

Ethnic Communities and School Performance among the New Second Generation in the United States – Testing the Theory of Segmented Assimilation*

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Abstract

The Theory of Segmented Assimilation has become a popular framework for explaining the adaptation of the children of the post-1969 wave of immigration to the United States. These are assumed to experience divergent outcomes depending on the way they are received by US society, their access to social capital through ethnic communities and the exposure to the oppositional cultures of marginalised domestic minorities. The article critically reviews those arguments and provides a test in the area of school performance. Based on data from the regional Children of Immigrants Longitudinal Study, my analyses show that indicators of community-based social capital can indeed account for a considerable extent of inter-ethnic differences in school performance. However, my results challenge the notions that ethnic communities are generally supportive of the school performance of the second generation, while contact with the oppositional cultures of domestic minorities is the main cause of lower-than-average achievement. Instead, they support a conditional view of ethnic communities. According to this view, the extent to which immigrant families' insertion into ethnic communities can support the school performance of their children depends on the communities' socio-economic profile and level of aspirations.

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Ethnic Communities and School Performance among the New Second Generation in the United States – Testing the Theory of Segmented Assimilation

The new diversity of immigration that the United States has experienced since 1969 has given rise to a new diversity in the theoretical approaches brought to the fore to describe and explain the processes in which the new immigrants adapt to US society. One of the most remarkable developments is the formulation and empirical application of a third theoretical approach that joins the two traditional perspectives of assimilation theory and pluralism: the Theory of Segmented Assimilation (TSA) (Portes and Zhou 1993; Portes 1995; Zhou 1997; Portes and Rumbaut 2001). In line with assimilation theory, the TSA assumes that the vast majority of the second and subsequent generations will eventually assimilate into US society (Portes *et al.* 2008). However, it questions the assimilationist idea that second-generation youth increasingly benefit from the life chances provided by US society the more they assimilate. Instead, the theory reinvigorates the pluralist notion that more positive adaptation outcomes will result through the preservation of social and cultural ethnicity than through complete assimilation. In particular, the theory argues that ethnic communities would be an important source of social capital for immigrant families, helping them to support the adaptation of their children who face the risks of racial discrimination and assimilation into the oppositional cultures of downtrodden domestic minorities.

Due to its innovative integration of assimilationist and pluralist ideas, and its focus on the diversity of immigrant experiences, the segmented assimilation framework has been widely adopted and already constitutes something like the conventional wisdom in the field (Waldinger and Perlmann 1998: 6). Empirically, it has been most extensively applied in the area of school

performance which is particularly important given the path-setting role of education for the future life chances of immigrants' children in US society. Here, previous statistical analyses have repeatedly shown that the differences in school performance among nationality groups are remarkably resilient, persisting even *after controlling for* many relevant individual, family, and school attributes (Portes 1995; Portes and MacLeod 1996; Hirschmann 2001; Portes and Rumbaut 2001; Rumbaut and Portes 2001; Portes and Hao 2004). In the segmented assimilation perspective, this is often interpreted as support for the significance of different *modes of incorporation*, i.e. the character and strength of ethnic communities and the hostile, neutral, or supportive ways in which immigrant groups are received by the US government and society (Portes and Rumbaut 2001: 46-49).

However, rather than 'indicating the resilient influence of immigrant communities' and 'the role of a favorable context of reception' (Portes and Rumbaut 2001: 244), there could be several alternative explanations for the resilient inter-ethnic differences in school performance. For example, they could be caused by differences in the selectivity of the immigration with respect to cognitive abilities or by differences in parenting styles that are not completely captured by the variables in the statistical models. Therefore, the resilient nationality effects still constitute puzzles in need of explanation (Portes 1995: 274; 2000: 10), and the empirical validity of the TSA can be assessed only by introducing indicators of the causal mechanisms that are believed to mediate their influence (Zhou 1997: 1000; Xie and Greenman 2005).

In this article, the attempt is made to provide a more direct test of the main tenets of the TSA in the area of school performance, focusing especially on the role of ethnic communities. Using data from the Children of Immigrants Longitudinal Study (Portes and Rumbaut 2001; Rumbaut and Portes 2001), I examine whether inter-ethnic differences in school performance among the new second generation are indeed due to differential exposure to the oppositional cultures of

domestic minorities, the ways immigrant groups have been received by the US government and society, and/or the capability of ethnic communities to act as social capital. In order to arrive at empirically testable hypotheses, I will first discuss the different ways in which the influence of ethnic communities on the school performance of the second generation has been specified within the segmented assimilation perspective. I will then cast into doubt the underlying assumption that a significant share of second-generation youth is at risk of assimilating into the oppositional cultures of domestic minorities. This leads me to a conditional view of ethnic communities that additionally informs the analyses in the empirical part.

Ethnic Communities and the Theory of Segmented Assimilation

Structural and Cultural Dimensions of Ethnicity as Social Capital

Since its first formulation by Alejandro Portes and Min Zhou (1993), the TSA portrays ethnic communities as an important source of social capital for immigrants' children. Social Capital can be broadly defined as 'the ability of actors to gain benefits by virtue of membership in social networks or other social structures' (Portes 1998: 4). In the TSA, immigrants' children are assumed to benefit in terms of their school performance and other adaptation outcomes if their families are inserted into strong ethnic communities. However, in later publications, Portes and Zhou have each separately elaborated this idea further, leading to important although rarely explicated differences within the segmented assimilation perspective regarding the attributes that make ethnic communities effective sources of social capital.

Building on Coleman's work on social capital (Coleman 1988) and the network-theoretic perspective in economic sociology, Portes (1995) hypothesises that the most significant

characteristics of ethnic communities are the density of social networks, the multiplexity of social ties (i.e., the number of different roles in which individuals are related to each another), and the degree of bounded solidarity within the ethnic community. To the extent that those factors are present, immigrant parents can ‘call on co-ethnics to reinforce normative expectations vis-à-vis their offspring and to supervise their behavior’, while their children can ‘command resources controlled by the ethnic community’ (Portes 1995: 255). According to Portes and Rumbaut (2001), the ability of immigrant groups to build such tightly knit communities with high degrees of bounded solidarity depends in turn on the way in which they have been received by the US government and society. Note that all those arguments refer to structural characteristics of the mode of incorporation. Indeed, Portes and his co-authors explicitly turn against the idea that *cultural* attributes of ethnic communities are an independent source of inter-ethnic differences in the second generation’s educational achievement (e.g., Portes and MacLeod 1999: 391; Portes and Rumbaut 2001).

A different position is evident in Min Zhou’s later work on segmented assimilation (Zhou 1997; Zhou and Bankston 1998: 237; Bankston and Zhou 2002). In her interpretation of the TSA, the ‘central argument is that individual and structural factors are intertwined with immigrant culture and predisposed group characteristics to shape the fates of immigrants and their offspring’ (Zhou 1997: 993). This stronger emphasis on culture originates in a focus on particular immigrant groups of Asian origin, such as the Chinese, Koreans, or Vietnamese (Zhou and Bankston 1998: 237; Zhou and Kim 2006), and is line with earlier accounts of their extraordinary school success (Hirschman and Wong 1986; Sue and Okazaki 1990; Caplan, Choy, and Whitmore 1991). According to this view, and in contrast to the more structuralist formulation of the TSA by Portes and Rumbaut (2001), the special ability of those groups to support the educational achievement of their offspring derives to a significant extent also from the *contents*

of their culture, which entails values and beliefs that are particularly conducive to school performance, e.g., a high value attached to education or a great respect for teachers (Zhou and Bankston 1998: 237). However, Zhou and Bankston (1998) rightly stress that it is only through *social* processes at the level of the community that cultural attributes can become social capital conducive to the school success of the second generation.

The Risk of Oppositional Cultures

Notwithstanding those differences, adherents of the TSA converge in a central assumption that is at the core of the segmented assimilation perspective and from which the crucial role of ethnic communities is derived in the first place. It is claimed that due to special characteristics of contemporary US society, the route of cultural and social assimilation now involves greater risks and much more uncertain benefits for members of the new second generation than was the case for the children of immigrants of largely European origin who grew up in the first half of the twentieth century. The most immediate challenge to the school performance of immigrants' children is said to arise from the segmented character of US society. The existence of a largely black urban underclass and its residential and social segregation in the form of the ghetto (Massey and Denton 1993) render 'assimilation' a highly ambiguous term. For immigrants' children living in poor neighbourhoods and attending inner-city public schools, assimilation might often entail adopting the adversarial outlook that characterises the oppositional culture of domestic minorities (cf. Fordham and Ogbu 1986). It is against the background of this argument that proponents of the TSA view ethnic communities generally as being supportive of the second-generation's school performance. They can strengthen an otherwise contested parental authority, backing up parental efforts to secure their children's educational aspirations in the face of adversarial messages from inner-city subcultures.

However, there is reason to question the validity of this argument as a general explanation of the resilient inter-ethnic differences in school performance among the new second generation. Analyzing educational outcomes, psychological well-being, and at-risk behavior in the National Longitudinal Survey of Adolescent Health, Xie and Greenman (2005) found no evidence for the hypothesis that the preservation of co-ethnic ties matters most in low-SES environments. Furthermore, the theory of oppositional culture itself has been challenged by a number of quantitative and qualitative analyses (e.g., Cook and Ludwig 1997; Ainsworth-Darnell and Downey 1998; Carter 2005). Thus, even though particular groups such as Afro-Caribbeans might indeed be facing the risk of assimilating into the inner-city underclass (Waters 1999), one can doubt whether this factor accounts for a great portion of the resilient inter-ethnic differences in school performance among the new second generation (Alba and Nee 2003: 8). Given that the possibility of ‘downward assimilation’ might not have the significance assumed in the TSA, I propose to retain a theoretically more open view of how ethnic communities influence the school performance of the second generation.

A Conditional View of Ethnic Communities

The crucial role attributed to ethnic communities in the TSA constitutes a major point of disagreement with the traditional assimilationist perspective. Traditional assimilation theory argues that since the most productive resources for socio-economic advancement are defined by the host society, they can be attained most effectively through social and cultural assimilation (Esser 2004: 1135). For the same reason, it views cultural and social attachment to one’s ethnic group more critically (Wirth 1928; Child 1943; Warner and Srole 1945) and portrays ethnic communities largely as mobility traps (Wiley 1967). In contrast, and although its initial formulation acknowledged this possibility (Portes and Zhou 1993: 87), the TSA has come to

locate the ‘downsides of social capital’ (Portes and Sensenbrenner 1993) mainly *outside* ethnic communities. Going beyond the argument about domestic minority oppositional cultures, it has even been hypothesised that adopting American ways is *generally* likely to result in lower school performance because it tends to lower the typical immigrant achievement drive (Rumbaut 1997).

Since none of those hypotheses can be dismissed a priori, I propose to retain a theoretically more open view of how ethnic communities influence the school performance of the second generation and to assess the different possibilities empirically. Immigrants and their children can invest mainly in social relations within ethnic communities or in social relations with segments of the host society (Nee and Sanders 2001; Esser 2004). Thus, to what extent investments in co-ethnic social relations constitute social capital depends not only on the segment of US society that would have been available as an alternative but also, and probably even more so, on the characteristics of available co-ethnics.

In this context, the socio-economic composition of ethnic communities can be expected to be particularly relevant (Borjas 1992, 1995; Portes and Rumbaut 2001: 48). First, it substantially influences the financial resources a community might have to build a system of community organizations to which immigrant families can turn for support. Especially effective with respect to education is the possibility to offer supplementary education in the form of after-school programs as observed among Chinese and Korean immigrant communities (Zhou and Kim 2006). Second, the socio-economic composition influences the level of educational standards and aspirations in the community. Where the average level of socio-economic status is high, networks of social relations can be expected to keep aspirations at high levels by monitoring and sanctioning performance, and to distribute useful education-related information. In contrast, where immigrant communities consist mainly of low-skilled labourers and service workers, those informal channels of social control might rather reinforce lower educational aspirations

(Perlmann and Waldinger 1997; Waldinger and Perlmann 1998). In such a situation, it might be more conducive to children's school performance if a family is less attached to the ethnic community (DeWind and Kasinitz 1997: 1101).

According to the more culture-affine variant of the TSA put forward by Zhou and Bankston (1998), achievement norms can be very high even in socio-economically disadvantaged ethnic communities due to the independent influence of immigrant cultures. Such a 'culture of achievement' could be grounded in experiences with highly competitive educational systems in the countries of origin (Sun 1998: 435; Zhou and Kim 2006). It could also be a response to earlier experiences of discrimination in US society in professions that did not require high educational credentials, such as manual labour (Hirschman and Wong 1986; Sue and Okazaki 1990). In line with both explanations, Steinberg and colleagues (1996) found that compared to other ethnic groups, Asians particularly subscribe to the belief that lack of success in the educational system will have strongly negative consequences for their future life chances.

The conditional view of ethnic communities also leads to a different assessment of the roles played by the density of social networks, the multiplexity of social ties, and the degree of bounded solidarity in ethnic communities (Portes 1995). Although those attributes might generally increase the capabilities for social control, a beneficial impact on the school performance of the second generation can only be expected if resources and aspirations in the community are higher than those available to families on their own or through assimilation (Zhou 1997; Bankston and Zhou 2002; Bankston 2004; Kao 2004). In the following, empirical part, I assess the importance of the different factors that emerged from our discussion as possible sources of community-based social capital, and to test whether they really explain the resilient inter-ethnic differences in school performance.

Methodology

Data and Dependent Variables

Data were drawn from the Children of Immigrants Longitudinal Study (CILS), which is a panel of immigrant students in the metropolitan areas of Miami/Ft. Lauderdale, Florida, and San Diego, California (cf. Portes and Rumbaut 2001; Rumbaut and Portes 2001). This survey was designed with the TSA as its explicit background and contains suitable but so far unused measures of some of the theory's central constructs. The CILS includes students with at least one foreign-born parent who themselves are either native-born or who were brought to the US at an early age and have resided there continuously for at least five years. I use data from the first and second wave of the CILS, including the parental interviews. The first survey was conducted in 1992 when the students were in the eighth and ninth grades, while the second wave, as well as the parental survey, followed in 1995/96 when they were in their last year of high school.¹

The following analyses use standardised mathematics and reading test scores as indicators of school performance. Those are total scores on standardised Stanford achievement tests as administered at the time of the first wave in 1992. Test scores do not vary by differences in the institutional and subjective grading practices employed by different teachers and within different schools and school systems. Nor are they distorted by differences in course rigor and course selection. They therefore constitute a particularly accurate measure of school performance. Moreover, it can be shown that controlling for standardised mathematics and reading test scores explains inter-ethnic differences in grade point averages in the CILS data. Thus, it becomes a question of how to explain those more basic group differences.

In the following analyses, communities are operationally defined as nationality groups within a metropolitan area. Community attributes are then constructed by aggregating over the responses

of all parents of a nationality group within a metropolitan area. To avoid losing too many communities, only groups with at least nine responding parents were retained. In view of the small sample sizes for some groups, the exact values of the community-level variables should be interpreted with caution. However, sensitivity analyses indicate that the substantive results of the multivariate models are very robust.² Only parents of Mexican origin yielded a sufficiently large number of cases in both the San Diego and the Miami/Ft. Lauderdale region, so that cases of the other nationality groups were retained in only one of the regions. In the case of Cubans in Miami/Ft. Lauderdale, I split the sample into those immigrants who arrived before the Mariel exodus of 1980, and those who arrived during it or afterwards, since it is known that the modes of incorporation differed for those groups (Portes and Rumbaut 2001: 261-67). With this exception, all groups are defined by national origin and metropolitan region but for the sake of brevity will hereafter also be called ‘nationality groups’ or ‘ethnic communities’.

The analyses use only data on students with valid parental interviews. After the listwise deletion of cases with missing values on the variables of interest and the exclusion of students for whom no reliable community attributes could be calculated, the size of the final sample equals 1,920 in regressions of math scores and 1,937 in regressions of reading scores. These students are nested in 37 schools and belong to one of 25 ethnic communities.

Community-Level Variables

In order to measure differences in the modes of incorporation, I construct several community attributes as indicators of the different dimensions of this central construct. The first indicator (*% US economic assistance*) is the percentage of parents who answered ‘Yes’ to the question, ‘During your first year of residence in the United States, did you or your family receive any kind of economic assistance from a government or private agency?’ This variable measures the

different ways in which the groups were received by the US government and society. The other community attributes refer more directly to current characteristics of ethnic communities. Indicators of their socio-economic profile are the average number of years of schooling (*Average education*) on the part of the parents and the percentage of them who are self-employed (*% Self-employed*). The question, 'How much do people from your country help each other in the US?' (1 'not at all', 2 'a little', 3 'somewhat', 4 'a lot'), taps into the different levels of bounded solidarity. Again, the group average of this subjective assessment is used as an indicator of this source of social capital (*Bounded solidarity*). In the same way, I construct an indicator of the density of social ties within ethnic communities by calculating the percentage of parents who report socializing mainly with people from their country of birth (*Social closure*). The final community attribute that enters into the analysis is the average level of aspirations with regard to the educational attainment of the second generation. Since parental aspirations should be relevant to the extent that they are effectively communicated, I use here students' answers to the question, 'What is the highest level of education that your parents want you to get?' and calculate for each community the percentage of students answering, 'Finish a graduate degree.' (*Average aspirations*).

Measuring Community-Based Social Capital

In order to test for effects of community-based social capital, one has to measure the relevant community attributes which influence children's school performance, as well as the insertion of the family into the ethnic community (Portes 1998). The following analyses assume that a student's family is inserted into the ethnic community if the interviewed parent reports socializing mainly with people from her country of birth (*Co-ethnic network*). The strategy is

then to test for interaction effects between this variable and community attributes: Theoretically, *community attributes should affect children's school performance only, or at least more strongly, if parents participate in the corresponding social processes at the community level.*

Of course, the measurement of community characteristics at the level of nationality groups in a metropolitan region can be expected to entail aggregation error because it ignores variation between more local ethnic communities of the same nationality and that between the co-ethnic networks of different families. On the other hand, testing for interaction effects between community attributes and families' insertion into co-ethnic communities protects us to some extent from interpreting spurious associations between school performance and community attributes as evidence for social capital arguments. Moreover, families' insertion into co-ethnic communities is measured here more directly than in previous studies that use residing in a census tract as a proxy for participating in a corresponding community (Borjas 1992, 1995; Pong and Hao 2007). The latter strategy can be problematic since ethnic neighbourhoods can not only be more localised than census tracts, but can vary in the extent to which they are neighbourhood-based at all. This is especially important in the TSA, where neighbourhoods are explicitly described as being separate contexts that often work at cross-pressures with the ethnic community (Zhou 1997; Zhou and Bankston 1998).

Method

In the following analyses, I use multilevel techniques suited to the structure of the data. Students are nested within schools and within nationality groups. Conceptualizing nationality groups as a macro level is critical since I am interested in communities as a source of variance in school performance and since I trace the impact of community attributes in accounting for that variance

(for a similar approach, see, e.g., Tubergen 2005). Using multilevel techniques takes into account the error terms at the macro levels and prevents underestimation of standard errors (Snijders and Bosker 1999; Raudenbush and Bryk 2002). Since schools and nationality groups are not nested, I use ‘cross-classified’ multilevel models (Snijders and Bosker 1999: 155-65; Raudenbush and Bryk 2002: 373-98), with students being contained within a cross-classification of their national origin and school. These cross-classified models are estimated with the Markov Chain Monte Carlo (MCMC) procedures from the software program MLwiN (Browne 2003). Note that since there is no agreed-upon method for testing the significance of variance components after MCMC estimation, I only report standard errors for these coefficients.

Results

Variation in School Performance between Ethnic Communities

The second and third columns of Table 1 give the mean test scores for the 25 metropolitan nationality groups that entered into the analysis. Students whose parents come from Taiwan, China, Japan, Vietnam, and the Philippines have the highest average scores in mathematics, giving testimony to the well-known ‘Asian success story’. Only students with backgrounds in Argentina and Chile score equally high. Average test scores are also high among Cuban-American students in Miami whose parents were part of the flow of human-capital immigrants that arrived before the Mariel exodus. Mexican-American students in San Diego are the one with the lowest average math scores. Equally low performance can be found only among the children of immigrants from Laos (Hmong), Cambodia, Haiti, or the Dominican Republic, i.e., groups that

are known to be largely comprised of political and/or economic refugees (Jensen 2001). The patterns are basically the same with regard to reading scores.

-- Table 1 about here --

Multilevel regression models allow estimation of the extent to which variation in school performance is attributable to differences between ethnic communities. To this end, variance components of cross-classified multilevel models with random intercepts for nationality group and school are computed. These ‘empty models’ are without any explanatory variables. For math scores they show that 15.24 percent of the total variance is among nationality groups ($341.26/2,238.96$), while 9.33 percent is among schools ($218.26/2,338.96$). For reading scores the order is reversed, with 9.96 percent of the variance being found among nationality groups ($152.80/1,534.25$), and 18.19 percent among schools ($279.07/1,534.25$). These figures make it apparent that the nationality background and the school attended play an important role in the school performance of immigrants’ children.

Individual, Family, and School Characteristics

In a first step, I consider to what extent variation between nationality groups is due to differences in a set of basic individual and family background variables, as well as to school attributes. These include the age and sex of the student, the length of US residence, whether the student was born in the US or abroad, the average socio-economic status in the school, whether it is a private or public school, whether or not it is located in the inner city, family income per capita (in 1995), whether or not both parents are living together, and the parents’ education measured as the average of both parents’ years of schooling (in 1995). I normalise all independent variables on

the unit interval so that the regression coefficients reported in Table 2 compare students with a maximum value on that variable to those with a minimum value. The best predictors of school performance are the socio-economic profile of the family and that of the school. As can be seen from the variance components, the inter-ethnic differences in reading scores are largely accounted for by the individual, family, and school variables in the model. By contrast, a considerable amount of the variation between groups with regard to math scores remains unexplained. In the following, I test whether the theoretical arguments developed in the segmented assimilation perspective can account for the remaining inter-ethnic differences in school performance.

-- Table 2 about here --

As has been discussed, the TSA highlights both the risk of oppositional cultures and the significance of modes of incorporation. With regard to the first factor, the hypothesis states that the school performance of immigrants' children is negatively affected if they socialise with domestic minority youths who adhere to an oppositional culture and even more so if they adopt the corresponding adversarial outlook. However, already the distribution of possible indicators shows that this mechanism is hardly responsible for the inter-ethnic differences in school performance. Only 57 students (1.08 percent) report having friends from US ethnic minorities. Likewise, only 2.57 percent of the students reject the statement, 'Good grades are important to me.' as 'not true at all'. Hardly discriminating as these items are, the corresponding variables have no net association with school performance.

Group Differences in Community Attributes

The values of the community attributes that describe the groups' modes of incorporation are given in Table 1. Before I estimate their impact in multivariate models, I describe group differences in those measures in order to give some indication of their validity. In line with the description by Portes and Rumbaut (2001), immigrants from Laos (Lao/Hmong), Cambodia, and Vietnam felt their reception had been extraordinarily positive: The great majority of parents from these groups report having received *economic assistance*, whereas in almost all other groups less than fifty percent do so. The set of communities that received little or no assistance is quite heterogeneous, comprising human-capital immigrants such as the Taiwanese or Filipinos, as well as groups that received hardly any support despite their being economically needy, e.g., Mexicans in San Diego, Haitians, and Colombians.

Average education and *percentage of self-employed* are positively correlated, but clearly measure different dimensions of the communities' socio-economic profiles. For example, the Japanese, Taiwanese, and Filipinos all have very high levels of education, but only in the first two groups is a high percentage self-employed. Socio-economically deprived with regard to both indicators are parents who are from Laos (Lao/Hmong), Cambodia, or (to a lesser extent) Haiti, whereas the Vietnamese and Mexicans living in San Diego show considerable engagement in self-employment despite their low levels of education. Finally, we observe high percentages of self-employed parents among several groups in Miami, such as immigrants from Cuba, Chile, Ecuador, or El Salvador.

The indicators of *bounded solidarity* and *social closure* likewise seem to measure systematic differences between the groups. Given the socio-economic success and institutional completeness of the Cuban community in Miami, it is not surprising that perceived bounded solidarity is highest in this group and that they also have high levels of social closure. The extremely high

levels of social closure among parents from Laos (Lao/Hmong), Cambodia, or Vietnam correspond to the emphasis upon the close-knit character of their communities in the literature (Zhou and Bankston 1998; Portes and Rumbaut 2001: 250). These groups also show high levels of bounded solidarity, which might be another source of social capital in addition to their favourable reception. This is in line with the segmented assimilation perspective, which stresses the significance of their supportive mode of incorporation, especially when compared to other groups with equally low levels of human capital, such as the Mexicans in San Diego.

Among all groups, *average aspirations* are remarkably high, confirming earlier findings of ‘immigrant optimism’ (Kao and Tienda 1995). Even among the two groups with the lowest average aspirations, the Hmong and the Mexicans in San Diego, about half of the students think that their parents want them to finish a graduate degree. However, even if *all* immigrant groups have high educational aspirations for their children, there is still significant between-group variation. Not only groups of human-capital immigrants, such as the Chinese, Japanese, Filipinos or Taiwanese, but also the Vietnamese have average aspirations considerably higher than those of the Mexicans in San Diego.

The Significance of ‘Modes of Incorporation’

The TSA claims that the different modes of incorporation have a *direct* impact on the school performance of the second generation and account for the inter-ethnic differences that remain after controlling for main individual, family, and school characteristics. I therefore control for the same set of variables as in Table 2 when testing the impact of the different community attributes. In each case, the hypothesis states that the community attribute affects the student’s school performance under the condition that the parent is integrated into the ethnic community, i.e., reports socializing mainly with people from her country of birth (*Co-ethnic network*).³ Table 3

presents the results. Again, I normalise all independent variables on the unit interval so that all reported regression coefficients compare students with a maximum value on that variable to those with a minimum value, and hence can be interpreted as maximum (average) effects within the sample.

-- Table 3 about here --

As can be seen from the first model in Table 3, the percentage of parents in a community who report having received economic assistance in their first year of residence in the US is unrelated to the school performance of the next generation. I also find no relationships when entering this variable either without the interaction term or as an individual-level predictor.

The socio-economic profile of the communities as measured by the percentage of self-employed parents and the average level of parental education strongly affects both the math and reading test scores of their children. For both indicators, the interaction effect with the parent's co-ethnic social orientation is statistically significant and in the theoretically expected direction. Based on the estimates in Table 3, Figure 1 visualises this interaction effect with respect to math scores, for the average level of education as the community attribute. *First*, the bold line indicates that the average level of education in the community is strongly and positively associated with a student's math scores if the parent socialises mainly with co-ethnics. When parents' average level of education in the community increases from its minimum to its maximum (i.e., from 5.5 to 16.5 years of schooling), the math score of a student whose parent socialises mainly with co-ethnics increases on average by 48.59 points. The respective estimate for reading scores can be calculated from Table 3 to be 36.94 points ($17.91 + 19.03$). *Second*, the association between the socio-economic profile of the community and the student's school performance is much lower

and not statistically significant (on the 95 per cent confidence level) if a parent is *not* integrated into a co-ethnic community (broken line in Figure 1). However, there is still an average positive association, which could either reflect crude measurement or indicate that students whose parents do not socialise mainly with co-ethnics nonetheless benefit from a high level of socio-economic resources in the community. *Third*, the effect of parental co-ethnic orientation conditional on belonging to a *low*-SES community is negative and statistically significant (with the exception of the percentage of self-employed parents in the math scores regression). This implies that in a low-SES community context, students whose parents assimilate socially do better than those whose parents have a co-ethnic orientation. Comparing the variance components of these models to those in Table 2, we see a considerable reduction in between-nationality group variation, and the differences in DIC values also suggest that including the three additional parameters results in better models.

-- Figure 1 about here --

In the next step, I test whether high degrees of bounded solidarity and/or network density make ethnic communities sources of social capital. However, there is no relationship between school performance and *bounded solidarity* as perceived by the parents. This is also true when entering this variable as an individual attribute. The level of *social closure*, as measured by the percentage of parents with a co-ethnic network, interacts negatively with a parent's insertion into the ethnic community. According to the coefficients in Table 3, students whose parents socialise mainly with co-ethnics do better than those whose parents assimilate socially, but only if the overall co-ethnic social segmentation is *low*. Hence, this pattern contradicts the argument that under the condition of a *high* level of social closure, integration into the ethnic community is

especially supportive of the second generation's school performance. If there is any positive effect associated with denser networks, it seems to be outweighed by countervailing negative effects or to depend on the presence of other characteristics.

With regard to the average *aspirations* within an ethnic community, I find the same pattern of relationships as for the indicators of their socio-economic profile, hence clear support for the hypothesised interaction effect. These associations explain a significant portion of the remaining variation between nationality groups, in particular with respect to math scores. Additional analyses, not reported in detail here, showed that this interaction effect is not reduced even if students' own aspirations in 1992 and students' perception of their parents' aspirations in 1995 are included as *individual*-level (and therefore surely endogenous) predictors.

Evidence for a 'Culture of Achievement'

The variant of the TSA developed by Zhou and Bankston predicts that a socially reproduced culture of achievement is responsible for the school success of certain immigrant groups that are disadvantaged socio-economically, such as the Vietnamese. If such independent cultural influences exist, they should be well captured by differences in the average levels of aspirations when *controlling for* the socio-economic composition of ethnic communities. I therefore conduct a mediation analysis within the subgroup of those students whose parents are integrated into the ethnic community.

-- Table 4 about here --

I first estimate the effects of the average level of education and the percentage of self-employed parents simultaneously and then add the average level of aspirations to see whether it mediates the impact of the socio-economic characteristics. Table 4 presents the results for both math and reading scores. In the models *without* aspirations, both socio-economic characteristics have strong average effects on performance, although they cannot be estimated with sufficient certainty in the math scores regression. Those effects are considerably reduced when the average level of aspirations is added as an explanatory variable, and this is especially the case with respect to the average level of education. The net effect of average aspirations is particularly strong in the math scores regression, where it also reduces the average impact of education by more than fifty percent. Overall, then, the general commitment to education in ethnic communities has a strong influence on school performance that partly mediates, but is not fully reducible to, the impact of their socio-economic profile.

-- Table 5 about here --

Since the level of aspirations matters over and above that of socio-economic resources, it is interesting to know whether for some communities it is particularly important to account for aspirations in order to understand their higher- or lower-than-average performance. I therefore estimated nationality group residuals for the regressions of math scores (since only here did we find resilient inter-ethnic differences) in the *complete* sample. Table 5 presents the results for the Mexicans and the Vietnamese in San Diego, since the relatively large sample sizes for those groups allow reliable estimation of residuals and since the level of aspirations turned out to be especially important to understanding their school performance. As shown in Table 5, the mathematics scores of the Mexicans in San Diego are estimated to be 26.41 points lower than

average, whereas those of the Vietnamese are on average 12.09 points higher. Remarkably, those statistically significant effects are neither reduced when controlling for the highly predictive individual, family, and school characteristics (as in Table 2), nor when taking into account the average level of education in interaction with parents' integration into the community. However, when controlling for the average level of aspirations (as done in the last column of Table 3), the lower-than-average performance of the Mexicans in San Diego is reduced by more than 10 points, and the higher-than-average performance of Vietnamese by seven points, rendering the latter residual statistically insignificant.

Summary and Conclusions

According to the TSA, the way immigrants are received by US government and society, their access to social capital through ethnic communities, and their contact with marginalised domestic minorities all interact, and together decisively affect the school performance of the new second generation (Portes and Zhou 1993; Portes 1995; Zhou 1997; Portes and Rumbaut 2001). These processes are doubtlessly complex and difficult to disentangle by means of statistical analyses alone. However, in order to empirically ground the claims of the theory, it is certainly necessary to reduce the gap between theory and evidence that has so far characterised the segmented assimilation perspective. My statistical analyses of the CILS data attempted a more direct test of some of the theory's key hypotheses. I found no positive evidence for the presumption that a sizable fraction of immigrants' children is at risk to adopt an adversarial stance towards school because of contact with the oppositional cultures of domestic minorities. It is still possible, however, that those influences are more important in early adulthood (see Portes *et al.* 2008),

especially for some subgroups which are categorised as racially black. My analyses also do not support the interpretation of the resilient inter-ethnic differences in school performance as reflecting differences in the way groups were received by the US government and society. The same is true with respect to the hypothesis that immigrants' children and their families can derive social capital from ethnic communities to the extent that these are characterised by dense social networks and high levels of bounded solidarity. Certainly, future attempts to test the TSA should try to come up with better measures of practiced (rather than perceived) co-ethnic solidarity and the network structure of local ethnic communities. However, my critical discussion of the TSA already on theoretical grounds questions the idea that network-based social control or bounded solidarity in ethnic communities are *as such* conducive to the school performance of immigrants' children.

My analyses support a conditional view, according to which immigrant families' insertion into ethnic communities can have differential effects on the school performance of their children, depending on the communities' socio-economic profiles and their general commitment to education. In communities characterised by high levels of self-employment, education, and aspirations, students' math and reading test scores were considerably higher if their interviewed parent socialised mainly with co-ethnics. In communities that ranked low on those indicators, parents' insertion into ethnic communities was associated with lower test scores. By taking these relationships into account, it was possible to explain away the remaining differences between nationality groups that had been especially resilient with regard to mathematics scores. Average aspirations emerged from my analyses as an independent performance-enhancing factor that is not reducible to communities' socio-economic profile. This supports a position within the segmented assimilation perspective that points towards cultural values and beliefs as an important

ingredient in the social processes by which some ethnic communities become sources of social capital for immigrants' children (Zhou and Bankston 1998).

The findings carry several important implications for the current debate about assimilation in the field. They *support* a central claim of the segmented assimilation perspective that has been questioned by its critics (Alba and Nee 2003: 218) and for which so far only very indirect evidence has been provided: Processes at the level of ethnic communities really do seem to be responsible for the resilient inter-ethnic differences in school performance among the new second generation, and individualistic explanations that refer only to the financial and human capital endowments of immigrant families and their children are therefore clearly insufficient (Portes 1995). Contrary to the traditional assimilationist perspective, the results also show that close attachment to one's ethnic community might under certain circumstances be associated with more positive adaptation outcomes. However, while it is therefore important to revise assimilation theory in order to incorporate such community-based strategies, the value of ethnic resources does not necessarily reach beyond adolescence. Parents in ethnic communities with high levels of socio-economic resources and educational aspirations generally want their children to enter top universities and become successful professionals in the mainstream economy rather than to aim at a career within an ethnic enclave economy (Zhou and Kim 2006). Thus, to the extent that this strategy is successful, it might pave the way for the further social and cultural assimilation of the second and subsequent generations (Alba and Nee 2003). In the context of the debate about assimilation, it also has to be emphasised that my analyses identified integration into co-ethnic communities with low levels of socio-economic resources and educational aspirations – rather than exposure to domestic minority subcultures – as the factor responsible for the lower-than-average performance in some groups such as Mexican-Americans (see already Perlmann and Waldinger 1997; Waldinger and Perlmann 1998; Alba and Nee 2003: 49-50;

Waldinger *et al.* 2007). A crucial question then is the extent to which government policies would be able to effectively raise the level of socio-economic resources and aspirations in ethnic communities that would otherwise provide at most prospects for ‘working-class incorporation’ (Waldinger *et al.* 2007: 32).

Finally, it has to be emphasised that the empirical analyses are limited in several respects. Since the CILS is restricted to the metropolitan areas of Miami/Ft. Lauderdale, Florida, and San Diego, California, the generalizability of the presented results to the national level cannot be established statistically. Moreover, the usual caveats against cross-sectional methods apply; clearly needed are better data that would allow the use of advanced longitudinal methods while still providing the relevant measures needed to test the TSA. Future research should also try to construct more valid measures of the various community attributes, e.g., by looking at different respondent-specific social networks. One should also further differentiate between the different ways and the extent to which immigrant parents and their children can participate in ethnic communities. In this context, particular attention should be paid to the role of institutions and community organizations (Bankston and Zhou 2002; Zhou and Kim 2006). Lacking any measures in this respect, the analyses in this article had to leave unanswered the question through which social processes exactly the socio-economic resources and cultural models of ethnic communities can become sources of social capital for the second generation. In any case, it is only by means of cumulative research that we can hope to specify more fully the ways in which ethnic communities might contribute to the advancement of the second generation. The TSA deserves credit for redirecting our attention to this important area of research.

Notes

- [1] I do not use the third wave of the CILS conducted in 2002 because the further drop in the number of cases due to attrition would make it very difficult to employ the methods used in the following analyses.
- [2] In particular, I confirmed that the results are stable against omission of groups with small sample sizes and when using multiple imputation techniques to increase group sizes. The latter strategy can be used for students who were not part of the probability sample for which parental interviews were conducted (Portes and Rumbaut 2001: 31).
- [3] Most of the community variables and parents' co-ethnic network are measured at the time of the parental interviews, and therefore about three years *after* the tests were administered. However, it seems realistic to assume that both the community characteristics and parents' social orientation are rather stable over a three-year period. Moreover, there is no reason to expect an endogeneity problem since it seems highly unlikely that parents would choose their social network in response to their children's school performance or that nationality group *averages* would be influenced by the performance of a *single* student three years earlier.

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Table 1. Means of test scores and values of community attributes by metropolitan nationality group

Nationality group (Region)	Mathematics	Reading	#Parental interviews	Econ. assistance	%Self-employed	Average education	Bounded solidarity	Social closure	Average aspirations
Argentina	723.4	678	18	0	0.111	14.17	2.133	0.333	0.759
Cambodia (SD)	671.5	630.1	85	0.941	0.024	6.794	3.286	0.965	0.602
Chile	715.3	682	14	0	0.429	15.11	1.846	0.286	0.615
China (SD)	752	692.6	18	0.056	0.333	13.01	2.5	0.588	0.64
Colombia	695.4	667.2	90	0.044	0.278	14.26	2.368	0.3	0.798
Cuba pre-Mariel	710.7	679.7	283	0.262	0.332	14.26	3.313	0.671	0.713
Cuba Mariel/post	691.5	668.6	111	0.441	0.333	13.15	3.396	0.739	0.66
Dominican Repub.	675.9	651.6	41	0.098	0.244	13.4	2.692	0.317	0.534
Ecuador	693	662.6	15	0	0.333	14.03	2.2	0.267	0.565
El Salvador	690	658.1	11	0.091	0.636	14.16	2.364	0.182	0.619
Guatemala	680.6	664	10	0	0.1	13.68	2.3	0.1	0.524
Haiti	676.3	648	86	0.116	0.081	11.74	2.885	0.663	0.667
Hmong (SD)	668.8	632.4	46	0.913	0.022	5.5	2.8	0.957	0.48
Honduras	686.8	653.4	16	0	0.188	12.25	2.125	0.125	0.59
Jamaica	702.6	676.2	72	0.042	0.139	14.85	2.629	0.444	0.721
Japan (SD)	739.5	700.1	11	0.182	0.273	15.27	3	0.546	0.64
Laos (SD)	687	644	143	0.944	0.021	9.958	2.787	0.993	0.566
Mexico	710.7	672.3	11	0	0.273	14.77	3.273	0.273	0.524
Mexico (SD)	667.4	649.1	329	0.055	0.14	10.38	2.494	0.696	0.515
Nicaragua	690.1	658.2	203	0.03	0.232	14.72	2.338	0.503	0.776
Peru	704.3	674.5	17	0	0.294	14.94	2.625	0.235	0.833
Philippines (SD)	713.9	683.1	373	0.048	0.089	15.85	2.927	0.713	0.643
Taiwan (SD)	767.3	716.8	9	0	0.444	16.5	2.667	0.667	0.933
Vietnam (SD)	714.3	665.8	250	0.832	0.192	10.81	2.876	0.944	0.668
West Indies	689.5	667.4	54	0.037	0.167	13.4	2.765	0.204	0.662

Source: CILS 1992, 1995.

Notes: National origin groups in San Diego (SD) where indicated; otherwise in Miami/Ft. Lauderdale. *Mathematics* and *Reading* are total scores on standardized Stanford tests administered in 1992. *Average aspirations* are derived from students' interviews in 1995. All other community attributes are calculated based on parental interviews in 1995.

Table 2. Individual, family, and school predictors of standardized test scores among children of immigrants – Results from cross-classified multilevel regressions

	Mathematics		Reading	
South California	14.65+	(7.48)	3.85	(5.61)
Female	7.77**	(1.81)	8.00**	(1.49)
Age	-4.88	(7.64)	-7.89	(6.12)
US born	1.16	(3.20)	-4.60+	(2.51)
US length	3.62	(4.90)	26.32**	(3.92)
Weighted family income	25.78*	(11.09)	35.17**	(8.72)
Parents' education	31.01**	(7.59)	35.68**	(6.03)
Intact family	8.74**	(2.12)	2.26	(1.67)
School SES	30.60**	(8.51)	25.23*	(11.25)
Private school	15.26*	(7.51)	7.81	(10.63)
Inner-city school	-3.46	(4.61)	-4.23	(5.85)
Constant	644.69	(9.66)	607.69	(9.72)
<i>Variance components</i>				
Nationality group	213.52	(98.08)	45.40	(24.37)
School	55.32	(25.30)	141.79	(55.86)
Individual	1,633.70	(54.18)	1,022.86	(33.90)
N		1,920		1,937
DIC		19,698.14		18,970.03

Source: CILS 1992, 1995.

Notes: Standard errors in parentheses. + $p < .10$ * $p < .05$ ** $p < .01$ (two-tailed tests). No significance tests performed for variance components. DIC = Deviance Information Criterion.

Table 3. Community attributes and ethnicity of parent’s network as predictors of standardized test scores among children of immigrants – Results from cross-classified multilevel regressions

	Community attribute											
	%US economic assistance		%Self-employed		Average education		Average perceived co-ethnic solidarity		Average ethnic network (closure)		Average aspirations	
Mathematics (N = 1,920)												
Co-ethnic network	4.51	(2.75)	-6.73	(4.40)	-21.06 *	(9.03)	-0.06	(6.03)	20.86 **	(6.98)	-10.51 *	(4.89)
Community attribute	-6.75	(15.10)	20.60	(16.84)	16.54	(17.39)	-8.17	(14.76)	-3.81	(17.29)	29.20 *	(13.71)
Co-ethnic network ×	-13.25	(10.62)	31.84 *	(13.08)	32.05 **	(11.84)	4.16	(9.37)	-31.81 **	(11.52)	31.49 **	(10.84)
Constant	645.60	(10.01)	635.91	(11.30)	634.52	(15.93)	647.48	(12.39)	644.42	(11.34)	632.02	(10.74)
<i>Variance components</i>												
Nationality group	233.45	(102.27)	173.84	(81.93)	172.13	(79.32)	241.38	(115.77)	217.31	(99.73)	114.92	(65.43)
School	61.19	(28.93)	61.51	(28.93)	61.75	(28.90)	59.74	(28.24)	59.16	(28.55)	60.80	(28.45)
Individual	1,628.66	(53.07)	1,626.91	(52.97)	1,623.13	(52.86)	1,632.14	(53.23)	1,625.98	(52.97)	1,627.02	(53.09)
DIC	19,696.24		19,693.30		19,688.75		19,700.35		19,692.66		19,691.84	
Reading (N = 1,937)												
Co-ethnic network	0.54	(2.15)	-9.19 **	(3.37)	-14.71 *	(6.93)	1.78	(4.71)	13.52 *	(5.37)	-10.40 **	(3.81)
Community attribute	-4.50	(9.66)	10.65	(10.37)	17.91 +	(10.22)	0.54	(8.35)	1.53	(9.79)	11.92	(8.72)
Co-ethnic network ×	-9.28	(8.32)	28.50 **	(10.01)	19.03 *	(9.09)	-4.85	(7.32)	-25.00 **	(8.81)	22.78 **	(8.49)
Constant	610.13	(9.48)	603.83	(9.84)	599.31	(11.58)	607.75	(10.37)	607.71	(10.10)	602.90	(9.81)
<i>Variance components</i>												
Nationality group	46.66	(24.33)	26.62	(16.17)	17.17	(11.58)	52.32	(28.98)	45.16	(24.33)	24.15	(17.55)
School	147.36	(57.81)	148.15	(57.53)	147.48	(56.90)	144.84	(56.52)	148.84	(58.21)	140.55	(55.08)
Individual	1,020.79	(33.21)	1,019.06	(33.10)	1,017.26	(33.06)	1,023.23	(33.31)	1,018.81	(33.14)	1,021.29	(33.27)
DIC	18,968.42		18,963.01		18,957.69		18,973.54		18,964.65		18,966.63	

Source: CILS 1992, 1995.

Notes: Standard errors in parentheses. + p < .10 * p < .05 ** p < .01 (two-tailed tests). No significance tests performed for variance components. DIC = Deviance Information Criterion.

Table 4. Socio-economic profile and average idealistic aspirations as predictors of standardized test scores among children of immigrants – Results from cross-classified multilevel regressions in the subsample of parents with a co-ethnic network

	Mathematics		Reading	
	(1)	(2)	(1)	(2)
%Self-employed	34.02 (21.96)	29.05 (20.46)	29.64* (12.36)	25.97* (10.75)
Average education	35.08+ (18.13)	14.25 (17.63)	27.70** (9.13)	21.61* (8.46)
Average aspirations		47.99* (19.10)		21.31* (10.36)
Constant	617.90 (16.02)	611.97 (14.41)	578.81 (11.81)	573.26 (11.15)
<i>Variance components</i>				
Nationality group	176.45 (100.99)	113.62 (75.92)	23.49 (22.40)	9.38 (16.54)
School	65.39 (32.81)	69.54 (33.22)	128.65 (54.91)	123.34 (61.49)
Individual	1,595.04 (64.07)	1,593.27 (64.92)	1,046.90 (41.99)	1,051.53 (44.23)
N	1,276	1,276	1,289	1,289
DIC	13,070.81	13,068.87	12,662.28	12,667.42

Source: CILS 1992, 1995.

Notes: Standard errors in parentheses. + $p < .10$ * $p < .05$ ** $p < .01$ (two-tailed tests). No significance tests performed for variance components. DIC = Deviance Information Criterion.

Table 5. Residuals for Mexican-American and Vietnamese-American students in San Diego

– Results from cross-classified multilevel regressions of mathematics scores

Different models	Mexican-Americans in San Diego	Vietnamese-Americans in San Diego
Random intercepts	-26.41** (5.36)	12.09* (5.28)
Individual/family school predictors (Table 2)	-26.60** (6.00)	12.09* (5.79)
Average education (Table 3)	-25.56** (5.96)	12.07* (5.79)
Average aspirations (Table 3)	-15.30** (5.50)	5.16 (5.33)

Source: CILS 1992, 1995.

Notes: Standard errors in parentheses. + $p < .10$ * $p < .05$ ** $p < .01$ (two-tailed tests).

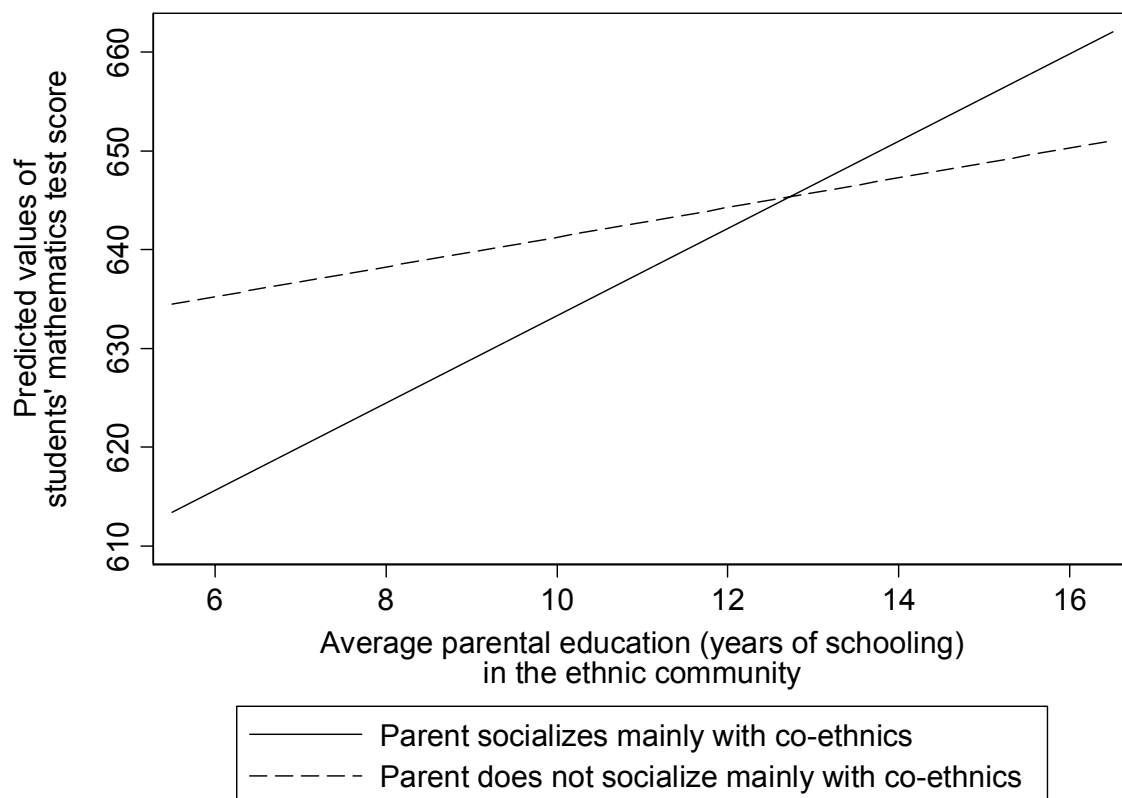


Figure 1. Effect of average parental education in the community on students' mathematics scores conditional on their parents' network (predicted values based on estimates from Table 4, column five)