

Promoting Skills by Boosting the Environments of Disadvantaged Children

James J. Heckman




CENTER FOR THE ECONOMICS
OF HUMAN DEVELOPMENT
THE UNIVERSITY OF CHICAGO

Education Commission of the States

June 28th, 2018

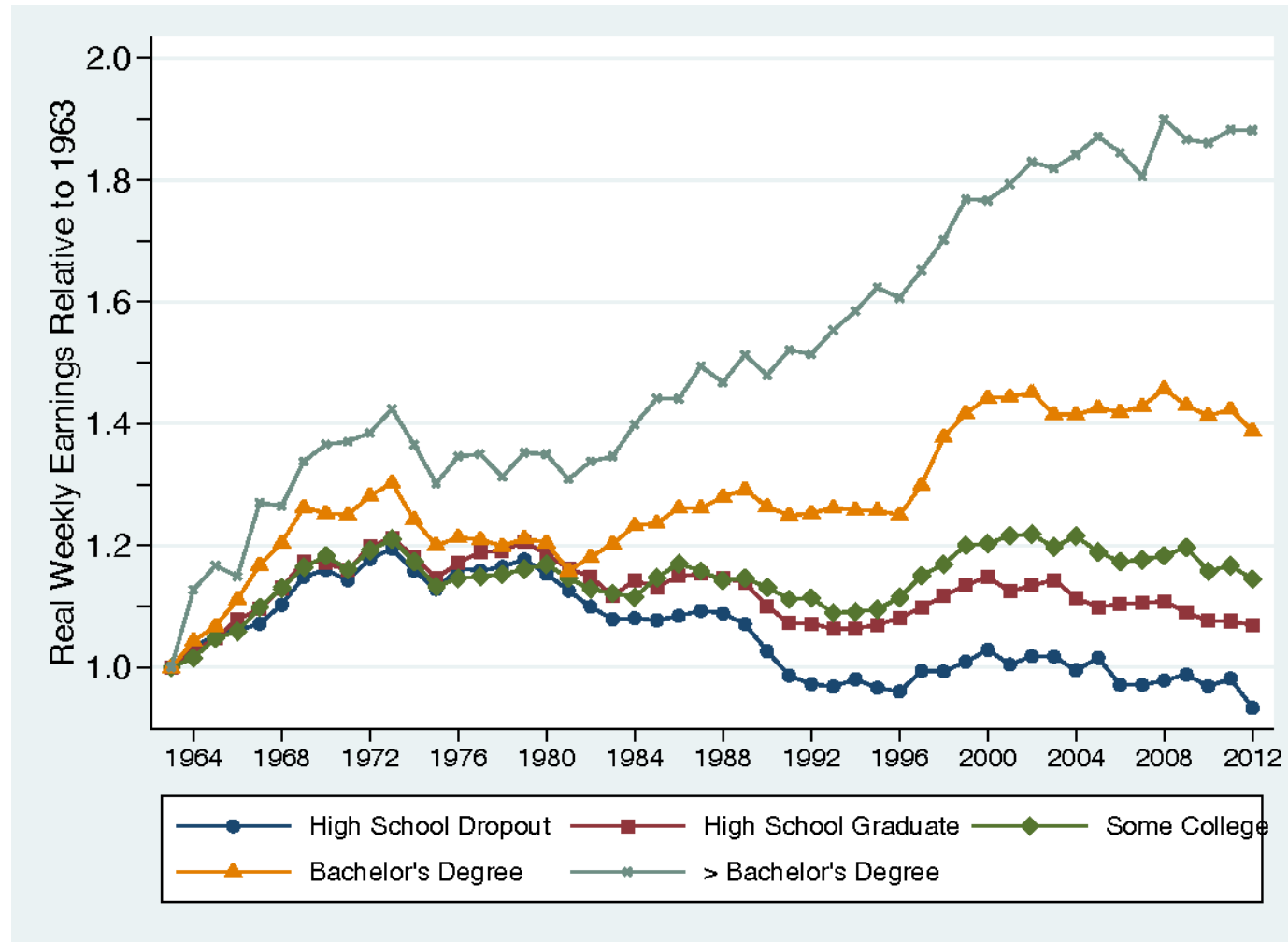


The challenges:
inequality, social mobility,
a divided society, and
polarized leadership.




The effective way to
alleviate poverty and
inequality: promote skills,
not income transfers.

Changes in Real Wage Levels of Full-time U.S. Workers by Education, 1963-2012, Males

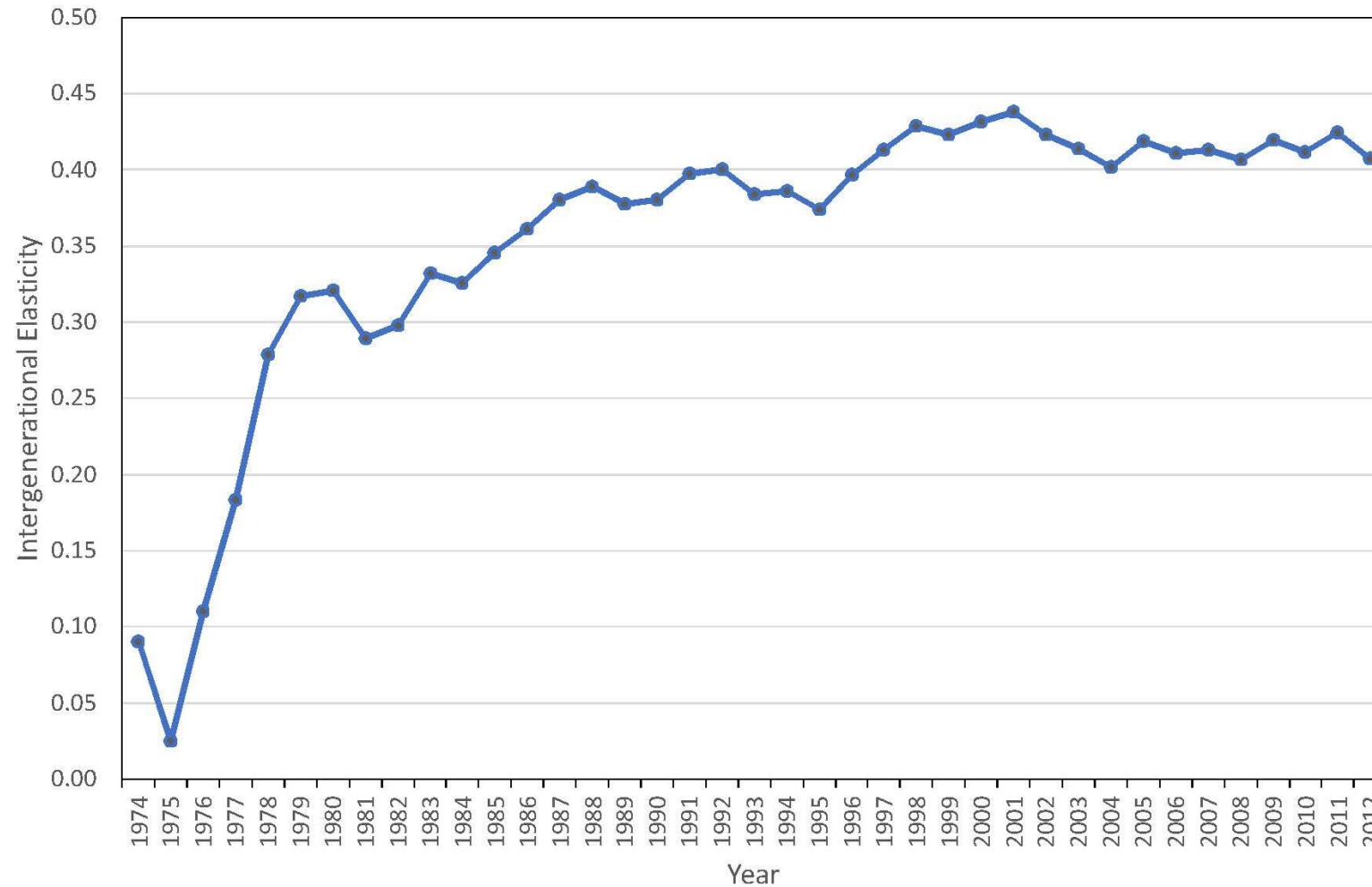


Source: Autor 2014, Skills, Education, and the Rise of Earnings Inequality Among the "Other 99 Percent."




Building skills produces
agency and engagement
in society.

Trends in the Intergenerational Correlation of Welfare Participation: Neither Transfers Nor Work Requirements Reduced Intergenerational Poverty




Source: Hartley et al. 2016


Note: Welfare participation includes AFDC/TANF, SSI, Food Stamps and Other Welfare.




Reduce inequality and
promote inclusion and
social mobility by
promoting skills.



A skilled workforce is a flexible, adaptable, and productive workforce.



A comprehensive
approach to skill
development makes
dollars and sense.

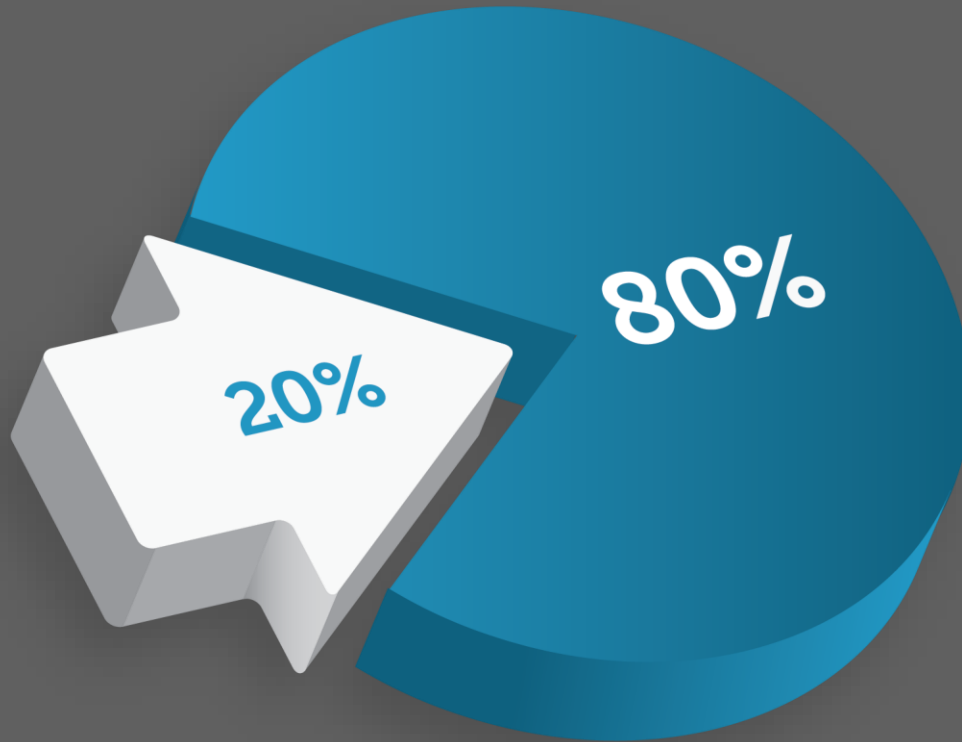


Fragmented solutions
are often not the most
effective ones—the
problems and their
causes are interrelated.



Should only the squeaky
wheel get the grease?

The Pareto Principle




20% of the Actors
Account for **80%**
of the Results.

Vilfredo Pareto, 1848-1923


- A high-need/high-cost population segment uses more than half of resources in multiple sectors.
- Most high-need/high-cost people in this segment share risk factors in the first decade of life;
- Factors that can be accurately assessed in the first years of life is important.

Seen in this way, targeting early-life risks seem important enough to warrant investment in early-years preventions.



Invest more in prevention and less in remediation and in creating a secure foundation to take the opportunities life offers.


Invest more in creating flourishing lives, rather than in correcting problems after they appear.




Families, Not Schools,
Are the Major Producers
of the Skills of Children



The importance of the
early years: skills beget
skills.



Help troubled American families to develop the skills of their children through voluntary programs.



Supporting families in
engaging and nurturing
their children is key to
success in education
and learning at all
stages of a child's life.

Sources of Rising Inequality





Estimated Average Annual Percentage Change in Various Inequality Measures Accounted for by Factor Components, US 1979-2007

	Gini	P90/P10
Actual	0.4	0.82
Household Structure	23%	33%
Men's Employment	5%	5%
Men's Earning Disparity	73%	50%
Women's Employment	-25%	-22%
Women's Earning Disparity	20%	29%
Assortative Mating	10%	11%
Other	-5%	-6%

Note: Household Structure: Marriage Rate, Men's Employment: Male Head Employment, Men's Earning Disparity: Male head earnings distribution, Women's Employment: Female Head Employment, Women's Earning Disparity: Female head earnings distribution, Assortative Mating: Spouses' earnings correlation.

Source: Larrimore, Je. "Accounting for United States household income inequality trends: The changing importance of household structure and male and female labor earnings inequality." *Review of Income and Wealth*. 60.4 (2014): 683-701.



The family is the
cornerstone of effective
skill development.



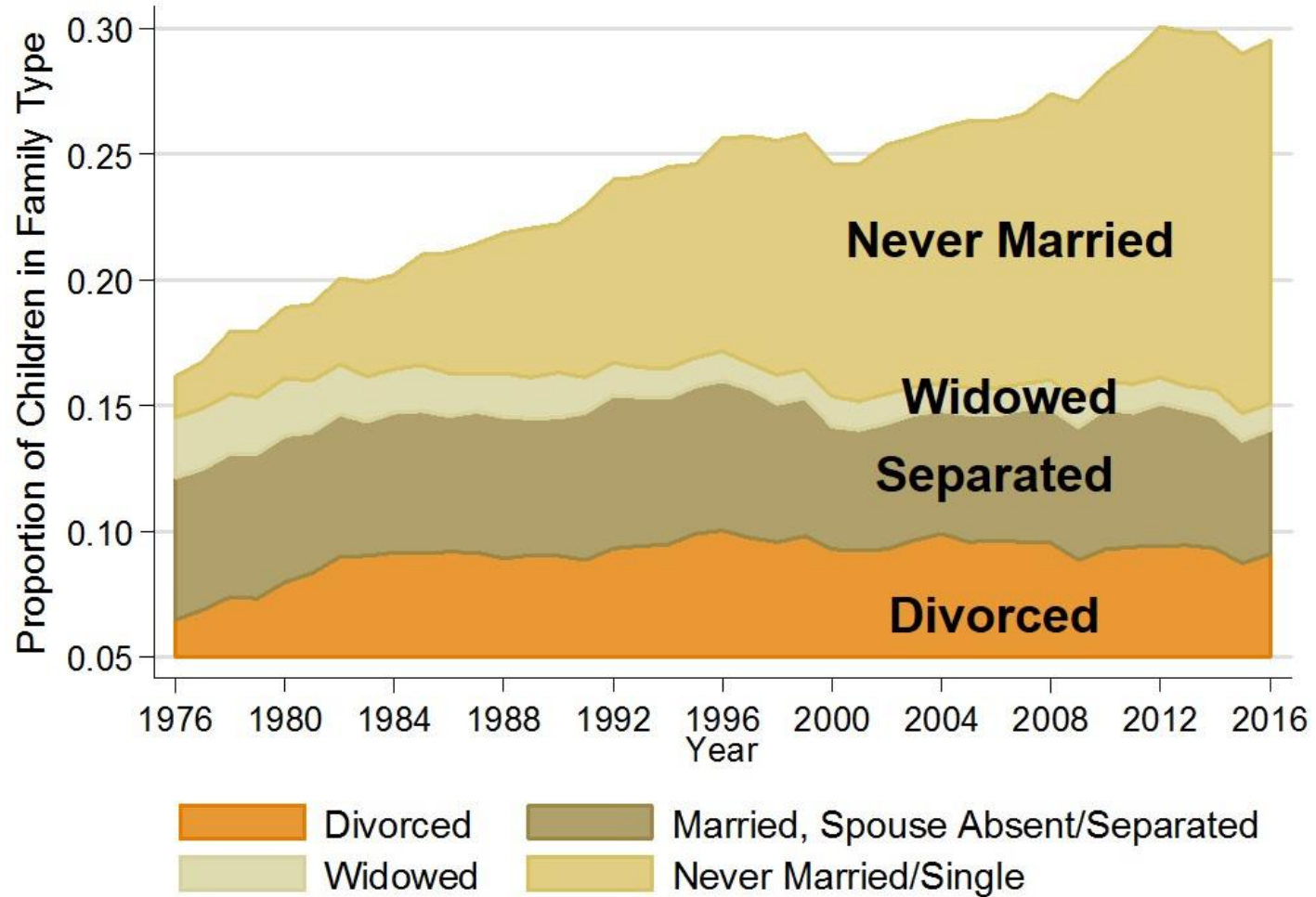
Yet American family life
is under stress.



The challenges facing families impair their ability to foster the skills of their children.



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





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:

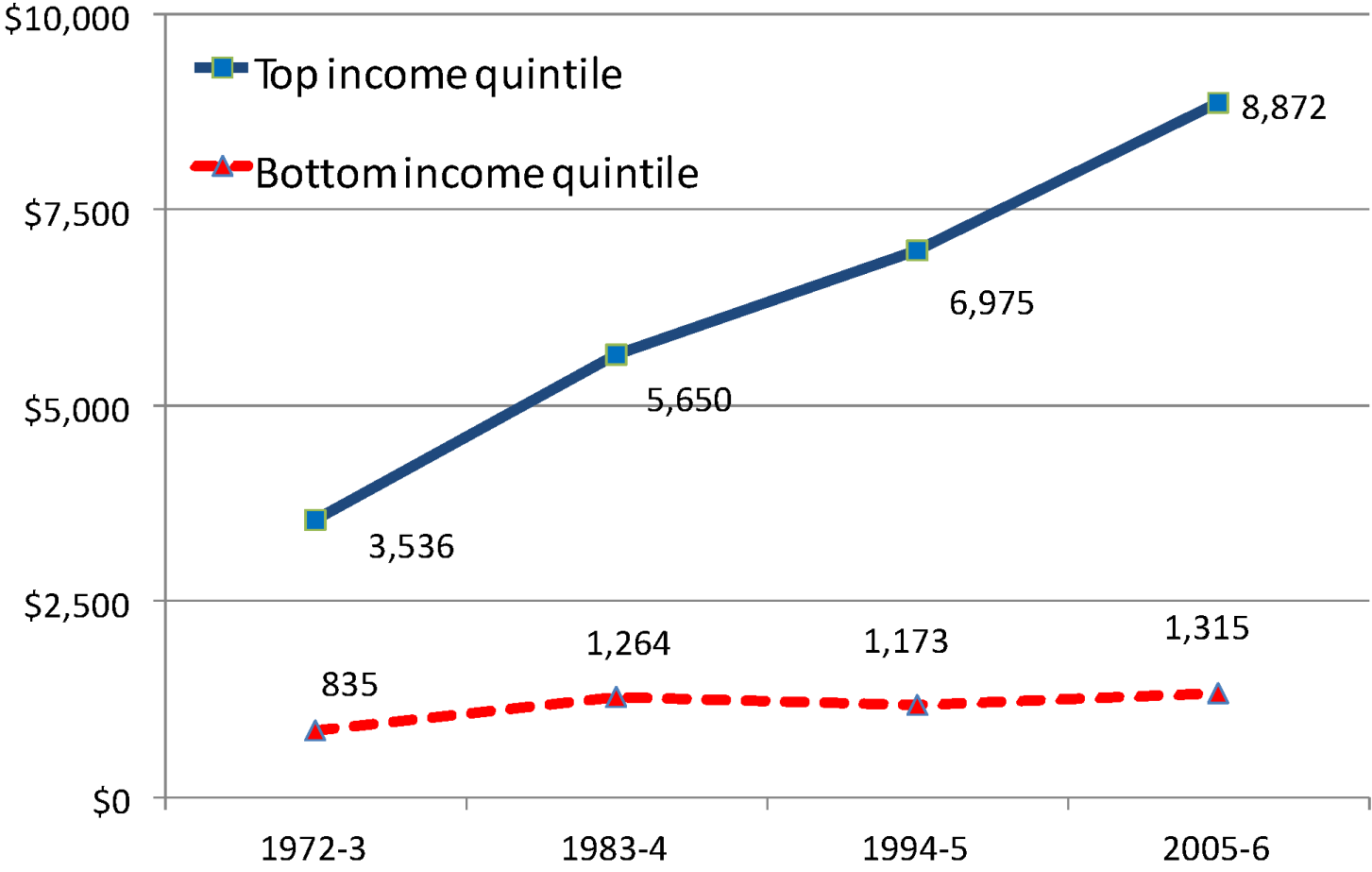
Family Status	Actual Differences in Quantity of Words Heard	Actual Differences in Quality of Words Heard
Welfare	616 Words	5 affirmatives, 11 prohibitions
Working Class	1,251 Words	12 affirmatives, 7 prohibitions
Professional	2,153 Words	32 affirmatives, 5 prohibitions

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



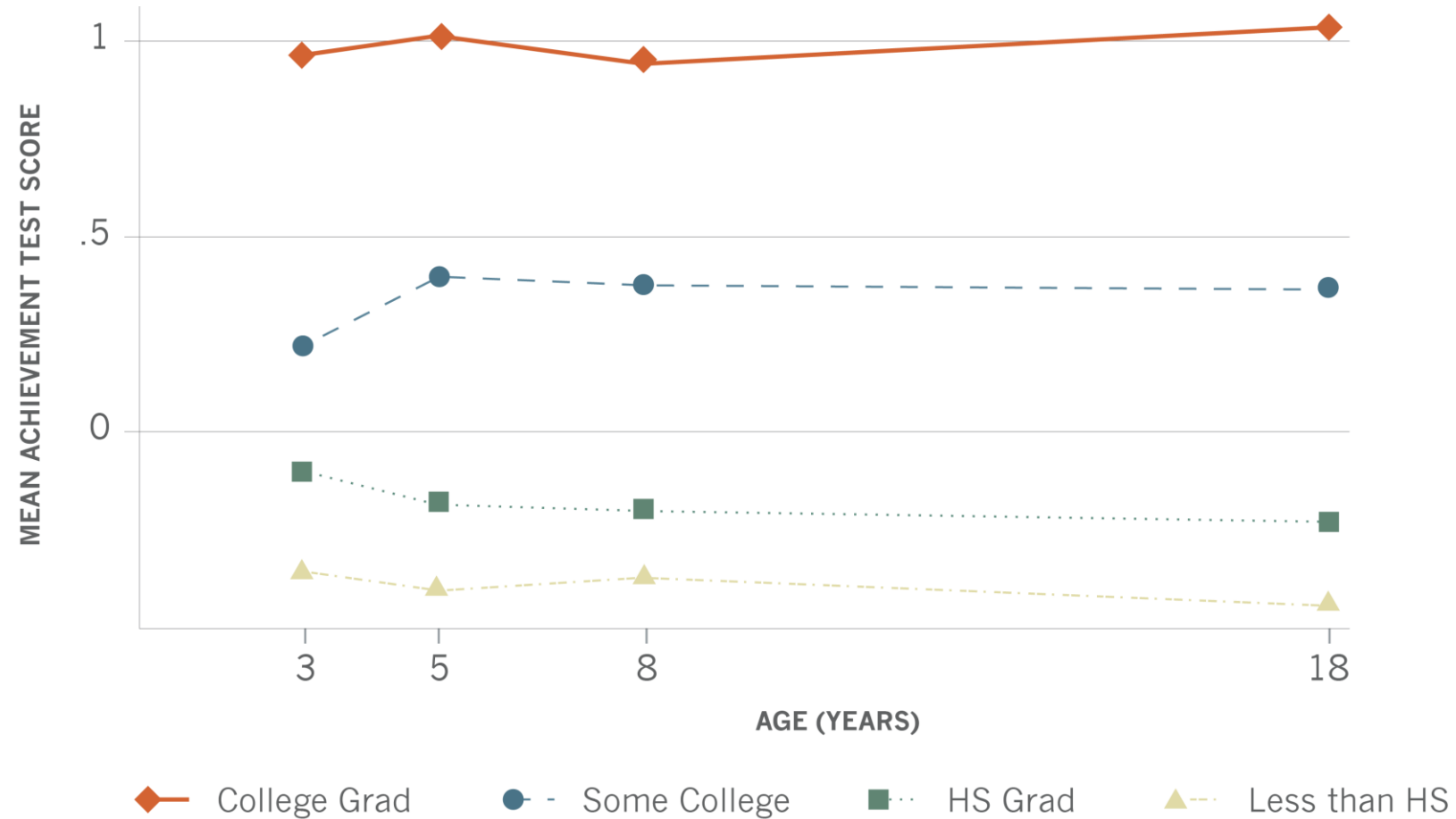
Per Capita Enrichment Expenditures on Children (\$2008) Top Versus Bottom Quintile of Households




Source: Duncan and Murnane (2011)



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).



Early childhood programs substantially reduce achievement gaps and produce better child outcomes.

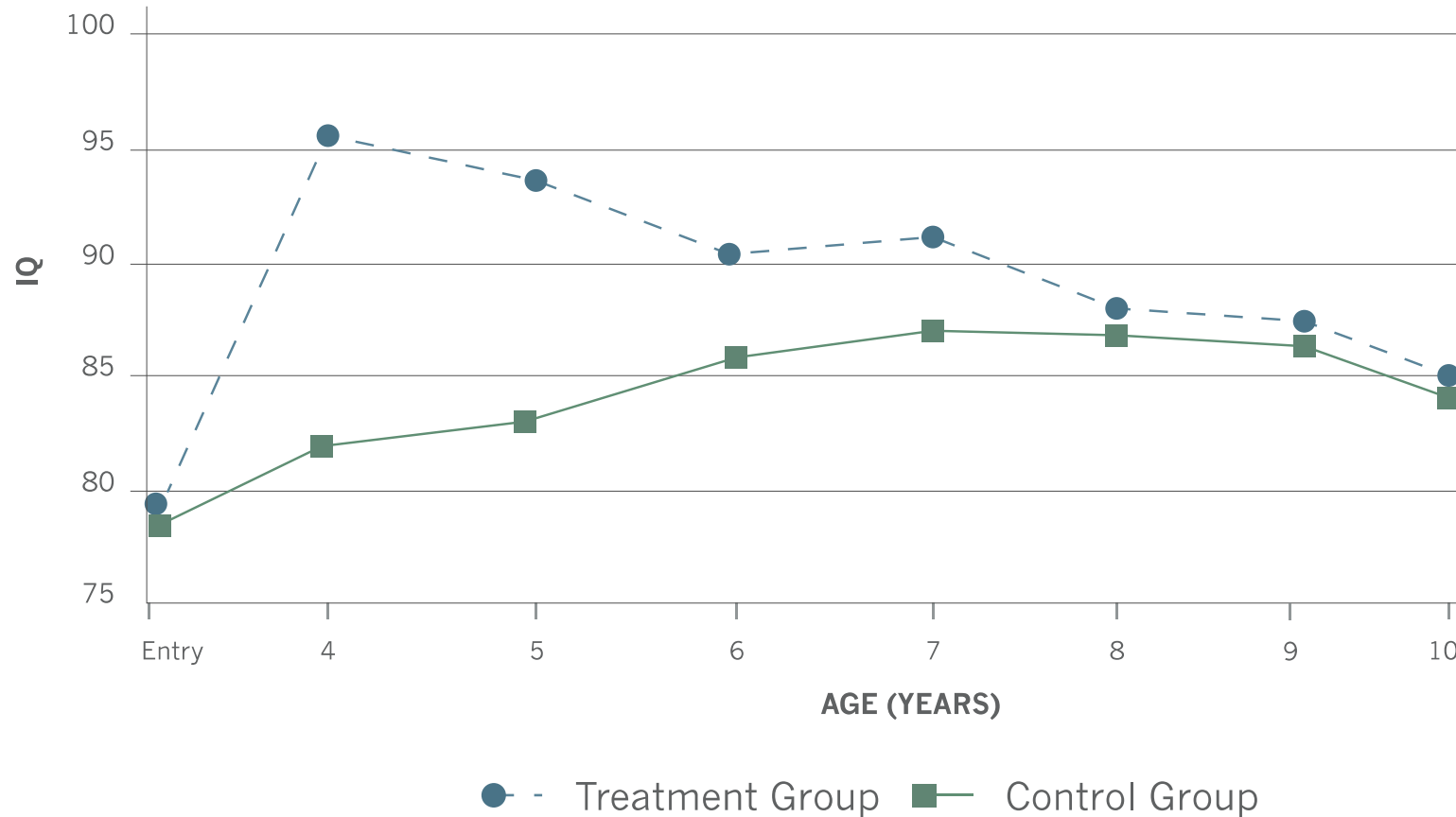


They work with and
encourage parents.



In assessing them, we need proper measures of program output of life-relevant skills.

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.



Despite “Fadeout,”
7-10% per annum
rate of return.



Worked primarily
through boosting social
and emotional skills.




Hard evidence on the
importance of “soft” skills.




- a) Major advances have occurred in understanding which human capacities matter for success in life.
- b) Cognitive ability as measured by IQ and achievement tests is important.
- c) So are the **socio-emotional skills** – sometimes called character traits or personality traits:

- Motivation
- Sociability; ability to work with others
- Attention
- Self Regulation
- Self Esteem
- Ability to defer gratification
- Health and mental health



Develop cognition and
character from conception,
through birth and into
school and career training.



Character and cognition
are skills, *not* traits fixed
at birth.



They can be fostered.



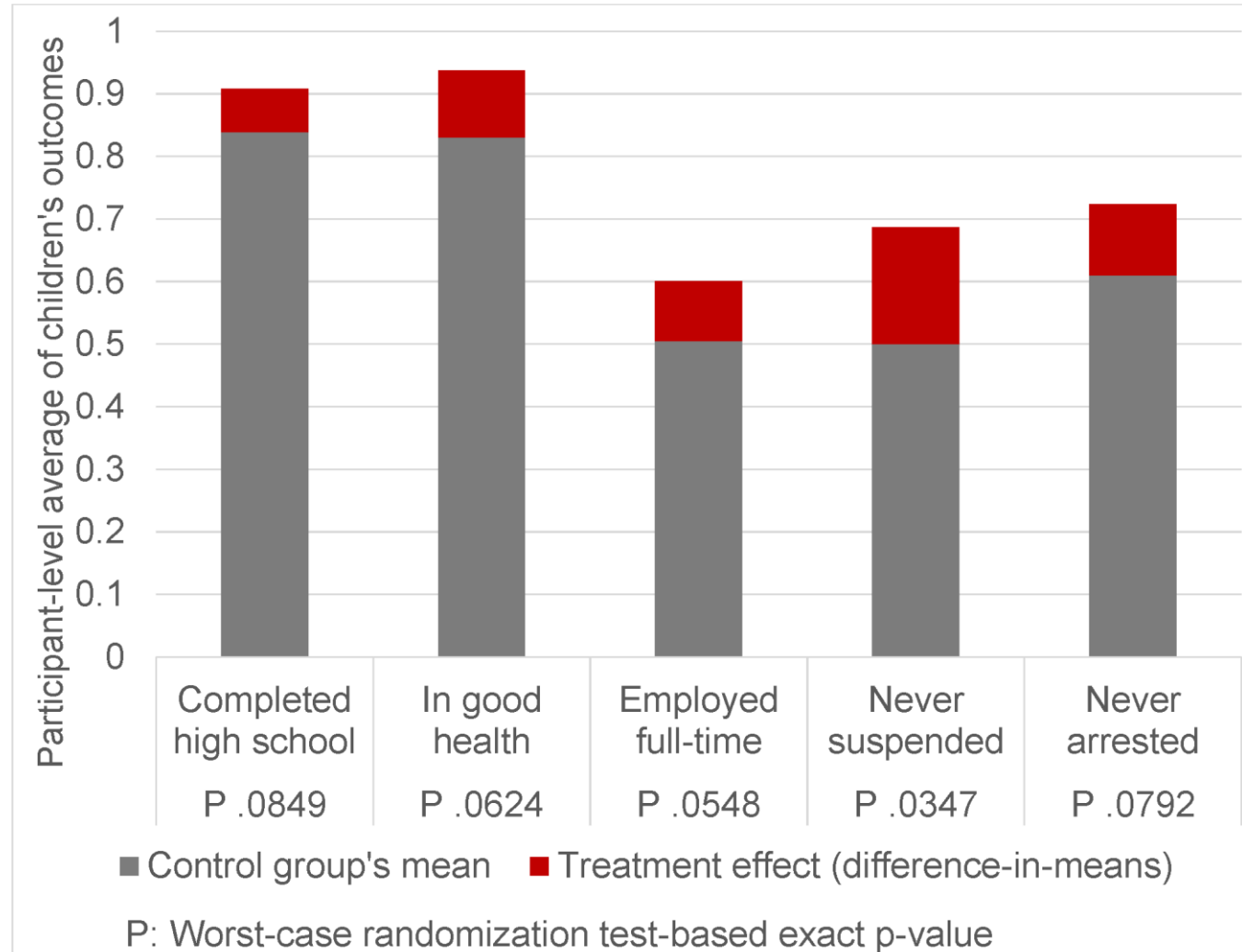
Developing multiple skills and abilities is the best way to solve the problems of economic and social inequality.




Intergenerational Effects of Perry Program



Selected Outcomes for All Children of the Perry Participants





Abecedarian shows
healthy benefits from a
comprehensive
approach.



Starting Earlier (At Birth) Boosts IQ



- Improved parenting practices and child attachment
- Positive effect on behavior and mental health
- Higher educational attainment
- Higher employment rate
- Reduced criminal activity
- Better child and adult health



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).



Rate of return:

- Overall: 13.7% per annum
- Males: 14% per annum
- Females: 10% per annum



The enhanced income of mothers from providing childcare by itself pays for program costs.



Mechanisms



Enriches Home Lives of Children Outside of Childcare Center

Keeps Parental Engagement
Active Long After the Children
Leave Pre-K



The Importance of the Early Years: Skills Beget Skills

Social-emotional Skills



Cognitive Skills, Health

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

Health



Cognitive Skills, Social-Emotional Skills

(fewer lost school days; ability to concentrate)

Cognitive Skills

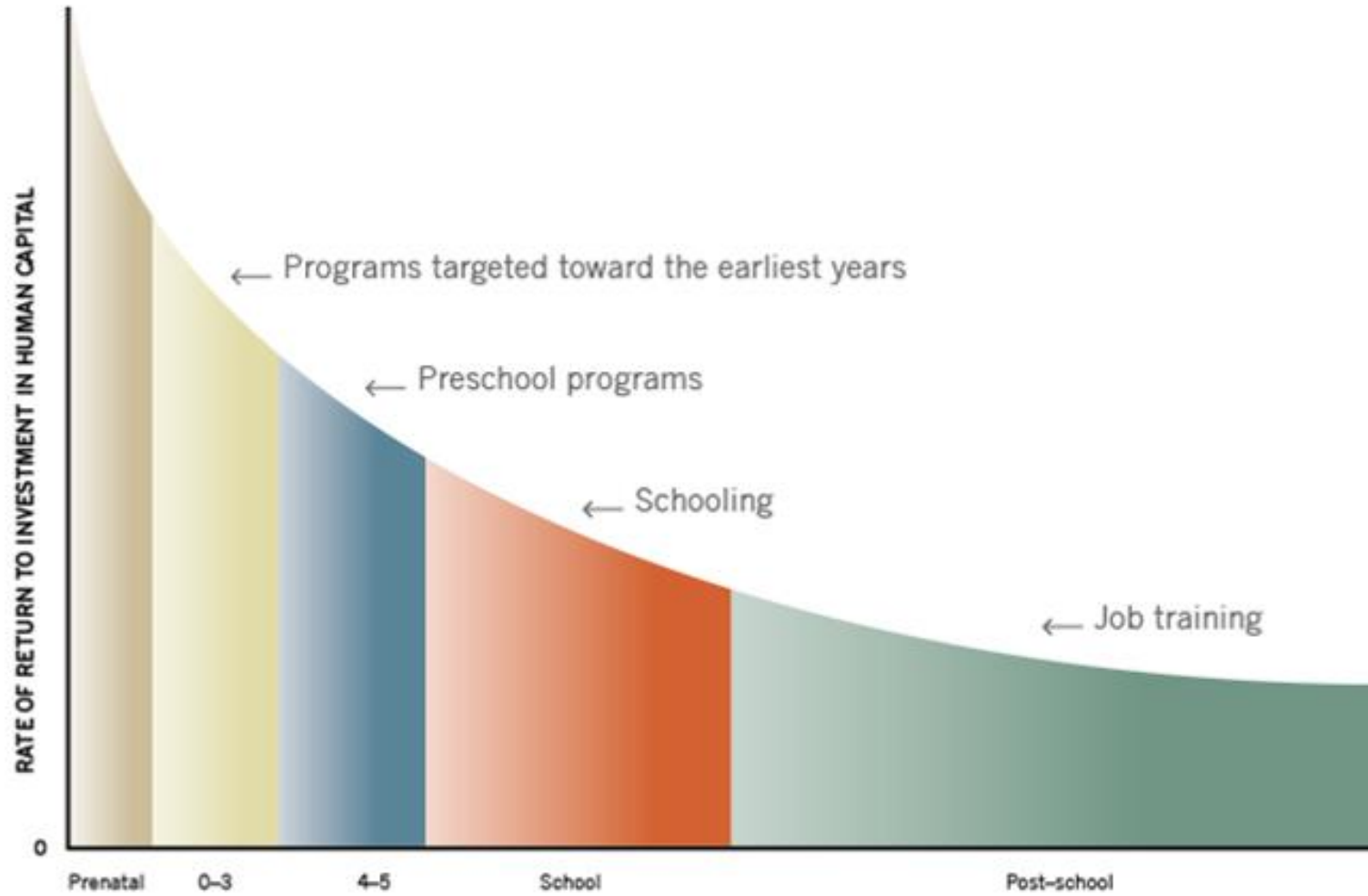


**Produce better health practices;
produce more motivation; greater
perception of rewards, social-emotional
skills**

(child better understands and controls its environment)

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

Returns to a Dollar Invested



Source: Heckman (2008)



- Substantial Returns on high quality programs for *disadvantaged* children.
- Advantaged children have other resources often much better than those from public programs.



Successful early childhood programs help parents grow their parenting skills, foster the skills and aspirations of their children, and make for engaged and inclusive communities, a more skilled workforce, and a healthier society.