Travel and social capital: Some empirical evidence

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Part 1: Hypotheses
Time-scaled “road”-Switzerland (1950 & 2000)

Axhausen and Hurni, 2005
Commuter sheds of the 10 largest Swiss towns

Botte, 2003
Example of a social network geography
How to explain travel?

- Budget constraints
- Capability constraints

- Generalised costs of the schedule
  - Generalised cost of travel
  - Generalised cost of activity participation
    - Risk and comfort-adjusted weighted sums of time, expenditure and social content
How to understand the traveller?

Contacts

Social capital

Ego’s Personal World

Biography

Projects

Learning
Travel and social networks

Maintenance of the network requires:

- Face to face contacts
- Balanced by other forms of contacts
- Travel ~ Physical spread of the contacts
- Trade-off between loosing contacts and “social” capital and investing in new contacts closer to home
Hypotheses

Message costs $\rightarrow$ Migration $\rightarrow$ Professional activity space

Number of networks $\rightarrow$ Left skew of intensity distribution

Network geography $\rightarrow$ Network overlap $\rightarrow$ Local anomie

Elasticity $> 0$

Elasticity $< 0$
Part 2: Survey work
Data needs

• Measurement of the activity spaces (geographies, markets)
• Estimate of previous activity spaces
• (Local) level of trust
• Strength and object of attachment to a locality
Contributors

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- VW Stiftung – M Kowald, A Frei, K Nagel and J Illenberger
Items to capture the social network geographies

- Name generators
  - Core network
  - Leisure “partners”
- Name interpreters
  - Type and length of contact
  - Frequency by mode of contact
  - Home location
Number of contacts reported

Number of contacts named

Percent

Number of contacts named

0 10 20 30 40 50

Percent

2%
4%
6%
8%
10%
## Comparison of the instrument

<table>
<thead>
<tr>
<th>Variable</th>
<th>East York</th>
<th>NCCS</th>
<th>GSS</th>
<th>IVT</th>
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<tbody>
<tr>
<td><strong>Instrument</strong></td>
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<tr>
<td>Name-generator</td>
<td>1 prompt (feel close to)</td>
<td>11 prompts</td>
<td>1 prompt (discuss important matters)</td>
<td>4 prompts</td>
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<tr>
<td>Generator limitation</td>
<td>6</td>
<td>No limitation</td>
<td>5</td>
<td>No limitation</td>
</tr>
<tr>
<td><strong>Ego-centric network</strong></td>
<td></td>
<td></td>
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<tr>
<td>Size (Ø)</td>
<td>4.70</td>
<td>18.48</td>
<td>3.01</td>
<td>12.35</td>
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<tr>
<td>Share of relatives (Ø)</td>
<td>0.50</td>
<td>0.44</td>
<td>0.61</td>
<td>0.31</td>
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<tr>
<td>Share of weak ties (Ø)</td>
<td>0.18</td>
<td>0.32</td>
<td>0.23</td>
<td>0.48</td>
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<tr>
<td>Duration (Ø)</td>
<td>&gt;10 for 57%</td>
<td>16</td>
<td>-</td>
<td>20.6</td>
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<tr>
<td>Contact freq. per year (Ø)</td>
<td>150.4</td>
<td>-</td>
<td>194.6</td>
<td>59.0</td>
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</table>
Geocoded home locations
Distances between home locations

![Histogram of Great circle distance [km]](image)
Size of network geometries

95%-confidence ellipse of the social network geography
Ratio of contacts to population

- Share of contacts [%]
- Share of population [%]
- Ratio of contact and population shares

Ratios at 1km: 39; 2km: 9; 3km: 5
Interactions by mode and distance between homes
Market share by contact mode

- Face to face [%]
- Phone [%]
- EMail [%]
- SMS [%]

Great circle distance (km)

- Face to face
- Phone
- EMail
- SMS
Die räumliche Ausdehnung sozialer Beziehungen:
Was hier im Modell dargestellt ist, soll in einem Forschungsprojekt genau untersucht werden. Ausgehend von einer Person (1) besteht die Frage darin, wo deren Bekannte und Freunde leben (2). Befragt man auch diese Personen nach ihren sozialen Kontakten, ergibt sich ein detaillierteres Bild der räumlichen Verteilung freundschaftlicher Beziehungen (3).
<table>
<thead>
<tr>
<th></th>
<th>Wave 0</th>
<th>Wave 1</th>
<th>Wave 2</th>
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<tbody>
<tr>
<td>Sample</td>
<td>166</td>
<td>250</td>
<td>61</td>
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<tr>
<td>(380) (of contacted)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Not yet reached</td>
<td>11</td>
<td>32</td>
<td></td>
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<tr>
<td>Contacted</td>
<td>152</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Not reached</td>
<td>66</td>
<td>18</td>
<td></td>
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<tr>
<td>Refused</td>
<td>60</td>
<td>38</td>
<td></td>
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<tr>
<td>Recruited</td>
<td>26</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Sent without recruitment</td>
<td>-</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Full information</td>
<td>20</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>(of contacted)</td>
<td>(13%)</td>
<td>(22%)</td>
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</tbody>
</table>
Further information

www.ivt.ethz.ch