Health, Skills, and Parenting

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Leveraging the Healthcare System to Impact Educational Disparities
Saieh Hall
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Effective Policy for Building Skills Recognizes:

1. Fundamental importance of skills in modern economies
2. Multiplicity of skills
3. The multiple sources producing skills
   a. Schools
   b. Families
   c. Neighborhoods and peers
   d. Firms
4. The importance of supporting and incentivizing all of these sources of skill
5. Recent knowledge on effective targeting of skills
6. Need for evaluations accounting for costs and benefits measured in terms of social opportunity costs
A Skills-based Policy Tackles Many Aspects of Poverty, Inequality, and Social Mobility
A Unified Approach to Policy
Avoids Fragmented Solutions

• Current policy discussions have a fragmented quality.
Solve Problems As They Arise?
“The Squeaky Wheel Gets the Grease”
Is Prevention Efficient? How Well Can We Target?
Evidence on the Effectiveness of Early Targeting to Promote Skills (Including Character Skills)

- 80% of adult social problems regarding health, healthy behaviors, crime and poverty are due to 20% of the population.
- Reliable indicators of these problems by age 5 (Caspi et al., 2016).
Childhood Forecasting of a Small Segment of the Population with Large Economic Burden
Caspi, Moffitt, et al. (2017)

*Nature Human Behaviour*
The Pareto Principle

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

Vilfredo Pareto, 1848-1923
Social Welfare Benefit Months

20% of Cohort Members = 80% of Total Social Welfare Benefit Months
Cigarette Smoking Pack-Years

20% of Cohort Members = 68% of Total Tobacco Smoking Pack-Years
Prescription Drug Fills

20% of Cohort Members = 89% of Total Prescription Drug Fills
Hospital Bed-nights

20% of Cohort Members = 77% of Total Hospital Bed-Nights
Excess Weight in Kilograms

20% of Cohort Members = 98% of Total Excess Obese Kilograms
20% of Cohort Members = 97% of Total Criminal Court Convictions
Concentration of High-Cost Groups in the Dunedin Birth Cohort

Chance Overlap

- None
- 1 group
- 2
- 3+

Observed Overlap

- None
- 1 group
- 2
- 3+
The High-need/High-cost Group in 3 or more sectors: How many health/social services do they use?
Small Footprint of cohort members never in any high-cost group:
Childhood Risk Factors to Describe High-cost Actor Groups: Composites across ages 3, 5, 7, 9, 11

- IQ
- Self-control
- SES (socio-economic status)
- Maltreatment
Age-3 Brain Health:
45-minute standardized assessment of Dunedin cohort 3-year-olds in 1975

- Neurologist’s examination of soft signs
- Peabody Picture IQ test
- Reynell Receptive Language test
- Bayley Motor Skills test
- Examiner-rated poor behavior control
What are Skills?
The Importance of Cognition and Character
Major advances have occurred in understanding which human capacities matter for success in life.

Cognitive ability as measured by IQ and achievement tests is important.

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
• Beyond PISA scores
Link to Report PDF
Cognitive and Socioemotional Skills Determine:

a. Crime
b. Earnings
c. Health and healthy behaviors
d. Civic participation
e. Educational attainment
f. Teenage pregnancy
g. Trust
h. Human agency and self-esteem
Skill Gaps Open Up Early

- Gaps in skills across socioeconomic groups open up very early:
  - Persist strongly for cognitive skills
  - Less strongly for noncognitive skills
- Skills are not set in stone at birth—but they solidify as people age. They have genetic components.
- Skills evolve and can be shaped in substantial part by investments and environments.
Figure 1: Mean Achievement Test Scores by Age by Maternal Education

Source: Brodsky, Gunn et al.
How to Interpret This Evidence

- Evidence on the early emergence of gaps leaves open the question of which aspects of families are responsible for producing these gaps.
- Genes? Eugenics?
- Parenting and family investment decisions?
- Family environments? Neighborhood, peer, and sorting effects?
- The evidence from a large body of research demonstrates an important role for investments and family and community environments in determining adult capacities above and beyond the role of the family in transmitting genes.
- The quality of home environments by family type is highly predictive of child success.
- Home environments can be strengthened in a voluntary fashion.
Genes, Biological Embedding of Experience, and Gene-Environment Interactions
Family Environments and Child Outcomes
In the USA, children enter school with “meaningful differences” in vocabulary knowledge.

1. Emergence of the Problem
In a typical hour, the average child hears:

<table>
<thead>
<tr>
<th>Family Status</th>
<th>Actual Differences in Quantity of Words Heard</th>
<th>Actual Differences in Quality of Words Heard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welfare</td>
<td>616 words</td>
<td>5 affirmatives, 11 prohibitions</td>
</tr>
<tr>
<td>Working Class</td>
<td>1,251 words</td>
<td>12 affirmatives, 7 prohibitions</td>
</tr>
<tr>
<td>Professional</td>
<td>2,153 words</td>
<td>32 affirmatives, 5 prohibitions</td>
</tr>
</tbody>
</table>

2. Cumulative Vocabulary at Age 3

<table>
<thead>
<tr>
<th>Cumulative Vocabulary at Age 3</th>
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<tbody>
<tr>
<td>Children from welfare families:</td>
</tr>
<tr>
<td>Children from working class families:</td>
</tr>
<tr>
<td>Children from professional families:</td>
</tr>
</tbody>
</table>
⇒ 30 Million Word Gap
Figure 2: Per Capita Enrichment Expenditures on Children (2008 USD) Top Versus Bottom Quartile of Households

Source: Duncan and Murnane (2011).
Child Home Environments are Compromised:
A Growing Trend World-wide
Figure 3: Children Under 18 Living in Single Parent Households by Marital Status of Parent

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.
Figure 4: Ratio of Child Care Expenditures to Mother’s Income

Consequences of Cohabitation
Figure 5: Self-Regulation and Cooperation by Family Status

Source: 'Daycare of the Future', Bleses and Jensen (2017)
Figure 6: Empathy by Family Status

Source: 'Daycare of the Future', Bleses and Jensen (2017)
Is Family Influence Just About Money?
Parenting is the Proper Measure of Child Advantage and Disadvantage
The Science Underlying the Benefits of Early Investment
The Dynamics of Skill Formation:
Two Notions of Complementarity
Static Complementarity

• The productivity of investment greater for the more capable, especially in adolescent and early adult years.
  • **High returns for more capable people.**
  • **Does this justify social Darwinism?**
  • On grounds of economic efficiency, should we invest primarily in the most capable?
  • **Answer: Depends on where in the stage of the life cycle we consider the investment.**
Dynamic Complementarity

- If we invest today in the base capabilities of disadvantaged young children, there is a huge return.
- Makes downstream investment more productive.
- **No necessary tradeoff between equality and efficiency goals.**
• **Both** processes are at work.
• No necessary contradiction.
• Investing early creates the skill base that makes later investment productive.
• Effective targeting.
Skills Beget Skills

<table>
<thead>
<tr>
<th>Social-emotional Skills</th>
<th>Cognitive Skills, Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>(sit still; pay attention; engage in learning; open to experience)</td>
<td></td>
</tr>
</tbody>
</table>

Health

<table>
<thead>
<tr>
<th>Cognitive Skills, Noncognitive Skills</th>
</tr>
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<tbody>
<tr>
<td>(fewer lost school days; ability to concentrate)</td>
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</table>

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.