



School choice increases racial segregation even when parents do not care about race

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This research examines how school choice impacts school segregation. Specifically, this work demonstrates that even if parents do not take the racial demographics of schools into account, preference differences between Black and White parents for other school attributes can still result in segregation. These preference differences stem from motivational differences in pursuit of social status. Given that the de facto US racial hierarchy assigns Black people to a lower social status, Black parents are more motivated to seek schools that signal that they can improve their children's status. Simulations of parental school decisions at scale show that preference differences under an unmitigated school-choice policy lead to more segregated schools, impacting more than half a million US children for every 3-percentage-point increase in school-choice availability. In contrast, if Black and White parents have similar preferences, unmitigated school choice would reduce racial segregation. This research may inform public policy concerning school choice and school segregation.

segregation | school choice | social status | education | race

After the US Supreme Court's 1954 ruling on *Brown v. Board of Education* deemed segregation unconstitutional, school segregation dropped over the next three decades. Before the law was enforced, 99% of students attended schools that were racially segregated [i.e., one's own racial or ethnic group comprised more than 75% of the student body (1)]. By the end of the 1980s, this proportion dropped to 63% for Black students and 61% for White students (2, 3). However, the Supreme Court's 1990 decision on *Board of Education of Oklahoma City v. Dowell* weakened regulatory support for school-integration efforts. Today, segregation levels have regressed to those seen in the late 1960s: 69% of Black students and 87% of White students attend a school where they are the predominant race (4).

School-choice advocates contend that increasing the availability of school choice (through policies that enable parents to select the school that best fits their needs) may reduce racial segregation. School choice allows parents to freely choose schools for their children that may be outside their segregated neighborhoods (5). In this view, policies that increase school choice reduce segregation. A counterposition maintains that because parents prefer their own racial group, they consider a school's racial demographics and choose schools where their child is a member of the predominant race (6, 7). This position is supported by research that finds a positive relationship between the availability of school choice and racial segregation (8). In this view, policies that reduce school choice reduce segregation.

Unmitigated school choice enables parents to select the school they want for their children. For this reason, the school system resembles an open market for educational services, whereby the parent is the decision-maker and schools are service options in a choice set. Schools that differ in attributes will attract different market segments of parents who differ in preferences. We propose that Black and White parents are distinct market segments that differ in school preferences, even if they do not consider a school's racial demographics. The differences in Black and White parents' preferences occur because of a divergence in motivation to change social status through school selection. We find that school-performance ratings, in particular, signal a school's ability to alter a child's social status. As such, Black parents are more willing to forgo other school attributes, such as short commutes or teacher experience, for higher-rated schools.

We propose that White parents, in contrast, place more weight on maintaining their children's position in the social status hierarchy. As such, they are more likely to avoid lower-performing schools. Moreover, because they are less motivated to alter their children's social status, they are less willing to give up attributes, such as short commutes or teacher experience, in favor of higher-performing schools. This research finds that even if parents do not intentionally seek schools where the majority of students are in their racial group, unmitigated school choice among these market segments can increase segregation

Significance

US school children largely attend racially segregated schools. This research examines conditions under which school choice increases or decreases school segregation, even when parents do not care about race. A choice-based conjoint study reveals that Black and White parents place different values on school attributes related to reducing social status inequality—particularly, school performance. Simulations of parents' school selections uncover that, because of these different values, unmitigated school-choice policies increase segregation—even if parents do not take school racial demographics into consideration. In contrast, if Black and White parents have similar preferences, unmitigated school choice would reduce racial segregation. This research informs public policy regarding both school-choice policies and efforts to alter racial segregation in schools.

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because these groups are seeking schools that have different value offerings. School choice only reduces segregation when these parent groups share the same preferences.

We contend that parents view education as a means to influence social status, defined as the relative level of honor, respect, and assumed competence afforded to an individual (9). We identified common school attributes that factor into a parent's school choice using two public platforms, Niche.com and Greatschools.org. Both are highly trafficked by parents searching for schools [monthly visits of 6.9 million (M) and 3.8M, respectively (10)]. Greatschools.org has been used in previous research on school choice (11, 12). We reviewed the information provided to parents on these platforms and identified attributes that empirical research has shown are important to parents (13–20).

We identified the following focal attributes considered by parents when making their choice: 1) the school's performance rating, 2) teacher experience, 3) the prevalence of poverty among the students, 4) the commute (i.e., the amount of time it takes a parent to get their child from home to school), and 5) the racial demographics of the student body. Although this list is not exhaustive, it is inclusive of major factors that parents consider (see *SI Appendix, Table S1* for a list of references).

Parents are likely to consider each of these attributes when selecting a school for their children. However, these attributes vary to the extent that they signal a school's capability to increase their children's social status. In two pilot studies, 300 parents ranked the preceding attributes in order of their perceived effect on social status. Overall, parents ranked school-performance ratings (presented as an A, B, or C rating) as the most effective attribute in signaling the school's efficacy in changing a student's social status. This was followed by teacher experience, student income demographics, student racial demographics, and commute to school (see detailed pilot results in *SI Appendix*).

Black and White parents exist within a racial hierarchy in the United States, and Black people have been historically assigned a lower social status compared to White people (21, 22). This positional inequality impacts the extent to which parents from each racial group value these attributes when selecting schools. Research finds that groups assigned lower social status seek to reduce hierarchical differences, whereas groups assigned higher status are less motivated to alter their status (23). Based on this research, Black parents may be more willing than White parents to forgo other attributes to allow their children to attend the highest-rated, top-ranked (e.g., A-rated) schools. White parents, however, may prioritize avoiding lower-performing schools (e.g., C-rated) schools. They may also be less likely to move schools to chase higher performance and more likely to prioritize other attributes that are less related to social status change, such as having a short commute. This is not to say that White parents care less about their children's social status. We still expect White parents to favor top-ranked schools relative to lower-performing schools. However, because of the racial hierarchical difference between White and Black people, Black parents are comparatively more motivated to prioritize changing their children's social status through the choice of top-rated schools.

To add nuance to these propositions, we expect that the difference in attribute preferences between Black and White parents may be affected by income level. Previous research finds a positive relationship between a Black person's income and pursuit of greater social status. In contrast, no such relationship was found for White people (24, 25). Indeed, middle- and upper-class minorities often report dressing in nicer clothes and overtipping in restaurants as strategies to increase their perceived status (26).

Thus, we propose that higher incomes uniquely affect Black parents in that high-income Black parents are more motivated than other income–race groups to seek opportunities to increase social status, thus placing the greatest weight on choosing the highest-rated schools.

If schools vary along these attributes, then Black and White parents will select different schools for their children. This difference in selection should occur even if parents do not intentionally seek schools where most of the students are in their own racial group. For example, consider a version of the United States in which the racial demographics of the school has no effect on a parent's willingness to choose the school. In this scenario, a city markets two schools. The first school is A-rated, but has a long commute for the average household. The second school is B-rated, but has a short commute. Consider in this scenario that hundreds of Black and White parents are given the freedom to choose either of these schools for their children (i.e., unmitigated school choice). We hypothesize that the Black (vs. White) parents are more likely to select the A-rated school with the long commute and that the White (vs. Black) parents are more likely to select the B-rated school with the benefit of the short commute. Even in the absence of preference for one's own racial group, the likely outcome is that the two schools would be segregated. However, if only a few families in this scenario can freely choose between these schools, the difference in preferences between the parents would have a weaker effect on segregation. Thus, a policy of unmitigated school choice compounds and increases segregation when Black and White parents differ in school preferences.

In summary, this work hypothesizes that 1) Black parents have a greater preference than White parents for the highest-rated schools; 2) White parents have a greater preference than Black parents for avoiding the lowest-rated schools; 3) White parents have a greater preference for school attributes that are less related to social status change, such as short commute time and racial demographics; 4) the gap in preference for A-rated schools between Black and White parents increases as their income increases; and 5) segregation increases as unmitigated school choice increases in markets where Black and White parents have these preference differences. Moreover, racial segregation can persist, even when parents do not intentionally choose schools where their child is a member of the predominant race.

This research first conducts a choice-based conjoint (CBC) study to reveal the underlying preferences of Black and White parents. A subsequent simulation analysis with an agent-based model (ABM) uses these preferences as decision weights to test if preference differences between these market segments, with or without the consideration of a school's racial demographics, affect segregation under unmitigated school choice policies.

Study 1

To test Hypotheses 1–4, we conducted two CBC studies (studies 1A and 1B). A CBC design elicits preferences from surveyed populations for different attributes that comprise a product or service (27). CBC designs are an especially useful method because they help mitigate social desirability response bias. Research has shown that true preferences are revealed with a CBC design without activating social desirability biases potentially triggered by direct questions about race (28). To obtain unbiased parameter estimates and maintain utility balance, we employed the principles of an orthogonal CBC design (29). Data collection was approved by the Internal Review Board of Virginia Tech (#20-843). All participants provided informed consent to the studies and were informed of hypotheses upon completion.

In study 1A, we recruited 605 parents (261 Black, 344 White, $M_{age} = 41.09$, $SD = 11.73$, 61.32% female, $M_{no. of children} = 1.95$, $SD = 1.18$). In study 1B, we recruited a larger sample of Black and White parents representative of the United States (in age, income, and number of children), with a total of 1,042 parents (530 Black, 512 White, $M_{age} = 38.5$, $SD = 11.02$, 67.6% female, $M_{no. of children} = 2.02$, $SD = 1.22$). In both studies, we presented each parent with 32 choice sets of school options. Each choice set contained three fictional schools and a fourth option of "None." Choice sets displayed information about each school's performance rating, teacher experience, racial demographics, income demographics, and average commute time. Participants selected one of the four options from each choice set. The three school options varied the values of the five attributes (see *SI Appendix, Fig. S3* for example). Given our theory and the pilot study results, we expected Black parents to place greater value on school performance, but relatively less value on the other attributes in comparison to White parents. However, we expected White parents to place greater weight on short commutes and a predominantly White student body.

Parents are assumed to be utility-maximizing decision-makers. Value (utility) for each school attribute influences school selection for their children. School selection is modeled with a hierarchical Bayesian (HB) multinomial logit (30). The hierarchical design has an advantage over a standard multinomial logit because it models each parent's preference for school attributes. The feature incorporates modeling the variation in school preferences across parents. The hierarchical structure also incorporates and accounts for interactive effects between attributes and parents' race, as well as for scenarios where a preference for an attribute may be correlated with preferences for other attributes (e.g., parents who prefer B-rated schools may also prefer short commutes) (27, 31). We modeled parent i 's utility for school k (or None) from school-choice set j as follows:

$$U_{ijk} = \beta_{i,1} A.rated_{jk} + \beta_{i,2} B.rated_{jk} + \beta_{i,3} C.rated_{jk} + \beta_{i,4} TeachersExperience_{jk} + \beta_{i,5} Low.Inc.Students_{jk} + \beta_{i,6} OwnRace_{jk} + \varepsilon_{ijk} \quad [1]$$

$$\varepsilon_{ijk} \sim \mathbf{EV}_1(0, 1).$$

Each independent variable in Eq. 1 is an indicator variable that represents a school attribute. Indicator variables equaled one

(vs. zero) if the school had the attribute of the given performance rating (A, B, or C), 80% (vs. 20%) of teachers had at least 3 years experience, 70% (vs. 30%) of students came from low-income households, it had an 8-minute (vs. 28-minute) commute time, and 75% of its student body matched (vs. did not match) the parent's race. The choice of None is the reference level of the model where all indicator variables equal 0.

School-Attribute Preference Results. Fig. 1 displays the mean of Black and White parents' coefficients estimated with the HB multinomial logit for studies 1A and 1B (also see *SI Appendix, Table S3*). In both studies, we found that all parents valued nearby, highly rated schools with experienced teachers and students whose race matches their own. However, the conjoint results also indicated differences that were consistent with our hypotheses. Because results from both studies were similar, we report the details of the larger sample, study 1B. Black parents valued A-rated schools 50% more than did White parents (Black = 3.645 vs. White = 2.434, $P < 0.001$). In exchange for prioritizing highly rated schools, Black (vs. White) parents placed less value on short commutes (Black = 0.488 vs. White = 0.800, $P < 0.001$) and predominantly own-race schools (Black = 0.500 vs. White = 0.737, $P = 0.016$). In contrast, White (vs. Black) parents placed greater value on a shorter commute and predominantly White schools. Black and White parents similarly valued teacher experience (Black = 0.436 vs. White = 0.522, $P = 0.133$) and schools with predominantly low-income students (Black = -0.034 vs. White = -0.047, $P = 0.803$). We reran this analysis with a subset of Black and White parents matched by income and number of children and found qualitatively similar findings (*SI Appendix, Table S7*).

Parental income levels also moderated preferences for school attributes. As income increased, the difference between Black and White parents widened across all attributes: A-rated schools (Black = 4.786 vs. White = 2.695, $P < 0.001$), B-rated schools (Black = 3.710 vs. White = 1.061, $P < 0.001$), C-rated schools (Black = 2.316 vs. White = -1.100, $P < 0.001$), teacher experience (Black = 0.367 vs. White = 0.578, $P = 0.017$), commute (Black = 0.466 vs. White = 0.966, $P < 0.001$), and preference for schools with a student majority matching their own race (Black = 0.366 vs. White = 0.675, $P = 0.018$). The gap also widened for the low-income demographics, but was not significant (Black = -0.048 vs.

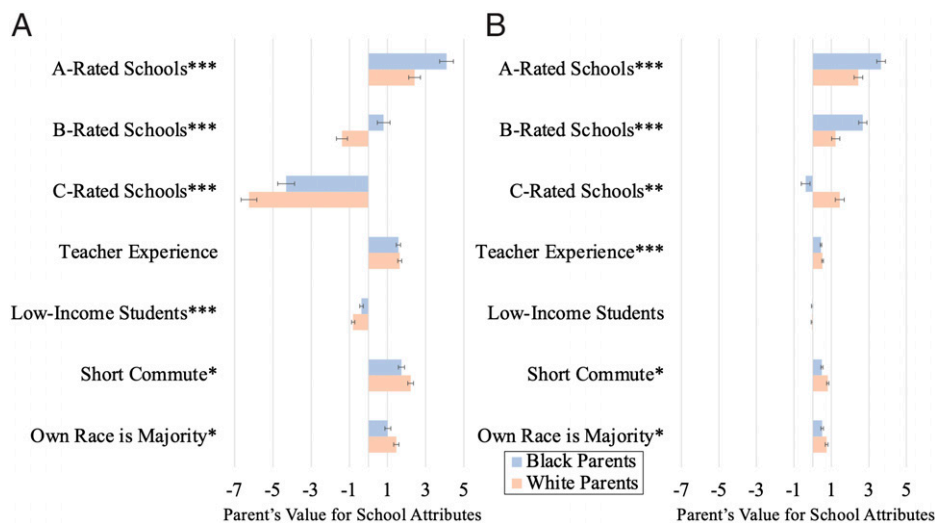


Fig. 1. Parent's value for school attributes for studies 1a (A) and 1b (B). Each bar represents ± 1 SE about the mean. * $P < 0.05$; *** $P < 0.001$.

White = -0.126 , $P = 0.373$). Overall, these results suggest that high-income Black parents have the highest preference for A-rated schools compared to high-income White parents, low-income White parents, and low-income Black parents.

Study 2

The goal of study 2 is to understand how preference differences between Black and White parents impact school segregation when parents can freely choose their child's school. We inputted study 1's estimates of utility values for school attributes into an ABM. An ABM simulates the behavior and interactions of individual agents (e.g., parents and schools) to produce emergent macro phenomena (e.g., school segregation rates) (32). Integrating conjoint study results with the ABM facilitates insights into the implications of empirically derived individual behavior at scale (33).

Model Design and Assumptions. The ABM tests whether the proportion of households that exercise school choice impacts segregation rates when Black and White parents differ in school preferences, even when racial composition is not considered. The ABM simulates parents' school decisions over 20 time periods. Parents have a choice of seven schools in a district serving 4,000 households. Each school is randomly endowed with an A, B, or C school rating and teacher experience level. Socio-demographic composition of the student body is determined by which children in the ABM attend which school. Commute time is determined by the proximity of each household to a selected school. Each household falls into one of the following four income-racial groups: high- or low-income Black households or high- or low-income White households. All household members are of the same race and include one or more children. The ABM assumptions are based on empirical data about Indianapolis, IN and its public school district. We chose Indianapolis because of its accessible school-choice program (34) and its demographic similarity to the United States as a whole. The ABM uses these inputs as realistic starting points to examine the relative phenomenon produced under different parent preferences and school-choice conditions (see *SI Appendix, Table S8* for details).

At each simulation period, a randomly selected proportion of households exercised school choice. These households selected any of the seven schools for their children that maximized their value. Parent selection was determined by a multinomial logit with Eq. 1's function and school-attribute values derived from study 1. Each income-racial group had its own set of school-attribute preferences (*SI Appendix, Tables S4 and S5*). Each school-choice household could change their children's school at any time step if they grew dissatisfied with their children's school. Households that could not exercise school choice sent their children to one assigned school nearby and kept them there, which mirrors public school assignments in most US school districts. Additionally, the ABM assumed that no households moved out of the district. Research has shown that only a fraction of the 11% of annual US household moves is driven by concerns for better schools (35).

In our analysis, we measured segregation with the dissimilarity index (36), a frequently used measure in extant literature [see *SI Appendix, Table S9* for alternative analysis using the entropy index (37) as a segregation measure]. Dissimilarity is the percentage of students from a racial group that would have to move to another school to achieve desegregation in their current school. The dissimilarity index has values between zero (complete desegregation) and one (complete segregation).

The ABM simulated parental school preference under three conditions: *Different Preferences with Race*, *Different Preferences without Race*, and *Same Preferences without Race*. In the *Different*

Preferences with Race condition, parents' values for attributes match those of study 1's values for the parent's socio-demographic group. In this condition, parents consider the racial demographics of the student body when selecting a school. In contrast, parents do not factor in student-body racial demographics in the *Different Preferences without Race* and *Same Preferences without Race* conditions. To operationalize this, the utility value for one's own race is set to zero, enabling simulations of a scenario where the racial demographics of a school are not a contributing factor to segregation. In the *Same Preferences without Race* condition, all four household-income-race groups have the same preferences, which are based on the average utility values of all study 1 participants.

We first compared the *Different Preferences without Race* to *Same Preferences without Race* conditions to determine the degree to which different preferences for school attributes other than school racial demographics contributed to segregation under a policy of unmitigated school choice. In this comparison, racial demographics of a school had no effect on a parent's school preferences. Then, we compared *Different Preferences with Race* and *Different Preferences without Race* to quantify the degree to which own-race preference alone provides an incremental contribution to school segregation.

This research generated 9,000 simulations of school-selection choices in each full factorial run of the ABM (see *SI Appendix, Study 2: Agent-Based Model Simulation Analysis* for details). Ultimately, this research analyzed the ABM-generated data related to school-district segregation levels from the final ABM period to determine the relationship between input parameters and resultant segregation. Estimates are based on a fractional logistic regression model with the following functional form:

$$\begin{aligned} \text{Segregation} = & \alpha_0 + \alpha_1 \text{PreferencesDiffer} \\ & + \alpha_2 \text{PreferOwnRace} + \alpha_3 \text{SchoolChoice} \\ & + \alpha_4 \text{NeighborhoodHomophily} \\ & + \alpha_5 \text{PreferencesDiffer} * \text{SchoolChoice} \\ & + \alpha_6 \text{PreferOwnRace} * \text{SchoolChoice}. \quad [2] \end{aligned}$$

In Eq. 2, *PreferencesDiffer* and *PreferOwnRace* are indicator variables that represent preference conditions tested in the ABM. *PreferencesDiffer* equals one if all four income-race groups differ in preferences for school attributes (whether racial preferences are included or not). *PreferOwnRace* equals one if parents considered school racial demographics in their school selections. Otherwise, the variables are zero. *SchoolChoice* equals the proportion of households that exercise school choice. These households chose the school that provided them the greatest utility value at that time (vs. simply sending children to the nearest school). Finally, to account for differences in residential segregation that currently exists across US neighborhoods (38), the ABM includes the parameter *NeighborhoodHomophily*. This variable equals the probability that a household's neighbor was in the same socio-demographic group: The greater the probability, the greater the neighborhood segregation. Note that having four income-race groups enables the ABM to account for both race and income drivers of residential segregation's contribution to school segregation.

School Segregation Results. Table 1 displays estimates from the fractional logit regression on data generated from the ABM simulations. The two fractional logit models, studies 2A and 2B, used the inputs of the utility values from studies 1A and 1B, respectively. The dissimilarity index is the dependent variable in both models. The results of both models are qualitatively similar

Table 1. School Segregation Driven by Preference

	Dependent variable: <i>Dissimilarity</i>	
	Study 2A	Study 2B
Intercept	−2.942*** (0.018)	−2.745*** (0.019)
Preferences Differ	0.315*** (0.022)	0.417*** (0.022)
Prefer Own Race	0.349*** (0.019)	0.190*** (0.019)
School Choice	−0.296*** (0.031)	−0.298*** (0.031)
Neighborhood Homophily	−0.013 (0.015)	0.015 (0.015)
Pref. Differ:School Choice	0.147*** (0.040)	0.177*** (0.040)
Pref. Own Race:School Choice	−0.0003 (0.034)	0.006 (0.034)
Observations	9,000	9,000

Pref. Differ, Preferences Differ; Pref. Own Race, Prefer Own Race. *** $P < 0.001$.

and support our hypothesis that preference differences between Black and White parents contribute to school segregation.

The positive and statistically significant coefficients on *PreferencesDiffer* in both regressions indicate that preference differences between Black and White parents in the ABM increase segregation levels. This is the case, even when parents hold no preference for primarily Black or White schools and after controlling for the degree of residential segregation. A positive and significant coefficient on the interaction between *PreferencesDiffer* and *SchoolChoice* suggests that when Black and White parents differ in school preferences, increases in school choice (households choosing any school) increase segregation (Fig. 2). The negative coefficient on *SchoolChoice* indicates that when Black and White parents have the same preferences (the baseline condition in the model), unmitigated school choice reduces segregation. This reduction occurs because Black and White parents in this scenario select the same schools.

To put this into perspective, consider that the average US school's dissimilarity index (as indexed by the 242 largest school districts) is 0.545 (39). This index refers to the proportion of students of one race or another who would have to move out of

their own schools to desegregate them. According to our analysis, for every 3% increase in households participating in school choice, there needs to be an additional 1% of students who need to leave their schools to avoid an increase in segregation. This translates into more than 564,000 students impacted, given that there are 56.4M kindergarten through 12th-grade children in the United States (40).

Discussion

Parents' freedom to choose a desired neighborhood or school for their children often leads to segregation because people prefer to be in environments where one's own race is well-represented (16, 41, 42). However, this research shows that, even if we lived in a world where parents do not consider race in their school choices, unmitigated school-choice policies can still increase segregation. This is because Black and White parents differ in preferences for school attributes unrelated to race. This work theorizes that the historical US racial hierarchy, which assigns a lower social status to Black people, leads Black parents to place greater value than White parents on high ratings of school performance. However, it leads White parents to place greater value on close schools with higher-income students from White households. Moreover, household income impacts these preferences. Black parents with higher incomes place even greater value on the highest-rated schools for their children. In contrast, changes in income for White parents do not have as strong of an effect.

We simulated preference differences in an ABM to examine the impact of these differences at scale when parents are free to choose any school for their children (i.e., unmitigated school choice). The ABM demonstrated that even if parents do not consider race in their school choices, the differences between Black and White preferences for other school attributes could still increase school racial segregation. Our simulations suggest that when there are differences in school-attribute preferences between Black and White parents, every 3% increase in households participating in school choice translates into more than 564,000 US school children attending segregated schools (40). In contrast, if preferences are the same, unmitigated school choice decreases school segregation.

The implications of this work are notable. Preference differences caused by social status inequality are an underconsidered origin of school racial segregation. Expanding school choice without first addressing preference differences between Black and White parents may lead to more segregated schools. This consideration extends beyond Black and White parents. We expect our findings to apply to other racial or ethnic groups, as these market segments also exist within a de facto racial hierarchy in the United States. As such, they will differ from each other in terms of preferences for school attributes related to social status change. Thus, it would be insufficient to rely purely on individual parental choices without considering the implications of these choices at scale.

Finally, we acknowledge some research limitations. First, the simulations assume that schools have unlimited capacity. In reality, school capacity limits could alter a parent's school choice. For example, an individual A-rated school might change its admission policies when the number of students per teacher increases above state-mandated guidelines. Second, the ABM does not incorporate people moving out of a school district. Research finds that less than 3% of any household with children moves intercounty in any given year, with 2020 to 2021 being the lowest year since 1947 (43). Only a fraction of these moves occurs out of concern for better schools (35). Although the percentage of moves based solely on the desire for better neighborhood schools is likely to be small, the model does not account for this phenomenon.

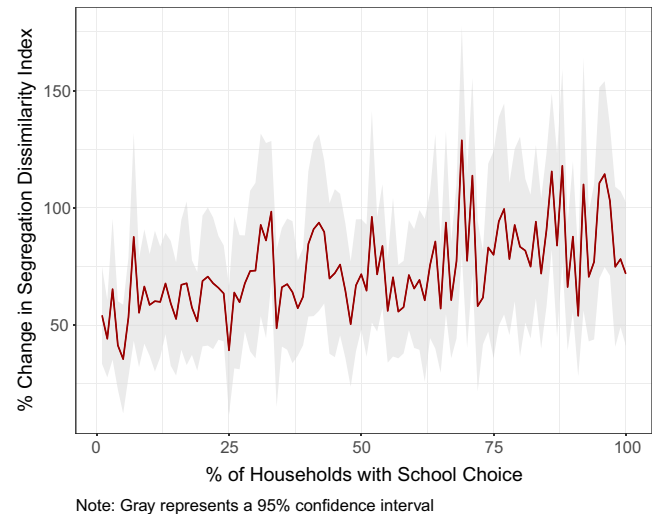


Fig. 2. School choice increases segregation when there are preference differences.

Third, participant selections of schools in the conjoint experiments may have been influenced by social desirability bias. Despite prior research showing that conjoint experiments can reduce social desirability bias by the nature of their design, it is still possible that parents were reluctant to allow the race of students to play a role in their school selections in the study, as it would in real-life school decisions. If, in reality, parents put greater importance on the race of the school's student body, this would result in larger coefficients on "Own Races is Majority" (Eq. 1 and Fig. 1) than those estimated in this study. Furthermore, such an outcome could result in less importance placed on one or more other school attributes relative to race. However, this outcome would be unlikely to have material impact on our results as long as there were still preference differences between Black and White parents for school attributes that have nothing to do with students' race.

Fourth, the simulations do not account for the US racial wealth gap (44). US Black households have 10% of the wealth of White households (45). Although shared property taxes fund most public school systems, most school districts allow schools to keep funds raised from their neighborhoods (46). If higher-rated school performance is linked to higher local funding, then an increase in Black parents with a corresponding decrease in White parents could result in a reduction in funding to maintain the school's high ratings. Any resulting decrease in funds may lead to a decrease in school ratings. As a result, Black parents may continue to pursue higher-rated schools to improve the social status of their children.

This work offers important opportunities for research. One may test these findings across different global conditions. The input for the ABM is based on the demographics and school make-up of Indianapolis, as the demographic and school-choice policies in the city are reasonably consistent with those of the United States as a whole. However, different areas of the United States deviate from this norm, which may impact variances in the preferences of White and Black parents. One could examine if a reduced number of A-rated schools or schools with a short commute would moderate the effect. Furthermore, future work may test whether the effect changes when the number of attributes and levels increases or decreases.

Data Availability. All study data are included in the article and/or *SI Appendix*. Data for all studies are provided at <https://osf.io/xz4tr/> (47).

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1. National Center for Education Statistics, "Number and percentage distribution of public elementary and secondary school students, by percentage of minority enrollment in the school and student's racial/ethnic group: Selected years, fall 1995 through fall 2015" (Report, National Center for Education Statistics, Washington, DC, 2018).
2. G. Orfield, "Schools more separate: Consequences of a decade of resegregation" (Tech. Rep., Harvard University, Cambridge, MA, 2001).
3. F. Welch, A. Light, *New Evidence on School Desegregation* (U.S. Commission on Civil Rights, Washington, DC, 1987).
4. E. Garcia, "Schools are still segregated, and black children are paying a price" (Tech. Rep., Goldman School of Public Policy, University of California, Berkeley, CA, 2022).
5. D. V. Francis, W. A. Darity, Separate and unequal under one roof: How the legacy of racialized tracking perpetuates within-school segregation. *RSF* **7**, 187–202 (2021).
6. L. A. Renzulli, L. Evans, School choice, charter schools, and white flight. *Soc. Probl.* **52**, 398–418 (2005).
7. R. Breen, K. B. Karlson, Education and social mobility: New analytical approaches. *Eur. Sociol. Rev.* **30**, 107–118 (2014).
8. G. J. Whitehurst, New evidence on school choice and racially segregated schools. *Evid. Speak. Reports* **2**, 1–9 (2017).
9. M. L. Kern, H. S. Friedman, L. R. Martin, C. A. Reynolds, G. Luong, Conscientiousness, career success, and longevity: A lifespan analysis. *Ann. Behav. Med.* **37**, 154–163 (2009).
10. Greatschools.org, Traffic analytics & market share. <https://www.similarweb.com/website/greatschools.org/#overview>. Accessed 1 March 2022.
11. N. Gillani, E. Chu, D. Beeferman, R. Eynon, D. Roy, Parents' online school reviews reflect several racial and socioeconomic disparities in K–12 education. *AERA Open* **7**, 232858421992344 (2021).
12. M. F. Lovenheim, P. Walsh, Does choice increase information? Evidence from online school search behavior. *Econ. Educ. Rev.* **62**, 91–103 (2018).
13. L. Bosetti, Determinants of school choice: Understanding how parents choose elementary schools in Alberta. *J. Educ. Policy* **19**, 387–405 (2004).
14. C. Bell, Geography in parental choice. *Am. J. Educ.* **115**, 493–521 (2009).
15. S. Altenhofen, M. Berends, T. G. White, School choice decision making among suburban, high-income parents. *AERA Open* **2**, 232858415624098 (2016).
16. S. Glazerman, D. Dotter, Market signals: Evidence on the determinants and consequences of school choice from a citywide lottery. *Educ. Eval. Policy Anal.* **39**, 593–619 (2017).
17. C. M. Billingham, M. O. Hunt, School racial composition and parental choice: New evidence on the preferences of white parents in the United States. *Sociol. Educ.* **89**, 99–117 (2016).
18. N. Lacireno-Paquet, C. Brantley, "Who chooses schools, and why" (Report, Education Policy Research Unit, Arizona State University, Tempe, 2008).
19. J. J. Holme, Buying homes, buying schools: School choice and the social construction of school quality. *Harv. Educ. Rev.* **72**, 177–206 (2002).
20. H. Buyruk, A school choice experience at the age of "parentocracy": Impressions from a public primary school in Turkey. *Int. J. Prog. Educ.* **16**, 230–247 (2020).
21. Constitution of the United States Article I, Section 2, Clause 3 (1787).
22. J. N. Sullivan, J. L. Eberhardt, S. O. Roberts, Conversations about race in Black and White US families: Before and after George Floyd's death. *Proc. Natl. Acad. Sci. U.S.A.* **118**, e2106366118 (2021).
23. P. J. Mazzocco, D. D. Rucker, A. D. Galinsky, E. T. Anderson, Direct and vicarious conspicuous consumption: Identification with low-status groups increases the desire for high-status goods. *J. Consum. Psychol.* **22**, 520–528 (2012).
24. S. A. James, John Henryism and the health of African-Americans. *Cult. Med. Psychiatry* **18**, 163–182 (1994).
25. D. L. Bernard, S. C. T. Jones, V. V. Volpe, Impostor phenomenon and psychological well-being: The moderating roles of John Henryism and school racial composition among Black college students. *J. Black Psychol.* **46**, 195–227 (2020).
26. D. Crockett, Paths to respectability: Consumption and stigma management in the contemporary black middle class. *J. Consum. Res.* **44**, 554–581 (2017).
27. P. J. Lenk, W. S. DeSarbo, P. E. Green, M. R. Young, Hierarchical Bayes conjoint analysis: Recovery of partworth heterogeneity from reduced experimental designs. *Mark. Sci.* **15**, 173–191 (1996).
28. Y. Horiuchi, Z. Markovich, T. Yamamoto, Does conjoint analysis mitigate social desirability bias? *Polit. Anal.*, 1–15 (2021).
29. J. Huber, K. Zwerina, The importance of utility balance in efficient choice designs. *J. Mark. Res.* **33**, 307–317 (1996).
30. P. E. Rossi, G. M. Allenby, R. McCulloch, *Bayesian Statistics and Marketing* (John Wiley & Sons, Hoboken, NJ, 2012).
31. B. Orme, "Sample size issues for conjoint analysis. Sawtooth software research paper series" (Tech. Rep., Sawtooth Software, Provo, UT, 1998).
32. E. Bonabeau, Agent-based modeling: Methods and techniques for simulating human systems. *Proc. Natl. Acad. Sci. U.S.A.* **99** (suppl. 3), 7280–7287 (2002).
33. E. B. Smith, W. Rand, Simulating macro-level effects from micro-level observations. *Manage. Sci.* **64**, 5405–5421 (2018).
34. P. Wohlstetter, D. Zeelandelaar, "America's best (and worst) cities for school choice" (Tech. Rep., Thomas B. Fordham Institute, Washington, DC, 2015).
35. D. Ihrke, "Reason for moving: 2012 to 2013" (US Census Bureau Report P20-574, US Census Bureau, Washington, DC, 2014).
36. O. D. Duncan, B. Duncan, A methodological analysis of segregation indexes. *Am. Sociol. Rev.* **20**, 210–217 (1955).
37. H. Theil, A. J. Finizza, A note on the measurement of racial integration of schools by means of informational concepts. *J. Math. Sociol.* **1**, 187–193 (1971).
38. D. S. Massey, "Residential segregation and neighborhood conditions in US metropolitan areas" in *America Becoming: Racial Trends and Their Consequences*, F. Mitchell, N. J. Smelser, W. J. Wilson, Eds. (National Academy Press, Washington, DC, 2001), pp. 391–434.
39. M. Maciag, School Segregation Data for U.S. Metro Areas. Governing. <https://www.governing.com/archive/school-segregation-dissimilarity-index-for-metro-areas.html>. Accessed 10 March 2022.
40. National Center for Education Statistics, "Enrollment in elementary, secondary, and degree-granting postsecondary institutions, by level and control of institution: Selected years, 1869–70 through fall 2029" (Report, National Center for Education Statistics, Washington, DC, 2019).
41. T. C. Schelling, Models of segregation. *Am. Econ. Rev.* **59**, 488–493 (1969).
42. T. C. Schelling, Dynamic models of segregation. *J. Math. Sociol.* **1**, 143–186 (1971).
43. J. Jordan, Americans Moving at Historically Low Rates, Census Bureau Reports. US Census Bureau. <https://www.census.gov/newsroom/press-releases/2016/cb16-189.html>. Accessed 10 March 2022.
44. B. Callaghan, L. Harouni, C. H. Dupree, M. W. Kraus, J. A. Richeson, Testing the efficacy of three informational interventions for reducing misperceptions of the Black-White wealth gap. *Proc. Natl. Acad. Sci. U.S.A.* **118**, e2108875118 (2021).
45. J. Bricker et al., Changes in US family finances from 2013 to 2016: Evidence from the survey of consumer finances. *Fed. Reserve Bull.* **103**, 1–42 (2017).
46. S. Schaller, E. Nisbet, Regulating private support for public goods: De-clubbing public schools. *J. Educ. Policy* **35**, 287–314 (2020).
47. B. L. Turner, K. Ukanwa, A. Jones, Data for "School choice increases racial segregation even when parents do not care about race." Open Science Framework (OSF). <https://osf.io/xz4tr/>. Deposited 22 July 2022.