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Exploring the Academic Benefits of Friendship Ties for Latino Boys and Girls*

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Abstract

Objectives—We examine how the racial/ethnic and generational status composition of Latino students' friendship groups is related to their academic achievement and whether there are differential effects by gender.

Methods—We use multivariate regression analyses to examine the effects of friends' characteristics on Latino students' end of high school grades, utilizing data from the Adolescent Health and Academic Achievement Study (AHAA), and its parent survey, the National Longitudinal Study of Adolescent Health (Add Health).

Results—For Latina girls, there are positive effects of having more friendship ties to third-plus-generation Latino peers in contrast to dominant culture peers; yet Latino boys benefit academically from ties to all co-ethnic peers. Having friends with higher parental education promotes achievement of both genders.

Conclusion—Our results counter notions of a pervasive negative peer influence of minority youth and suggest that co-ethnic ties are an important source of social capital for Latino students' achievement.

Latinos make up the fastest-growing ethnic group in the United States, having increased by 267 percent over the past three decades (Suro and Passel, 2003). This demographic trend has consequences across many sectors of society, perhaps most notably in the realm of education. In the coming decades, Latinos will comprise an increasing proportion of the school-age population in the United States. Yet research clearly demonstrates the stark disparities between the educational achievement of Latino students and their non-Latino white peers (Kao and Tienda, 1995). For example, Latinos have lower test scores across subjects and are less likely than nonLatino whites to take advanced math coursework (NCES, 2005). Together these two patterns, a growing Latino student population and the low academic achievement of Latino students currently in the school system, may inhibit the production of a large highly educated and skilled national labor force.

Our study is motivated by a focus on finding factors that work to promote the achievement of Latino youth. Specifically, we turn to a consideration of peers as a source of social capital for student academic outcomes. In so doing, we make a contribution to previous literature in two key ways. First, while some studies have argued that friendships with dominant culture peers provide social capital that promotes the academic success of Latino students (Ream, 2005;

Stanton-Salazar and Dornbusch, 1995), we argue that co-ethnic friendships may also positively contribute to academic achievement, albeit for different reasons. We explicitly examine the relationship between the racial/ethnic composition of Latino students' friendship groups and their achievement, and attempt to model some of the mechanisms through which groups of different compositions might foster academic success for Latino students. In considering co-ethnic peers, we further distinguish between peers with regard to generational status, since this may have implications for the kinds of resources that students access via social networks (Kao and Rutherford, 2007). Our attention to the potential for in-group ties among co-ethnic peers to function as a source of social capital for achievement by providing encouragement, support, and a positive cultural identity for Latino youth offers an important counterpoint to literature that assumes that co-ethnic peer groups negatively impact the achievement of minorities (Ogbu, 2003).

Second, our study contributes to the need for research that explicitly considers gender differences between Latina and Latino youth in the factors that promote achievement. Specifically, the literature on peer effects among minority youth is surprisingly devoid of attention to variation by gender. Yet social psychological literature has long acknowledged gender differences in the intimacy, support, and importance of friendships among adolescent youth (Eccles, 1994) and, more recently, sociological literature has pointed to gender variation in the consequences of friendship ties for academic success (Frank et al., 2008; Riegle-Crumb, Farkas, and Muller, 2006). These bodies of literature, together with evidence that Latinas may be more likely than Latinos to seek in-group ties as a means of maintaining a positive cultural identity (Barajas and Pierce, 2001), motivate our intent to explicitly examine gender differences in the relationship between friendship group composition and academic achievement.

Subsequently, the primary goal of this study is to examine how the racial/ethnic and generational status composition of Latino girls' and boys' friendship groups is related to their academic achievement at the end of high school and to explore the mechanisms through which in-group and out-group ties can provide alternative forms of social capital for Latino students' achievement. We utilize newly available nationally representative data from the Adolescent Health and Academic Achievement Study (AHAA), and its parent survey, the National Longitudinal Study of Adolescent Health (Add Health), to build on the insights of ethnographic research that highlight the complexities faced by Latino youth in navigating the social and academic world of high school (Carter, 2005; López, 2003; Valenzuela, 1999).

Social Capital and Academic Achievement

A dominant theme in sociological research on inequality centers on how social relationships and interactions can promote individual outcomes. Seminal work by Coleman (1988) argued that the achievement of adolescents is facilitated by the capital embedded in social networks, particularly as found in relationships between students and parents that act as conduits for the transmission of norms, values, and information. Recently, research has considered how students themselves can play a role in the activation of social capital. At a point in the lifecourse when the importance of parental influence often wanes in contrast to that of peers, the potential for adolescents' academic outcomes to be affected by the values, behaviors, skills, and proclivities of friends is particularly heightened (Crosnoe, Cavanagh, and Elder, 2003).

It can be argued that minority children may be the most in need of and receptive toward social capital benefits, given their comparatively low levels of achievement and human capital resources at home (Kao and Rutherford, 2007). Yet the discussion of social capital pertaining to minority youth often focuses on how Latino students have lower amounts of several forms of social capital, such as fewer connections with teachers and lower levels of parental involvement (Stanton-Salazar and Dornbusch, 1995). In light of these findings, social capital

available through peer relationships takes on a particularly important role. If Latino students have limited access to relationships with adults who help them navigate the school on a daily basis, then peers may be the most accessible and trusted source of information and support (Carter, 2005). Subsequently, in this article we explore the composition of Latino students' friendship groups and their relation to achievement in high school.

Friendship Ties to Dominant Culture Peers

In a discussion of the different dimensions of social capital, Putnam (2000) distinguishes between bonding and bridging ties. In contrast to bonding ties, characterized by homogeneity in some defining aspect of social identity, bridging ties involve interactions and relationships with individuals from divergent social groups. Such out-group ties can provide a link to external resources and access to the diffusion of new information. Literature on the assimilation of immigrant adults stresses the importance of out-group ties, such that access to dominant culture social networks can lead to higher levels of social and economic attainment (Zhou, 1997).

Indeed, the few studies that consider how Latino students' friends' racial/ ethnic identification may have implications for social capital suggest that cross-ethnic, out-group friendships represent an important resource. For example, Stanton-Salazar and Dornbusch (1995) argue that friendship ties to majority-group youth provide Latino students with greater access to relevant knowledge about the institution of schooling, and the subsequent opportunity for greater academic achievement. Similarly, Ream (2005) discusses the cross-racial friendships of Mexican-origin students as an aspect of peer social capital relevant for achievement.

As suggested by these studies, the academic benefits to Latino students from dominant culture friends may be largely attributable to the fact that such peers come from families with more social and economic resources, and are more successful in school. Dating back to the "Coleman Report" (Coleman et al., 1966), research has brought attention to how the access—or lack of access—of minority peers to dominant culture peers, and through them to networks of highly educated adults, is a key factor in educational inequality. Ties formed with dominant culture students can offer Latino students access to families with higher levels of academic and economic attainment, and thereby insight and information concerning the academically-related demands of high school and how to successfully navigate them (Stanton-Salazar and Dornbusch, 1995). Additionally, relationships with non-Latino white peers may be an important marker of a more general social integration into the school, and one that may have positive implications for academic success.

Friendship Ties to Co-Ethnic Latino Peers

Research on the benefits of peers for the academic achievement of Latino youth has concentrated on the advantages that dominant culture peers can confer; however, we turn to theory on social capital to argue that the potential for co-ethnic peers to positively influence achievement must also be considered. Co-ethnic ties are an example of bonding ties that are characterized by homogeneity and reinforce the group's social identity and solidarity (Putnam, 2000), offering vital social and psychological support to its members that can help buffer the obstacles and experiences of discrimination that ethnic minorities often face (Rumbaut and Portes, 2001).

Much of the evidence regarding the benefits of co-ethnic communities comes from literature on the experiences of immigrant parents and their children. Zhou and Bankston (1994) discuss how the Vietnamese co-ethnic immigrant community supports its members and promotes the academic success of its children through a commitment to hard work and perseverance. Other research echoes this sentiment, focusing on the strong sense of optimism and high expectations evident in the Latino immigrant community, with positive consequences for members'

resilience and attainment (Rumbaut and Portes, 2001). Such studies suggest that the benefits associated with immigrant communities might also apply to immigrant friendship networks within schools (Kao and Tienda, 1995; Portes and Rumbaut, 2001). Co-ethnic immigrant friendship groups could be a valuable source of social capital on which all Latino students, regardless of their own generational status, could draw in their efforts to succeed in school.

Yet we also argue that there are likely benefits to having co-ethnic friends who are neither immigrants nor children of immigrants. Friendships formed with third-plus-generation Latino peers can provide a network of individuals who understand and relate to the often challenging experience of being Latino in U.S. high schools (Valenzuela, 1999). Although some research has negatively characterized the academic commitment and attitudes of third-plus-generation Latinos (Matute-Bianchi, 1986), alternatively, such friends could provide a source of psychological support. Third-plus-generation Latino friendship networks may combine the positive aspects of co-ethnicity with a greater knowledge and experience of academic and social norms of U.S. high schools. Subsequently, we consider whether co-ethnic peers positively influence Latino students' achievement, distinguishing between friends who are immigrants or children of immigrants (first or second generation), and those who are third-plus generation.¹

In sum, our study considers the possibility that both in-group and out-group ethnic ties may be sources of social capital for the achievement of Latino youth, albeit for different reasons. While the former may increase achievement through psychological and social support and solidarity, the latter could lead to higher achievement by providing relevant academic information about the importance of certain courses and high grades for college admission. As Putnam (2000) importantly points out, both bonding and bridging forms of social capital can have powerful positive effects depending on the circumstances. Therefore, our goal is to determine whether dominant culture ties or co-ethnic ties (both immigrant and nonimmigrant) are more beneficial in promoting the academic achievement of Latino high school students.

Considering Friendship Effects by Gender

Finally, we suggest the need to consider the effects of friendship groups on Latino students' achievement separately by gender. Social psychological research indicates that compared to boys, girls are generally socialized to be more other-oriented, seeking the approval of others for validation of their choices and behavior (Gilligan, 1982; Hibbard and Buhrmester, 1998). Thus, beginning at relatively young ages, girls tend to be more cognizant of their social surroundings and the individuals of whom they are comprised (Eccles, 1994). Regarding the social ties of friendship in particular, girls tend to be more invested in such relationships as key to their identity, establishing relationships that are more intimate, involved, communal, and supportive than those of boys, whose relationships tend to emphasize competition and hierarchy rather than cooperation (Beutel and Marini, 1995).

Furthermore, while young people of both genders respond to social influence during adolescence, there is evidence that friendships may operate or function differently for girls than for boys. Specifically, research has consistently found a stronger pattern between social relationships and subsequent academic outcomes for girls than for boys (Beutel and Marini, 1995; Frank et al., 2008; Riegle-Crumb, Farkas, and Muller, 2006). These studies suggest that girls may turn to friends as an important source of academic encouragement and information, while the competitive nature that characterizes the friendships of many adolescent boys may result in less reliance on friends for assistance and validation of their own academic pursuits.

¹We use the term "immigrant" to include both first- and second-generation students, consistent with research stressing that both groups grow up exposed to similar factors, such as immigrant parents' optimism (Kao and Tienda, 1995; Rumbaut and Portes, 2001).

With regard to Latinos in particular, results from the few existing studies suggest that Latina girls have a greater tendency toward co-ethnic friendships, while boys have a correspondingly higher likelihood of selecting dominant culture or out-group friends (Barajas and Pierce, 2001; Carter, 2005) and that, compared to other ethnic groups, the gender differences in the psychological support adolescents receive from their friendship groups are particularly pronounced among Latinos (Way and Chen, 2000). Taken together, these studies suggest the possibility that girls will be more likely than Latino boys to turn to co-ethnic friendships as a source of positive encouragement and identity.

Given their lower relative academic achievement compared to girls, Latino boys may have a greater need for knowledge about the requirements for academic success, as well as the encouragement to succeed (López, 2003). Yet they may be less likely than their female peers to be in tune with the positive academic resources that friends could provide. For example, Barajas and Pierce (2001) found that Latino young men were more likely to develop out-group friendships, partly in an effort to gain status, and that these friendships centered more on competition and sports than on school. Overall, little research examines gender differences among Latinos in the types of friendships they form and their influences on academic outcomes. Subsequently, our analyses represent a major step in addressing this issue.

Research Objectives and Data

Our study has two main research objectives. First, we examine how the composition of students' friendship groups, in terms of race/ethnicity and generational status, relates to academic achievement at the end of high school for Latino students. Second, we explore whether the effects of friendship group composition on achievement differ according to students' gender. We utilize data from the Adolescent Health and Academic Achievement Study (AHAA), and its parent survey, the National Longitudinal Study of Adolescent Health (Add Health). These data sets are ideal to address our questions, as they include an oversampling of minorities and immigrants, extensive friendship data, and detailed information on students' achievement.

Add Health is a nationally representative stratified random sample of 7th–12th grade students in 132 middle and high schools in 1994–1995. The In-School Survey provided a virtual census of each school and served as the sampling frame for a longitudinal survey. About six months later, the longer Wave I survey was administered to 20,745 students. Students were surveyed in 1995–1996 for Wave II ($N = 14,738$), with the exception of Wave I seniors. In 2001–2002, the Wave III survey was collected, which followed up all Wave I respondents ($N = 15,170$).

As part of Wave III, respondents were asked to sign a Transcript Release Form (TRF), which authorized the collection of their official transcript from the last high school they attended (www.cpc.unc.edu/projects/addhealth). Approximately 91 percent of Wave III respondents signed a valid TRF, leading to the collection of more than 12,000 student transcripts. From these transcripts, a series of indicators were developed by the AHAA study that capture students' course taking and performance across subjects throughout their high school years (www.prc.utexas.edu/ahaa).

For the purposes of our research focus, we restricted the sample to Latino students. Additionally, we include only students with valid friendship data and those in Grades 7–11 in the In-School Survey to ensure that measurement of friendship and other variables preceded the dependent variable by one year or more. In addition, students had to be included in Wave III and the subsequent collection of high school transcripts by the AHAA study, and remain in high school for three or more years, meaning that those who dropped out earlier are not included. Our final sample includes almost 900 Latino students in approximately 90 schools nationwide.

Variables

Dependent Variable—Our dependent measure is the average of students' grades in all classes recorded on their transcripts during 11th and 12th grade, measured on a four-point scale, available from the AHAA data component of Add Health. Grades are a common outcome measure in research on the effects of social capital on achievement (Kao and Rutherford, 2007), tapping not only mastery of course material, but also students' academic efforts to meet teachers' expectations (Carbonaro, 1998). Furthermore, as an external marker visible to others (parents, admissions counselors), end of high school grades are a more tangible signal of achievement than many tests, and predict both college and labor force success (Alon and Tienda, 2007).²

Independent Variables: Friends' Characteristics—Our focal variables capture the characteristics of students' friends. In contrast to other national data sets that use individuals' perceptions of friends' characteristics, which can introduce upwardly-biased estimates, Add Health friendship data are reported by friends themselves. As part of the In-School Survey, students were asked to list their closest male and female friends, with a maximum of five of each gender. Because virtually every student within the school was interviewed, nominated friends' individual survey responses can be linked to the student to create measures of the friendship group's characteristics (Carolina Population Center, 2001).³

We constructed several variables to characterize the composition of friendship groups. To measure co-ethnic ties we calculated two variables: (1) proportion of friends who were first- and second-generation Latino immigrants, and (2) proportion who were third-plus-generation Latino.⁴ We also created separate variables for the proportion of friends who were African American, and for the proportion of friends who were "other" racial/ethnic minorities, including Asians and Native Americans. The remaining or omitted category is the proportion of friends who are non-Latino white. This coding reflects our research focus on comparing the influence of co-ethnic peers (either immigrant or nonimmigrant Latino) to dominant culture peers.

In an effort to discern the process by which friendship group composition influences the achievement of Latino students, we include several variables from the In-School Survey as potential mediators. As stated earlier, because the benefits of dominant culture friends may stem from their greater parental resources and higher academic performance, we construct measures for the average level of parent education in the friendship group, as well as the average of friends' grades. The parent education variable is the higher value of mother's and father's education on a five-point scale (1 = less than high school graduate, 2 = high school graduate, 3 = some college attendance, 4 = college graduate, 5 = advanced degree), averaged across all friends. The latter variable is the mean of each friend's self-reported math, English, history, and science grades, averaged across all friends. These two variables are positively correlated with the proportion of non-Latino white friends, and negatively correlated with the proportion of Latino friends, both immigrant and not.

²We also conducted analyses where the dependent measure was whether students had taken an advanced math course (algebra II or above). The results were very similar to those shown here.

³Some students named friends who were missing from the rosters, while others nominated friends who did not attend the same school. These two instances result in about 8 percent of all friendship nominations being unlinkable to the friend's own self-reported data (Carolina Population Center, 2001). Consistent with prior studies, students with no valid friendship data are excluded (Crosnoe, Cavanagh, and Elder, 2003). We utilize the full friendship nomination data, as individuals are likely to be influenced by the behaviors and attitudes of those they consider friends, regardless of whether feelings of friendship are as strongly reciprocated (Frank et al., 2008).

⁴The measure for proportion immigrant is over 65 percent second-generation students. In exploratory analyses, we created separate measures for the proportion of first-generation and second-generation friends. The effects were similar in all cases; we therefore use the combined measure.

As we are also interested in exploring the ways co-ethnic peers may influence student achievement, we use a measure of the level of closeness that friends feel toward others in the school, averaged across all friends, ranging from not at all close (1) to very close (5). In including this measure, we attempt to capture the feelings of solidarity and acceptance that might function in co-ethnic groups of friends within the school, recognizing that we are limited by the available questions in Add Health. This measure correlates positively with the proportion of co-ethnic friends. We also include as controls a dichotomous measure of whether the student has a predominantly same-gender friendship group, as well as a measure of the total number of friends within the school the student nominated. Finally, we control on the level of involvement within a friendship group. This is based on students' reports of weekly activities with each friend: whether they had visited the friend's house, hung out after school, talked on the telephone, discussed a problem, or spent time together during the weekend. The responses were summed and then averaged across all friends.

Additional Variables—Regarding student background, we include a variable coded 1 for first- or second-generation immigrant and 0 for third-plus generation. Other variables include parental education (coded on the same scale described earlier) and a measure of intact family structure (coded 1 if the student lives with both biological parents and 0 otherwise). We also include a measure of the student's own report of closeness to others in the school. All these measures are taken from the In-School Survey. To account for students' academic background, we include two measures from the AHAA data: students' freshman year GPA and an ordinal measure of freshman year math-course level (0 = no math; 1 = basic or remedial math; 2 = general math; 3 = prealgebra; 4 = algebra I; 5 = geometry; 6 = algebra II; 7 = precalculus or algebra III). Finally, we include a measure from the Add Health delinquency questionnaire administered to students in Wave 1, indicating the average number of the following behaviors in which the student engaged: painting graffiti, deliberately damaging property, stealing from a store or from others, getting in a serious fight, running away, driving someone's car without permission, using a weapon, and selling drugs (scale alpha reliability = 0.8).

As the selection of friends within the school is necessarily constrained by who attends (Kao and Joyner, 2006), we include several measures of school composition that parallel those for friendship groups: proportion Latino immigrant, Latino nonimmigrant, African American, and other racial/ethnic minority. We also include measures for the average parent education level in the school and the average GPA of students in the school. All the afore-mentioned school-level variables are constructed by aggregating the responses of students in the In-School Survey. Additionally, we utilize several measures from the School Administrator Survey. These are the proportion of students eligible for free lunch, school size, region (South, West, and Northeast, with Midwest as the reference category), school sector (private = 1 and public = 0), and location (dichotomous indicators for urban and rural, with suburban as the reference category).⁵

Method and Results

In our study, as with any study of friendship effects, the issue of selection must be considered, as students may choose friends based on existing similarities in priorities and interests (Moody, 2001). Yet studies that have explicitly examined selectivity bias conclude that friends remain an independent socializing influence on students' outcomes net of selection factors (Kandel, 1996). We utilize longitudinal data with carefully chosen controls for students' own characteristics to best account for such issues. Consistent with prior studies using Add Health

⁵Two variables (not shown) are included in the analyses to control on selection: grade level and a dummy variable for not completing 12th grade.

(Crosnoe, Cavanagh, and Elder, 2003; Frank et al., 2008), we argue that our models decrease the likelihood that observed friendship effects are solely the results of selection.

After discussing descriptive statistics, we turn to regression analyses to explore the effects of friends' characteristics on Latino students' achievement. We conduct separate models by gender to examine how such processes may operate differently for girls and boys. We follow analytic strategies for using the Add Health data as recommended by the Carolina Population Center (Chantala, 2001). Specifically, we account for the unequal probability of selection of students into the sample by identifying their stratum (region) and primary sampling unit (school) in the estimation of Taylor series standard errors, producing variance estimates that are robust to the correlations between observations.⁶ Missing values on independent variables were imputed. All analyses use the transcript weight designed for the AHAA component of Add Health.

Descriptive Results

Table 1 displays weighted means separately by gender. Beginning with the dependent measure of GPA, Latino students hover around 2.5, or between a "C" and "B" average. Yet consistent with other research (Gándara, 2005), girls' grades are significantly higher. The majority of Latino students' friendship groups are comprised of non-Latino white students and Latino immigrant students. Groups are generally characterized by a smaller proportion of third-plus-generation students, and the lowest proportions are observed for African-American and other racial/ethnic minority students. Breaking the means down by students' own generational status (not shown here) indicates that third-plus-generation Latino students are significantly more likely to have non-Latino white friends than their immigrant peers, while immigrant students are significantly more likely to have friends who are themselves immigrant. Although the proportions of different racial/ethnic friends by gender do vary in a pattern consistent with prior research (more in-group than out-group ties for girls), none of these differences achieve statistical significance.

Significant gender differences do emerge in the average parent education level of friends, with Latino boys' social networks having slightly higher levels of parent education. As expected, girls report having significantly more involved friendship groups. In general, Latino students start high school below Algebra I, and come from families where the highest level of parent education is between high school graduate and some college attendance, although boys in the sample come from homes with significantly higher parent education levels than do girls. Boys also report engaging in significantly more delinquent activities. Latino students attend schools in the South more often than other regions, and are most likely to attend urban schools. Latino students on average attend schools where approximately one-third of students are also Latino (combined immigrant and nonimmigrant), and where one-third of students are eligible for free lunch.

Multivariate Results

Friendship Effects on GPA for Latina Girls—The results of regression analyses predicting end of high school GPA for Latina girls are shown in Table 2. In Model 1, the coefficient for the proportion of friends who are third-plus-generation Latino is positive and statistically significant. This indicates that net of the other variables in the model, as the proportion of friends who are nonimmigrant Latino increases—and as the proportion of friends who are non-Latino white or dominant culture decreases—girls' GPA increases. No other measures of friendship racial/ethnic composition are significant.⁷ In analyses not shown here, we introduced interaction terms between all measures of friendship racial/ethnic composition

⁶The models are analogous to running fixed-effects models in HLM, where characteristics of students are at Level 1 and characteristics of schools are at Level 2.

and students' generational status. None were significant, indicating that the benefit of having more third-plus-generation Latino friends (relative to non-Latino white friends) applied equally to all Latinas.

We subsequently calculated predicted outcomes for a Latina student who was average on all other variables. A girl who has no Latino third-plus-generation friends has a predicted GPA of 2.35. As the percentage of such friends increases to 30 percent, her predicted GPA increases to 2.49, and then to 2.63 when her group is 60 percent Latino nonimmigrant. A girl with 100 percent Latino nonimmigrant friends has a predicted GPA of 2.82.

Model 2 of Table 2 introduces potential mediating variables, specifically friends' average parent education level, GPA, and reports of closeness to others in the school. The first of these is positive and significant, for example, as friends' parent educational level increases, so does Latina girls' GPA. Furthermore, the coefficient for the proportion nonimmigrant Latino friends increases by more than 30 percent, suggesting that this benefit is somewhat suppressed by the fact that these friends have lower parental resources. (Additional analyses confirm that it is the inclusion of friends' parental education that changes the effect of proportion third-plus-generation friends.)

With regard to other variables in the model, the only significant effect among the background variables is ninth-grade GPA. However, exploratory analyses reveal that there are significant effects of parental education and intact family structure that are nullified with the introduction of prior grades. Interestingly, having a friendship group that is predominantly female is negatively and significantly associated with end of high school GPA, speaking to the benefits for girls of having a more gender-equitable group. Finally, net of other factors, girls attain significantly lower grades in private schools, but higher grades in rural compared to suburban schools. These results are somewhat surprising, particularly in light of research on the positive effects of private schools on minority students' achievement (Lee and Bryk, 1988).

Friendship Effects on GPA for Latino Boys—Table 3 displays the results of regression models for Latino boys. In Model 1, no measures of friendship group composition are significantly related to boys' grades. Further, interaction terms with students' own generational status were introduced (not shown here), but none were statistically significant.

As seen in Model 2 of Table 3, the effect of friends' parent education level is positive and statistically significant. Additionally, with the introduction of this variable, the effect of having Latino immigrant friends increases by approximately 40 percent and is now statistically significant; similarly, the effect of having third-plus-generation Latino friends also increases in size and is significant. This pattern suggests that the benefits of co-ethnic ties are somewhat suppressed by the lower parental resources that characterize such networks. While for Latina girls we find significant effects only of having more third-plus-generation Latino friends, for boys the results indicate that, in general, co-ethnic ties (either immigrant or not) are a source of social capital for promoting achievement. Given the proliferation of stereotypes concerning the negative influence of co-ethnic peers on minority male youth, this is an important finding.

We calculated predicted values for GPA by varying the proportion of co-ethnic friends. For a Latino boy who was average on other factors, as the proportion of Latino immigrant friends increases from 0 to 0.3, his predicted GPA increases from 2.27 to 2.35. As this proportion further increases from 0.6 to 1, his GPA increases from 2.44 to 2.56. The magnitude of the effect of third-plus-generation friends is roughly comparable; as the proportion of a boy's

⁷Supplemental analyses changing the contrast category to immigrant friends confirms that the benefits of co-ethnic friends for Latinas are unique to third-plus-generation friends.

friends who are third-plus generation increases from 0 to 1, his predicted GPA increases from 2.27 to 2.60.

Other significant results include the positive effect of freshman year GPA. Interestingly, we find that Latino boys respond to different aspects of their school context than those we observed for girls. For example, Latino boys have significantly higher achievement in the West compared to the Midwest. As the Latino population is relatively new to midwestern states, this might suggest that males face particular difficulties in schools unaccustomed to educating language minority youth (Callahan, Wilkinson, and Muller, 2008). Additionally, in Model 1 of Table 3, there is a significant positive effect of being in a school with more Latino immigrants, again perhaps hinting at negative repercussions for Latino boys who comprise an ethnic minority within their school. Finally, boys' grades are significantly higher when they attend a school that has a higher average GPA, suggesting that boys' grades are responsive to school academic press.

Discussion and Conclusion

In this article we explored how Latino students' friendship groups might provide social capital for academic success. In contrast to many studies focusing on negative factors that may lead to Latinos' lower educational attainment, we chose to focus on how the racial/ethnic and generational status composition of friendship groups could relate to the provision of different kinds of resources that positively promote end of high school achievement. The results of our analyses indicate that as Putnam (2000) suggested, there are circumstances where in-group ties are more beneficial than out-group ties. Indeed, our results offer important evidence that co-ethnic friendship networks are positively related to Latino students' achievement. Although we are not able to pinpoint the specific mechanisms through which this association occurs, our findings stand in contrast to the notion that Latino youth suffer from a deficit of social capital. Although prior findings that Latino students are at a disadvantage in terms of relationships with school personnel, for example, should not be discounted (Stanton-Salazar and Dornbusch, 1995), this does not obviate the possibility that there are other ethnic-specific forms of social capital that might function simultaneously. Additionally, while some literature has found that boys do not tap into their social networks as a source for academic gains to the same extent as do girls (Barajas and Pierce, 2001; Riegle-Crumb, Farkas, and Muller, 2006), or that co-ethnic friendships function primarily as an academic deterrent for male minority youth (Ogbu, 2003), we find evidence that both Latino boys' and girls' achievement is promoted through in-group ties.

Yet we find interesting gender differences in the academic benefits that co-ethnic groups provide. For girls, the only positive effect of co-ethnic (vs. dominant culture) friends is found for having more third-plus-generation friends. In contrast, for boys, we observe a more general pattern whereby co-ethnic friendship ties, both to immigrant and nonimmigrant friends, are related to higher achievement. To understand why boys are unique in having higher grades in the presence of more friendship ties to Latino immigrant friends, we suggest that such friends do not necessarily provide any novel forms of support or encouragement for girls. Research finds that young Latinas have stronger ties to the home, family, and community than do their male peers (Valenzuela, 1999). Although this may be partly due to norms of traditionally feminine behavior, it may nevertheless offer girls a positive sense of their ethnicity and culture (López, 2003). For Latino boys, on the other hand, ties to immigrant peers in their school could offer a social context that affirms a sense of cultural identity and solidarity, as well as an optimistic view of their future opportunities and the importance of academic effort and perseverance to get ahead. Having Latino immigrant friends could provide these young Latino men with the benefits of membership in an immigrant community, representing a new and salient source of social capital that they are less likely to access via the home and the family.

It is important to point out that the positive effects of both immigrant and nonimmigrant co-ethnic friends on Latino males' achievement do not emerge until friends' parent education level is taken into account; additionally, the effect of third-plus-generation Latino friends on girls' grades is likewise strengthened by the addition of this indicator. These results suggest that the academic benefits of having co-ethnic friends are somewhat suppressed by the lower levels of parental educational resources that these friends possess. Given the educational advantages, both material and otherwise, that more-educated parents are known to confer on their children (Schneider and Coleman, 1993), it is not surprising that we also observe positive effects on achievement for Latino youth when they have access to friendship networks characterized by higher levels of parental education. And while we do not find any instances where having dominant culture friends directly promotes higher academic outcomes compared to having co-ethnic friends, to the extent that non-Latino white peers do have more-educated parents, this provides evidence of the benefits that such friends can provide. Thus, while our study suggests the affirming possibilities of co-ethnic friends for Latinos' academic performance, it also acknowledges the advantages that may accrue to those with out-group ties.

Several limitations of our study warrant noting. First, establishing causal relationships with survey data is a difficult endeavor, particularly in the case of friendship studies, where issues of selection are a concern. We have included a range of potentially confounding variables to account for this, yet we still cannot say with certainty that, for example, having co-ethnic friends actually causes higher achievement for Latino boys. Additionally, due to data limitations, our analyses cannot clearly discern all the specific mechanisms through which friendship groups contribute to Latino boys' and girls' achievement. Our study represents an important step on which future studies could build to more fully explore these issues.

In summary, our study speaks to the complex issues that minority youth face negotiating the boundaries of racial and ethnic cultural identities. As members of an ethnic group that is economically and socially disadvantaged in U.S. society, forming out-group ties can provide Latino youth with opportunities and information not available from their family background. At the same time, in-group ties are an important source of maintaining cultural heritage, identity, and a sense of community. Ideally, both these sources of social capital are available to Latino youth in schools. Yet all too often adolescents feel strong social pressures to choose one identity over the other (Carter, 2005). Furthermore, given the increasing levels of segregation of U.S. schools and the continuing evidence of internal racial/ethnic academic stratification within schools (Mickelson, 2001), it is clear that many Latino students will not have the opportunity to simultaneously establish both bonding ties to co-ethnic peers and bridging ties to dominant culture peers. Our study suggests that both desegregation across and within schools is necessary for Latino students to access both the in-group and out-group social capital that can facilitate their academic success.

Thus, while some may find it tempting to dismiss as somewhat superficial the question of *Who is friends with whom in high school?*, this study contributes to literature showing that the answer to this question has consequences for students' academic success. For Latino youth in particular, who will comprise an increasingly large proportion of the adult population in future years, examining their social ties offers a key point of entry to understanding the social, political, and economic well-being of the country.

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TABLE 1

Descriptive Table of Weighted Means and Standard Deviations for Latino Students

Dependent Variable	Girls		Boys	
	Mean	SD	Mean	SD
Grade point average (11th/12th grade)	2.56	(0.81)	2.42	(0.86)*
<i>Friendship Characteristics</i>				
<i>Racial/Ethnic Composition (Proportion)</i>				
1st-/2nd-generation Latino friends	0.31	(0.41)	0.24	(0.39)
3rd-plus-generation Latino friends	0.14	(0.23)	0.16	(0.23)
African-American friends	0.11	(0.27)	0.12	(0.24)
Other racial/ethnic minority friends	0.12	(0.23)	0.12	(0.23)
Non-Latino white friends (reference)	0.34	(0.36)	0.38	(0.37)
<i>Friends' Average</i>				
Parent education level	2.62	(0.90)	2.94	(0.83)*
Grade point average	2.78	(0.51)	2.77	(0.50)
Closeness to others in school	2.29	(0.60)	2.19	(0.55)
<i>Other Friendship Group Controls</i>				
Number of friends	7.01	(3.41)	6.91	(3.67)
Proportion same-sex friends	0.61	(0.23)	0.62	(0.26)
Activities with friends	1.59	(0.86)	1.17	(0.93)*
<i>Individual Background Characteristics</i>				
Grade point average (9th grade)	2.49	(0.89)	2.46	(0.85)
Math-course level (9th grade)	3.60	(1.34)	3.75	(1.41)
1st- or 2nd-generation immigrant	0.47	(0.49)	0.43	(0.49)
Parent education level	2.38	(1.22)	2.86	(1.16)*
Intact family	0.56	(0.50)	0.59	(0.49)
Closeness to others in school	2.19	(0.96)	2.33	(0.99)
Delinquent activity scale	0.18	(0.28)	0.31	(0.38)*
<i>School Characteristics</i>				
Private school	0.08	(0.22)	0.07	(0.17)
South	0.41	(0.49)	0.43	(0.49)
West	0.28	(0.48)	0.24	(0.47)
Northeast	0.20	(0.35)	0.16	(0.35)
Midwest (reference)	0.11	(0.28)	0.16	(0.27)
Urban	0.52	(0.50)	0.48	(0.50)
Rural	0.06	(0.22)	0.07	(0.22)
Suburban (reference)	0.42	(0.49)	0.43	(0.49)
School size	846.27	(716.09)	823.51	(737.91)
Proportion 1-/2nd-generation Latino	0.22	(0.27)	0.19	(0.28)
Proportion 3rd-plus-generation Latino	0.13	(0.07)	0.13	(0.07)
Proportion African American	0.13	(0.16)	0.15	(0.17)
Proportion other racial/ethnic minority	0.13	(0.15)	0.13	(0.14)

Dependent Variable	Girls		Boys	
	Mean	SD	Mean	SD
Proportion non-Latino white (reference)	0.39	(0.29)	0.41	(0.29)
Average parent education level	3.31	(0.51)	3.32	(0.49)
Average school grade point average	2.78	(0.27)	2.78	(0.26)
Proportion eligible for free lunch	0.33	(0.17)	0.32	(0.17)
<i>N</i>	513		404	

* Indicates mean for Latino boys is significantly different than the mean for girls at the 0.05 level.

TABLE 2

Predicting Latina Girls' GPA: Coefficients from Regression Analyses (Standardized Coefficients in Parentheses)

	Model 1		Model 2	
Friendship Characteristics				
Proportion				
1st-/2nd-generation Latino friends	-0.274	(-0.131)	-0.099	(-0.047)
3rd-plus-generation Latino friends	0.469	(0.142)*	0.619	(0.188)**
African-American friends	-0.259	(-0.087)	-0.165	(-0.055)
Other racial/ethnic minority friends	-0.291	(-0.084)	-0.236	(-0.068)
(Reference: Non-Latino white friends)				
Friends' Average				
Parent education level			0.108	(0.128)*
Grade point average			0.115	(0.077)
Closeness to others in school			0.038	(0.031)
Other Friendship Group Controls				
Number of friends	0.009	(0.031)	0.005	(0.019)
Proportion same-sex friends	-0.289	(-0.127)*	-0.258	(-0.113)*
Activities with friends	-0.023	(-0.027)	-0.021	(-0.025)
Individual Background Characteristics				
Grade point average (9th grade)	0.561	(0.619)***	0.537	(0.592)***
Math-course level (9th grade)	0.003	(0.006)	0.006	(0.012)
1st- or 2nd-generation immigrant	0.132	(0.085)	0.134	(0.087)
Parent education level	0.045	(0.066)	0.027	(0.039)
Intact family	0.031	(0.020)	0.046	(0.029)
Closeness to others in school	-0.002	(-0.002)	0.003	(0.004)
Delinquent activity scale	0.166	(0.066)	0.128	(0.051)
School Characteristics				
Private school	-0.293	(-0.103)*	-0.307	(-0.108)**
South	0.138	(0.088)	0.145	(0.092)
West	0.103	(0.059)	0.093	(0.054)
Northeast	-0.046	(-0.023)	-0.058	(-0.031)
Urban	-0.094	(-0.061)	-0.122	(-0.078)
Rural	0.421	(0.127)***	0.385	(0.117)**
School Size	-0.001	(-0.045)	-0.001	(-0.041)
Proportion 1st-/2nd-generation Latino	0.085	(0.025)	-0.100	(-0.029)
Proportion 3rd-plus-generation Latino	-1.530	(-0.157)	-1.366	(-0.139)
Proportion African American	-0.392	(-0.084)	-0.499	(-0.107)
Proportion other racial/ethnic minority	0.291	(0.059)	0.351	(0.053)
Average parent education level	0.033	(0.026)	-0.014	(-0.009)
Average school grade point average	0.017	(0.006)	-0.053	(-0.017)
Proportion eligible for free lunch	0.353	(0.091)	0.364	(0.094)
Constant	0.882		0.611	

	Model 1	Model 2
R^2	0.45	0.47

$N=513$ students, 91 schools.

*
 $p<0.05$;

**
 $p<0.01$;

 $p<0.001$.

TABLE 3

Predicting Latino Boys' GPA: Coefficients from Regression Analyses (Standardized Coefficients in Parentheses)

	Model 1		Model 2	
Friendship Characteristics				
Proportion				
1st-/2nd-generation Latino friends	0.200	(0.087)	0.281	(0.122)*
3rd-plus-generation Latino friends	0.277	(0.086)	0.325	(0.101)*
African-American friends	0.265	(0.089)	0.289	(0.097)
Other racial/ethnic minority friends	0.042	(0.011)	0.053	(0.014)
(Reference: Non-Latino white friends)				
Friends' Average				
Parent education level			0.081	(0.092)*
Grade point average			0.003	(0.003)
Closeness to others in school			−0.044	(−0.033)
Other Friendship Group Controls				
Number of friends	0.019	(0.065)	0.023	(0.081)
Proportion same-sex friends	0.067	(0.043)	0.065	(0.041)
Activities with friends	0.021	(0.023)	0.015	(0.017)
Individual Background Characteristics				
Grade point average (9th grade)	0.539	(0.533)***	0.526	(0.521)***
Math-course level (9th grade)	0.045	(0.069)	0.036	(0.056)
1st- or 2nd-generation immigrant	0.053	(0.033)	0.056	(0.035)
Parent education level	0.002	(0.004)	−0.006	(−0.010)
Intact family	−0.074	(−0.046)	−0.069	(−0.044)
Closeness to others in school	0.043	(0.055)	0.049	(0.063)
Delinquent activity scale	−0.168	(−0.081)	−0.185	(−0.089)
School Characteristics				
Private school	−0.152	(−0.048)	−0.148	(−0.047)
South	0.185	(0.116)	0.176	(0.110)
West	0.385	(0.207)*	0.375	(0.202)*
Northeast	0.171	(0.081)	0.162	(0.076)
Urban	−0.166	(−0.105)	−0.171	(−0.108)
Rural	0.142	(0.049)	0.172	(0.059)
School size	−0.001	(−0.032)	−0.001	(−0.002)
Proportion 1st-/2nd-generation Latino	0.541	(0.142)*	0.424	(0.111)
Proportion 3rd-plus-generation Latino	−0.219	(−0.023)	−0.156	(−0.017)
Proportion African American	−0.084	(−0.020)	−0.081	(−0.019)
Proportion other racial/ethnic minority	−0.875	(−0.129)	−0.829	(−0.123)
Average parent education level	0.156	(0.106)	0.076	(0.052)
Average school grade point average	0.453	(0.147)*	0.458	(0.148)*
Proportion eligible for free lunch	0.029	(0.029)	−0.059	(−0.016)

	Model 1		Model 2	
Constant	-1.75	**	-1.61	*
R^2	0.58		0.59	

$N=404$ students, 86 schools.

*
 $p<0.05$;

**
 $p<0.01$;

 $p<0.001$.