

# Preferred citation style

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Axhausen, K.W. (2009) **Travel and social capital: Some empirical evidence**, 2<sup>nd</sup> CCSS Workshop, Zürich, June 2009.

# Travel and social capital: Some empirical evidence

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June 2009

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**ETH**

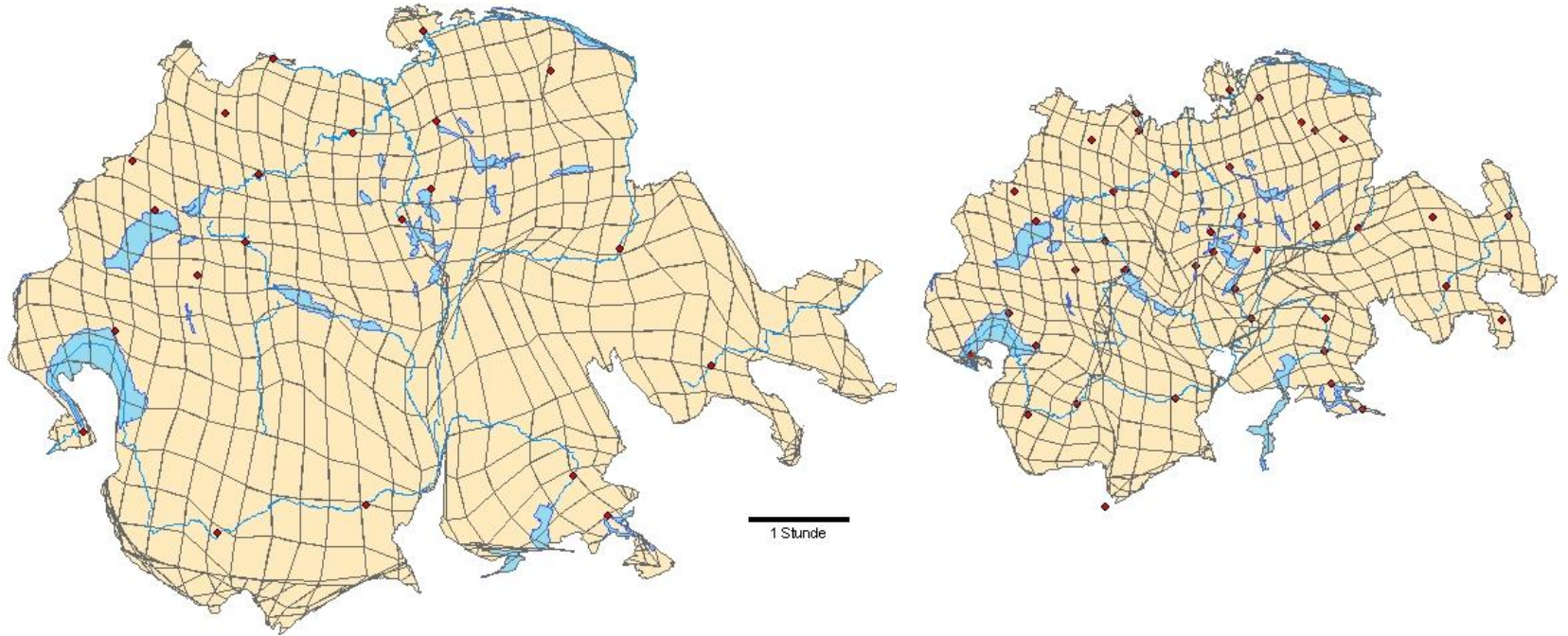
Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

# Part 1: Hypotheses

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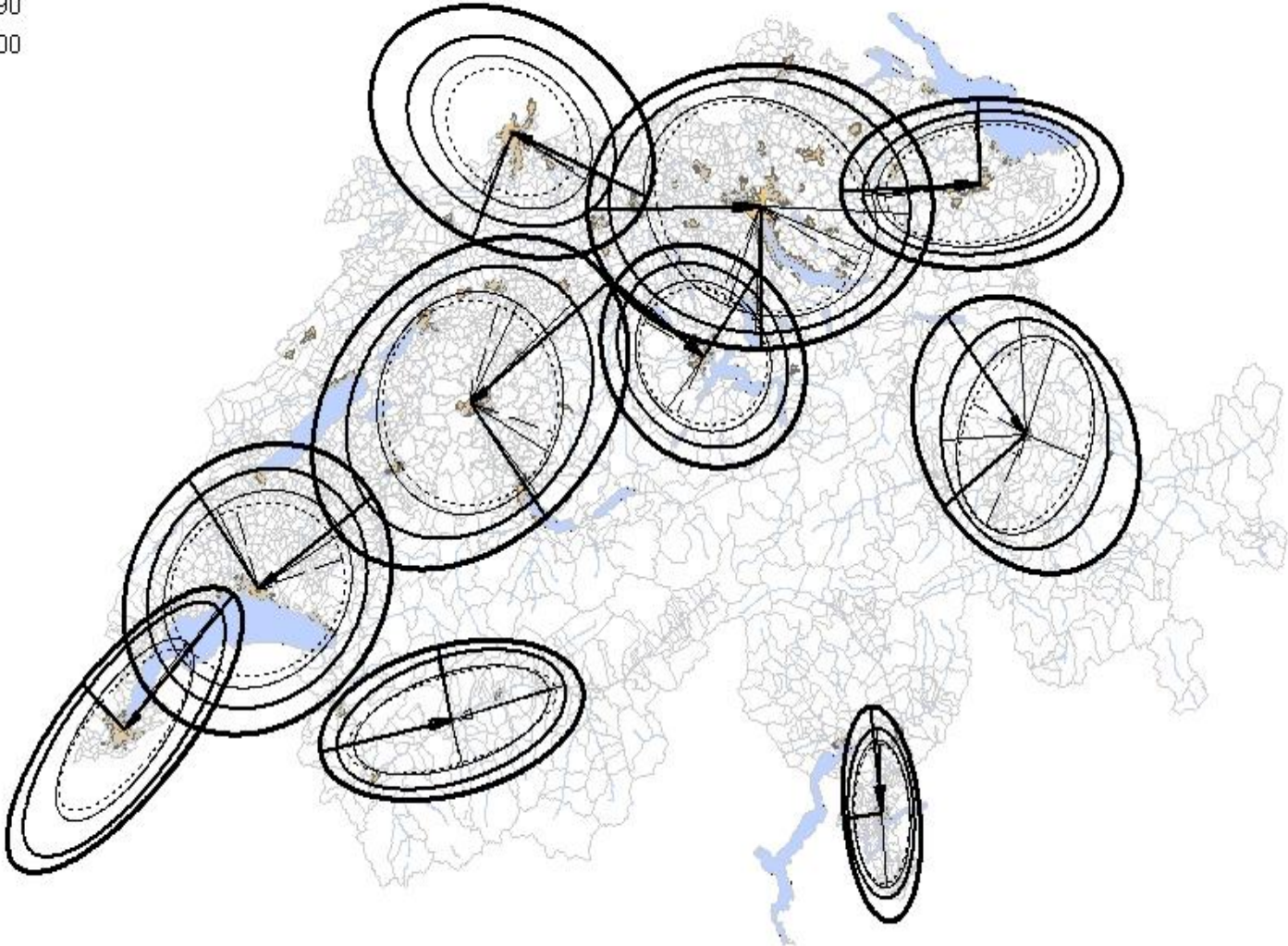
# Time-scaled “road”-Switzerland (1950 & 2000)

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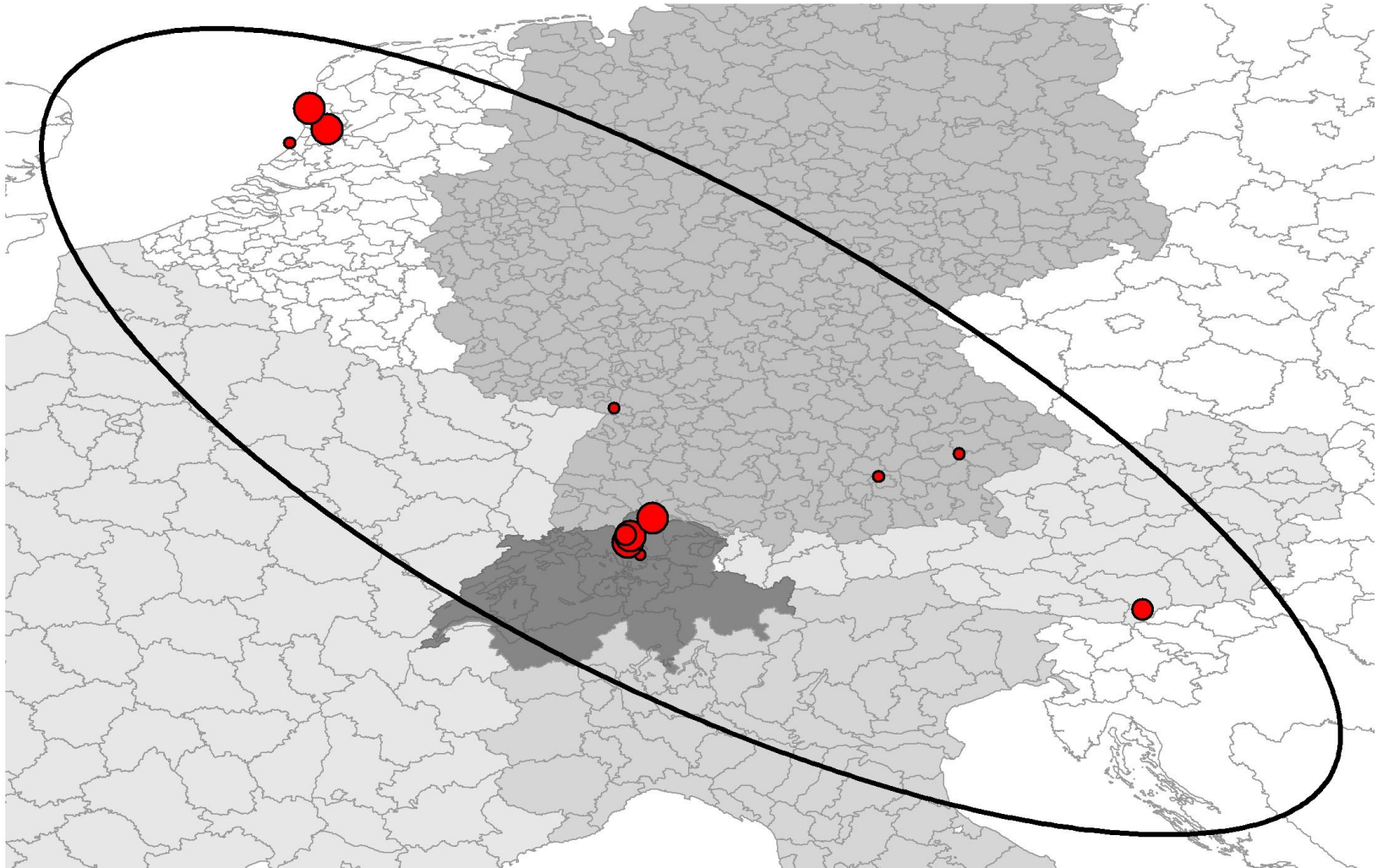
# Commuter sheds of the 10 largest Swiss towns

- 1970
- 1980
- 1990
- 2000



# Example of a social network geography

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# How to explain travel ?

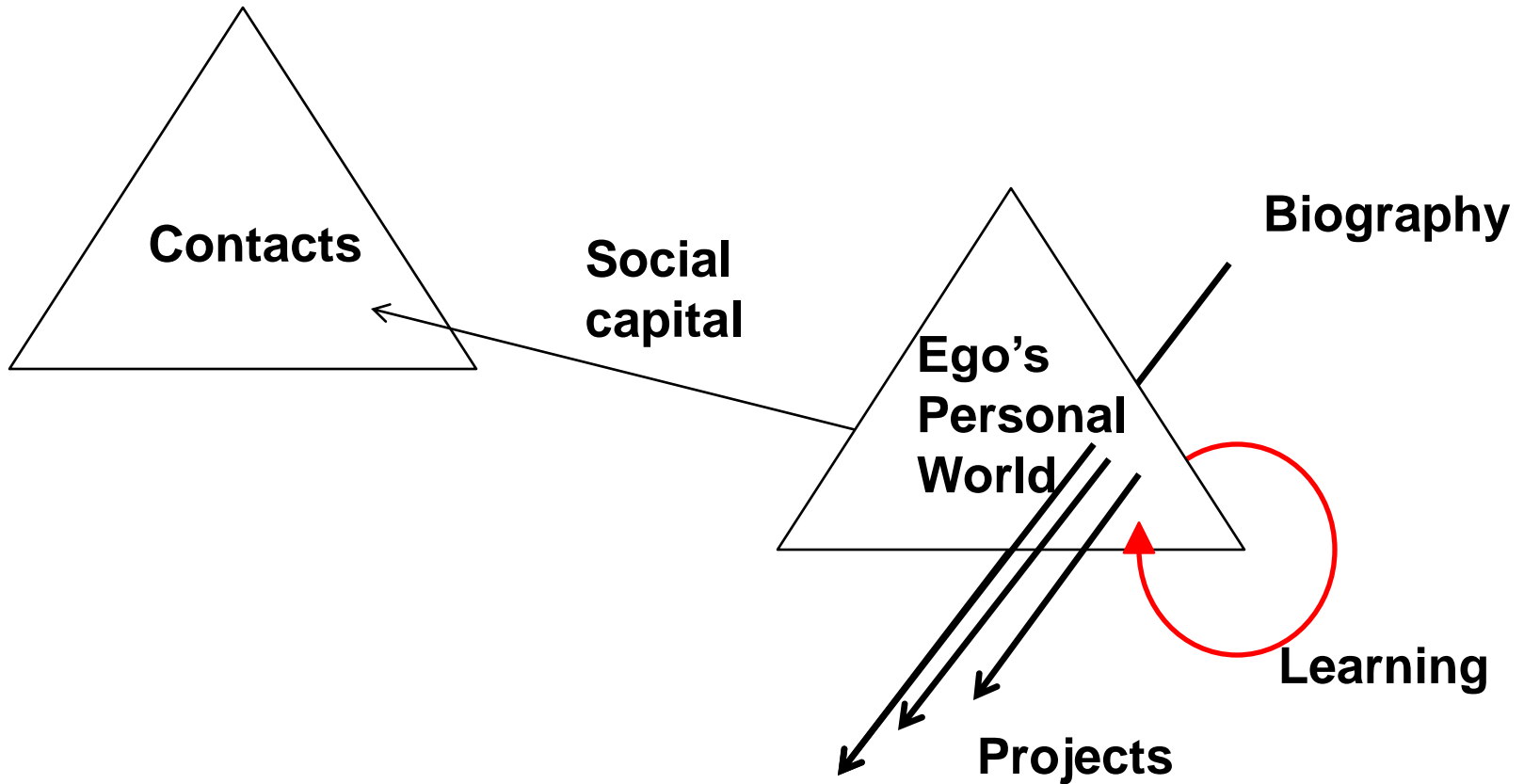
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- Budget constraints
- Capability constraints
- Generalised costs of the schedule
  - Generalised cost of travel
  - Generalised cost of activity participation
    - Risk and comfort-adjusted weighted sums of time, expenditure and social content



# How to understand the traveller ?

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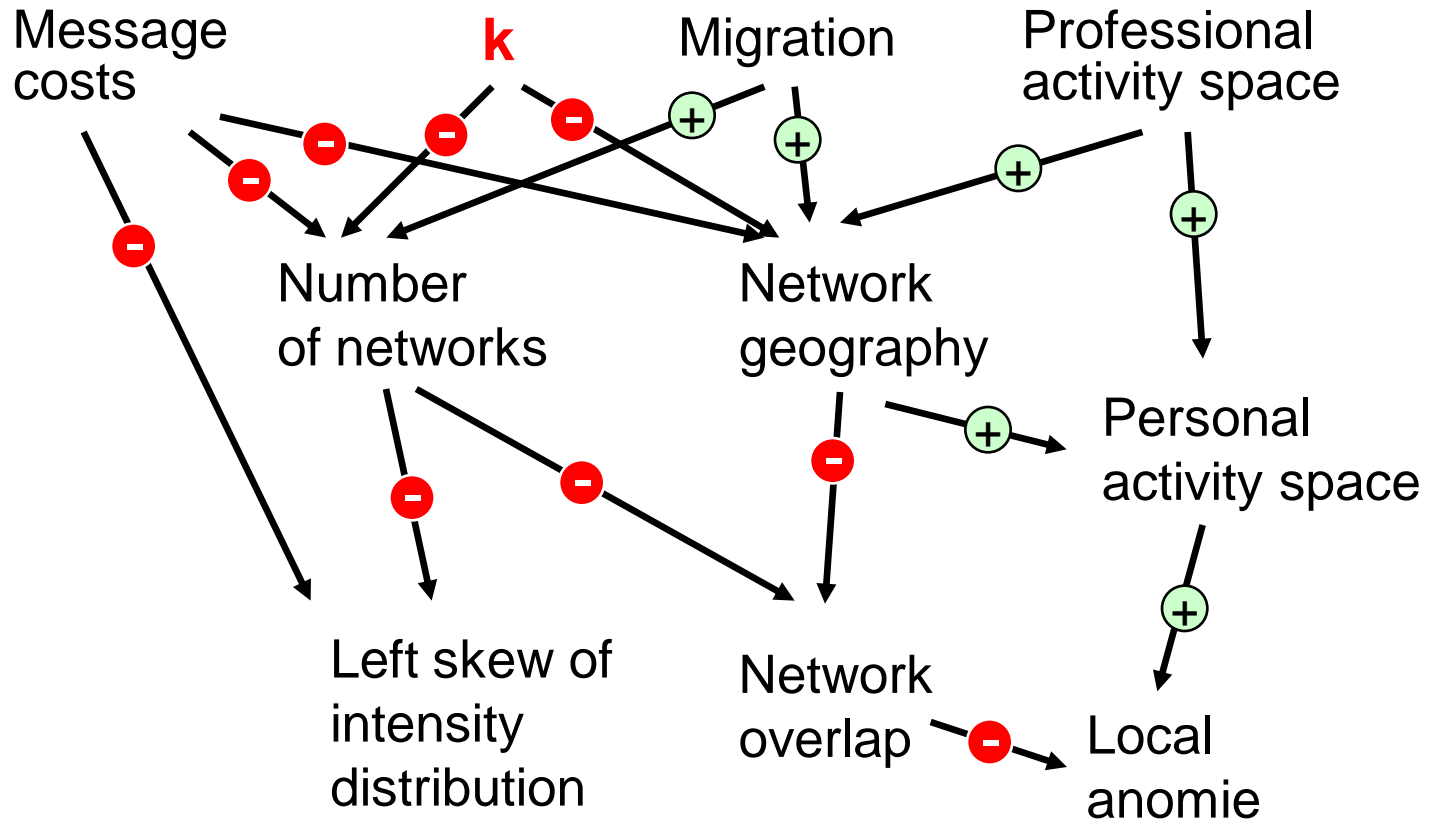
# Travel and social networks

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Maintenance of the network requires:

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

# Hypotheses



⊕ Elasticity > 0  
⊖ Elasticity < 0

## Part 2: Survey work

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# Data needs

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- 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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- ifmo, Berlin – T. Ohnmacht, A Frei and KW Axhausen
- UK DfT – J Larsen, J Urry and KW Axhausen
- COST 355/ifmo – A Frei and KW Axhausen
- VW Stiftung – M Kowald, A Frei, K Nagel and J Illenberger

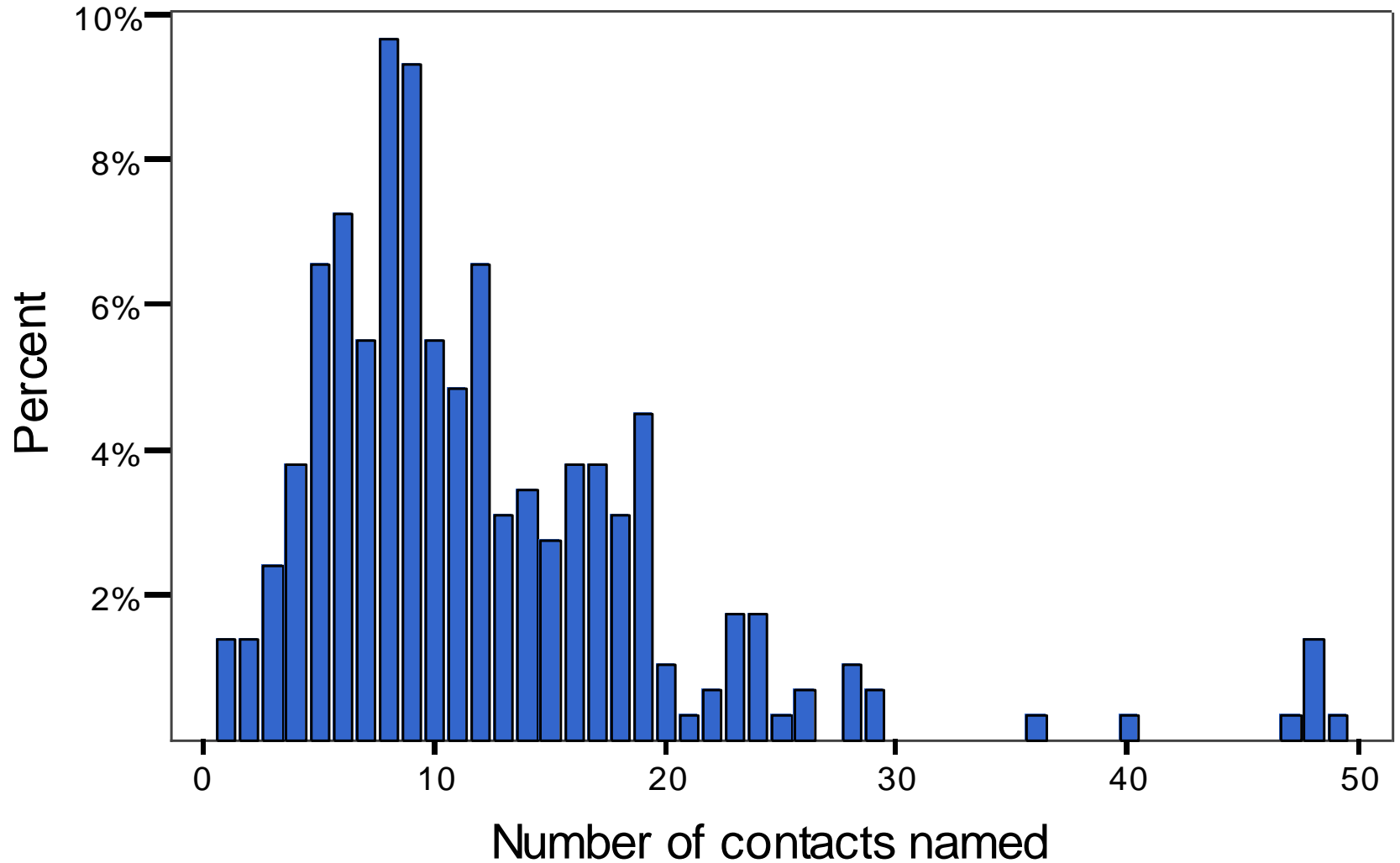
# Items to capture the social network geographies

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

# Number of contacts reported

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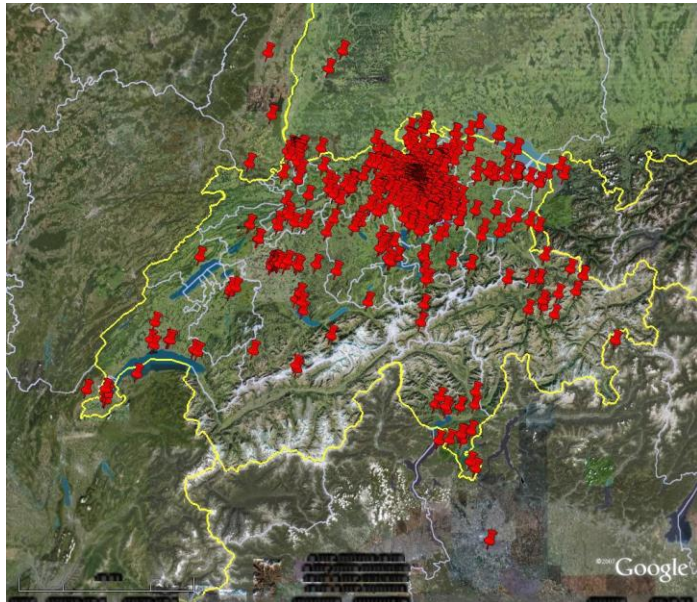
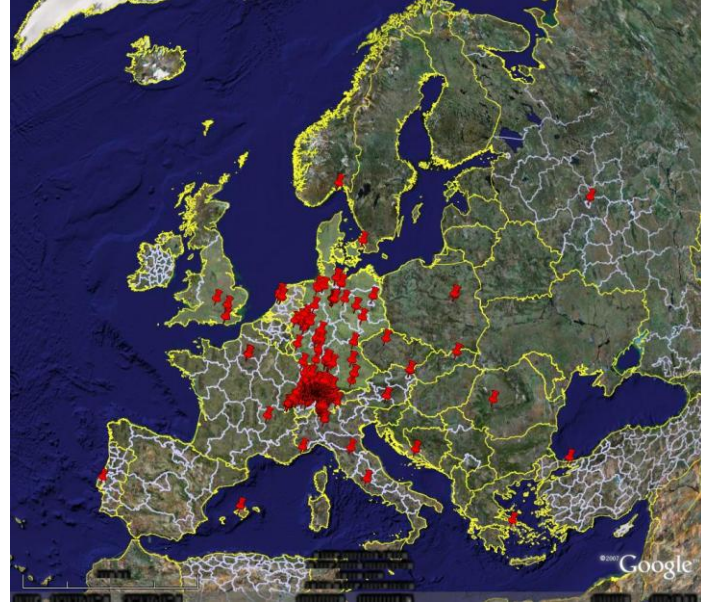


# Comparison of the instrument

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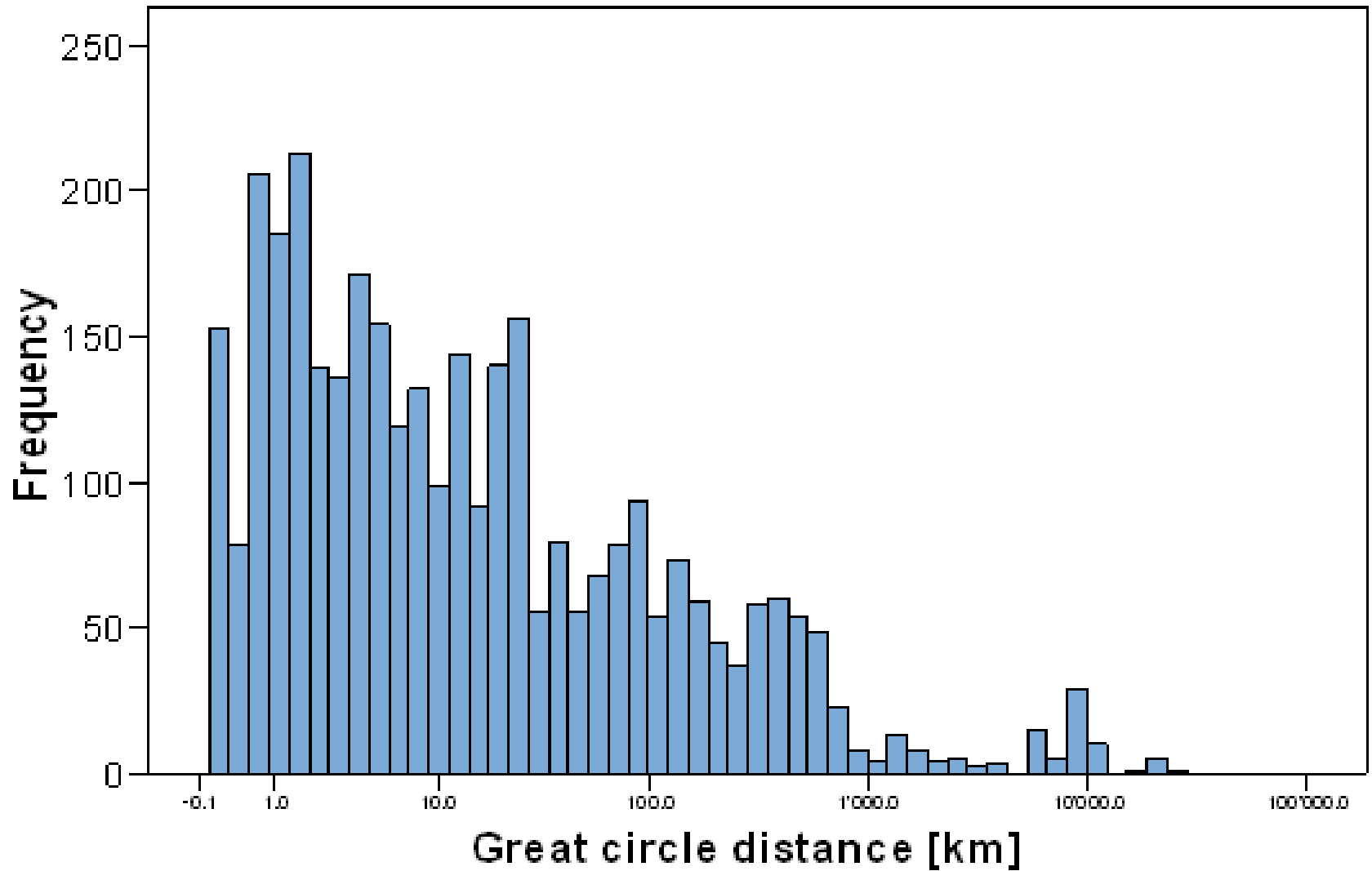
Variable	East York	NCCS	GSS	IVT
<b>Instrument</b>				
Name-generator	1 prompt (feel close to)	11 prompts	1 prompt (discuss important matters)	4 prompts
Generator limitation	6	No limitation	5	No limitation
<b>Ego-centric network</b>				
Size ( $\emptyset$ )	4.70	18.48	3.01	12.35
Share of relatives ( $\emptyset$ )	0.50	0.44	0.61	0.31
Share of weak ties ( $\emptyset$ )	0.18	0.32	0.23	0.48
Duration ( $\emptyset$ )	>10 for 57%	16	-	20.6
Contact freq. per year ( $\emptyset$ )	150.4	-	194.6	59.0

# Geocoded home locations



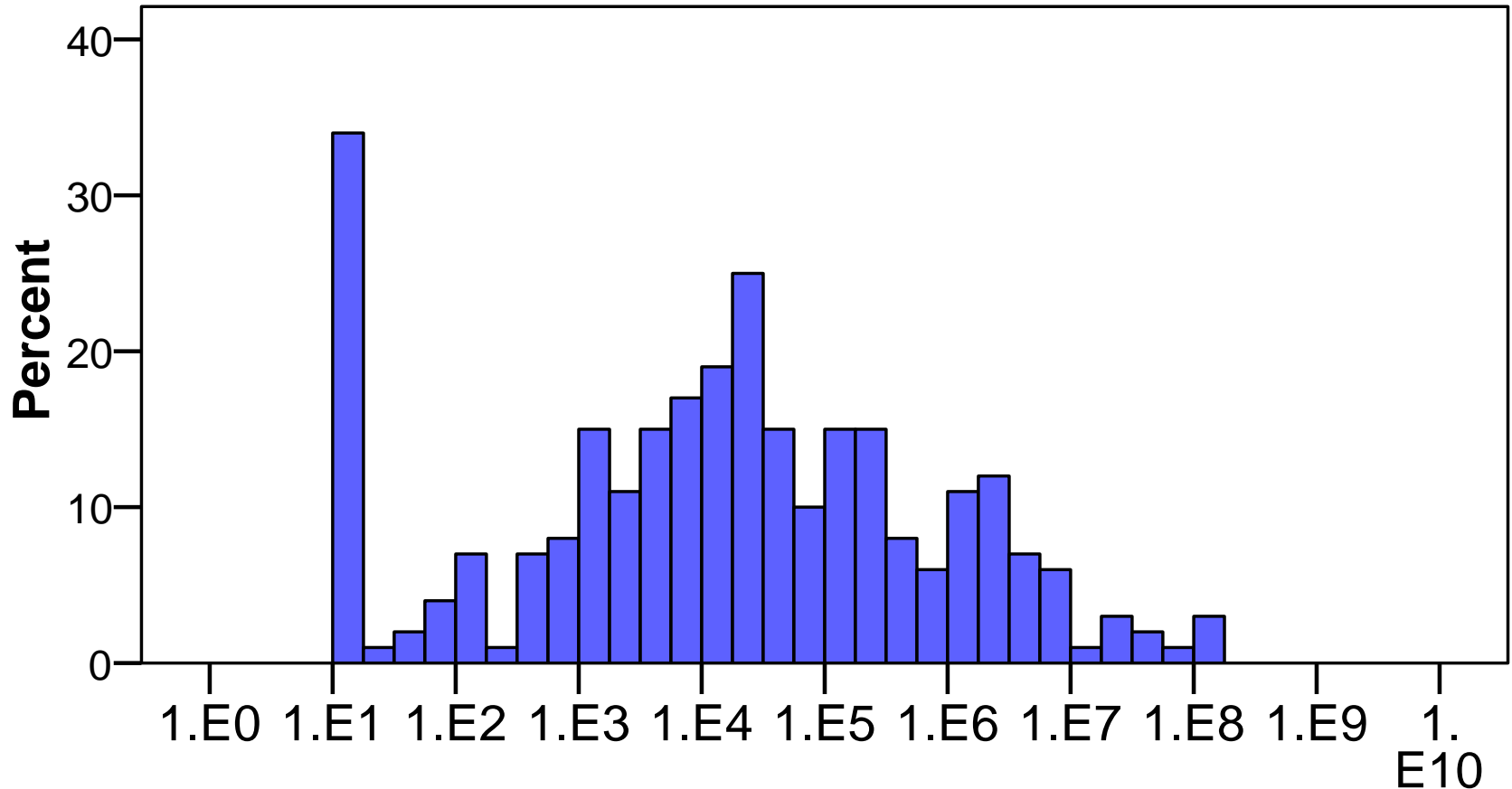
# Distances between home locations

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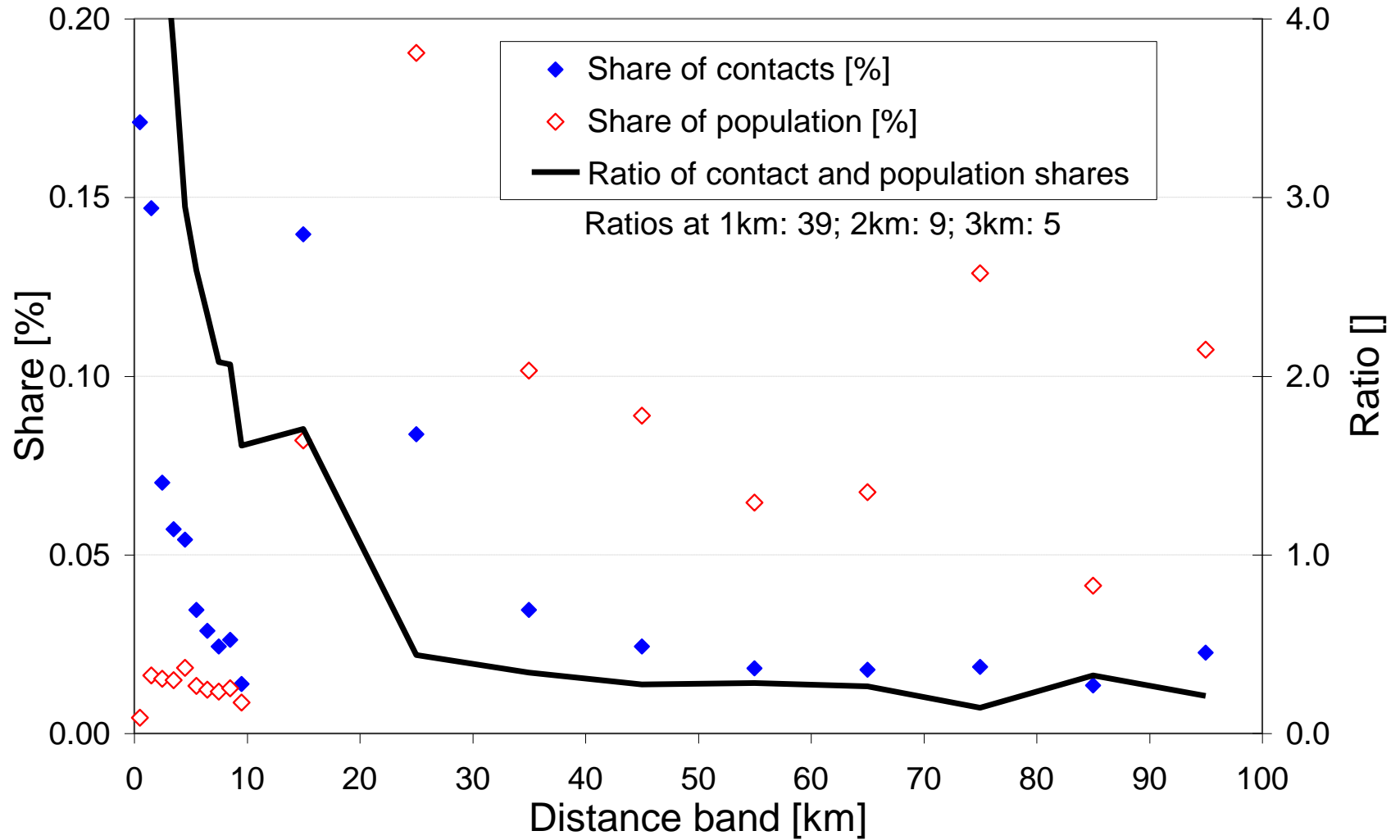
# Size of network geometries

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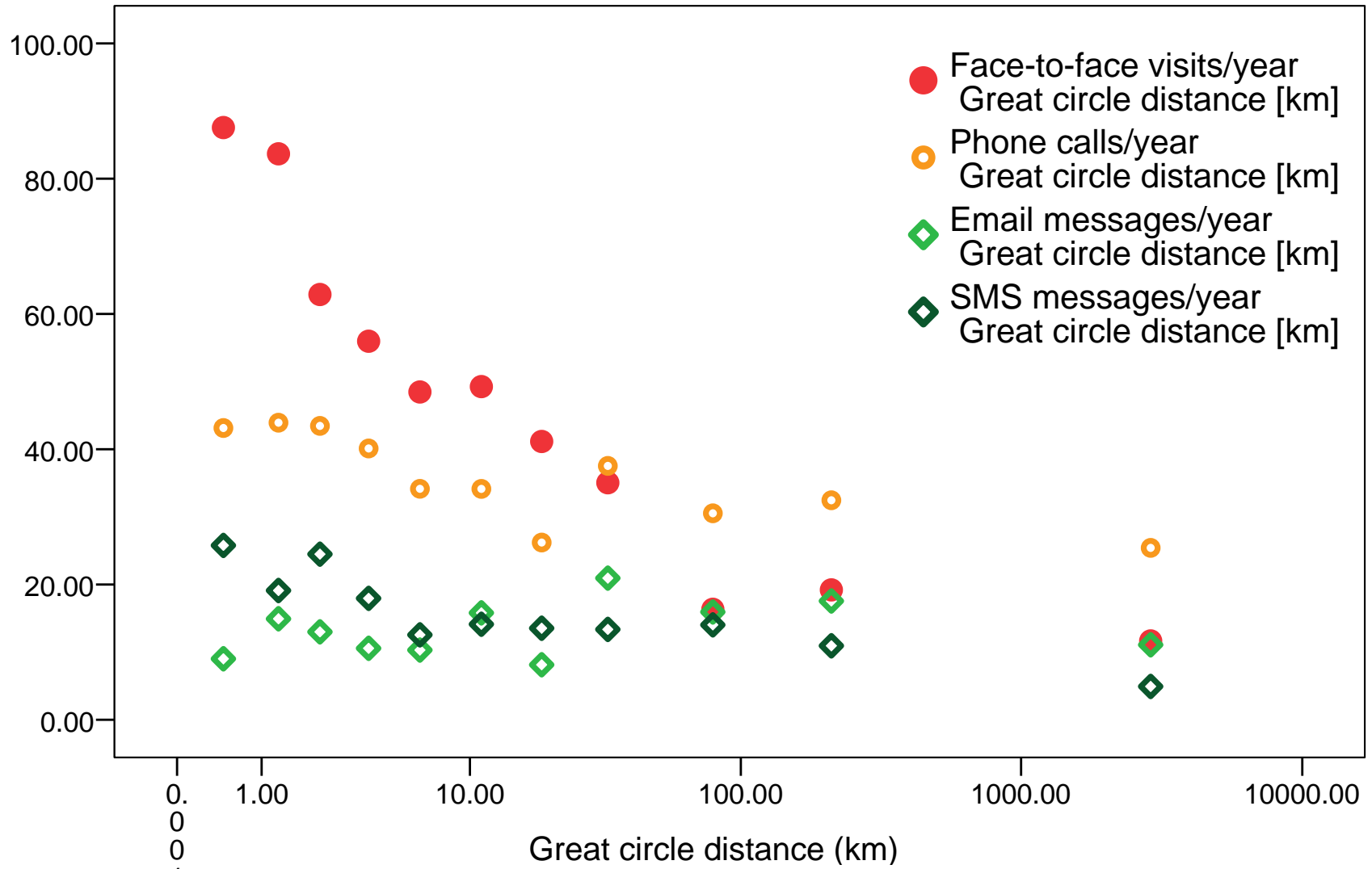


**95%-confidence ellipse of the social network geography**

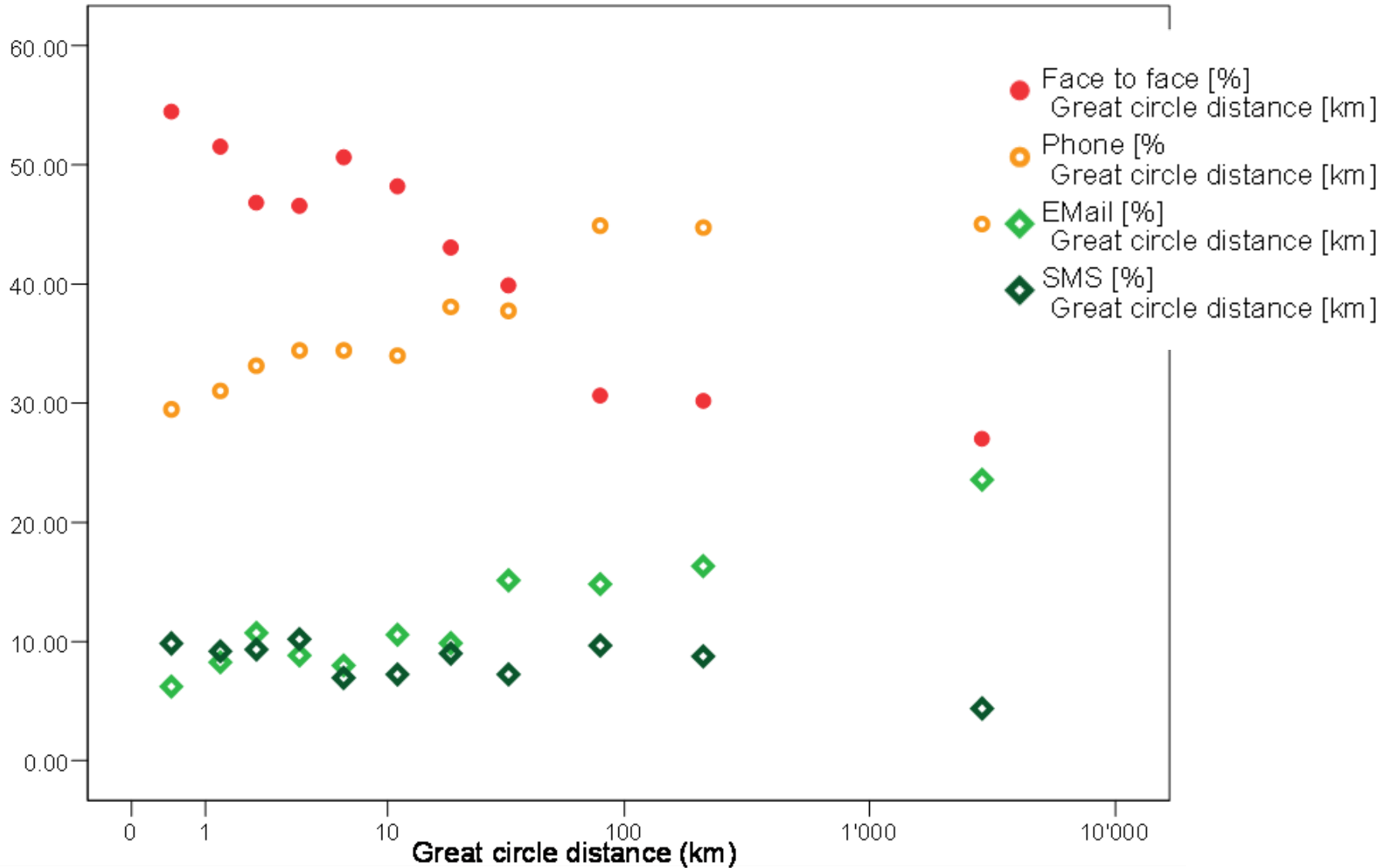
# Ratio of contacts to population



# Interactions by mode and distance between homes

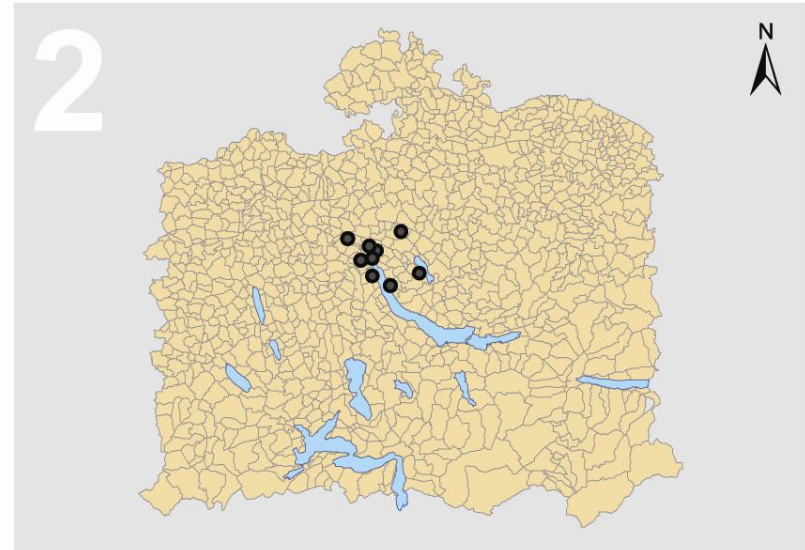
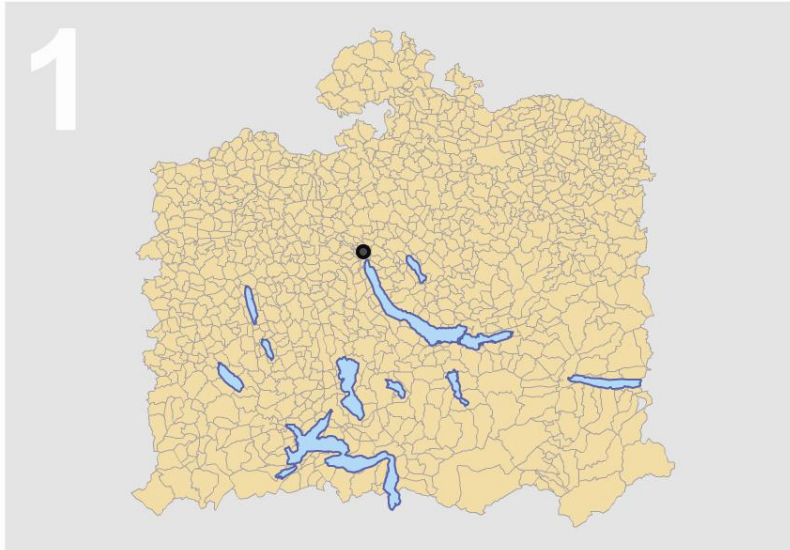


# Market share by contact mode





# Preview: A snowball sample

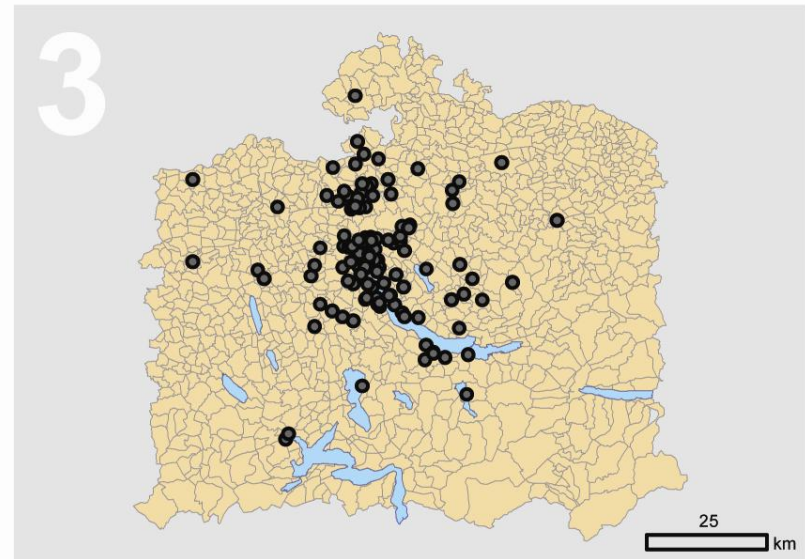


Die räumliche Ausdehnung sozialer Beziehungen:

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 detailliertes Bild der räumlichen Verteilung freundschaftlicher Beziehungen (3).

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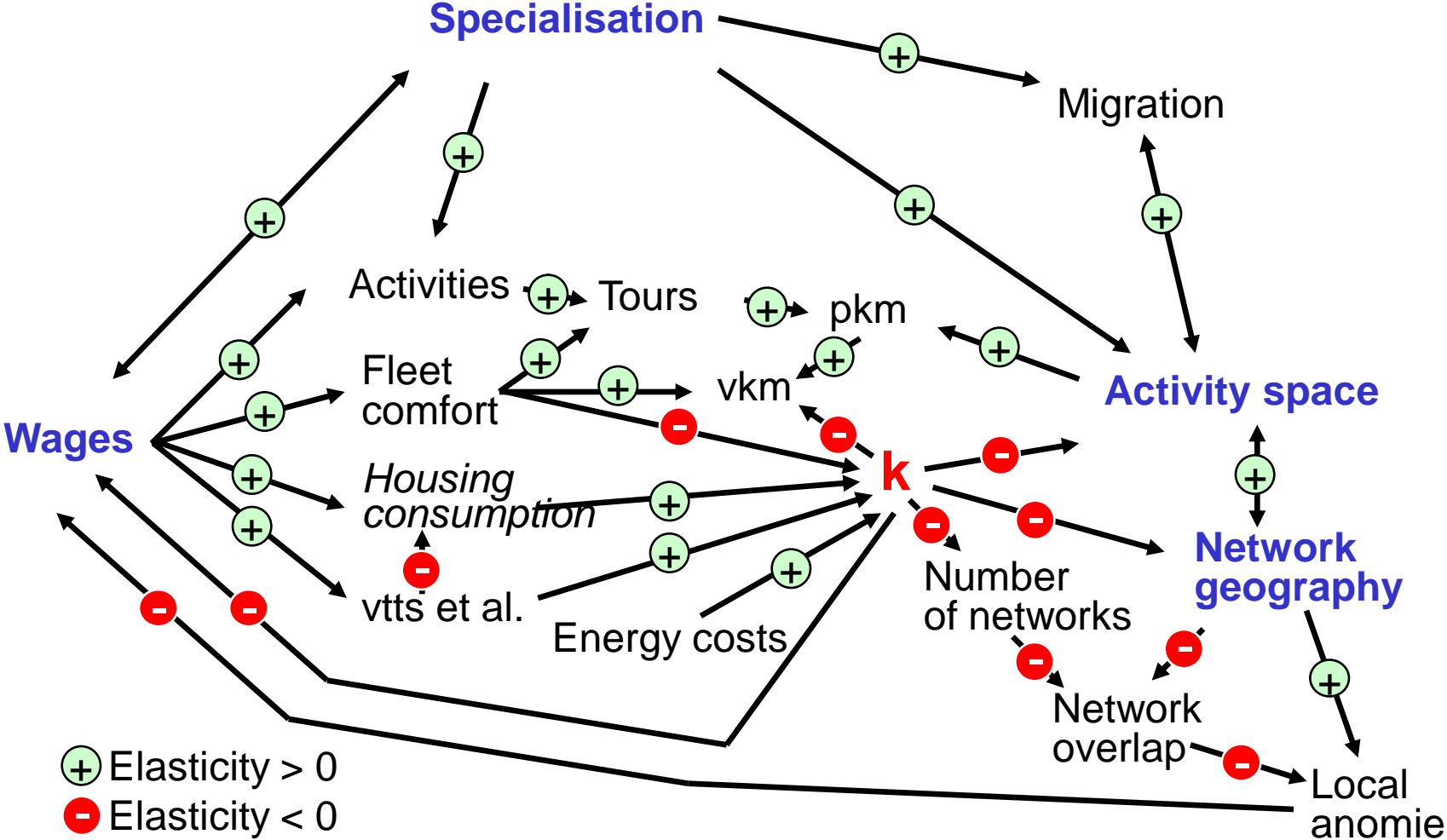


# Preview: First response rate experiences

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		<b>Wave 0</b>	<b>Wave 1</b>	<b>Wave 2</b>
Sample	166		250	61
(380)				
Not yet reached	11		32	
Contacted		152		147
Not reached		66		18
Refused		60		38
Recruited		26		64
Sent without recruitment		-		27
Full information		20		32
(of contacted)		(13%)		(22%)

# The context



## Further information

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**[www.ivt.ethz.ch](http://www.ivt.ethz.ch)**