Race Matters:
Student–Teacher Trust in New York City Middle Schools [1]

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Abstract

Racial gaps in trust are well-documented in American society, though it is unclear how early these gaps emerge in the life-course. Using the student-teacher relationship as a case study, this article draws on data from New York City (NYC) public middle schools to examine racial differences in trust among youth and analyze how schools shape the racial dynamics of trust. The main results of this study are four-fold. First, racial gaps in trust are cemented by early adolescence, with the largest difference between Black and Asian students. Second, important intraracial heterogeneity in trust exists by student gender and nativity, with Black girls and US-born students expressing the lowest levels of trust in their teachers. Third, the racial composition of schools is an important predictor of trust for students. Finally, study results provide evidence of distinct racial trust climates in urban schools with varying degrees of convergence depending on the racial groups compared. Study findings demonstrate that trust is a salient dimension of educational inequality. Moreover, this study offers a conceptualization of trust in schools that is racialized, intersectional, and contextual.

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INTRODUCTION

Trust refers to the expectation that others will act in accordance with our interests (Smith 2010). Race is a powerful predictor of trust in American society (Smith 2010; Uslaner 2002). Members of racial minority groups tend to express lower levels of generalized trust (i.e., "most people can be trusted") than their majority counterparts (Alesina and La Ferrara 2002; Smith 1997). The widest gap in trust exists between Black and White Americans, and this gap persists after accounting for socioeconomic status (Demaris and Yang 1994; Smith 2010).

Moreover, education scholars indicate that trust serves as the foundation of cohesive and effective schools. Bryk and Schneider (2002) find that trust among school-based adults remains necessary to reform struggling schools. While the extant research on trust in schools focuses primarily on adults, there is a growing literature of trust from the student perspective. For example, studies on this topic demonstrate that students' feelings of trust in their teachers factor into their grades, aspirations, and disciplinary outcomes (Gregory and Ripski 2008; Romero 2010; Schneider et al. 2014).

By focusing on youth, this study adds a life-course perspective to the race and trust literature, which almost exclusively focuses on the adult experience. This study also contributes to research on trust in schools, which often fails to examine this topic from the student perspective. I draw on longitudinal survey and administrative data on students in New York City (NYC) public middle schools to examine racial differences in trust among youth and to analyze how schools shape the racial dynamics of this process.

This study is guided by four research questions: (1) How do students' racial and ethnic identities predict their level of trust in their teachers ("student–teacher trust")? (2) Is there intraracial heterogeneity in student–teacher trust by gender and immigration status? (3) How do

school factors shape student–teacher trust given students' race or ethnicity? (4) To what extent are schools comprised of distinct racial trust climates and what predicts a positive trust climate for Black students?

Results from ordinary least squares (OLS) regressions and multilevel linear regressions demonstrate that race matters for student–teacher trust. The main results of this study are four-fold. First, racial gaps in trust are cemented by early adolescence, with the largest difference between Black and Asian students. Second, important intraracial heterogeneity in trust exists by student gender and nativity, with Black girls and US-born students expressing the lowest levels of trust in their teachers. Third, the racial composition of schools is an important predictor of trust for students. Finally, results provide evidence of distinct racial trust climates in urban schools with varying degrees of convergence depending on the racial groups compared. By examining the trust beliefs of middle-schoolers, this study demonstrates that trust in schools that is racialized, intersectional, and contextual.

BACKGROUND

Trust in Schools

In his discussion of social capital in the organizational context, Coleman (1990) observed that "a group whose members manifest trustworthiness and place extensive trust in one another will be able to accomplish much more than a comparable group lacking that trustworthiness and trust" (p. 304). This observation can easily extend to schools. Indeed, education studies demonstrate that trust is an important element of effective and cohesive school communities.

In their study of school reform in Chicago, Bryk and Schneider (2002) identified trusting relationships among adults—namely, parents, teachers, and principals—as a critical input for

improving struggling elementary schools. The authors contend that trust in schools is based on four key principles: respect, competence, integrity, and personal regard for others. A deficit in any one of these areas can erode interpersonal trust (Bryk and Schneider 2002). Forsyth and colleagues (2011) argue that teachers play a central role in the collective trust of a school. While school leaders oversee formal school structure, the actions of teachers determine "the extent to which teaching and learning will be open and collaborative or closed and isolated" (Forsyth, Adams and Hoy 2011).

Existing empirical research on trust in schools largely focuses on relationships among school-based adults (Holland 2015; Phillippo 2012; Romero 2010) or teachers' trust in their students (Van Maele and Van Houtte 2011). However, there is a burgeoning literature examining the causes and consequences of students' trust in their educators. A recent study by Holland (2015) shows how a lack of shared expectations around the college application process promoted feelings of mistrust between first-generation students and their counselors in diverse high schools. As a result, these students often went without the support they needed to successfully navigate this process. Research connects students' trust in their teachers and other school-based adults to high school persistence, higher grade point averages, and college ambitions (Romero 2010; Schneider et al. 2014).

School discipline is also related to trust. For instance, Gregory and Ripski (2008) argue that authoritarian styles of discipline in the classroom thwart students' feelings of trust in their teachers. Additionally, the authors find that greater feelings of student–teacher trust are associated with fewer incidents of defiant student behavior. In sum, these studies emphasize the importance of trust for student–educator relationships and student outcomes. This body of work, however, does not offer insight into how trust differs across student groups. The present study

builds on the literature by examining racial differences in students' propensity to trust their educators.

Race and Trust

Race is a powerful determinate of trust in American society. Members of racial minority groups, on average, express lower levels of generalized trust than their majority counterparts (Alesina and La Ferrara 2002; Smith 1997). Generalized trust refers to the belief that "most people" can be trusted (Smith 2010). The stark Black-White gap in generalized trust has received the most research attention and this gap remains even after accounting for socioeconomic status (SES) (Demaris and Yang 1994; Smith 2010). Recent studies suggest that the generalized trust beliefs of Latinos more closely align with the beliefs of Blacks, while the beliefs of Asians more closely aligned with that of Whites (Nunnally 2012; Pew 2013; Rainie et al. 2019). For Latinos, immigration plays an important role in trust formation, with immigrants expressing less trust than those who are US-born (Rainie et al. 2019). Among Asians, there are no reported differences in trust along the lines of immigration. However, survey data broken out by subgroups indicate that Filipinos report less trust than other Asian-American groups (Pew 2013).

Discrimination is cited as a driving force behind racial differences in generalized trust (Alesina and La Ferrara 2002; Demaris and Yang 1994; Nunnally 2012). As Smith (2010) notes, "members of ethnoracial minority groups are presumed to trust less because of the disadvantaged positions they hold in the socioeconomic structure resulting from actual and perceived interpersonal and institutional discriminatory treatment" (p. 457). Relatedly, studies also link bias socialization during childhood to feelings of out-group mistrust among members of racially marginalized groups (Hughes et al. 2006). Through bias socialization, parents caution their

children about racial discrimination and offer strategies to cope with racial barriers, and this type of socialization is most often practiced by Black parents (Smith 2010).

Given the relationship between discrimination and trust, it is not surprising that some racial minorities are more inclined to trust members of their in-group as opposed to racial others. This form of trust is often referred to as particularized trust (Smith 2010). Drawing on data from the American National Election Study (ANES) and Pew Research Center, Uslaner (2002) finds that Blacks are "more likely to be particularized trusters" (p. 107). Asians also appear to be particularized trusters according to Uslaner's analysis of ANES data. Similarly, Nunnally (2012) reports that Blacks exhibit greater trust in other ethnic and racial minorities—particularly other Blacks—as opposed to Whites, which the author attributes to "a shared minority status that Blacks perceive with these…groups" (p. 233). Simpson and colleagues (2007) show through an experimental trust game that individuals, regardless of their race, tend to be more trusting of same-race partners.

Research on racial differences in trust almost exclusively focuses on adults. Extrapolating from research on bias socialization and numerous studies on racial discrimination in education, it is likely that race is an important predictor of trust among students in the school context. For example, studies show that teachers generally hold lower expectations for Black and Latino students compared to their White and Asian peers (Casteel 1998; Fish 2017; Gershenson et al. 2016; Downey and Pribesh 2004; Paley 1979; Tenenbaum and Ruck 2007). Research by Skiba and colleagues (2011) demonstrates that Black and Latino youth are more likely than their White peers to be on the receiving end of expulsions or out-of-school suspensions for similar problem behavior. Furthermore, students of color are cognizant of racial disparities in teacher expectations (Pringle et al. 2010).

While differential treatment by educators can directly impact students' academic performance, it may also produce more indirect consequences for student outcomes and the student–teacher relationship more broadly, especially as it concerns students' trust in their educators. The present study extends the trust literature by examining how race shapes students' propensity to trust their teachers as well as how schools influence the racial dynamics of student–teacher trust. By focusing on youth, this study adds a life-course perspective to the race and trust literature, which almost exclusively focuses on the adult experience. The study also contributes to research on trust in schools, which often fails to examine trust from the perspective of students (Holland 2015; Phillippo 2012; Romero 2010).

DATA & METHODS

This study draws on longitudinal survey and administrative data from three sources—The Research Alliance for New York City Schools (RANYCS), the New York State Education Department (NYSED), and the New York City Department of Education (DOE). These data span three consecutive school years: 2014-15, 2015-16 and 2016-17.

Student-level Survey Data

The DOE administers an annual school climate survey to students in grades 6 through 12. Response rates over the last three years range from 81 to 83 percent. In collaboration with the RANYCS, the DOE redesigned this survey in 2014 to include a module on student–teacher trust. The main dependent variable for this study is a generalized student–teacher trust scale (i.e., "trust score") comprised of three Likert-type items from this survey that map onto Bryk and Schneider's (2002) principles of respect, integrity, and personal regard for others. These items include: (1) My teachers treat me with respect; (2) When my teachers tell me not to do

something, I know they have a good reason; (3) My teachers will always listen to students' ideas. Students respond to these statements on a four-point scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The trust score is a continuous variable that ranges from 1 to 4 and can vary from year to year. A Cronbach's alpha of 0.76 indicates that the scale is internally consistent.

Student-level Administrative Data

Student administrative data include measures of race/ethnicity, gender, and grade level as well as whether a student receives special education services, lives in temporary housing, was born outside of the US, and is an English Language Learner (ELL). ELL status is used as a proxy for timing of migration to the US and temporary housing is used as a proxy for SES. Starting in the 2014-15 school year, the DOE implemented a universal free lunch program in standalone middle schools. Therefore, free and reduced-price lunch eligibility is not a useful measure of SES for students in the sample.[3] Race/ethnicity, gender, foreign-born status, and ELL status are measured at baseline and are fixed over time. The remaining variables can vary over time. Additionally, this study incorporates academic measures, including students' scaled scores on annual standardized math exams, annual attendance rates, and total number of annual suspensions. These variables can also vary over time.[4]

School-level Administrative Data

School administrative data include variables for the racial/ethnic make-up of students and teachers. To capture student racial composition, I create a measure of the combined proportion of Black and Latino students in a school. To capture teacher racial composition, I create separate measures of the proportion of Asian, Latino, Black, and White teachers. School administrative

[3] At baseline (2014-15), 99 percent of Asian and White students, 98 percent of Latino students, 97 percent of Black students in the sample were eligible free or reduced-price lunch.

[4] Student-level survey and administrative data are restricted access and come from the RANYCS.

data also include variables for the average standardized math test score, total student enrollment (divided by 100), the percentage of ELL students, and the percentage of students in poverty.[5] Student poverty is defined as the proportion of students with families who qualify for free or reduced-price lunch or are eligible for Human Resources Administration benefits.[6]

Analytic Dataset

I combine these data sources to create a sample of students in grades 6 through 8 who participated in the school climate survey during the 2014-2017 study period and are nested in standalone middle schools. Stand-alone middle schools serve grades 6 through 8 only. In NYC, several types of schools serve these grades, including middle, K-8, and K-12 schools. Therefore, I restrict the sample to ensure that students are attending comparable schools. The sample includes students who self-identify as Latino (any race), non-Latino Black, non-Latino White, and Asian and Pacific Islander, since they comprise the four main racial and ethnic groups in NYC public schools. I exclude 'other' race students (i.e., Native American, multi-racial, and unknown) as they made up less than 2 percent of NYC public school students in the baseline year.

To avoid selection bias related to school dropout, I further restrict the sample to students under the age of 17—the maximum age of compulsory education in NYC. Students automatically exit the sample when they transition to grade 9, transfer to a non-middle school, leave the DOE, or turn 17. Students can enter the sample between panel waves if they are new to

[5] School-level teacher demographic data come from NYSED Personnel Master File and were accessed at http://www.p12.nysed.gov/irs/pmf/. All other school-level measures were obtained from the DOE and were accessed at https://infohub.nyced.org/reports-and-policies/citywide-information-and-data/information-and-data-overview.

[6] To better reflect the actual concentration of poverty in a school, the DOE bases the Universal Meal status for middle schools in 2014-15 and 2016-17 on their 2013-14 status (the year before the universal free lunch program rolled out across all standalone middle schools). For the same reason, the poverty indicator in 2016-17 does not automatically qualify all students enrolled in middle schools.

a middle-school or the DOE. The resulting dataset is an unbalanced panel of 308,128 person-year observations with complete data for all study variables.[7] The unbalanced panel follows 201,739 students attending 258 middle schools during the three-year study period. Students appear in the unbalanced panel about 1.5 times, on average. Throughout the remainder of the paper, I refer to the unbalanced panel as the "full sample." From the full sample, I created a "cohort sample" of 50,592 person-year observations with complete data for all study variables. The cohort sample is a balanced panel that follows the same 16,864 students across all three panel waves (i.e., grade 6 in 2014-15 through grade 8 in 2016-17).

Analytic Strategy

To assess the relationship between student race and student–teacher trust, I begin my analysis by estimating ordinary least squares (OLS) linear regression models for the cohort sample of 16,864 students who are followed across each panel wave (50,592 person-year observations). The dependent variable is the student trust score. These models include school fixed effects to control for unobserved differences between schools. These models also include clustered standard errors to account for serial correlation between student observations over time. The first set of linear regression models focus on the main effects of race. These models take the following general form:

$$Trust_{it} = \beta_0 + \beta_1 Race_i + \boldsymbol{X}'\gamma + \theta_s + \varepsilon_{it} \quad (1)$$

[7] Complete case analysis assumes that data are missing completely at random. This strategy can lead to biased estimates if cases with missing values differ systematically from those with non-missing values (Pigott 2001). As a sensitivity analysis, I will compare the estimates obtained from complete case analysis to estimates obtained after implementing a missing data imputation strategy in a future draft of this paper.

where *Trust* equals student *i*'s trust score at time *t*; *Race* represents student racial/ethnic identity; *X* describes all the other aforementioned student-level predictors in the model; θ represents school-fixed effects; and ε equals the disturbance term.

The next set of OLS linear regression models captures intraracial heterogeneity by gender and immigration status. For ease of interpretation, these models use categorical variables to obtain estimates for racial subgroups. I also estimate models using interaction terms as a robustness check, which are provided in the Appendix.

Lastly, I estimate a set of multilevel linear regression models on the full sample of 201,739 students (308,128 person-year observations) to examine how school characteristics impact student–teacher trust, with a separate model for each racial group. Once again, the dependent variable is the student trust score. Multilevel modeling takes advantage of the sample's hierarchical structure in which Level-1 units (i.e., observations) are nested within Level-2 units (i.e., students), and Level-2 units are nested within Level-3 units (i.e., schools) (Gelman and Hill 2012). These models have varying intercepts by school and take the following form:

$$Trust_{ist} = \beta_{0s} + \boldsymbol{X}'_{ist}\boldsymbol{\beta}_{1s} + \varepsilon_{ist} \tag{2.1}$$

$$\beta_{0s} = \boldsymbol{\gamma}_{0s} + \boldsymbol{\gamma}'_{1s}Z_{0t} + \eta_{0s} \tag{2.2}$$

$$\boldsymbol{\beta}_{1s} = \boldsymbol{\gamma}_{0s} + \boldsymbol{\gamma}'_{1s}Z_{1t} + \eta_{1s} \tag{2.3}$$

where *Trust* equals student *i*'s trust score in school *s* at time *t*; *X* describes all student-level predictors; ε equals the disturbance term corresponding to the student-level regression; *Z* describes all school-level predictors; and η equals the disturbance term corresponding to the school-level regression.

RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics for the full sample at baseline (2014-15) by racial group. The first section of this table provides information on students' individual-level characteristics, while the second section describes their school environments. In terms of trust, Asian students in the sample have the highest mean score of 3.25, followed by Latino (3.21), White (3.20) and Black (3.06) students, respectively. Asian students are more likely to be foreign-born at 32 percent and Latino students are more likely to be ELL at 20 percent. Approximately 23 percent of Latino students and 22 percent of Black students have a special education designation compared to 15 percent of White students and just 7 percent of Asian students. Black and Latino students are more likely to experience economic hardship as measured by temporary housing residence. With regard to educational profiles, Asian students have the highest mean math scaled score (332), highest attendance rate (97.4%), and lowest mean number of total annual suspensions (0.02). On the other hand, Black students have the lowest mean math scaled score (287), lowest attendance rate (93.6), and highest mean number of total suspensions (0.10).

Turning to school context, Black and Latino students in the sample are more likely to attend schools where more than 75 percent of the student body is Black or Latino. The average Asian and White student attends schools that are 40 percent and 34 percent Black and Latino, respectively. Students, regardless of their race or ethnicity, are more likely to have a White teacher than a teacher of another race. The average White student attends school where 77 percent of teachers are White. The average Black student attends school where 45 percent of teachers are White. However, Black and Latino students are more likely to have exposure to

Black teachers with a mean of 37 percent and 17 percent, respectively. On average, White and Asian students attend schools that are larger, higher performing, and less impoverished than Black and Latino students. To examine how of each of these factors influence students' trust in their teachers, I estimate single and multilevel linear regression models.

[Table 1 about here]

Trust in Schools as Racialized

How do students' racial and ethnic identities predict their level of trust in teachers?

Table 2 presents OLS regression estimates of the relationship between student race/ethnicity and student–teacher trust scores for the cohort sample. Models 1 and 2 show bivariate regressions with White students as the reference group. Model 2 incorporates school fixed effects. Both models point to a similar pattern of racial differences in student–teacher trust, however the magnitude of the coefficients change after controlling for unobserved variation between schools. As shown in Model 2, Asian students have a 0.06-point greater trust score ($p < 0.001$)—compared to White students—and Black students have a 0.10-point lower trust score ($p < 0.001$). The coefficient for Latino students is not statistically significantly different from that of White students in this model.

Model 3 includes additional student-level covariates along with school fixed effects. Net of other predictors, the pattern of racial differences remains the same in this model, however the size of the coefficients for Asian and Black students shrink to 0.04 ($p < 0.01$) and -0.06 ($p < 0.001$), respectively. The coefficient for Latino students in this model still is not statistically significantly different from that of White students. Estimates in Model 3 also indicate that there are factors outside of race and ethnicity that predict student–teacher trust. Students who are female, foreign-born, ELL, and receive special education services generally report higher levels

of trust than their counterparts. Scaled standardized math test scores and attendance rates are also positive predictors of trust. On the other hand, grade level and total number of suspensions negatively predict trust.

[Table 2 about here]

Trust in Schools as Intersectional

Is there intraracial heterogeneity in student–teacher trust by gender and immigration status? OLS regression results based on the cohort sample provided in Tables 3 and 4 demonstrate that the main race effects mask important variation in trust by student gender and immigration status. Table 3 focuses on the intersection of race and gender for the subsample of students followed over time. White males are the reference group. Model 1 is a bivariate regression and Model 2 adds additional student-level predictors. Both models include school fixed effects and use categorical variables to obtain estimates for racial subgroups. According to Model 2, female students generally report higher levels of trust compared to their same-race male counterparts—with the exception of Black girls. The coefficient for Black females is -0.06 ($p < 0.01$). The coefficient for Black males is about -0.02 and this estimate is not statistically significantly different from that of White males.

As a robustness check, I examine the intersection between race and gender using an interaction term in Table A1 in the Appendix. The estimates in Model 2 of Table A1 mirror those provided in Table 3. The coefficient for Black girls (i.e., Female*Black in Table A1) remains negative and statistically significant, suggesting they are less trusting than Black boys. The coefficient for White girls (i.e., Female) remains positive and statistically significant, suggesting they are more trusting than White boys. However, the coefficients for Asian females (i.e., Female*Asian) and Latinas (i.e., Female*Latino) are no longer statistically significant. The

interaction between race and gender can be more clearly discerned in Figure A1 in the Appendix. This figure presents a linear prediction plot of estimates for the race and gender interaction term with 95 percent confidence intervals.

[Table 3 about here]

Table 4 focuses on the intersection of race and immigration status. The reference group is White US-born, non-ELL students. Again, Model 1 is a bivariate model and Model 2 adds additional student-level predictors. Both models include school fixed effects. Estimates in Model 2 show a gradation in trust scores based on whether students are foreign-born and/or ELL. The overall trend for all racial groups is that foreign-born, ELL students report higher levels of trust than their US-born, non-ELL counterparts—with the widest variation among Black students (0.19 vs. -0.06, $p < 0.001$). Among Asian students, those who are US-born ELL express greater trust than those who are foreign-born non-ELL (0.11 vs. 0.10, $p < 0.001$). A similar pattern exists for Latino students.

As a robustness check, I examine the intersection between race and immigration status using an interaction term in Table A2 in the Appendix. Once again, the estimates in Table A2 correspond to those provided in Table 4. However, only the coefficients for Asian US-born, non-ELL students (i.e., "Asian" in Table A2) and Black US-born, non-ELL students (i.e., "Black") remain statistically significant. These results indicate that Black and Asian US-born, non-ELL students express less trust in their teachers compared to their same-race peers who are foreign-born and/or ELL. For a clearer picture of this interaction, refer to Figure A2 in the Appendix. This figure shows a linear prediction plot of estimates for the race and immigration interaction term, with 95 percent confidence intervals.

[Table 4 about here]

Trust in Schools at Contextual

How do school factors shape student–teacher trust given students' race or ethnicity?

Table 5 presents multilevel linear regression estimates of the impact of school characteristics on student–teacher trust using the full sample. I run a separate model for each racial group.

Coefficients on the student-level (i.e., Level 2) covariates have a similar overall pattern as the estimates presented in Tables 2 through 4. Coefficients on school-level (i.e., Level 3) covariates indicate that students are differentially impacted by certain school factors. For example, Models 2 and 3 show that the trust of Latino and Black students is positively associated with the combined proportion of Black and Latino students in a school (0.19 and 0.28, $p < 0.001$). There is no statistically significant relationship between student body racial composition and trust for Asian and White students.

In terms of teacher racial composition, the proportion of Asian educators in a school appears to have negative implications for the trust of Asian students (-0.441, $p < 0.01$). On the other hand, the relationship between Black student trust and the proportion of Black educators is more nuanced. This curvilinear relationship indicates that the trust of Black students initially declines but then increases at the point where the proportion of Black educators reaches 50 percent ($p < 0.001$).[8] I analyze these results as they relate to particularized trust in the Discussion section (Nunnally 2102; Uslaner 2002).

There are other school factors beyond school racial composition that are noteworthy in Table 5. For example, the proportion of students in poverty in a school has positive implications for the trust of Asian, Latino and White students. However, this is not the case for Black

[8] The turning point in the slope is calculated as follows: -(-0.83) / (2*0.83).

students. Among Asian and Latino students, the proportion of ELL students is positively associated with trust, but this coefficient is only statistically significant for Latinos. The percentage of special education students is negatively associated with trust for all students. However, the coefficient is once again only statistically significant for Latinos. The mean achievement level of a school, as measured by the average math score, positively predicts the trust of Asian, Latino, and Black students. Finally, school size, as measured by total student enrollment, negatively predicts the trust of Black and White students.

[Table 5 about here]

To what extent are schools comprised of distinct racial trust climates and what predicts a positive trust climate for Black students (compared to their non-Black peers)? In Table 6, I examine the extent of interracial agreement in student–teacher trust. Measures of agreement in this table are correlations of the school-level residual trust scores for each racial group. To obtain the residuals scores, I estimate a set of multilevel linear models with student-level predictors only. These scores indicate whether schools are doing better or worse than predicted in fostering student–teacher trust.

A measure of 1 indicates complete agreement between two racial groups and a measure of 0 indicates complete disagreement. Results in Table 6 show varying degrees of agreement depending on the racial groups compared. For example, in schools with 30 or more students in each racial group, Black students have the most agreement with Latino students (0.72), followed by White (0.62) and Asian students (0.62). Asian (0.71) and White students (0.76) also have the most agreement with their Latino peers. This general pattern holds regardless of the number of students within each group.

[Table 6 about here]

To put this finding into context, the intraracial agreement measure for Black students ranges from 0.89 to 0.92 depending on the number of Black students in a given school. The agreement measures for Latino (0.90 to 0.93), Asian (0.85 to 0.89), and White (0.85 to 0.87) students are similarly high. Measures of intraracial agreement are correlations of trust score residuals for two randomly created subclasses within each racial group. Intraracial agreement measures are provided in Table A3 of the Appendix. In sum, there is greater agreement within racial groups than between racial groups in schools. However, Latino students have the highest level of cross-racial group agreement with their peers.

Lastly, I estimate a school-level linear regression model in Table 7 to identify school characteristics that predict more trusting climates for Black students. This table demonstrates that schools with more trusting climates for Black students (compared to their non-Black peers) are marked by greater percentages of Black teachers (0.07, $p < 0.05$). The dependent variable in this table is the difference between the school-level residual score for Black students and the school-level residual score for non-Black students (i.e., Black residual score *minus* non-Black residual score). This finding supports results in Table 5, which shows a curvilinear relationship between Black student trust and the proportion of Black teachers in a school.

[Table 7 about here]

DISCUSSION

Trust is an important dimension of racial inequality in American society. Multiple studies demonstrate that Blacks express lower levels of generalized trust than Whites (Alesina and La Ferrara 2002; Demaris and Yang; Nunnally 2012; Rainie et al. 2019; Smith 1997; Thomas 2018; Uslaner 2002). Research also indicates that individuals are more inclined to trust co-ethnics as opposed to racial others (Nunnally 2012; Simpson et al. 2007; Uslaner 2002). However, much of

the work on race and trust focuses on the adult population and studies often fail to consider this topic from the vantage point of young people (for exceptions, see Baifora et al. 1993). I build on the existing literature by centering the perspectives of youth.

Using school climate data from the NYC public schools, this study demonstrates that race matters for student–teacher trust in middle-school and provides evidence that racial gaps in trust are cemented by early adolescence. Nevertheless, there are important intraracial differences in youth trust at the intersections of gender and immigration. This work also contributes to the literature on trust in schools by identifying the school characteristics that are conducive to trust for racialized students and examining the extent to which distinct racial trust climates exist within urban schools. Ultimately, this study demonstrates that student–teacher trust is a racialized, intersectional, and contextual process.

Summary of Results

Results from the OLS models show that Asian students in New York City middle schools report the highest levels of trust in their teachers while Black students report the lowest levels of trust. White and Latino students fall in the middle in terms of trust and there is no statistically significant difference between the estimates for these two groups. The incorporation of school fixed effects demonstrates that these racial differences are not simply an artifact of the types of schools attended by students in the sample. This pattern is largely consistent with extant research on trust. For instance, Smith (1997) finds that Blacks report the highest levels of misanthropy (i.e., less trust) followed by Latinos and Asians. Whites, particularly those descending from early European immigrants, reported the lowest levels misanthropy. Overall, studies show that Blacks consistently report more mistrust than non-Blacks (Alesina and La Ferrara 2002; Demaris and Yang 1994; Uslaner 2002).

Recognizing that racial groups are not monolithic in their beliefs and everyday experiences, I examine within-group heterogeneity by student gender and immigration status (Celious and Oyserman 2001). OLS regressions with an interaction term for race and gender confirm that Black girls are less trusting than Black boys as well as boys and girls of other racial groups. This finding departs from previous research on generalized trust among adults that shows no interaction effect between race and gender (Demaris and Yang 1994). However, a recent study by Thomas (2018), using data from the General Social Survey (GSS), shows that Black women report greater feelings of social cynicism compared to Black men, White men, and White women. Intersectionality theory (Crenshaw 1989) sheds light on the finding that Black girls report the lowest levels of student–teacher trust. Through the lens of intersectionality, social inequality is "understood as being shaped not by a single axis of social division, be it race or gender or class, but by many axes that work together and influence each other" (Collins and Bilge 2016: 2). As a result, racism and sexism intersect to produce unique social experiences for Black girls that can factor into their everyday interactions with educators and their feelings of trust.

At the nexus of race and nativity, results from linear regression models with an interaction between race and immigration/ELL status indicate that Black and Asian US-born, non-ELL students express less trust in their teachers than their same-race peers who are foreign-born and/or ELL. Previous research on the durability of generalized trust among immigrants helps explain this result. In an analysis of Gallup World Poll data, Helliwell and colleagues (2014) show that while the trust assessments of immigrants are heavily influenced by the conditions of their country of residence, the social trust footprints of their home countries remain influential. Waters' (1999) qualitative study of Black West Indian immigrants identifies

discrimination as a potential mechanism behind why native-born students express less trust in teachers than their foreign-born peers. The migrants in Waters' study enter this country with high ambitions and naïve expectations of American race relations. Over time, racial barriers chip away at their feelings of openness toward Whites and general hopes for the future. This research suggests that as racial minority immigrant students become more embedded in the US context, their inclination to trust their teachers is undermined by the burden of racial inequality.

Beyond race, gender, and nativity, the OLS models point to other noteworthy factors that shape trust—namely, grade level, suspensions, and special education status. As students in the sample advance through middle school, they express less trust in their teachers. This finding is reasonable in light of research showing that early adolescence is a period when young people become more peer centric (Steinberg and Silverberg 1986). Qualitative research by Gregory and Ripski (2008) helps explain the negative relationship between suspensions and trust. The authors suggest that more punitive approaches to discipline in the classroom can lead to feelings of student–teacher mistrust among students and conclude that greater feelings of trust are associated with fewer incidents of defiant student behavior. While there is clearly an important relationship between discipline and trust, the authors do not ascertain the direction of the causal arrow. Finally, higher levels of trust among special education students may be attributed to the added layer of school-based services they receive. Multiple touch points inside and outside of the general education classroom between special education students and teachers permit more opportunities for what Crosnoe et al. (2004) refer to as intergenerational bonding.

Multilevel models show that certain school characteristics have differential impacts on students given their race or ethnicity. Two of these factors are noteworthy—the racial composition of the student body and the racial composition of educators. First, the combined

percentage of Black and Latino students in a school is positively associated with student–teacher trust for these respective groups. One plausible explanation for this finding is that schools serving majority Black and Latino students tend to be race conscious environments. In a comparative ethnography of segregated and diverse elementary schools, Randolph (2013) found that teachers in schools serving a predominately Black student body were more inclined to practice culturally relevant pedagogy that responded to the unique social and educational needs of racial minority youth (see also Ladson-Billings 1995).

Second, multilevel models indicate that the racial composition of teachers has differential impacts on students given their identity. For example, the percentage of Asian educators is negatively associated with the trust of Asian students. The relationship between the percentage of Black educators and the trust of Black students is more complicated. This curvilinear relationship indicates that the trust of Black students initially declines but then increases at the point where the proportion of Black educators reaches 50 percent. This finding is reinforced by the result of the school-level linear regression model showing that schools with higher collective trust scores for Black students have greater proportions of Black educators. Taken together, these results suggest that particularized trust among Black students is most salient in school environments where Black educators are in the majority. In these schools, there is a higher probability that Black students will come into regular contact with a Black teacher in the classroom. Moreover, schools with majority Black educators also might emphasize culturally relevant pedagogy that, in turn, helps garner the trust of Black students (Ladson-Billings 1995; Randolph 2013).

Finally, results from the correlational analysis of school-level residual trust scores show varying degrees of racial agreement within schools depending on the groups compared. The main result of this analysis is that Black, Asian, and White students have the most overlap with Latino

students in their feelings of student–teacher trust, which suggests that Latino students symbolically bridge racial trust climates in NYC middle schools. A possible reason for this finding is the diversity and multidimensionality of Latino identity (Parker et al. 2015). As Telles emphasizes (2018), Latinos descend from a variety of national contexts "with their own, often complex, racial histories. . .and span a wide range of phenotypes comprising varying degrees of European, indigenous, and African ancestries . . ." (p. 159). Among Latinos in NYC, seven percent racially identify as Black and 37 percent as White. Fifty-five percent identify as another race, multiracial, or do not indicate a separate racial classification (NYC Department of Health and Mental Hygiene 2017).

Implications

The sociological implications of racial differences in trust among adolescents are twofold, the first of which relates to social capital. Burton and Welsh (2015) argue that more distrusting individuals are hindered in their ability to develop effective exchange relationships necessary for social and economic advancement (see also Smith 2010). Similarly, Stanton-Salazar (2011) emphasizes that trusting relationships with institutional agents, such as educators, are essential to young people's social capital formation. The author defines institutional agents as non-kin adults in young people's social networks who occupy relatively high-status and authoritative roles. Institutional agents act to transmit, or facilitate the transmission of, highly valued educational resources—such as a referral to a gifted or talented program or assistance with college applications (Stanton-Salazar 2011). These relationships are of greater consequence for working-class and racial minority youth since they are "structurally more dependent on non-familial institutional agents for various forms of institutional support difficult to attain elsewhere" (Stanton-Salazar 2011:1088).

Second, racial differences in trust may contribute to racial gaps in academic achievement. Studies show that student–teacher trust is related to essential educational outcomes, including high school persistence, higher grade point averages, and college ambitions (Romero 2010; Schneider et al. 2014). While the effect of trust is not large enough to improve the outcomes of students who grossly lag behind their peers, trust matters for students at the margin (Romero 2010). In analysis of data from the Educational Longitudinal Study of 2002 (ELS), Romero (2010) shows that trust provides students on the borderline of graduating with "the extra push to enroll in a higher math class, or [increase] their post-secondary ambitions" (p. 121). Given this finding, racial gaps in trust might create a chasm between Black and non-Black students on the cusp of high school graduation.

Limitations and Directions for Future Research

This study has a couple of noteworthy limitations. The first limitation relates to generalizability. Since the study is based on survey and administrative data from NYC schools, the patterns observed in these data may be specific to the NYC context. For example, the framework used by the DOE to monitor school progress includes a trust component. Therefore, school leaders in NYC may place a greater emphasis on trust than their counterparts outside of this city, which would make generalizing to the broader population of American students problematic. The second limitation relates to endogeneity. Given the observational nature of this study, it is not possible to determine the causal pathways connecting trust, race, and other predictors included in the study.

Future research should analyze racial differences in trust among students using nationally representative data, such as ELS, to determine the generalizability of the findings presented here. This study is also limited by the grade range of students participating in the DOE climate survey

(grades 6-12 only). Future studies using national datasets should incorporate students in lower grades to determine when racial gaps in trust begin to emerge in the life course. Substantial work remains in exploring the links between students' trust in their teachers and their educational outcomes—as well as the racial dynamics of this process. Finally, qualitative research in schools would prove valuable for unpacking the causes of between and within racial group differences in student–teacher trust.

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TABLES

Table 1. Descriptive Statistics for Full Sample by Student Race/Ethnicity at Baseline (2014-15)

	Asian		**Latino**		**Black**		**White**	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Student-level Variables								
Outcome Variable								
Trust Score	3.25	0.63	3.21	0.65	3.06	0.70	3.20	0.68
Demographic								
Female (%)	0.48		0.49		0.50		0.49	
Foreign Born (%)	0.32		0.17		0.13		0.13	
ELL (%)	0.16		0.20		0.03		0.06	
Special education (%)	0.07		0.23		0.22		0.15	
Grade	6.91	0.79	6.98	0.81	7.00	0.81	6.89	0.79
Temporary housing (%)	0.03		0.08		0.09		0.01	
Education								
Math scaled score	332.08	35.27	291.50	34.59	287.24	34.26	321.41	35.87
Attendance rate	97.35	4.05	93.68	6.40	93.57	6.65	95.01	5.09
Total suspensions	0.02	0.17	0.05	0.30	0.10	0.46	0.03	0.22
School-level Variables								
Percent Black & Latino students	0.40		0.76		0.83		0.34	
Percent Asian educators	0.08		0.05		0.05		0.05	
Percent Latino educators	0.10		0.18		0.11		0.08	
Percent Black educators	0.09		0.17		0.37		0.06	
Percent White educators	0.71		0.58		0.45		0.79	
Percent poverty	0.77		0.88		0.84		0.60	
Percent ELL	0.13		0.18		0.10		0.07	
Percent special education	0.16		0.21		0.22		0.17	
Average math score	316.97	18.77	295.39	18.06	289.91	16.03	319.17	19.28
Student enrollment (per hundred)	11.80	4.40	9.07	6.20	6.09	4.08	11.21	4.07
N. of observations	21,494		44,811		24,422		17,635	
Percent of sample	20%		41%		23%		16%	

Table 2. OLS Regression Models of Student Trust Scores

	Model 1		**Model 2**		**Model 3**	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Demographic						
Asian	0.038**	0.014	0.063***	0.015	0.041**	0.015
Latino	0.029*	0.012	0.014	0.014	0.025	0.014
Black	-0.108***	0.014	-0.097***	0.017	-0.064***	0.017
Female					0.029***	0.007
Foreign-born					0.058***	0.010
ELL					0.109***	0.010
Grade					-0.148***	0.003
Temporary housing					0.002	0.013
Special education					0.107***	0.009
Education						
Math scaled score					0.001***	0.000
Attendance rate					0.005***	0.001
Total suspensions					-0.115***	0.014
Constant	3.173***	0.011	3.173***	0.013	3.415***	0.071
School Fixed-Effects	No		Yes		Yes	
Clustered Standard Errors	Yes		Yes		Yes	
R-squared	0.008		0.058		0.111	
N. of observations	50,592		50,592		50,592	

* p<0.05, ** p<0.01, *** p<0.001

Table 3. OLS Regression Models of Student Trust Scores with Categorical Variables for Race and Gender

	Model 1		**Model 2**	
	Coef.	Std. Err.	Coef.	Std. Err.
Demographic				
Asian				
Female	0.104***	0.018	0.104***	0.019
Male	0.030	0.018	0.038*	0.019
Latino				
Female	0.069***	0.017	0.076***	0.018
Male	0.038*	0.017	0.035*	0.018
Black				
Female	-0.115***	0.019	-0.058**	0.020
Male	-0.061**	0.019	-0.015	0.020
White				
Female	0.058**	0.022	0.064**	0.021
Male (reference)	—	—	—	—
Foreign-born			0.054***	0.009
ELL			0.110***	0.010
Grade			-0.148***	0.003
Temporary housing			0.003	0.013
Special education			0.108***	0.008
Education				
Math scaled score			0.001***	0.000
Attendance rate			0.005***	0.001
Total suspensions			-0.108***	0.014
Constant	3.142***	0.015	3.364***	0.070
School Fixed-Effects	Yes		Yes	
Clustered Standard Errors	Yes		Yes	
R-squared	0.010		0.110	
N. of observations	54,849		54,849	

* p<0.05, ** p<0.01, *** p<0.001

Table 4. OLS Regression Models of Student Trust Scores
with Categorical Variables for Race and Nativity

	Model 1		**Model 2**	
	Coef.	Std. Err.	Coef.	Std. Err.
Demographic				
Asian				
Foreign Born + ELL	0.097***	0.021	0.163***	0.023
Foreign Born + non-ELL	0.076***	0.021	0.103***	0.022
US Born + ELL	0.081**	0.029	0.115***	0.031
US Born + non-ELL	0.033*	0.015	0.055***	0.017
Latino				
Foreign Born + ELL	0.187***	0.018	0.224***	0.021
Foreign Born + non-ELL	0.033	0.025	0.049	0.025
US Born + ELL	0.123***	0.018	0.137***	0.020
US Born + non-ELL	0.007	0.014	0.027	0.015
Black				
Foreign Born + ELL	0.093*	0.041	0.186***	0.042
Foreign Born + non-ELL	-0.055*	0.028	-0.017	0.028
US Born + ELL	-0.025	0.061	-0.022	0.058
US Born + non-ELL	-0.109***	0.015	-0.063***	0.018
White				
Foreign Born + ELL	0.140***	0.037	0.204***	0.036
Foreign Born + non-ELL	0.04	0.035	0.070*	0.035
US Born + ELL	0.021	0.066	0.069	0.062
US Born + non-ELL (reference)	—	—	—	—
Female			0.032***	0.007
Grade			-0.148***	0.003
Temporary housing			0.001	0.013
Special education			0.112***	0.009
Education				
Math scaled score			0.001***	0.000
Attendance rate			0.005***	0.001
Total suspensions			-0.108***	0.014
Constant	3.153***	0.012	3.380***	0.070
School Fixed-Effects	Yes		Yes	
Clustered Standard Errors	Yes		Yes	
R-squared	0.014		0.110	
N. of observations	54,849		54,849	

* p<0.05, ** p<0.01, *** p<0.001

Table 5. Multilevel Linear Regression Models of Student Trust Scores

	Model 1 Asian		**Model 2** Latino		**Model 3** Black		**Model 4** White	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Level 2: Student								
Demographic								
Female	0.070***	0.005	0.028***	0.004	-0.019***	0.005	0.068***	0.007
Foreign-born	0.055***	0.006	0.089***	0.006	0.129***	0.009	0.068***	0.011
ELL	0.080***	0.008	0.142***	0.005	0.150***	0.015	0.144***	0.015
Grade	-0.122***	0.003	-0.129***	0.002	-0.118***	0.003	-0.148***	0.004
Temporary housing	0.025*	0.013	0.009	0.006	0.027**	0.009	0.011	0.023
Special education	0.072***	0.010	0.089***	0.005	0.137***	0.007	0.114***	0.010
Education								
Math scaled score	0.001***	0.000	0.001***	0.000	0.001***	0.000	0.001***	0.000
Attendance rate	0.007***	0.001	0.004***	0.000	0.001*	0.000	0.006***	0.001
Total suspensions	-0.100***	0.014	-0.096***	0.006	-0.071***	0.006	-0.120***	0.013
Level 3: School								
Percent Black & Latino students	0.071	0.050	0.198***	0.043	0.276***	0.061	0.004	0.063
Percent Asian teachers	-0.441***	0.126						
Percent Latino teachers			-0.034	0.046				
Percent Black teachers					-0.831***	0.116		
Percent Black teachers squared					0.825***	0.125		
Percent White teachers							0.083	0.059
Percent poverty	0.105***	0.024	0.047**	0.018	-0.024	0.031	0.160***	0.036
Percent ELL	0.135	0.083	0.115*	0.058	-0.108	0.089	-0.124	0.096
Percent special education	-0.094	0.153	-0.216*	0.095	-0.214	0.123	-0.138	0.174
Suspension rate	-0.065	0.199	-0.213*	0.103	-0.377**	0.134	-0.608*	0.250
Average math score	0.001*	0.001	0.003***	0.000	0.001*	0.001	0.000	0.001
Student enrollment	-0.002	0.002	-0.001	0.002	-0.010***	0.003	-0.006**	0.002
Constant	2.648***	0.244	2.447***	0.167	3.207***	0.215	3.254***	0.277
N. of schools	252		258		257		255	
N. of observations	62,700		132,050		68,529		44,849	

* p<0.05, ** p<0.01, *** p<0.001

Table 6. Correlations of Interracial School-level Residual Trust Scores

	Latino-White	Latino-Black	Latino-Asian	Asian-White	Black-White	Black-Asian	N. of Schools
≥ 10 students per group	0.69	0.74	0.67	0.57	0.65	0.60	92
≥ 20 students per group	0.73	0.73	0.67	0.63	0.65	0.62	70
≥ 30 students per group	0.76	0.72	0.71	0.69	0.62	0.62	49
≥ 40 students per group	0.79	0.70	0.71	0.66	0.65	0.60	39
≥ 50 students per group	0.80	0.61	0.67	0.62	0.53	0.49	27

Table 7. School-level OLS Regression Model Predicting Difference Between Black and Non-Black Trust Scores

	Difference	
	Coef.	Std. Err.
Percent Black & Latino students	-0.050	0.033
Percent of Black teachers	0.067*	0.031
Percent poverty	0.017	0.034
Percent ELL	-0.025	0.043
Percent special education	0.144	0.084
Average math score	0.000	0.000
Enrollment	-0.002	0.001
Constant	-0.134	0.173
R-squared	0.038	
N. of observations	754	

* p<0.05, ** p<0.01, *** p<0.001

APPENDIX

Table A1. OLS Regression Models of Student Trust Scores with Race*Gender Interaction

	Model 1		**Model 2**	
	Coef.	Std. Err.	Coef.	Std. Err.
Demographic				
Asian	0.060**	0.02	0.040*	0.02
Latino	0.027	0.019	0.036*	0.019
Black	-0.04	0.021	-0.01	0.021
Female	0.061**	0.022	0.064**	0.022
Female*Asian	0.007	0.027	0.003	0.026
Female*Latino	-0.032	0.024	-0.026	0.024
Female*Black	-0.119***	0.027	-0.111***	0.027
Foreign-born			0.057***	0.01
ELL			0.110***	0.01
Grade			-0.148***	0.003
Temporary housing			0.003	0.013
Special education			0.105***	0.009
Education				
Math scaled score			0.001***	0
Attendance rate			0.005***	0.001
Total suspensions			-0.115***	0.014
Constant	3.144***	0.017	3.400***	0.072
School Fixed-Effects	Yes		Yes	
Clustered Standard Errors	Yes		Yes	
R-squared	0.060		0.112	
N. of observations	50,592		50,592	

* p<0.05, ** p<0.01, *** p<0.001

Table A2. OLS Regression Models of Student Trust Scores with Race*Nativity Interaction

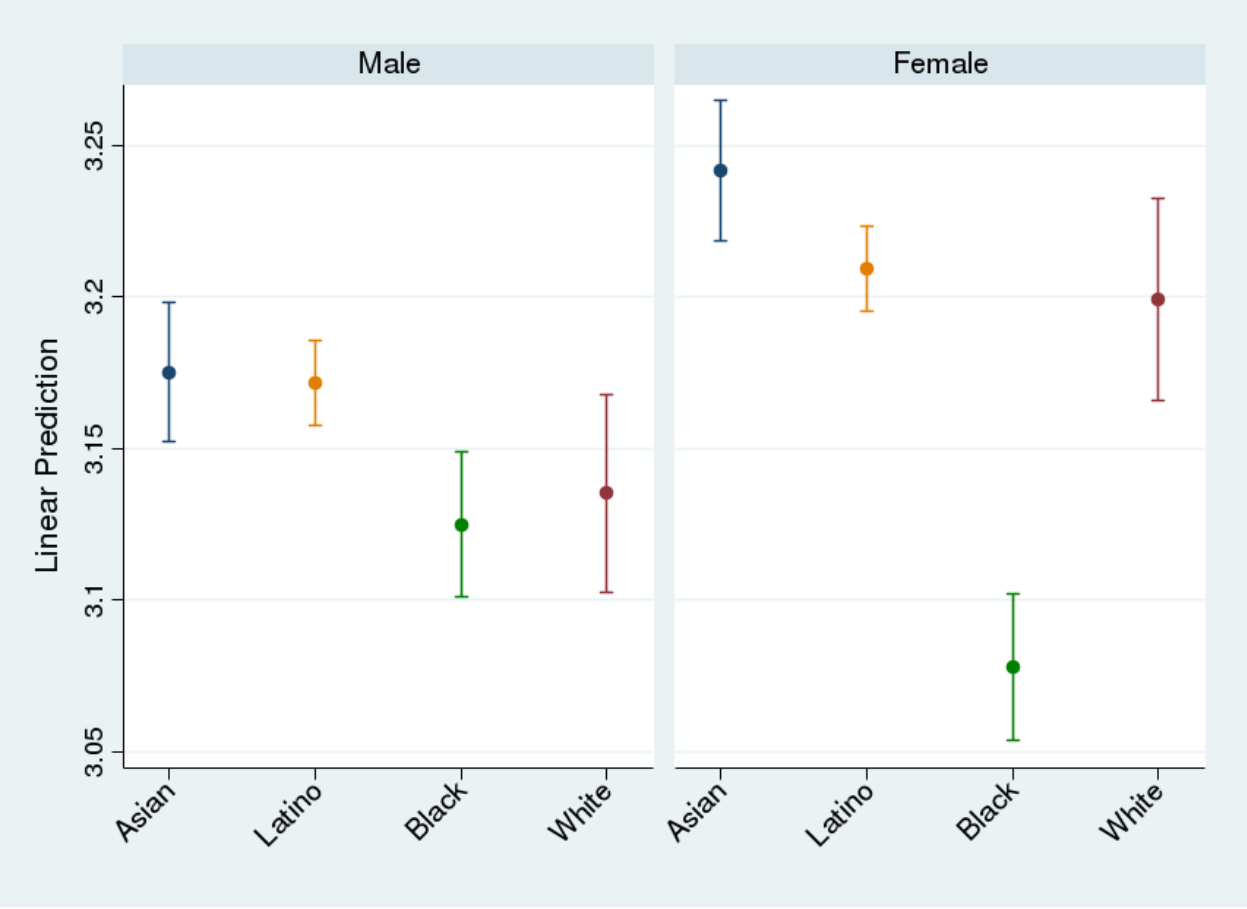
	Model 1		**Model 2**	
	Coef.	Std. Err.	Coef.	Std. Err.
Demographic				
Asian	0.063***	0.018	0.053**	0.018
Latino	0.017	0.016	0.025	0.016
Black	-0.075***	0.018	-0.063***	0.018
US-born/non-ELL	-0.061	0.066	-0.053	0.066
Asian*Foreign-born/ELL	-0.085	0.2	-0.045	0.198
Asian*Foreign-born/non-ELL	-0.07	0.134	-0.053	0.133
Asian*US-born/ELL	0.022	0.072	0.023	0.072
Latino*Foreign-born/ELL	0.001	0.199	0.039	0.197
Latino*Foreign-born/non-ELL	-0.095	0.134	-0.082	0.133
Latino*US-born/ELL	0.06	0.068	0.056	0.067
Black*Foreign-born/ELL	0.032	0.203	0.064	0.201
Black*Foreign-born/non-ELL	-0.056	0.135	-0.047	0.134
Black*US-born/ELL	0.004	0.091	-0.004	0.09
White*Foreign-born/ELL	-0.011	0.2	0.043	0.198
White*Foreign-born/non-ELL	-0.063	0.135	-0.043	0.133
Female			0.030***	0.007
Grade			-0.148***	0.003
Temporary housing			0.002	0.013
Special education			0.109***	0.009
Education				
Math scaled score			0.001***	0
Attendance rate			0.005***	0.001
Total suspensions			-0.116***	0.014
Constant	3.382***	0.262	3.631***	0.269
School Fixed-Effects	Yes		Yes	
Clustered Standard Errors	Yes		Yes	
R-squared	0.065		0.112	
N. of observations	50,592		50,592	

* p<0.05, ** p<0.01, *** p<0.001

Table A3. Correlations of Intraracial School-level Residual Trust Scores

	Latino	Black	Asian	White
≥ 50 students	0.90	0.89	0.85	0.85
≥ 60 students	0.90	0.89	0.85	0.85
≥ 70 students	0.90	0.91	0.84	0.85
≥ 80 students	0.91	0.92	0.85	0.87
≥ 90 students	0.91	0.91	0.88	0.86
≥ 100 students	0.93	0.92	0.89	0.87

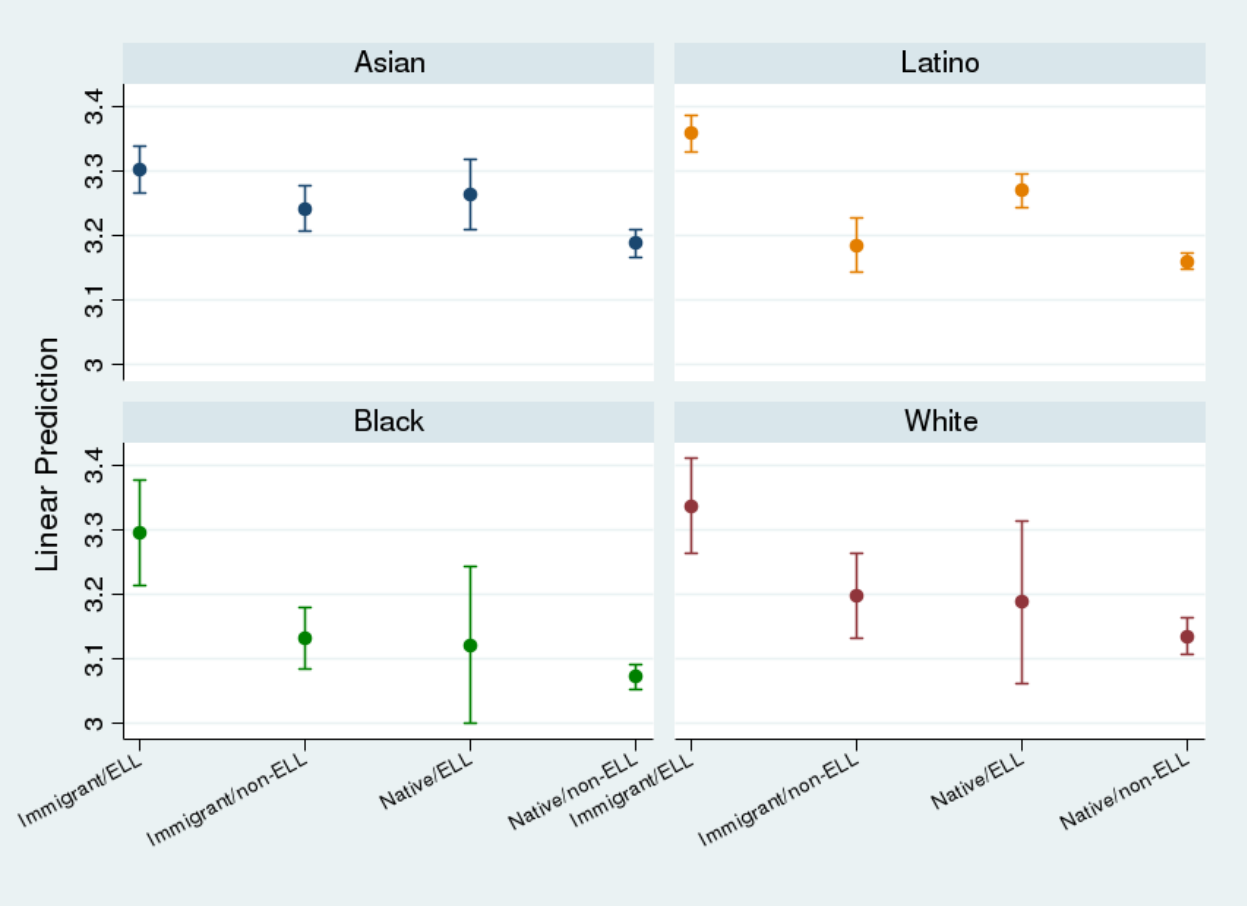
Figure A1. Linear Prediction of Trust Score by Race and Gender



Source: The Research Alliance for New York City Schools and the New York City Department of Education.

Note: Linear predictions were calculated based on Model 2 in Table A1, holding all other covariates constant. Whiskers indicate 95% confidence intervals and the trust score is based on a scale of 1 to 4.

Figure A2. Linear Prediction of Trust Score by Race and Nativity



Source: The Research Alliance for New York City Schools and the New York City Department of Education.

Note: Linear predictions were calculated based on Model 2 in Table A1, holding all other covariates constant. Whiskers indicate 95% confidence intervals and the trust score is based on a scale of 1 to 4.