


Rhythms and dynamics of traveller behaviour

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Rhythms and dynamics of traveller behaviour

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Zürich

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Background

New transport policy issues

- Demand management by information
- Demand management through pricing

Reactions

- Choice of departure time
- Choice of route
- Choice of mode
- Activity demand

Questions

Natural variability

- Activity demand
- Mode choice
- Departure time

Scheduling

- Amount of committed time
- Amount of pre-planned activities
- Number of spontaneous activity

Measurement of natural variability

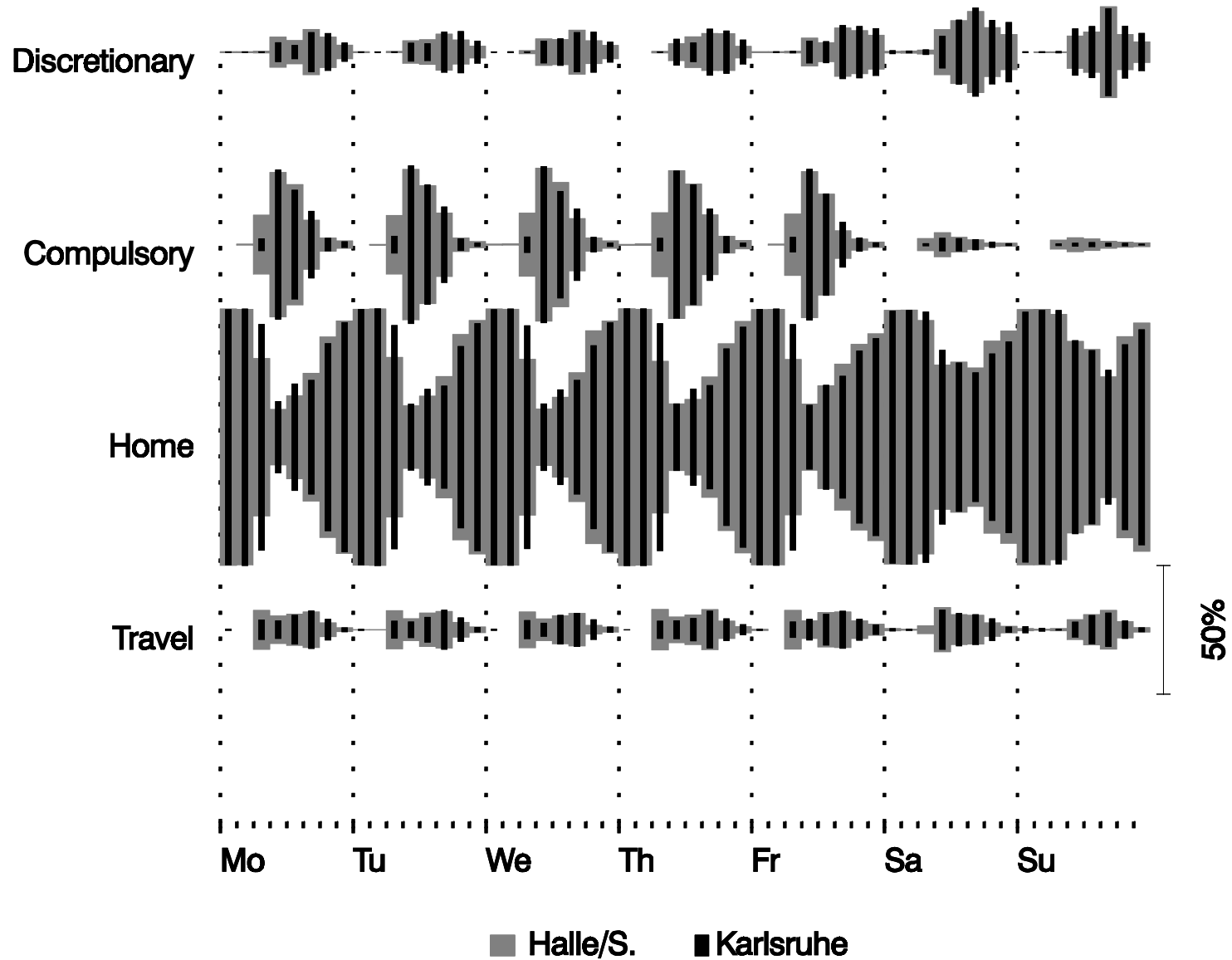
Requirement:

- Multi-day diary

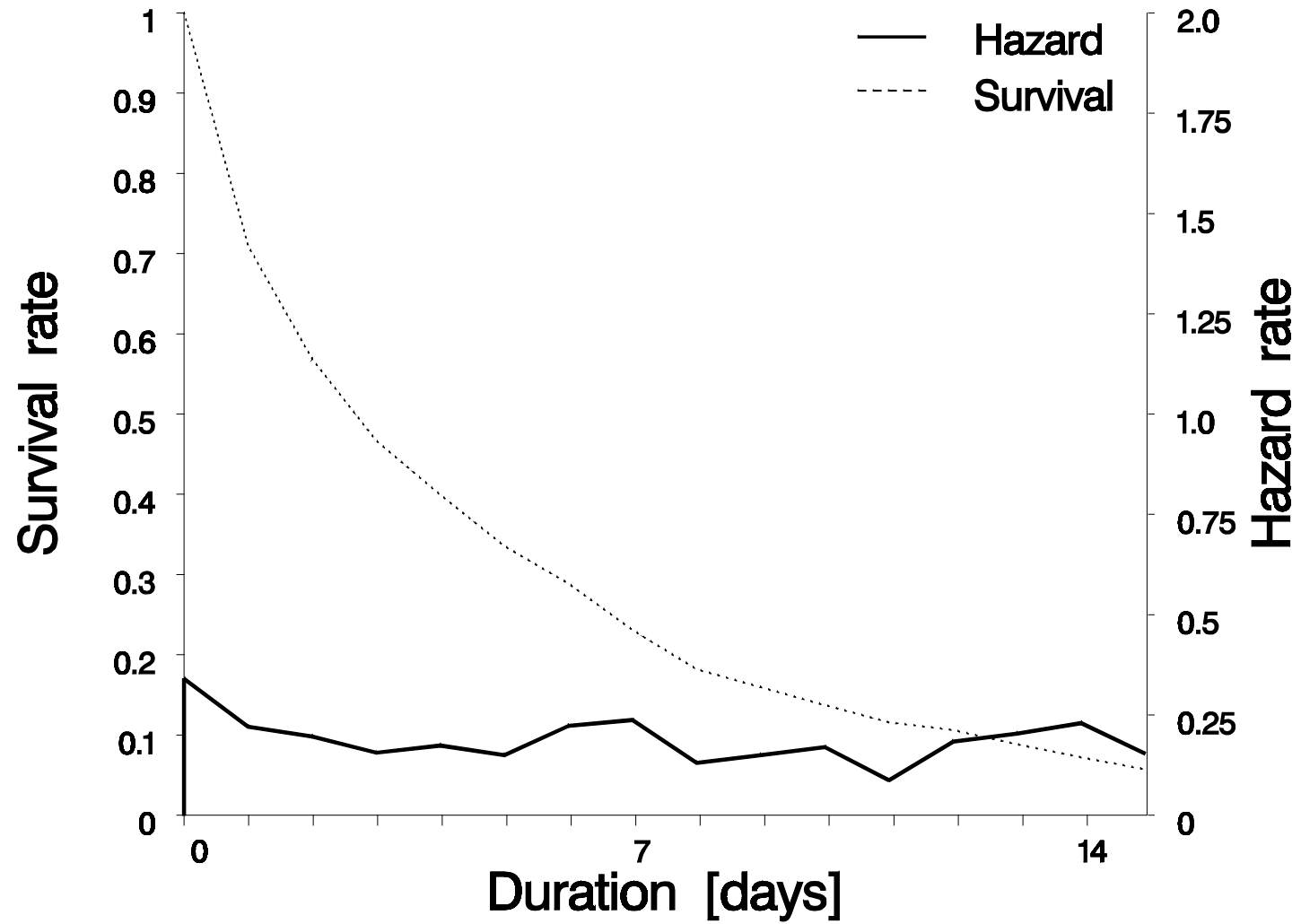
Approach

- BMBF research project (PTV, RWTH, ETH)
- Six week diary
- 362 persons in 162 households
- Karlsruhe and Halle
- Spring and fall of 1999

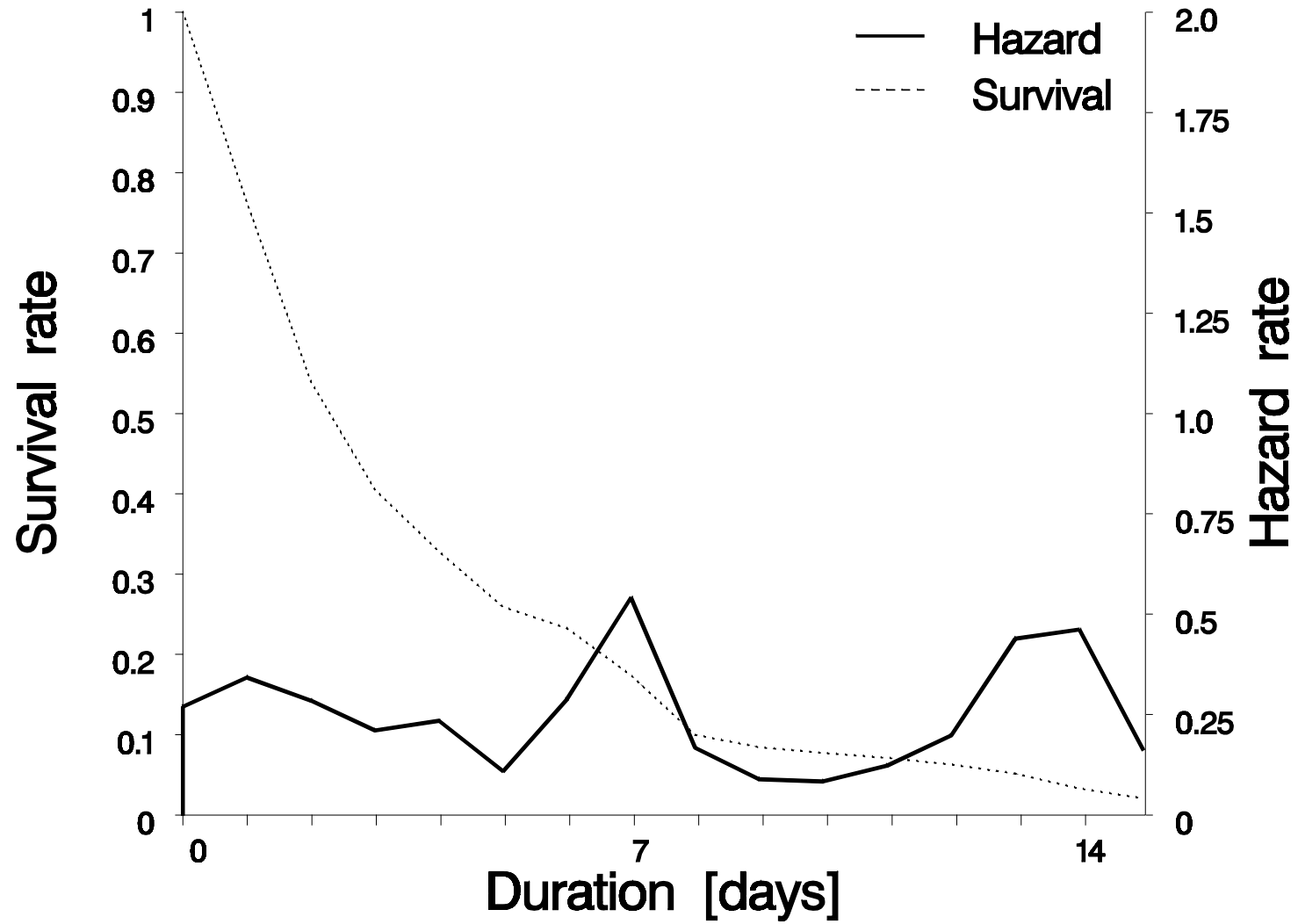
Weekly rhythms



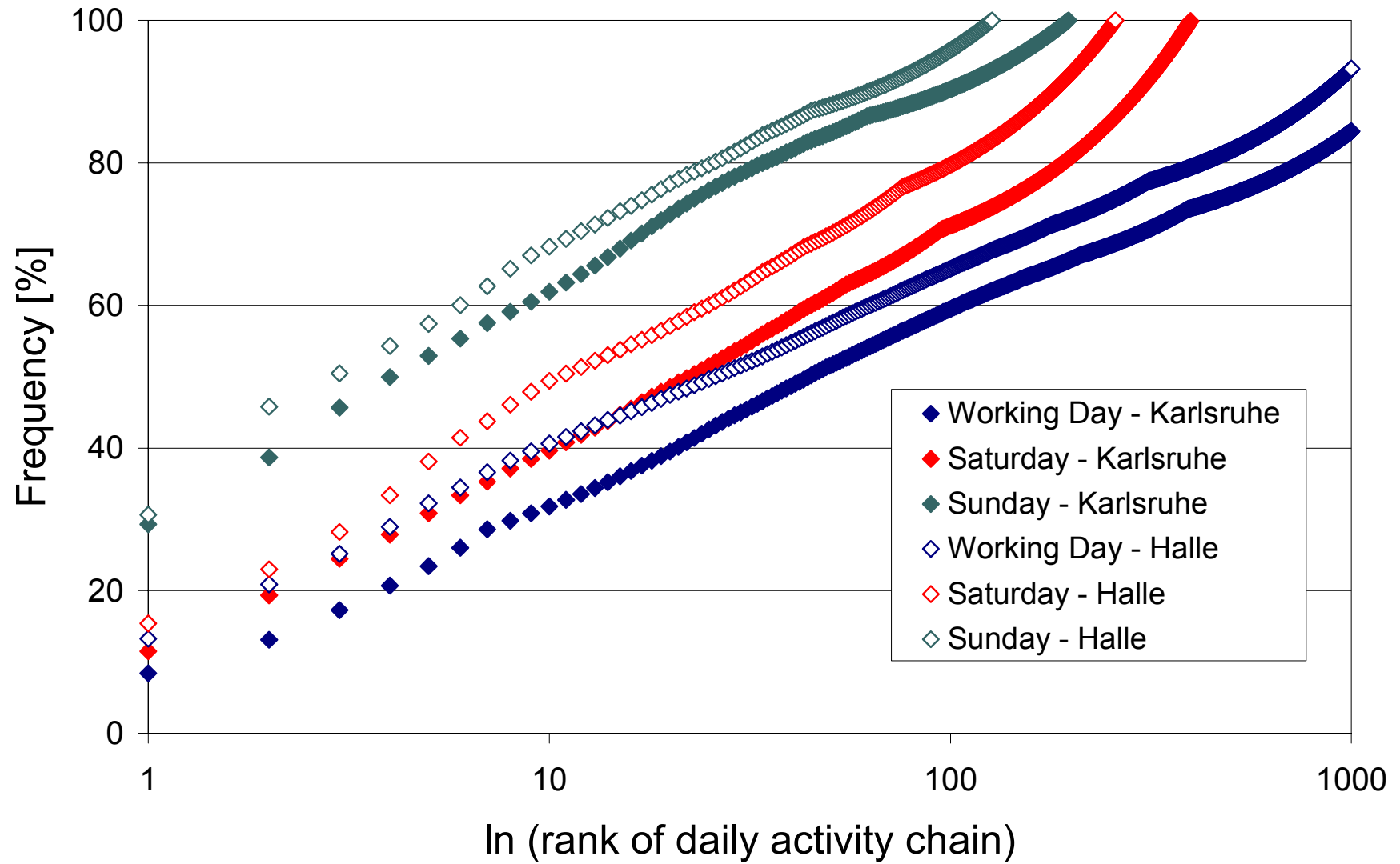
Personal rhythms: Daily shopping



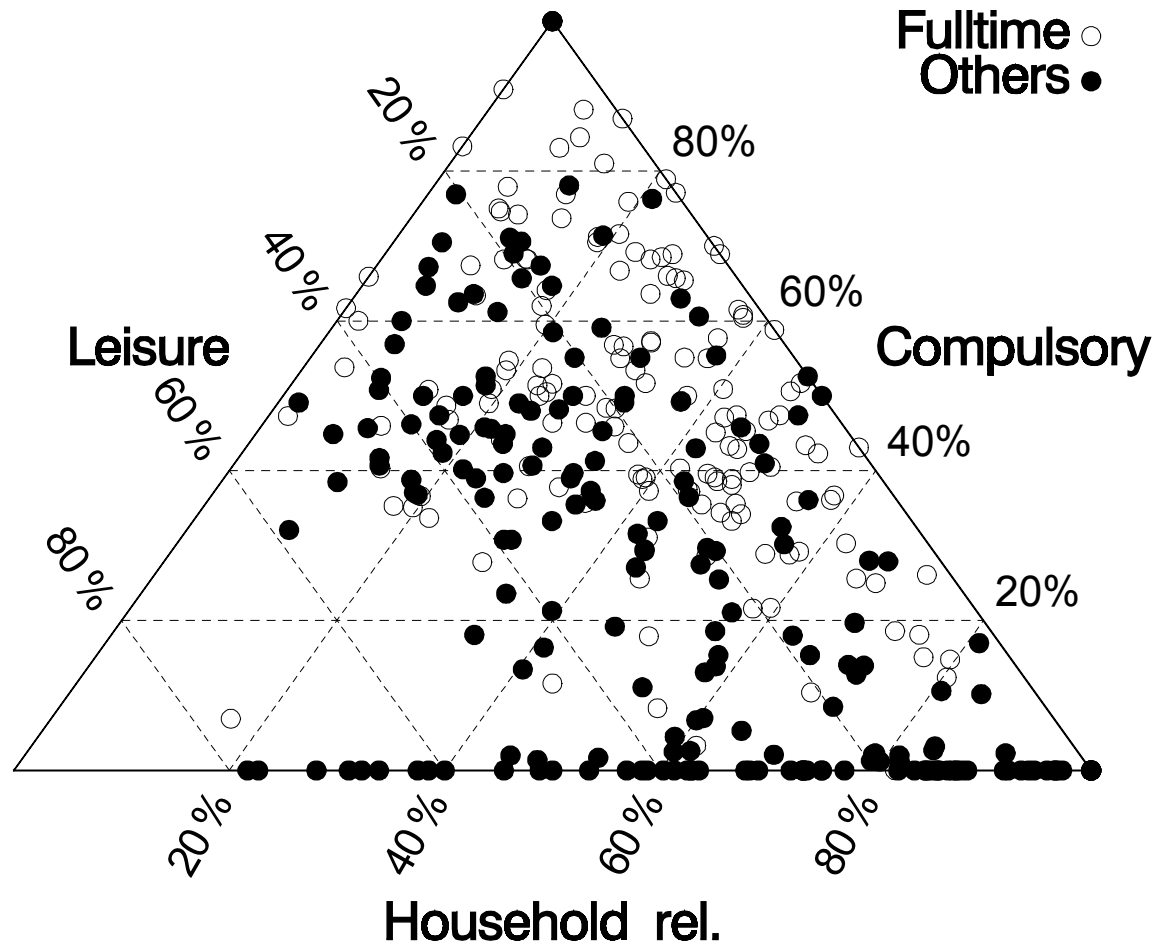
Personal rhythms: Sport



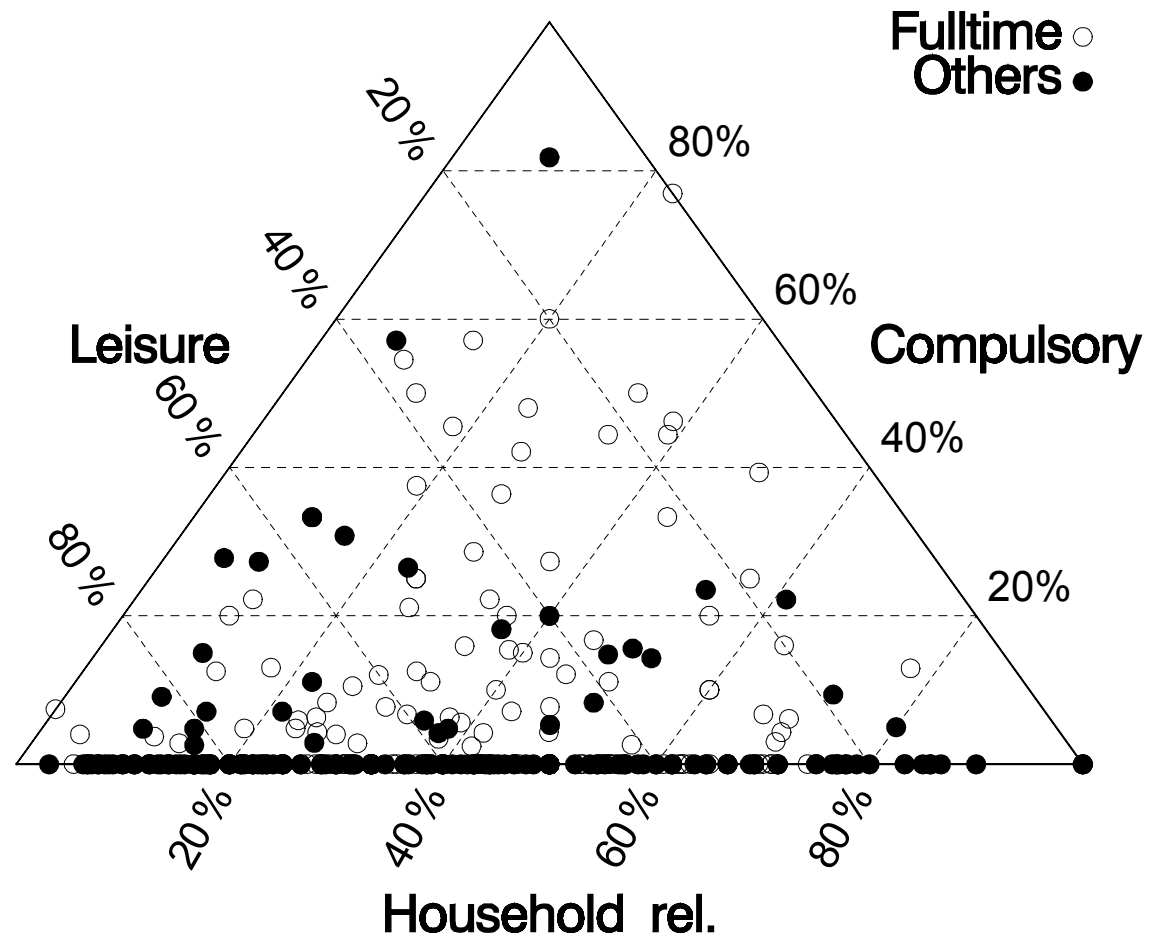
Activity chains



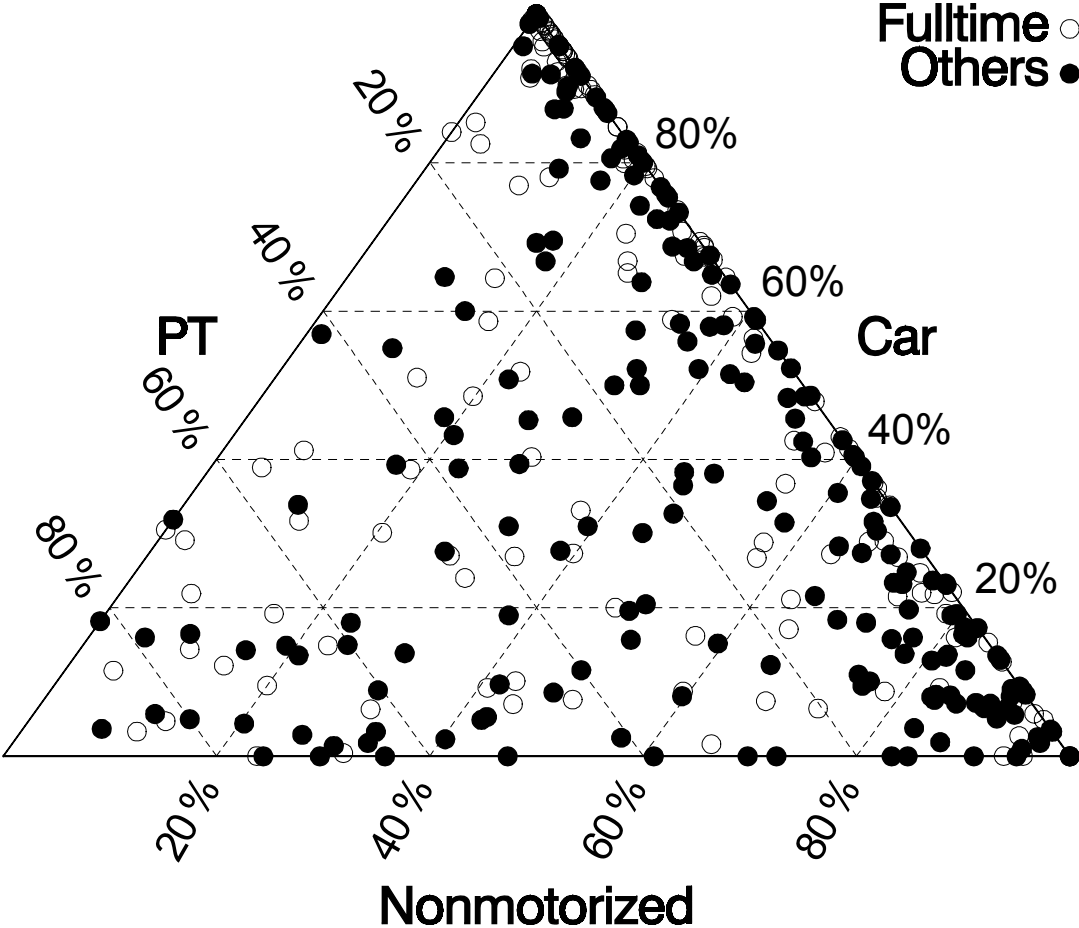
Activity mixture: work days



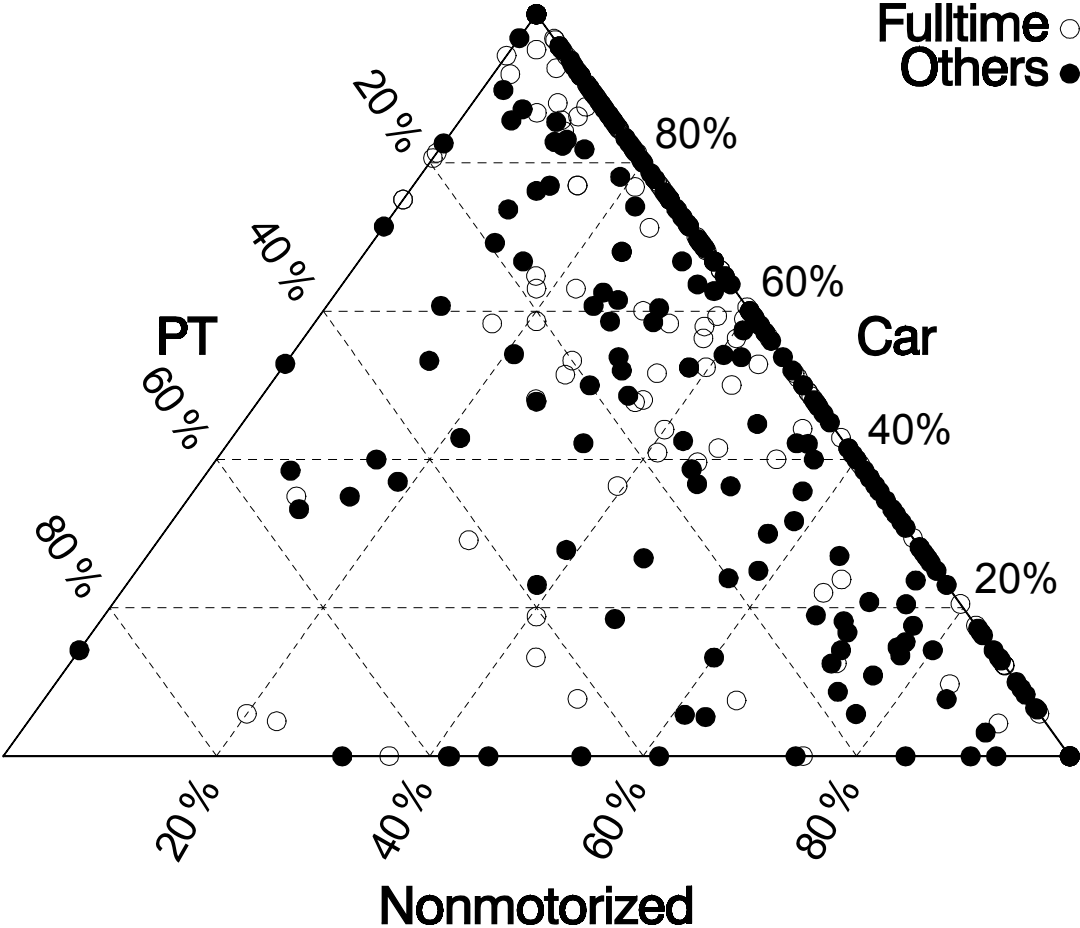
Activity mixture: weekend



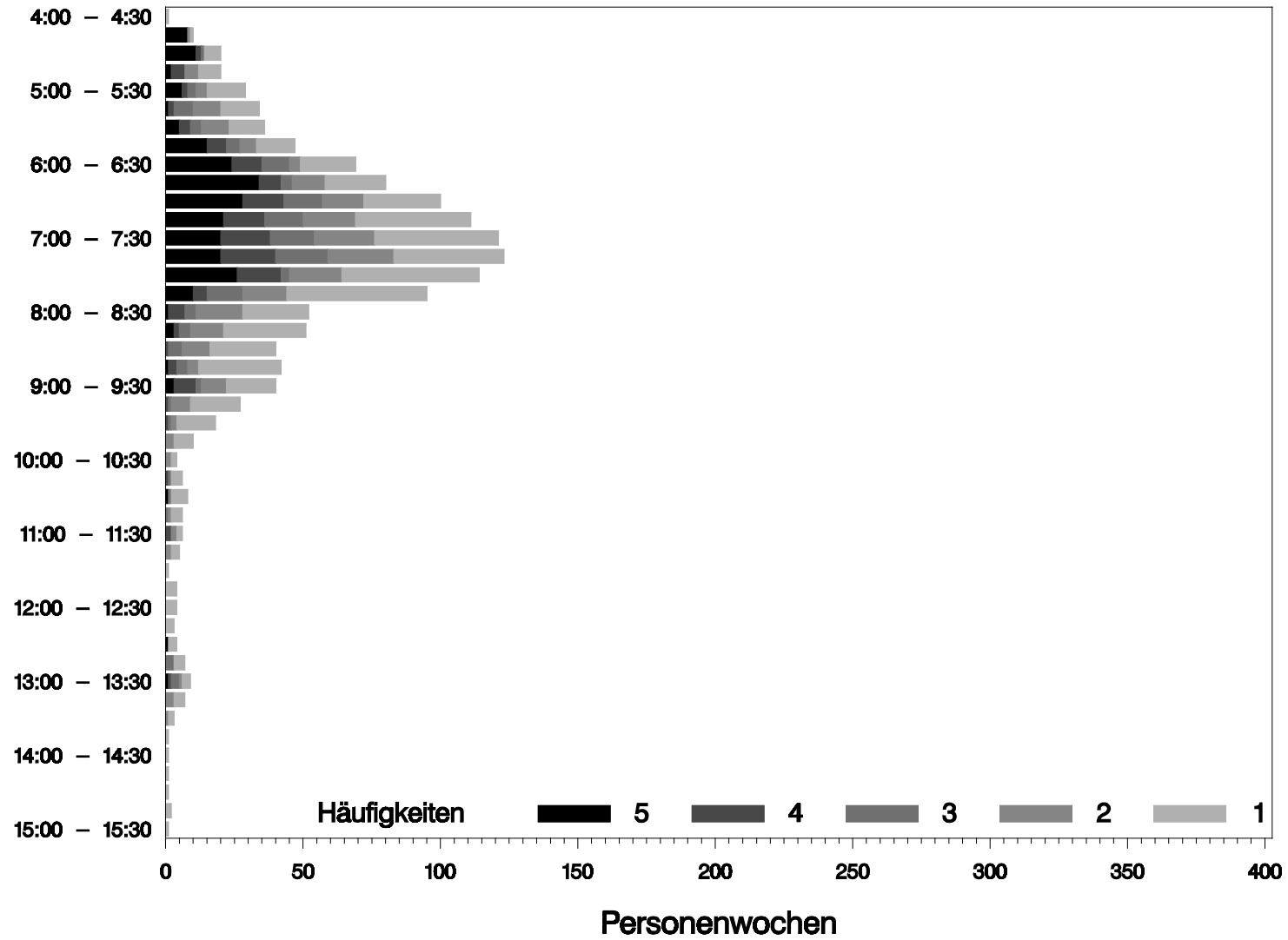
Modal mixture: work days



Modal mixture: weekend



First departure (full time, week days)



The concept of scheduling

Activity participation is a conscious path choice through time and space

- Process of demand satisfactions
- Reuse of successful building blocks
- Mixture of long term commitments and impulse
- Reserves for disturbances and opportunities

- Very few empirical results

Expanded activity concept

- Kind: What do we see ?
- Purpose: What is the aim ?
- Meaning: What is the personal goal ?

- Social context
- Project context
- Time horizons

- Substitutability
- Level of commitment

Data source

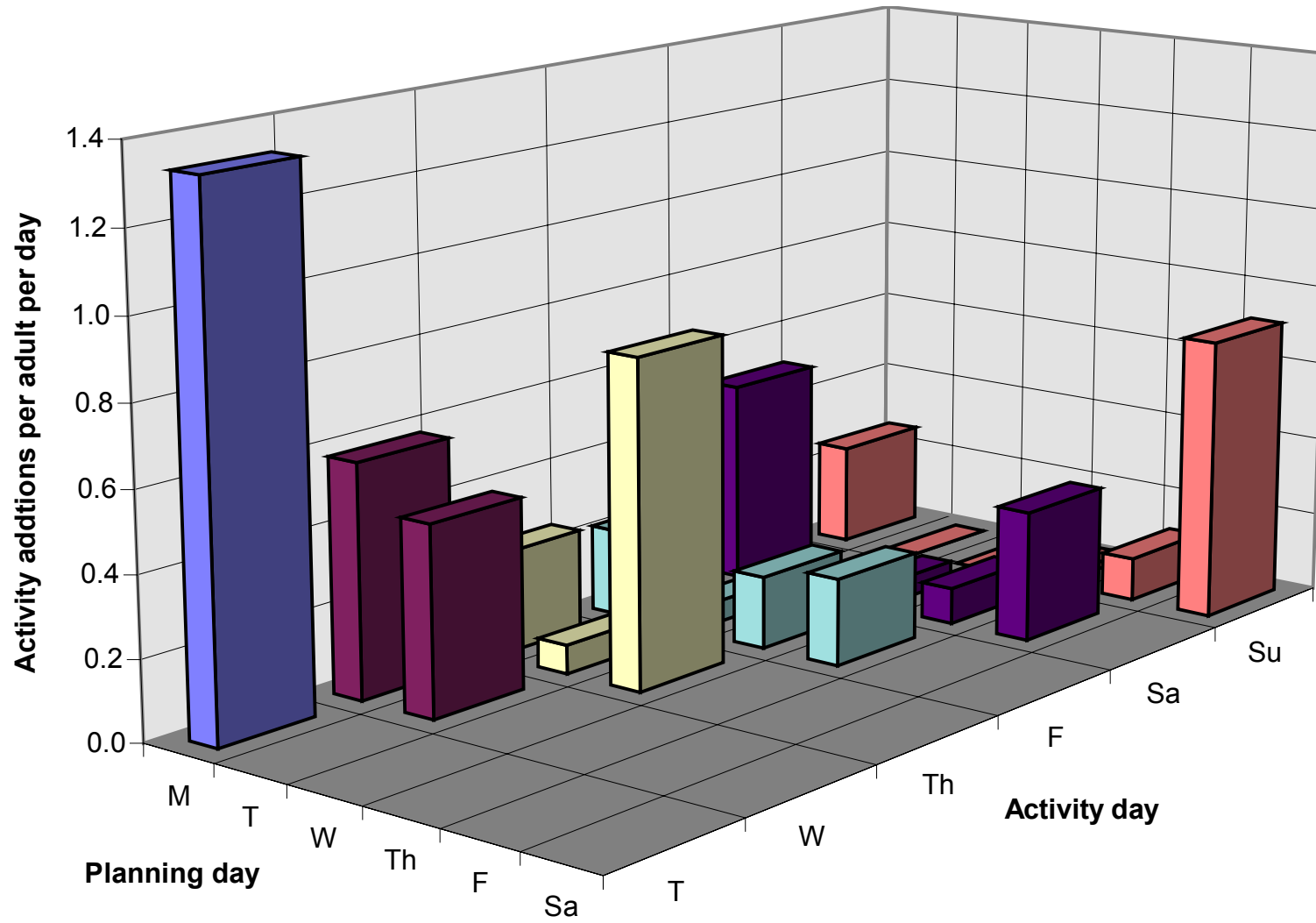
CHASE

- Doherty (University of Toronto)
- Computer-based survey
- Seven days
- Plans continuously
- Performance at the end of each days
- Small sample in Hamilton, Ontario

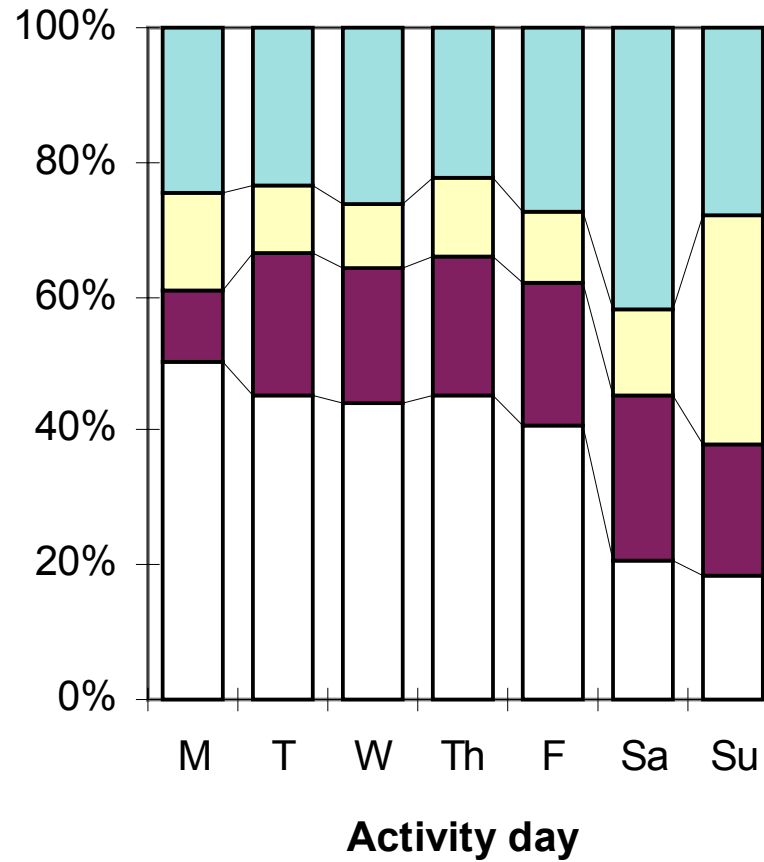
Further work

- iCHASE (UC Irvine)
- CHASE-GIS (RWTH)

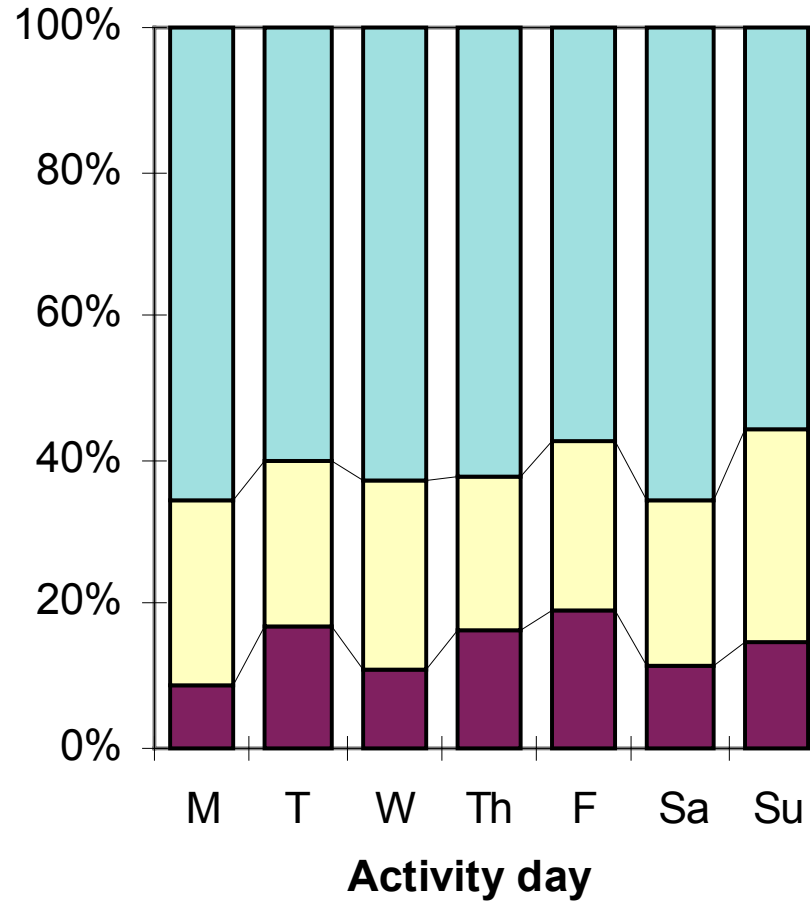
When do we plan ?



When do we add activities ?

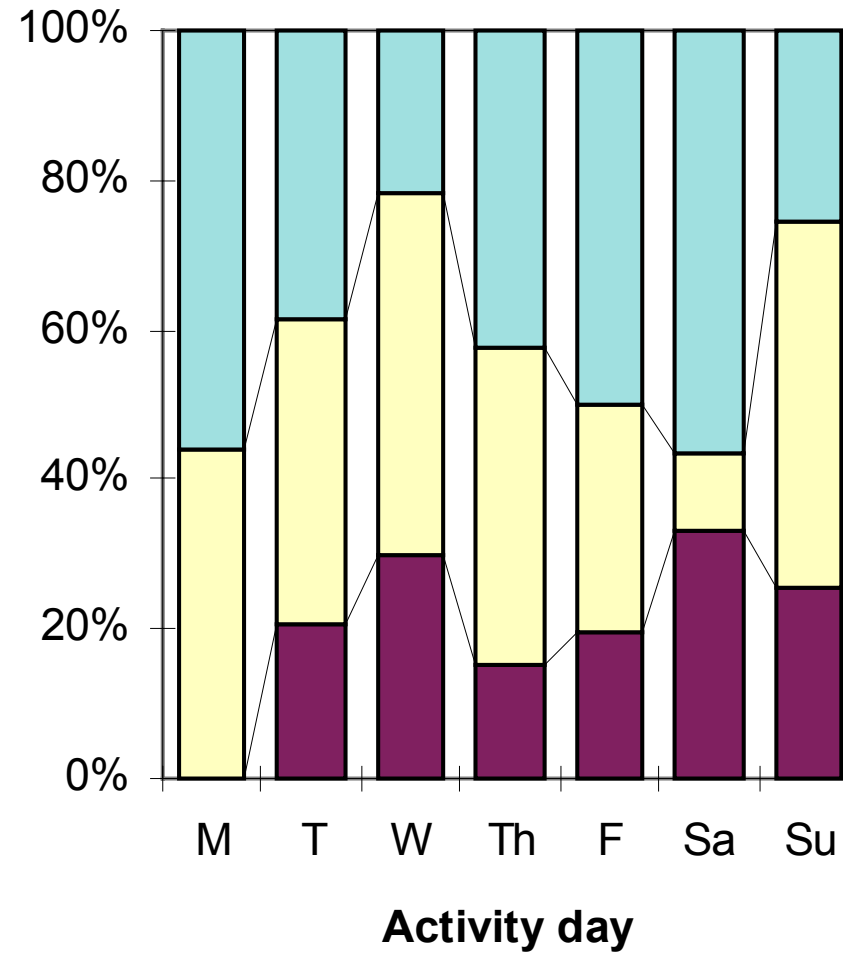


When do we modify activities ?



□ First Sunday ■ Pre-planned □ Same day □ Impulsive

When do we remove activities from our plans ?



□ First Sunday ■ Pre-planned ■ Same day ■ Impulsive

Challenges

- Modelling the rhythms
- Modelling the activity frameworks
- Modelling the stability of times and choices
- Modelling scheduling
- Describing and predicting the trends