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The Process of Racialized and Classed Systems of Tracking

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# The Process of Racialized and Classed Systems of Tracking

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An abstract of  
A thesis submitted to the Faculty of the  
James T. Laney School of Graduate Studies of Emory University  
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2020

## Abstract

### The Process of Racialized and Classed Systems of Tracking

By Christopher Smith

The purpose of this study is to test the processes that transform racial and class-based hierarchies into the hierarchical tracking system embedded in the educational system. The analysis focused on the testing of three potential mediators of the association between race and socioeconomic status and track placement outcomes. The potential mediating variables were parental engagement, interactions with influential actors, and experiences of teacher treatment. The data set analyzed was the High School Longitudinal Survey (HSLs), which is a nationally representative dataset collected in waves from 2009 to 2016. The results indicate that there was no significant mediation by the potential mediators of the association between race and socioeconomic status and track placement outcomes. There was, however, a significant and independent association between these three variables and track placement. This indicates the need to further explore the complex processes that transmit student characteristics into their track position.

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## INTRODUCTION

Education in the United States has, since its inception, provided different levels of access to students based on their racial and economic characteristics (Labaree 2010). Several movements throughout the history of education in the US have sought to address these exclusions, such as the common schooling reform movement created to address economic exclusion with public schooling and the civil rights movement that addressed racial segregation in schooling. These movements have made monumental strides in terms of opening up educational institutions to previously excluded groups. Despite these monumental gains, systems of tracking developed alongside these expansions in access and subsequently created new forms of segregation within schools.

Tracking is a form of ability-based stratification utilized in schools to maintain relatively homogeneous classrooms with regard to perceived ability. Several researchers have documented significant relationships between socioeconomic status and race with track position (Oakes 1985; Gamoran 1987; Tyson 2011). Prior researchers have discussed the importance of institutional actors, experiences of discrimination, and parental involvement for contributing to racial disparities in course placement (Oakes 1985; Hallinan and Sorensen 1986; Lareau 1987). White and upper-class students and their families possess greater stores of institutionally valued cultural capital, and this cultural capital allows for these families to be more comfortable interacting with and exerting their influence on the school system through actors, such as teachers and counselors (Lareau 1987).

Cultural capital can exist in three states: the embodied state, the objectified state, and the institutionalized state. The embodied state takes “the form of long-lasting dispositions of the mind and body” (Bourdieu 1986). The objectified state takes the form of cultural goods, such as

pictures, books, dictionaries, instruments, and machines. The institutionalized state is objectified in the form of educational credentials (Bourdieu 1986). Within the institution of the school, “cultural experiences in the home facilitate children's adjustment to school and academic achievement, thereby transforming cultural resources into... cultural capital” (Lareau 1987). Due to their limited access to institutionally valued forms of cultural capital, students with low socioeconomic status and racial minorities engage in less frequent and more strained interactions with institutional actors; this is exacerbated due to the discrimination that racial minorities experience in these interactions (Royster 2003).

Extant studies have detailed the persistent and harmful nature of racial and class-based disparities in systems of tracking (Oakes 1985; Gamoran 1987; Tyson 2011). This study provides a thorough examination of not only the racial and class-based disparities of systems of tracking, but also the important role that institutional actors, experiences of discrimination, and parental involvement play in determining a student's track placement. Understanding of these processes improves the ability to reform current systems of tracking. Thus, to elaborate on the role of the process of creating educational disparities through tracking, I ask specifically: Are the effects of race and class on track position mediated by student's particular experiences (i.e. experiences of discrimination, parental involvement, and teacher interactions)?

I begin this paper by providing a brief review of earlier research documenting the phenomena of tracking that provides the impetus for this study and offer hypotheses regarding the effects of the proposed mediators. Next, I describe the methodology used to collect the original data for the High School Longitudinal Survey. Following this, I outline the coding procedures for the variables analyzed from the dataset. Additionally, I describe the procedures for data analyses, including models of binary and multinomial logistic regression and formal test



of mediation. Last, I provide the results of these analyses and discuss them in terms of the hypothesized relationships and the unique findings.

## LITERATURE REVIEW

### *Tracking*

Prior studies identify clear racial and class-based disparities in the placement of students into track positions (Oakes 1985; Gamoran 1987; Tyson 2011; Domina 2016). Racial minorities, particularly black and Hispanic students, are disproportionately placed in the lowest tracks and are disproportionately absent from the highest track positions relative to their white peers. It is significant that the effects of class and race while found to be moderately interrelated, maintain the independent and significant effects. These interconnected systems of racial and economic hierarchy operate to hoard the most advantageous positions within the tracking system for white and middle to upper class students.

Hypothesis 1: Racial minorities and students from families with low socioeconomic status will be more likely to be placed in lower tracks and less likely to be placed in upper tracks than white students and students from families with high socioeconomic status.

Researchers have examined the tracking regimes that students face and the disparities in these regimes between race and class groups. These findings indicate that there are qualitative differences in the mobility patterns experienced by racial groups. African Americans experience asymmetrical downward mobility, whereas white students experience advantage through asymmetric upward mobility (Lucas and Good 2001). These differential patterns of mobility demonstrate that prior performance and track position alone do not account for later track placement. The mechanisms responsible for these patterns have not yet been fully identified.

### *Parental Engagement*

Prior qualitative research by Annette Lareau (1987) has shown clear differential interactions between parents and the school system. Parents of lower-class students rely on school administrators and teachers to be the primary educators of their children. These attitudes contrast with those of middle- and upper-class parents, which tend to be more focused on maintaining a partnership with teachers and administrators. Part of the explanation for these differences stems from the disparities in cultural capital possessed by these parents and their relative social positions. Middle- and upper-class parents tend to possess greater stores of cultural capital that helps to set them at ease when interacting with actors in the school. Lower class parents due to their often-limited education and social position relative to teachers and school administrators feel uneasy engaging with these actors as peers. Thus, I expect:

Hypothesis 2a: Socioeconomic status of parents are positively associated with engagement in the educational system.

Lareau makes it clear that the parenting strategies of middle- and upper-class parents are not naturally more beneficial than the parenting strategies of lower-class parents. Nonetheless, there are advantages that result from the strategy of close cooperation with teachers and administrators, because the school like most institutions in our society is designed around the needs and interests of middle-and-upper class families. As a result, education has been designed in order to make parents active participants in their children's education. Parents that do not adopt this relationship with the educational system, which tend to be disproportionately lower-class and racial minorities, experience disadvantage in attaining desired ends, such as getting access to the best track positions (Lareau 1987).

Changes in the system of tracking have increasingly come to rely on parents and students in the decision-making process (Domina and Thurston 2016). The old system was to place students into rigid curricular tracks that would determine their schedule of courses for the entirety of their academic career with relatively little mobility between these tracks. In part due to the criticisms of this inflexible and racially biased system, schools have moved away from this old system of tracking and have increased the degree of fluidity in courses taken (Tyson 2011). Students often take courses of varying rigor from subject to subject and year to year. Student choice has become a central concern in the decision-making process for course placement. However, as researchers studying school choice decisions have noted, parental and student choices often lead to class and racial disparities due to differential access to information and ability to deal with bureaucratic complexities regarding these decisions (Fong and Faude 2018).

Hypothesis 2b: Parental engagement is positively associated with placement into the upper track.

### *Teachers and Counselors*

Previous research has indicated that school administrators play an important role in the implementation of tracking (Lewis and Diamond 2015). Some of the most important actors in this process are teachers and counselors who have the most frequent and intimate contact with students, and from whom recommendations are seriously considered in determining a student's track placement (Oakes 1985). These interactions, which in a similar manner as the interactions between parents and school actors, are shaped by the social position of students both in terms of their racial category and socioeconomic status.

Hypothesis 3a: Racial minorities and students from families with low socioeconomic status are likely to receive less support from institutional actors, such as teachers and counselors, than white students and students from families of higher socioeconomic status.

Previous studies have documented the importance of interactions between students and agents in the school, and the ways that these interactions shape the support received by students (Royster 2003). Moreover, teacher support has been identified as a key component in student's attachment to school and subsequent academic achievement (Hallinan 2008). Such interactions between students and teachers/counselors are likely to affect the recommendations that they give regarding track placement, which are frequently cited as an important factor in the decision-making process for track placement (Oakes 1985). Consequently, the extent of support from institutional actors affects track placement.

Hypothesis 3b: Institutional support is positively associated with placement into the upper track.

### *Discrimination*

Not only do teachers play an important role in the process of tracking, but they also influence student's outcomes through the nature of their interpersonal contact. Irizarry (2015) finds that there is a significant effect of teacher's racial characteristics and the degree of racial bias demonstrated in their perceptions of their students. The effects of these racialized perceptions are significant, but not substantial for all non-white and Asian students. Interestingly, the effect of racialized perceptions on student outcomes vary according to their relative academic performance. Among students performing below the bottom 90th percentile there is actually a reversal in outcomes, with positive perceptions of black students motivating better outcomes relative to white students in the same percentile (Irizarry 2015). Expected results are found

among students in the top third of academic performance, with significant and substantial effects of racially biased perceptions limiting non-white and Asian student's academic outcomes.

Hypothesis 4a: Racial minorities (Black and Latinx students) are more likely to perceive discriminatory treatment from teachers, counselors, and other institutional actors than white and Asian students.

It should be expected that in subjects that students feel they have been treated unfairly by teachers that they adopt a similar distaste to that course subject. Additionally, their performance in that class would likely suffer further decreasing the likelihood of gaining access to the higher track positions. Early experiences of discrimination in school have been linked to later academic achievement, in the form of student GPA and number of absences (Benner and Graham 2011). Benner and Graham demonstrated the importance of early experiences of discrimination on later educational outcomes for Latina/o youth. These experiences of discrimination had an independent and direct effect on later academic achievement. However, part of the effect of experiences of early discrimination was mediated through students' perceptions of school; perceptions, which as Hallinan (2008) showed, are deeply linked to students' interactions with teachers. The outcomes Hallinan examined were the student's GPA and number of absences, which can directly result in differential access to track positions in the course of their academic career.

Hypothesis 4b: Students' perceptions of discrimination within the educational system are negatively related to track placement.

### *Mediators of Track Position*

Previous studies have documented the race and class-based dimensions of tracking (Oakes 1985; Gamoran 1987; Tyson 2011; Domina 2016). Additionally, several qualitative

studies have uncovered potential mechanisms that could be responsible for these disparities (Lareau 1987). Quantitative studies have posited potential explanations for the results that they uncovered (Oakes 1985; Hallinan 2008; Lewis and Diamond 2015). None of these studies, however, have formally examined the role of these potential mediating factors in the process for track placement. This study specifically investigates the mediation process to further knowledge of the decision-making processes that perpetuate a racialized and classed tracking system.

Hypothesis 5: Parents engagement with the school and students' interactions with institutional actors and experiences of discrimination mediate the effects of students' race and class on track placement.

## METHODOLOGY

### *Data*

I use data from the High School Longitudinal Survey (HSLs) to test hypotheses regarding students' placement into track positions and the contributing factors. The HSLs began its first wave in 2009 and was followed by subsequent waves in 2012, 2013, 2013-2014, and 2016. The base wave began with a cohort of 9th graders that were entering their fall semester. The first follow-up occurred in the spring of 2012 and examined the same cohort of students. An update to this follow-up occurred during spring of 2013 to determine students' post-secondary plans. High school transcripts were analyzed during the period of 2013-2014. The second follow-up occurred in 2016 to examine post-secondary outcomes. The surveys were conducted through a digital survey format, which allowed for the survey questions to be tailored to the respondent. This survey includes a nationally representative sample of students.

The sampling method was a two-stage process. The first stage included a stratified random sample of schools that generated a sample of 944 schools, with a response rate of

approximately 50 percent. The second stage randomly selected 25,206 9th grade students from the school enrollment lists. After removing students that were not capable of responding to the questionnaire the sample included 24,658 students. There were around 27 students included per school. The strata used in the first stage of sampling were locale, region, and school-type; these variables were controlled for in the analytical models. After excluding all cases with missing values in any of the variables being studied, the sample size for analysis was 6,203 students. As a result, multiple imputation was utilized to prevent this significant reduction in sample size. After multiple imputation, the sample size for analysis was 17,014. The reason for the reduction in sample size from the overall study sample size is due to the exclusion of certain categories of students, which will be explained later.

### *Track Position*

To examine the track placement of students in the sample, the various courses that could be taken by the students needed to be recoded into a more readily comparable format. The categories utilized during coding were adapted from Samuel Lucas' (1990; 1999) Course-Based Indicators (CBI). These categories include: Not taking a course in the subject, remedial, business and vocational, lower college, regular college, and elite college. Then these categories were coded into a binary variable with the categories: lower track and upper track. Remedial, business and vocational, and lower college were coded as lower track, and regular college and elite college were coded as upper track.

The sole focus of the analysis was student's mathematics track placement. The reason for this choice was due to the lack of variation in course placements for the other subjects that were included in the dataset. Science courses offered the second greatest detail in course titles, but after coding these courses according to the CBIs there was insufficient variation in the courses

taken by student; this may be evidence for limited tracking in fields beyond mathematics.

Previous researchers have chosen to focus on math tracks for similar reasons (Hallinan 1996; Lucas 2001).

The math course analyzed is the students' most advanced course taken during their high school career. If there had been a measure of a students' course taken during their final year, then this would have been preferable; however, there was no such measure in this particular dataset. Using a course taken later than the samples' Freshman year allows for temporal ordering, with other predictor variables measured during the students' Freshman year.

### *Student Characteristics*

Race and ethnicity are operationalized using a nominal variable with the categories of white, non-Hispanic; black, non-Hispanic; Asian, non-Hispanic; and Hispanic. These categories were constructed using the responses to a question which indicates the student's self-identified race and a question indicating the student's ethnicity: either Hispanic or non-Hispanic. The racial categories excluded from the analysis owing to small sample size included: American Indian, Alaskan Native, Native Hawaiian, and Pacific Islander. Multiracial students who indicated two or more races in their response were likewise excluded due to small sample size and the difficulty of conceptualizing this category as a unique racial identity. Socioeconomic status is used to operationalize class position. This variable is included in the dataset and was constructed by creating a composite of parent/guardians' education, occupation, and family income. The scale for this variable is constructed using standard deviations away from the mean.

### *Predicted Mediators*



Parental engagement is operationalized through seven questions asking parents whether they had participated in an array of events at their child's school since the start of their child's Freshman year of high school. The responses to these questions were either yes or no. The scale, constructed through the addition of these binary responses, was divided into three categories. The first category, low parental engagement, included parents who indicated yes to two or fewer of the questions. The second category captured parents with average levels of parental engagement as indicated by three to five "yes" responses. The final category captured parents who answered yes to at least six of the seven questions, signaling high engagement.

Similarly, student interactions with actors at the school was operationalized using 14 questions that asked students whether they had discussed a variety of topics with a teacher or counselor since the start of their Freshman year of high school. The responses to these questions were either yes or no. Like the parental engagement scale, student interactions are represented by an additive index of the 14 questions. The distribution of responses on the index was skewed upwards with the modal category being only a few affirmative answers to the questions. Thus, low levels of interaction involved students who answered no to all of the questions. Students with falling into the average level of interaction category included those that answered yes to between one and three of the questions. The highest level of interaction category involved students who responded affirmatively to four or more of the questions.

I use teacher treatment as a proxy for experiences of discrimination from teachers among students. The wording of the question in the survey was: "How much do you agree or disagree with the following statements about [your math teacher]? Your math teacher treats some kids better than other kids." The responses offered to the students were: strongly agree, agree,

disagree, and strongly disagree. For the purposes of analysis, strongly agree and agree were coded as unequal treatment and strongly disagree and disagree were coded as fair treatment.

### *Controls*

I include several control factors in my analysis owing to their relationship to the dependent variable as indicated in prior research. Gender has been shown to be a significant predictor of student track placement (Hallinan 1994), therefore all models control for gender. In addition, students' math scores on a standardized test in their Freshman year of high school is included in all models. Earlier academic achievement has been demonstrated to significantly predict later track placement (Lucas and Good 2001). Other controls that included in the analysis are characteristics of the school: public or private; rural or urban location; and region of country. These additional controls reflect characteristics of the sampling strategy.

### *Analysis*

I ran a series of logistic regression models to test the hypothesized relationships between the concepts represented in the theoretical argument. To test the first hypothesis suggesting the association between student race and socioeconomic status and track placement, the first model is a binary logistic regression with track placement regressed on race and socioeconomic status. The second, third, and fourth models regress teacher treatment, parental engagement, and interactions with influential actors on race and socioeconomic status to allow examination of their direct effects on proposed mediators as predicted by Hypotheses 2a, 3a, and 4a. The fifth model regresses track placement on the proposed mediators, teacher treatment, parental engagement, and interactions with influential actors, to assess their direct effects as described by Hypotheses 2b, 3b, and 4b. The final model regresses track placement on race, socioeconomic

status, teacher treatment, parental engagement, and interactions with influential actors to allow assessment of mediation (i.e. comparisons between the first and final models test hypothesis 5).

## RESULTS

### *Descriptive Statistics*

It is important to first highlight the descriptive statistics for the sample included in later analysis. As previously mentioned, the number of cases included in the final analysis was 17,140. As indicated in Table 1, the racial demographics of students for the sample are 62.4% white, 10.9% black, 17.6% Hispanic, and 9.1% Asian. The percentages for each quintile of socioeconomic status, starting with the lowest quintile, are 15%, 16.6%, 19.4%, 21.5%, 27.5%. The reason that these categories are not even divisions is due to the exclusion of students not taking a math course and aforementioned excluded racial categories. However, the variable for socioeconomic status included in the model is continuous; these quintiles are only used for descriptive purposes. There is nearly an even number of male and female students in the sample (50.3% male; 49.7% female). The percentage of students in the upper track is 62.7, and the percentage of students in the lower track is 37.3.

[Table 1 about here]

### *Race and Socioeconomic Status*

The reduced model in table 1 provides the results from the regression of track placement on race, socioeconomic status, and the controls. The findings suggest that black and Hispanic students are less likely to be placed into the upper track than white students; the coefficients respectively for these two groups are -.137 and -.092. Asian students are actually more likely than white students to be placed into the upper track, with a statistically significant coefficient of

.911. Socioeconomic status is a statistically significant predictor of track placement ( $\alpha = .001$ ,  $\beta = .404$ ). Students with higher levels of socioeconomic status are more likely to be placed into upper tracks than students with lower levels of socioeconomic status. These findings provide evidence to support Hypothesis 1.

[Table 2 about here]

### *Parental Engagement and Track Position*

In Hypothesis 2a, I predicted that students with low socioeconomic status will have lower levels of parental engagement. I did not expect to find any significant racial differences based on prior research (Lareau 1987). The findings in Table 3 support the prediction that students with low socioeconomic status have lower levels of parental engagement, and conversely students with high socioeconomic status have higher levels of parental engagement. Socioeconomic status is a significant predictor of levels of parental engagement for both average and high levels of parental engagement relative to low levels of parental engagement ( $\alpha = .001$ ;  $\beta = .254$  and  $\alpha = .001$ ;  $\beta = .465$ , respectively). Contrary to expectations, significant racial differences in the likelihood of levels of parental engagement emerged. Asian students were significantly less likely ( $\alpha = .001$ ) to have average or high levels of parental engagement relative to white students ( $\beta = -.534$  and  $\beta = -.59$ , respectively). Surprisingly, black students were significantly more likely ( $\alpha = .001$ ) to have high parental engagement rather than low parental engagement relative to white students ( $\beta = .431$ ).

[Table 3 about here]

In Hypothesis 2b, I predicted that high levels of parental engagement would be associated with placement into the upper track and low levels with the lower track. Table 4 provides strong

evidence to support this hypothesis. Both average and high levels of parental engagement are significantly associated ( $\alpha = .001$ ) with placement into the upper track relative to those with low levels of parental engagement ( $\beta = .222$  and  $\beta = .391$ , respectively).

[Table 4 about here]

### *Influential Actors and Track Position*

Table 3 presents the findings from the logistic regression of interactions with influential actors on race, socioeconomic status, and the controls. Hypothesis 3a predicted that both student race and socioeconomic status would be significant predictors of the level of interaction with influential actors. Consistent with the hypothesis, for both the average and high levels of interaction relative to low interaction, socioeconomic status is a significant predictor ( $\alpha = .01$ ;  $\beta = .046$  and  $\alpha = .001$ ;  $\beta = .12$ , respectively). Students with high socioeconomic status are more likely to have higher levels of interaction with teachers and counselors. Effects regarding race, however, provide minimal evidence for Hypothesis 3a. The only racial category that is a significant predictor of interactions with influential actors are Hispanic students, and even for these students the only significant category is for high interaction relative to low interaction ( $\alpha = .01$ ;  $\beta = -.201$ ). Hispanic students are more likely than white students to have low rather than high levels of interaction.

The findings presented in Table 4 provide only partial evidence to support Hypothesis 3b, predicting a positive relationship between interaction with institutional actors and track placement. The only category that is significantly associated with increased likelihood for placement into the upper track is high levels of interaction relative to low levels of interaction ( $\alpha$

= .01;  $\beta = .163$ ). There is no significant difference in the likelihood for placement in the upper track between low levels of interaction and average levels of interaction.

### *Discrimination and Track Position*

Unlike the models for parental engagement and interactions with influential actors, teacher treatment is the only outcome variable where socioeconomic status is not a significant predictor, which was predicted by Hypothesis 4a. In contrast, racial category in the case of Black and Hispanic students predicts the likelihood of perceiving unequal treatment. This relationship, however, is not in the expected direction. Both Black and Hispanic students are significantly less likely than white students to have indicated that their teachers provide unequal treatment of students ( $\alpha = .05$ ;  $\beta = -.147$  and  $\alpha = .01$ ;  $\beta = -.184$ , respectively). These findings are inconsistent with Hypothesis 4A. Nonetheless, teacher treatment is still a statistically significant predictor of track placement ( $\alpha = .01$ ;  $\beta = -.121$ ). Students who indicated that their teacher treats them unequally are less likely to be placed into the upper track, supporting Hypothesis 4b.

### *Test of Mediation*

Table 2 presents the results from the full model, including the antecedent factors and the mediators. Comparisons of the change in the coefficients for the effects of race and socioeconomic status after the inclusion of the mediating variables allows determination of, whether parental engagement, interaction with institutional actors, and perceived discrimination mediate the impact of race and socioeconomic status on tracking, as predicted by Hypothesis 5. The change in the coefficient for the likelihood of placement into the upper track for Black relative to White students from the reduced to the full model increased from  $-.137$  to  $-.16$  and the level of significance did not change substantially ( $\alpha = .01$ ). There was no change in either the

coefficient or the level of significance for Hispanic students relative to white students ( $\alpha = .05$ ;  $\beta = -.092$ ). Similar to the pattern for Black students, the coefficients for Asian students actually increased from .911 to .944 after the inclusion of the mediating variables, with no change in the level of significance ( $\alpha = .001$ ). The only variable that showed signs of mediation was socioeconomic status, which had a slight decrease in the size of the coefficient, from .404 to .383, though there was no change in the level of significance ( $\alpha = .001$ ). This is only a 5.2% change in the size of the coefficient from the reduced to the full model.

The mediating variables remain significant predictors of track placement in the same direction as indicated in Table 4. There were changes in the level of significance and in increase in the size of the coefficient for interactions with influential actors and teacher treatment. The size of the coefficients for parental engagement decreased, but only marginally. All in all, the results of the mediation analysis provide no evidence to support Hypothesis 5.

## DISCUSSION

### *Reason for the Study*

This study provides a preliminary examination of the mediating factors that transform race and socioeconomic status into a hierarchy of courses in the educational system. It also replicates previous findings on the association between both race and socioeconomic status and track placement. The mediators discussed in these analyses deserve further analysis, especially in understanding their role in transforming characteristics other than race and socioeconomic status into track placement outcomes. A thorough understanding of the ways that status characteristics embed themselves in social structures, like the educational system, allow researchers and

practitioners to offer targeted reforms to systems that perpetuate inequality, as is the case with systems of tracking.

### *Evidence for Mediation*

Figure 1 offers the hypothesized model of mediation. To support the claim for mediation, three things are required. First, there must be a temporal ordering with the mediators occurring between the variables being mediated and the outcome variable. This is supported in the dataset. Racial category is largely set at birth and fixed, at least in the context of the United States. Data collection involved asking students during their freshman year about their socioeconomic status. As such, that information was cotemporaneous with the questions used to operationalize the mediating variables. Nonetheless, I would argue that typically socioeconomic status is held relatively constant throughout childhood, especially in terms of parental education. The measure for track placement would in most cases occur after the students' freshman year.

[Figure 1 about here]

Second, there must be significant associations between the antecedent factors being mediated and the outcome variable, between the antecedents and the mediating variables, and the mediating variables and the outcome variable. There is evidence of a significant association between the antecedent factors of socioeconomic status and race (identified in Figure 1 as the variables to be mediated) and the outcome variable of track placement. In the support for Hypothesis 1, results show that socioeconomic status is positively related to track placement and that Black and Hispanic students are less likely than white students to be placed in higher tracks.. There is some evidence to support the association between the mediated variables and the mediating variables in the support for hypotheses 2A, 3A, and 4A, but not necessarily between



the variables that were predicted. There is also strong evidence in hypotheses 2B, 3B, and 4B to support the association between the mediating variables and the outcome variable.

Last, there must be a reduction in the association between the mediated variables (socioeconomic status and race) and the outcome variable after the inclusion of the mediating variables (parental engagement, interaction with institutional actors, and perceived discrimination). The analyses provide no evidence to of such reduction in the effects of the antecedent factors, thus disconfirming Hypothesis 5. The “mediated” variables and the “mediating” variables have independent and significant associations with the outcome variable even after being included in the same model. As a result, this study finds no evidence to support the claim that parental engagement, interactions with influential actors, and teacher treatment mediate for the effects of race and socioeconomic status on track placement. However, parental engagement, interactions with influential actors, and teacher treatment are all significant predictors and are significantly associated with race and socioeconomic status, which requires further studies to disentangle the complex relationships between these variables.

### *Unexpected Findings*

While there is no evidence to support the predictions of mediation, several findings run contrary to previous expectations. The findings indicating that white students are the most likely to perceive their teachers treating students unfairly run contrary to what prior literature suggests. Additionally, the students most likely to indicate teacher unfairness are male students as well. Together, these findings suggest that white male students are the most likely of any social category examined to indicate differential treatment by teachers. Such a pattern runs counter to the traditional assumption that students in this most privileged category should be the least likely to indicate that their teachers treat students unfairly.

The simplest explanation for this finding pertains to the nature of the question used to signal perceptions of discrimination. Survey administrators asked respondents: “How much do you agree or disagree with the following statements about [your math teacher]? Your math teacher treats some kids better than other kids.” That question, however, may have multiple meanings and may not actually measure experiences of discrimination at all. For example, students might recognize that math teachers privilege students with superior abilities, regardless of class or race, and treat them differently. Alternatively, perhaps teachers recognize the deficiencies in math training for those from lower socioeconomic or racial minority groups, and thus give more attention to help those students. In the minds of white students, that might constitute differential (positive) treatment. The latter meaning dovetails with the concept of reverse racism. Reverse racism is the phenomenon of white people primarily expressing concern at policies, such as affirmative action and quota systems, that they feel limits their opportunities relative to racial minorities. As evidence cited earlier indicates, this is not the case in systems of tracking and certainly not true in other systems as well. However, this narrative has remained convincing for many even within school systems (Royster 2003) and could be responsible for the perceptions of these white male students of being more likely to consider themselves to be treated differently by their teachers.

The phrasing of the question, which in no way specifies that this differential treatment must be directed at the respondent, may be responsible for the unconventional finding. It may be that white students are adept at perceiving the discriminatory nature of their teachers, even if they themselves are the beneficiaries of this discrimination. This is certainly well documented in the opportunity hoarding literature, which finds that white people are more likely to see the advantage that they are accruing and actively sustaining. This approach situates these students

within a project of actively perpetuating their advantage in the classroom, thereby being well aware of the differential treatment inherent.

Additionally, the data in this study suggest that Black students have more highly engaged parents than White students. Such a pattern runs contrary to much of the literature that argues that disparities in parental engagement are responsible for many of the disparities in outcomes in the educational system (Oakes 1985; Lucas and Good 2001). However, Lareau (1987) found that class, not race, primarily influenced the relationships between families and schools. Her work challenges the pathologizing of Black families as disengaged and uninterested in supporting education. The findings in this study extend this further by providing evidence that Black families may be more engaged than their White counterparts.

### *Limitations*

One of the most serious limitations of the analysis presented in this paper is that, with the clustered sampling design of the dataset, the data should be analyzed as nested. The publicly available dataset, however, does not allow such analyses; to do nested analyses would require access to the full dataset. Similarly, there is no consideration of school level variables, such as school demographics, which will undoubtedly play a significant role in determining the relationship between these variables.

Additionally, the measurement for track placement may not accurately measure the desired characteristics. For example, it may be that students participated in their most advanced math class prior to their final year, which would disturb the temporal ordering of the model. And, as discussed earlier, the measure of teacher fairness is evidently not a proxy for experiences of

discrimination and therefore fails to operationalize the underlying theoretical mechanism relevant to the research question underlying this study.

### *Future Studies*

While the focus of the study was the mediation of race and socioeconomic status, the results of this study provide opportunities to further explore the process of students' track placement. These results suggest that there are student characteristics beyond race and class that significantly shape a students' placement into track position, which operate independently frequently studied characteristics. Further exploration of these measures may provide a more thorough understanding of the actual processes by which students are placed into tracks, rather than just the disparities that are created as a result.

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**Table 1. Descriptive Statistics (n=17,014)**

Characteristic	%	n
<b>Demographics</b>		
<b>Race</b>		
White	62.4	10,615
Black	10.9	1,859
Hispanic	17.6	2,993
Asian	9.1	1,547
<b>Socioeconomic Status</b>		
First (Lowest)	15.0	2,556
Second	16.6	2,826
Third	19.4	3,306
Fourth	21.5	3,654
Fifth (Highest)	27.5	4,672
<b>Sex</b>		
Male	50.3	8,555
Female	49.7	8,459
<b>Track Placement</b>		
Lower Track	37.3	6,350
Upper Track	62.7	10,664



**Table 2. Binary Logistic Regressions of Track Placement on Reduced and Full Models**

Predictors	Reduced Model		Full Model	
	Coefficient	Std. Err.	Coefficient	Std. Err.
Race				
White	---	---	---	---
Black	-0.137 *	0.054	-0.16 **	0.055
Hispanic	-0.092 *	0.047	-0.092 *	0.047
Asian	0.911 ***	0.072	0.944 ***	0.072
Socioeconomic Status	0.404 ***	0.013	0.383 ***	0.014
Parental Engagement				
Low	---	---	---	---
Average			0.164 ***	0.047
High			0.268 ***	0.051
Influential Actors				
Low	---	---	---	---
Average			0.109 *	0.05
High			0.272 ***	0.047
Teacher Treatment			-0.253 ***	0.042
Sample size	17,014		17,014	

\* p<0.05    \*\* p<.01    \*\*\* p<.001    Controls Included for all Models: Sex, Region, Urbanicity, and School Type

**Table 3. Logistic Regressions for Mediating Variables**

Predictors	Parental Engagement				Influential Actors				Teacher Treatment	
	Average		High		Average		High		Unequal Treatment	
	Coefficient	Std. Err.	Coefficient	Std. Err.	Coefficient	Std. Err.	Coefficient	Std. Err.	Coefficient	Std. Err.
Race										
White	---	---	---	---	---	---	---	---	---	---
Black	0.166	0.086	0.431 ***	0.087	-0.069	0.074	-0.045	0.08	-0.147 *	0.064
Hispanic	-0.035	0.066	-0.009	0.072	-0.046	0.076	-0.201 **	0.07	-0.184 **	0.061
Asian	-0.534 ***	0.085	-0.59 ***	0.095	-0.02	0.079	-0.178	0.09	-0.13	0.068
Socioeconomic Status	0.254 ***	0.016	0.465 ***	0.02	0.046 **	0.016	0.12 ***	0.022	-0.022	0.015
Sample size	17,014		17,014		17,014		17,014		17,014	

\* p&lt;0.05    \*\* p&lt;.01    \*\*\* p&lt;.001

Controls Included for all Models: Sex, Region, Urbanicity, and School Type

**Table 4. Binary Logistic Regressions of Track Placement on Mediating Variables**

Predictors	Track Placement	
	Coefficient	Std. Err.
Parental Engagement		
Low	---	---
Average	0.222 ***	0.049
High	0.391 ***	0.054
Influential Actors		
Low	---	---
Average	0.059	0.053
High	0.163 **	0.052
Teacher Treatment	-0.121 **	0.044
Sample size	17,014	

\*  $p < 0.05$     \*\*  $p < .01$     \*\*\*  $p < .001$     Controls Included for all Models: Sex, Region, Urbanicity, and School Type

Figure 1:

