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Social Capital, Race, and Magnet School Attendance

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Critics of rational choice theory argue that there is an unequal distribution in access to good information about school choice options that favors families with greater social capital and whites. While there is much empirical evidence to support this argument, studies exist that counter it, suggesting that those with low stocks of social capital and racial and ethnic minorities are more likely to exercise school choice. Interestingly, extant studies typically focus on types of school choice other than magnet schools. Using combined student-level data from the Houston Independent School District (HISD) and neighborhood-level data from the United States Census Bureau's Zip Business Patterns, we examined how neighborhood-level social capital and race/ethnicity impact the exercise of intra-district magnet school choice. Utilizing propensity score stratification matching to account for neighborhood selection, we found that families living in low social capital neighborhoods and racial and ethnic minorities had a higher likelihood of attending an out-of-zone magnet school. Interactions between neighborhood social capital and race suggested that all races living in high social capital neighborhoods had a lower probability of attending a magnet school of choice than their same-race peers in low social capital neighborhoods. Racial and ethnic minorities were more likely than whites to attend an out-of-zone magnet school, whether they lived in high or low social capital neighborhoods.

BACKGROUND

The liberation model of school choice explains why magnet school choice might be different from the issue of school choice, generally speaking (Archbald, 2004). It is well known that poor and minority families are more likely than non-poor and nonminority families to be trapped in underperforming urban schools. While the latter have historically been able to exercise school choice due to their greater residential mobility, however, the former were often restricted in the amount of options available to them to do the same, most often as a consequence of racial redlining in certain neighborhoods or other housing practices (Wilson, 1997). Indeed, the decision-making propensity of parents is often proscribed by a host of factors both within and ouside parents' control. Typically these factors center on income level and educational attainment, but the strength of social networks also impact the access to knowledge parents have about quality choice options. Intradistrict controlled- or open-enrollment, by breaking the link between schools and neighborhoods, liberates poor and minority families from failing schools and allows them to send their children to what they believe are better schools.

That many urban districts continue to be characterized by high levels of residential segregation (Iceland, 2004; Massey, 2001), the

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expansion of school choice, and particularly magnet school choice, under the liberation model indicates the possibility of a decrease of segregation within schools if minority preference for more racially, and hence more socioeconomically, balanced neighborhoods (Charles, 2006; Ihlanfeldt & Scafidi, 2004) translates into a concomitant desire for more integrated schools. Moreover, it is important to understand the degree to which embeddedness in social networks facilitates the likelihood of exercising school choice, particularly magnet school choice.

RESEARCH QUESTIONS

In this study, we were interested in assessing the extent to which social capital and racial or ethnic minority status predicted the exercise of magnet school choice in the nation's seventh largest urban school district. We sought specifically to answer the following research questions:

1. Do the odds of attending an out-of-zone magnet school favor children from high social capital neighborhoods?
2. Are there differences in the odds of attending an out-of-zone magnet school between whites and members of racial/ethnic minority groups?
3. To what extent does the effect of community- or neighborhood-level social capital on out-of-zone magnet school attendance vary by race/ethnicity?
4. To what extent does the effect of race/ethnicity on out-of-zone magnet school attendance vary by community- or neighborhood-level social capital?

Elucidating whether disadvantage deriving from the lack of social capital or membership in a racial or ethnic minority group leads to a lower likelihood of attending a school of choice is important for reducing as much as possible the distance between social strata when among the schools of choice are those institutions that are recognized as being of high quality. With regard to policies of intra-district school choice, a positive finding of disparities in the propensity to exercise magnet choice, specifically, might necessitate that districts or schools exercise greater control over the exercise of choice to effect a more equitable distribution of seeking populations. It might also lead to the implementation of strategies to disseminate knowledge of choice options to the most vulnerable sectors within districts.

DATA AND METHOD

Data

We used administrative student-level data from the Houston Independent School District (HISD) for the 2011-2012 academic year, which, minus pre-K students and a small number of cases with incomplete data, comprised a final sample of 182,249 children in grades K-12.

Measures

Our primary aim was to examine the likelihood of out-of-zone magnet school attendance as a consequence of the additive effects of race/ethnicity and social capital, as well as their interactive effects. We were not merely concerned with the general impact on magnet choice of race/ethnicity and social capital across all grades, but we wished to ascertain the extent to which the propensity to attend a magnet school varies among elementary, middle, and high school. And we wished to understand how the likelihood of magnet choice by social capital and race/ethnicity might differ among the four distinct magnet types available to students in HISD: (1) School-Within-a-School (SWAS), (2) School-Wide Program (SWP), (3) School-Wide Vanguard Program (SWVP), or (4) Separate and Unique School (SUS; see www.houstonisd.org/magnet for definitions).

Our primary predictors of interest were race/ethnicity and social capital. The race/ethnicity variable is a four-category variable in which whites are coded 1, blacks are coded 2, Hispanics are coded 3, and those of some other race are coded 4. We created separate dummies for each of these race categories such that non-membership in a particular subgroup was coded 0 and membership in a particular subgroup was coded 1. We compared the performance of the latter three groups against their white peers in our analyses.

Given the unavailability of individual-level factors that tell us about individuals' embeddedness in social networks, we constructed a community- or neighborhood-level index of social capital. Following the example of Rupasingha, Goetz, and Freshwater (2006), we do this in a two-step process. We first examined the census tract density of associations such as golf courses, country clubs, fitness centers, bowling centers, and civic and religious institutions in the Houston, Texas, area.

We then considered 2010 decennial census tract-level data for (1) percent of households with incomes over $100,000, (2) percent of individuals with a bachelor's degree or higher, and (3) percent of homes that are occupied. From these three measures and the associational density variable we extracted the first two principal components to create our social capital index. For analytic purposes we transformed the resulting continuous social capital index into a binary variable. Every child residing in a census tract below the mean social capital index for all census tracts in the Houston area was coded 0, while every child residing in a census tract at or above the mean social capital index for all census tracts in the Houston area was coded 1.

For all magnet schools, generally, and for each magnet of a specific type, we created a dummy variable in which 0 denoted nonattendance and 1 denoted attendance at a magnet school outside the mandatory attendance zone. These five magnet dummies served as our main dependent variables in both additive and interaction logistic regression models for (1) all grades combined, (2) elementary school only, or grades K-5, (3) middle school only, or grades 6-8, and (4) high school only, or grades 9-12, for a total of 34 distinct models.

We include controls for (1) female status, a dummy variable in which males are coded 0 and females are coded 1, (2) limited English proficient status, a dummy variable that takes on a value of 0 if a student speaks English fluently and a value of 1 if a student does not speak English fluently, (3) at-risk status, a dummy variable that takes on a value of 0 if a student is deemed not-at-risk of school non-completion and a value of 1 if a student is at-risk of school non-completion, and (4) poverty status, a three-category variable in which non-disadvantage is coded 1, on free or reduced lunch is coded 2, and in poverty is coded 3. Regarding covariates 2 through 4, while they are based on district, state, and federally defined criteria, respectively, and are attached to students after entry into formal schooling within HISD, they nonetheless represent conditions preexisting entry into school and thus may serve as background predictors of the propensity to exercise both educational and neighborhood choice.

Method

To address possible selection bias in this study, we utilized propensity score stratification matching (Rosenbaum & Rubin, 1984) and used both the resulting propensity score and dummy variables for the propensity score strata as covariates in a logistic regression model. The aim of the propensity score matching technique is to match treated (those who live in a high social capital neighborhood) and untreated (those who live in a low social capital neighborhood) individuals on shared observed covariates (Morgan & Harding, 2006). This is accomplished by use of a logistic regression model that estimates the propensity that students' families will reside in a high social capital neighborhood. Stratification on the propensity score simply involves separating students into mutually exclusive groups based on their estimated propensity score. The result is that, within each stratum, treated and non-treated students should, so long as the propensity score model has been correctly specified, have similar propensity score values (Rosenbaum & Rubin, 1983). Using Stata's -pscore- command (Becker & Ichino, 2002), which, in addition to estimating the propensity score, automatically allows for both stratifying on the propensity score and for testing for balance among those baseline covariates used to predict the propensity score, we categorized students into nine strata.

Finally, we ran logistic regression models for the 34 relevant models in which the outcome variable is regressed on the treatment and race/ethnicity variables or their interactions, a variable denoting whether a student is zoned to a magnet school, the estimated propensity score, and dummy variables for eight of the propensity score strata (the first strata serving as the reference category).

RESULTS

Table 1 presents means and standard deviations for all covariates. The first thing to note is that nearly 20 percent of students in HISD attended a magnet school of choice in the 2011-2012 academic year. Of those, the vast majority (almost 10 percent) elected to attend a school-within-a-school. Near

Table 1. Summary Statistics (*N* = 182,249).

Variable	Mean	SD
Social Capital Index	-0.5344	1.3891
Out-of-Zone Magnet Type Attended		
Any Magnet Type	0.1896	0.3919
School Within A School	0.0950	0.2932
School-Wide Program	0.0363	0.1870
School-Wide Vanguard Program	0.0261	0.1595
Separate and Unique School	0.0322	0.1765
Grade	5.4413	3.6913
Female	0.4885	0.4999
Race/Ethnicity		
White	0.0788	0.2695
Black	0.2515	0.4339
Hispanic	0.6251	0.4841
Other Race	0.0372	0.1891
At-Risk	0.6130	0.4871
Limited English Proficient	0.2878	0.4527
Poverty Status		
Non-disadvantaged	0.2016	0.4012
Free or Reduced Lunch	0.4238	0.4942
In Poverty	0.3746	0.4840

equal percentages attended each of the other three magnet types, i.e., a school-wide program, a school-wide vanguard program, or a separate and unique magnet school. Also noteworthy is the large percentage of students who are non-Asian minorities. Given that nearly 90 percent of HISD students are either Hispanic or black likely also explains the high proportion of all students who are at-risk (61 percent), limited English proficient (29 percent), or free- or reduced-lunch eligible or in poverty (80 percent).

How do these means differ between those who live in high versus low social capital neighborhoods? For each of the covariates in Table 1, **Table 2** presents the difference in means between our quasi treatment and control groups, i.e., high social capital neighborhood residents versus low social capital neighborhood residents, and notes whether those differences are statistically significant. All differences in means were significant at the $p < .001$ level except for school-within-a-school, which was significant at the $p < .05$ level. A higher mean percentage of students from high social capital neighborhoods attended any magnet type and, except for school-within-a-school, also attended magnets of specific types. Higher mean percentages of these students tended to be white, were less at-risk and likely English proficient, and naturally came from non-disadvantaged families.

Table 2. Difference in means and t-test significance by social capital index (SCI) binary classification (top 50% vs. bottom 50%).

	(*N* = 182,249)	
	Diff. in means	*t*-test sig.
Out-of-Zone Magnet Type Attended		
Any Magnet Type	0.0344	***
School Within A School	-0.0034	*
School-Wide Program	0.0111	***
School-Wide Vanguard Program	0.0143	***
Separate and Unique School	0.0124	***
Grade	0.1580	***
Female	0.0016	
Race/Ethnicity		
White	0.1913	***
Black	-0.0472	***
Hispanic	-0.2126	***
Other Race	0.0552	***
At-Risk	-0.1619	***
Limited English Proficient	-0.1035	***
Poverty Status		
Non-disadvantaged	0.2848	***
Free or Reduced Lunch	-0.1073	***
In Poverty	-0.1775	***

Note: *p < .05; **p < .01; ***p < .001 (two-tailed t-tests).

Additive Models

Considering the additive effects models, we note that, in general, living in a high social capital neighborhood was associated with a lower probability (3.2 percentage points) of exercising choice for any magnet school when all grades are considered together, net of other factors (refer to top left panel under "Additive Models" in **Table A1**). Excepting school-wide program magnets, this trend held across each of the specific magnet types, with lower probabilities of about 0.3 percentage points in the case of school-wide vanguard programs to 1.9 percentage points in the case of school-within-a-school programs. As students from high social class neighborhoods progress from the elementary school years to middle school to high school, their lower probability of attending an out-of-zone magnet school of any type increased in size relative to their peers who resided in low social capital neighborhoods. In elementary school, HISD students from high social capital neighborhoods had a 0.2 percentage point lower probability of attending an out-of-zone magnet of any type. By middle school, they had a 5.7 percentage point lower probability of attending an out-of-zone magnet of any type. By high school, the probability of attending an out-of-zone magnet of any type was lower among students from high social capital neighborhoods by 8.6 percentage points. This trend held when we considered magnets of specific types.

The marginal effects of living in a high social capital neighborhood on the probability of attending an out-of-zone magnet school by race also failed to confirm what might be deduced from Tables 2 through 4. Controlling for high social capital index, blacks, Hispanics, and other race students had, respectively, a 20.4, 23.5, and 4.6 percentage point higher probability of attending a magnet school of any type when all grades are considered together. Regarding magnet schools of specific types, the trend is the same. Blacks had a 2.6, and Hispanics had a 3.8, percentage point greater probability of attending a school-within-a-school magnet program. In contrast, white students and students of other races were significantly less likely to attend magnet schools housed within other schools. With respect to school-wide magnet programs, again, both blacks and Hispanics were significantly more likely to attend than were whites. Other race students were also significantly less likely to attend out-of-zone school-wide programs. The trend among school-wide programs was similar in school-wide vanguard programs. White and other race students had lower probabilities of attending school wide vanguard programs, while black and Hispanic students had higher probabilities. Finally, black, Hispanic, and other race students had a higher probability of attending separate and unique magnet schools of between about 3 and 4 percentage points than their white peers.

In contrast to the marginal effect of living in a high social capital neighborhood on the probability of attending an out-of-zone magnet school of any type, which increased in size from elementary to middle to high school, the marginal effect of race actually decreased in size as students moved from elementary to high school. That is, while the probability of attending a magnet school of choice among black and Hispanic elementary-aged children was on the order of 23 percentage points higher than it was among white elementary-aged students, it was a slightly smaller greater probability of 14 and 18 percentage points, respectively, by high school. Except in the case of separate and unique magnet types, which saw an increase in the size of the marginal effect of race on the probability of attending a school of choice from elementary to high school, this trend held when magnets of specific types were examined.

Interactive Models

While additive effects models are useful for assessing the impact of a covariate conditional on a set of controls, interaction effects models allow for the investigation of more interesting questions. Regarding the present study, we desired to understand whether the impact of living in a low versus high social capital neighborhood on the probability of attending an out-of-zone magnet schools varies by race and, relatedly, whether the effect of race on the probability of attending an out-of-zone magnet school varies by low versus high neighborhood social capital. The main effect of SCI revealed that whites in high social capital neighborhoods had a lower probability (6.4 percentage points) than their white peers in low social capital neighborhoods of attending an out-of-zone magnet school of any type when all grades were grouped together (top left column under "Interaction Effects Models" in Table A1).

The differences in the probability of attending a magnet school of choice between high and low social capital neighborhood residing blacks and Hispanics were smaller (-6.4 + 2 = -4.4 and -6.4 + 5.2 = -1.2 percentage points, respectively). Only other race students who resided in high social capital neighborhoods had a lower probability than similarly situated whites of attending an out-of-zone magnet school of any type than their same race low social capital neighborhood residing peers. This trend was similar across magnets of specific types except in the case of school-wide vanguard programs. Those who resided in high social capital neighborhoods were slightly more likely to attend a school-wide vanguard magnet school of choice than their same race peers who resided in low social capital neighborhoods.

As students moved from elementary to middle to high school, the probability of attending an out-of-zone magnet school of any type among whites residing in high social capital neighborhoods increased in size. In elementary the marginal effect was -3.2 percentage points. By high school it was -17.2 percentage points. The gap in the marginal effect of social capital on the probability of attending a magnet school of any type between same race individuals who were either black or Hispanic continued to be smaller when school levels were considered separately as they were when all grades were grouped together. Again, this trend appeared to hold across magnets of specific types, particularly in the case of schools-within-schools and separate and unique magnet programs.

Turning to the main effects coefficients for the race dummies, which represent the difference in probability of attending a magnet school of choice between individuals of that specific race and their white peers who reside in low social capital neighborhoods, it was revealed that blacks, Hispanics, and other race students in low social capital neighborhoods had a higher probability than their white low social capital neighborhood residing peers of, respectively, 22, 24.3, and 7.9 percentage points of attending an out-of-zone magnet school of any type when all grades were pooled. In high social capital neighborhoods the probabilities of attending a magnet school of choice among blacks and Hispanics, relative to whites, were even higher. Blacks who lived in high social capital neighborhoods had a 22 + 2 = 24 percentage point higher probability of attending a magnet school of choice than their similarly situated white peers. The corresponding number for Hispanics was 24.3 + 5.2, or 29.5, percentage points. The probability of attending an out-of-zone magnet school of any type among other race individuals, relative to whites, while still higher in high social capital neighborhoods, was reduced in size. The 7.9 higher probability other race students had over whites of attending a magnet school of choice when both lived in low social capital neighborhoods, was reduced to a higher probability of 7.9 + (-4.6), or 3.3, percentage points. A similar trend is evident when we consider magnets of specific types separately.

With respect to school-wide vanguard programs, however, the probability of a minority attending by choice, relative to his white peers, was slightly higher when both hailed from a low rather than high social capital neighborhood.

As students transitioned from elementary to middle to high school, low social capital neighborhood residing blacks and Hispanics continue to have a higher probability of attending an out-of-zone magnet school of any type than their similarly situation white peers. Often, though, this marginal effect of race does not differ between low and high social capital neighborhoods until high school. Interestingly, while the marginal effect of race on the probability of attending a magnet school of choice favors blacks and Hispanics in elementary and middle school by anywhere from 24 to 32 percentage points, with little or no difference between low and high social capital neighborhoods, in high school the size of the positive marginal effect is lower for low social capital neighborhood residing blacks (11.4 percentage points) and Hispanics (15 percentage points) than for high social capital neighborhood residing blacks (11.4 + 10.6 = 22 percentage points) and Hispanics (15 + 10.1 = 25.1 percentage points).

DISCUSSION AND RECOMMENDATIONS

In this study, we desired to understand the relationship between both social capital and race/ethnicity and the likelihood of attending a magnet school of choice, generally speaking. Recognizing that not all magnet programs are created equal with regard to quality, admissions criteria, and educational focus, among other things, we also examined the extent to which the exercise of magnet choice differs by magnet school type. Given that the exercise of school choice increasingly transfers from parents to children as the latter age, partly as a consequence of peer effects (Lauen, 2007; Wolf & Stewart, 2012), we further elucidated the extent to which the exercise of magnet school choice varies by elementary, middle, and high school grade level. Finally, we sought to understand how the effects of social capital and race/ethnicity on the exercise of magnet school choice are each conditional on the other.

Regarding the relationship between race and ethnicity and the exercise of magnet school choice, we find that minority parents and students are far more likely to exercise choice than their white peers, net of the effects of controls, including neighborhood-level social capital. Minority students are more likely to attend a magnet school of choice across all types of magnet schools, though the magnitude of that likelihood is less pronounced in School-Wide Vanguard Programs. This trend is mostly repeated across the different levels of schooling, though it is important to note that the size of the minority race coefficients get smaller from elementary to middle to high school. Minority students were found to be 10 to 11 times more likely to exercise magnet school choice at elementary school than their non-minority peers, yet only 3 to 5 times as likely to exercise school choice at the high-school level when compared with their non-minority peers. This relatively large difference in the likelihood to exercise choice by grade level for minority students may mean that parents are more likely to emphasize the importance of exercising school choice in the earlier years when compared to the high-school level where students may have greater agency in choosing their educational trajectory.

Living in a high social capital neighborhood is associated with a lower probability of attending a magnet school of choice, net of the effect of race and other controls. This holds across most magnet types except for the School-Wide Programs; in these living in a high social capital neighborhood is positively related to attending a magnet school of choice. The size of this lower probability is smaller in the earlier grades than in the later grades, a fact which is likely explained by the increase in other contextual effects—namely the quality of schools in high social capital neighborhoods and the effects of peers—that influence both parental and student educational choice (Lauen, 2007).

Regarding models that examined the interaction between our social capital index and race/ethnicity, we find that minority parents and students are far more likely to exercise choice if they reside in an area with a high level of social capital. This finding holds across magnet school type and across levels of schooling. This finding is both surprising and perhaps less-than-surprising. Neighborhoods with a high social capital index presumably have higher quality schools, which might provide less incentive to attend schools located farther away. On the other hand, our findings may be less-than-surprising under the assumption that neighborhoods with a high social capital index presumably contain more families with higher educational attainment, which could perhaps drive students to apply to competitive magnet schools.

The preceding point made about good non-magnet neighborhood schools being located in high social capital neighborhoods, and the impact that has on the likelihood of parents and students exercising magnet school choice, is perhaps problematized by the main effects of race on attending a magnet school of choice. Not only are racial and ethnic minorities in low social capital neighborhoods more likely to attend a magnet school of choice than their similarly situated white peers, they are also more likely to do so if they reside in high social capital neighborhoods, and by a much larger degree. If the white families who live there deem high social capital neighborhoods good enough, why don't their black and Hispanic peers?

While the present study helps to shed light on how social capital and race/ethnicity predict magnet school choice, it is not without its limitations. A major limitation of this study derives from the fact that we have limited knowledge of the actual process by which social networks transmit knowledge and information regarding school choice. Due to the fact that this study uses administrative data, we have only partial access to contextual variables that would be helpful in understanding how school choice is exercised. For example, while we are able to attach information on neighborhood density of social-capital producing organizations to students' home addresses, we do not have access to individual-level data to assess organizational membership or degree of association with a given organization. Additionally, while social-capital producing organizations all theoretically foster cooperation and trust among neighbors, we cannot assume that they facilitate the production of these social goods in equal amounts. We are thus unable to speak to the relative importance of direct or indirect effects of neighborhood-level social capital, and the extent to which the benefits conferred from network membership differ by race, ethnicity, or socioeconomic status.

Notwithstanding these drawbacks, the present study should serve as a barometer for HISD and other school districts as they attempt achieve racial and ethnic and social class parity among those wishing to attend magnet schools, particularly if those magnet schools are qualitatively better on average than regular neighborhood schools. Where this study lacked access to magnet application and admissions data, however, future analyses will need to incorporate these data, as well as data on the racial and ethnic and social class distribution of students zoned to magnets based on their home addresses, to understand from a more holistic standpoint the ways in which school districts meet or fail to meet equity aims.

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For additional information on the findings presented here, contact the Houston Education Research Consortium at 713-348-2802 or email herc@rice.edu.

Appendix A

Table A1. Selected marginal effects of living in a neighborhood with a high (i.e., at or above the mean) versus a low (i.e., below the mean) social capital index (SCI) on the probability of attending an out-of-zone magnet school by specific magnet type and elementary, middle school, and high school status.

	Additive Effects Models				Interaction Effects Models			
Predictor by Magnet Type	All Grades	Elementary	Middle School	High School	All Grades	Elementary	Middle School	High School
All Magnet Types								
SCI	-0.032***	-0.002	-0.057***	-0.086***	-0.064***	-0.032***	-0.045**	-0.172***
	(0.002)	(0.002)	(0.005)	(0.005)	(0.006)	(0.007)	(0.017)	(0.015)
Black	0.204***	0.237***	0.198***	0.141***	0.220***	0.247***	0.258***	0.114***
	(0.012)	(0.015)	(0.030)	(0.026)	(0.013)	(0.016)	(0.034)	(0.030)
Hispanic	0.235***	0.243***	0.274***	0.179***	0.243***	0.237***	0.324***	0.150***
	(0.011)	(0.015)	(0.029)	(0.026)	(0.013)	(0.016)	(0.033)	(0.030)
Other Race	0.046***	0.052***	0.011	-0.007	0.079***	0.065***	0.091**	-0.004
	(0.006)	(0.007)	(0.019)	(0.015)	(0.010)	(0.011)	(0.028)	(0.023)
SCI × Black					0.020**	0.002	-0.030	0.106***
					(0.007)	(0.008)	(0.020)	(0.018)
SCI × Hispanic					0.052***	0.055***	0.004	0.101***
					(0.007)	(0.008)	(0.019)	(0.017)
SCI × Other Race					-0.046***	-0.018	-0.112***	-0.005
					(0.010)	(0.012)	(0.028)	(0.025)
N	180912	96473	37244	47195	180912	96473	37244	47195
Model d.o.f.	14.000	14.000	14.000	14.000	17.000	17.000	17.000	17.000
Wald χ^2	11294.868	5117.646	3215.564	2523.832	11507.264	5234.651	3228.159	2564.948
School Within-a-School								
SCI	-0.019***	0.001	-0.033***	-0.058***	-0.041***	-0.009*	-0.019	-0.152***
	(0.001)	(0.001)	(0.004)	(0.004)	(0.005)	(0.004)	(0.013)	(0.014)
Black	0.026**	0.044***	-0.007	-0.005	0.023*	0.039***	0.036	-0.066*
	(0.008)	(0.008)	(0.024)	(0.024)	(0.009)	(0.010)	(0.027)	(0.026)
Hispanic	0.038***	0.036***	0.014	0.040	0.035***	0.027**	0.054*	-0.016
	(0.008)	(0.008)	(0.023)	(0.024)	(0.009)	(0.010)	(0.026)	(0.026)
Other Race	-0.013**	-0.002	-0.101***	-0.096***	-0.006	-0.010	-0.038	-0.138***
	(0.005)	(0.004)	(0.015)	(0.015)	(0.007)	(0.007)	(0.021)	(0.020)
SCI × Black					0.028***	0.003	-0.017	0.126***
					(0.005)	(0.004)	(0.015)	(0.015)
SCI × Hispanic					0.025***	0.017***	-0.005	0.096***
					(0.005)	(0.004)	(0.015)	(0.015)
SCI × Other Race					-0.012	0.011	-0.095***	0.066**
					(0.008)	(0.008)	(0.021)	(0.022)
N	180912	96473	37244	47195	180912	96473	37244	47195
Model d.o.f.	14.000	14.000	14.000	14.000	17.000	17.000	17.000	17.000
Wald χ^2	4796.273	978.157	1421.955	1151.557	4868.218	1028.075	1453.583	1208.357

Table A1 continued. Selected marginal effects of living in a neighborhood with a high (i.e., at or above the mean) versus a low (i.e., below the mean) social capital index (SCI) on the probability of attending an out-of-zone magnet school by specific magnet type and elementary, middle school, and high school status.

	Additive Effects Models				Interaction Effects Models			
Predictor by Magnet Type	All Grades	Elementary	Middle School	High School	All Grades	Elementary	Middle School	High School
School-Wide Program								
SCI	0.002*	0.001			-0.010***	-0.023***		
	(0.001)	(0.002)			(0.003)	(0.005)		
Black	0.046***	0.092***			0.050***	0.104***		
	(0.007)	(0.012)			(0.007)	(0.013)		
Hispanic	0.046***	0.093***			0.043***	0.095***		
	(0.007)	(0.011)			(0.007)	(0.013)		
Other Race	-0.018***	-0.004			-0.012*	0.015		
	(0.003)	(0.005)			(0.005)	(0.008)		
SCI × Black					-0.001	0.008		
					(0.003)	(0.006)		
SCI × Hispanic					0.024***	0.041***		
					(0.003)	(0.005)		
SCI × Other Race					-0.010	-0.029**		
					(0.005)	(0.009)		
N	180912	96473			180912	96473		
Model d.o.f.	14.000	14.000			17.000	17.000		
Wald χ^2	1299.569	1890.981			1411.891	2001.080		
School-Wide Vanguard Program								
SCI	-0.003***	-0.001	-0.018***		0.004*	0.004	0.004	
	(0.001)	(0.001)	(0.002)		(0.002)	(0.002)	(0.006)	
Black	0.014**	0.023***	0.002		0.020***	0.028***	0.023	
	(0.004)	(0.005)	(0.014)		(0.004)	(0.006)	(0.015)	
Hispanic	0.033***	0.040***	0.047***		0.039***	0.045***	0.064***	
	(0.004)	(0.005)	(0.013)		(0.004)	(0.006)	(0.014)	
Other Race	-0.002	0.008***	-0.013		0.003	0.013***	0.001	
	(0.002)	(0.002)	(0.007)		(0.003)	(0.004)	(0.010)	
SCI × Black					-0.011***	-0.004	-0.041***	
					(0.002)	(0.003)	(0.009)	
SCI × Hispanic					-0.009***	-0.007**	-0.024***	
					(0.002)	(0.003)	(0.007)	
SCI × Other Race					-0.007*	-0.007	-0.018	
					(0.003)	(0.004)	(0.010)	
N	180912	96473	37244		180912	96473	37244	
Model d.o.f.	14.000	14.000	14.000		17.000	17.000	17.000	
Wald χ^2	2713.489	2083.965	1046.587		2716.717	2097.304	1025.408	

Table A1 continued. Selected marginal effects of living in a neighborhood with a high (i.e., at or above the mean) versus a low (i.e., below the mean) social capital index (SCI) on the probability of attending an out-of-zone magnet school by specific magnet type and elementary, middle school, and high school status.

	Additive Effects Models				Interaction Effects Models			
Predictor by Magnet Type	All Grades	Elementary	Middle School	High School	All Grades	Elementary	Middle School	High School
Separate and Unique School								
SCI	-0.006***	-0.002**	-0.004**	-0.018***	-0.008***	-0.008***	-0.013***	-0.012*
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.004)	(0.006)
Black	0.037***	0.026***	0.047***	0.045***	0.039***	0.022***	0.040***	0.061***
	(0.003)	(0.003)	(0.008)	(0.011)	(0.004)	(0.003)	(0.008)	(0.012)
Hispanic	0.035***	0.024***	0.054***	0.040***	0.036***	0.019***	0.046***	0.052***
	(0.003)	(0.003)	(0.008)	(0.011)	(0.004)	(0.003)	(0.008)	(0.012)
Other Race	0.027***	0.019***	0.027***	0.020***	0.030***	0.014***	0.020***	0.039***
	(0.002)	(0.001)	(0.004)	(0.006)	(0.002)	(0.002)	(0.006)	(0.008)
SCI × Black					0.001	0.005**	0.010*	-0.013
					(0.002)	(0.002)	(0.005)	(0.007)
SCI × Hispanic					0.004*	0.007***	0.010*	0.003
					(0.002)	(0.002)	(0.004)	(0.007)
SCI × Other Race					-0.004	0.006**	0.009	-0.027**
					(0.002)	(0.002)	(0.005)	(0.008)
N	180912	96473	37244	47195	180912	96473	37244	47195
Model d.o.f.	14.000	14.000	14.000	14.000	17.000	17.000	17.000	17.000
Wald χ^2	4309.228	1104.610	1187.509	1927.225	4375.814	1132.222	1203.616	1967.828

Note: Though excluded here, all models include the controls shown in Tables 1 and 2. The models for specific out-of-zone magnet types also include an additional dummy control denoting attendance at another out-of-zone magnet type. Elementary, middle school, and high school grades include kindergarten through fifth grade, sixth grade through eighth grade, and ninth grade through 12th grade, respectively. Standard errors are in parentheses. $^*p < .05$; $^{**}p < .01$; $^{***}p < .001$ (two-tailed tests).