

# The Coleman Report at Fifty: Its Legacy and Implications for Future Research on Equality of Opportunity



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July 2016 marked the fiftieth anniversary of the release of *Equality of Educational Opportunity* (hereafter EEO), commonly known as the Coleman Report after the lead investigator of the research team, James S. Coleman (Coleman et al. 1966). *The Coleman Report and Educational Inequality Fifty Years Later* celebrates the occasion. To set the stage for the papers that follow, we take a brief look in this introduction back to the origins of EEO in the 1960s and its immediate impact on scholarship and the policy debate. But this issue, in intent and execution, is decidedly forward-looking. Our contributors include some of the nation's leading authorities on issues at the intersection of schooling, race, and social inequality. They appraise EEO's lasting value, the continuing relevance of the issues it addressed, and the ways in which its research approach has stood the test of time, but their larger contribution is to forge, by way of example, a recast equality of educational opportunity research agenda appropriate to twenty-first-century America. As a bridge between then and now, we conclude our introduction with an overview of educational inequality as it now stands, through the lens of the EEO report. That exercise centers on

conditions in Baltimore City, Coleman's home base when leading the EEO team.

## BACKGROUND

Commissioned by Congress in the Civil Rights Act of 1964, the EEO report is located at the center of that era's struggle to desegregate America's public schools. Here is the authorizing language from section 402 of the Civil Rights Act:

The Commissioner [of Education] shall conduct a survey and make a report to the President and the Congress, within two years of the enactment, concerning the lack of availability of equal educational opportunity for individuals by reason of race, color, religion, or national origin in public institutions at all levels in the United States, its territories and possessions, and the District of Columbia.

The Civil Rights Act of 1964 pushed a sometimes reluctant country into a new era in pursuit of civil rights for black Americans. By virtue of its provenance in the act, EEO was destined to achieve landmark status. That has proven to be the case: written in a highly

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charged political climate, the project was the most ambitious deployment to that time of the tools of social science in the service of education policy.

In its 1954 and 1955 *Brown v. Board of Education* decisions, the Supreme Court had ordered that the system of segregated schooling throughout the South be dismantled “with all deliberate speed.” A decade of resistance and foot-dragging later, with too much deliberation and not enough speed, not much had changed. The survey that Congress mandated in 1964 was intended to advance the cause by establishing that segregation by race remained widespread throughout the country and that the schools attended by black children were grossly inferior to those attended by white children. These conditions were thought to be self-evident, but having them documented would provide the ammunition—that is, the scientific justification—for a final assault on the edifice of school segregation.

Considering the moment in history and all that was at stake, it is striking how little guidance Congress provided in its enabling language. Indeed, it sketched just the barest outline: a national study encompassing all levels of schooling was to be completed—meaning written up and delivered—in a mere two years. Nothing was said on the most consequential matters of method and substance. What kind of survey, for example, was to be conducted? Even more fundamentally, what was meant by “equal educational opportunity,” and what evidence was required to decide whether its availability differed along lines of race, religion, or national origins? These large questions were left to be resolved by the research team in consultation with the commissioner of education.

James Coleman, then on the faculty at Johns Hopkins University, was recruited to lead the effort. Large-scale survey research was uncommon at the time, but Coleman had the requisite experience through his first major project after graduate school, a study published in 1961 as *The Adolescent Society*. That project concluded that the anti-intellectualism characteristic of peer cultures in ten Chicago-area high schools deflected youth’s energies from academic priorities. Three years later, Coleman published *An Introduction to Mathematical So-*

*ciology* (1964), which put him at the vanguard of those advocating for greater empirical rigor in the social sciences.

Coleman must have seemed the ideal candidate to lead the effort. *The Adolescent Society* had brought him standing as a leading authority on conditions of schooling, and his bonafides in research methods were second to none. But how exactly was he to proceed? He began by accepting that the time frame and scope obliged his team to pursue breadth over depth. The EEO was a massive national survey and testing program involving more than half a million students in thousands of schools. Its empirical analysis used what were then state-of-the-art statistical methods to sketch the conditions extant in the nation’s public schools, with special attention to the experience of poor minority children and the contrasts between their experience and that of majority whites.

Considering the time constraints, the fractious political climate, and the primitive computer technology available to the research team, it is hardly surprising that the implementation of the study design was imperfect. For example, many school districts, including some large city school districts and many Southern districts, declined to participate; only a handful of items on family conditions were procured (such as the educational level of the parents, whether there were two parents co-resident in the household, the number of siblings in the home, an index of household possessions, and the parents’ interest in their child’s education), and then through highly fallible student reports; and the project’s information about conditions at school was superficial. Data on per-pupil expenditures, for example, were collected at the district level, not the school level, and they were not disaggregated in any way. Likewise, information on school facilities was compiled by way of a checklist, with little detail and no nuance.

Nor was there much theoretical or conceptual depth to the report’s analysis. The effort was little more than an empirical parsing of the association between children’s test scores at various grade levels, on the one hand, and measures of family background and school resources, on the other. The focus on school resources and family background was aimed at

identifying the relative weight of possible causative factors, but the design and framing were poorly suited to the task. The data, and so the analyses, were cross-sectional, not longitudinal, and so not well suited to causal attributions, while at the level of ideas, the EEO lacked an account of how children's school performance developed over time in response to conditions at home and at school, and it had even less to say about how children's performance developed in response to *changes* in conditions at home and at school, as would have been the ideal.

It is fair in retrospect to say that the report's methodology was limited in these and other respects, and critiques were advanced following its publication. Indeed, the report itself acknowledged many of its limitations, although those cautions were not especially evident in the way its conclusions were presented. Rather, the weight of sentiment seemed to be that the mere force of numbers would override research design limitations and the anticipated stark differences in facilities and resources between schools attended by black children and those attended by white children would be of such magnitude as to be undeniable.

We now know that “big” will not always carry the day; nevertheless, the report's key conclusions held up fairly well against thoroughgoing critical scrutiny. The best evidence of their strength is found in the papers produced by some of the country's leading academic researchers for a yearlong Harvard conference convened in 1967–1968 by two distinguished academics, then-policy-analyst Daniel Patrick Moynihan (later elected to the Senate from New York) and the distinguished statistician Frederick Mosteller (Mosteller and Moynihan 1972).

The EEO indeed warranted such close and critical scrutiny. By virtue of its provenance in the Civil Rights Act of 1964, EEO was central to policy and political debates about whether and how to advance the cause of school desegregation—a compelling issue then, and a compelling issue still.

Today much has changed, but much also has yet to change. After considerable progress in the 1970s and 1980s, levels of segregation in our public schools have risen sharply, rivaling

those extant in the 1960s (Brown 2016). The achievement gap across social lines, achievement gap reduction, and accountability have been elevated to focal concerns in the education policy and reform arenas. They always have been large challenges, but today we recognize them as such. That recognition was largely latent in the mid-1960s when planning for EEO commenced. It probably claims too much to credit today's attention to these topics to the legacy of EEO, but certainly the report helped elevate them.

### THE PRIMARY FINDINGS OF EEO

The thinking at the time was that school quality inhered in a school's facilities and resources, such as modern science laboratories, a well-stocked school library, and highly qualified teachers, all of which were regarded as “school inputs,” in the language of the report. It was expected that the segregated schools attended by black children would be found to be badly lacking in the inputs thought to be educationally important. From that vantage point, gauging “equality of opportunity” would be revealed in comparisons of school resources, black against white. For that part of the agenda, no fancy statistics were needed.

EEO presented evidence on this point, but evidence that many found hard to believe. The report concluded that school resource disparities revolving around race *distinctively* were not large. There were differences, to be sure—the South lagged behind the rest of the country, and rural areas behind urban—but differences by race within the same geographic space generally were small, too small to account for what today we call the black-white achievement gap.

This is one of several conclusions that made the EEO report controversial, and for many a disappointment. Other significant conclusions trace to the expansive view of equal educational opportunity that was introduced by the research team. Their reformulation shifted attention from disparities in schooling “inputs” as problematic in themselves to disparities in inputs that had bearing on educational “outcomes”—notably achievement test scores—and to achievement differences across social lines as markers of unequal opportunity. These radical reframings of the issue are undoubt-

edly among the report's most profound and lasting contributions.

Pursuing this line of inquiry, the report compared test scores across racial and ethnic lines, across dimensions of family background (for example, parents' educational level), by grade level, and across different regions and community contexts (urban or rural). In a more analytical vein, it examined variations in test scores and test score gaps in relation to school resources, focusing on average resource differences *across* schools. The school resources examined included teacher qualifications, curricular coverage, and facilities and expenditures, along with compositional characteristics of the student body (such as the percentage of minority enrollment and the percentage of families of low socioeconomic background).

These aspects of the report's work were truly groundbreaking, and very likely not at all by congressional intent. Here, too, EEO's main conclusions were both surprising and, for many, disappointing. These conclusions are addressed in detail in several of the papers in this issue. In thumbnail, EEO concluded that

1. differences across schools in average achievement levels were small compared to differences in achievement levels within schools;
2. the differences in achievement levels detected did not align appreciably with differences in school resources other than the socioeconomic makeup of the student body; and
3. family background factors afforded a much more powerful accounting of achievement differences than did any and all characteristics of the schools that children attended.

### THE LEGACY OF EEO

The report's focus on academic achievement (test scores) to assess equality of educational opportunity was revolutionary. Reliance on achievement tests for monitoring and accountability is now routine, and many volumes have been written on how to do such assessments well. But that was not the case a half-century ago.

The report also was transformative in directing attention to the broader social context of children's academic development. If school resources were the sole engine, then evaluating the performance of schools in isolation would be fine. But Coleman's research team understood that resources provided by families and neighborhoods contributed to children's initial school readiness, their achievement levels, and their learning trajectories. That, too, is taken for granted today—there is much interest, for example, in out-of-school time learning (OTL) opportunities—but at the time education policy was inward-looking: education reform meant school reform. Today it is also routine to pose questions about the social factors in children's learning and the determinants of the achievement gap across social lines by asking: is it family or is it school? In the 1960s, when the report posed that question, it was not routine.

The report also established that racial segregation remained the norm throughout the United States, a finding that proponents of school desegregation embraced and used to advance their agenda. The same cannot be said of its conclusions regarding the near-irrelevance of school resources for advancing the cause of educational equity and the imbalance of family and school in children's learning.

EEO's approach was simultaneously informative and limiting. The thinking at the time directed attention to differences between the schools attended by black children and other schools. With school segregation the animating issue, and with segregated schooling the norm throughout the United States, not just in the Southern states, the case for comparing schools could certainly be made. However, not only did that focus neglect conditions within those schools, but the report itself established that roughly 80 percent of the variability in children's test scores was located in achievement differences between children attending the very same school, not in average achievement differences across schools. One implication of this realization, which was not understood until EEO established the point, is that EEO was looking in the wrong place for the root causes of children's unequal school per-

formance. That is no warrant to ignore the average differences across schools that were the report's focus, but certainly a comprehensive accounting would require a more encompassing approach.

And the same holds for methods. With today's standards, any analysis of differences and patterns in learning trajectories that uses only data on school inputs and student outcomes measured at a single point in time is certain to be judged incomplete. If the questions of interest are developmental in nature—and many of the most important questions raised by EEO were—it is understood now that our research must model those trajectories with precision, using measures of outcomes collected over time.

Likewise, today the call for mixed-methods research is *de rigueur*, but back in the day it was either-or—quantitative or qualitative. The congressional enabling legislation used the word “survey,” but it is doubtful that Congress meant that to be taken literally. Still, Coleman's background was in survey research, and the time constraints imposed by Congress ensured that the exercise would have to opt for breadth over depth. Surveys are good for quick broad coverage, and not always so good for drilling down. Qualitative studies done well can yield valuable insights not easily gained using survey methods, but qualitative research is labor-intensive, typically can involve no more than a handful of schools, and is rarely implemented in a way that allows for generalization to a well-defined larger population of interest. Still, as a complement to broad-based, large-scale survey research, qualitative data can be invaluable. The EEO did include a small set of qualitative case studies, but they were conducted in parallel to the survey analyses rather than in conjunction with them. Lacking was a richly textured assessment of the conditions “on the ground” in the schools attended by minority children and the ways in which they contrasted with those in the schools attended by white children. One suspects that had it done that sort of assessment, EEO would have un-

covered larger resource differences across this school divide.

These critical observations notwithstanding, it would be hard to overstate the importance of EEO. It stood at the center of policy debates around schooling and equity at a time in our nation's history when the struggle to undo the legacy of 200 years of racial oppression was just beginning to gain momentum. Even today, more than a half-century later, EEO continues to be invoked as an authoritative account of conditions of schooling—not just conditions we see in looking back, as might be expected, but conditions we can see in looking around at schools today.

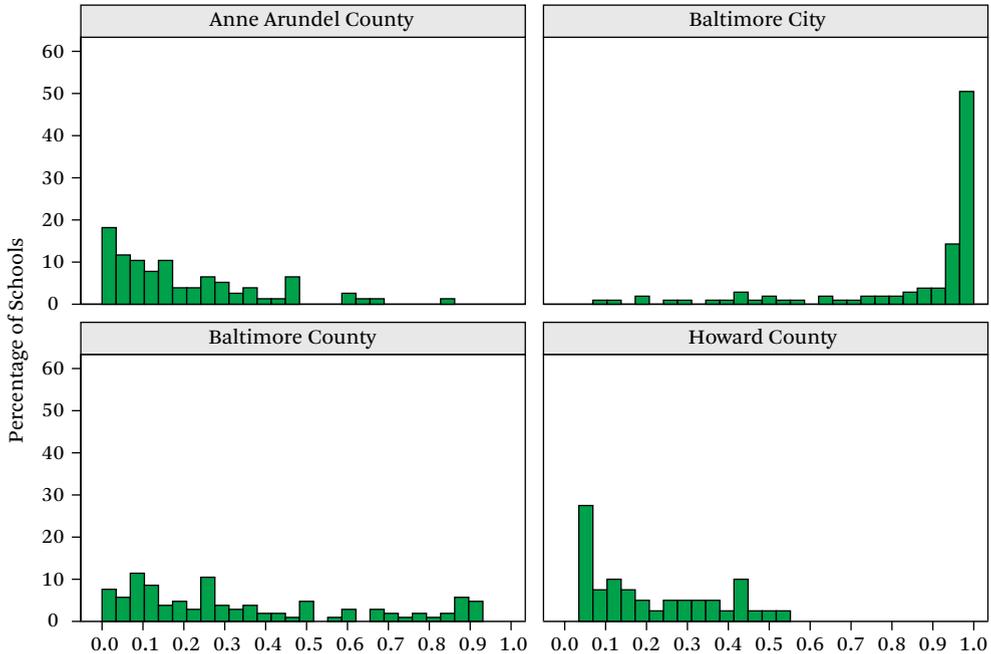
With that in mind, the next section offers a “looking around” application of EEO's issues and approach to current conditions in Baltimore, Maryland. Not only was Baltimore the venue for the conference associated with this set of papers, but the city was also Coleman's home base when EEO was written. As we show next, a vast inequality of educational outcomes persists in Baltimore, very likely for many of the same reasons highlighted by EEO five decades ago.

### EDUCATION AND INEQUALITY IN BALTIMORE FIFTY YEARS LATER

For the first two figures published in EEO (see Coleman et al. 1966, 4–5), Coleman and his colleagues looked at the student racial composition of elementary schools in the nation and then considered regional variations. Figure 1 here presents histograms for the proportion of students identified by their schools as black or African American across the 327 regular elementary schools in the four school districts that encompass the Baltimore metropolitan area—Baltimore City and the three adjacent counties.<sup>1</sup> The pattern of segregation—fifty years after EEO—is dramatic. The median Baltimore City school is 97 percent black. In contrast, the median schools in Anne Arundel County, Baltimore County, and Howard County are 14, 25, and 16 percent black, respectively, although Baltimore County has a larger diver-

1. In Maryland, school districts are coterminous with counties, and Baltimore City itself is a county. In figure 1 and all other results reported here, special education schools, vocational education schools, and “alternative/other” schools for federal reporting are excluded.

**Figure 1.** Proportion of Students Identified as Black or African American in Regular Elementary Schools in the Four School Districts That Encompass the Baltimore Metropolitan Area, 2012



Source: Authors' calculations based on NCES, CCD, 2012 School Universe File (Keaton 2014).

Notes: The number of regular elementary schools is 327 (77 for Anne Arundel County, 105 for Baltimore City, 105 for Baltimore County, and 40 for Howard County). To make the four subgraphs comparable, the vertical axis is the percentage of schools in each school district with the corresponding proportion of black or African American students in the bins listed on the horizontal axis.

sity of racial composition across its schools than both Anne Arundel and Howard.

Table 1 presents basic characteristics of elementary school students in these four school districts. As shown in the first row, the student populations of each district are large, and each district should be able to capture the cost-efficiencies afforded by size. However, student mobility into and out of Baltimore City schools is substantially higher, as shown in the second and third rows of the table. And of particular importance for a consideration of educational opportunity (see Coleman 1968/1990), the last two rows of the table reveal a large difference in proficiency levels for the performance of third-graders on Maryland's official standardized test.<sup>2</sup> Among Baltimore City third-graders, 53 and 44 percent are not proficient in reading

and mathematics, respectively. The gaps with the next-closest school district—Baltimore County—are 34 and 24 percent, respectively.

To begin to understand these differences, EEO's approach would direct attention to the geography of Baltimore to determine the extent to which residential patterns structure these differences. We are able to do that today by taking advantage of the geographic information systems now enabled by administrative data collection, supplemented by the Census Bureau's American Community Survey (ACS). These resources were not available to Coleman and his team. To convey a wider regional perspective, figure 2 presents a map of central Maryland with two sets of information displayed simultaneously. First, census tracts are shaded on a gray scale by the proportion of the

2. District-level differences for tests in other grades are similar.

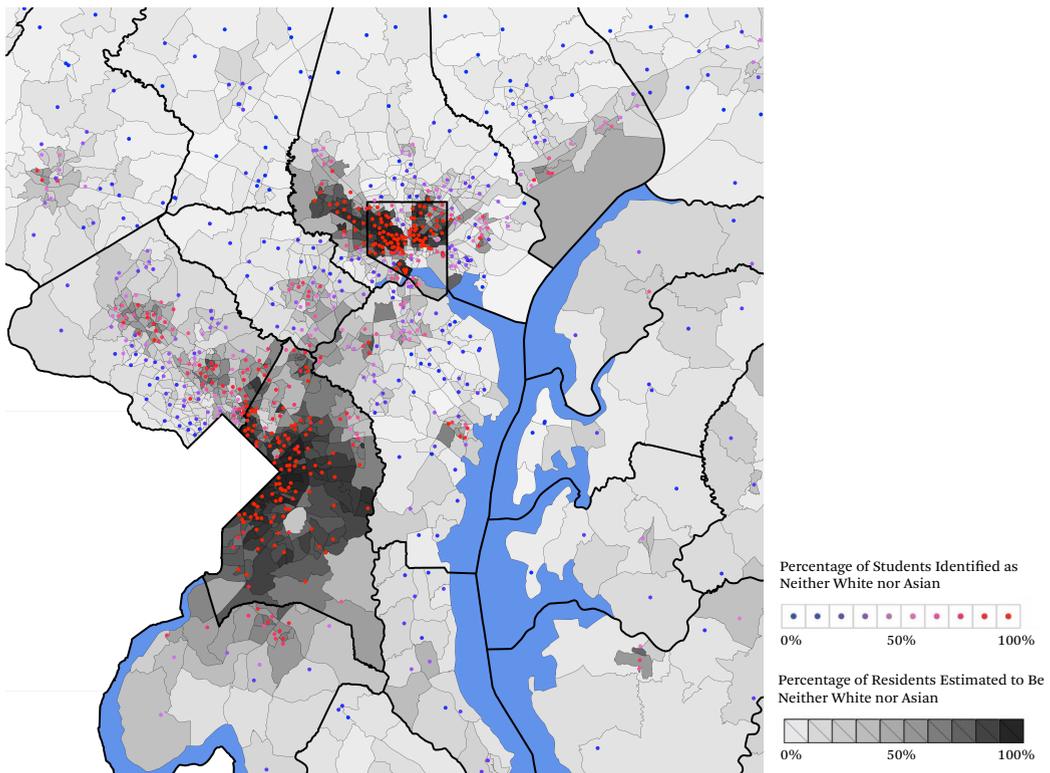
**Table 1.** Elementary School Students in the Four School Districts of the Baltimore Metropolitan Area, 2013–2014

	Baltimore City	Anne Arundel County	Baltimore County	Howard County
Number of elementary school students	39,767	36,749	50,999	23,458
New student transfers	16.9%	12.6%	10.8%	7.3%
Students withdrawn	15.3%	7.2%	7.4%	5.6%
<b>Proficiency in third grade</b>				
Not proficient in reading	53.0%	13.9%	18.9%	15.6%
Not proficient in math	44.1%	14.2%	19.9%	13.5%

Source: Authors’ calculations based on data available from the Maryland State Department of Education for the 2013–2014 academic year.

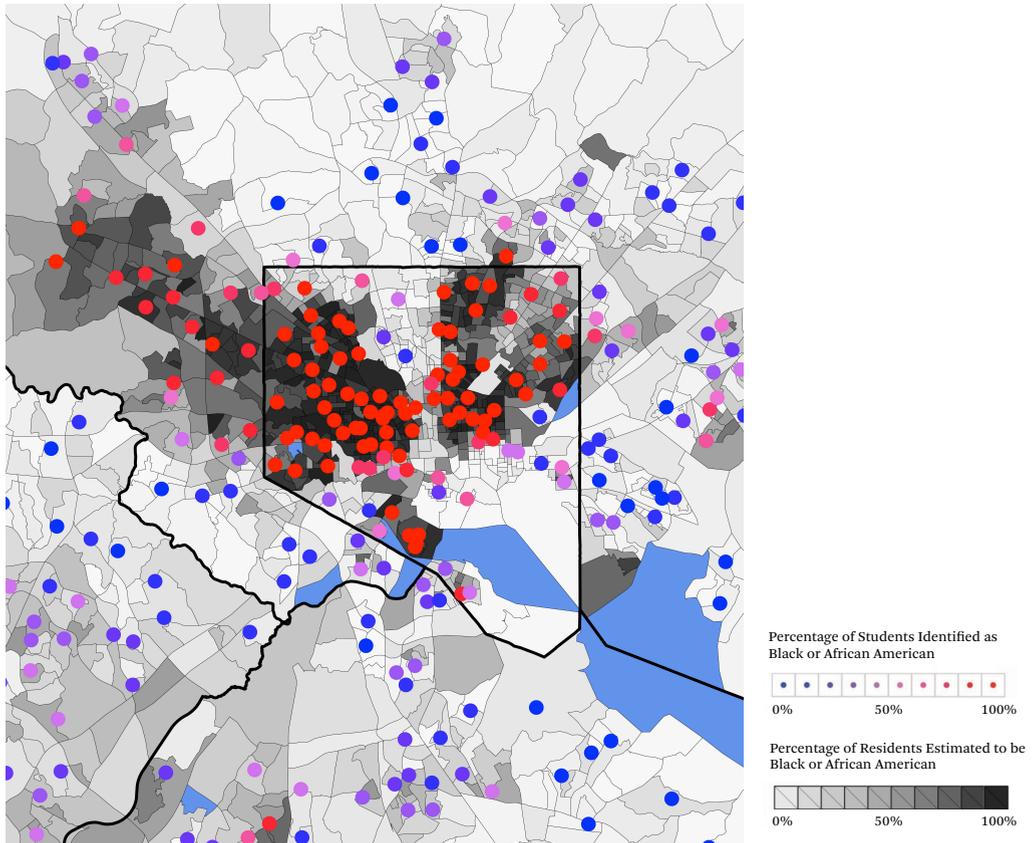
Note: The percentage “not proficient” is the category of “basic” on the Maryland State Assessment in 2014.

**Figure 2.** Locations of Regular Elementary Schools in Central Maryland, Displayed with a Heat Scale for the Percentage of Students Identified as Neither White nor Asian and Plotted on Top of Census Tracts Shaded by the Percentage of Residents Estimated to Be Neither White nor Asian



Source: Authors’ calculations and plotting of data from NCES, CCD, 2012 School Universe File (Keaton 2014), and the 2009–2013 Five-Year File from the ACS (U.S. Census Bureau 2013).

**Figure 3.** Locations of Regular Elementary Schools in the Baltimore Metropolitan Area, Displayed with a Heat Scale for the Percentage of Students Identified as Black or African American and Plotted on Top of Census Block Groups Shaded by the Percentage of Residents Estimated to Be Black or African American



Source: Authors' calculations and plotting of data from NCES, CCD, 2012 School Universe File (Keaton 2014), and the 2009–2013 Five-Year File from the ACS (U.S. Census Bureau 2013).

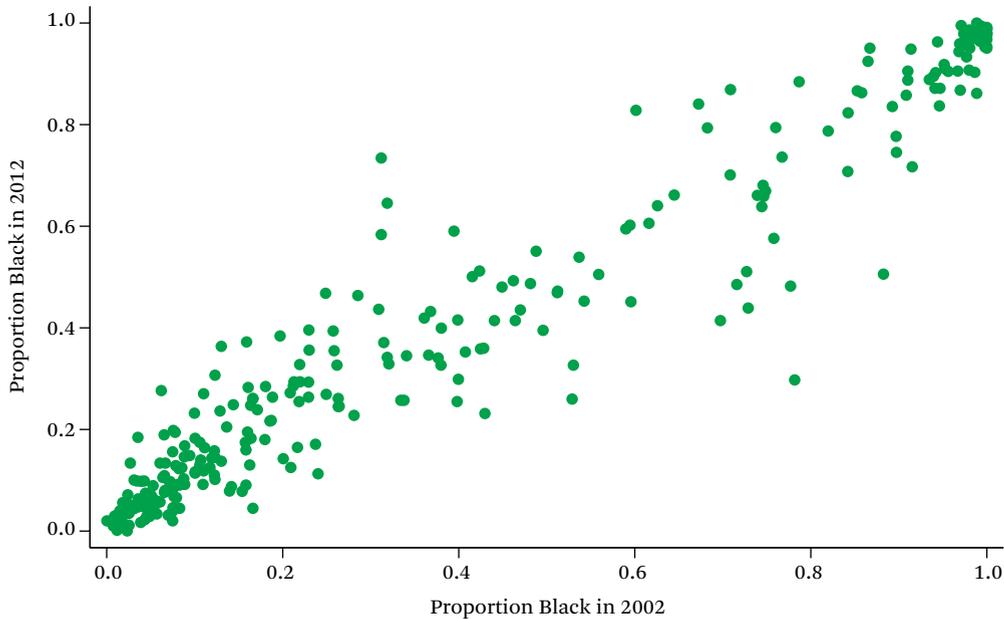
tract that is nonwhite and non-Asian, as estimated by pooled 2009 through 2013 samples of the ACS. Second, all regular elementary schools are plotted at their physical locations but then colored with a “heat” scale, where color gradations from blue through violet to red represent the proportion of the school population that is nonwhite and non-Asian.<sup>3</sup>

The map shows Baltimore City, with its harbor in the northwest of Chesapeake Bay, surrounded by Baltimore County in the shape of a wrench. Anne Arundel County is due south

of the city, and Howard County is to the southwest, squeezing in to the point where Baltimore County and Anne Arundel form their own border. Washington, D.C., is the square void farther southwest, with the Maryland portion of its metropolitan area surrounding it on three sides. Across the whole region, the correspondence between residential and school racial segregation is clear, with red dots representing schools with high percentages of black, African American, and Hispanic students sitting generally on top of darkly shaded census

3. The optimal way to view these maps is in color. We would refer readers of the print edition of this paper to [www.rsfjournal.org/doi/full/10.7758/RSF.2016.2.5.01](http://www.rsfjournal.org/doi/full/10.7758/RSF.2016.2.5.01) to view the color version.

**Figure 4.** The Persistence of de Facto Segregation for Regular Elementary Schools in the Four School Districts That Encompass the Baltimore Metropolitan Area, 2002 and 2012



Source: Authors' calculations based on data from NCES, CCD, 2002 and 2012 School Universe Files (Keaton 2014).

Notes: The estimated correlation for the underlying scatterplot is 0.97. The number of elementary schools with valid and available data in both years is 311 (75 for Anne Arundel County, 101 for Baltimore City, 99 for Baltimore County, and 36 for Howard County).

tracts with high proportions of black, African American, and Hispanic residents.<sup>4</sup>

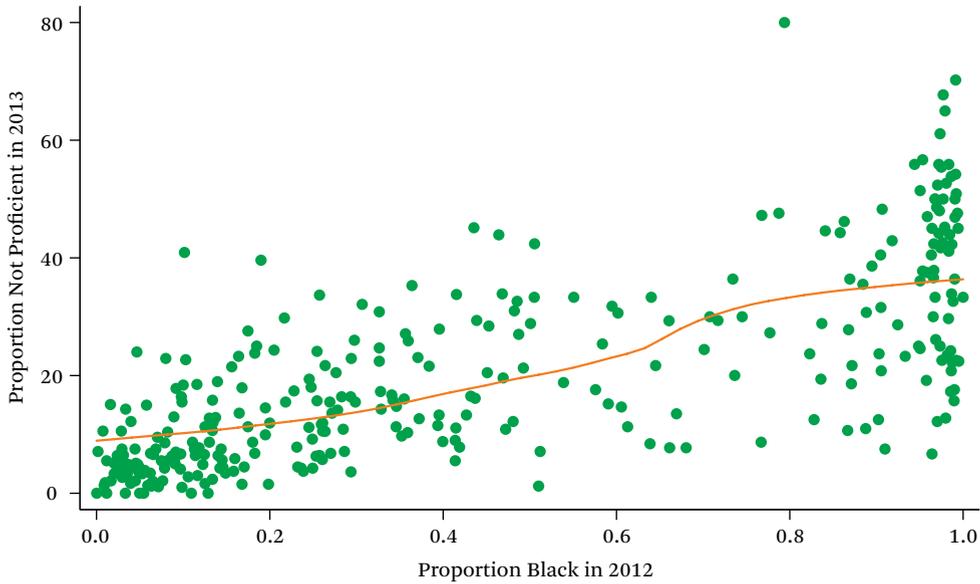
Zooming in on the Baltimore metropolitan area, figure 3 overlays the proportion of each elementary school that is black or African American on top of the proportion of residents of census block groups that are black or African American. The comparatively small Hispanic population in Baltimore ensures a close correspondence between the patterns in figures 2 and 3 in the Baltimore metro area, and the census block groups of this map bring local residential variation into greater relief. In either representation, the overall pattern is clear. Baltimore's black population is concentrated in a distinct V-shaped pattern, mostly within Baltimore City but also extending into Baltimore County, especially to the northwest. Elementary school segregation mirrors the resi-

dential pattern very closely. We suspect that it would have been much the same during the 1960s, indeed perhaps even more strikingly so, but the data sources and technology for such a perspective were not available to Coleman and his colleagues.

Next, we consider the stability of the racial segregation of schools to examine whether there has been a trend toward greater integration. Figure 4 offers a scatterplot of the proportion of students designated as black or African American in 311 of the 327 elementary schools for which data are available in both 2002 and 2012. The stability of the pattern over a decade is dramatic, and the correlation coefficient for the ten-year scatter is a staggering 0.97. Thus, although the Baltimore metro area has certainly changed over the past fifty years in many ways, since 2000 at least the racial segregation

4. In maps available in the supplementary appendix, we show that the Hispanic population is substantial in the metro D.C. area but not in the metro Baltimore area.

**Figure 5.** The Proportion of Students Who Fell Below the Reading Proficiency Cutoff in Third Grade in 2013 in Regular Elementary Schools in the Four School Districts That Encompass the Baltimore Metropolitan Area, Plotted Against the Percentage of Each School Identified as Black or African American in 2012



*Source:* Authors' calculations based on NCES, CCD, 2012 School Universe File (Keaton 2014), merged with publicly available data from the Maryland State Department of Education for 2013.

*Notes:* The red line is a kernel-smoothed local regression prediction, which is interpretable as the smoothed average proficiency for each value of racial composition. The estimated correlation for the underlying scatterplot is 0.73. The number of elementary schools with valid and available data for the proportion black in 2012 and the percentage not proficient in 2013 is 323 (77 for Anne Arundel County, 101 for Baltimore City, 105 for Baltimore County, and 40 for Howard County).

of elementary schools has looked fixed in place.

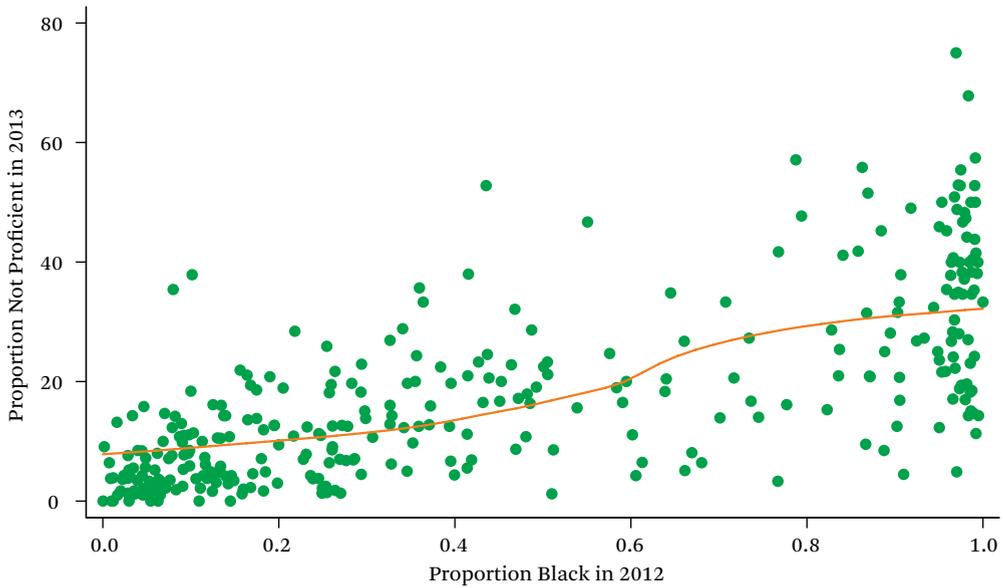
The demographic pattern in Baltimore of differences in school performance is taken up next to revisit whether, as in EEO, family background differences remain paramount. Recalling the district differences in proficiency documented already in the last two rows of table 1, we first examine the relationship between a school's African American enrollment (proportion black) and its proportion not proficient. Figures 5 and 6 present scatterplots with schools as the unit of analysis and with reading and math test scores for third-graders. For both figures, the correlation coefficient exceeds 0.7 for the relationship between the proportion not proficient in the subject of the test and the proportion of students identified as black or African American. The nonparametric regression

line, presented in red, suggests a threshold in the relationship as the proportion of the school that is black or African American approaches and exceeds two-thirds.

Of course, the relationship between test scores and racial composition at the school level is a surface representation of deeper structural determinants of educational outcomes. Indeed, EEO, probably more than any other piece of research, established clearly why such comparisons have limited value. So, to probe, we might follow EEO's lead and first look for notable differences in school inputs.

Table 2 presents selected input characteristics that are available from administrative reporting, and these do reveal a substantial difference for Baltimore City. The level of instructional staff is lower, and the rate of advanced certification for this staff is lower as well. Yet,

**Figure 6.** The Proportion of Students Who Fell Below the Mathematics Proficiency Cutoff in Third Grade in 2013 in Regular Elementary Schools in the Four School Districts That Encompass the Baltimore Metropolitan Area, Plotted Against the Percentage of Each School Identified as Black or African American in 2012



Source: Authors’ calculations based on NCES, CCD, 2012 School Universe File (Keaton 2014), merged with publicly available data from the Maryland State Department of Education for 2013.

Notes: The red line is a kernel-smoothed local regression prediction, which is interpretable as the smoothed average proficiency for each value of racial composition. The estimated correlation for the underlying scatterplot is 0.71. The number of elementary schools with valid and available data for the proportion black in 2012 and the percentage not proficient in 2013 is 323 (77 for Anne Arundel County, 101 for Baltimore City, 105 for Baltimore County, and 40 for Howard County).

**Table 2.** Selected Inputs for the Four School Districts in the Baltimore Metropolitan Area, 2011–2012 and 2013–2014

	Baltimore City	Anne Arundel County	Baltimore County	Howard County
<b>District staff, 2013–2014</b>				
Instructional staff per 1,000 students	62.2	68.6	68.7	73.3
Instructional assistants per 1,000 students	16.1	11.6	9.7	24.9
Advanced certification	47.6%	66.1%	66.4%	65.3%
<b>Distribution of revenue, 2011–2012</b>				
Local	18.7%	57.9%	51.7%	65.6%
State	67.4	37.0	42.6	31.7
Federal	14.0	5.1	5.8	2.7

Source: For district staff, Maryland State Department of Education 2013; for the distribution of revenue, NCES, CCD (Keaton 2014).

**Table 3.** Wealth and Expenditures per Pupil in the Four School Districts in the Baltimore Metropolitan Area, Before (2003 and 2004) and After (2013 and 2014) Full Implementation of Maryland's Revised Funding Formula for State Expenditures

	Baltimore City	Anne Arundel County	Baltimore County	Howard County
<b>Wealth per pupil (relative to state average)</b>				
2003	0.54	1.20	1.12	1.21
2004	0.53	1.22	1.10	1.18
2013	0.58	1.24	1.01	1.08
2014	0.59	1.24	1.02	1.09
<b>Expenditures per pupil (nominal dollars)</b>				
2003	8,926	8,104	8,138	8,957
2004	9,585	8,522	8,562	8,970
2013	14,973	12,519	12,752	14,571
2014	14,631	12,687	13,012	14,694
<b>Expenditures per pupil (relative to state average)</b>				
2003	1.07	0.97	0.98	1.07
2004	1.09	0.97	0.98	1.02
2013	1.12	0.94	0.95	1.09
2014	1.08	0.93	0.96	1.08

*Source:* Authors' calculations based on data from the Maryland State Department of Education (2013).

*Note:* Relative wealth and expenditures per pupil in each year were calculated by dividing the district-specific nominal dollar amount in each year by the Maryland state average across all districts in each year.

without a comprehensive analysis of educational programming and how it varies across districts, differences such as these are hard to interpret. Looking at the distribution of revenue reveals, in contrast, a large and clear difference that sets Baltimore City apart. Only 18.7 percent of Baltimore City's funding is from local sources, in comparison to 51.7 percent for Baltimore County and even higher shares for Anne Arundel and Howard. Unlike the other three districts, far and away the largest portion of Baltimore City's funding is from the state of Maryland. Its funding from federal sources is much larger as well, as most federal funding for K-12 schooling is targeted at high-poverty school districts.

The explanation for these differences is partly revealed in table 3, which shows annual wealth and expenditures per pupil for each of

the four districts in two periods, 2003 and 2004, and then 2013 and 2014. For the first time period, Maryland had only just begun to implement a new state program to compensate for variation in low levels of local funding and demonstrated need for better educational performance across the state. For the latter time period, 2013 and 2014, this new funding formula for state expenditures had been fully implemented.

With the goal of better understanding variation in the local capacity to fund schooling, for the first panel per-pupil wealth is tabulated in each year relative to the state average. In both time periods, Baltimore City has dramatically less wealth per pupil, thereby generating much lower local funding from analogous taxation mechanisms.<sup>5</sup> Between the two periods, Baltimore City's wealth per pupil grew slightly

5. In fact, Baltimore's property tax rate is much higher than that of its neighboring counties but yields much less revenue owing to these wealth disparities.

more, benchmarked against the state average, than wealth per pupil in the other three school districts, and narrowing a substantial amount on the wealth of Baltimore County.

The story for expenditures is similar, and some subtle patterns drive the results. State and federal funding for Baltimore City kept the district on par with the other three school districts before full implementation of the state's new funding formula. By 2013 and 2014, Baltimore City (and Howard County) had pulled ahead of both Anne Arundel and Baltimore counties in nominal dollars. But in part because per-pupil funding increases from the state program were large in some other districts in the state, the relative positions of all four school districts were little changed, as shown in the third panel. Overall, implementation of these changes in funding affected Baltimore City only modestly, relative to its nearest two school districts, Baltimore and Anne Arundel Counties.

Tables 2 and 3 represent two bedeviling realities of school effects research since EEO was published. First, direct measures of inputs, such as staffing characteristics, are hard to interpret given the wide variation in programming across districts, especially variation due to differences in the number of special needs students. Second, gross district-level funding differences do not line up with common expectations for seemingly resource-poor urban schooling; instead, this research tends to show that urban districts with low tested performance do not lack for funding, at least on paper.

The EEO researchers gathered data about children's families, and those data were central to the report's analyses comparing the relative influence of school and home resources. Today, to conduct like analyses, there would be a similar need for data on students' families, but despite the large increase in resources devoted to accountability measurement in the past two decades, most school districts still collect very

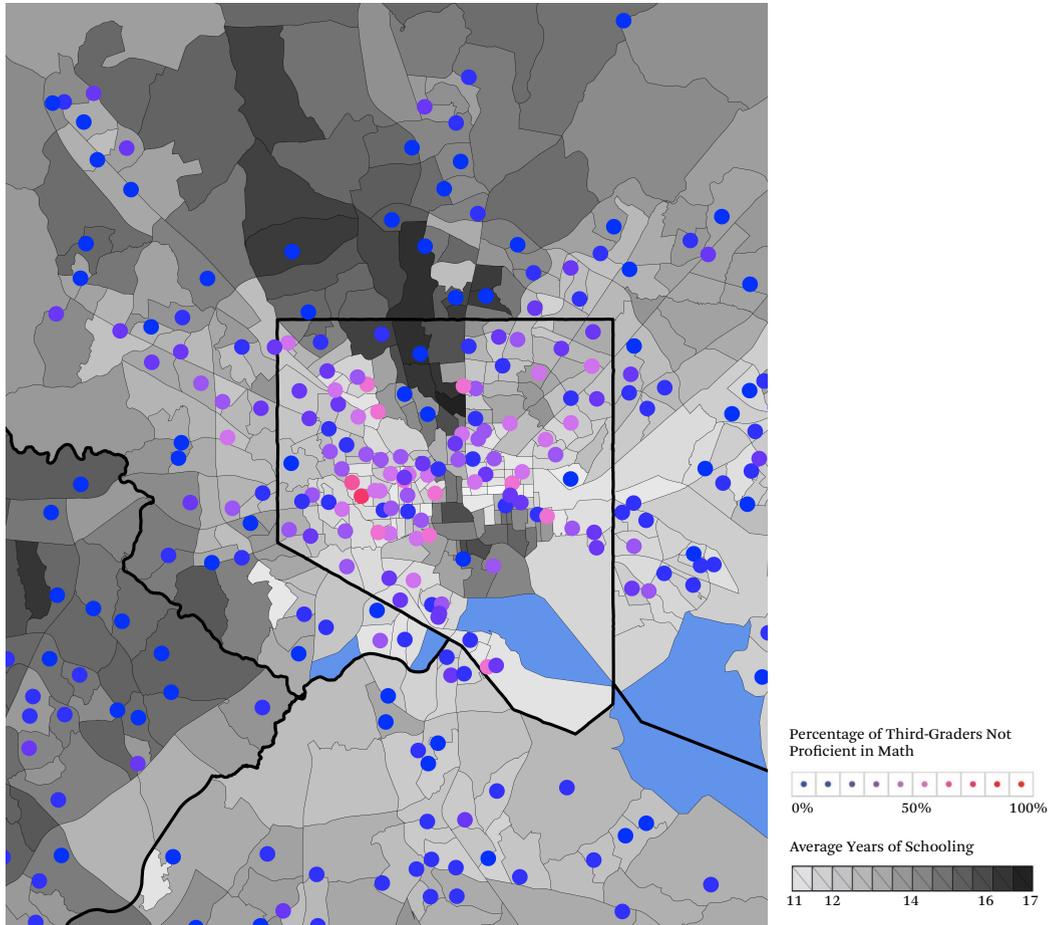
little such information. Figures 7 and 8 consider the role of family background inputs as best we can do without data on students' parents to match directly to students' test scores. Each figure plots the same regular elementary schools displayed in figure 3 in the Baltimore metropolitan area, but now with the heat scale set by the percentage of third-graders not proficient on the state tests for math. (The results for reading, provided in the supplementary appendix, show an even more dramatic pattern.) For figure 7, census tracts are shaded dark on a gray scale proportional to the average years of education for residents in the tract who were twenty-five years or older. For figure 8, the shading is for median income among civilians age eighteen or older who reported any income.

Paralleling, again, the EEO report's results, there is a close correspondence between aggregate family background characteristics in census tracts and the levels of student proficiency in the regular elementary schools located within and near to them. With reference to figure 3, within-race variation in family background appears to have a clear relationship with proficiency levels. For example, census tracts outside of Baltimore City that are predominantly black have higher levels of education and income and higher levels of tested proficiency as well.<sup>6</sup>

While undoubtedly there are local communities and particular schools with unique stories of success and failure, the broad pattern across Baltimore is simple. Racial segregation remains dramatic, and historic patterns of family disadvantage, which have changed too little across the decades, convert this segregation into a clear geography of varied school performance. Elementary schools situated in affluent areas test well, but performance falls off steadily and regularly as the local prevalence of family disadvantage increases. Large portions of Baltimore City are deserts of educational performance, dotted with too few oases of distinction.

6. In additional figures available in the supplementary appendix, we show that the pattern appears even more starkly when the map is zoomed out to show the entirety of all four counties. Virtually all of the schools in the exurban zones on the fringe of the Baltimore metro area are solidly blue, and none are in or near census tracts with the low levels of education and income characteristic of many areas of Baltimore City.

**Figure 7.** Locations of Regular Elementary Schools in the Baltimore Metropolitan Area, Colored with a Heat Scale for the Percentage of Third-Graders Not Proficient in Math in 2013 and Plotted on Top of Census Tracts Shaded by Levels of Education for Residents



Source: Authors' calculations based on the 2009–2013 Five-Year File from the ACS (U.S. Census Bureau 2013), merged with publicly available data from the Maryland State Department of Education for 2013.

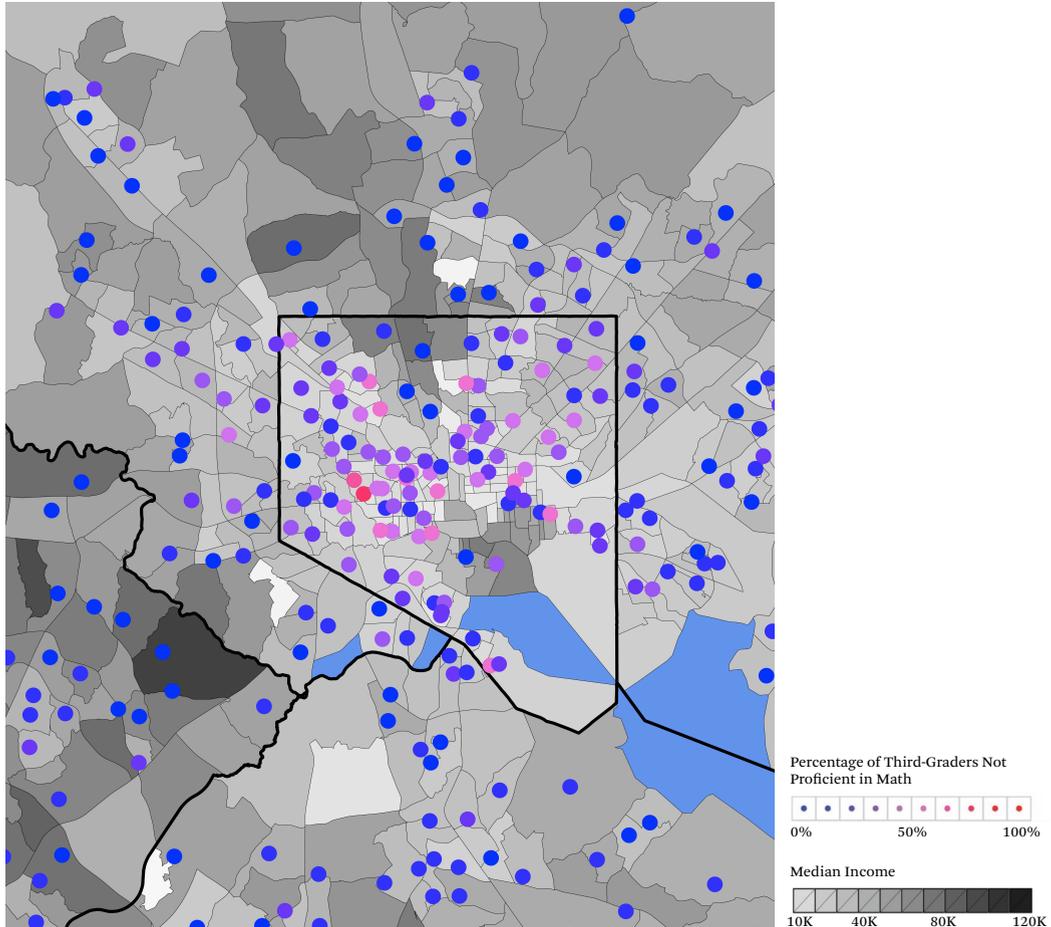
### THE HOPKINS CONFERENCE AND THE PRESENT ISSUE

These data from Baltimore and its neighboring school districts instruct us that EEO's agenda is no less relevant today than it was during the civil rights era and the decades that followed: how are we as a nation to *understand* and *moderate* large and troublesome achievement gaps along lines of race-ethnicity and family background? Questions remain as well about the debates and advances that the report set in motion: Are our approaches to accountability sensible? Do a school's resources matter for its

students' learning? And what about the balance between in-school and out-of school resources?

Motivated by EEO's prominence in the annals of social science research and mindful of the large questions that remain, we concluded that a thoroughgoing stocktaking was in order on the occasion of the report's fiftieth anniversary. Our goal was to respect the report's role in history, but not defer to it, to take a necessary look back, but also to be forward-looking. That is what prompted us to convene a conference at Johns Hopkins University, Coleman's

**Figure 8.** Locations of Regular Elementary Schools in the Baltimore Metropolitan Area, Colored with a Heat Scale for the Percentage of Third-Graders Not Proficient in Math in 2013 and Plotted on Top of Census Tracts Shaded by Levels of Income for Residents



Source: Authors' calculations based on the 2009–2013 Five-Year File from the ACS (U.S. Census Bureau 2013), merged with publicly available data from the Maryland State Department of Education for 2013.

home base while writing EEO. The papers prepared for that conference are shared in this issue of *RSF: The Russell Sage Foundation Journal of the Social Sciences*.

Prominent scholars from several disciplines were invited to offer their reflections on the report's legacy. In our letter inviting their contributions, we explained that "the intent is not simply to valorize the exercise. Rather, it is . . . to be forward-looking and agenda setting." We noted that "the Report's conclusions regarding what today would be called the achievement gap across social lines" would be the confer-

ence's most obvious frame of reference, but then reminded invitees that the report's "legacy includes as well the development of a modern social science research infrastructure and advances in how insights from research are used to inform practice."

A truly distinguished set of contributors accepted our invitation to consider how well EEO's insights have held up and to explore their continuing relevance to today's educational and social policy debates. Some of the contributors are quite senior and were on the scene at the time; others are younger and en-

gaged with the report's issues using today's methods and understandings.

The papers that follow address the EEO report's approach and its substantive conclusions through the lens of advances over the past half-century in research methods and in the knowledge base bearing on the report's substantive contributions. They address the balance of family and school in children's academic development, school racial isolation and segregation, school climate and school reform, standards and assessments, and the methodology of school effects research. It is an ambitious agenda, but one that we hope the readers of this issue will find has been well executed.

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