The Growing Importance of Social Skills in the Labor Market

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SBTC and Job Polarization

Smoothed Changes in Employment by Occupational Skill Percentile 1979-2007

Source: Acemoglu and Autor (2011)
Slowdown in demand for cognitive skills among college grads

Source: Beaudry, Green and Sand (2014)
Lower return to cognitive skills in later NLSY cohort

<table>
<thead>
<tr>
<th></th>
<th>AFQT80 NLSY79 (1)</th>
<th>AFQT80 NLSY97 (2)</th>
<th>AFQT80 NLSY79 (3)</th>
<th>AFQT80 NLSY97 (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>.2012 (.0161)</td>
<td>.1901 (.0193)</td>
<td>.1239 (.0176)</td>
<td>.1679 (.0197)</td>
</tr>
<tr>
<td>Associate’s</td>
<td>.3836 (.0335)</td>
<td>.4415 (.0445)</td>
<td>.2727 (.0357)</td>
<td>.4143 (.0446)</td>
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<tr>
<td>Bachelor’s</td>
<td>.5248 (.0233)</td>
<td>.5972 (.0279)</td>
<td>.3845 (.0264)</td>
<td>.5481 (.0300)</td>
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<tr>
<td>Master’s</td>
<td>.8308 (.0510)</td>
<td>.9112 (.0824)</td>
<td>.6520 (.0531)</td>
<td>.8552 (.0819)</td>
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<tr>
<td>$R^2$ (adjusted)</td>
<td>.1405</td>
<td>.1498</td>
<td>.1661</td>
<td>.1535</td>
</tr>
</tbody>
</table>

Source: Castex and Dechter (2014)
The Disappearance of Routine Jobs Higher Up the Skill Distribution
Smoothed Changes in Employment for Routine Occupations

Occupations with above median routine task intensity based on 1998 O*NET
Computers are replacing cognitive tasks of rapidly increasing cognitive complexity. Is there anything that still cannot be automated?

- **Social interaction**

- Skill in social settings is based on tacit knowledge and evolved over thousand of years - we don’t know “the rules” (Autor 2015)

- Theory of Mind and the Turing test
Labor Market Trends

Three key facts about the U.S. labor market:

1. Employment growth in social skill-intensive occupations throughout the wage distribution
2. Growing complementarity between cognitive skills and social skills (Weinberger 2014)
3. Inverse relationship between social skill intensity and routineness of an occupation
Worker Tasks in the U.S. Economy, 1980-2012
Update of Autor, Levy, and Murnane (2003) Figure 1

Occupational Task Intensity based on 1998 O*NET
Smoothed Changes in Employment by Occupational Task Intensity

1980-2012

Occupation's Percentile in 1980 Wage Distribution

Low Math, Low Social
High Math, Low Social
Low Math, High Social
High Math, High Social

100 x Change in Employment Share

Occupational Task Intensity based on 1998 O*NET

Sources: 1980 Census, 2011-2013 ACS
Smoothed Changes in Median Wages by Occupational Task Intensity
1980-2012

Occupational Task Intensity based on 1998 O*NET
Sources: 1980 Census, 2011-2013 ACS
Since 2000...

Smoothed Changes in Employment by Occupational Task Intensity

2000-2012

100 x Change in Employment Share

Occupation's Percentile in 1980 Wage Distribution

Low Math, Low Social
High Math, Low Social
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Occupational Task Intensity based on 1998 O*NET

Returns to Skills in the NLSY

• Standard wage regressions for prime-age adults
  • AFQT, social skills index

• Test and find support for three main predictions:
  1. Positive return to social skills - controls for cog. and non-cog. skill, education/occ/industry
  2. Skill complementarity
  3. Increasing returns in non-routine, social skill-intensive occupations
    3.1 Holds within-worker (job transitions)
Three implications

1. ICT and shifting of the organization of work - “Taylorist” to flexible team structures

2. Social skills and gender gaps in labor market outcomes
   2.1 Women consistently score higher on test of emotional and social intelligence

3. Early childhood interventions and “non-cognitive” skills
Worker Tasks in the U.S. Economy, 1980-2012
Males - Update of ALM (2003), Figure 1

Occupational Task Intensity based on 1998 O*NET
Worker Tasks in the U.S. Economy, 1980-2012
Females - Update of ALM (2003), Figure 1

Occupational Task Intensity based on 1998 O*NET
Change in Female Employment Share by Social Skill Task Intensity

1980-2012

Social Skills Task Intensity based on 1998 O*NET

Sources: 1980 Census, 2011-2013 ACS
Measuring social skills

Are social skills conceptually distinct? Can they be measured?

- Social intelligence tests formally developed and validated - correlation with IQ about 0.3 (e.g. Salovey and Mayer 1990, Mayer et al 2008)

- “Reading the Mind in the Eyes” test predicts team performance even after controlling for team IQ (Woolley et al 2010)
despondent

relieved

shy

excited
Perry Preschool (Heckman et al. 2013)

Figure 6. Decompositions of Treatment Effects on Outcomes, Males
Thanks!

This is work in progress, and I appreciate your thoughts, suggestions and criticisms.

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