Axhausen, K.W. (2002) Leisure, variety seeking and social networks, Presentation at the Danish Technical University, Kopenhagn, June 2003.

## Leisure, variety seeking and social networks

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- Impoverished understanding of activities, especially of leisure
- Impoverished understanding of the rhythms of activity participation
- Generally a-social treatment of travel and activity participation

- 1971 Uppsala survey (5 week travel diary)
- 1999 Mobidrive survey (6 week travel diary)
- 2002 SVI/Raumpartnerschaften survey (12 week leisure activity diary)
- 2000/02 Rattfart GPS observation (up to 2 year long GPS traces)

- Journey-based travel diary of all travel
- Five week diary in Uppsala
- about 600 respondents; records for about 200 are still available

For details see (in English):

http://www.ivt.baug.ethz.ch/vrp/ab107.pdf

- Trip-based travel diary of all travel (open trip purpose categories)
- Six one-week diaries in Halle and Karlsruhe
- 360 respondents with a 100-200 DM incentive payment (about 20% recruiting rate from a random telephone sample) (hardly any drop-out after the start of the diary)

For details see (in English):

http://www.ivt.baug.ethz.ch/vrp/ab25.pdf http://www.ivt.baug.ethz.ch/vrp/ab52.pdf

- Combined time use (all purposes) and activity-survey (outof-home leisure only)
- Twelve (six) one-week diaries in Zürich (Berlin)
- 70 respondents with a 150 sFr incentive payment (about 10% recruiting rate from a random telephone sample) (hardly any drop-out after the start of the diary)

For details see (in German):

http://www.ivt.baug.ethz.ch/vrp/ab123.pdf http://www.ivt.baug.ethz.ch/vrp/ab121.pdf

- GPS observation of all car travel in the context of a road safety experiment
- Up to 100 weeks duration
- about 300 private vehicles (~ 300 participants) in Borlänge

For details see (in English):

http://www.rattfart.com (Out-of-service)

Description:

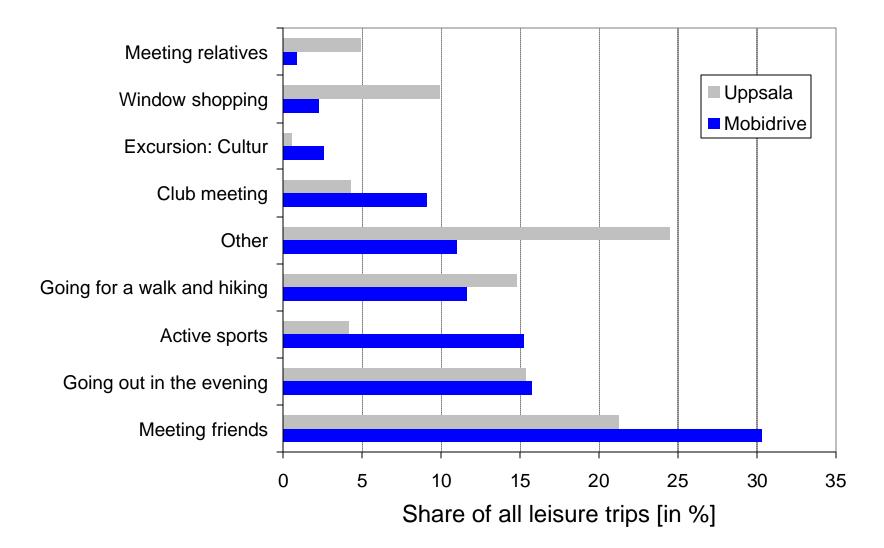
- What is being done ? and with whom ? (observable act)
- For what purpose ? (instrumental aspect)
- With what personal meaning ? (expressive aspect)

Project context

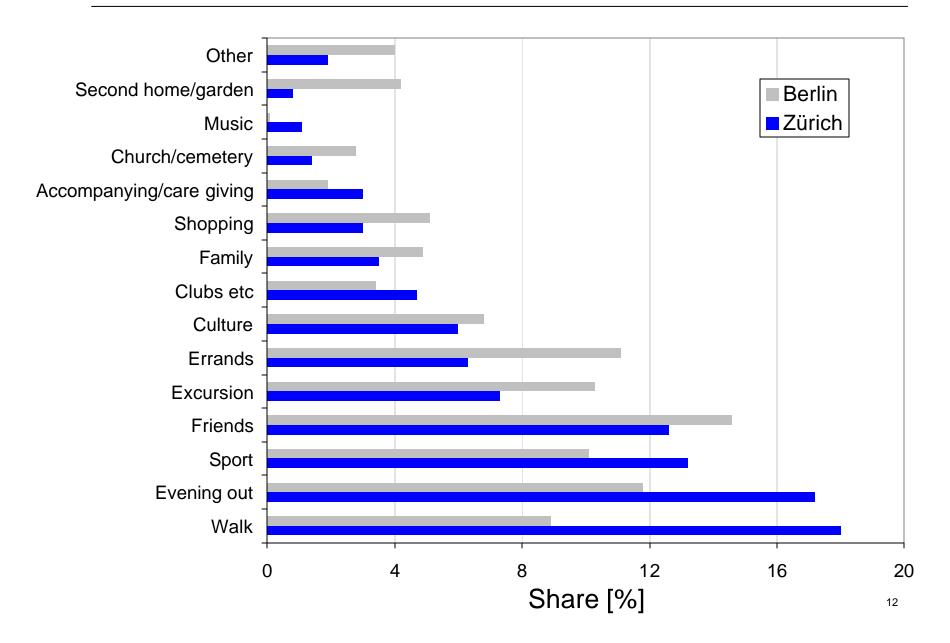
Scheduling:

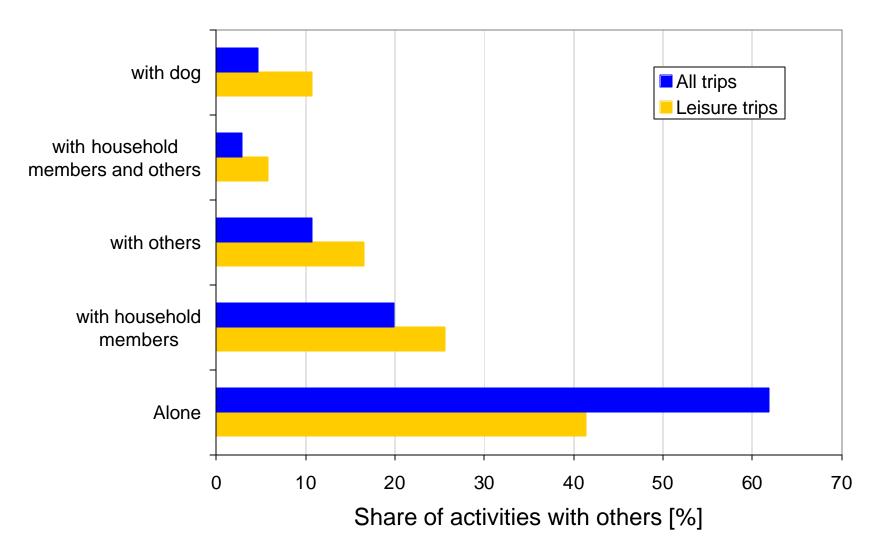
- Length and strength of commitment to the activity
- Time window for the performance
- Time horizon for a performance
- Feasibility of a replacement

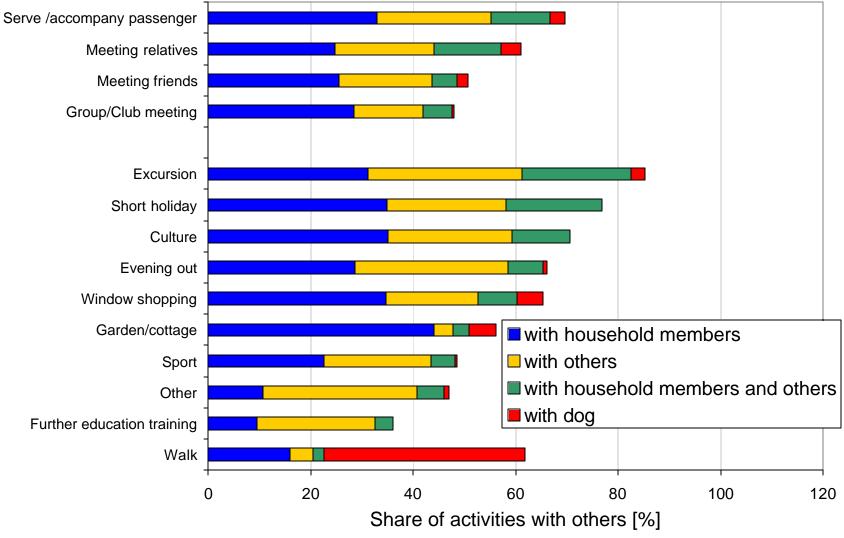
- Difference in perception between participant and observer: The personal definition makes an activity into leisure
- Detailed categorisation needed (here the one based on the work of City:mobil)
- Unusual items required (composition of the party, expenditure for travel and the activity)



# SVI/Kontrasträume survey: Why?

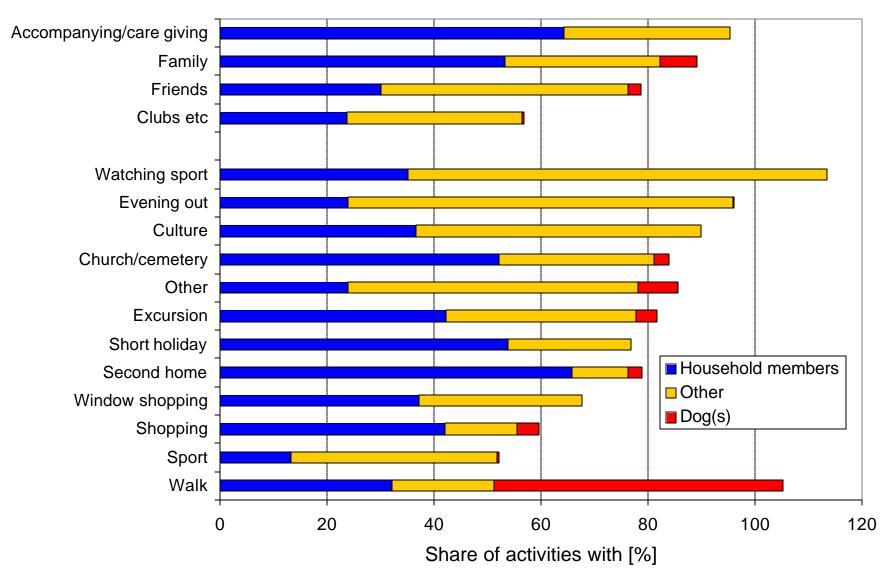




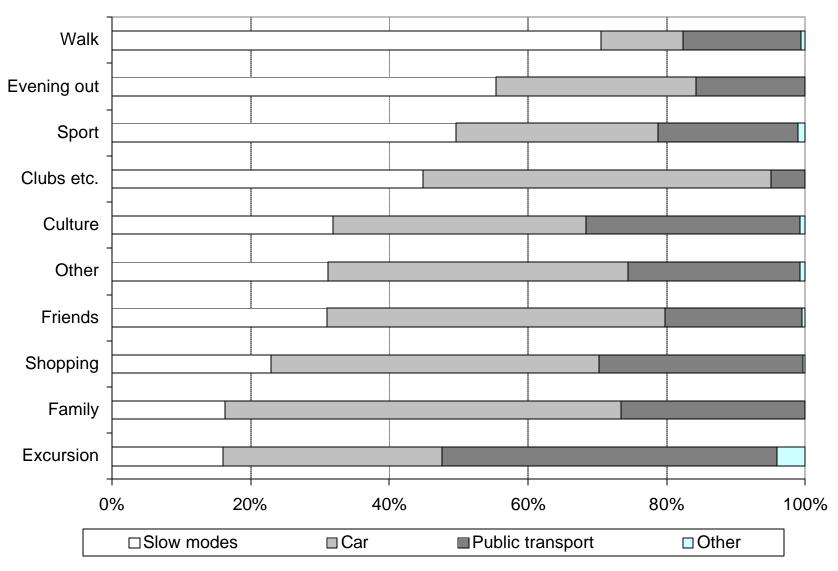


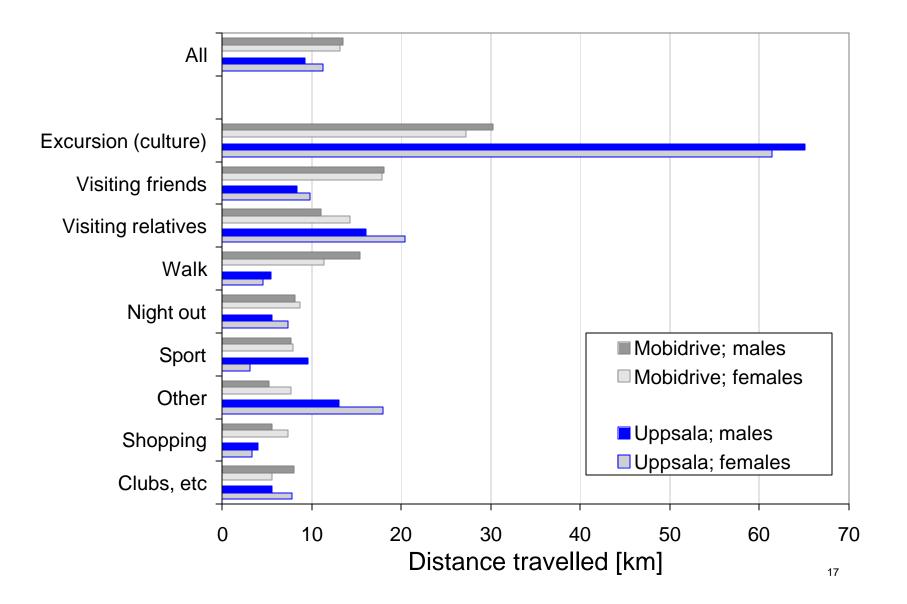
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# SVI/Kontrasträume survey: With whom ?

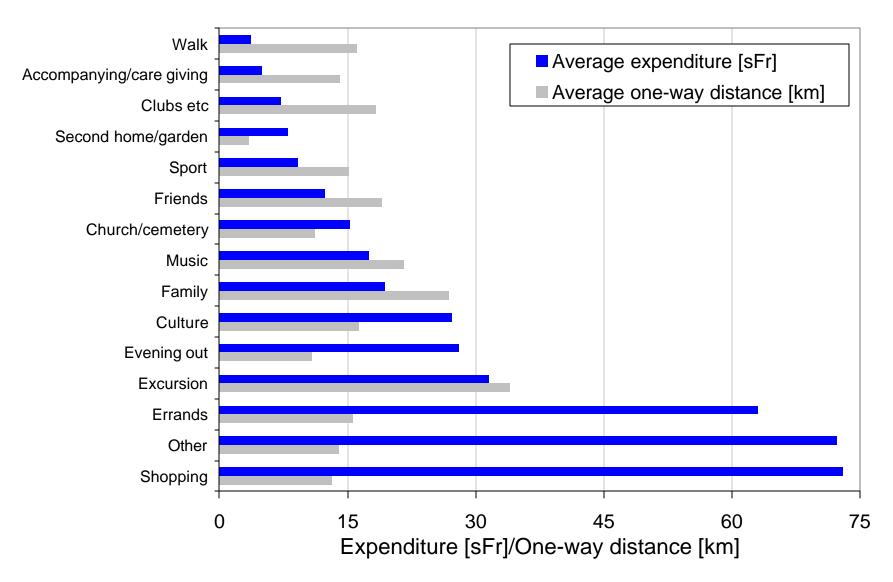


### SVI/Kontrasträume: What mode ?





# SVI/Kontrasträume: How much ?



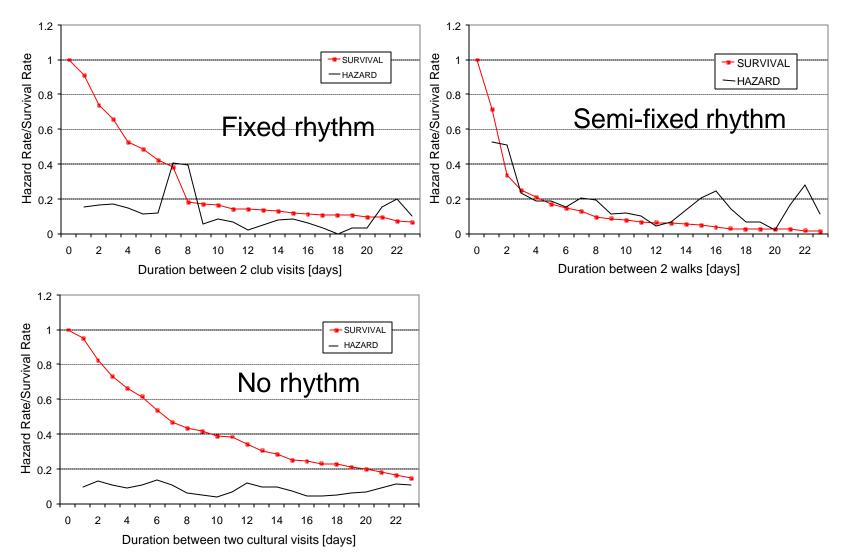
Leisure activities should be differentiated by type, as each differs

- by social context
- by mode (and distance travelled)
- by expenditure

Social context is crucial

Participation is regular, but

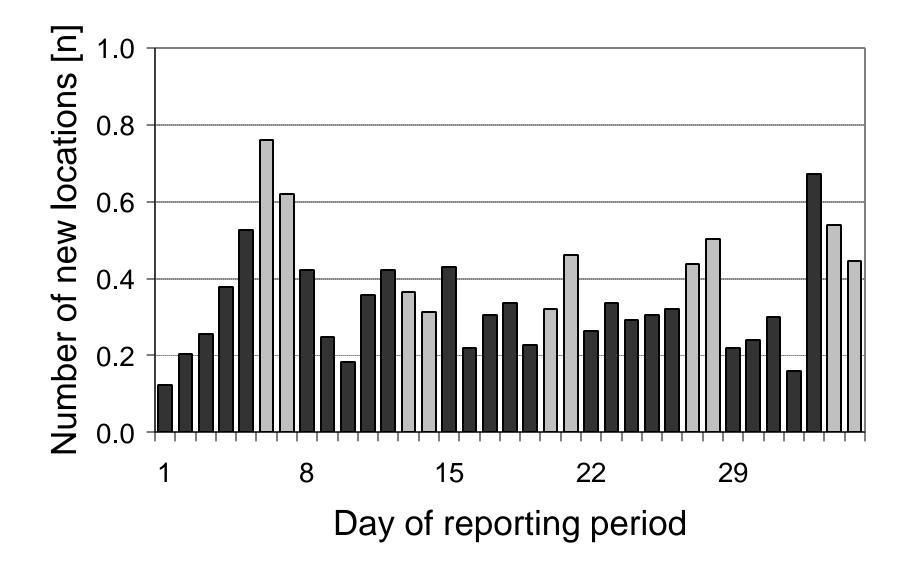
- Do different types compete for time ?
- What needs to be the same and what different ?
  - Type
  - Location
  - Social context

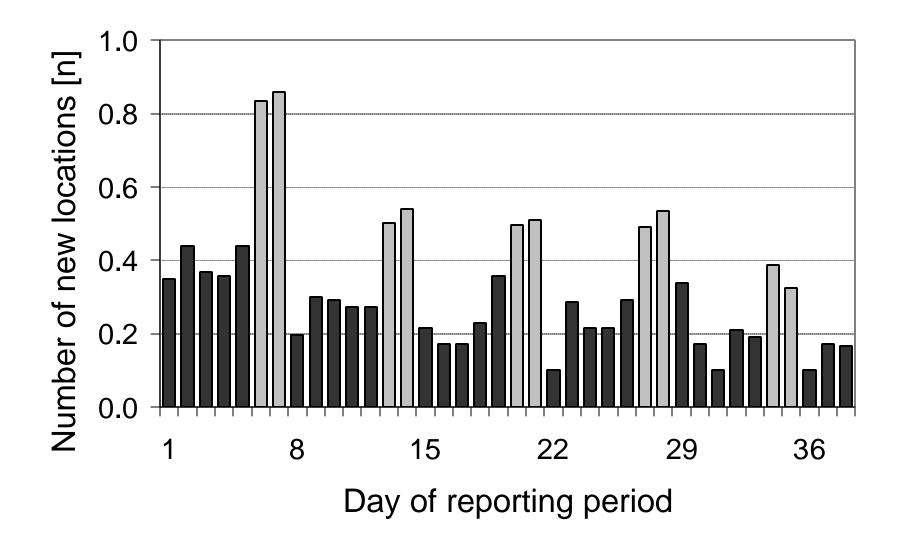


We observe "new" locations, i.e. locations, which have not been previously reported:

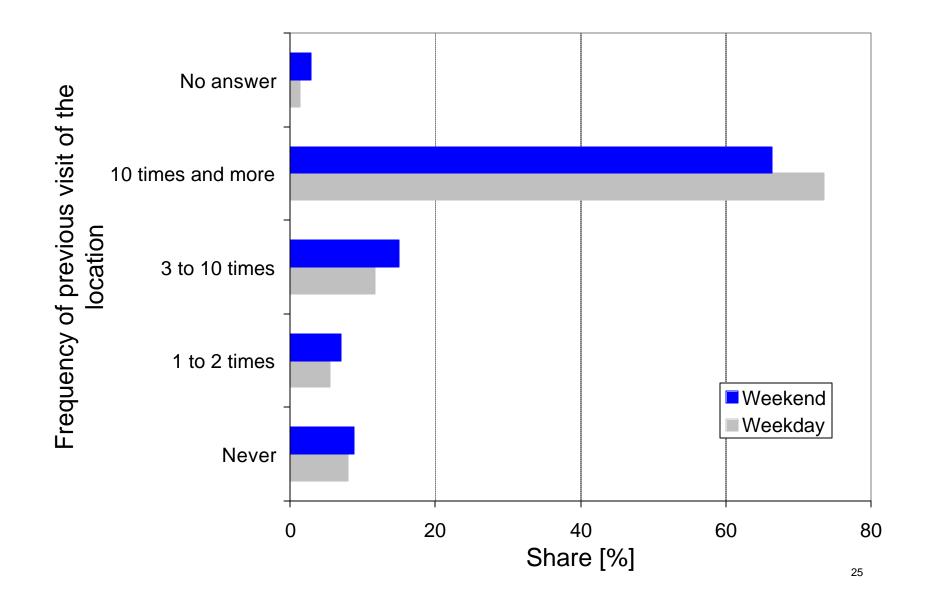
- Uppsala, Mobidrive-Karlsruhe: Detailed activity code \* detailed x,y co-ordinate
- 12 week leisure survey: Detailed leisure type \* zip code
- Borlänge: x,y co-ordinate \* imputed purpose

#### 5 week Uppsala: New leisure locations/day

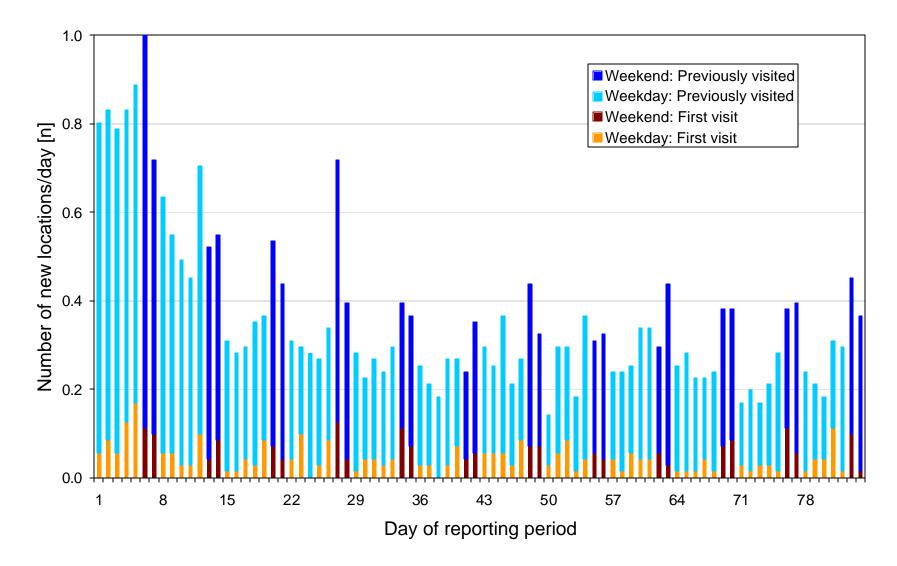




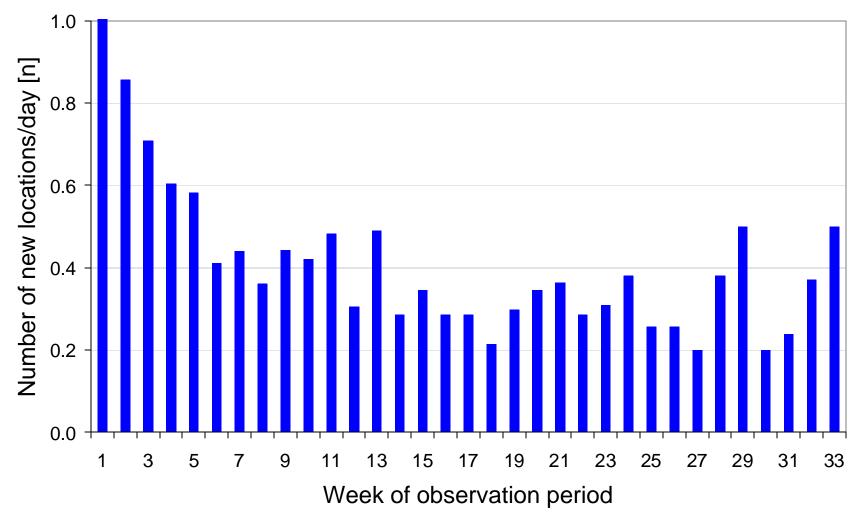
# SVI/Kontrasträume survey: Frequency of previous visit



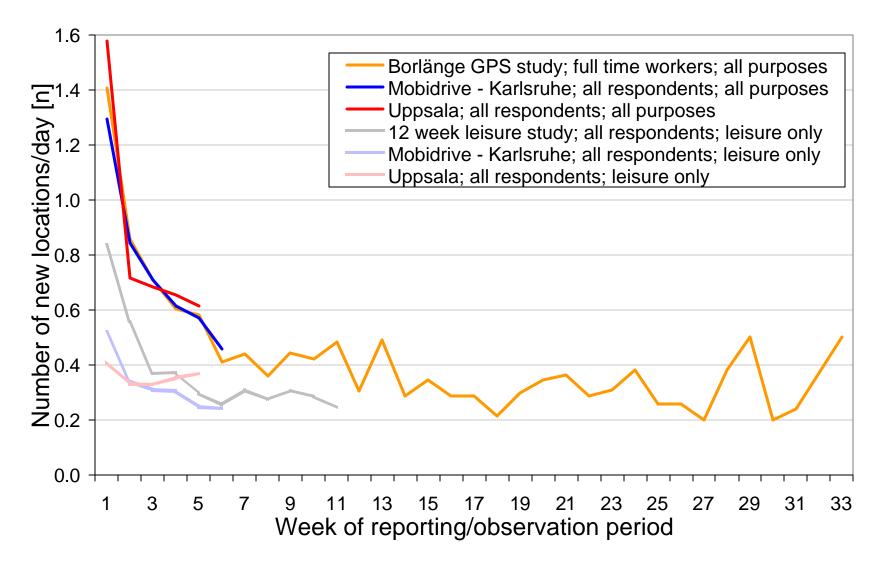
### SVI/Kontrasträume survey: New leisure locations

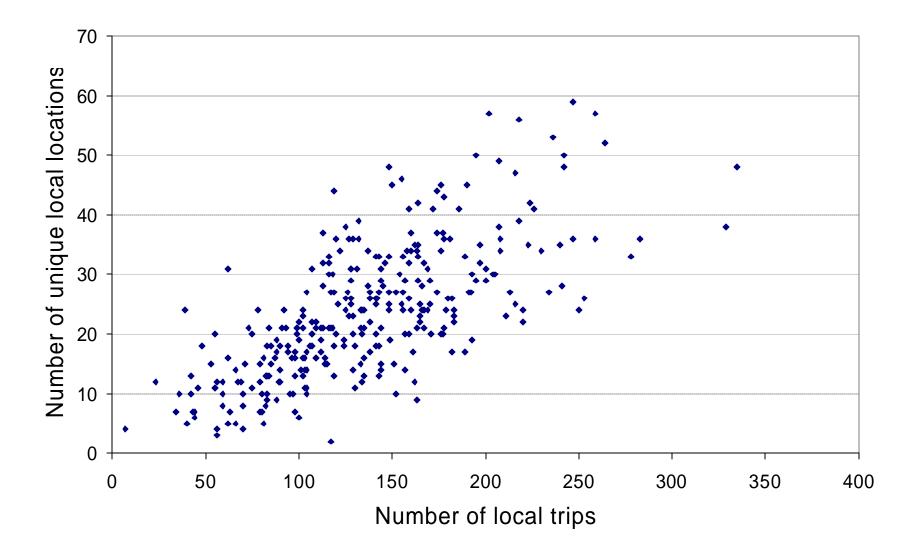


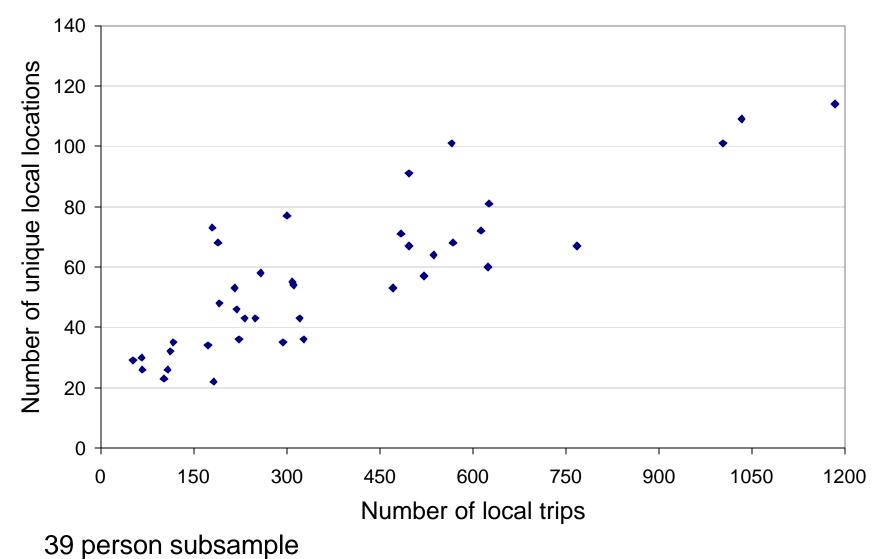
### Borlänge GPS study: New locations (fulltime workers)



Week 1 = 1.41; 39 person subsample







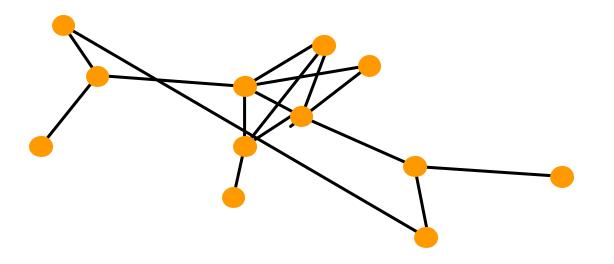
- The commitment to the different types of activities is different and therefore the regularity
- Respondents continually vary their location/purpose combinations
- Respondents continually add new location/purpose combinations
- Relative levels of variety seeking are independent of activity level (1:4 to 1:6)

Questions one would like to ask:

- Where do the friends/relatives/contacts live ?
- Frequency of face-to-face contact ?
- Locations of the face-to-face contacts ?

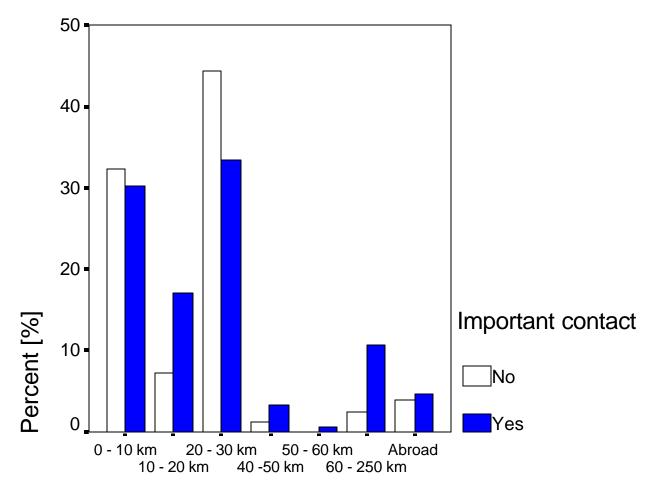
The social network is the (topological) graph specifying

- which person (nodes) belongs to which group
- what direct contacts (links) a person has of a particular (level of) quality (link "cost")

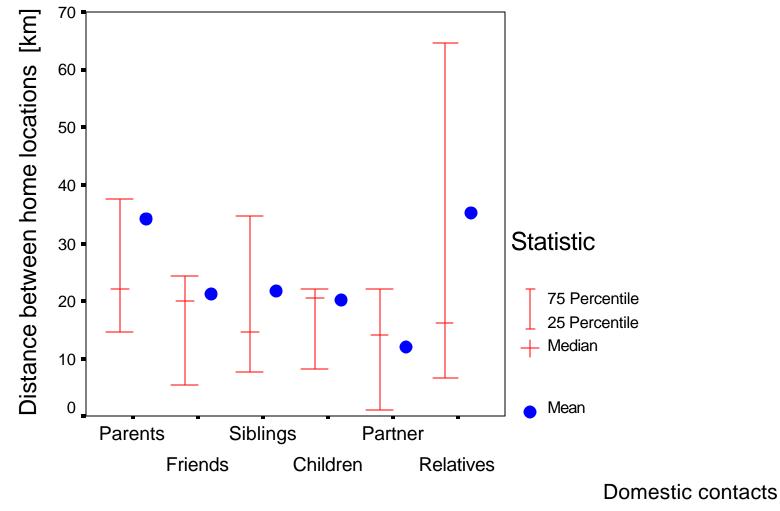


Sources:

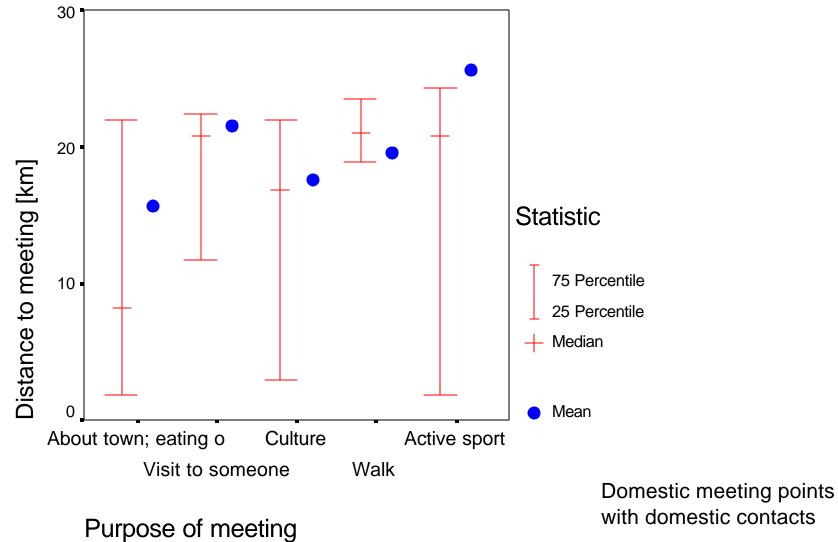
- Socio-demographic questions about contacts and their locations
- Add-on module to SVI/Kontrasträume survey:
  - List of all leisure activities undertaken with nonhousehold members sent to respondents
  - Request to indicate home location of those participants
  - Coded to zip code level
  - Crow-fly distances between the post offices of zip code

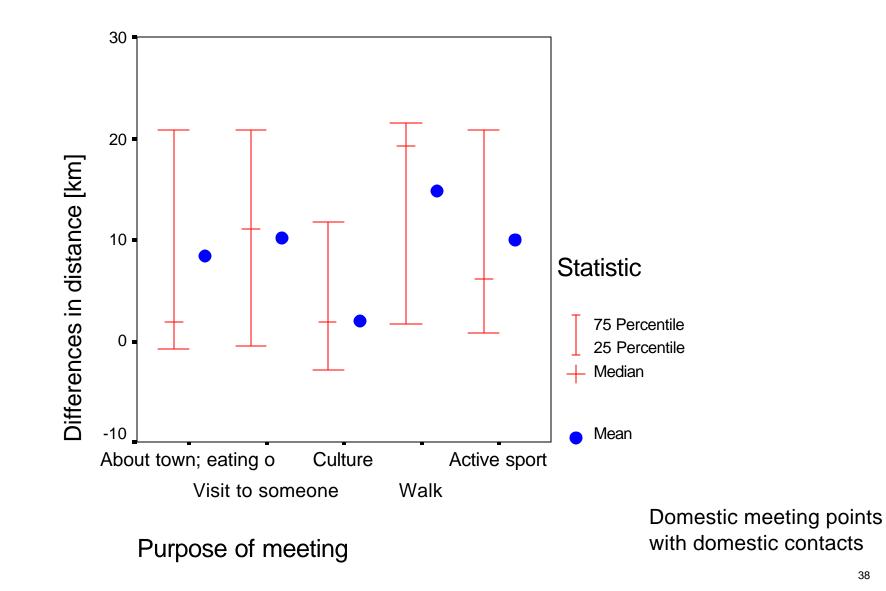


Distance between home locations [km]



Type of relationship





- Can we apply the measurement concepts of the human activity space to the distribution of social networks ?
- What is the best way of measuring the contact space ?
- Does the size of contact space have an impact on the amount of travel ?

"Leisure" is as good as useless category for analysis

(New) items of travel surveys:

- "Leisure, please specify"
- Composition of travelling group
- Frequency of previous visits
- Activity expenditures

Variety seeking is independent of activity level

Variety seeking is central to leisure choice (type and locations)

The contact space should influence the activity space