001 - 49.9%)	No Prediction	+	+

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% Own- High (50- 90%) (Ref: % Own- none (0))	No Prediction	+	+
Control Variables:			
<i>National Origin Group</i>			
Educational Selectivity	No Prediction	+	+
Group Size	No Prediction	+	+
<i>Individual</i>			
Parent's SES	+	+	+
Foreign Language at home	-	+	-
Biological Parents	+	+	+
Female	+	+	+

Table 2. Community, Neighborhood, and National Origin Group Characteristics

Parent's Country of Origin	Community		Neighborhood					Group			
	% Coethnic (per tract)	% College (per tract)	Average Income (per tract)	% White (per tract)	% Black (per tract)	% Latino (per tract)	% Asian (per tract)	Educational Selectivity ₁	Political Stability	Group Size (proportion of US population)	GDP per capita
Mexico	36.06	12.51	24755	40.81	18.97	39.46	13.93	0.2	-0.683	3.26	9137
Philippines	13.94	23.78	40288	46.12	12.65	15.72	32.88	0.602	-1.417	1.59	1403
Vietnam	1.90	21.54	33201	57.04	11.13	17.73	22.60	0.589	0.193	0.35	731
China	1.50	31.35	38613	68.6	8.51	13.21	16.11	0.667	-0.439	0.73	2069
Japan	0.30	32.32	43812	72.69	5.01	11.37	16.46	0.67	0.954	0.12	34148
India	0.20	32.7	37850	73.33	5.63	10.50	16.21	0.858	-1.188	0.36	857
Cuba	0.17	21.33	38015	64.02	9.37	20.49	15.42	0.406	0.026	0.31	4682
Korea	0.16	33.9	43921	71.59	4.41	9.09	19.97	0.524	0.213	0.31	19707
Guatemala	0.12	17.16	26525	55.39	19.60	23.33	11.60	0.534	-0.735	0.17	2319
El Salvador	0.11	24.95	29172	64.6	9.69	27.04	8.41	0.342	0.03	0.29	3071
Nicaragua	0.10	18.06	31973	62.93	9.32	14.95	20.21	0.669	-0.51	0.08	952
Peru	0.10	44.05	45043	81.76	3.13	7.39	12.24	0.645	-0.929	0.1	3312
Ecuador	0.06	35.68	33416	75.93	5.58	11.53	13.50	0.513	-0.749	0.11	3058
Dominican Republic	0.03	41.47	51098	72.39	3.20	9.01	20.03	0.49	0.124	0.24	3825
Thailand	0.03	20.18	29478	52.21	15.61	24.7	17.25	0.638	-1.105	0.06	3078
Colombia	0.01	48.71	45985	84.96	2.10	6.00	10.56	0.617	-1.67	0.18	3726

¹From Feliciano(2005)

Table 3. Odds of Obtaining Educational Attainment for Second Generation Respondents (N=1196)	
Independent Variables	Model 1
<i>Neighborhood</i>	
% Black	.79* (0.09)
% Asian	.69* (0.11)
% White	0.93 (0.17)
% Hispanic	1.06 (0.14)
% Foreign born	1.36+ (0.23)
% Married households	1.37* (0.20)
Neighborhood SES (income + home ownership)	0.63 (0.48)
<i>Coethnic Community</i>	
% Own- Medium (.001 - 49.9%)	0.79 (0.20)
% Own- High (50- 90%) (Ref: % Own- none (0))	.27*** (0.09)
<i>National Origin Group</i>	
Educational Selectivity	2.19*** (0.42)
Group Size	.54+ (0.18)
<i>Individual</i>	
Parent's SES	2.09*** (0.19)
Foreign Language at home	1.23** (0.10)
Biological Parents	1.44* (0.22)
Female	2.07*** (0.34)

*** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$ + $p \leq .1$

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