

## Preferred citation style for this presentation

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# Spatial Relationships and Social Networks: an Iterative Survey Approach

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# Involved Persons

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- IVT ETH Zurich:
  - Matthias Kowald
  - Andreas Frei
  - Jeremy Hackney
  - Kay Axhausen
  
- VSP TU Berlin:
  - Johannes Illenberger
  - Kay Nagel

# The link between SNA and transport planning

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Approaches in transport planning often use a model of an actor that is independent against influences from his social environment

New approaches try to imply these social influences towards the (mobility)decisions of an individual human being

# The usage of social network analysis

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SNA provides information about actors and ties

Bound the network of interest:

- whole networks: areas of a town, a company etc.
- personal networks: Ego - Alter

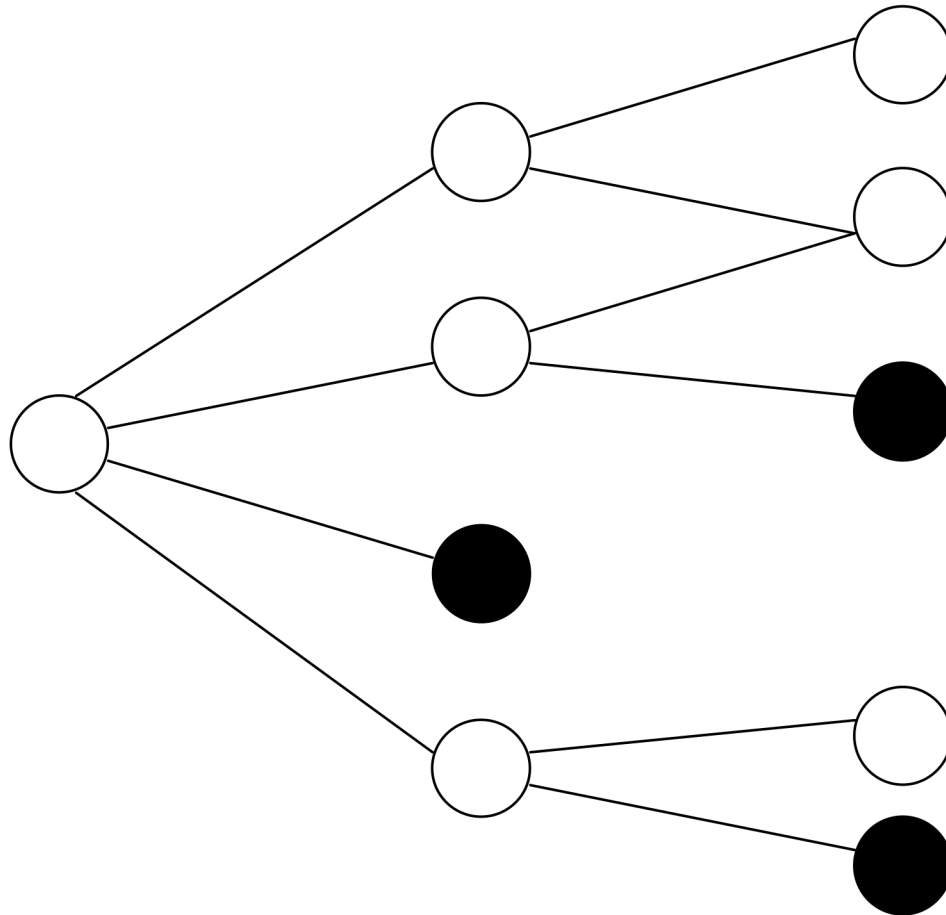
# Ego-centric networks

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- Ego`s characteristics
- Name generator:
  - Context
  - Interaction
- Name interpreter:
  - Socio-demographics
  - Geocodings
- Sociogram
  - Alter-Alter relationships

# The snowball technique as an iterative combination of egocentric networks

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# Snowball samples: Problems

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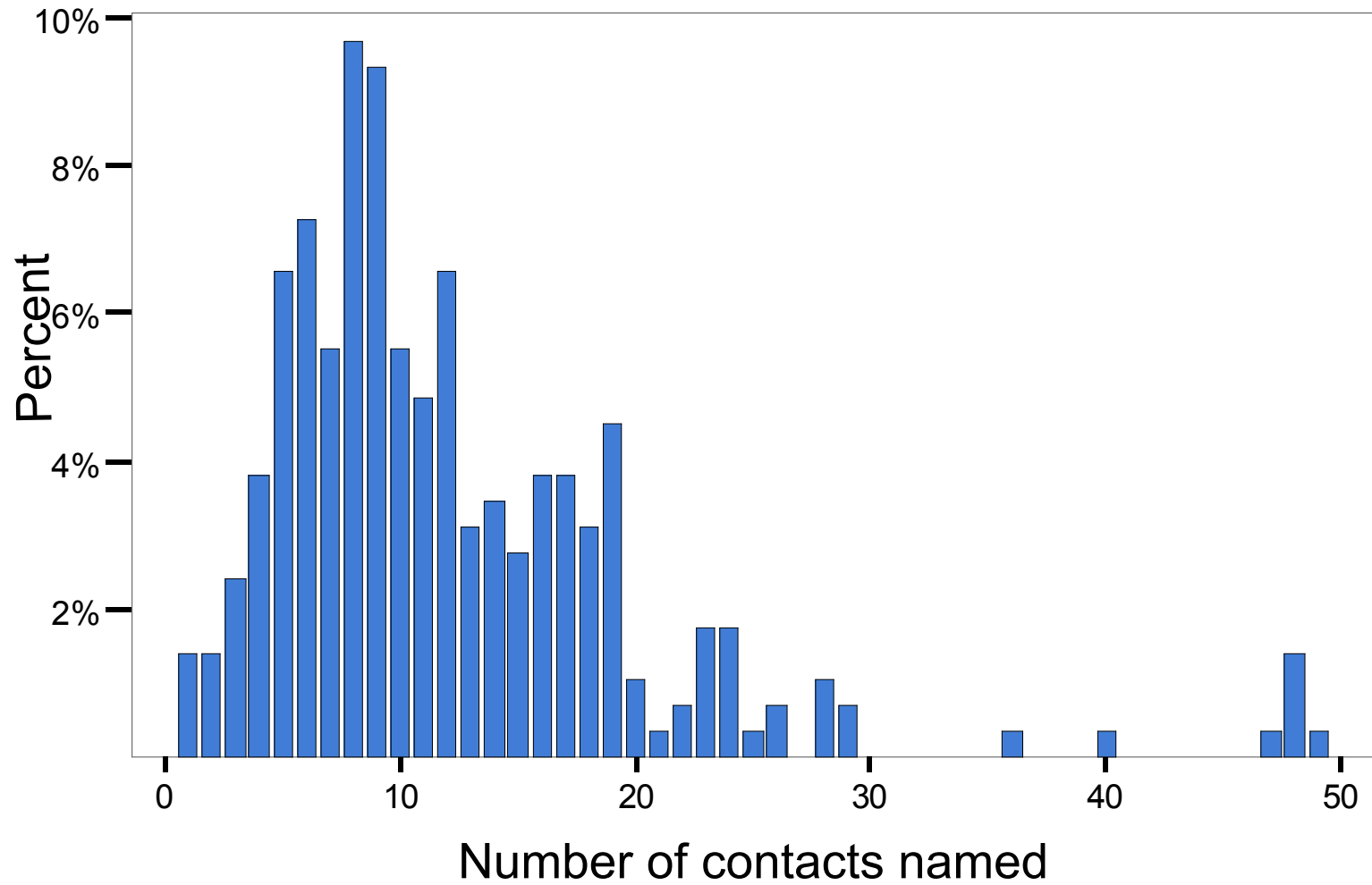
Samples from chain methods are not random:

- Cooperative human beings
- Persons with many social contacts
- Chain process
- More mutual and social upwards directed contacts

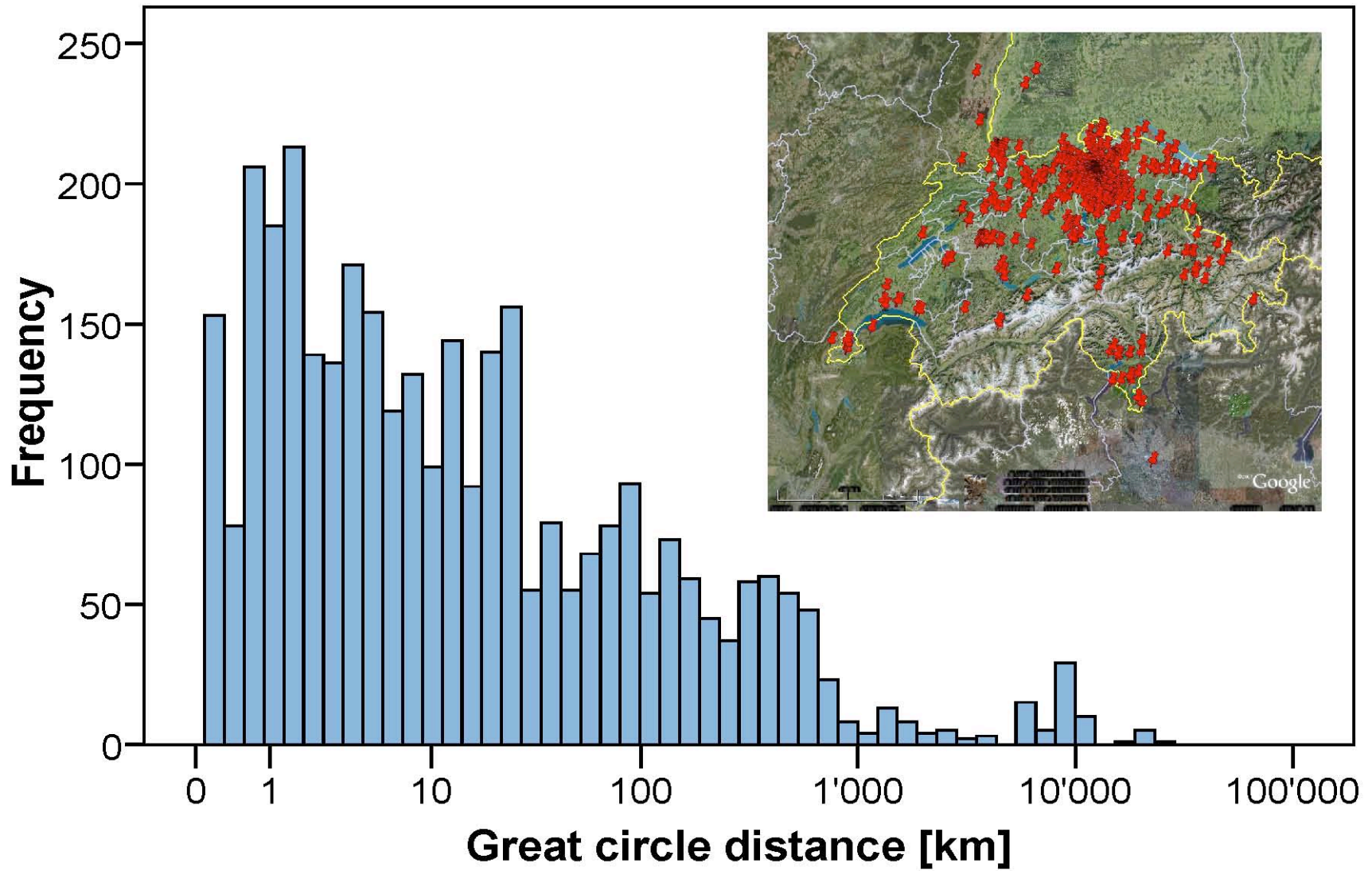


# Frei und Axhausen: Zurich 2006

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# Frei und Axhausen: Zurich 2006



## Further questions

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- What is the structure of personal networks?
- Which characteristics do Ego and Alter share?
- In which way is social contact established and achieved?
- How many activities are shared by Ego and Alter?

# The activity based diary

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The combination of a egocentric questionnaire and an activity based diary:

- Daily activities and the contacts from the name generator
- The frequency of activities
- The process of activity planning

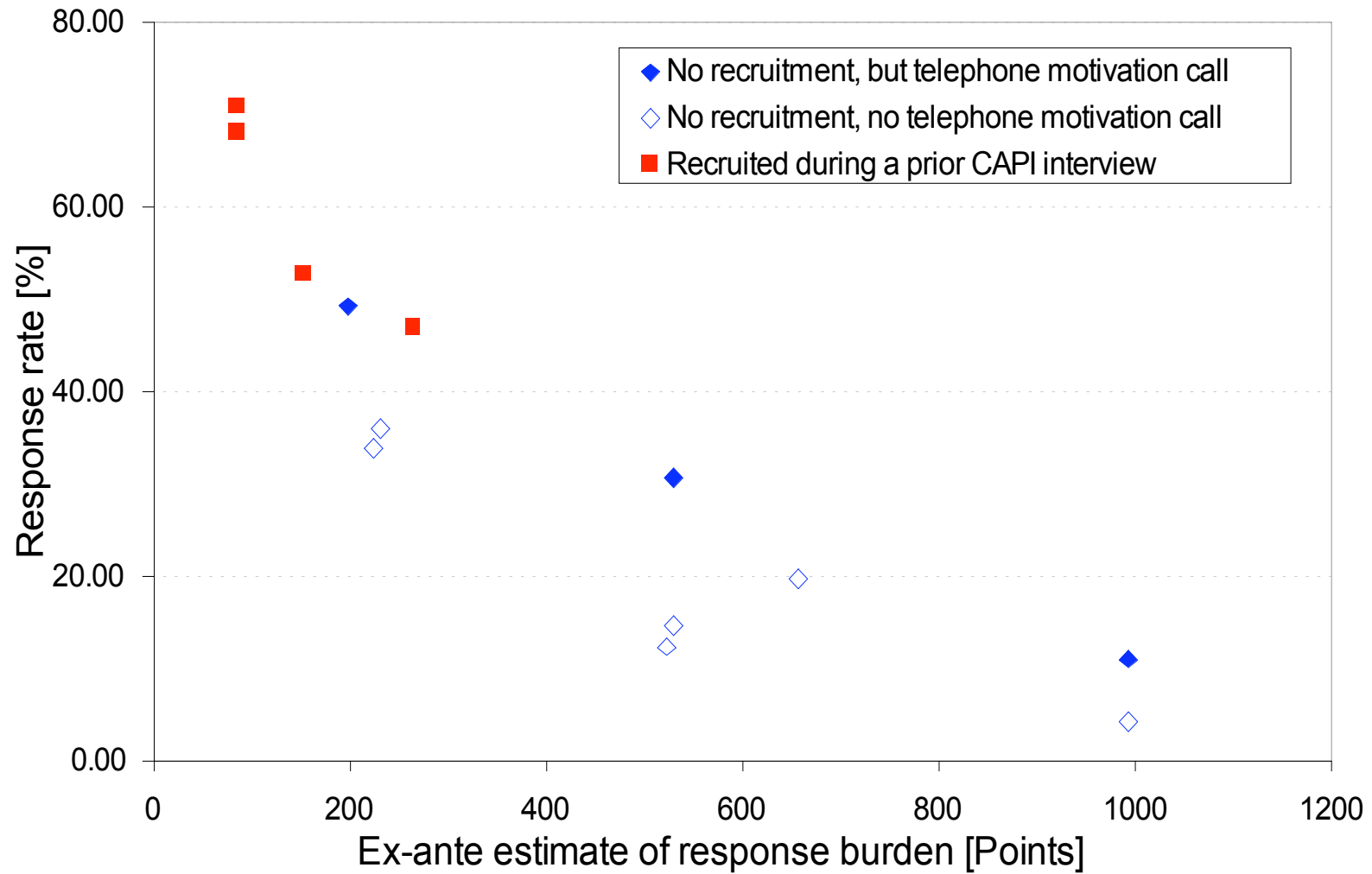
# The survey process

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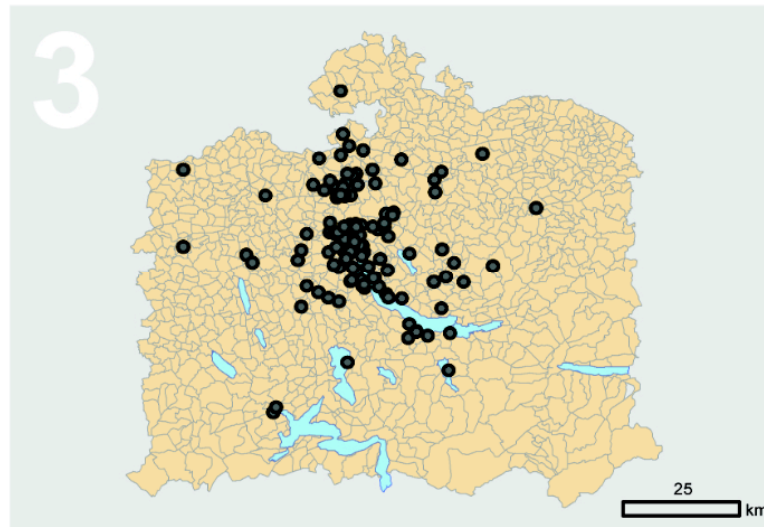
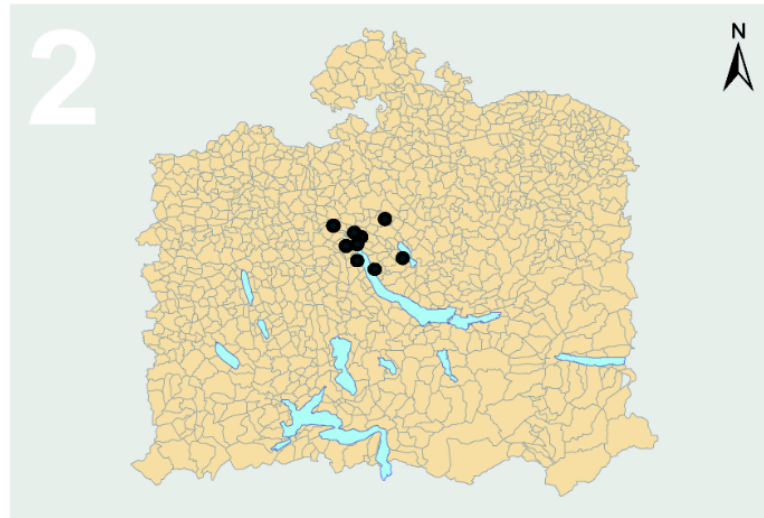
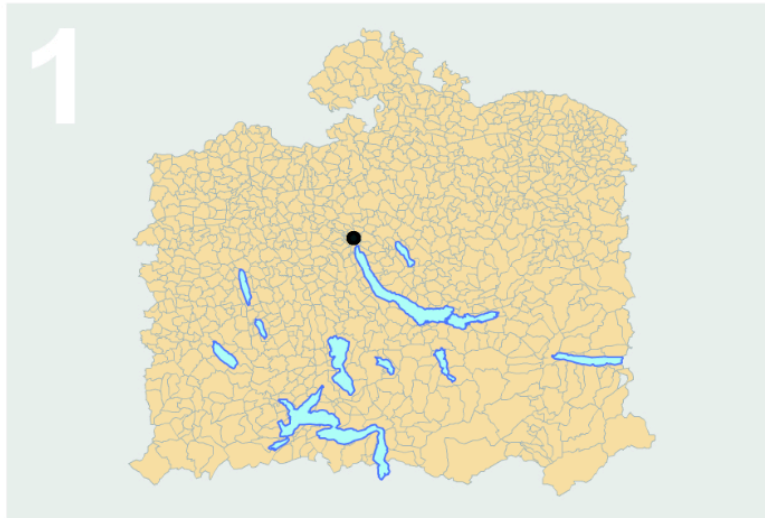
The organisation of the process:

- Establishing and achieving contact
- Reducing response burden
- Additional arrangements to establish trust

# Axhausen 2007: Estimating response burden



# Additional arrangements



## 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).

## Data from the pre-test: Response rate

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	Overall	Share (%)	Share of persons, reached by phone (%)
Sample	189	100.0	
Problems with addresses	21	11.1	
Not reached by phone	86	45.5	
Reached by phone	82	43.4	100.0
Recruited	32	16.9	39.0
Participated	17	8.9	20.7
With interview	<i>5</i>	<i>2.6</i>	<i>29.4</i>
Without interview	<i>12</i>	<i>6.3</i>	<i>70.6</i>



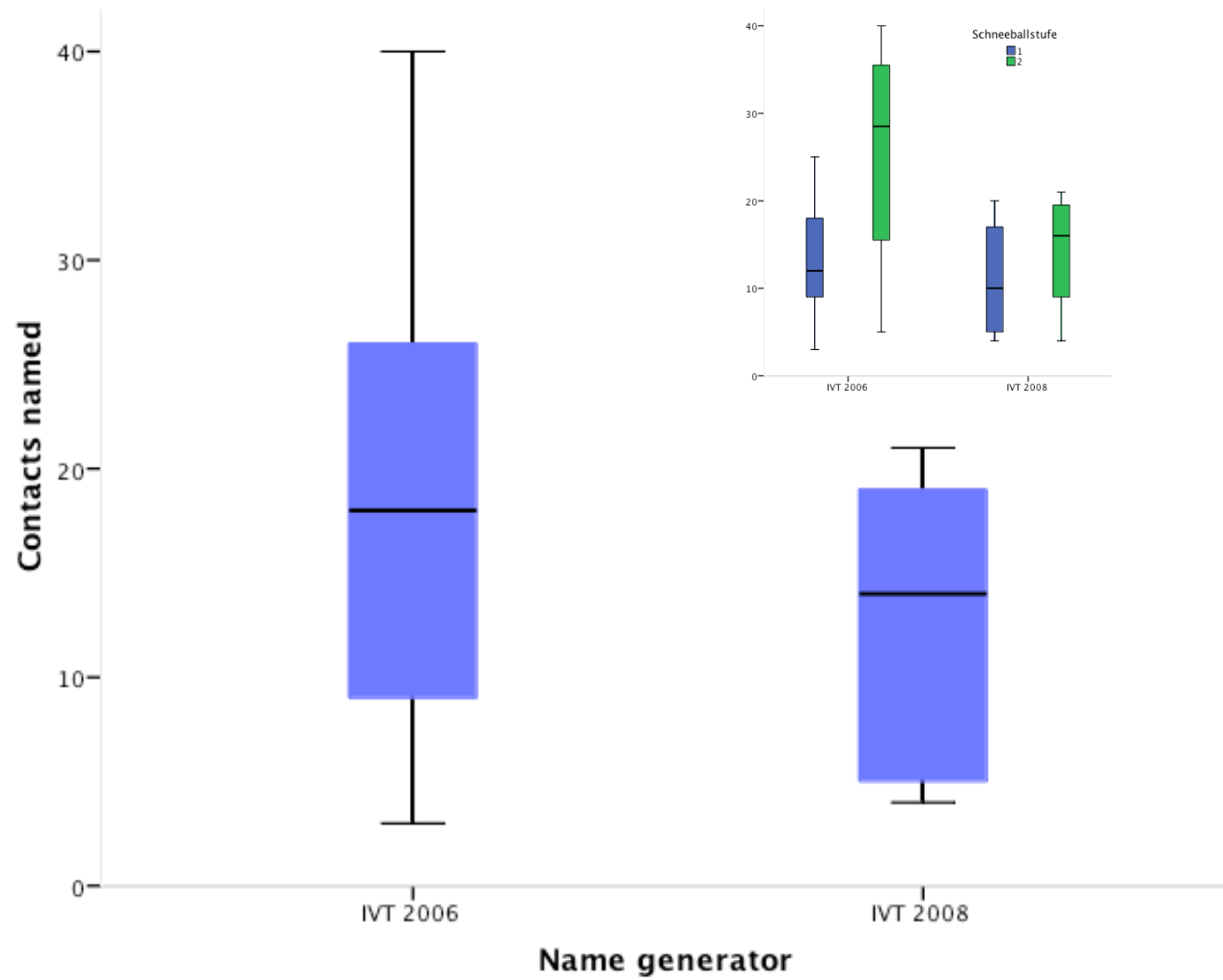
## Data from the pre-test: The chain process

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	Person 1	Person 2	Person 3
Given Names	9	12	18
Valid Names	8	6	16
...with greeting card	-	2	4
...without greeting card	8	4	12
Participators	2	0	6
... ..with greeting card	-	0	4
... without greeting card	2	0	2

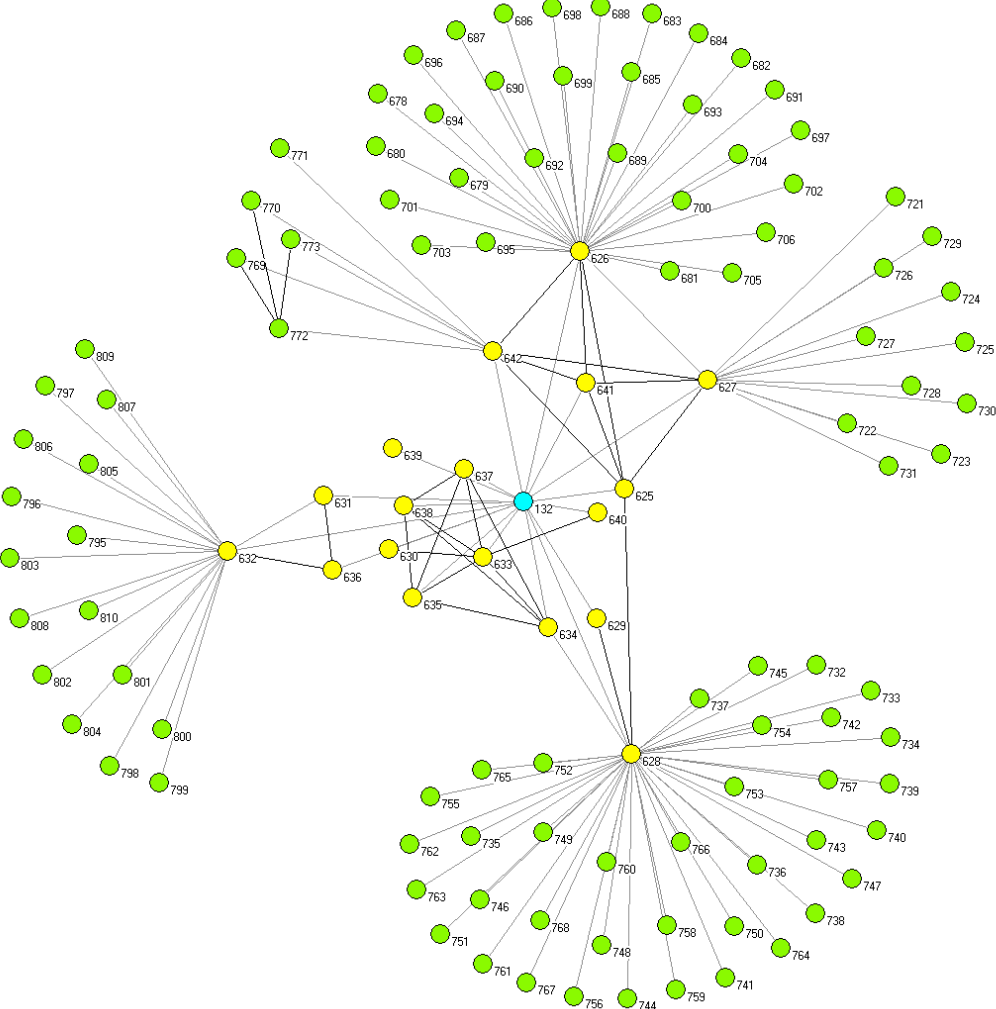
# Data from the pre-test: The name generators

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# Data from the pre-test: Iterative combined networks

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# Future prospects

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The next steps:

- Analysing the diary data
- Designing an web based version
- Repe-testing
- Main study (2009)