The network geographies of Singaporeans

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Burning Question

Do technological advances affect individual’s social capital and network geographies, in ways that better life outcomes and result in inequalities?

Which factors affect network geographies?
Research Question(s)

Describe/ Measure

• What - in terms of **degree, spatial dispersions** etc. - do the social networks, or **personal communities**, of a sample of Singaporeans (stratified by gender, ethnicity and age etc.) look like, and whether they are stretched out geographically due to advancements in communication and travel technologies?
Research Question(s)

- Explain/ Causal

- How do these technological advances (in communication and travel) affect Singaporeans social capital, defined as the capacity for joint activities (Frei and Axhausen 2009)?

- Does distance matter? How far do people live from their significant others, and how this distance influences the practices of phoning, texting, emailing and meeting up face-to-face?

- How do these technological advances affect a person’s social network geography, defined as the (addresses of daily life) of everybody involved in their social network (Axhausen 2008)?

- How do these networks potentially enable the individual to achieve better life outcomes, such as life satisfaction, mental
Social Network Analysis explores the structural properties that *connect* people in webs of friendship, mutual support and sociality through face-to-face talk, phone conversations and email (Larsen, Urry and Axhausen 2006).
Social Network Paradigm

1. Social networks: resources, tie strength, size, composition and location – structural holes (Burt 1990) - density, closeness, betweenness, and eigenvector (Borgatti, Jones et al. 1998)

2. Social networks in terms of their spatiality, particularly as 'network geographies'?

   • First study of network geographies as social sciences has not systematically measured or mapped distances between members of networks and associated networking practices (Larsen, Urry and Axhausen 2006).

   • Findings: Geography – distance and proximity – matters greatly in relation to weak or new ties, but less so with ‘strong ties’. Too much distance to significant others has detrimental effects upon one’s social capital.
Social Network Geography

The travel necessary for the building and maintenance of the social capital of a network is tied up with the longer term locational choices of its network members - their homes, workplaces etc. The destination choice of an individual is the result of joint choices with those other persons, whom the individual wants to travel to meet. The pegs of the daily lives of everybody involved, i.e. residences, holiday homes and accommodations, common meeting places, work places form the social network geography (Axhausen 2008).
Social Network Geography of a UK Architect

**Mobility biography** refers to a set of an individual’s longitudinal trajectories, assuming that the existence of **events at certain moments in an individual’s life, changes their daily travel patterns**. For example, by relocation, car ownership, or job and education changes over a person’s life course (also Beige and Axhausen 2006; Scheiner 2007; Ohnmacht et al. 2008).
Social Capital Paradigm: debates

1. Normative (Coleman; Putnam and Leonardi) or a resource (Portes; Bourdieu)?

2. Individual (Lin, Vaughn; Bian), group (Bourdieu), families (Hanifan), neighborhoods (Loury) or communities (Coleman)?

3. Closure (Bourdieu, Coleman) or bridges (Granovetter; Burt)?

4. What outcomes and under what conditions a denser/sparser network might generate (Lin)?

5. Social capital: combination of network size, the relationship strength, and the resources possessed by those in the network (De Graaf and Flap).
Social Capital

Social capital is the joint skilled ability of the members of a network to perform, act and enjoy each other’s company as the result of their joint history, commitments and references.

This capital is built up through joint activity and therefore travel, but also through technology mediated interaction, such as letter writing, texting via SMS, emailing, videoconferencing, instant messaging, amongst other new technologies (Frei and Axhausen 2009).

The transmission of social capital benefits, such as, social support (Wellman and Wortley 1990), or, receiving important advice (Fischer 1982) and help with a job (Granovetter 1995), are a result of the joint activities that builds trust among network members over time.
Alternative Paradigms - Better life outcomes and inequalities

- Community mobilization
- Cooperation
- Identity formation
- Cognitive dissonance
- Individualizing the collective experience
- Castell’s concept of project identities
- Role of the state
- Role of the market
- Martha Nussbaum and Amartya Sen’s concept of capabilities
- John Friedmann’s concept of empowerment
- Iris Young’s concept of the five faces of oppression
Technological advances increase social network geography and social capital

• New spatial network patterns due to improved transportation and communication systems, lower generalized costs and changing social practices (Frei and Axhausen 2009).

• Inequalities due to network and economic capital

“How long does it take a 10,000 word letter to reach the receiver?”

Dicken, 1998

Coach and sailing boat until 1840

Steam ship and locomotive, 1840 - 1930

Propeller aircraft, 1930-1950

Jets, from 1950
Networked Individualism and Personal Communities

• Communities are in **networks**, and not groups

• Communities are **far-flung, loosely-bounded**, multiple, sparsely-knit and fragmentary networks of kin, neighbors, friends, workmates and organizational ties.

• Networked communities are stretched out geographically and socially. Each person is connected to diverse networks, possessing a ‘**personal community**’, providing **sociality, support, information** and **identity** (Wellman 2001).
Communication technologies mediate distance, to increase social capital

Modern networked individuals manage personal communities with the help of communication technologies which enable people to talk over large and short distances.

- Distance becomes less of a barrier (but still a barrier) in maintaining personal communities (Mok et al., 2009; Rainie and Wellman 2012).

Social status...
Singaporean communication patterns

Singaporeans are heavy users of new media:

• **75%** of Singaporean population have **internet access** in 2012 (European Travel Commission New Media Trend Watch)

• 85% of digital consumers in Singapore own an Internet-capable mobile phone (Nielson’s inaugural Southeast Asia Digital Consumer Report 2012)

• 68.1% of Singaporeans used social media on a regular basis, at least once per week, in 2012 (The state of social media in Singapore, Rockpublicity Report 2012)
Singaporeans’ travel patterns

• Travel produces social capital in societies with dispersed social networks (Urry and Larsen 2006)

• Singaporeans are highly mobile, but differences exist due to network capital

- More than 20,000 Singapore citizenship applications approved (Channel News Asia, 25/2/13)
- Almost 40% of marriages in 2011 are between citizens and non-citizens (A sustainable population for a dynamic Singapore 2012)
- 200,000 Singaporeans living overseas in 2012 (Population in brief report 2012)
Additional social capital benefits

• According to Borgatti et. al (2009), one of the four mechanisms whereby networks can influence outcomes, is through transmission. Network-based theories treat network ties as pipelines through which things flow: social support (Wellman and Wortley, 1990) etc.

• Personal communities can change situations. As conduits through which resources such as money, skills, information and services are exchanges, personal communities enhance life outcomes such as receiving important advice (Fischer 1982) and getting a job (Granovetter 1995) etc.
Modern individuals shop at ‘specialized interpersonal boutiques’ rather than at ‘general stores’ (Wellman and Wortley 1990).

- They select **unique persons for unique tasks** (Chua 2011).
- Need to look at distances e.g. how far are parents separated from children?

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<table>
<thead>
<tr>
<th>NETWORK</th>
<th>TASK</th>
<th>STUDY</th>
</tr>
</thead>
</table>
| Parents-children | (+) Financial aid | Wellman and Wortley, 1990, Canada  
| | | Fischer, 1982, US  
| | | Freeman and Ruan, 1997, China  
| | | Wellman and Wortley, 1990, Canada |
| Spouse | (+) Emotional aid and counselling | Hollinger and Halter, 1990, multi-country  
| | | Lee, Ruan, Lai, 2005, China  
| | | Fischer, 1982, US  
| | | Hollinger and Halter, 1990, multi-country  
| | | Lee, Ruan, Lai, 2005, China  
| | | Freeman and Ruan, 1997, China |
| Siblings | (+) Companionship, general support | Wellman and Wortley, 1990, Canada  
| | | Freeman and Ruan, 1997, Australia, Hungary, US  
| | | Freeman and Ruan, 1997, China |
| Extended kin | (+) Family get-togethers (seasonal) | Wellman and Wortley, 1990, Canada  
| | | Salaff, Fong, Wong, 1999, Canada |
| Neighbours | (+) Emergencies | Litvak and Szelenyi, 1969, US  
| | | Lee and Campbell, 1999, US  
| | | Fischer, 1982, US  
| | | Freeman and Ruan, 1997, China, Austria, Germany, Netherlands, US, Britain, Italy...  
| | | Espinosa, 1999, Chile  
| | | Freeman and Ruan, 1997, China  
| | | Freeman and Ruan, 1997, Australia, Hungary, Italy, US, Germany, Britain |
| Co-workers | (+) Confidants | Ferrand, Moursier, Degene, 1999, France  
| | | Lee, Ruan, Lai, 2005, China  
| | | Fischer, 1982, US  
| | | Freeman and Ruan, 1997, Australia, Hungary, Italy, Britain, US, Netherlands, Austria |
| Friends | (+) Sociai pleasure | Wellman and Wortley, 1990, Canada  
| | | Fischer, 1982, US  
| | | Granovetter, 1973, US  
| | | Lee, Ruan, Lai, 2005, China  
| | | Freeman and Ruan, 1997, Australia, Britain, US, Austria...  
| | | Freeman and Ruan, 1997, Hungary, Italy, Netherlands |
| Others | (+) Financial aid | Freeman and Ruan, 1997, Australia, Hungary, Italy, Britain, US, Netherlands |
In Singapore, communities exist in personal networks made up of diverse individuals. Neighbors, given their physical proximity, are called upon as watchers of the house; kin are sought for emotional aid, important matters, and financial matters; friends and coworkers are sought for social companionship and job-seeking (Chua 2011).

Although modern individuals are autonomous shoppers in ‘specialized interpersonal boutiques’ (Wellman and Wortley, 1990), structural forces (such as gender, race, class, etc.) shape how those shopping experiences turn out (Chua 2011).
Social Network Survey: Overview

Demographics
- Individual (Gender, Age, Ethnicity, Education)
- Household (Income, housing, education, network capital)
- Locations (Residences, workplaces, schools)

Topics
- Work satisfaction
- Life satisfaction (Projects)
- Family (Residence)
- Leisure
- National Service
- Voluntary Organizations
- Identity
- Mobility and Communication

Name Generators
- Who listens (important or depressed)?
- Who helps (financial/job/housework/childcare)?
- Work buddies?
- Voluntary organizations
- National service buddies?
- Leisure and exercise buddies?
- School buddies?
- Close alters (local/overseas)?
How did you come to know about this job? (If you have a few positions with the same company, your answer should be based on your 'first' position with the company)

- I saw an ADVERTISEMENT in a newspaper (magazine, trade, technical journal etc.)
- I found out through an EMPLOYMENT AGENCY (or personnel consultant, head-hunter etc.)
- I SUBMITTED AN APPLICATION before anyone told me about the job
- Someone I didn't know contacted me and said that I had been RECOMMENDED
- I asked a FRIEND/ PERSON who told me about the job
- A FRIEND/ PERSON who knew I was looking for a job contacted me
- A FRIEND/ PERSON who didn't know I was looking for a job contacted me
- Family business
- Signed on after National Service
- Bonded
- Not sure/ Can't say/ Can't remember
- Others (pls. specify)
52. How did you get hired for your current job?

- I was HIRED from outside the organization
- I was TRANSFERRED from another division within the organization
- I was PROMOTED from another position within the same division
- I started MY OWN BUSINESS
- Never worked before
- Family business
- Serve National Service
- Bonded
- Can't remember
- Others (pls. specify)

53. Was there someone in the company who helped you get this job or any other jobs previously?

- Yes
- No

54. You mentioned that someone in the company helped you get this job. What is the name or initials of this person?

<table>
<thead>
<tr>
<th>No.</th>
<th>Person's First Name</th>
<th>Person's Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Jia Xin</td>
<td>JX</td>
</tr>
</tbody>
</table>
Person's Details

Person's Name: Jia-Xin
Person's Initials: JX
Person's Address: One Tree Hill, Singapore
1 What is the person's gender?
- Male
- Female

2 What is the person's ethnicity?
- Chinese
- Malay
- Indian
- Others (pls specify)

If you have selected 'Others', please specify

3 What is the person's marital status?
- Single
- Married
- Divorced
- Widowed
- Separated

4 What is the person's year of birth?

1989

5 What is the person's primary citizenship?

Singaporean

6 What is the highest educational level the person has completed?
- No formal education
- Some Primary
- Completed Primary (PSLE)
- Some Secondary
- Completed Secondary ('O' / 'N' Levels)
- ITE/ Vocational Institute
- Completed Pre-U/ Junior College ('A' levels)
- Polytechnic (Diploma)
- Professional Qualifications/ Other Diplomas
- University Graduate (Basic Degree/ Honors Degree)
- University Postgraduate (MA, MSc, MBA, PhD, Graduate Diploma)
- Refused
- Others (pls. specify)
7 Who introduced you to this person?
- Husband / wife / life partner
- First degree relative
- Other relative
- Married into the family
- A friend
- Colleague
- An acquaintance
- None of the above
- Others (pls specify)

If you have selected 'Others', please specify

8 Where is the place (address) you got to know the person?

Ai Tong School, 100 Bright Hill Dr, Singapore 579646

9 What is the year of the first meeting with the person?

2001

10 How did you get to know the person?
- Partner
- Family
- Education
- Work
- Club/Bar
- Others (pls specify)

If you have selected 'Others', please specify

11 How is this person related to you?
- Child
- Parent
- Spouse/Fiancé
- Sibling
- Boyfriend/Girlfriend
- Grandparent
- Parent-in-law
- Other relative
How *frequent* do you have the following *modes of contact* with the person?

<table>
<thead>
<tr>
<th>No.</th>
<th>Mode of Contact</th>
<th>No. of Times</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Physical/Face to face contact</td>
<td>3</td>
<td>Per Day, Per Week</td>
</tr>
<tr>
<td>13</td>
<td>By Telephone (Landline or mobile phone)</td>
<td>2</td>
<td>Per Day, Per Week</td>
</tr>
<tr>
<td>14</td>
<td>By E-mail</td>
<td>0</td>
<td>Per Day, Per Week</td>
</tr>
<tr>
<td>15</td>
<td>By SMS/Whatsapp</td>
<td>0</td>
<td>Per Day, Per Week</td>
</tr>
<tr>
<td>16</td>
<td>By Chat (e.g. Skype) or an Internet Forum</td>
<td>1</td>
<td>Per Day, Per Week</td>
</tr>
</tbody>
</table>
Power Geometries

• Power geometries refer to the power that different social groups and individuals have in mobilities (Massey 1994)

• Singapore’s Gini coefficient is 0.473 in 2011 (comparable with New York, Los Angeles and Hong Kong: >0.5)

• Gender, ethnicity and class are no mere personal characteristics; they are social ‘categories’ that shape behaviours and life chances (Tilly, 1998).

• In Singapore, gender, ethnic and class stratification are strong and durable (Chua 2011).
• Does distance matter? How do social distance and geographical distance interact with and affect one another?

• Is there a theoretical space for thinking of network geographies in terms of inequality?
Questions?

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