

# Local Economic Segregation and Opinions about Income Integration in Schools

City &amp; Community

00(0) 1–25

© American Sociological Association 2023

DOI: 10.1177/15356841231195616

journals.sagepub.com/home/cty

**Kendra Bischoff<sup>1</sup> and Emily Sandusky<sup>1</sup>**

## Abstract

Income-segregated contexts may limit residents' exposure to income inequality, suppressing concerns about economic disparity and support for economic integration. In this article, we assess the relationship between residential income segregation and attitudes about the importance of income integration in schools to understand the link between local economic conditions and individuals' attitudes about social equity. We test this relationship by measuring residential income segregation at two geographic scales—meso-level institutional segregation between school districts and micro-level neighborhood segregation between census tracts. We find a negative relationship between school district income segregation in individuals' residential counties and beliefs about the importance of income integration in schools, but no relationship between more fine-grained neighborhood income segregation and these same beliefs. The results suggest that the degree to which residents problematize income-segregated school contexts is associated with the relative income homogeneity of the school districts where they live, which represent the salient political boundary for the administration of educational services. These findings contribute to broader knowledge about the varied pathways and spatial scales through which segregated environments may shape beliefs about social and economic inequality.

## Keywords

income segregation, public opinion, school integration, residential context, attitudes

Residential income segregation among families in the United States has grown in the past 45 years (Reardon and Bischoff 2011; Reardon et al. 2018). These increases have been driven by families with children (Owens 2016), and consequently have exacerbated income sorting in public schools (Owens, Reardon, and Jencks 2016). Income differences across educational environments may increase inequality in children's outcomes (Owens 2018) for several reasons, including less socioeconomic integration within schools or school districts and greater disparities in access to social resources embedded in families, such as parental educational attainment (Bischoff and Owens 2019). One key concern posited in the income segregation literature is that relatively income-homogeneous residential contexts may

suppress individuals' concern for economic inequality and support for economic integration (Bischoff and Reardon 2012; Mijs 2018; Reardon and Bischoff 2019). However, alternative theoretical approaches identify diverse economic contexts as a source of social tension that may suppress individuals' concern for those in different economic strata (Sands 2017).

In this article, we assess the relationship between residential income segregation and

---

<sup>1</sup>Cornell University, Ithaca, NY, USA

### Corresponding Author:

Kendra Bischoff, Department of Sociology, Cornell University, 323 Uris Hall, Ithaca, NY 14853, USA.

Email: kbischoff@cornell.edu

attitudes about the importance of income integration in schools to understand the link between local conditions and individuals' perceptions. Income segregation describes the extent to which residential sorting by income occurs unevenly across geographic or geopolitical units (Reardon 2011a). Higher levels of income segregation mean that residential contexts have less income diversity than the larger geographic unit in which they are nested. We test this relationship by measuring residential income segregation at two scales—meso-level institutional segregation between school districts and micro-level neighborhood segregation between census tracts. The social contexts of census tracts are akin to small neighborhoods that are delineated only by close geographic proximity. The social contexts of school districts are shaped by their larger geographic boundaries and also the fact that they confer membership in political entities charged with providing public education. Using these two scales, we investigate whether economic conditions within spatial boundaries with disparate geographic, social, and political meanings have different implications for individuals' attitudes. More specifically, we suggest that school districts are a tangibly and cognitively important institutional context for attitudes about school integration. We draw on a unique, nationally representative and geocoded dataset to link respondents' attitudes to characteristics of their residential contexts. Our results show that income segregation between school districts within counties is negatively associated with county residents' beliefs about the importance of income integration in schools. While residents of counties with relatively income-homogeneous school districts are less likely to prioritize income integration in schools, economic homogeneity at the neighborhood level appears to be less influential.

## BACKGROUND

### *The Influence of Residential Economic Context on Public Opinion*

A rich social scientific literature has investigated trends in public opinion about a range

of issues related to social inequality, including individuals' perceptions of local, state, and national problems, understanding of racial and economic inequality, and support for various public policies. Individual-level attributes, such as ideological orientation, social class, and gender, reliably predict opinions about social inequality (Bobo 1991; Franko, Tolbert, and Witko 2013; Gilens 1995; Hunt 1996, 2004); however, sociological theory suggests that people's residential and geopolitical contexts may also influence their knowledge and attitudes about social stratification in their local communities and nationally. Indeed, a large body of research shows that residential contexts shape individual-level outcomes, such as educational attainment, health, and employment (literature reviewed in Sampson, Morenoff, and Gannon-Rowley 2002; Sharkey and Faber 2014). Understanding how social and spatial contexts add to, or interact with, individual-level attributes to shape beliefs and attitudes expands basic knowledge about the complex factors that influence public opinion, and helps uncover the pathways through which social inequality is developed and maintained.

Local geographic space, often defined as the residential neighborhood, is hypothesized to affect individuals through a range of direct and indirect influences, such as interpersonal contact, social cohesion and trust among residents (*collective efficacy*), quality of public goods, density of local organizations, levels of crime, environmental conditions, and access to information through observation (literature reviewed in Sampson et al. 2002; Sharkey and Faber 2014). Drawing from this larger set of mechanisms found in the contextual effects literature, we focus on two pathways that connect an individual's local economic context to their beliefs about economic inequality. First, spatial proximity provides an opportunity for routine interaction between neighbors and co-residents and for the potential development of close social ties (Grannis 2009; Neal 2013). Interpersonal contact through casual encounters and social networks situated in residential environments transmits information

about local economic well-being. Although the socioeconomic status of individuals is not always obvious or visible to observers, conversations with neighbors and acquaintances may reveal information about a recent job layoff, vacation plans, or the financial effects of health or housing troubles.

Intergroup contact between individuals of different races, ethnicities, and other socially salient groups can reduce prejudice and enhance out-group knowledge and empathy (Allport 1954) because it provides an opportunity for people to learn about those who are different from themselves, potentially dispelling stereotypes, and to generate emotional connections, or affective ties, with disparate others (Pettigrew 1998; Pettigrew et al. 2011). Allport's (1954) contact theory predicted that intergroup contact is most effective for reducing prejudice under certain conditions, such as when groups have equal status in a situation and when individuals from those groups cooperate to work toward common goals, though a review of the literature concludes that intergroup contact often produces positive effects even in the absence of these optimal conditions (Pettigrew 1998). A good deal of the interpersonal contact literature focuses on racial difference; however, an extension of intergroup contact theory suggests that interaction between individuals from different socioeconomic groups may increase understanding and concern for socioeconomic integration in an economically unequal society. Through these interactions, individuals may update their prior beliefs about their own position on the economic ladder and develop a more comprehensive picture of economic variation in their residential contexts. Conversely, intergroup contact may create tension between groups. Scholars have argued that racial diversity can lead majority groups to feel threatened, thereby reducing out-group tolerance (Key 1949). Others have reasoned that socially diverse interactions may create divisions under conditions of consolidated social difference—when membership in an ethnoracial group strongly predicts

other social characteristics, such as religious affiliation or income, thereby reducing potential points of commonality among members of different ethnoracial groups (Baldassarri and Abascal 2020). Extending this logic to income-diverse interactions produces uncertainty in how mixed-income communities shape individuals' beliefs.

A second spatial mechanism that may shape a person's perceptions of the economic status of their neighbors and of their community at large is their local information environment, or the knowledge one can glean from observing their local surroundings. Visible indicators such as types of businesses, the make and year of cars people drive, and the price of homes convey the level and range of individuals' economic well-being in the community, while the quality of public infrastructure helps convey the collective economic status of a place. Local media outlets also contribute to a community's economic information environment by reporting on issues of poverty and privilege, highlighting volunteer efforts, and covering local policy topics such as new housing development and social services. This type of information may draw attention to the diversity of economic interests in a community or reinforce homogeneous conditions. Empirical evidence supports the theory that individuals can gather relatively accurate contextual information from their local environments through observation and use this information to inform broader conclusions. For example, Newman, Velez, and, Hartman (2015) demonstrate that county- and zip code-level unemployment rates are predictive of residents' reports of the difficulty of finding a job in their community. Individuals' evaluations of the trajectory of the national economy are influenced by home foreclosure rates within the boundaries of their local media market and in the state where they live (Reeves and Gimpel 2012), and lower income residents of states with greater income inequality are more likely to accurately report growing income disparity at the national level (Xu and Garand 2010).

## Scale and Boundary

A topic that has received less attention in this literature is how local economic information available through observations and interpersonal contact may be encountered and interpreted differently depending on the scale of the context and the salience of its boundaries. In this framework, residential neighborhoods can be considered a micro context, characterized by regular, spontaneous opportunities to observe and interact with a relatively small group of neighbors within socially determined, often imprecise boundaries. Institutional boundaries, like those created by school district catchment areas, are politically determined and confer access to specific public goods. Political boundaries provide individuals with place-based identities that are unambiguous and uniform, and serve as a foundation for structuring contextual information (Weiher 1991).

Local public institutions, such as schools, are likely more inclusive of an area's total population than personal networks, given the tendency for individuals to socialize and affiliate with people similar to themselves (McPherson, Smith-Lovin, and Cook 2001). This tendency toward homophily also leads to ethnoracial and socioeconomic friendship segregation, which is well-documented in educational settings, and limits the extent and nature of interpersonal interactions (Moody 2001). Nevertheless, participation in local public schools or other open institutions may highlight the economic advantage, disadvantage, or inequality present in a community beyond individuals' close social ties or residential blocks. This may occur, in part, because school districts generally encompass several, and sometimes many, socially determined residential neighborhoods. In addition, most U.S. school districts have fewer secondary schools than elementary schools, making middle and high schools less acutely localized. This structure mechanically increases school integration as students age through local school systems (Fiel and Zhang 2018), though the degree of exposure to social

difference depends on the characteristics of the total school district population. Finally, although schools can be less socially diverse than their residential catchment areas due to nonresidential school choice options (Bischoff and Tach 2020), school districts can also draw individual school catchment boundaries in ways that promote school integration across micro-segregated neighborhood contexts.

Residents' interpretation of contextual economic information within school districts is likely informed by the particular function of local schools in their lives (Hunter 1975). For example, parents whose children will soon start school may actively seek information about local districts and those with current students share a goal of high-quality education for their children. Collaboration toward this aim may create some of the conditions at the foundation of Allport's contact hypothesis. Nevertheless, school district boundaries are arguably salient to a broader swath of residents for financial, political, and social reasons. In most cases, school districts levy taxes and are governed by an independent, elected board of officials that make decisions about matters such as curricula, disciplinary policies, budgets, and individual school attendance boundaries. Given the decentralized nature of K–12 schooling in the United States, the policies and practices of local school districts reflect the community's beliefs about the role of schools in socializing and educating children, concretizing the salience of citizenship in these sociopolitical units. The perceived quality of local schools, as measured by standardized test scores, is also reflected in home prices (Black 1999), affecting both parents of children in school and homeowners alike.

In their call to address “where, when, why, and for whom” residential contexts shape outcomes, Sharkey and Faber (2014) emphasized using theory and evidence to find the appropriate match between the spatial scale and the social process under examination. School districts represent a meso context in which residents' local neighborhoods are reflected, but also refracted through the

mission of public education and, often, a geographically more expansive view of local community. At the same time, school district boundaries play a large role in creating unequal school environments because they significantly shape schools' resources and determine the composition of the student population. For these reasons, school district boundaries are likely to be both familiar and meaningful to residents, and may be particularly salient for attitudes about income integration in schools.

### *Income Segregation*

Income integration makes intergroup contact between disparate income groups more likely and it ensures that local information contexts are heterogeneous. Conversely, individuals who live in income-segregated communities are relatively isolated from contact with individuals from different income groups. Income segregation may stunt understanding across social boundaries and limit information about structural sources of inequality and mobility (Mijis 2018). Because income segregation may skew perceptions of the broader extent of economic and social issues and limit the formation of affective ties between people in different income groups, scholars have argued that segregated communities may shape attitudes about social inequality and social welfare policy (Bischoff and Reardon 2012; Reardon and Bischoff 2019).

Evidence from New York City shows that residents in income-diverse neighborhoods perceive more local income disparity and report greater concern about the income gap in both New York City and nationally than their counterparts in more homogeneous neighborhoods (Minkoff and Lyons 2019). Research that has more specifically assessed the association between residential segregation and individual attitudes finds that affluent White residents of income-segregated metropolitan areas report more positive assessments of local job opportunities, crime level, and healthcare accessibility than nonaffluent White individuals who live in the same metro area (Thal 2017).

A related body of research uses field experiments to test the effects of brief exposure to evidence of economic inequality in one's local context on an immediate show of support for redistributive policies. In affluent Boston suburbs, the presence of a "poverty-stricken" person reduced the likelihood that relatively high-income passersby would sign a petition in support of a millionaire's tax, suggesting that brief proximity to extreme income difference reduced immediate support for one redistributive policy targeting high earners (Sands 2017). Although this field experiment eliminates bias from non-random residential selection that may arise in observational studies, such as those cited above, it is not clear that brief encounters with social difference influence individuals' attitudes in the same way as prolonged exposure to social difference in residential communities. This field experiment relates to the effects of one's *local information environment*, but the mechanisms are distinct from residential context because they are momentary pieces of information that do not allow for the development of social ties or cooperative activities between disparate individuals. Nevertheless, evidence from both observational and experimental research contributes to the broad understanding of how exposure to economic inequality, or lack thereof, influences attitudes about economic inequality in society.

### *Attitudes about Social Integration in Schools*

Elementary and secondary school integration is a social issue that is particularly tied to local geographic context because schools are inherently local institutions. Research on attitudes about racial integration in schools surged in the wake of large-scale school desegregation efforts in the United States in the 1960s and 1970s. As an issue of great importance to debates about equality of opportunity and access to social mobility, trends in attitudes about racial integration in schools were viewed as a marker of progress



toward racial equity. By the 1980s, research showed that people overwhelmingly supported the principle of racially integrated schools (Smith et al. 2018), though there was more varied support for specific policies that would achieve racial integration in schools (Rossell 1990). Advancements in the public opinion literature on school segregation linked individual beliefs to local context primarily to disentangle the reasons for White individuals' opposition to "busing," the most prominent policy solution at the time. By including features of an individual's local context, these studies extended the literature by incorporating estimates of the personal impact of such policies on individuals (e.g., how a busing policy might be implemented in a respondent's school district; McClendon 1985; McConahay 1982; Weatherford 1980). As such, these studies did not focus on how local context influenced individuals' general support or opposition to racial integration in schools, but instead focused on attitudes about specific policy solutions.

Although racial segregation is an enduring dimension of American schools (Reardon and Owens 2014), it is now unconstitutional to assign children to schools based on their race/ethnicity alone as a result of the 2007 *Parents Involved* Supreme Court case. As income segregation between schools has risen (Owens et al. 2016), socioeconomic test score gaps have increased (Reardon 2011b), and direct solutions to racial segregation have waned (Reardon et al. 2012), understanding attitudes about economic segregation in schools has become increasingly relevant to education equity efforts. A recent report based on a nationally representative sample of parents of school-age children found that 45 percent of respondents thought it was "extremely important" or "very important" that the public schools in their community had a mix of students from different income backgrounds. Higher income parents reported that economic diversity is less important than lower income parents did, but political ideology was the strongest predictor of views on the importance of economic diversity ("The

49th Annual PDK Poll" 2017). A separate study reported that 62 percent of adults said economic "school segregation" was "very important" or "somewhat important" to them, while 70 percent said "more should be done to integrate low- and high-poverty schools" (Boser and Baffour 2017). The available public opinion research thus shows that a significant portion of Americans are concerned about economic segregation in schools, but it remains unclear how individuals' residential context might influence these attitudes.

In this article, we seek to understand the pattern of associations between individuals' local geographic context and their beliefs about the importance of economic integration in schools. Drawing on the sociological theories and empirical findings outlined above, we hypothesize that individuals who live in more income-segregated contexts are less likely to believe that income integration in schools is important while acknowledging that conflict-based theories might suggest otherwise. We explore this relationship at two geographic scales by computing residential household income segregation at the micro level—between neighborhoods—and at the meso level—between school districts, which are arguably the focal boundary for attitudes about income integration in schools. We further explore the relationship for parents of children in school who are embedded actors in educational institutions and for whom school district contexts and attendance policies may be particularly salient.

## DATA AND METHOD

### *Data*

We fielded an original survey question about the importance of economic integration in U.S. schools on a nationally representative sample of 1,000 adults. The survey was conducted by the Survey Research Institute at Cornell University between September 19, 2016 and December 13, 2016.<sup>1</sup> The dependent variable is derived from a question prompt that first informed respondents that

families are more residentially separated by income now than they were 40 years ago. Respondents were then asked to indicate how important it is that children attend school with students from a wide range of economic backgrounds. The response choices were as follows: 1 = not important at all, 2 = somewhat important, 3 = important, 4 = very important, and 5 = extremely important.<sup>2,3</sup>

### *Measuring Local Context*

In this study, we seek to understand the link between contextual economic factors and individuals' opinions. The county is a theoretically appropriate measure of local context because our key contextual construct is a measure of spatial economic segregation. As has been argued in previous research on the relationship between economic context and public opinion, using the county to measure local context is often more appropriate than smaller geographies because they capture labor market dynamics and broader economic distributions than towns and neighborhoods (Newman, Johnson, and Lown 2015; Oliver and Mendelberg 2000). In addition, counties are more appropriate for assessing the potential for school income integration than metropolitan areas, which are much larger geographic units often used in segregation research.<sup>4</sup> To assess each respondent's experience of economic integration vis-à-vis other proximate residential spaces, it is necessary to measure the distribution of income in a geographic unit larger than their immediate residential environment (e.g., the distribution of income across tracts within counties). Although the population and land size of counties vary widely across the United States, counties are mid-size geopolitical units that are meaningful to most Americans.

Respondents were not asked to identify their county of residence in the survey, but they were asked to identify their residential ZIP code. We use self-reported ZIP codes to derive the county of residence for all respondents except a small number of cases in which the ZIP code was missing or invalid. In these

cases, we use the area code from the respondent's phone number to determine county of residence, but only if the respondent was reached on a landline.<sup>5</sup> Some survey research relies exclusively on the area code from the respondent's phone number to identify geographic location. However, the ubiquity of cell phones makes area codes a suboptimal means of identifying county of residence because cell phone numbers are not necessarily tied to place of residence.<sup>6</sup> Approximately 61 percent of the survey respondents for this study were reached on a cell phone. In total, there are 951 cases in our sample with valid county identifiers.

We match ZIP codes to counties using the U.S. Department of Housing and Urban Development's (HUD) December 2016 ZIP code-county crosswalk. The majority of ZIP codes are nested within counties, and in cases where ZIP codes span multiple counties, we use HUD's measure of residential overlap to assign the respondent to the county in which the greatest proportion of the ZIP code's residential population is located.<sup>7</sup> There are 517 unique counties represented in the analytic sample.

### *Estimating Income Segregation*

As described above, we contrast the experience of county-level micro segregation (between neighborhoods) to county-level meso segregation (between institutional boundaries) and operationalize these two geographic scales with census tracts and school districts, respectively.<sup>8</sup> This approach builds on scholarly discussions about potential variation in the causes and consequences of segregation at different geographic and geopolitical scales (Kaplan and Holloway 2001; Reardon et al. 2008). We compute income segregation using binned household income data from the 2014–2018 American Community Survey tabulated into tracts and school district boundaries, the latter of which we obtain from the National Center for Education Statistics Education Demographic and Geographic Estimates.<sup>9</sup> We use the Common

Core of Data (National Center for Education Statistics 2021) to link school districts to the appropriate county.

We measure income segregation using the rank-order information theory index ( $H$ ), an evenness measure that compares variation in household incomes within tracts or school districts to variation in household incomes in the county where they are located (Reardon 2011a). This measure ranges from a theoretical minimum of 0 (indicating that all tracts or school districts have the same income distribution as the county) to a theoretical maximum of 1 (indicating that all households in each tract or school district are in the same income category). We multiply the index by 100 for ease of interpretation (theoretical range = 0–100). Because income data are based on a sample of respondents in the American Community Survey, and because small sample sizes create upward bias in income segregation measures, we apply a bias-correction technique to account for the possibility of small sample sizes in any of the geographic units in our study (Reardon et al. 2018).<sup>10</sup>

Ultimately, we dichotomize county-level income segregation into counties with tract or school district income segregation below and above the population-weighted national median ( $H_{\text{tract}} = 7.65$ ;  $H_{\text{school district}} = 1.49$ ), meaning the thresholds represent the median level of county-level segregation experienced by U.S. residents. Although operationalizing income segregation into blunt categories discards fine-grained information, comparing counties that have meaningfully different levels of income segregation best captures the contextual mechanisms we described above. In addition, in places where school districts are coterminous with counties, such as in many southern states and some large cities, county-level income segregation between school districts is zero. Twenty-eight percent of the 517 unique counties in our analytic sample have zero income segregation because they contain only one school district.

National variation in the structure of school district boundaries leads to differences

in the relationship between counties and school districts. A county-based school district with between-school district income segregation equal to zero may not feel integrated because there is still localized segregation. Nevertheless, that county is arguably socially and politically integrated in ways that may not be true of demographically similar counties with more fragmented school district systems. Whereas tract-level segregation does not depend on political boundaries, and therefore may be experienced more consistently across the United States,<sup>11</sup> variation in school district context presents an opportunity to observe the salience of meso level institutional contexts as socially constructed, politically meaningful units. Table 1 presents county-level tract and school district income segregation for select cases to illustrate variation in school district structure and its relationship to income segregation. San Francisco County, CA consists of one urban district covering the city of San Francisco and therefore has no between-school district segregation, but slightly above-median neighborhood segregation. Miami-Dade County, FL consists of one large county-based district covering many municipalities, including the city of Miami. Miami-Dade also has no between-district segregation and above-median neighborhood segregation. Wayne County, NY, adjacent to Monroe County and its central city of Rochester, is characterized by approximately the median level of school district income segregation in U.S. counties, but below-median neighborhood segregation. Somewhat typical in structure, Wayne County contains 11 suburban, town, and rural school districts. A more politically fragmented configuration is observed in Cook County, IL (Chicago), Cuyahoga County, OH (Cleveland), and Essex County, NJ (Newark), which all contain central city school districts and between 19 and 115 autonomous suburban districts. Essex and Cuyahoga Counties are characterized by very high school district and neighborhood segregation whereas Cook County has above-median, but more moderate, school district and neighborhood



**Table 1.** Examples of Variation in County-Level Segregation by School District Boundary Configuration.

County	Schools districts in county	Between-tract segregation ( <i>H</i> )	Between-school district segregation ( <i>H</i> )
Cook County, IL	Chicago city + 115 small city or suburb	10.56	3.09
Cuyahoga County, OH	Cleveland city + 30 suburb	13.94	9.45
Essex County, NJ	Newark city + 19 suburb	17.29	14.03
Hamilton County, TX	Three town or rural	1.42	0.22
Miami-Dade County, FL	Miami-Dade County	10.65	0.00
San Francisco County, CA	San Francisco city	8.20	0.00
Wayne County, NY	11 Suburb, town, or rural	3.10	1.38

Source. Household Income and Number of School Districts, 2014–2018 American Community Survey, and National Center for Education Statistics.

segregation. Finally, Hamilton County, TX consists of three rural school districts and has far below-median school district and neighborhood segregation.

In addition to our preferred measure of income segregation, we estimate models using the continuous rank-order information theory index (*H*) and the square root of the rank-order information theory index, which reduces the skew and kurtosis of the raw measure.<sup>12</sup> We present estimates using these alternative measures in the Robustness Analysis section.

### Analytic Strategy

The analytic sample includes all respondents with nonmissing responses to the variables in our statistical models and a valid geocode ( $n = 890$ , 89 percent of the full sample). We estimate ordinal logistic regression models to test the association between individual and contextual characteristics and opinions about economic integration in schools. We cluster standard errors at the county level to help account for dependencies among respondents from the same county.<sup>13,14</sup>

In the analyses, we include a set of control variables at both the county and individual levels that may be correlated with income segregation and the outcome of interest. At the county level, we control for median household income and the percentage of

households that are below the poverty line, both of which reflect economic well-being within a county. We control for the percentage of the county population that identifies as Black or African American because, on average, Black Americans have lower incomes and less wealth than White Americans (Jones, Schmitt, and Wilson 2018). This measure gives some purchase on the potential salience of race and racial bias in the formation of attitudes about income integration in schools. We obtain county-level demographic data from the 2014–2018 American Community Survey, which has a midpoint of 2016 to match the survey data. We also include the share of the county population that voted for the Republican candidate in the 2016 presidential election to control for local political climate, a likely conduit for political values and information that may shape residents' understanding of economic integration.<sup>15</sup> We obtain county-level presidential vote share data from the Congressional Quarterly Voting and Elections Collection. Finally, we include population density—the number of people per square mile—to control for differences in frequency and character of opportunities for interpersonal interaction in neighborhoods and school districts.

Using individual-level information from survey respondents, we control for Republican political party identification (1 = “strong Republican” or “not very strong Republican”)

and social ideology (1–7 scale, 1 = “extremely liberal” to 7 = “extremely conservative”). In addition to the close link between partisanship and attitudes about economic inequality, political and ideological perspectives likely serve as lenses through which individuals observe and interpret contextual economic conditions. In addition, we control for a standard set of demographic features including race/ethnicity (non-Hispanic White [reference], non-Hispanic Black, Hispanic, and Other (Asian or Pacific Islander; American Indian, or Alaska Native; Other; Multiple)), age, marital status, gender, educational attainment, income, and nativity. We combine several racial/ethnic categories due to small sample sizes in the data. Nevertheless, the results remain the same if the “Other” racial/ethnic category is disaggregated. We control for respondents’ household income using low (less than \$50,000), middle (between \$50,000 and \$100,000), and high (greater than \$100,000) income categories, which are condensed from nine categories in the original data. Finally, we control for homeownership and for the presence and school enrollment of children in respondents’ households. Both of these measures indicate increased investment in one’s local community, either because of personal financial stake in the valuation of public goods or because of direct use of elementary and secondary education services.

## RESULTS

Table 2 presents descriptive statistics for individual characteristics of survey respondents. Thirty-two percent of respondents have household incomes under \$50,000, the threshold for the low-income category, 41 percent of respondents are in the middle-income category, and the remaining 27 percent have income over \$100,000. Fifty-four percent of the sample are married and half are female. Forty-five percent have a college degree, two-thirds own their homes, and 90 percent were born in the United States. Among survey respondents in this sample, 72 percent identified as non-Hispanic White,

eight percent as non-Hispanic Black or African American, nine percent as Hispanic, and 11 percent as non-Hispanic Other race/ethnicity. The mean age is just under 50 years old. The sample is fairly evenly divided between households with no children, households with children in public or private school, and households with adult children who are no longer enrolled in school. The mean self-reported social ideology of 4.13 falls between “moderate” and “slightly conservative” on the 7-point scale and 27 percent of respondents identify themselves as Republican.<sup>16</sup>

Table 3 presents descriptive statistics for contextual characteristics of the counties in which survey respondents reside. The primary explanatory factors in our analyses are between-tract and between-school district income segregation within counties, both of which are dichotomized around the population-weighted median among all U.S. counties, as described above. Forty-six percent of respondents live in counties with above-median neighborhood income segregation (between tracts), while forty-seven percent of respondents live in counties with above-median income segregation between school districts. On the whole, there is less income segregation between school districts than census tracts because school districts generally encompass larger populations, often with greater income diversity. On average, just over 47 percent of voters in respondents’ counties supported the Republican candidate in the 2016 presidential election. The median household income is \$62,110 and 13.31 percent of households are below the poverty line. On average, Black residents comprise 11.67 percent of the population in respondents’ counties. The Black population share ranges from zero to 62 percent. The average population density in respondents’ counties is 1,980 persons per square mile, and density ranges from fewer than four to over 72,000 persons per square mile.

Figure 1 describes survey respondents’ attitudes toward income integration in schools. The data illustrate fairly broad agreement

**Table 2.** Individual-level Descriptive Statistics ( $n = 890$ ).

Individual-level characteristics	Mean or proportion	SD
Social ideology	4.13	1.68
Republican party	0.27	—
Household income		
Low income	0.32	—
Middle income	0.41	—
High income	0.27	—
Married	0.54	—
Female	0.50	—
Bachelor's degree or higher	0.45	—
U.S. born	0.90	—
Homeowner	0.68	—
Race/ethnicity		
White	0.72	—
Black	0.08	—
Hispanic	0.09	—
Other	0.11	—
Age	49.97	17.56
Children in household		
No children	0.30	—
Children in school	0.35	—
Adult children	0.35	—

on the importance of children of different income levels attending schools together with over 70 percent of respondents reporting that income integration is either “important,” “very important,” or “extremely important.” Approximately, 10 percent of respondents indicated that income integration in schools is “not important at all.”

Table 4 presents results from ordered logistic regression models that estimate the association between the perceived importance of income integration in schools and residential income segregation. Models 1 and 2 estimate the relationship between the perceived importance of income integration in schools and micro-level residential income segregation (between neighborhoods). Model 1 shows no significant relationship between residence in a county with above-median (compared to below-median) neighborhood segregation and the perceived importance of income integration in schools, controlling for the contextual socioeconomic and political

factors noted above. This association remains insignificant with the inclusion of a set of individual characteristics in Model 2. Overall, the first two models show no evidence of a meaningful association between micro segregation and expressed importance of children from different income levels attending school together.

Models 3 and 4 assess the relationship between the perceived importance of income integration in schools and meso level residential income segregation (between school districts). Model 3 indicates a negative and statistically significant relationship ( $p < .05$ ) between residence in a county with above-median (compared to below-median) income segregation across school districts and perceived importance of income integration in schools, controlling for the same contextual socioeconomic and political factors included in the first two models. The addition of individual-level characteristics in Model 4 increases the magnitude and significance

**Table 3.** County-level Descriptive Statistics ( $n = 890$ ).

County-level characteristics	Mean or proportion	SD	Minimum	Maximum
Share of respondents in counties with <i>between-tract</i> income segregation above weighted national median	0.46	—	—	—
Income segregation ( $H$ ) in counties above median ( $n = 413$ )	10.47	1.75	7.70	17.29
Income segregation ( $H$ ) in counties below median ( $n = 477$ )	4.23	2.32	0.00	7.65
Share of respondents in counties with <i>between-school district</i> income segregation above weighted national median	0.47	—	—	—
Income segregation ( $H$ ) in counties above median ( $n = 421$ )	4.18	2.06	1.50	14.03
Income segregation ( $H$ ) in counties below median ( $n = 469$ )	0.36	0.48	0.00	1.49
2016 Republican vote share	47.17	16.66	4.09	85.91
Median household income (\$1,000)	62.11	16.54	24.09	136.27
Proportion of households below poverty line	13.31	4.67	3.70	34.80
Black population share	11.67	12.00	0.00	62.02
Population density (1,000 persons per square mile)	1.98	6.72	0.00	72.05

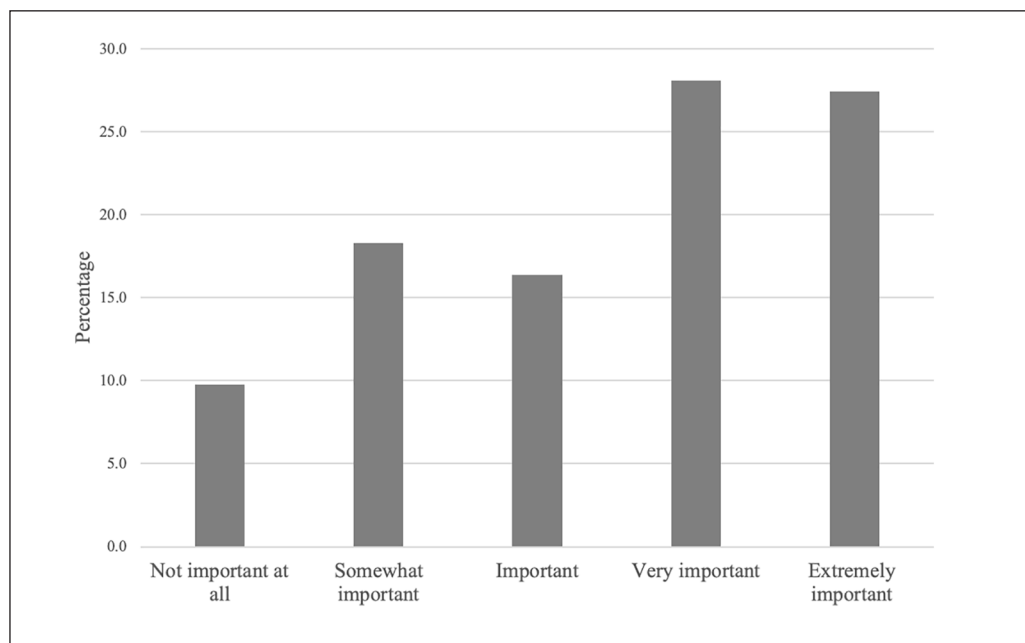
Source. 2014–2018 American Community Survey, National Center for Education Statistics, and Congressional Quarterly Voting and Elections Collection.

level of the coefficient on school district income segregation ( $p < .01$ ), which suggests that one or more of the individual-level characteristics suppress the estimated association between school district income segregation and integration attitudes in Model 3. According to this model, the log odds of reporting greater perceived importance of income integration in schools are 0.39 lower among residents of counties with income segregation above the national median, compared to their counterparts in counties with below-median income segregation.

With the exception of segregation measures, the estimated associations between the perceived importance of income integration in schools and county- and individual-level control variables are similar across models that include between-tract and between-school district segregation. The magnitude and significance of school district income

segregation stand out among the contextual variables in Model 4 (which also include individual-level controls), though the Black population share and 2016 Republican vote share also have negative, statistically significant associations with the perceived importance of school income integration. The coefficients for median household income, poverty rate, and population density are nonsignificant.

Because favoring social integration is often coded as a liberal perspective, the direction and significance of many of our individual-level control variables conform with expectations. For example, opinions regarding the importance of income integration in schools are informed by social ideology and political orientation. Social conservatives and Republicans are significantly less likely than their respective counterparts to report that economic integration is important, controlling for all individual and contextual



**Figure 1.** Importance of economic integration in schools ( $n = 890$ ).

variables. Results from Models 2 and 4 indicate that women are more likely than men to believe that school integration is important, and Black and Hispanic individuals are significantly more likely than White individuals to report that it is important for schools to be economically integrated. However, respondents' income and the presence of children in the household, two factors that seem aligned with opinions about income integration in schools, are not significantly associated with perceived importance of income integration in schools, net of other factors in the models.

To help interpret the results, we compute predicted probabilities for each level of the outcome variable for respondents who live in counties with segregation below and above the population-weighted national median. The marginal changes and associated statistical significance levels presented in Appendix Table A1 show that modeling a shift from below- to above-median tract-level income segregation does not significantly change the perceived importance of income integration. Table A2 presents the marginal changes to predicted probabilities with a shift from below- to above-median income segregation

between school districts. The average likelihood of reporting that it is "not important at all" that "children attend school with students from a wide range of economic backgrounds" is 3.4 percentage points higher for respondents who live in counties with above-versus below-median income segregation. At the other extreme, the average likelihood of reporting that it is "extremely important" that "children attend school with students from a wide range of economic backgrounds" is 7.1 percentage points lower for respondents who live in counties with above- versus below-median income segregation. Taken together, these results provide a more detailed, substantive depiction of the negative association between residence in relatively income-homogenous school districts and expressed importance of income integration among children in schools.

### *Parents of Children in School*

Next, we analyze the association between meso-level income segregation and opinions about economic integration in schools among parents of children in school ( $n = 312$ ) for



**Table 4.** Estimated Log Odds Coefficients from Ordered Logistic Regression Models Predicting Perceived Importance of Income Integration in Schools ( $n = 890$ ).

	(1)	(2)	(3)	(4)
<i>Contextual variables</i>				
<b>Between-tract</b> income segregation above weighted national median	0.08 (0.13)	0.07 (0.14)		
<b>Between-school district</b> income segregation above weighted national median			-0.32* (0.13)	-0.39** (0.13)
2016 Republican vote share	-0.02** (0.00)	-0.00 (0.01)	-0.02*** (0.00)	-0.01 <sup>†</sup> (0.01)
Median household income	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Share of households below poverty line	0.01 (0.02)	0.02 (0.03)	0.01 (0.02)	0.02 (0.03)
Black population share	-0.01 (0.01)	-0.01 <sup>†</sup> (0.01)	-0.01 (0.01)	-0.01* (0.01)
Population density	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
<i>Individual variables</i>				
Social ideology		-0.24*** (0.05)		-0.24*** (0.05)
Republican party		-0.25 (0.17)		-0.28 <sup>†</sup> (0.17)
Household income (reference: middle income)				
Low income		-0.01 (0.16)		-0.02 (0.16)
High income		0.09 (0.16)		0.11 (0.16)
Married		-0.15 (0.15)		-0.18 (0.16)
Female		0.28* (0.12)		0.29* (0.12)
Bachelor's degree or higher		0.22 (0.15)		0.24 (0.15)
U.S. born		-0.04 (0.18)		-0.01 (0.18)
Homeowner		-0.02 (0.16)		-0.06 (0.16)
Race/ethnicity (reference: White)				
Black		0.68** (0.23)		0.66** (0.23)
Hispanic		0.59* (0.26)		0.58* (0.25)
Other		0.32 <sup>†</sup> (0.18)		0.33 <sup>†</sup> (0.18)
Age		0.00 (0.00)		0.00 (0.00)

(continued)

**Table 4. (continued)**

	(1)	(2)	(3)	(4)
Children in household (reference: no children)				
Children in school		0.17 (0.18)		0.21 (0.18)
Adult children		0.04 (0.19)		0.08 (0.19)
Cut point 1	-3.11*** (0.86)	-3.26** (1.01)	-3.40*** (0.86)	-3.59*** (0.99)
Cut point 2	-1.82* (0.86)	-1.90† (1.01)	-2.10* (0.86)	-2.23* (1.00)
Cut point 3	-1.09 (0.85)	-1.12 (1.01)	-1.37 (0.85)	-1.44 (0.99)
Cut point 4	0.13 (0.85)	0.16 (1.01)	-0.15 (0.85)	-0.15 (0.99)
Pseudo $R^2$	0.007	0.036	0.009	0.039
Chi-squared	23.933	100.630	25.824	105.711

Note. Clustered standard errors in parenthesis.

† $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; two-tailed tests.

whom the school district context may be particularly relevant. Overall, parents of children in school report beliefs about the importance of income integration in schools that closely reflect those of the full sample of respondents ( $n = 890$ ). Over 70 percent of parents of children in school report that income integration is either “important,” “very important,” or “extremely important.” Approximately 10 percent of the subsample report that income integration in schools is “not important at all.” Compared to the full sample, parents of children in school are more likely to be in the high-income category, are more likely to be married, are younger, and are slightly more likely to identify as a Republican.

Table 5 presents results from ordered logistic regression models that estimate the association between meso-level residential income segregation between school districts and perceived importance of income integration in schools among parents with children in school. Models 1 and 2 are identical to those presented for the full sample in Models 3 and 4 in Table 4. Similar to the full-sample results, there is a significant, negative association between residence in a county

with above-median school district segregation and perceived importance of income integration in schools among this subsample. To ease interpretation, Table A3 presents the predicted probabilities for each level of the outcome variable. Among parents of children in school, the average likelihood of reporting that it is “not important at all” or “somewhat important” that “children attend school with students from a wide range of economic backgrounds” is 5.4 or 6.3 percentage points higher, respectively, for respondents who live in counties with above- versus below-median income segregation. Likewise, the average likelihood of reporting that it is “extremely important” that “children attend school with students from a wide range of economic backgrounds” is 11.6 percentage points lower for respondents who live in counties with above- versus below-median income segregation. The marginal effects of a shift from below-median to above-median school district segregation are larger in magnitude for parents of children in school than for our full sample, indicating that beliefs about income integration in schools among this subpopulation are more sensitive to homogeneity

**Table 5.** Estimated Log Odds Coefficients from Ordered Logistic Regression Models Predicting Perceived Importance of Income Integration in Schools (Subset of Parents with Children in School;  $n = 312$ ).

	(1)	(2)
<i>Contextual variables</i>		
<b>Between-school district</b> income segregation above weighted national median	-0.59*	-0.65**
	(0.24)	(0.24)
2016 Republican vote share	-0.01	-0.00
	(0.01)	(0.01)
Median household income	0.01	0.01
	(0.01)	(0.01)
Share of households below poverty line	0.03	0.06
	(0.04)	(0.04)
Black population share	-0.00	-0.02
	(0.01)	(0.01)
Population density	0.11*	0.12*
	(0.05)	(0.06)
<i>Individual variables</i>		
Social ideology		-0.16 <sup>†</sup>
		(0.09)
Republican party		-0.71**
		(0.27)
Household income (reference: middle income)		
Low income		-0.22
		(0.32)
High income		-0.03
		(0.27)
Married		0.03
		(0.28)
Female		0.19
		(0.20)
Bachelor's degree or higher		0.24
		(0.25)
U.S. born		0.72*
		(0.36)
Homeowner		-0.22
		(0.32)
Race/ethnicity (reference: White)		
Black		0.68 <sup>†</sup>
		(0.35)
Hispanic		0.68
		(0.48)
Other		0.77*
		(0.38)
Age		0.01
		(0.01)
Cut point 1	-1.84	-1.01
	(1.66)	(1.90)

(continued)

**Table 5. (continued)**

	(1)	(2)
Cut point 2	-0.54 (1.67)	0.36 (1.90)
Cut point 3	0.19 (1.65)	1.15 (1.89)
Cut point 4	1.44 (1.64)	2.50 (1.89)
Pseudo $R^2$	0.020	0.056
Chi-squared	18.412	59.047

Note. Clustered standard errors in parenthesis.

<sup>†</sup> $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; two-tailed tests.

within local institutional contexts. This finding supports our theoretical expectation that the salience and interpretation of economic conditions within and across school districts will vary based on individuals' degree and type of exposure to these contexts.

### Robustness Analysis

We verify the robustness of associations between school district income segregation and perceived importance of economic integration by estimating models using two alternative income segregation measures, the continuous bias-corrected rank-order information theory index ( $H$ ) and its square root, to correct for a skewed distribution. Appendix Tables A4 and A5 present the marginal changes to responses at each level of the dependent variable, for the full sample and subsample of parents, respectively, using estimates derived from the supplemental measures of income segregation between school districts. The results from these models align with estimates produced using the dichotomized income segregation measure. With all covariates held as observed, the average likelihood of reporting that it is "not important at all" that "children attend school with students from a wide range of economic backgrounds" increases by 1.1 percentage points with a one-standard deviation (2.4 points) increase in the continuous income segregation measure and 1.4 percentage points with a one-standard deviation (0.9 point) increase in the square root of income

segregation. Among parents of children in school the corresponding increases in the average likelihood of reporting that income integration in school is "not important at all" are 2.4 and 2.6 percentage points, respectively. The average likelihood of reporting that income integration in school is "extremely important" decreases by 2.1 and 2.7 percentage points, respectively, with one-standard deviation increase in the income segregation and the square root measures. Among parents of children in school, the corresponding decreases are 4.4 and 4.8 percentage points.

The pattern of results is clear and consistent across the three measures of meso-level income segregation between school districts. Marginal changes with a one-standard deviation increase in the square root of income segregation are significant at  $p < .05$  at all levels of the outcome variable, and marginal changes with a one-standard deviation increase in the continuous income segregation index are significant at  $p < .10$  for three levels of the response variable. Among the subset of parents with children in school, all marginal changes to the square root of income segregation are significant at  $p < .05$  and marginal changes to the continuous measure are significant at  $p < .05$  or  $p < .10$ , depending on the level of the dependent variable. Supplemental analyses using alternative measures of between-tract income segregation produce marginal changes that are nonsignificant. Appendix Table A6 presents marginal changes using estimates derived

from alternative measures of between-tract income segregation. The full ordered logistic regression results for supplemental analyses regressing attitudes about mixed-income schools on two alternative measures of income segregation—the continuous bias-corrected rank-order information theory index ( $H$ ) and its square root—are available from the authors upon request.

As noted above, 28 percent of the counties in our sample have only one school district and are therefore constrained to have zero between-district income segregation. To investigate how one-district counties might influence the results, we estimate an additional model that specifies between-school district income segregation as a set of indicators that identify the quartile of county-level income segregation in the distribution of all counties with nonzero income segregation. Counties with zero income segregation form the reference group in these analyses. The results show that the first quartile of income segregation does not have a statistically significant association with attitudes about mixed-income schools compared to zero income segregation. This indicates that there is not a sharp difference in the residential experience of zero and low-segregation county contexts.<sup>17</sup> Finally, we have estimated our preferred models among the subset of respondents who live in counties with nonzero income segregation and the main results are substantively unchanged. These results support the general conclusions of our analyses, that there is a negative association between school district income segregation and attitudes about income integration in schools, and that the results are not driven by single-school district counties. The results of these analyses are available from the authors upon request.

## DISCUSSION AND CONCLUSION

Income segregation contributes to the uneven distribution of familial and public resources across socially and politically defined

geographic spaces and ultimately limits upward economic mobility across generations (Chetty et al. 2014). In addition to its potential effects on individuals' economic and educational trajectories, income segregation may also influence the way people perceive social inequality because it limits their exposure to the full distribution of economic well-being among members of society. Prior research on how local economic conditions influence attitudes and beliefs has focused on broad perceptions of economic inequality and well-being. Although beliefs about national economic issues, such as income inequality and unemployment, may be influenced by the economic conditions in one's proximate geographic context, these types of issues tend to have national policy prescriptions, such as changes to the federal tax code or trade regulations. In this article, we focus on attitudes about the K–12 education system, a key public good that is closely tied to residential location. Local school district boundaries, and the educational contexts they create, are a key mechanism that brokers access to educational resources and interpersonal contact. Income segregation in schools can only be mitigated by changing features and actions of local communities, and thus, local economic conditions may be particularly salient for individuals' beliefs about the sociodemographic composition of schools and the value of social integration in educational environments. Moreover, the influence of local conditions on individuals may vary depending on the scale and boundaries of the contextual space. Residential neighborhoods, as measured by census tracts, generally represent narrowly proximate geographic spaces with cognitively fuzzy borders. These spaces often support informal and unplanned interactions among neighbors, and are more likely than larger geographic units to be socially homogenous. Institutional boundaries, such as municipalities or school districts, create sharp distinctions in place-based identity and confer access to specific public resources. Institutional boundaries convey contextual information by facilitating interactions across larger geographic spaces and communicating



information to the public to fulfill their function. Therefore, these boundaries may influence how individuals define their local communities and conceive of the set of people who are meant to share public resources, such as schools.

Consistent with our hypothesis, our results show that residents of counties with greater between-school district income segregation are less likely to indicate that income integration among students in schools is important, net of individual characteristics such as partisanship, ideology, household income, race/ethnicity, and gender. This finding extends knowledge about the relationship between segregated communities and attitudes about social integration and lends support to the broader conclusion that economic context influences attitude formation. However, our results also show that micro-level income segregation between neighborhoods (census tracts) has no statistically significant association with beliefs about the importance of income integration in schools. Although we had no firm *a priori* hypothesis regarding the differential influence of micro-level and meso-level segregation, these results suggest that the degree to which residents support mixed-income schools is associated with the relative homogeneity of the school district boundaries in which people live whereas the relative homogeneity of neighborhoods appears to be less salient. More generally, residential contexts refracted through relevant institutional boundaries may be particularly salient for opinions about social inequality in those institutional settings. Furthermore, the results show that relative economic homogeneity within school district boundaries has a greater negative association with beliefs about the importance of integrated schools among parents with children in school. This corroborates theoretical perspectives that suggest that the salience of community borders is related to the functionality of those borders for each individual, and it raises important questions about future support for social integration in schools in an era of rising income

segregation among families with children.

The lack of existing empirical evidence linking geographic context to beliefs and attitudes is due, in part, to methodological challenges in this area of research. Geocoded attitudinal survey data are relatively rare, and in cases where they do exist, researchers are often limited in their analytic approach due to small sample sizes in the geographic unit of analysis. Although this analysis uses nationally representative data to extend knowledge of contextual effects, the data present a cross-sectional view of the relationship between income segregation and attitudes about integration, and therefore may represent, in part, a sorting effect. Individuals who do not think income integration is important may choose to live in more income-segregated counties. Nevertheless, this research shows a consistent negative relationship between several specifications of income segregation between school districts and attitudes about the perceived importance of income integration in schools, providing a foundation upon which to build additional evidence. Future research might use more varied measures of attitudes about economic integration in schools to strengthen the validity of these findings, especially because questions about racial and economic equity may be susceptible to social desirability bias. In addition, future studies might aim to more precisely investigate the mechanisms through which this association operates, including more precise measures of information gleaned from local media, or from geographically defined virtual communities, such as neighborhood-based online parenting groups. Another possibility is that people are generally satisfied, or at least accustomed, to their residential communities, and thus express attitudes that simply align with and reflect those conditions.

Income integration in schools may be a key route to reducing educational inequalities because it reduces the differences in financial and familial resources across schools and school districts and broadens students' exposure to people from a wider range of economic

backgrounds. Interpersonal contact between children from different economic backgrounds may pay academic and labor market dividends, but it may also influence the development of children’s own beliefs about

economic inequality. Understanding how residential, social, and institutional contexts influence attitudes is crucial to fully understanding the varied pathways through which segregated environments maintain inequality.

APPENDIX

**Table A1.** Predicted Values Using Tract Segregation: How Important Is It That Children Attend School with Students from a Wide Range of Economic Backgrounds (*n* = 890).

Response category	Tract segregation below weighted national median	Tract segregation above weighted national median	Marginal change	<i>p</i> value
Not important at all	0.101 (0.011)	0.095 (0.013)	−0.006	.631
Somewhat important	0.189 (0.014)	0.182 (0.016)	−0.007	.634
Important	0.166 (0.013)	0.163 (0.013)	−0.003	.639
Very important	0.278 (0.015)	0.281 (0.016)	0.003	.632
Extremely important	0.266 (0.018)	0.278 (0.021)	0.012	.634

Note. Clustered standard errors in parenthesis. Estimated from ordered logistic regression models with all covariates as observed. The population-weighted, median value of tract-level income segregation in all U.S. counties is 7.65.

**Table A2.** Predicted Values Using School District Segregation: How Important Is It That Children Attend School with Students from a Wide Range of Economic Backgrounds (*n* = 890).

Response category	School district segregation below weighted national median	School district segregation above weighted national median	Marginal change	<i>p</i> value
Not important at all	0.084 (0.010)	0.118 (0.013)	0.034	.004
Somewhat important	0.167 (0.013)	0.207 (0.016)	0.039	.004
Important	0.157 (0.012)	0.171 (0.013)	0.014	.004
Very important	0.285 (0.015)	0.268 (0.015)	−0.016	.007
Extremely important	0.307 (0.019)	0.236 (0.018)	−0.071	.003

Note. Clustered standard errors in parenthesis. Estimated from ordered logistic regression models with all covariates as observed. The population-weighted, median value of school district income segregation in all U.S. counties is 1.49.

**Table A3.** Predicted Values Using School District Segregation: How Important Is It That Children Attend School with Students from a Wide Range of Economic Backgrounds (Subset of Parents with Children in School;  $n = 312$ ).

Response category	School district segregation below weighted national median	School district segregation above weighted national median	Marginal change	<i>p</i> value
Not important at all	0.073 (0.015)	0.127 (0.023)	0.054	.009
Somewhat important	0.149 (0.022)	0.212 (0.027)	0.063	.008
Important	0.146 (0.020)	0.170 (0.022)	0.023	.015
Very important	0.289 (0.025)	0.265 (0.025)	−0.024	.022
Extremely important	0.342 (0.036)	0.227 (0.027)	−0.116	.006

Note. Clustered standard errors in parenthesis. Estimated from ordered logistic regression models with all covariates as observed. The population-weighted, median value of school district income segregation in all U.S. counties is 1.49.

**Table A4.** Marginal Changes (School District Income Segregation;  $n = 890$ ).

How important is it that children attend school with students from a wide range of economic backgrounds?	School district income segregation		Square root of school district income segregation	
	Marginal change: one SD	<i>p</i> value	Marginal change: one SD	<i>p</i> value
Not important at all	0.011	.097	0.014	.029
Somewhat important	0.012	.083	0.016	.020
Important	0.004	.590	0.005	.011
Very important	−0.006	.125	−0.008	.046
Extremely important	−0.021	.072	−0.027	.015

Note. Estimated from ordered logistic regression models with all covariates as observed. The standard deviation of national, population-weighted, school district-level income segregation is 2.39. The standard deviation of the square root of national, population-weighted, school district-level income segregation is 0.93.

**Table A5.** Marginal Changes (School District Income Segregation; Subset of Parents with Children in School;  $n = 312$ ).

How important is it that children attend school with students from a wide range of economic backgrounds?	School district income segregation		Square root of school district income segregation	
	Marginal change: one SD	<i>p</i> value	Marginal change: one SD	<i>p</i> value
Not important at all	0.024	.027	0.026	.022
Somewhat important	0.025	.020	0.028	.014
Important	0.008	.014	0.008	.010
Very important	−0.013	.053	−0.014	.043
Extremely important	−0.044	.011	−0.048	.007

Note. Estimated from ordered logistic regression models with all covariates as observed. The standard deviation of national, population-weighted, school district-level income segregation is 2.39. The standard deviation of the square root of national, population-weighted, school district-level income segregation is 0.93.

**Table A6.** Marginal Changes (Tract Income Segregation;  $n = 890$ ).

How important is it that children attend school with students from a wide range of economic backgrounds?	Tract income segregation		Square root of tract income segregation	
	Marginal change: one SD	<i>p</i> value	Marginal change: one SD	<i>p</i> value
Not important at all	0.007	.297	0.008	.234
Somewhat important	0.008	.280	0.010	.216
Important	0.003	.249	0.003	.184
Very important	-0.004	.323	-0.004	.262
Extremely important	-0.015	.270	-0.017	.205

Note. Estimated from ordered logistic regression models with all covariates as observed. The standard deviation of national, population-weighted, tract-level income segregation is 3.65. The standard deviation of the square root of national, population-weighted, tract-level income segregation is 0.80.

## ACKNOWLEDGMENTS

We thank the editors and four anonymous reviewers for their constructive comments.

## FUNDING

The author(s) disclosed receipt of the following financial support for research, authorship, and/or publication of this article: This research was funded by the Cornell Survey Research Institute and the Cornell Center for Social Sciences.

## NOTES

1. Our questions were included in the 2016 Cornell National Social Survey. The survey was administered by phone to a sample of landlines and cell phones drawn from a Random Digit Dial list, which ensures that every household with a phone has an equal chance of being contacted. All interviews were conducted using Computer-Assisted Telephone Interview software. The national sample was conducted in English. The cooperation rate among those reached and deemed eligible to participate was 69 percent.
2. Exact survey question: Studies show that families are more residentially separated by income now than they were 40 years ago. In your opinion, how important is it that children attend school with students from a wide range of economic backgrounds?
3. Before the final data were collected, the question was piloted by the Survey Research Institute at Cornell University. The staff collected feedback on how well respondents understood the question and then provided suggested revisions to the original question wording to improve data quality.
4. When thinking about income integration in schools, we expect that people will refer to areas larger than their specific neighborhood or school district, but

rarely beyond what would be reasonable for a child to travel. In Boston, for example, one-way student bus rides are 23 minutes, on average (Bertsimas, Delarue, and Martin 2019), and New York State recommends children spend no more than one hour traveling to or from school (New York State Department of Education).

5. There are 81 cases in which the county of residence could not be determined from the residential ZIP code question, either because the respondent did not answer the question or provided an invalid ZIP code. However, we recover 32 of these missing county identifiers by using respondents' area code for those who were reached on a landline, for a total of 49 cases with missing county identifiers. Results are substantively similar with or without the 32 observations we recover using area codes.
6. Estimates suggest that using cell phone numbers to identify county of residence is accurate in about 60 percent of cases. Cell phone numbers are a better indicator of place of residence for older respondents (Christian, Dimock, and Keeter 2009).
7. Of the respondents from the national sample who reported a valid ZIP code of residence ( $N = 919$ ), 70 percent live in a ZIP code that is completely nested in one county. Of the remaining respondents who live in a ZIP code that spans more than one county, the county with the highest proportion of residential overlap contains 89 percent of the population, on average. This indicates little risk of misidentifying the county of residence using this method.
8. Census tracts are administrative subdivisions of counties that have an average population of 4,000 people, and a range of 1,200 to 8,000 people. School districts are geographic entities within which educational services are provided. School districts are not always perfectly nested within counties. We assign each school district to the county in which its central office is located as indicated in the National Center for Education Statistics Common Core of Data.

9. In states with overlapping elementary and high school districts, we drop high school districts to prevent double counting residential populations covered by more than one district.
10. We use the Stata program—rankseg—to compute bias-corrected income segregation measures.
11. Tract boundaries also vary because of differences in population density. The distribution of land area for tracts in the United States has a median of 1.9 square miles and an interquartile range of 0.68 to 12.8 square miles (authors' calculation from the 2015–2019 American Community Survey).
12. There is very little difference across fit statistics for models using between-tract segregation, though the square root measure produces a marginally better fit. Among models using between-school district income segregation, fit statistics clearly support the dichotomized measure.
13. We perform omnibus tests of the proportional odds assumption using the—omodel—Stata package. The full models using tract- and school district segregation pass this test. We also perform Brant tests using the—spost—Stata package to test the proportional odds assumption for each variable in each model. Median household income and poverty rate violate the assumption in both models, and age also violates the assumption in the school district segregation model only.
14. Although individual respondents are nested within counties, we do not present estimates from multi-level models because the data are geographically sparse. There are less than two observations per county, on average, in the dataset. However, results from models with random intercepts for counties are nearly identical.
15. We originally controlled for income inequality (Gini) and total population, but these variables had no significant association with our outcomes net of the other variables in the model, and they did not improve the fit of the model.
16. The characteristics of the analytic sample are largely comparable to nationally representative statistics on similar measures using the American Community Survey (2014–2018) and General Social Survey (2018). However, compared to national averages, the analytic sample has a higher proportion of White non-Hispanic respondents and college graduates and a smaller share of low-income individuals.
17. Postestimation analyses also show that there is no statistically significant difference between coefficients for the first and second quartiles and that the first and second quartiles are not jointly significantly different from the coefficient for zero segregation. The third and fourth quartiles are jointly statistically significantly different from the coefficient for zero segregation.

## REFERENCES

- Allport, Gordon W. 1954. *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Baldassarri, Delia, and Maria Abascal. 2020. "Diversity and Prosocial Behavior." *Science* 369:1183–87.
- Bertsimas, Dimitris, Arthur Delarue, and Sebastien Martin. 2019. "Optimizing Schools' Start Time and Bus Routes." *Proceedings of the National Academy of Sciences of the United States of America* 116:5943–48.
- Bischoff, Kendra, and Ann Owens. 2019. "The Segregation of Opportunity: Social and Financial Resources in the Educational Contexts of and Higher-Income Children, 1990–2014." *Demography* 56:1635–64.
- Bischoff, Kendra, and Sean Reardon. 2012. "No Middle Ground." *Boston Review*, May/June. Retrieved August 8, 2023 (<https://www.bostonreview.net/issue/may-june-2012/>).
- Bischoff, Kendra, and Laura Tach. 2020. "School Choice, Neighborhood Change, and Racial Imbalance between Public Elementary Schools and Surrounding Neighborhoods." *Sociological Science* 7:75–99.
- Black, Sandra. 1999. "Do Better Schools Matter? Parental Valuation of Elementary Education." *The Quarterly Journal of Economics* 114:577–99.
- Bobo, Lawrence. 1991. "Social Responsibility, Individualism, and Redistributive Policies." *Sociological Forum* 6:71–92.
- Boser, Ulrich, and Perpetual Baffour. 2017. *Isolated and Segregated: A New Look at the Income Divide in Our Nation's Schooling System*. Washington, DC: Center for American Progress.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez. 2014. "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." *The Quarterly Journal of Economics* 129:1553–1623.
- Christian, Leah, Michael Dimock, and Scott Keeter. 2009. "Accurately locating where wireless respondents live requires more than a phone number." Pew Research Center; Washington, DC. Retrieved September 15, 2022 (<https://www.pewresearch.org/2009/07/09/accurately-locating-where-wireless-respondents-live-requires-more-than-a-phone-number/#en1>).
- Fiel, Jeremy E., and Yongjun Zhang. 2018. "Three Dimensions of Change in School Segregation: A Grade-Period Analysis." *Demography* 55:33–58.
- Franko, William, Caroline J. Tolbert, and Christopher Witko. 2013. "Inequality, Self-Interest, and Public Support for 'Robin Hood' Tax Policies." *Political Research Quarterly* 66:923–37.
- Gilens, Martin. 1995. "Racial Attitudes and Opposition to Welfare." *The Journal of Politics* 57:994–1014.
- Grannis, Rick. 2009. *From the Ground Up: Translating Geography into Community through Neighbor Networks*. Princeton, NJ: Princeton University Press.



- Hunt, Matthew O. 1996. "The Individual, Society, or Both? A Comparison of Black, Latino, and White Beliefs about the Causes of Poverty." *Social Forces* 75:293–322.
- Hunt, Matthew O. 2004. "Race/Ethnicity and Beliefs about Wealth and Poverty." *Social Science Quarterly* 85:827.
- Hunter, Albert. 1975. *Symbolic Communities: The Persistence and Change of Chicago's Local Communities*. Chicago, IL: The University of Chicago Press.
- Jones, Janelle, John Schmitt, and Valerie Wilson. 2018. "50 Years after the Kerner Commission: African Americans Are Better Off in Many Ways but Are Still Disadvantaged by Racial Inequality." Economic Policy Institute Report, Washington, DC.
- Kaplan, David H., and Steven R. Holloway. 2001. "Scaling Ethnic Segregation: Causal Processes and Contingent Outcomes in Chinese Residential Patterns." *GeoJournal* 53:59–70.
- Key, V. O. 1949. *Southern Politics in State and Nation*. 1st ed. New York: Alfred A. Knopf.
- McClendon, McKee J. 1985. "Racism, Rational Choice, and White Opposition to Racial Change: A Case Study of Busing." *Public Opinion Quarterly* 49:214–33.
- McConahay, John B. 1982. "Self-Interest versus Racial Attitudes as Correlates of Anti-Busing Attitudes in Louisville: Is It the Buses or the Blacks?" *The Journal of Politics* 44:692–720.
- McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27:415–44.
- Mijs, Jonathan J. B. 2018. "Inequality Is a Problem of Interference: How People Solve the Social Puzzle of Unequal Outcomes." *Societies* 8:64.
- Minkoff, Scott L., and Jeffrey Lyons. 2019. "Living with Inequality: Neighborhood Income Diversity and Perceptions of the Income Gap." *American Politics Research* 47:329–61.
- Moody, James. 2001. "Race, School Integration, and Friendship Segregation in America." *American Journal of Sociology* 107:679–716.
- Neal, Zachary P. 2013. *The Connected City: How Networks Are Shaping the Modern Metropolis*. New York: Routledge.
- Newman, Benjamin J., Christopher D. Johnson, and Patrick L. Lown. 2015. "False Consciousness or Class Awareness? Local Income Inequality, Personal Economic Position, and Belief in American Meritocracy." *American Journal of Political Science* 59:326–40.
- Newman, Benjamin J., Yamil Velez, Todd K. Hartman, and Alexa Bankert. 2015. "Are Citizens 'Receiving the Treatment'? Assessing a Key Link in Contextual Theories of Public Opinion and Political Behavior." *Political Psychology* 36:123–31.
- Oliver, J. Eric, and Tali Mendelberg. 2000. "Reconsidering the Environmental Determinants of White Racial Attitudes." *American Journal of Political Science* 44:574–89.
- Owens, Ann. 2016. "Inequality in Children's Contexts: The Economic Segregation of Households with and Without Children." *American Sociological Review* 81:549–74.
- Owens, Ann. 2018. "Income Segregation between School Districts and Inequality in Students' Achievement." *Sociology of Education* 91:1–27.
- Owens, Ann, Sean F. Reardon, and Christopher Jencks. 2016. "Income Segregation between Schools and School Districts." *American Educational Research Journal* 53:1159–97.
- Pettigrew, Thomas F. 1998. "Intergroup Contact Theory." *Annual Review of Psychology* 49:65–85.
- Pettigrew, Thomas F., Linda R. Tropp, Ulrich Wagner, and Oliver Christ. 2011. "Recent Advances in Intergroup Contact Theory." *International Journal of Intercultural Relations* 35:271–80.
- Reardon, Sean F. 2011a. "Measures of Income Segregation." CEPA Working Papers, Stanford Center for Education Policy Analysis, Stanford, CA. Retrieved September 15, 2022 (<https://cepa.stanford.edu/content/measures-income-segregation>).
- Reardon, Sean F. 2011b. "The Widening Academic Achievement Gap between the Rich and the Poor: New Evidence and Possible Explanations." Pp. 91–116 in *Whither Opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children*, edited by R. Murnane, and G. Duncan. New York: Russell Sage Foundation.
- Reardon, Sean F., and Kendra Bischoff. 2011. "Income Inequality and Income Segregation." *American Journal of Sociology* 116:1092–1153.
- Reardon, Sean F., and Kendra Bischoff. 2019. "No Neighborhood Is an Island." Pp. 56–59 in *The Dream Revisited: Contemporary Debates about Housing, Segregation, and Opportunity*, edited by I. G. Ellen, and J. P. Steil. New York: Columbia University Press.
- Reardon, Sean F., Kendra Bischoff, Ann Owens, and Joseph B. Townsend. 2018. "Has Income Segregation Really Increased? Bias and Bias Correction in Sample-Based Segregation Estimates." *Demography* 55:2129–60.
- Reardon, Sean F., Grewal Elena, Kalogrides Demetra, and Greenberg Erica. 2012. "Brown Fades: The End of Court-Ordered School Desegregation and the Resegregation of American Public Schools." *Journal of Policy Analysis and Management* 31:876–904.
- Reardon, Sean F., Stephen Matthews, David O'Sullivan, Barry Lee, Glenn Firebaugh, Chad Farrell, and Kendra Bischoff. 2008. "The Geographic Scale of Metropolitan Racial Segregation." *Demography* 45:489–514.
- Reardon, Sean F., and Ann Owens. 2014. "Sixty Years after Brown: Trends and Consequences of School Segregation." *Annual Review of Sociology* 40:199–218.
- Reeves, Andrew, and James G. Gimpel. 2012. "Ecologies of Unease: Geographic Context and National Economic Evaluations." *Political Behavior* 34:507–34.

- Rossell, Christine H. 1990. *The Carrot or the Stick for School Desegregation Policy: Magnet Schools or Forced Busing*. Philadelphia, PA: Temple University Press.
- Sampson, Robert J., Jeffrey D. Morenoff, and Thomas Gannon-Rowley. 2002. "Assessing "Neighborhood Effects": Social Processes and New Directions in Research." *Annual Review of Sociology* 28:443–78.
- Sands, Melissa L. 2017. "Exposure to Inequality Affects Support for Redistribution." *Proceedings of the National Academy of Sciences of the United States of America* 114:663–68.
- Sharkey, Patrick, and Jacob W. Faber. 2014. "Where, When, Why, and For Whom Do Residential Contexts Matter? Moving Away from the Dichotomous Understanding of Neighborhood Effects." *Annual Review of Sociology* 40:559–79.
- Smith, Tom W. Michael Davern, Jeremy Freese, and Stephen Morgan. 2018. *General Social Surveys, 1972–2018*. Chicago, IL: NORC at the University of Chicago. Retrieved September 15, 2022 (gssdataexplorer.norc.org).
- Thal, Adam. 2017. "Class Isolation and Affluent Americans' Perception of Social Conditions." *Political Behavior* 39:401–24.
- The 49th Annual PDK Poll of the Public's Attitudes toward the Public Schools. 2017. *Phi Delta Kappan* 99(1):NP1–32.
- Weatherford, M. Stephen. 1980. "The Politics of School Busing: Contextual Effects and Community Polarization." *The Journal of Politics* 42:747–65.
- Weiher, Gregory R. 1991. *The Fractured Metropolis: Political Fragmentation and Metropolitan Segregation*. Albany, NY: State University of New York Press.
- Xu, Ping, and James C. Garand. 2010. "Economic Context and Americans' Perceptions of Income Inequality." *Social Science Quarterly* 91:1220–41.