


# Rhythms and dynamics of traveller behaviour

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# Rhythms and dynamics of traveller behaviour

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August 2000

# Background

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## 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

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## 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

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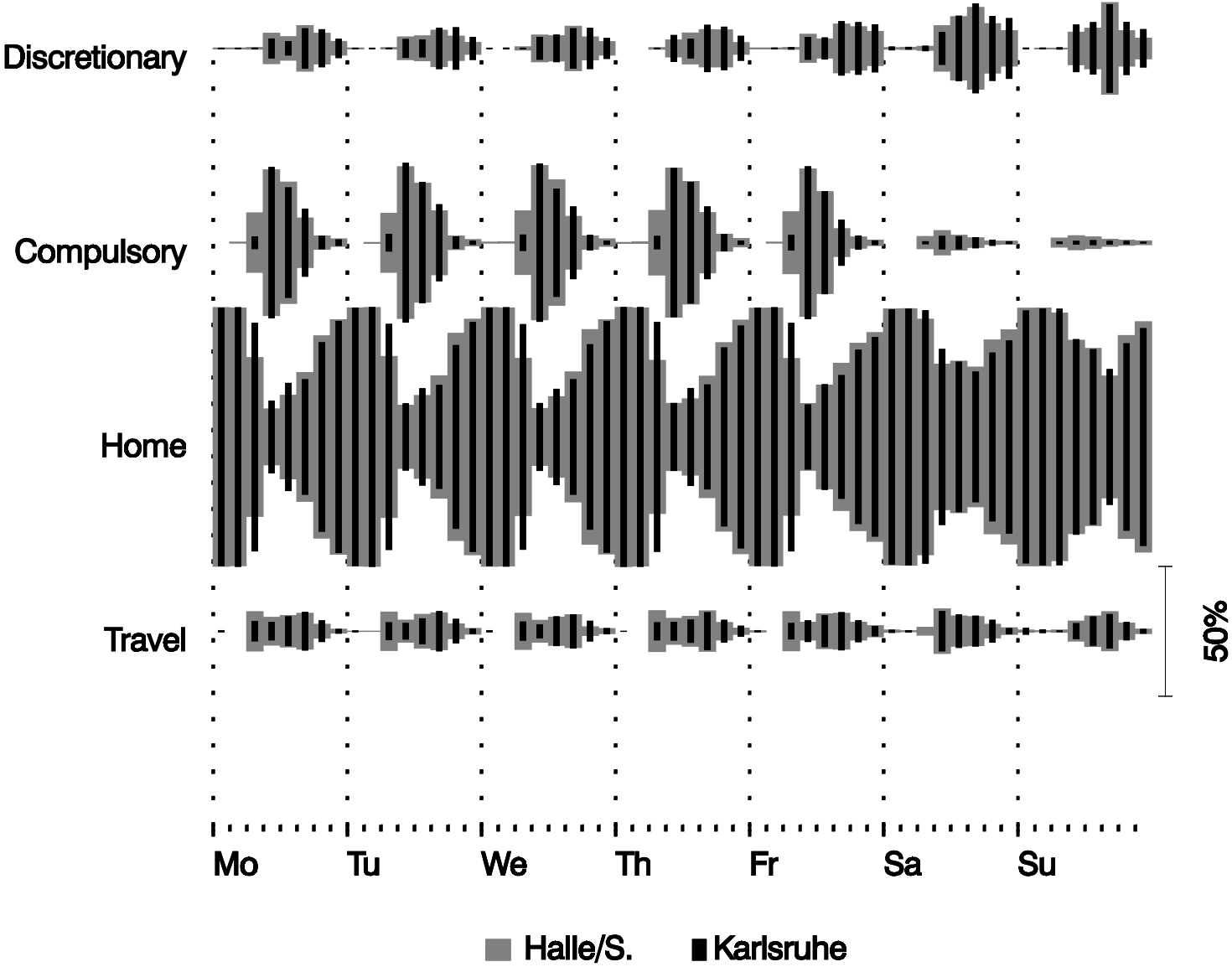
## Requirement:

- Multi-day diary

## Approach

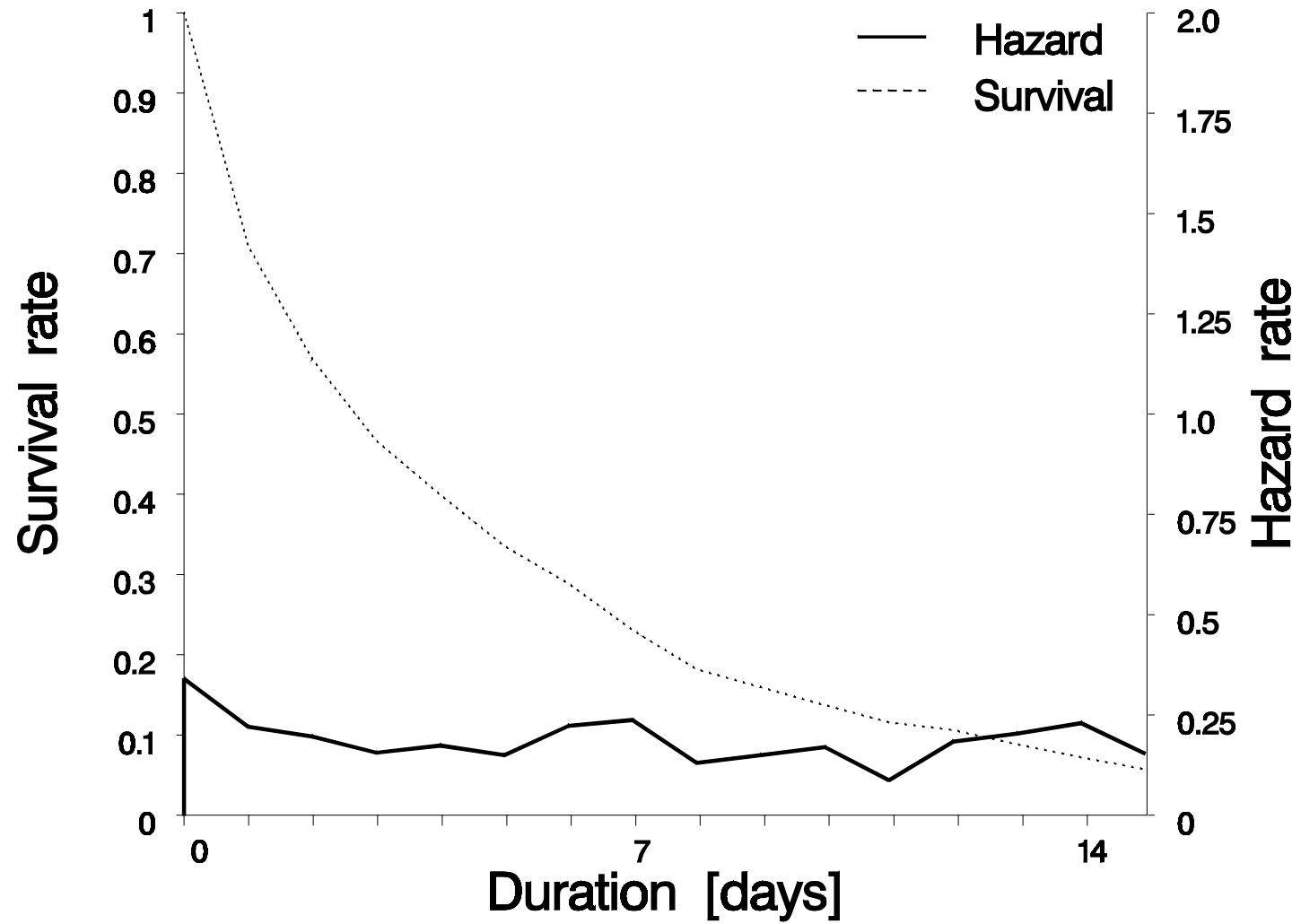
- BMBF research project (PTV, RWTH, ETH)
- Six week diary
- 362 persons in 162 households
- Karlsruhe and Halle
- Spring and fall of 1999

# Weekly rhythms

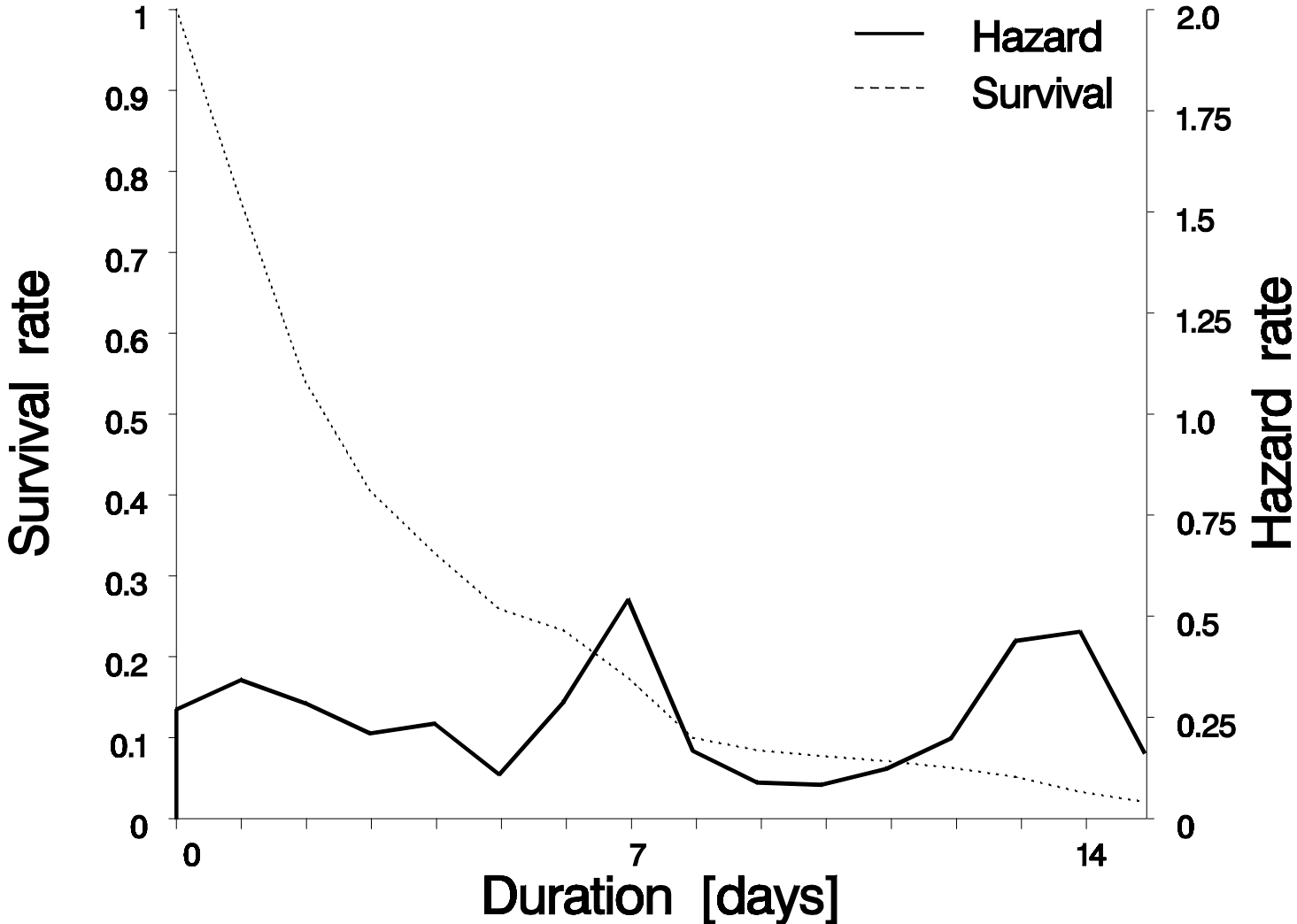


# Personal rhythms: Daily shopping

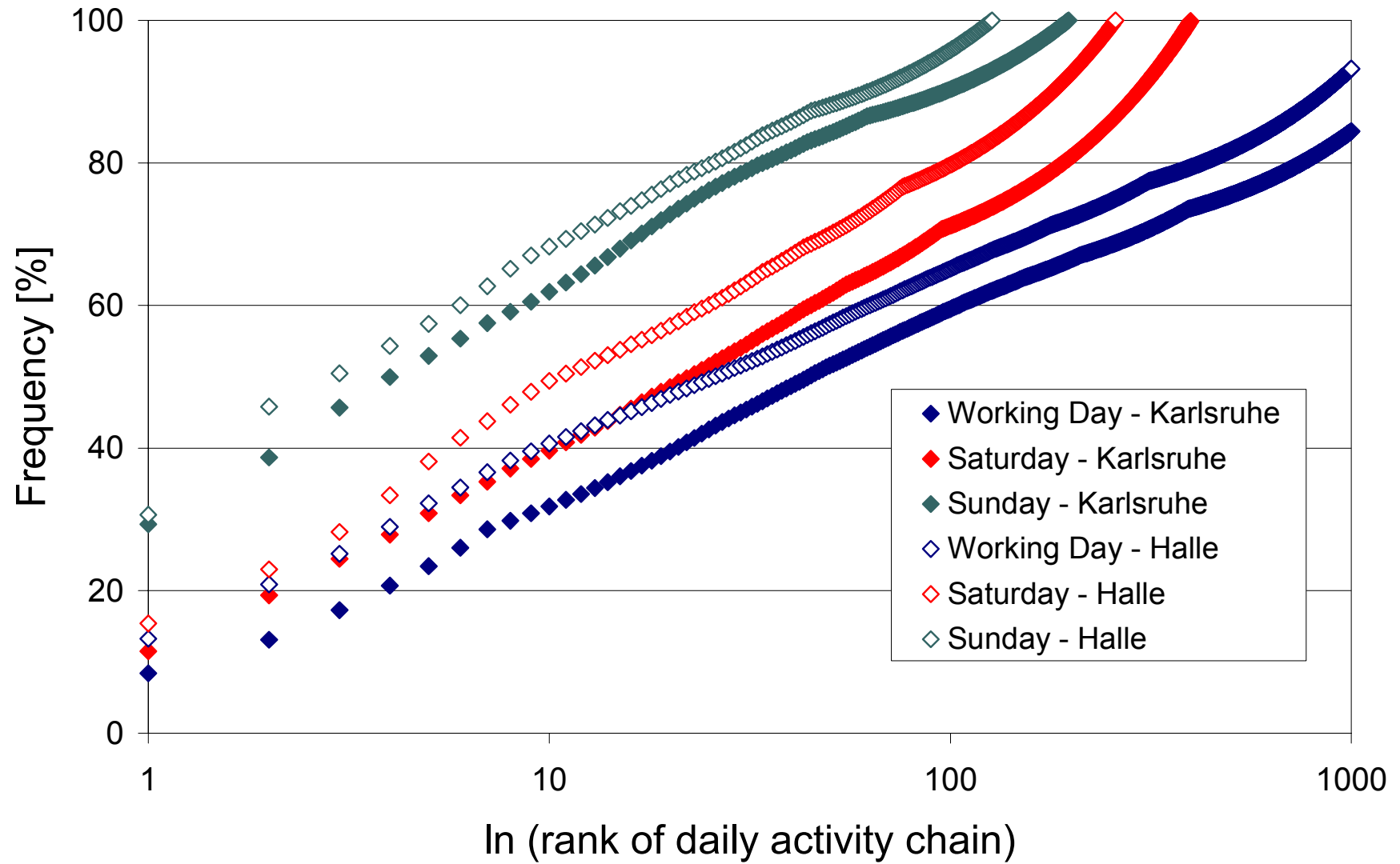
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# Personal rhythms: Sport

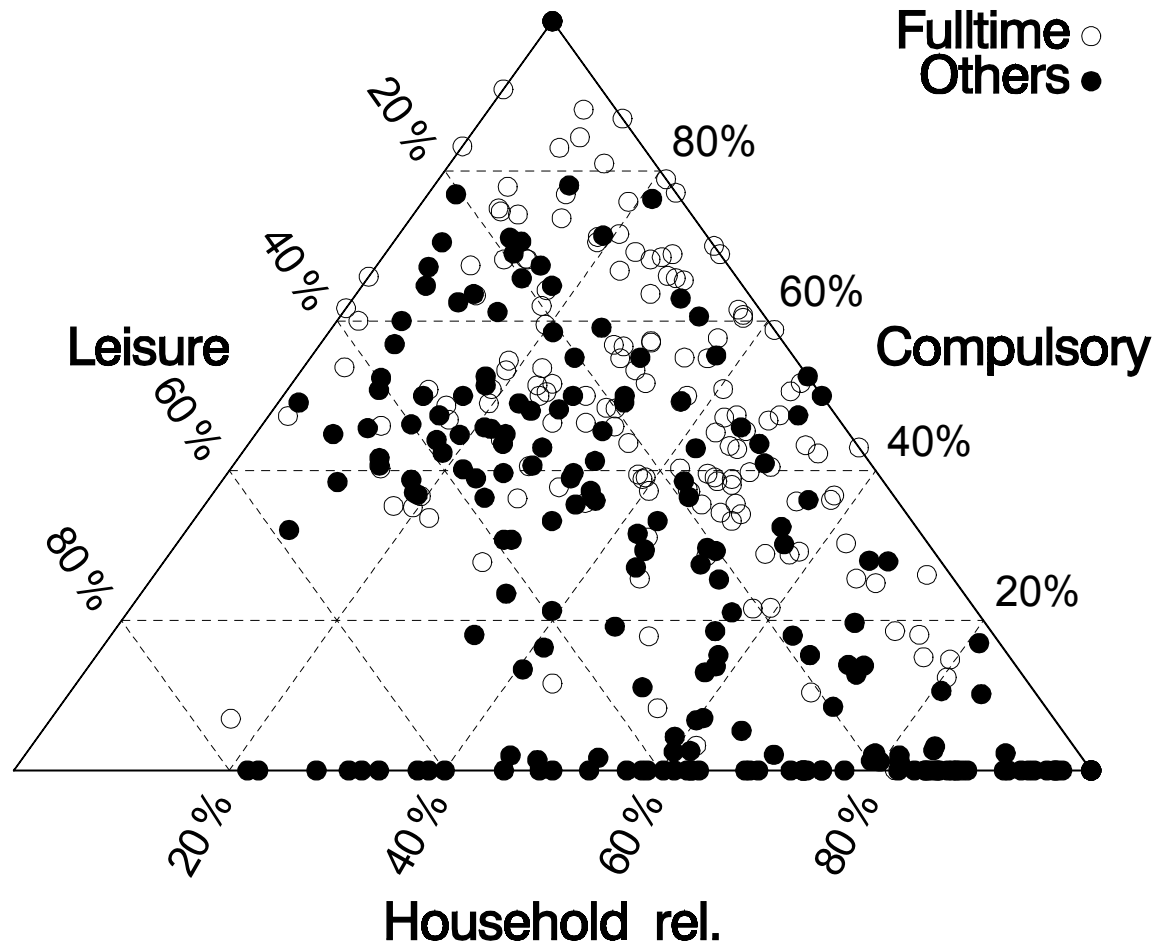


# Activity chains



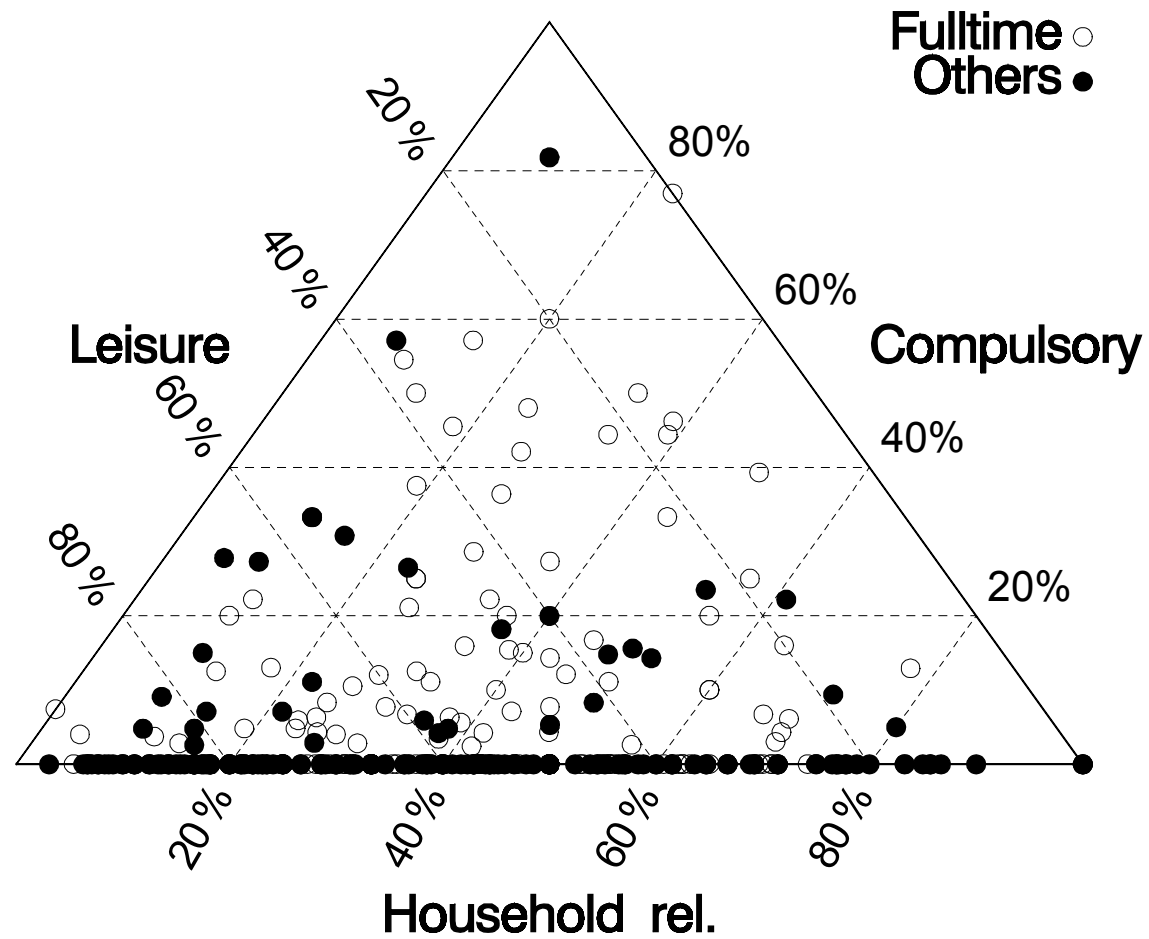
# Activity mixture: work days

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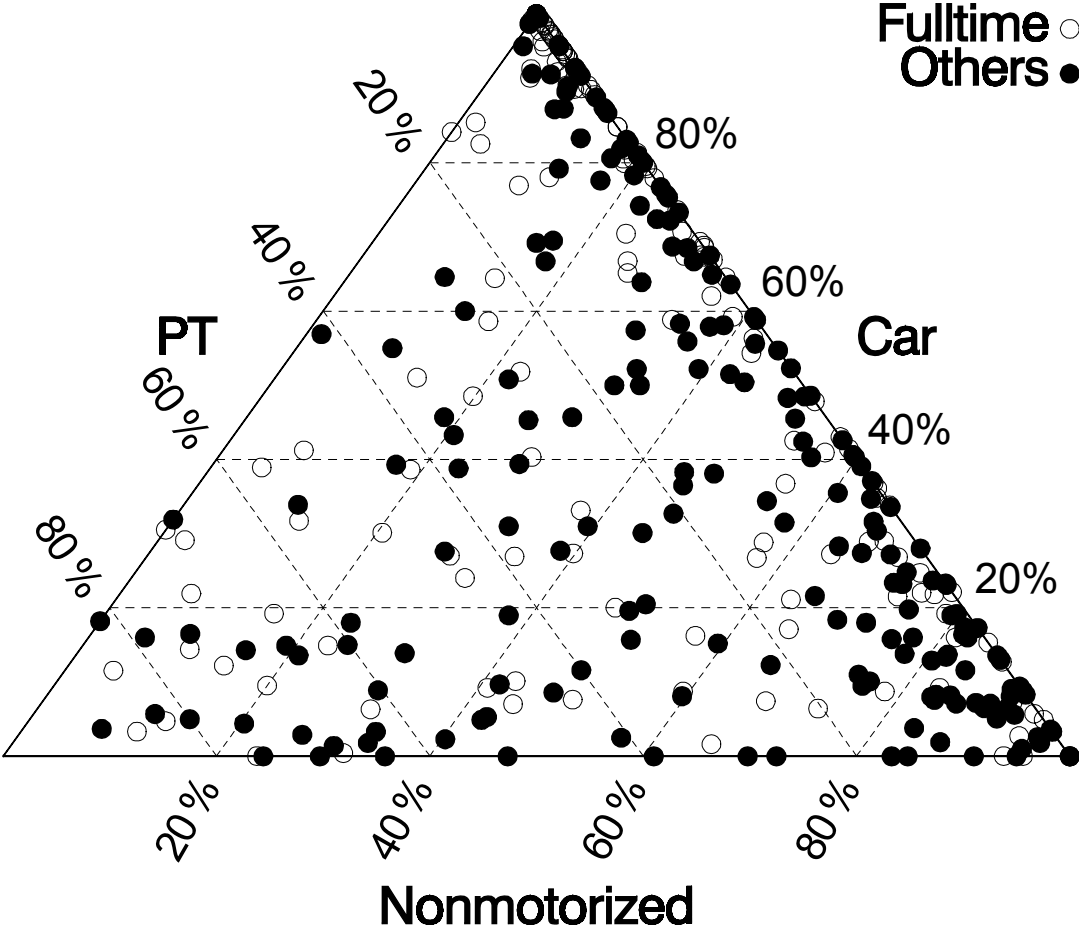


# Activity mixture: weekend

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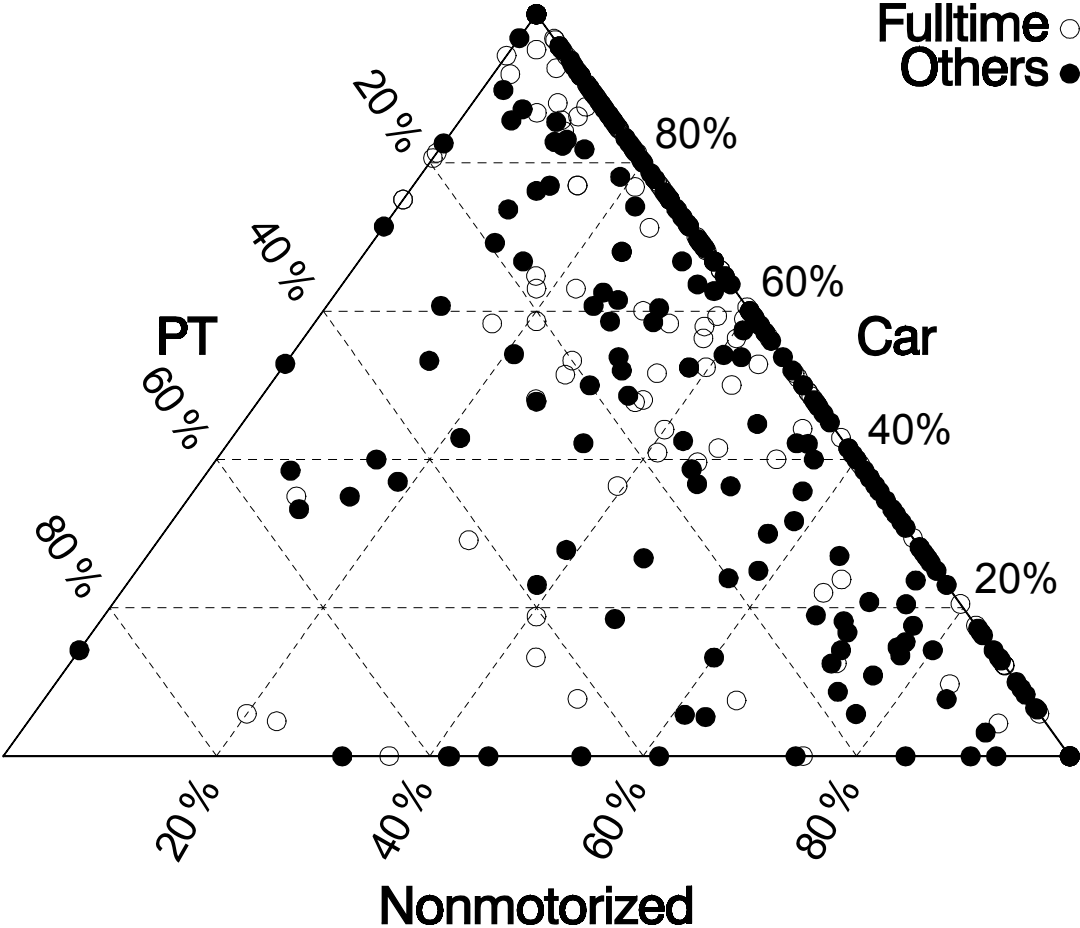


# Modal mixture: work days



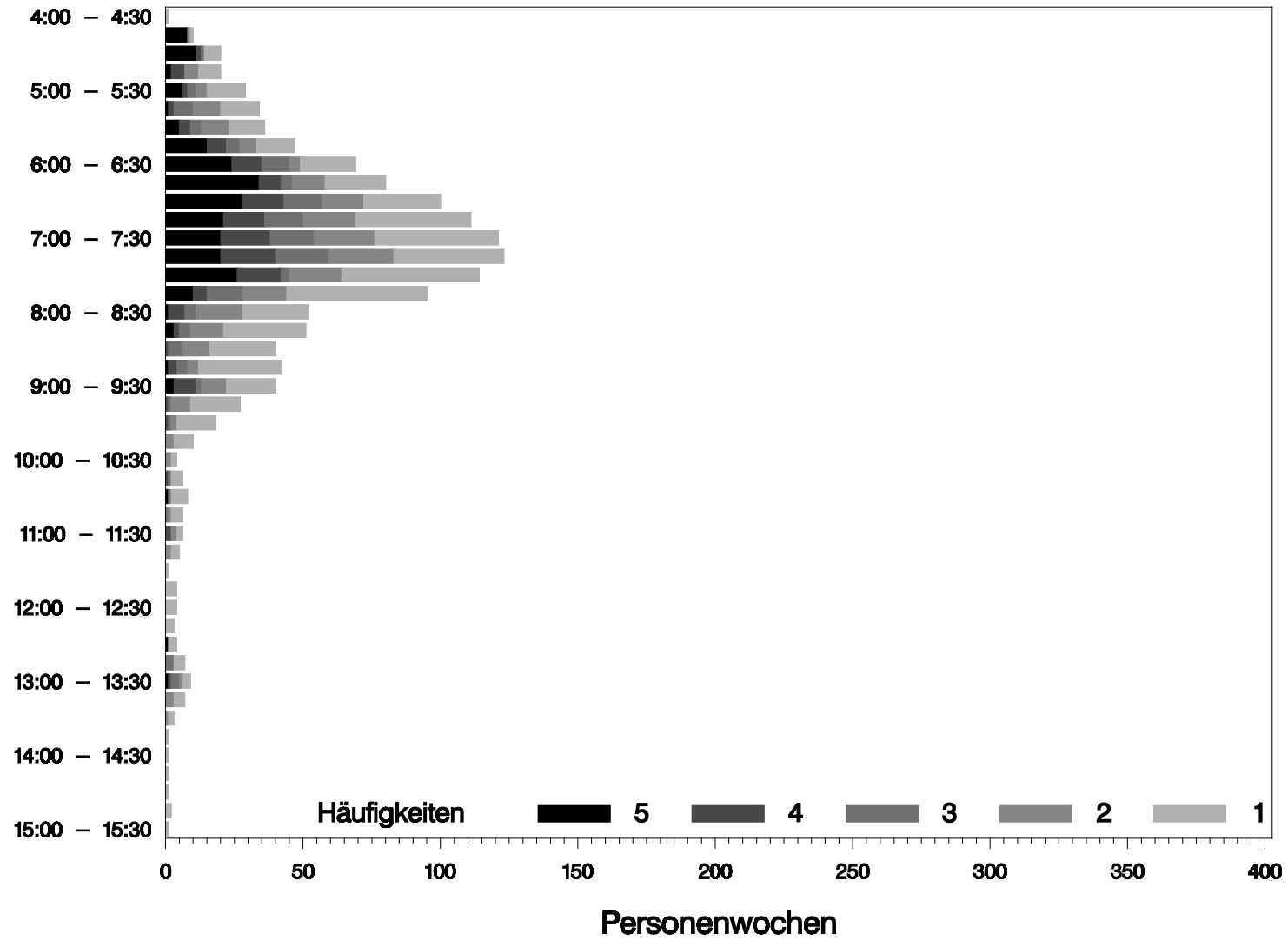
# Modal mixture: weekend

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# First departure (full time, week days)

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# The concept of scheduling

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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

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- 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

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### CHASE

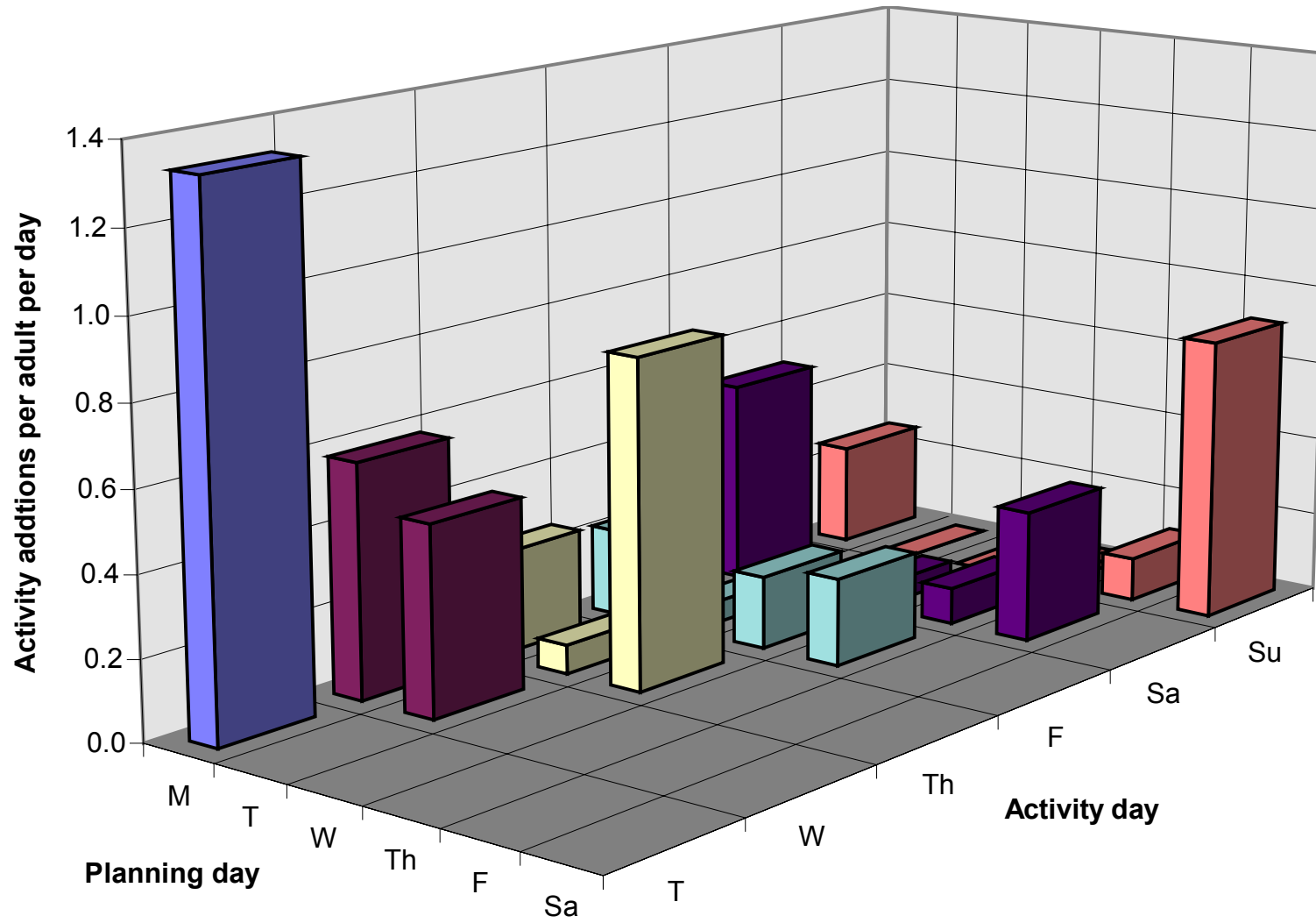
- Doherty (University of Toronto)
- Computer-based survey
- Seven days
- Plans continuously
- Performance at the end of each days
- Small sample in Hamilton, Ontario

### Further work

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

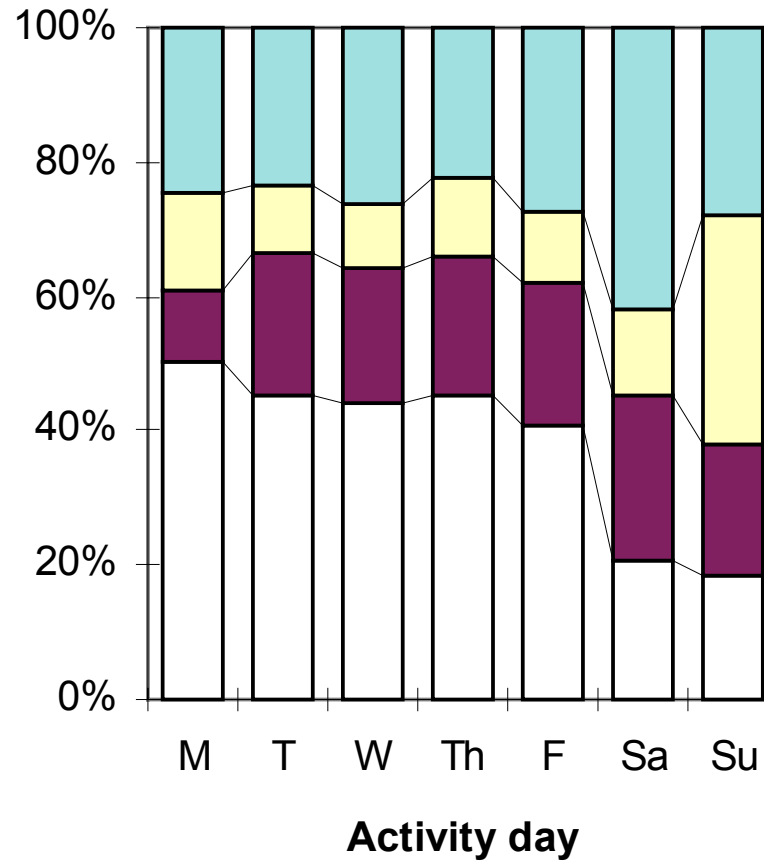
# When do we plan ?

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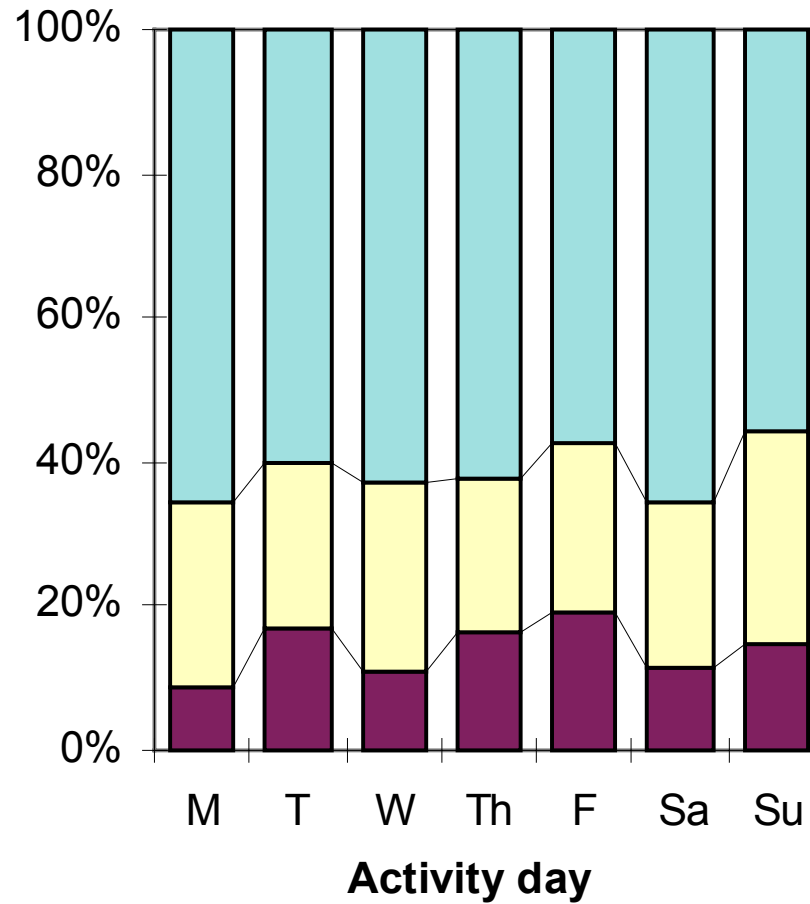
# When do we add activities ?

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# When do we modify activities ?

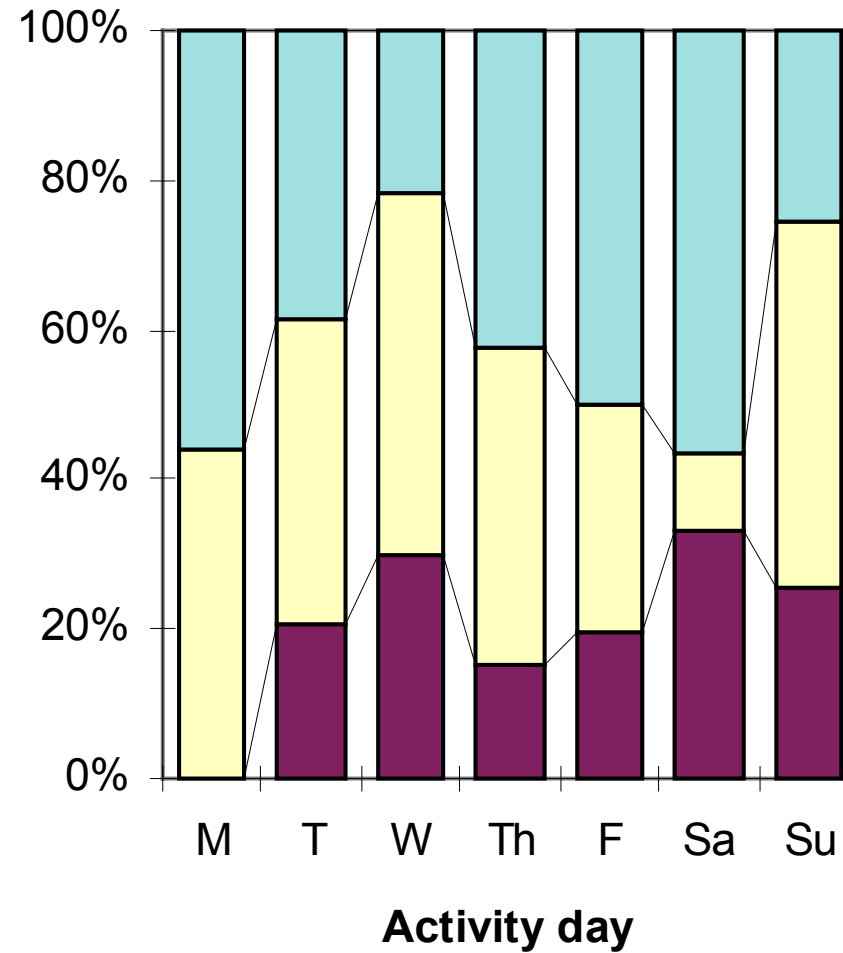
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□ First Sunday   ■ Pre-planned   □ Same day   □ Impulsive

# When do we remove activities from our plans ?

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

# Challenges

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