
INEQUALITY AND EDUCATION

CUNY INEQUALITY BY THE NUMBERS 2020

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OUTLINE

1. **State of the field:** Inequality in educational achievement and attainment, mid-twentieth century to present (by: income, wealth, parental education, race)
2. **A question from my own research:** Intersections of (some of) these axes of educational inequality, also mid-twentieth century to present
3. **Sociological perspectives on Coronavirus pandemic and educational inequality (pre-k through 12th grade)**

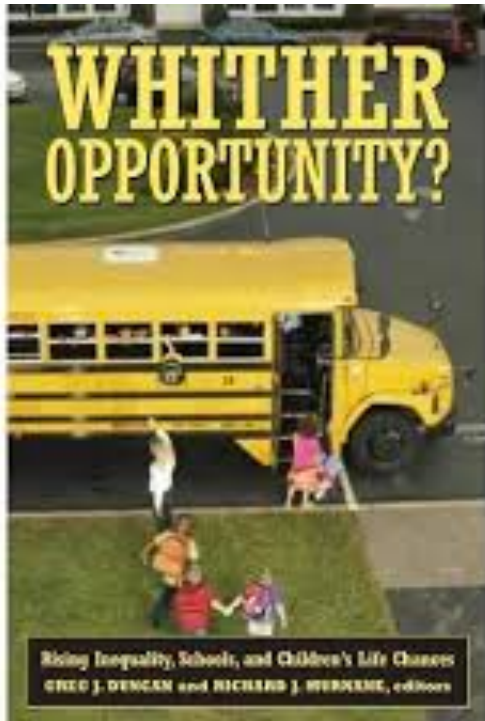
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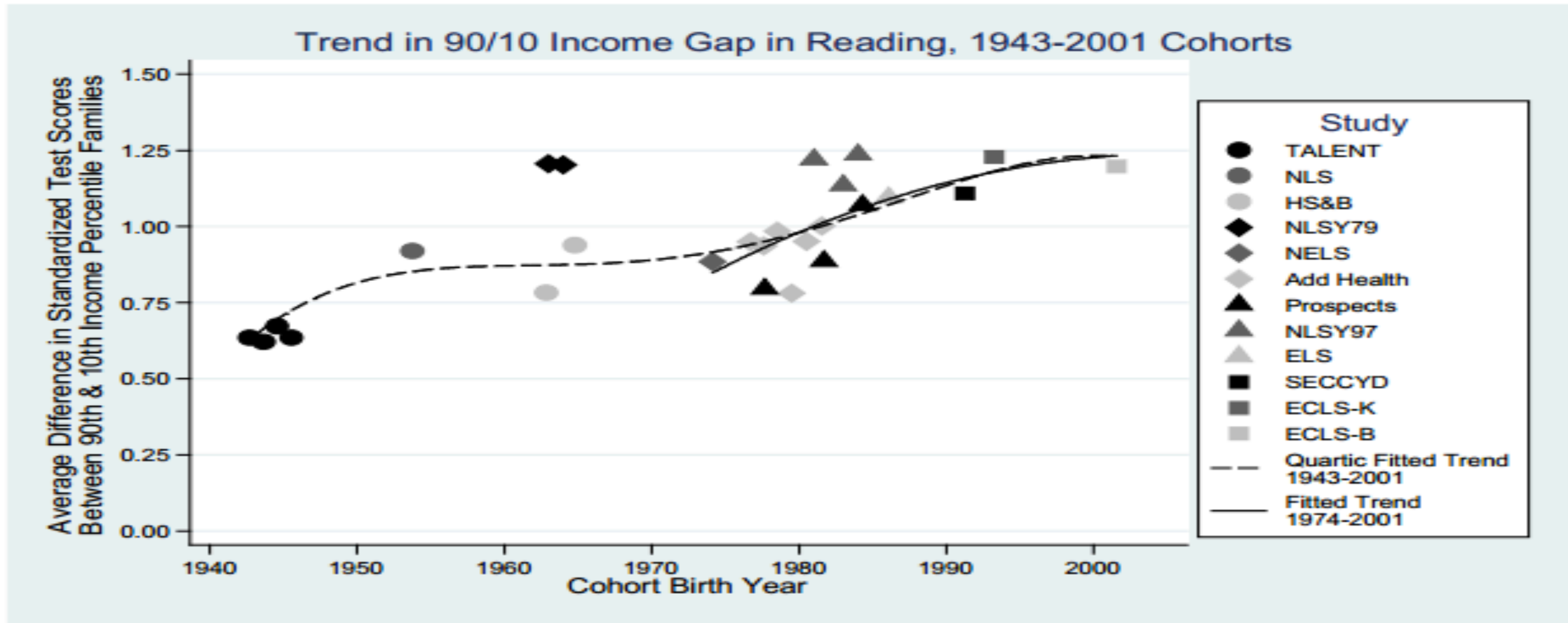
Sociological perspectives on Coronavirus pandemic and educational inequality

EDUCATIONAL GAPS BETWEEN CHILDREN OF HIGH-VERSUS LOW-INCOME PARENTS HAVE INCREASED



- **K-12 achievement** (Reardon 2011, *Whither Opportunity*)
 - Data: 12 national data sources

FIGURE 5.1 *Trend in 90/10 Income Achievement Gap in Reading, by Birth Cohort (1943 to 2001 Cohorts)*



Source: Author's compilation based on data from Project Talent (Flanagan et al. n.d.); NLS, HS&B, NELS, ELS, ECLS-K, ECLS-B (U.S. Department of Education, Center for Education Statistics 1999, 2000, 2001, 2004, 2009, 2010); Prospects (U.S. Department of Education 1995); NLSY79, NLSY97 (U.S. Bureau of Labor Statistics 1980, 1999); SECCYD (National Institute of Child Health and Human Development 2010); and Add Health (Harris 2009, reading only).

Note: See note 4 and online appendix for further details.

EDUCATIONAL GAPS BETWEEN CHILDREN OF HIGH-VERSUS LOW-INCOME PARENTS HAVE INCREASED

Demography (2017) 54:1603–1626
DOI 10.1007/s13524-017-0600-4



Increasing Inequality in Parent Incomes and Children's Schooling

Greg J. Duncan¹ · Ariel Kalil² ·
Kathleen M. Ziol-Guest³

Published online: 1 August 2017
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Abstract Income inequality and the achievement test score gap between high- and low-income children increased dramatically in the United States beginning in the 1970s. This article investigates the demographic (family income, mother's education, family size, two-parent family structure, and age of mother at birth) underpinnings of the growing income-based gap in schooling using data from the Panel Study of Income Dynamics. Across 31 cohorts, we find that increases in the income gap between high-

- **Completed schooling at age 24** (Duncan, Kalil, Ziol-Guest 2017, *Demography*)
- Data: PSID

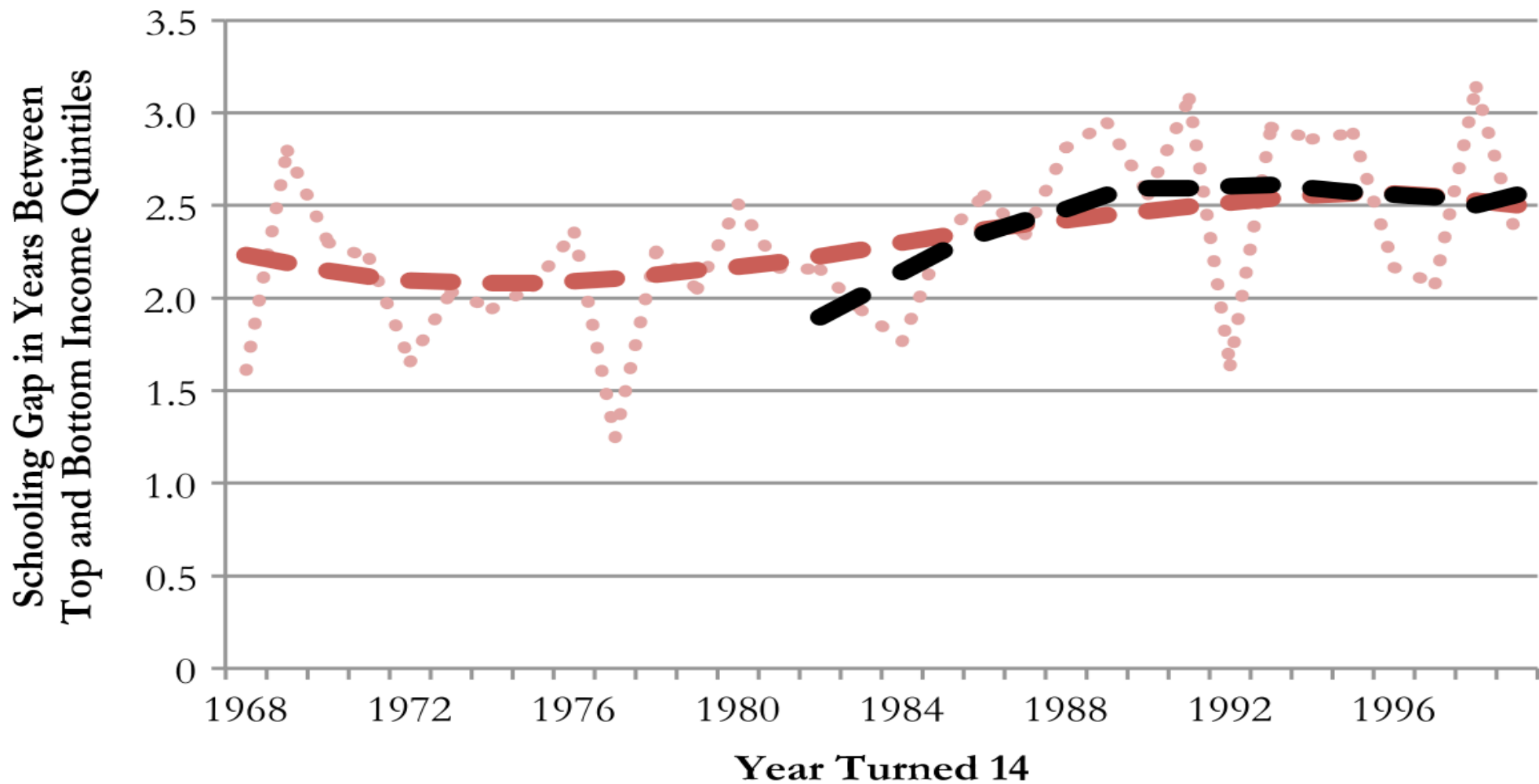


Fig. 1 Top minus bottom income quintile differences in children’s years of completed schooling: Panel Study of Income Dynamics. Dotted line shows gaps in years of completed schooling between children in the top and bottom quintiles of the income distribution for all PSID cohorts. Solid line shows lowess-based trends across all years of data; dashed line shows lowess-based trend for data in the second half of the period. Analyses in Table S1 (Online Resource 1) show that the gap in completed schooling rose between the first and second half of the period

WHAT ABOUT WEALTH (INSTEAD OF INCOME?) SAME STORY

Demography (2018) 55:1033–1068
<https://doi.org/10.1007/s13524-018-0666-7>



Growing Wealth Gaps in Education

Fabian T. Pfeffer¹

Published online: 27 March 2018
© Population Association of America 2018

Abstract Prior research on trends in educational inequality has focused chiefly on changing gaps in educational attainment by family income or parental occupation. In contrast, this contribution provides the first assessment of trends in educational attainment by family wealth and suggests that we should be at least as concerned about growing wealth gaps in education. Despite overall growth in educational attainment

- Completed schooling at age 25 (Pfeffer 2018, *Demography*)
- Data: PSID

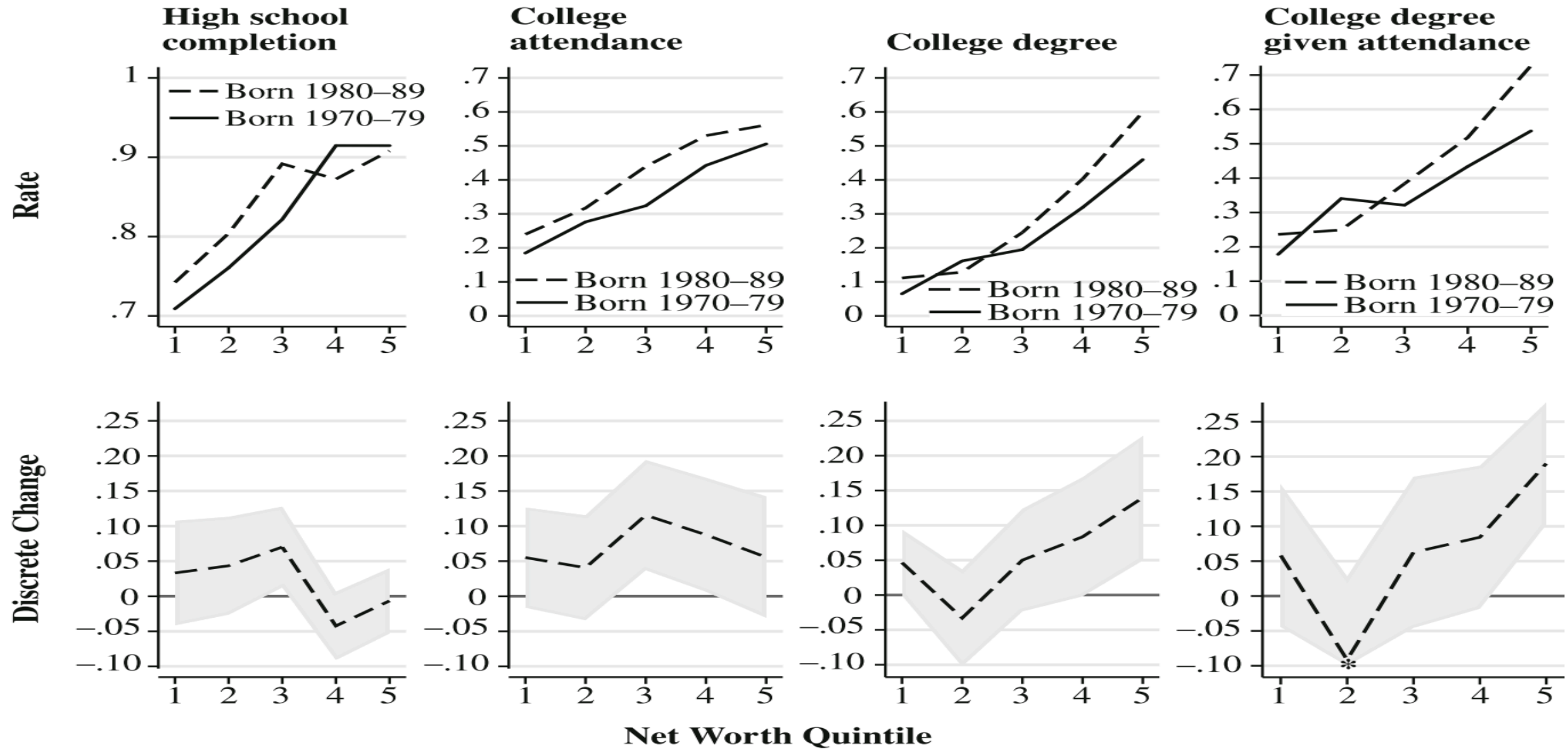


Fig. 2 Cohort trends in wealth gaps in education. *Display of lower bound of one confidence interval (second quintile, college degree given college attendance) truncated to maintain the same y-axis scale across outcomes

PFEFFER (2018), “GROWING WEALTH GAPS IN EDUCATION”

While it is thus a misperception that a great majority of children from wealthy households graduate college, it is certainly the case that many college graduates come from households with significant net worth. In this analytic sample, half of all college graduates come from a household with more than \$190,000 in net worth, and a full one-fifth of them come from a household with a net worth of at least half a million dollars.

[Net worth percentiles corresponding to those net worth values \(2016\):](#)

190K = >60pct <70pct

500K = approx. 80pct

AT THE SAME TIME: GAPS BY PARENTAL EDUCATION HAVE REMAINED STABLE

NBER WORKING PAPER SERIES

THE UNWAVERING SES ACHIEVEMENT GAP:
TRENDS IN U.S. STUDENT PERFORMANCE

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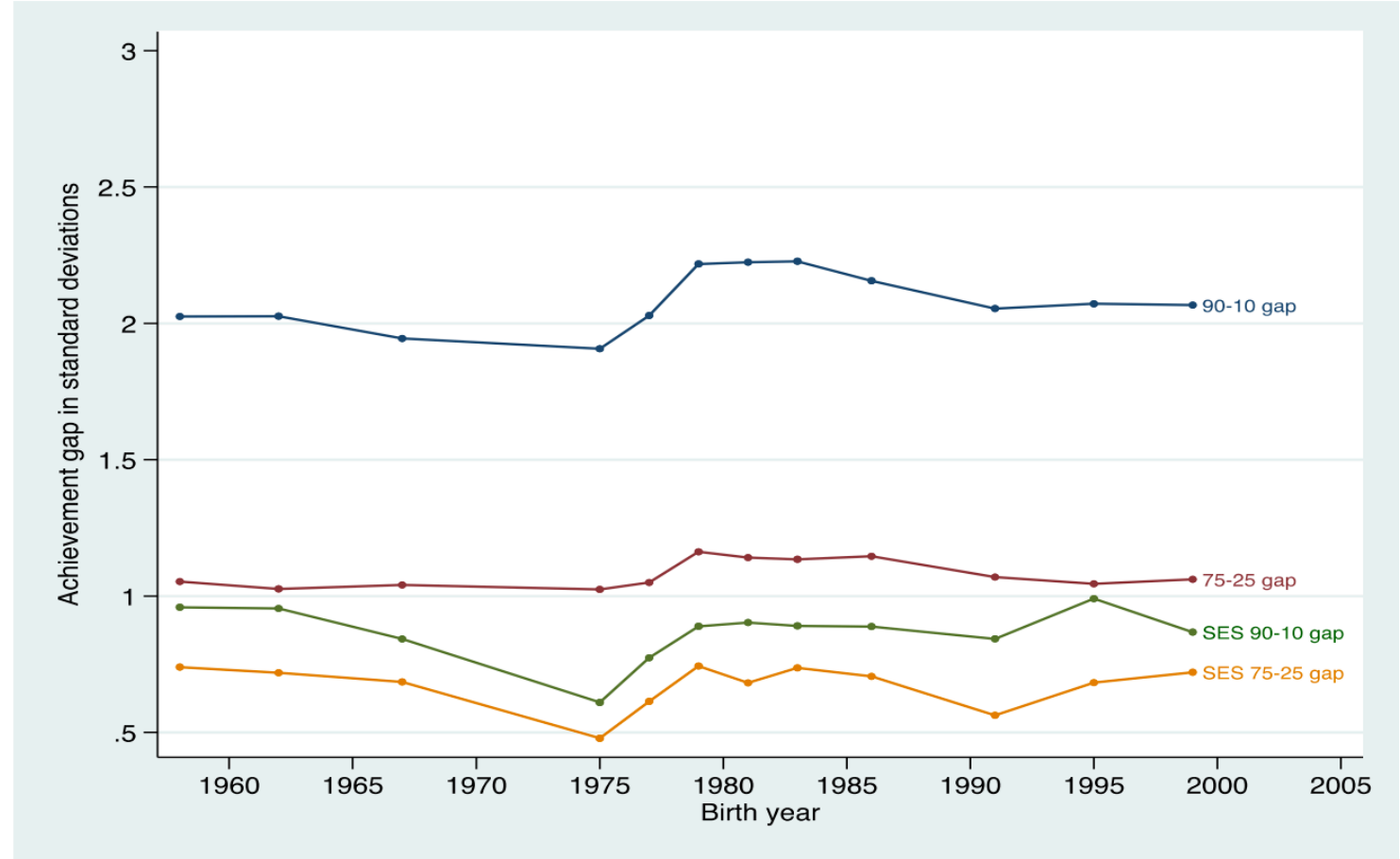
Working Paper 25648
<http://www.nber.org/papers/w25648>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
March 2019

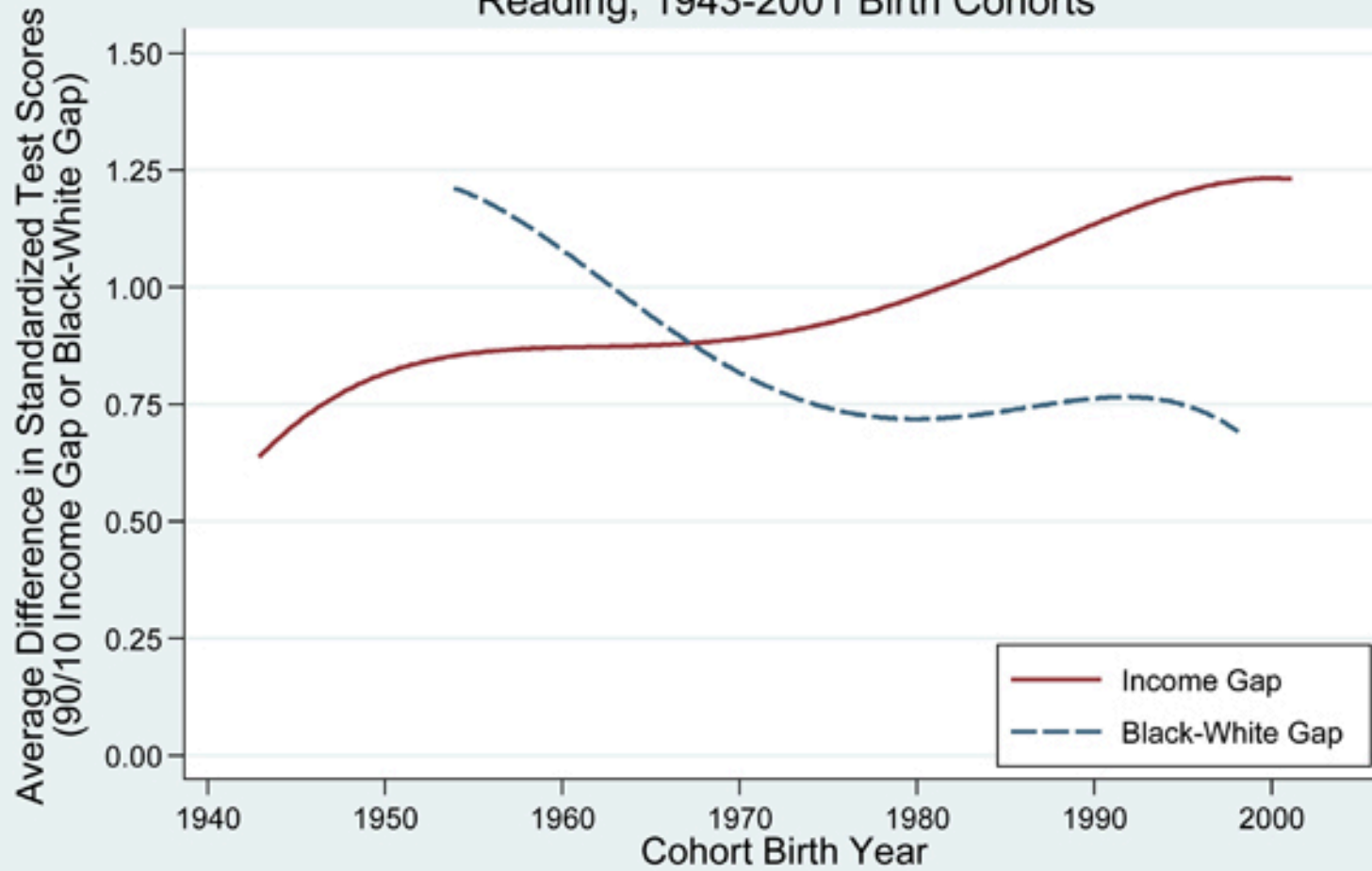
Figure C.1: Unconditional and (SES) Achievement Gaps in LTT-NAEP, Birth Cohorts 1954-1999

Measured as parent education + home possessions

Panel B: 13-year-old Reading

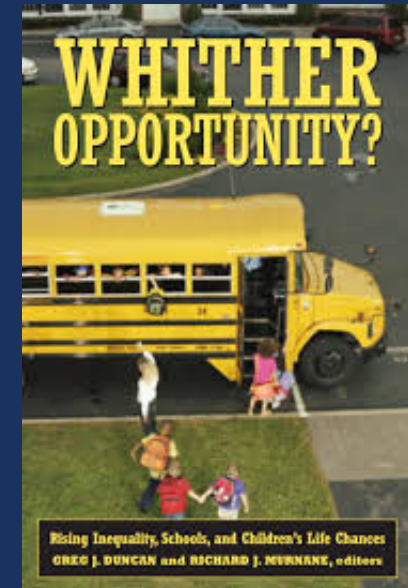


Income Achievement Gap and Black-White Achievement Gap
Reading, 1943-2001 Birth Cohorts



Source: Reardon (2011)

AT THE SAME TIME:
BLACK-WHITE
ACHIEVEMENT GAP
HAS DECREASED



“[A]t the same time that family income has become more predictive of children’s academic achievement, so have educational attainment and cognitive skills become more predictive of adults’ earnings...As the children of the rich do better in school, and those who do better in school are more likely to become rich, we risk producing an even more unequal and economically polarized society.” -Reardon (2011, p. 111)



Economic
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BROADER,
BOLDER
APPROACH
TO EDUCATION

Education inequalities at the school starting gate

Gaps, trends, and strategies to address them

Report • By Emma García and Elaine Weiss • September 27, 2017



MECHANISMS: EDUCATIONAL GAPS BY PARENTAL INCOME

Family mechanisms

- Divergence in family demographic characteristics by parental income: maternal education, maternal age, # of parents in household, family size
- These are correlated with children's cognitive and behavioral development and their educational success

Mother's Age at Birth/Number of Siblings Gap
Between Top and Bottom Income Quintiles

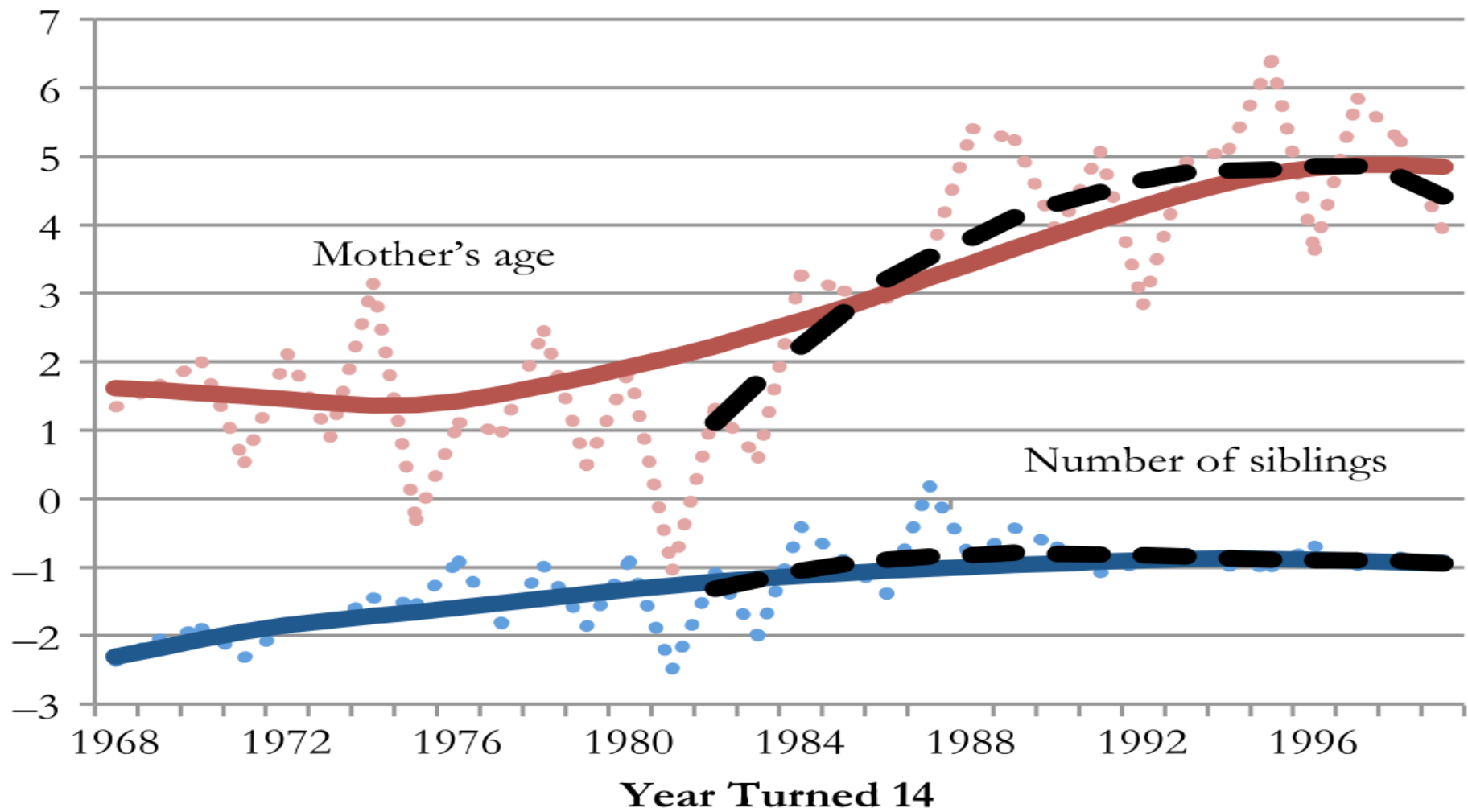


Fig. 6 Top minus bottom income quintile differences in age of mother at birth and number of siblings: Panel Study of Income Dynamics. Dotted lines show gaps in mother's age at birth (top dotted line) and number of siblings (bottom dotted line) between children in the top and bottom quintiles of the income distribution for all PSID cohorts. Solid lines shows lowess-based trends across all years of data; dashed lines show lowess-based trend for data in the second half of the period

MECHANISMS: EDUCATIONAL GAPS BY PARENTAL INCOME

Neighborhood and school mechanisms

- Increasing neighborhood and school segregation by parental income
 - Recent trends in overall neighborhood segregation driven by families with children (e.g., Owens 2016, *ASR*)
- High-income children increasingly more likely than low-income children to grow up in safe and healthy neighborhoods and attend schools with achievement-boosting resources, teachers, and peer cultures (e.g., Owens, Reardon, and Jencks, 2016, *AERJ*; Owens 2018, *Soc of Ed*)
- Together with family inequality → The **interrelated/ nested contexts of child and adolescent development** (families, schools, neighborhoods, etc.; e.g., Bronfenbrenner) are becoming **increasingly stratified by parental income and wealth**

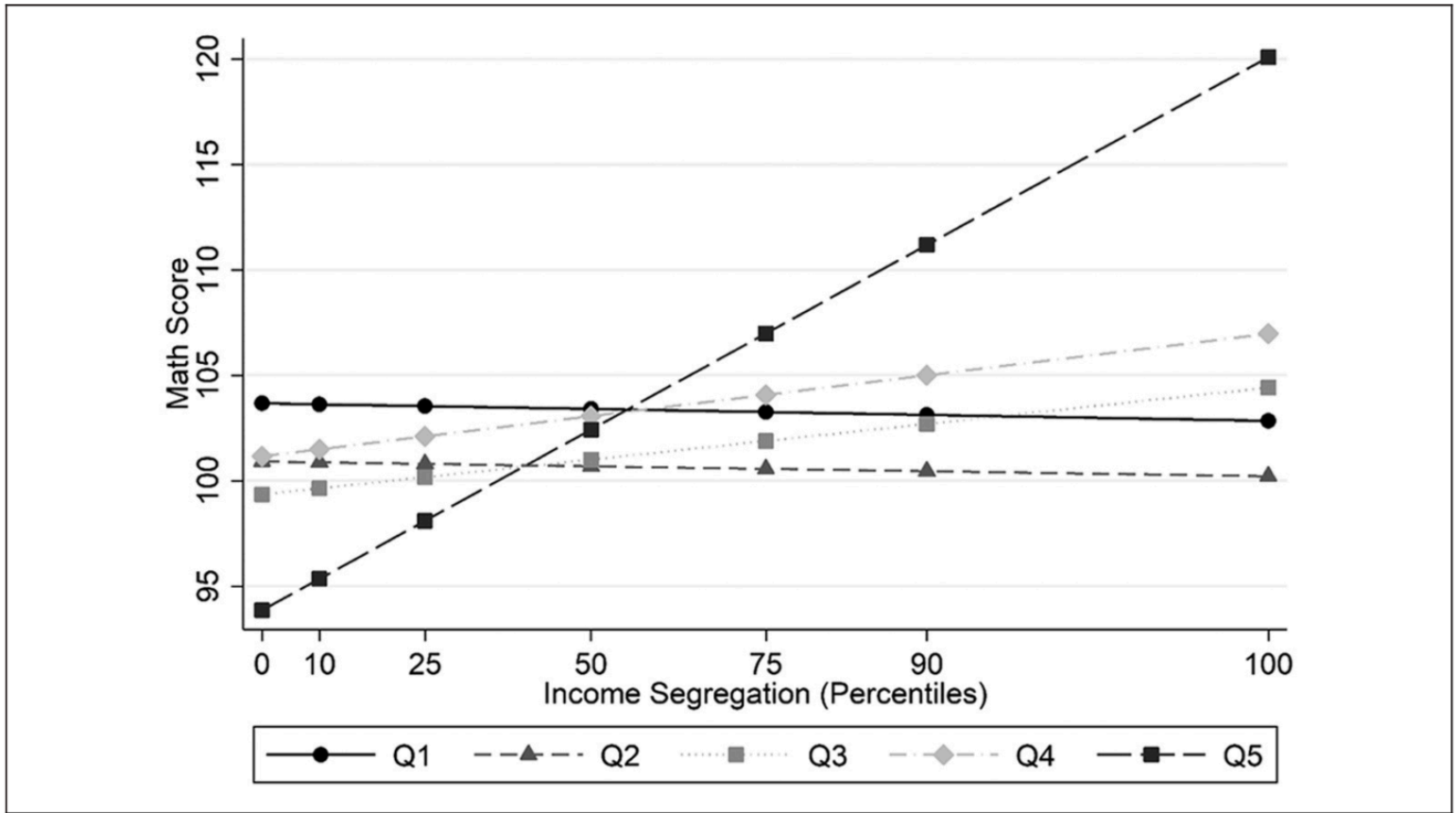


Figure 2. Predicted math scores by family income quintile and income segregation between school districts.

Note: Estimates from model similar to Table 2, Model 4, but categorizing family income by national income quintiles instead of continuously. All covariates held at their mean value. In all figures, income segregation percentiles are defined by the sample.

HIGH INCOME CHILDREN'S ACHIEVEMENT IS POSITIVELY CORRELATED WITH SCHOOL DISTRICT SEGREGATION BY INCOME (OWENS 2018)

ADDITIONAL/ AMPLIFYING: MECHANISMS OF WEALTH INEQUALITY IN ACHIEVEMENT AND ATTAINMENT (FROM HALLSTEN AND PFEFFER 2017, ASR)

1. **Purchasing** - neighborhoods (in the U.S., neighborhoods = public schools for children); private schooling; higher education
2. **Insurance** – children can identify strengths, abilities, and interests (including ones that are highly rewarded in labor market, perhaps after longer, riskier, and/ or more expensive periods of training), with less concern about immediate economic payoff
3. **Normative** – families develop strong educational norms out of a desire to reproduce their wealth position

THEORETICAL SUMMARY W/R/T ECONOMIC INEQUALITY

- Multigenerational reproduction of *economic (income and wealth)* inequality, in part through *educational (achievement and attainment)* inequality
 - Economic returns to schooling are increasing, incl. for small increments at top of distributions of educational attainment and skills (e.g., Lemieux 2006)
- Potential that schooling – a compulsory social institution through the early part of children’s lives – serves a *legitimizing function* for inequality
 - Particularly for whatever share of inequality still driven by highly-educated, highly-skilled “*working rich*” (medicine, academia, tech, etc.) whose top income and/ or wealth shares are undergirded by *educational credentials* – as opposed to rentiers, who may not need them (e.g., Picketty and Saez 2003; Picketty 2011)
 - Why? Continued prevalence of ethos that educational achievement and attainment outcomes are meritocratic

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Sociological perspectives on Coronavirus pandemic and educational inequality

INTERSECTION OF RACE AND INCOME IN HIGH SCHOOL STUDENTS' MATH ACHIEVEMENT, 1960-2009

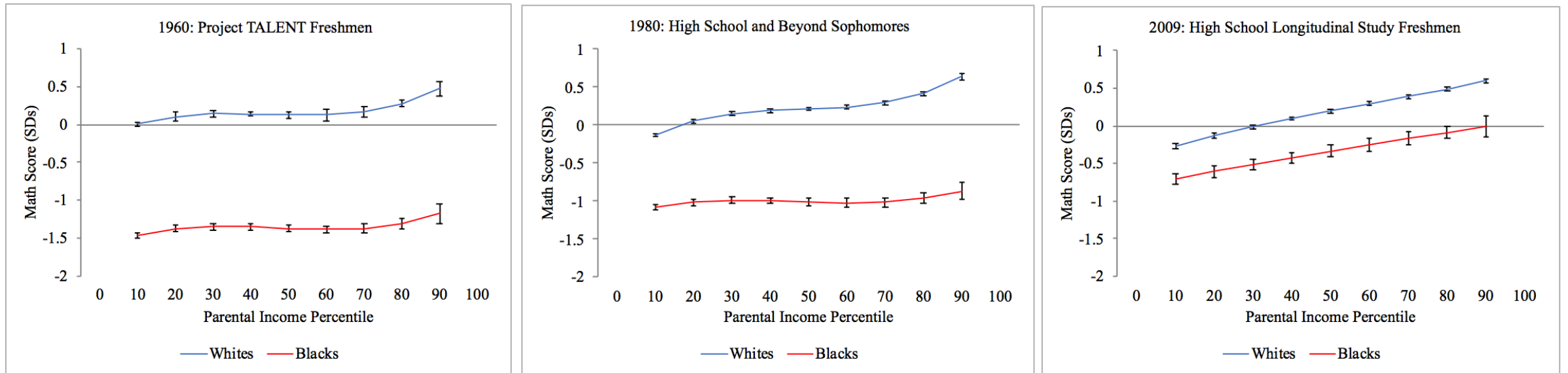


Figure 1. Math Achievement Score (Standard Deviations), by Year, Parental Income Percentile, and Race

Notes: Error bars represent robust standard errors.

Source: author's calculations. Please do not cite or distribute without permission.

FAMILIES AND SCHOOLS AS EXPLANATIONS FOR BLACK-WHITE ACHIEVEMENT GAPS B/T HIGH SCHOOLERS W/ SAME-INCOME PARENTS

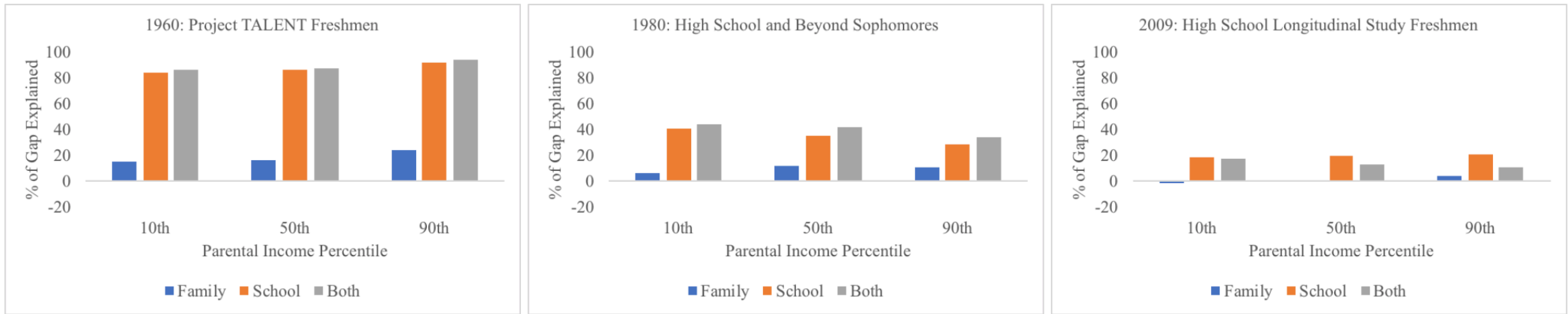


Figure 2. Percentage of Black-White Math Achievement Gaps Between Same-Income Students Explained by Regression Adjustment Procedure, by Year and Parental Income Percentile

Source: author's calculations. Please do not cite or distribute without permission.

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CORONAVIRUS AND EDUCATIONAL INEQUALITY: FIRST, SCHOOLING IN U.S., “BY THE NUMBERS”

	Public Schools	Private Schools
Students (Pre-k through 12 th grade)	51 million	6 million
Schools	100,000	35,000

Source: presenter’s approximations (rounded), based on National Center of Education Statistics “Fast Facts” Data, various figures 2015-2019

- Only countries with more primary-school-aged children than U.S., per Unicef: [China](#), [India](#), [Indonesia](#), [Nigeria](#)
- *Background:* In the U.S., the federal government has a limited role in educational decision-making, relative to countries with fully nationalized/ centralized education systems.
 - State Departments of Education and, within states, municipal public-school districts that run and fund schools with local authority tax dollars
 - Some of these districts are notably large: New York City Public Schools: approx. 1,000,000 students; Los Angeles Unified Public Schools: approx. 735,000 students; Chicago Public Schools: approx. 400,000 students; Miami-Dade County Public Schools: approx. 360,000 students

CORONAVIRUS AND EDUCATIONAL INEQUALITY: ONE KEY QUESTION (OUT OF MANY)

- Social experiment, necessitated by the virus: **What happens when all of these students are let out of school with approximately one-third of the school year remaining?**
 - Not clear when they will be able to come back to school
 - Decisions about online education, grading, when/ how to return, whether/ how to remediate upon return are decentralized
 - (e.g., multiple weeks of variation in state governments announcing school closures in March/ April, even more variation in stated plans to resume)
- Relevant candidate predictions come from sociological research on the more controlled version of this experiment we conduct in the U.S. between each school year: **summer vacation.**
 - **Summer learning loss:** disadvantaged children often score worse on assessments in the fall of the next school year compared to the spring of the prior year, presumably due to lack of developmental and other well-being inputs from school (e.g., Alexander et al. 2016; Downey et al. 2004)



Time Magazine, July 2010

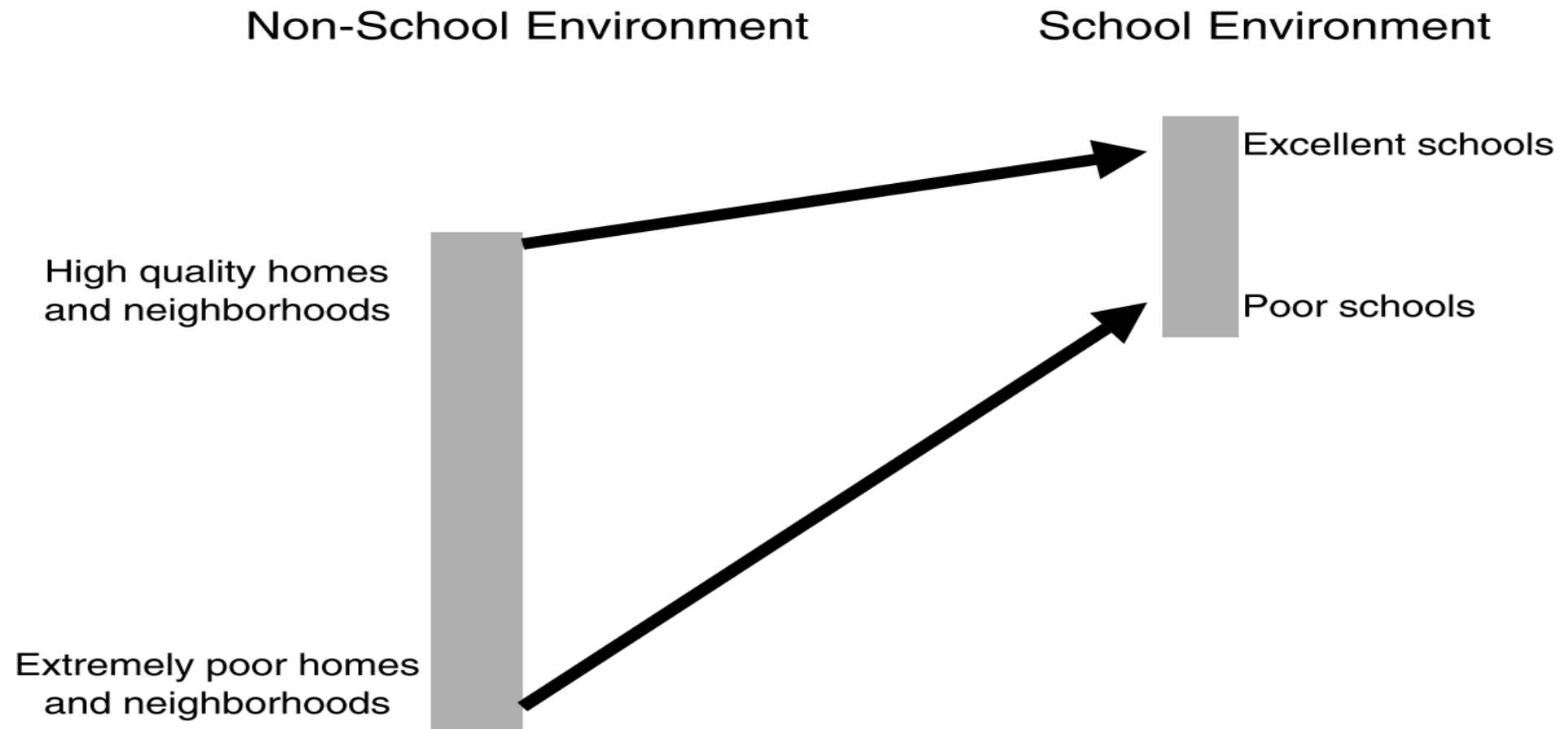
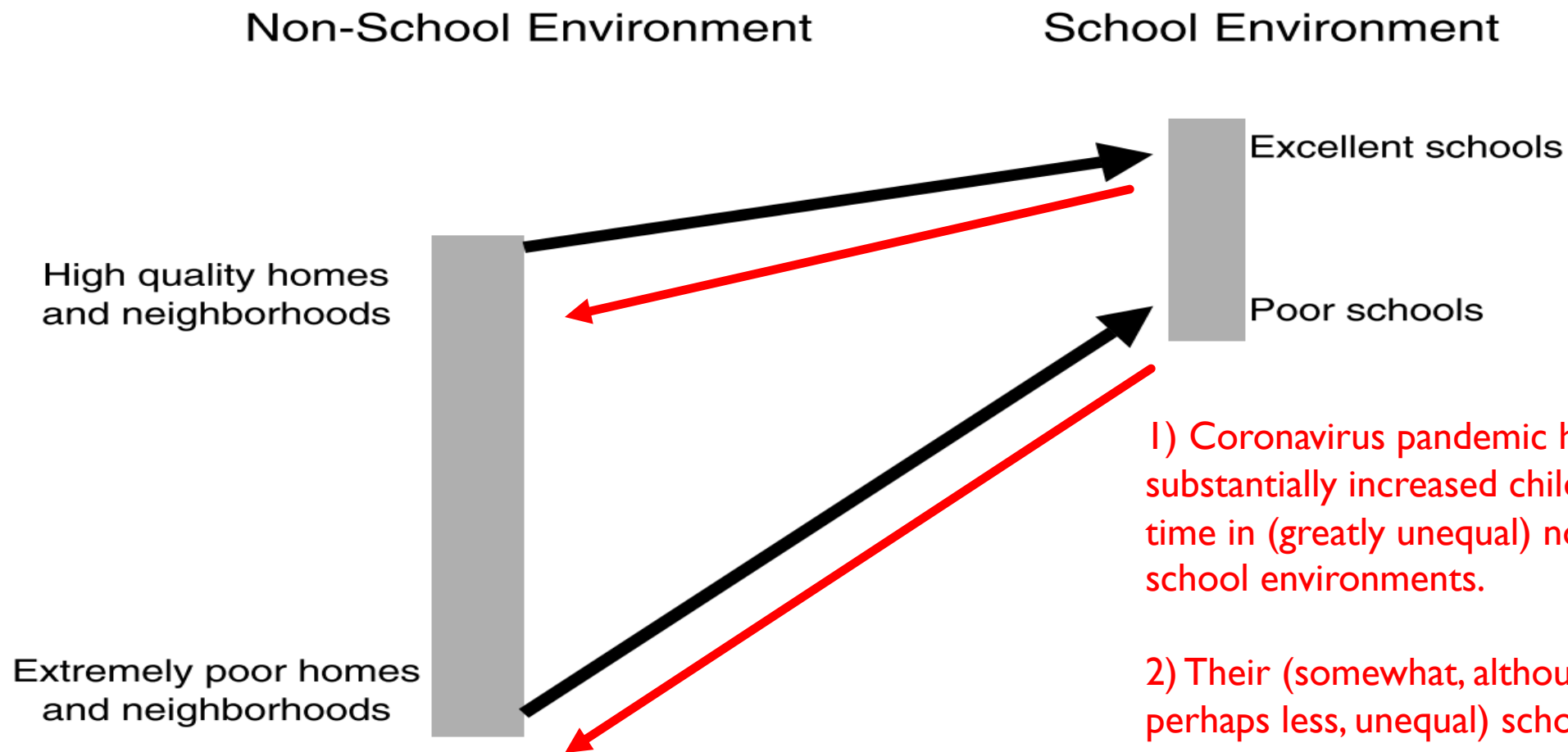


Figure 1. How Unequal Schools Can Serve as Equalizers

Note: Because non-school environments vary more than school environments, a child from a disadvantaged non-school environment can attend a disadvantaged school and yet still enjoy a greater school benefit than a child from an advantaged non-school environment who attends an advantaged school.

Downey, Douglas B., Paul T. von Hippel, and Beckett A. Broh. 2004. "Are Schools the Great Equalizer? Cognitive Inequality during the Summer Months and the School Year." *American Sociological Review* 69:613–35.



1) Coronavirus pandemic has substantially increased children's time in (greatly unequal) non-school environments.

2) Their (somewhat, although perhaps less, unequal) schools attempt to support online learning, within the constraints of their own resources and children's non-school environments.

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The New York Times

The Class Divide: Remote Learning at 2 Schools, Private and Public

Some private schools provide online luxury learning during the pandemic. As many public schools struggle to adjust, the nation's educational gaps widen.

The Philadelphia Inquirer

BROKE IN PHILLY

When coronavirus hit, schools moved online. Some students didn't.

by Maddie Hanna and Kristen A. Graham, Updated: April 27, 2020



AWARD-WINNING WEBSITE DESIGNS FOR BUSINESS OWNERS

EDUCATION WEEK

5 Insights for How to Tackle the Digital Divide During the Coronavirus and Beyond

By Mark Lieberman on April 21, 2020, 4:30 PM

Tweet Share 11



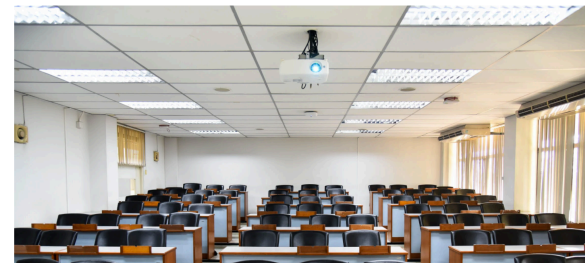
The "digital divide" and the "homework gap" have been urgent topics in K-12 education for years, but the COVID-19 pandemic is putting them in the spotlight.

As of last year, more than a quarter of U.S. homes lacked internet access, according to a [Pew](#)



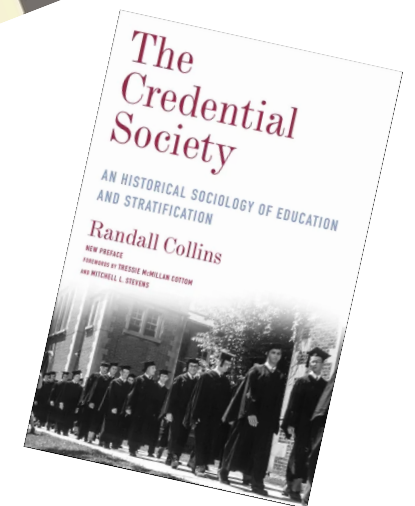
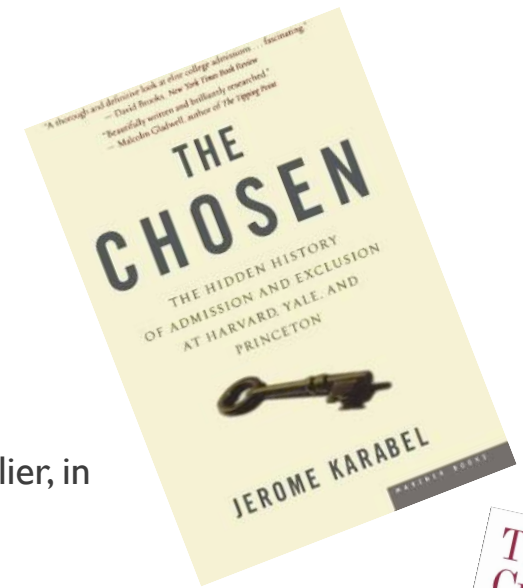
When School Is Online, the Digital Divide Grows Greater

Most US schools are closed, with instruction shifting to the internet. That's a problem for millions of people without reliable broadband, including 20 percent of rural students.



CORONAVIRUS AND EDUCATIONAL INEQUALITY: ADDITIONAL TAKEAWAYS

- Schools **do more** than teach children reading, writing, and arithmetic
 - Food (school breakfast and lunch program)
 - Mental and physical health, safety and supervision
 - **Crucial economic functions because they free parents to go to work**
 - Children's sense of community, friendship, and social bonds with non-family adults
- Coronavirus pandemic is **directly worsening key axes of educational inequality** we discussed earlier, in ways that may be difficult to fully reverse – particularly income/ wealth and race
 - Reasonable to assume that educational gaps will be worse when children are next assessed
 - We will soon be seeing much research on this, including causal work analyzing the pandemic as a natural experiment
- Next step for high school students is college- what do testing agencies and colleges that consider them do about **standardized testing (SAT/ACT)**? High School **grades** from this semester?



THANK YOU!

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