



Human Development is Economic Development

James J. Heckman



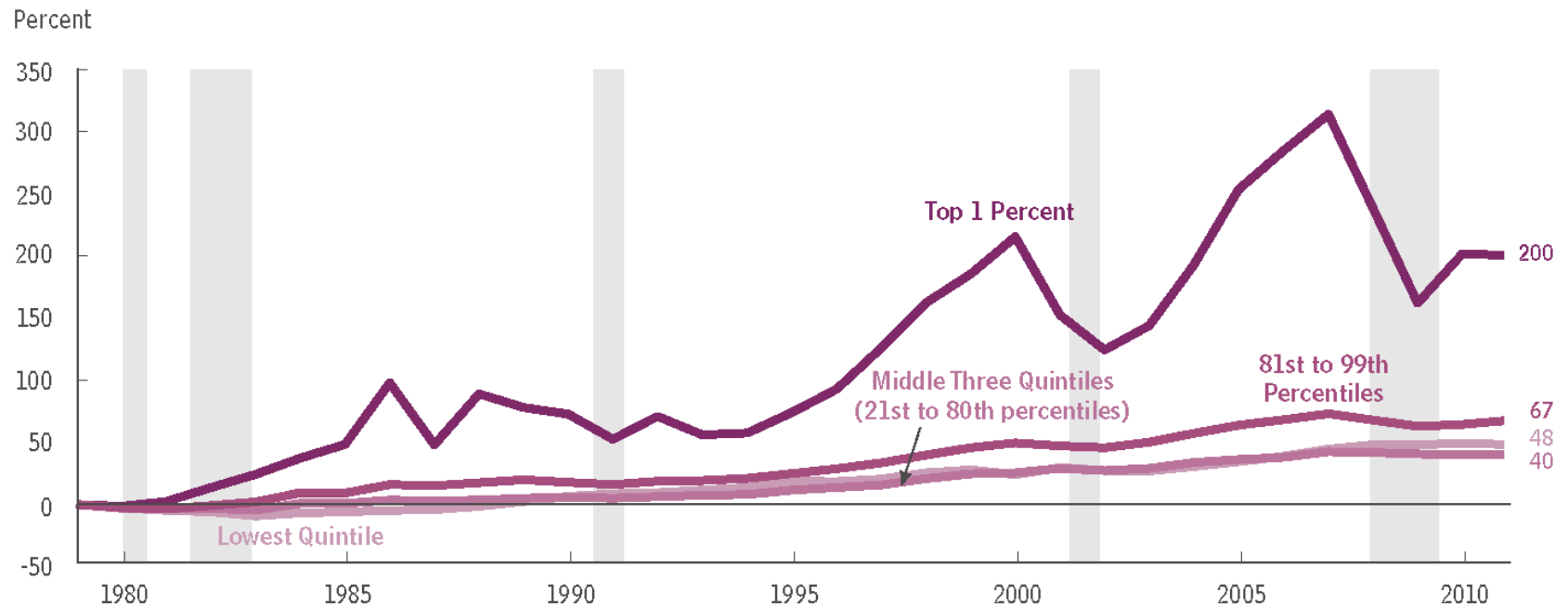
CENTER FOR THE ECONOMICS
OF HUMAN DEVELOPMENT
THE UNIVERSITY OF CHICAGO

California Water Cooler Conference
March 23, 2015



The challenges:
economic inequality, a
divided society and
polarized leadership.

Cumulative Growth in Average Inflation-Adjusted After-Tax Income, by Before-Tax Income Group, 1979 to 2011



Source: Congressional Budget Office.

Notes: After-tax income is before-tax income minus federal taxes.

Before-tax income is market income plus government transfers. Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Those transfers include payments and benefits from federal, state, and local governments.

Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

Income is converted to 2011 dollars using the personal consumption expenditures price index.

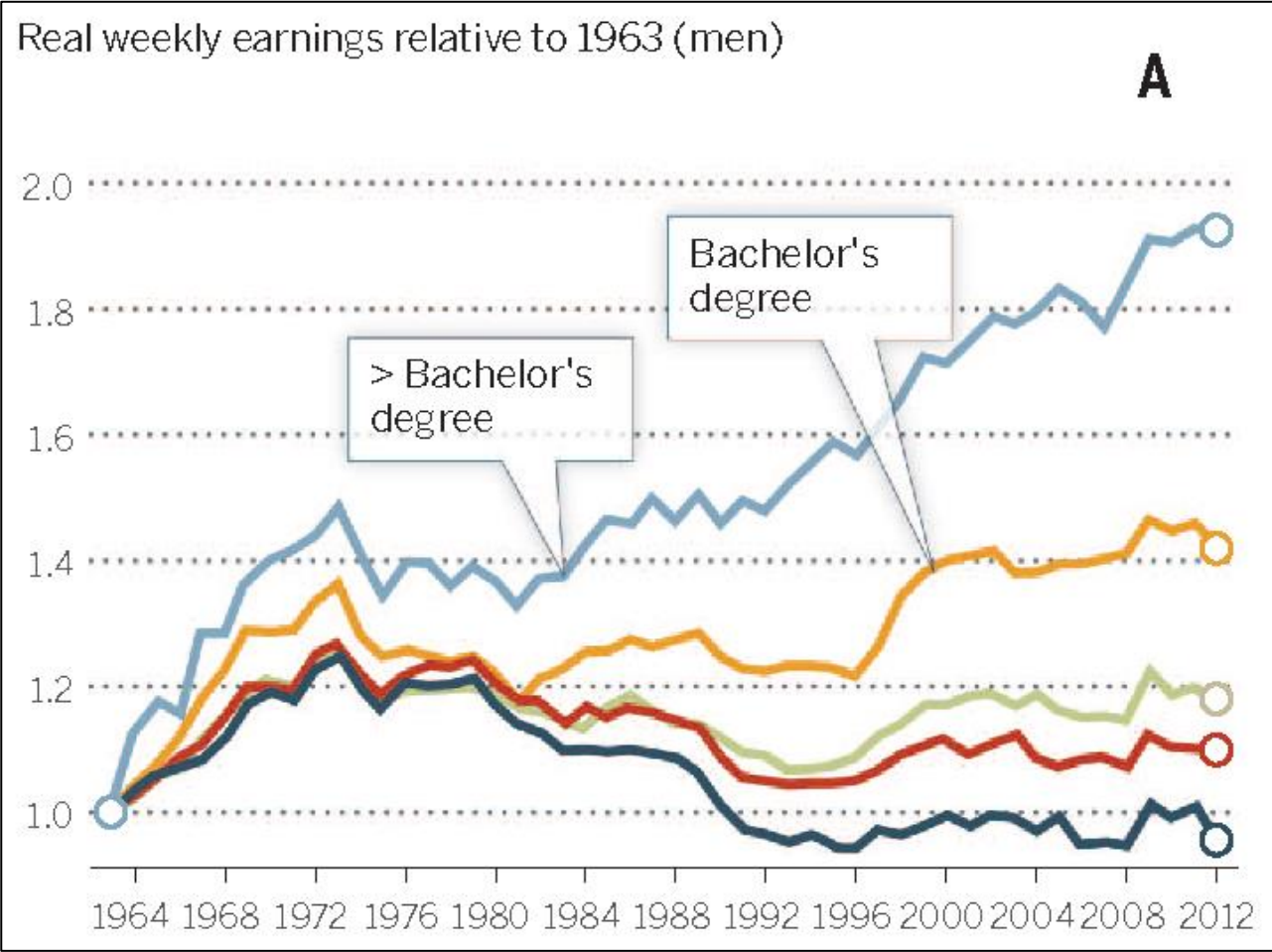
Income groups are created by ranking households by before-tax income, adjusted for household size. Quintiles (fifths) contain equal numbers of people; percentiles (hundredths) contain equal numbers of people as well.

For more detailed definitions of income, see the appendix.



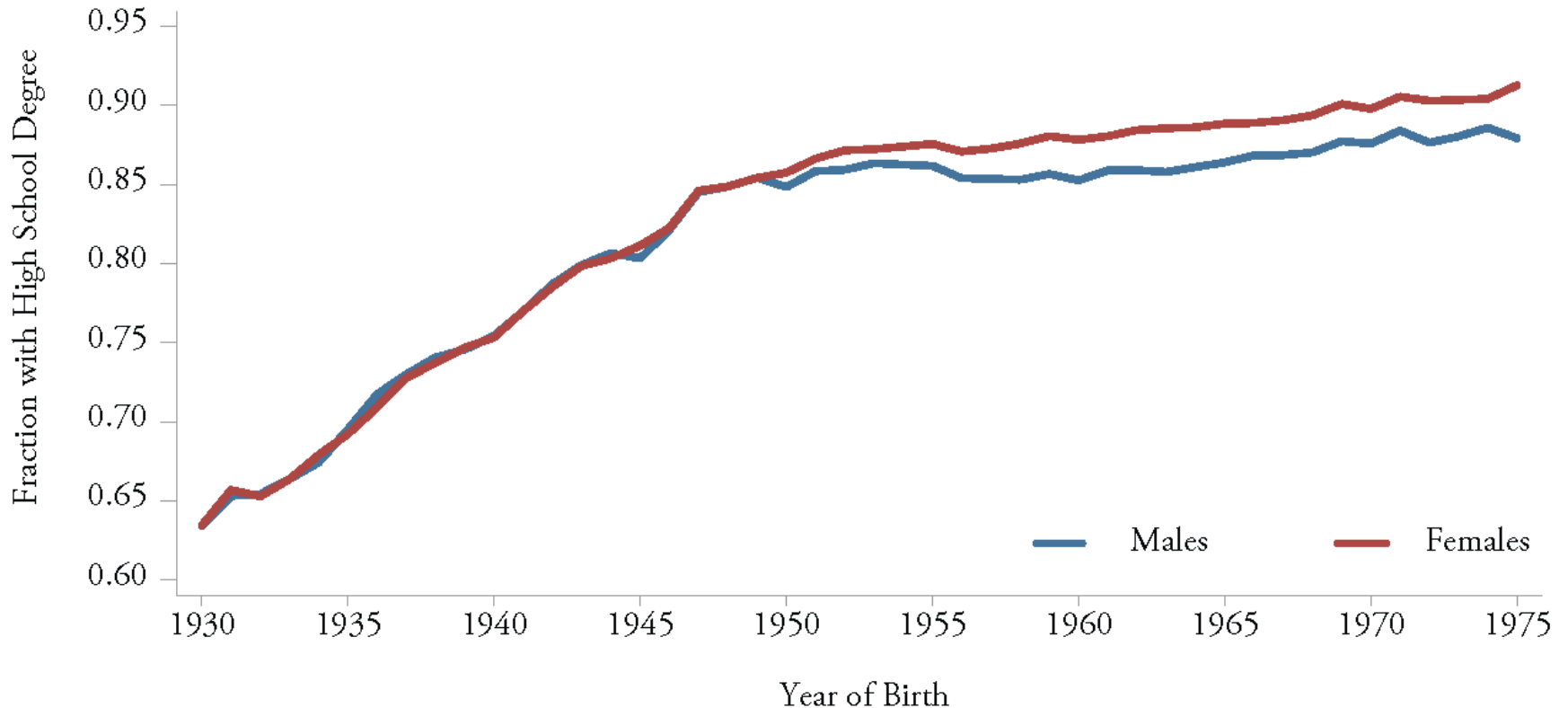
We can reduce
inequality and promote
social mobility by solving
the skills problem.

Changes in real wage levels of full-time U.S. workers by sex and education, 1963-2012



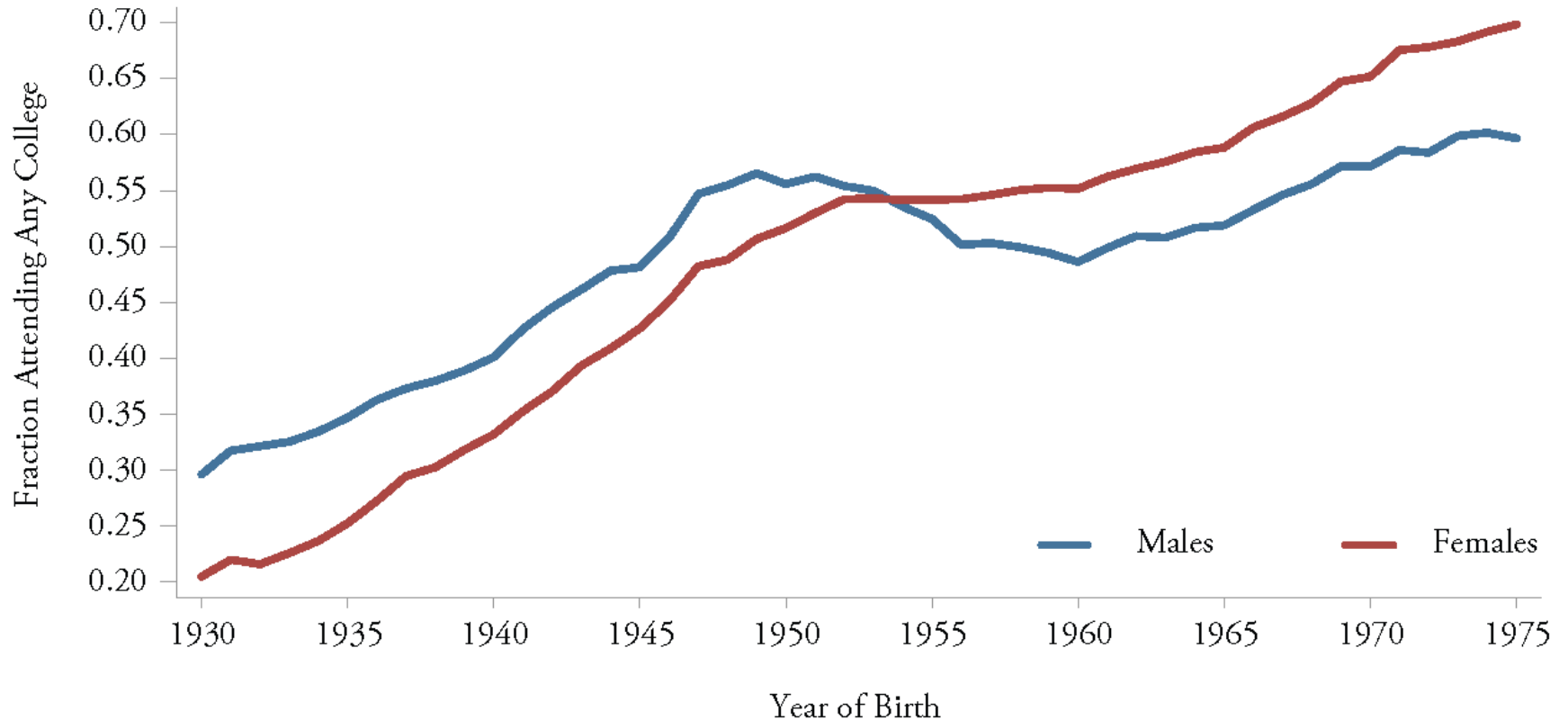
Source: Autor (2014).

High School Graduation Rates at Age 35: U.S. Males and Females Born 1930-1975



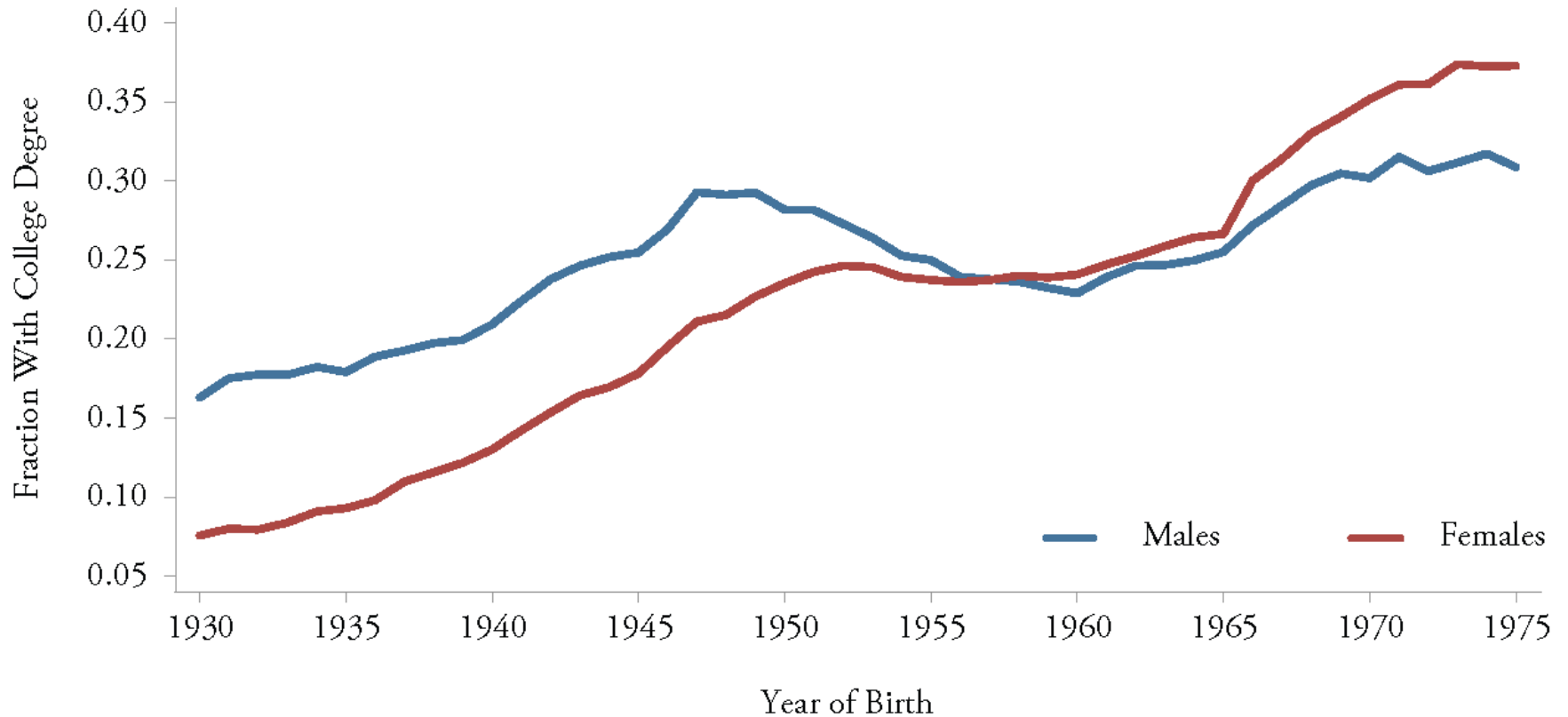
Source: Autor & Wasserman (2013).

Percent of Adults with Some College Education by Age 35



Source: Autor & Wasserman (2013).

Percent of Adults with Four-Year College Degree by Age 35



Source: Autor & Wasserman (2013).



A comprehensive approach to skills development makes dollars and sense.



Fragmented solutions
don't work—
the problems and their
causes are interrelated.



Invest in prevention,
not remediation.



Success depends on
having the right skills
and abilities.

Fostering and Measuring Skills:

Improving Cognitive and Non-Cognitive Skills to Promote Lifetime Success

Tim Kautz, James J. Heckman, Ron Diris, Bas ter Weel, Lex Borghans



Link to Report

<http://tinyurl.com/OECD-Report-2014>



We must help troubled
American families
develop skills required
for their children's
success.



The importance of the
early years: skills beget
skills.



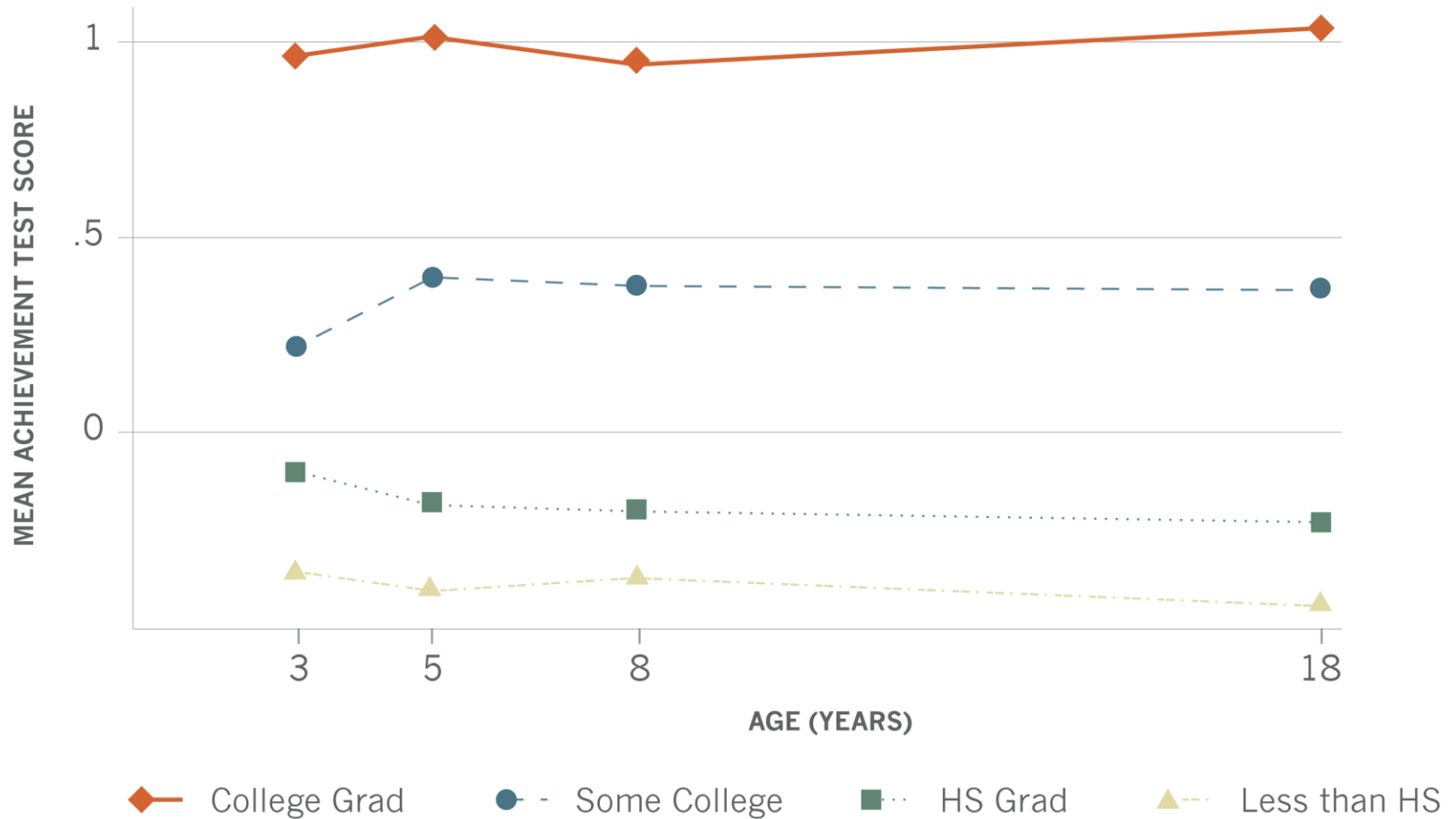
Develop cognition and
character from
conception to birth to
school, college and
career training.



Developing skills and abilities is the best way to solve the problems of economic and social inequality.

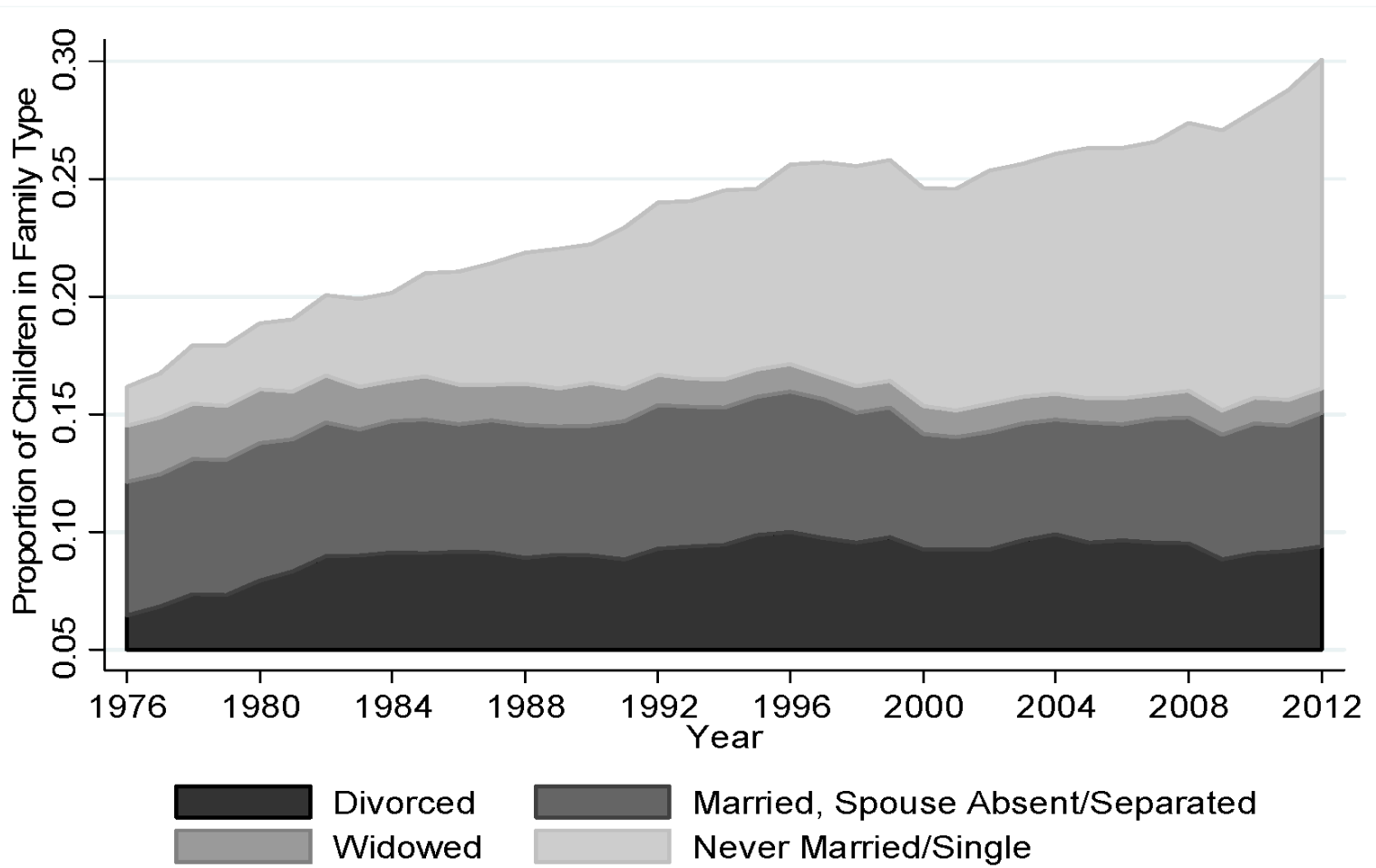


Mean Achievement Test Scores by Age by Maternal Education



Each score standardized within observed sample. Using all observations and assuming data missing at random. Source: Brook-Gunn et al. (2006).

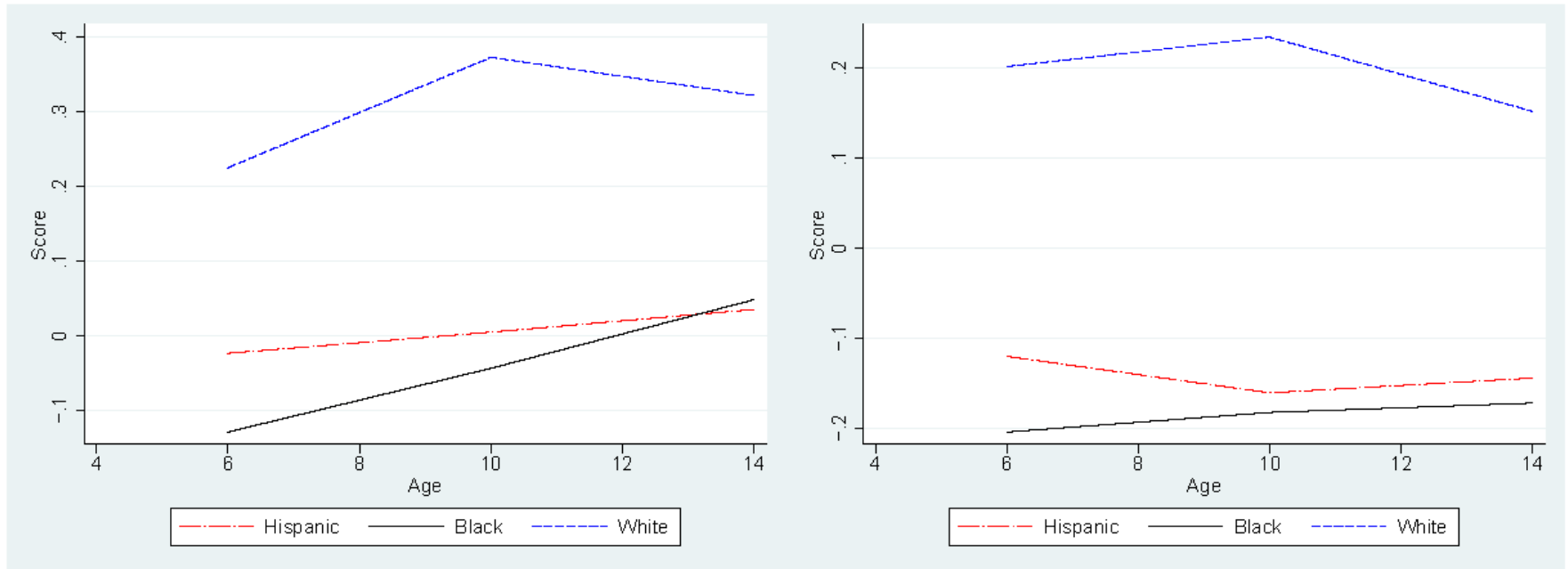
Children Under 18 Living in Single Parent Households by Marital Status of Parent



Source: IPUMS March CPS 1976-2012

Note: Parents are defined as the head of the household. Children are defined as individuals under 18, living in the household, and the child of the head of household. Children who have been married or are not living with their parents are excluded from the calculation. Separated parents are included in "Married, Spouse Absent" Category

Parental Investment over Childhood Among Whites by Family Type



Girls: Cognitive Stimulation

Boys: Cognitive Stimulation

Data: A balanced panel from the National Longitudinal Survey of Youth 1979.
Source: Moon (2014).

Hart & Risley, 1995

Children enter school with “meaningful differences” in vocabulary knowledge.

1. Emergence of the Problem

In a typical hour, the average child hears:

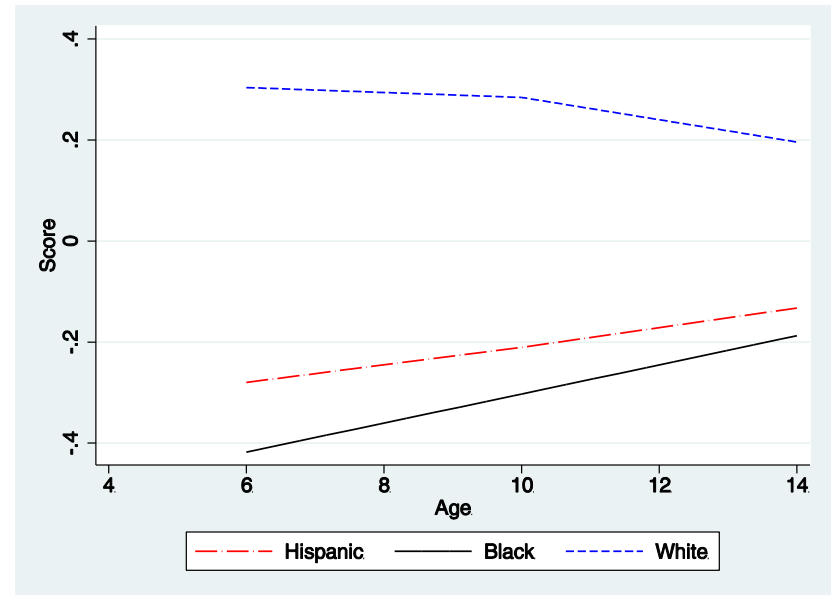
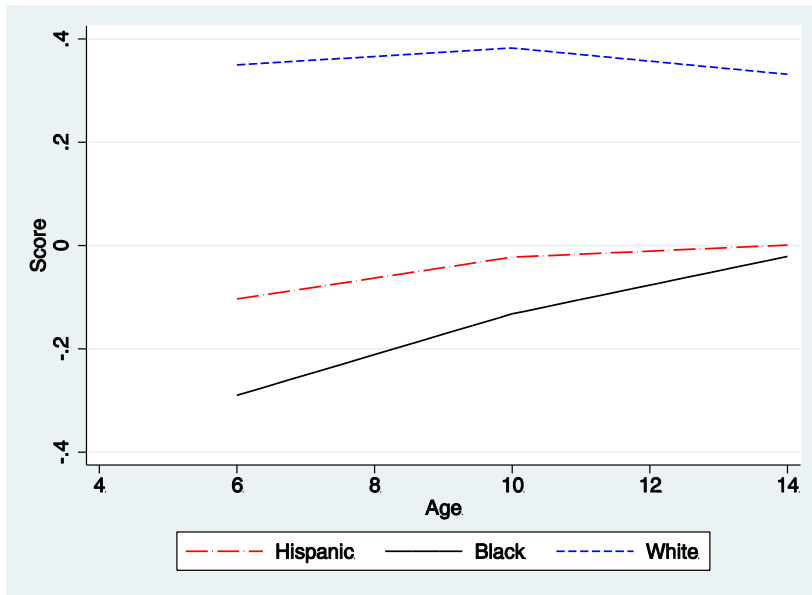
Family Status	Actual Differences in Quantity of Words Heard	Actual Differences in Quality of Words Heard
Welfare	616 Words	5 affirmatives, 11 prohibitions
Working Class	1,251 Words	12 affirmatives, 7 prohibitions
Professional	2,153 Words	32 affirmatives, 5 prohibitions

2. Cumulative Vocabulary at Age 3

Cumulative Vocabulary at Age 3	
Children from welfare families:	500 words
Children from working class families:	700 words
Children from professional families:	1,100 words

Parental Investment Over Childhood Across Ethnic Groups

Girls & Boys: Material Resource

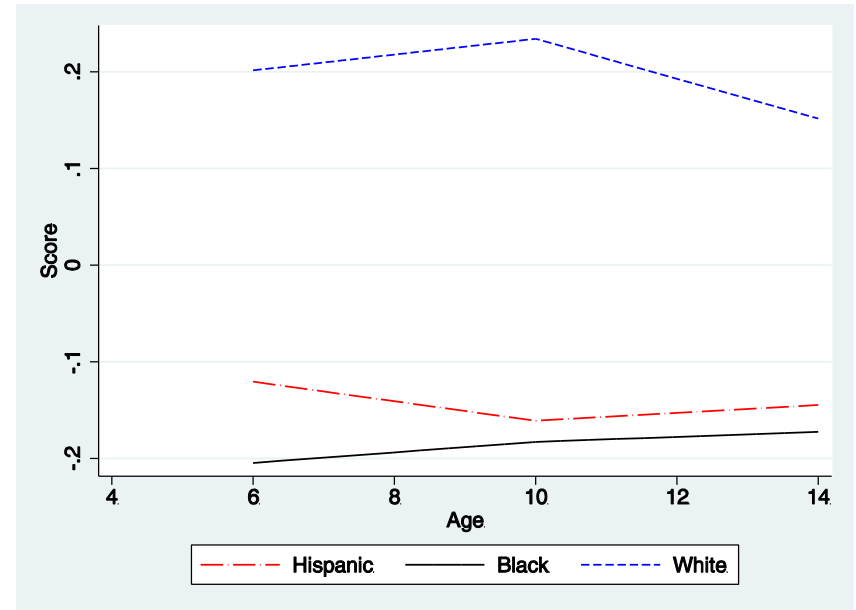
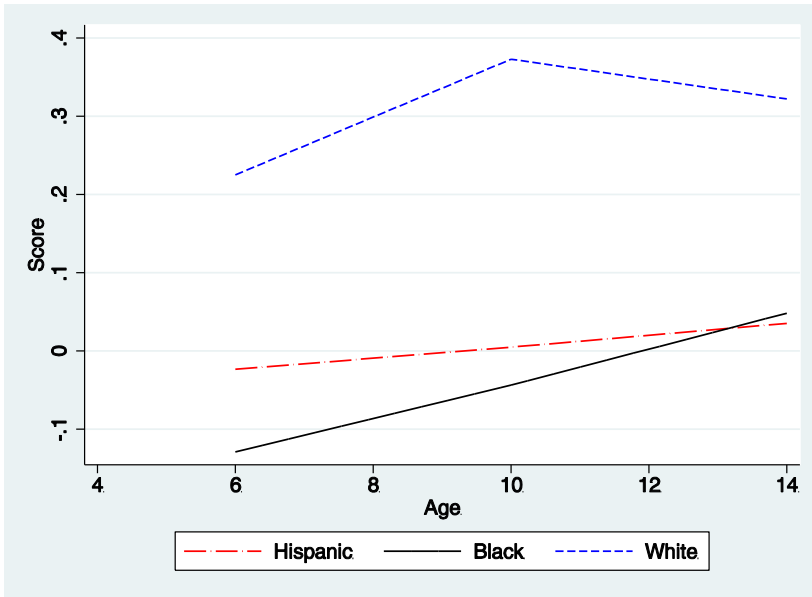


Source: Moon, 2014

Parental Investment Over Childhood Across Ethnic Groups



Girls & Boys: Cognitive Stimulation

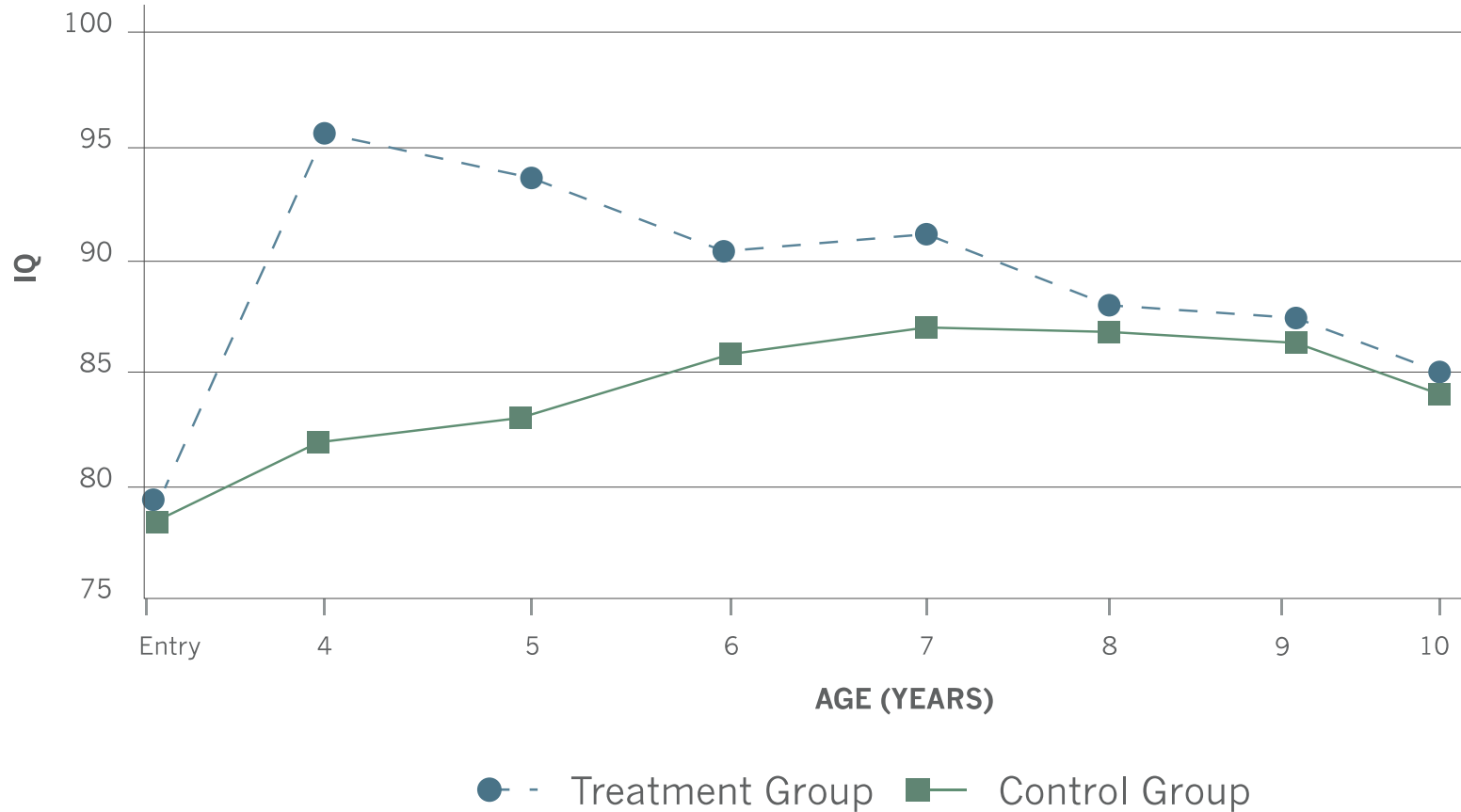


Source: Moon, 2014



Early childhood programs can prevent achievement gaps and produce better outcomes.

Perry Preschool Program: IQ, by age and treatment group



Source: Perry Preschool Program. IQ measured on the Stanford. Binet Intelligence Scale (Terman & Merrill, 1960). Test was administered at program entry and each of the ages indicated.



Abecedarian shows
healthy benefits from a
comprehensive
approach.

Abecedarian Project, Health Effects at Age 35 (Males)

	Treatment Mean	Control Mean	Treatment p-value
Systolic Blood Pressure	125.79	143.33	0.018
Diastolic Blood Pressure	78.53	92.00	0.024
Pre-Hypertension	0.68	0.78	0.235
Hypertension	0.10	0.44	0.011
HDL Cholesterol	53.21	42.00	0.067
Cholesterol/HDL-C	3.89	4.69	0.057
Abdominal Obesity	0.65	0.87	0.136
Metabolic Syndrome	0.00	0.25	0.009

Source: Campbell, Conti, Heckman, Moon, Pinto, Pungello and Pan (2014).

The Importance of the Early Years: Skills Beget Skills



Social-emotional Skills



Cognitive Skills

(sit still; pay attention; engage in learning; open to experience)

Health



Cognitive Skills

(fewer lost school days; ability to concentrate)

Cognitive Skills



**Produce better health practices;
produce more motivation; greater
perception of rewards.**

(child better understands and controls its environment)

**Outcomes: increased productivity, higher income, better health,
more family investment, upward mobility, reduced social costs**

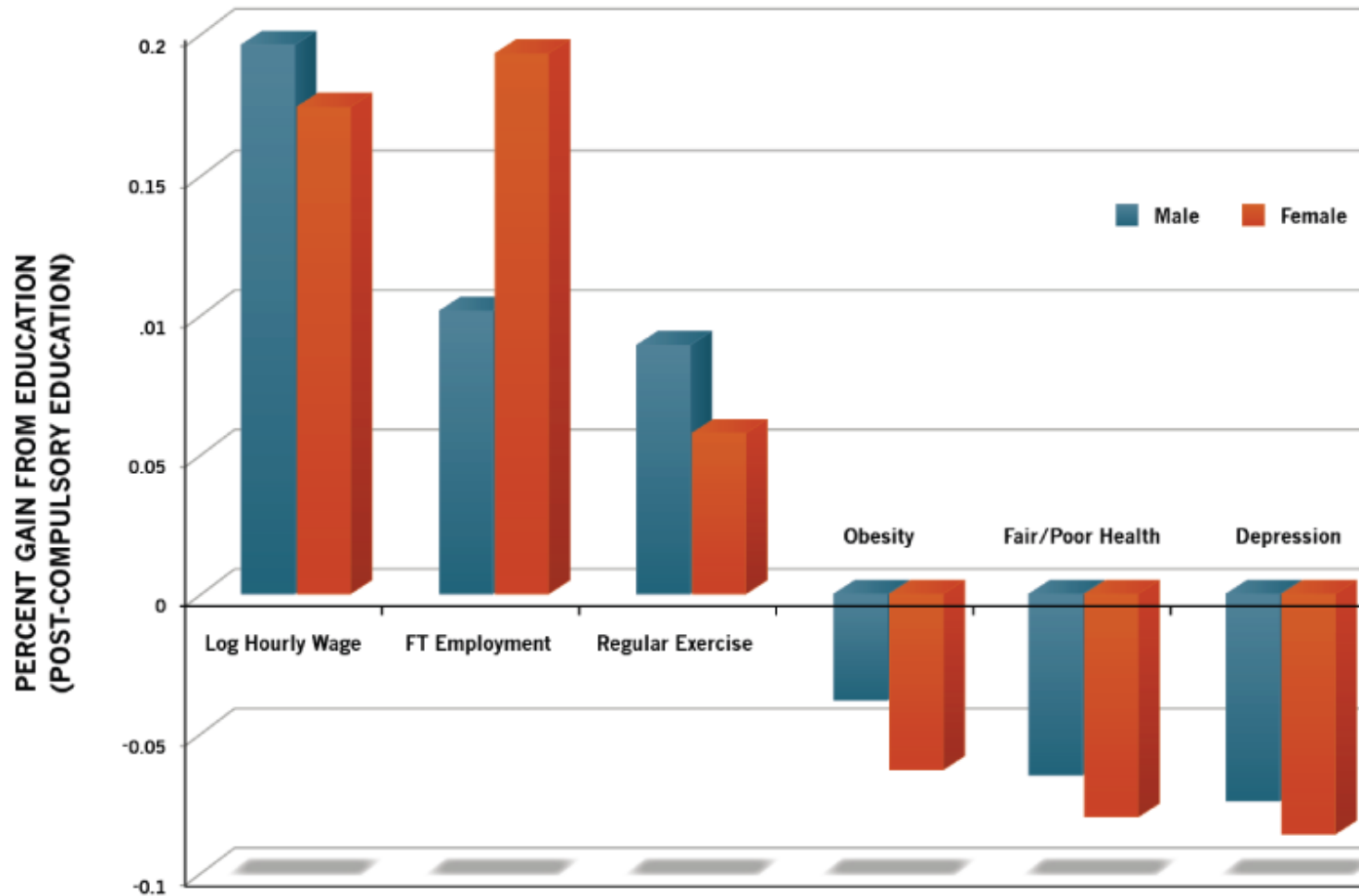


Later remediation is costly and as currently configured is usually ineffective.



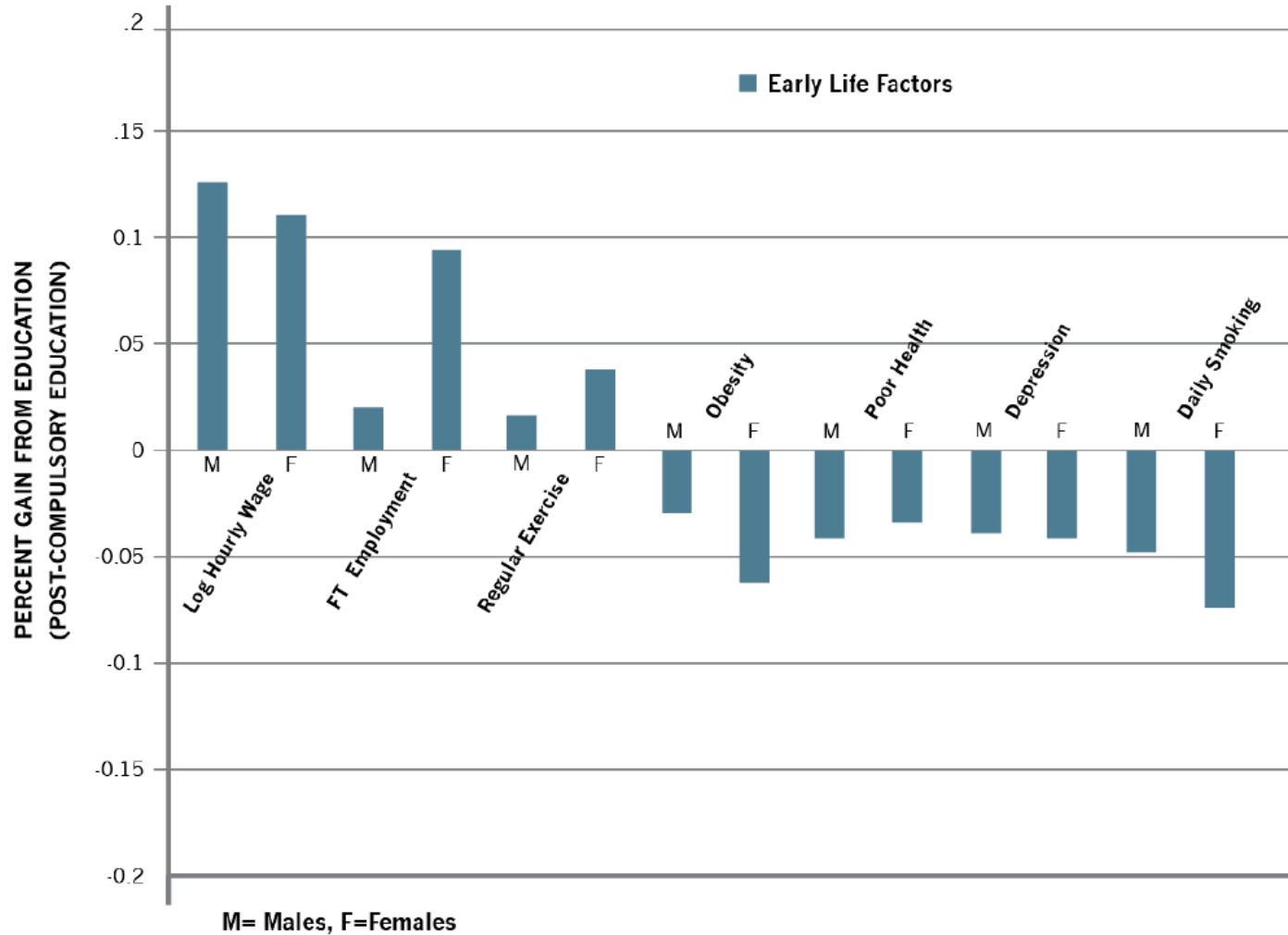
Early development is as important as education in promoting wages, employment and health.

Disparities by Education (Post-compulsory Education)



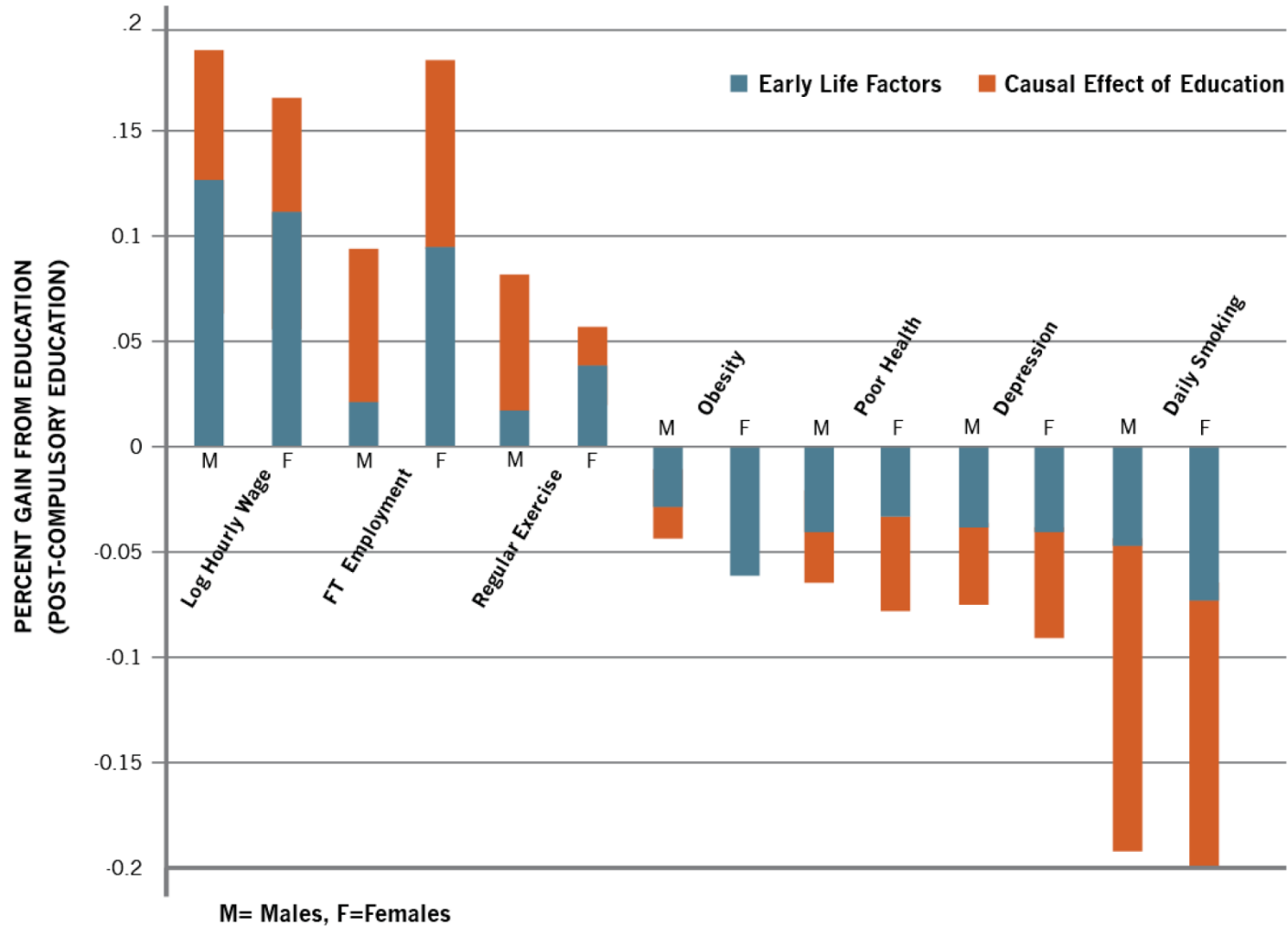
Note: Conti and Heckman (2010). Author's calculations using BCS70.

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Disparities by Education (Post-compulsory Education)



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The solution:
Predistribution, not
just redistribution or
remediation.



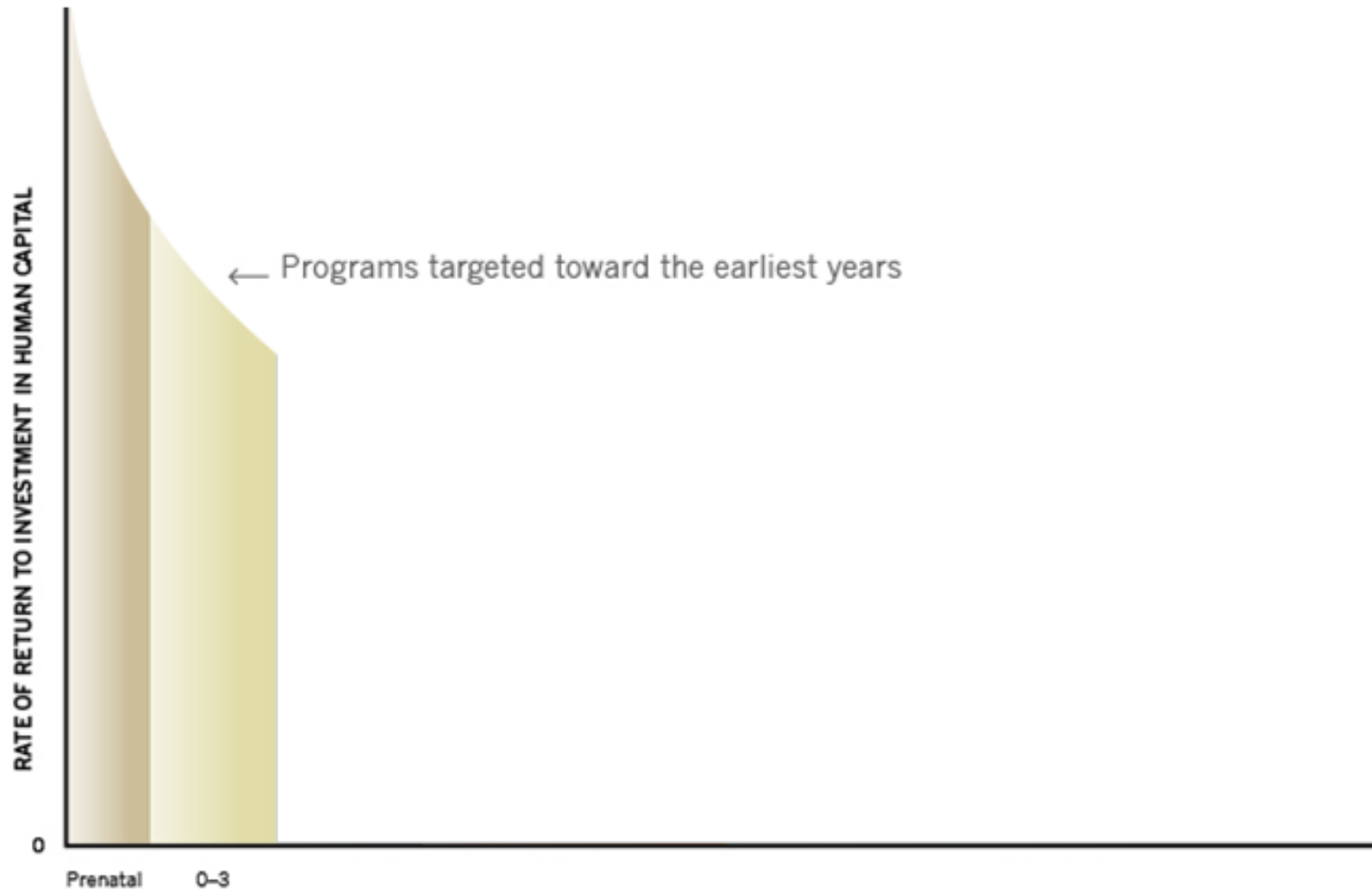
Returns to a Unit Dollar Invested



Source: Heckman (2008)



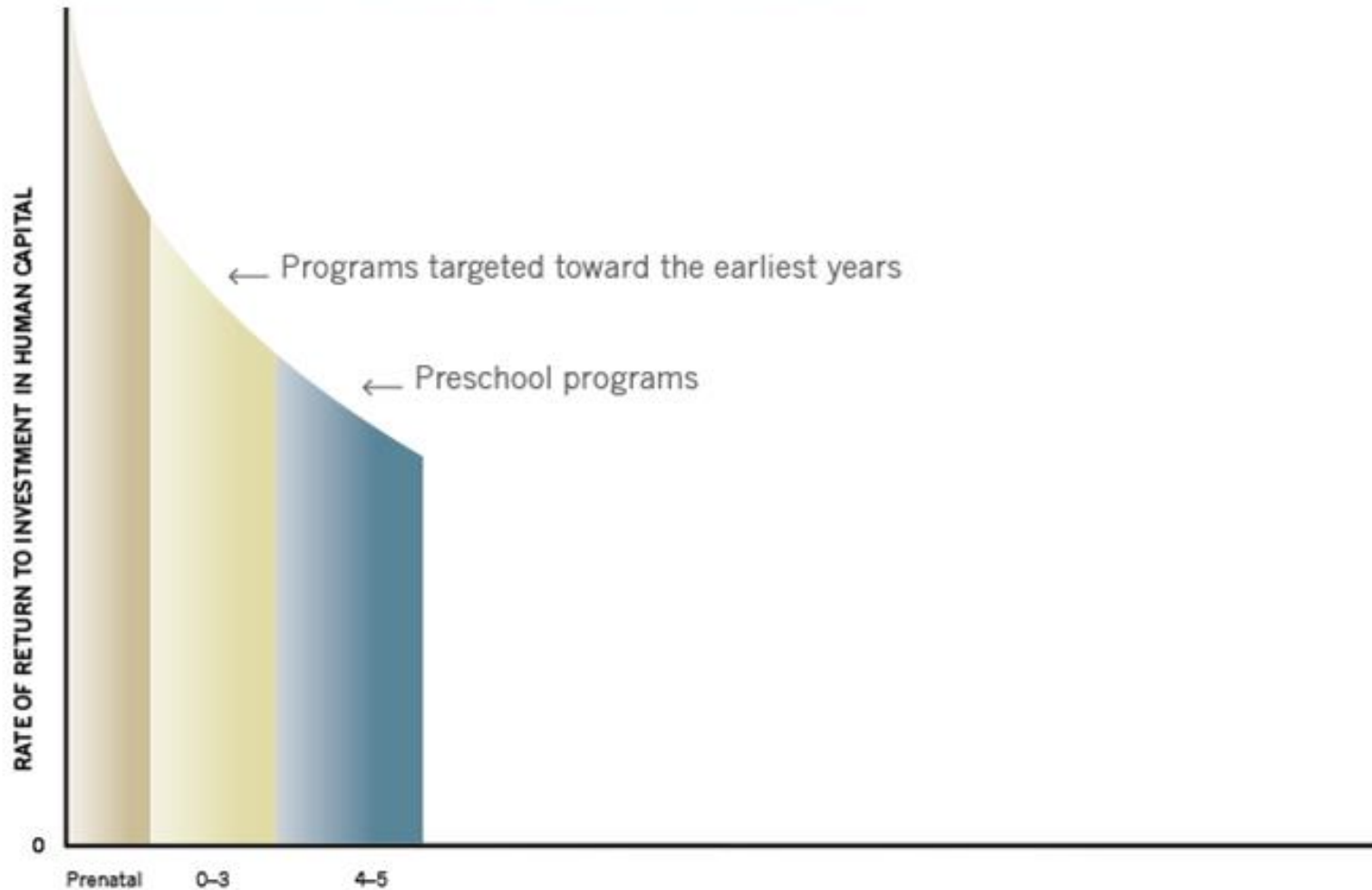
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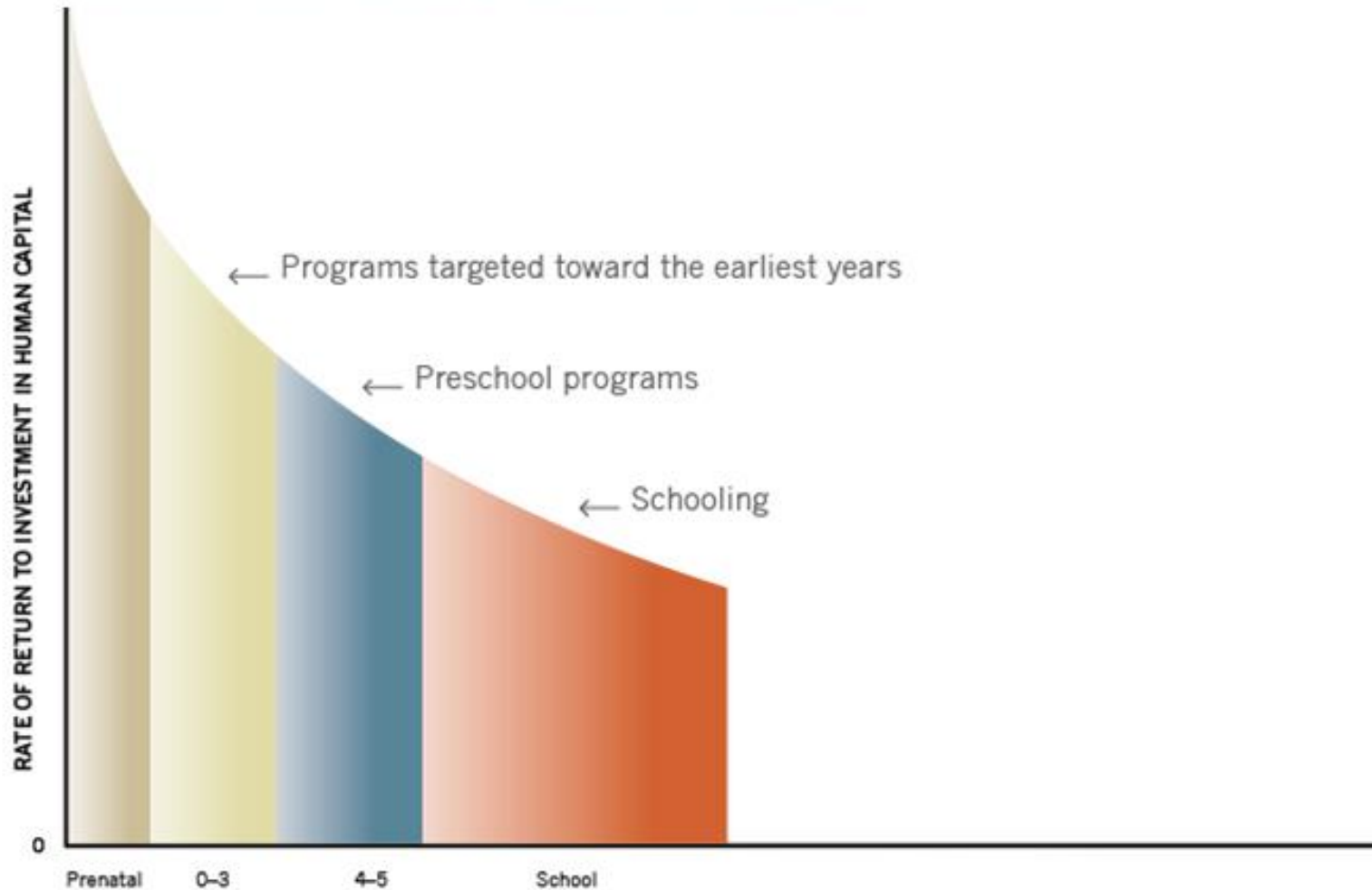
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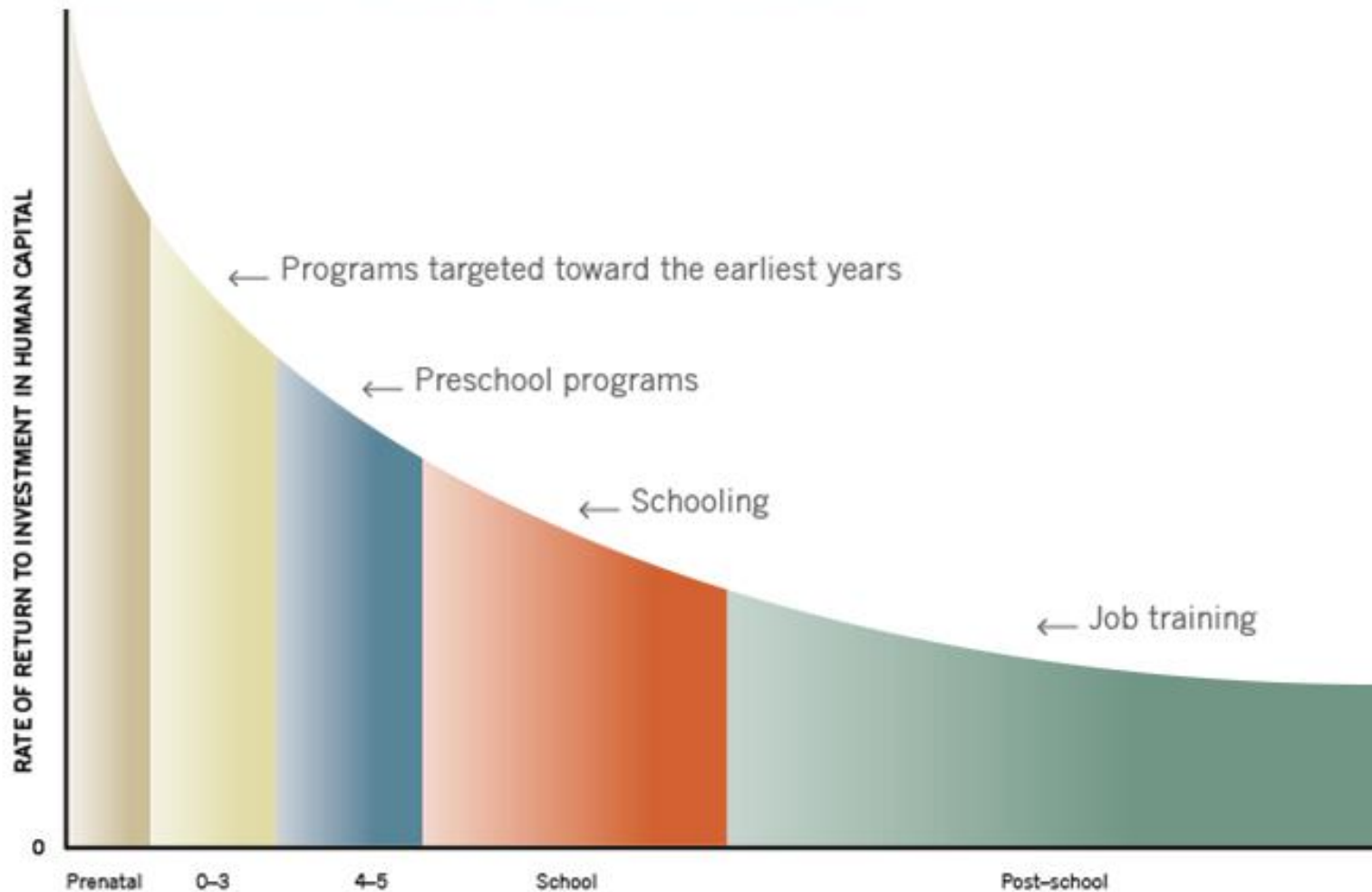
Returns to a Unit Dollar Invested




Source: Heckman (2008)



Returns to a Unit Dollar Invested



Source: Heckman (2008)



Smart investments start
by addressing a major
root cause of
inequality—
*disadvantaged early
childhoods.*