

Bevorzugter Zitierstil für diesen Vortrag

Axhausen, K.W. (2001) Variability in travel behaviour: Experiences with a six-week diary, presentation to Groupe Romand Telematique, September 2001, EPF Lausanne.

Variability in travel behaviour: Experiences with a six-week diary

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September 2001



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Background

New transport policy concerns

- Demand management by information
- Demand management by differential pricing

Reactions

- Choice of departure time
- Choice of route
- Choice of mode
- Choice of group size
- Choice of activity sequence

Questions

Natural variability

- Activity chains
- Mode choice
- Choice of departure time

Activity scheduling

- Share of committed times
- Share of pre-planned times
- Share of spontaneous activities

Measurement of natural variability

Necessary instrument:

- Multiday diary (trace)

Implementation:

- BMBF-Projekt *Mobidrive*
 - PTV AG, Karlsruhe (Co-ordination)
 - ISB, RWTH Aachen
 - IVT, ETH Zürich

Approach

Example:

- Uppsala 1971 (Susan and Perry Hanson)
- Five week diary
- 300 Persons

Structure

- Reporting period: Six weeks
- Six one-week diaries
- Quota sample (One-person-households, couples, families with children over 6 years of age)
- Differential incentives 100 – 200 DM/household)

Implementation

Response

- 361 persons in 162 households (about 17% of addresses drawn)

Survey periods

- Two waves of recruitment each
- Halle 9 weeks
- Karlsruhe 8 weeks

Form

Mo	Di	Mi	Do	Fr	Sa	So
<input type="text"/> Beginn (Uhrzeit)						
<input type="radio"/> Jmd. Abholen/Wegbringen						
<input type="radio"/> Erledigung/Dienstleistung						
<input type="radio"/> Dienstlich/geschäftlich						
<input type="radio"/> zur Ausbildung/Schule						
<input type="radio"/> zur Arbeit						
<input type="radio"/> Einkauf						
<input type="radio"/> <input type="radio"/> täglicher Bedarf						
<input type="radio"/> <input type="radio"/> langfristiger Bedarf						
<input type="radio"/> Freizeit, und zwar						
<input type="text"/>						
<input type="radio"/> Sonstiges, und zwar						
<input type="text"/>						
<input type="radio"/> nach Hause						

Form

<input type="radio"/>	nur zu Fuß	<input type="text"/>
<hr/>		
<input type="radio"/>	zu Fuß zum Verkehrsmittel	<input type="text"/>
<input type="radio"/>	Fahrrad	<input type="text"/>
<input type="radio"/>	Mofa, Motorrad	<input type="text"/>
<input type="radio"/>	Pkw als Fahrer	<input type="text"/>
<input type="radio"/>	Pkw als Mitfahrer	<input type="text"/>
<input type="radio"/>	Bus	<input type="text"/>
<input type="radio"/>	Straßen-/Stadtbahn	<input type="text"/>
<input type="radio"/>	Eisenbahn	<input type="text"/>
<input type="radio"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	zu Fuß zum Ziel	<input type="text"/>

<input type="text"/>
(Straße, Haus-Nr.)
<input type="text"/>
(Ort)

Form

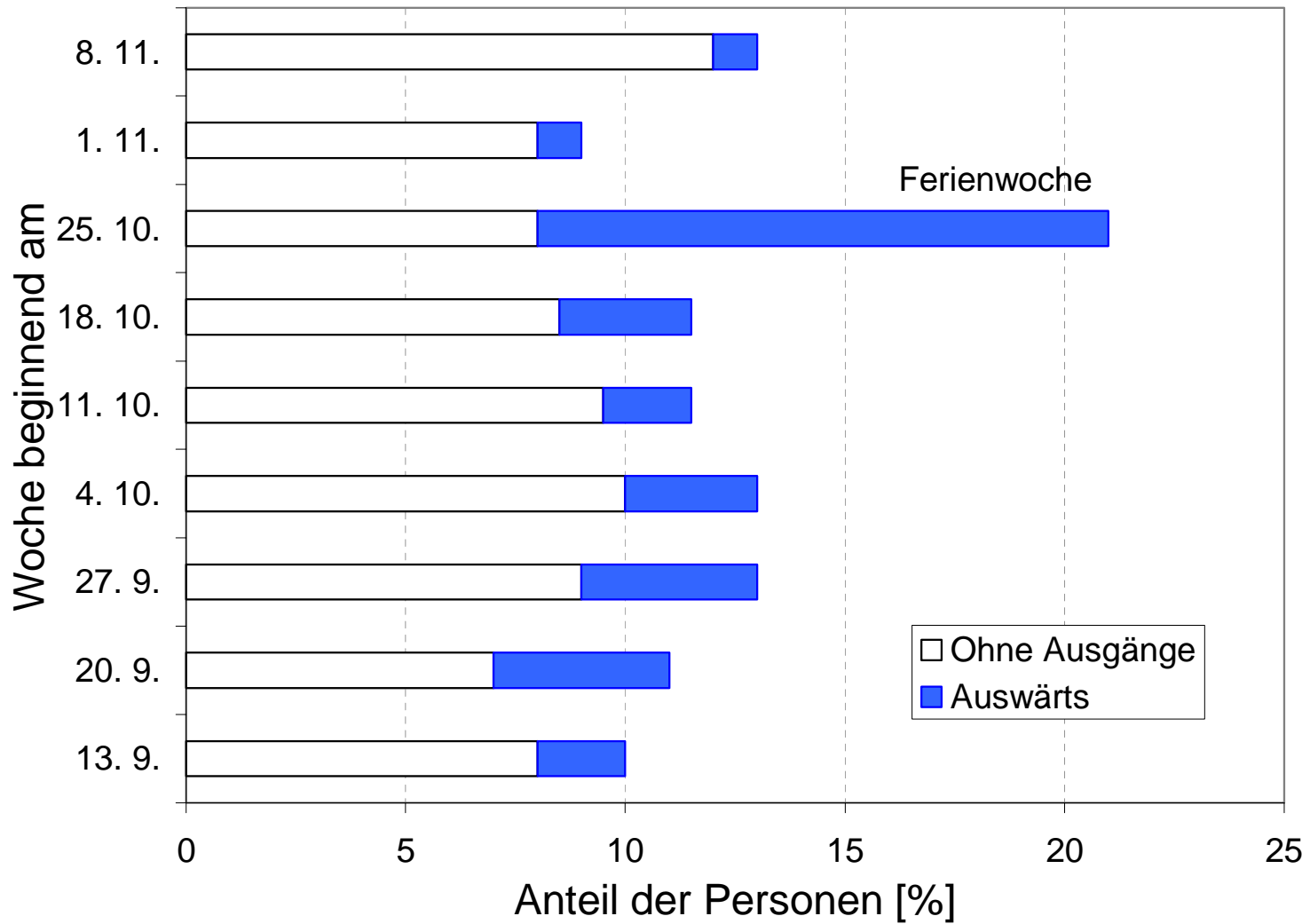
<input type="text"/>	Haushaltsmitglied(er)		
<input type="text"/>	Andere Person(en)		
<input type="radio"/>	Hund		
<hr/>			
<input type="radio"/>	keine Ausgaben		
<input type="radio"/>	bis DM 10,--		
<input type="radio"/>	über DM 10,-- bis DM 25,--		
<input type="radio"/>	über DM 25,-- bis DM 100,--		
<input type="radio"/>	über DM 100,--		
<hr/>			
<input type="radio"/>	Fahrschein, Parkgebühr, Taxi etc.		
<input type="text"/>	DM, Pf		
<hr/>			
<input type="text"/>	Ankunft (Uhrzeit)		
<input type="text"/>	km	<input type="text"/>	m

Key indicators

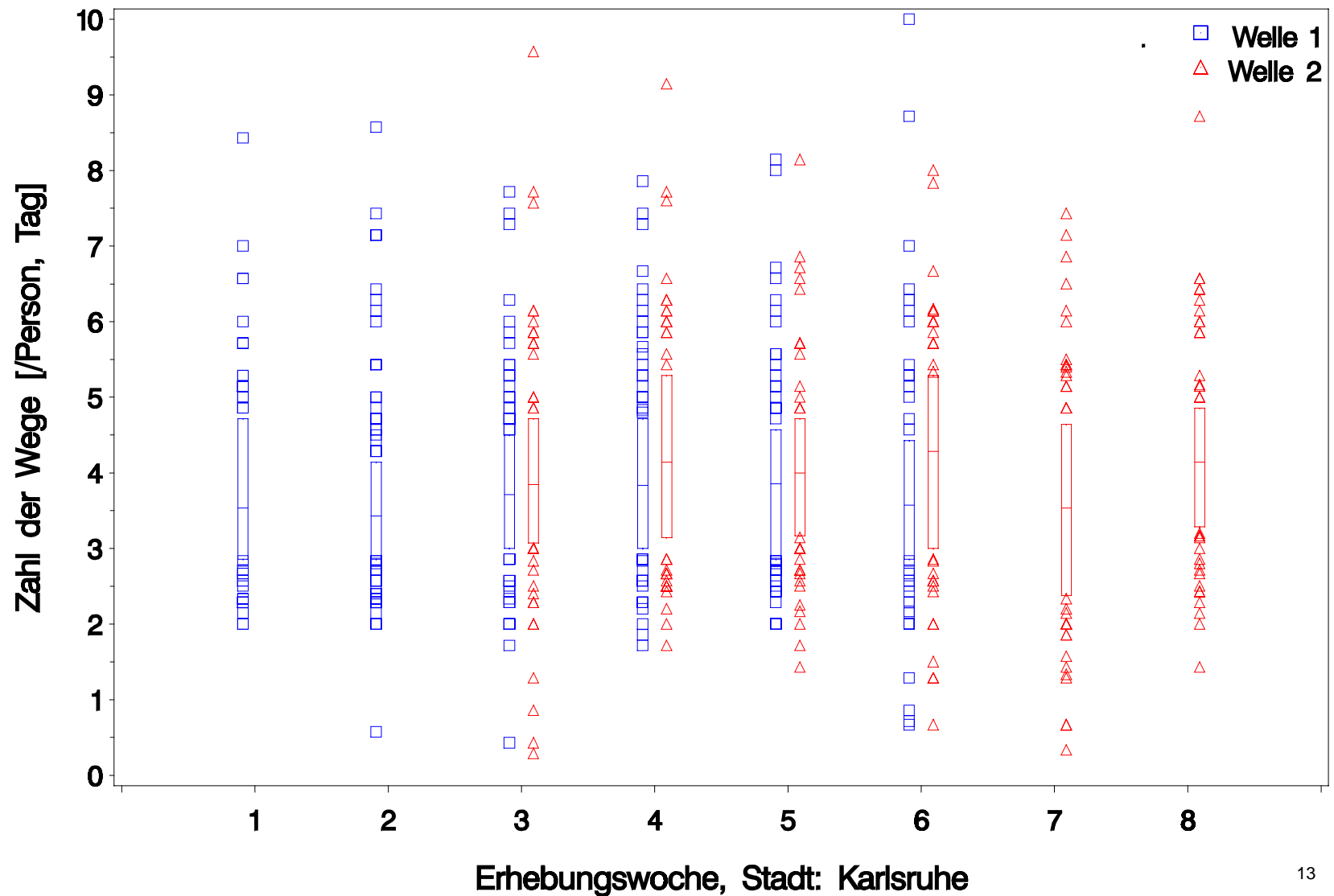
	Halle	Karlsruhe
Mean number of trips/mobile and day	3.54	4.05
Mean trip length [km]	7.5	8.2
Mean trip duration [min]	21.1	18.8

(Weighted by age and gender)

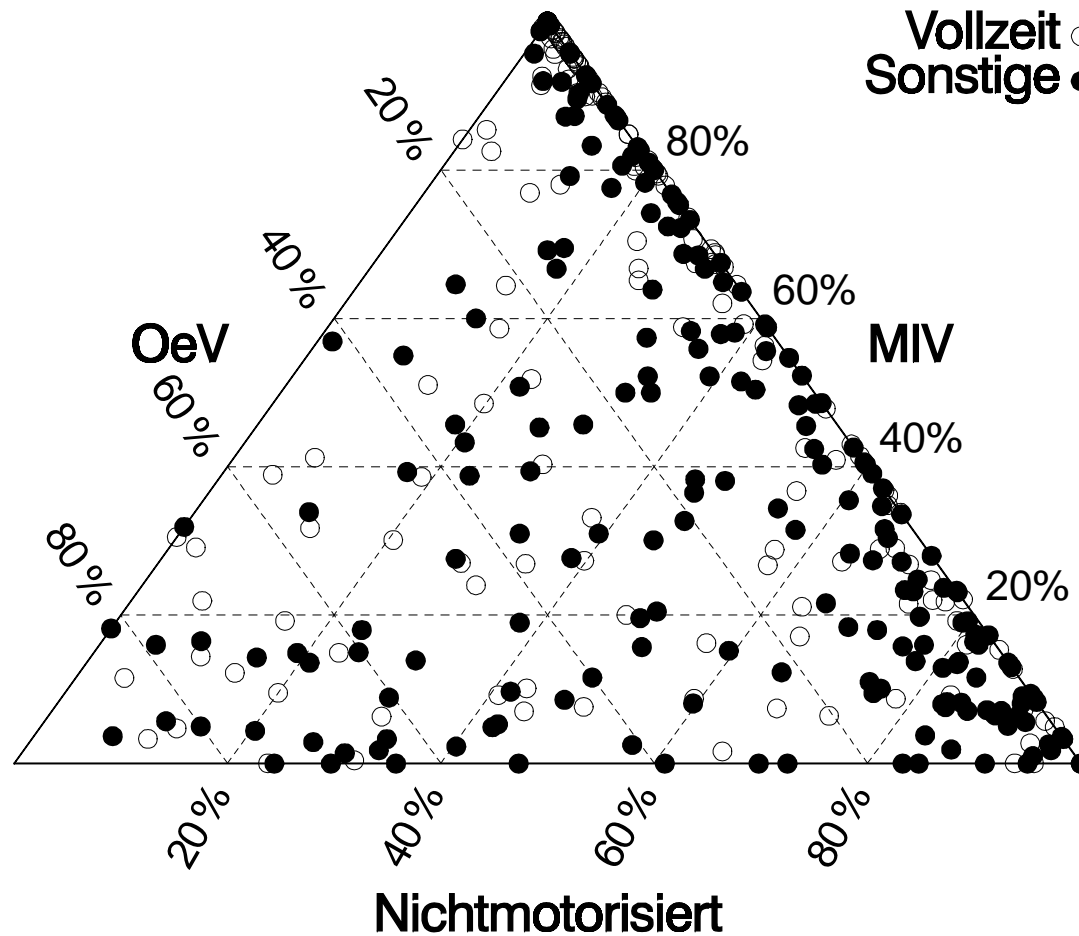
Variability: days with out trips in Halle



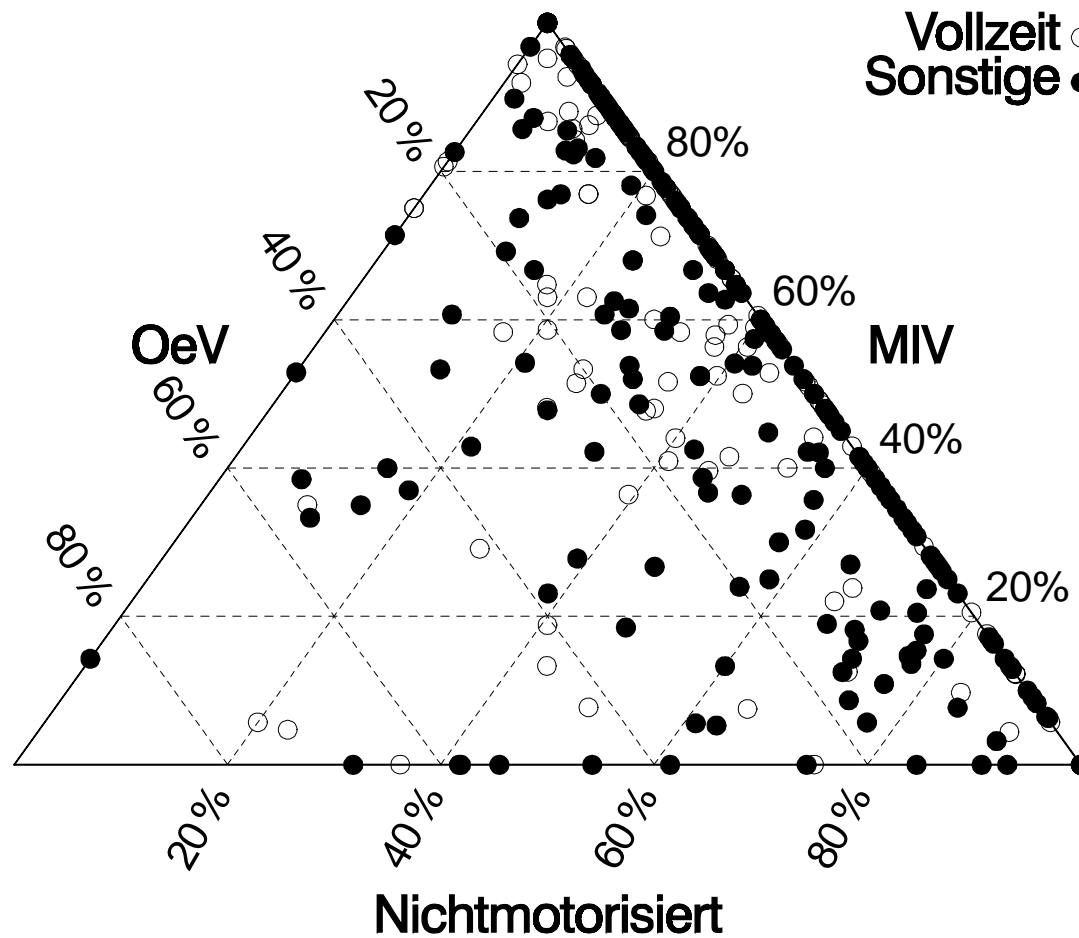
Variability: Average number of trips/person and week



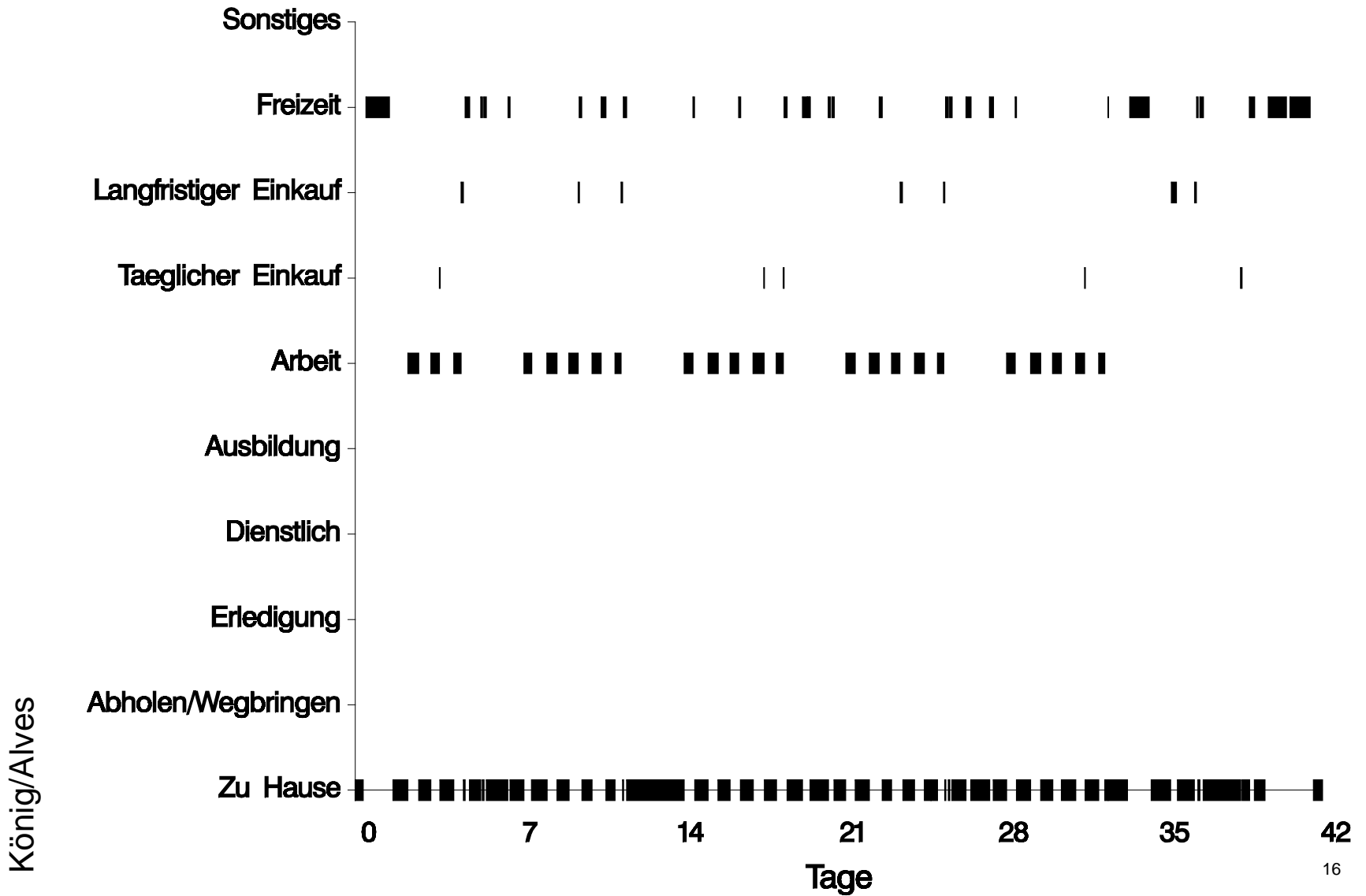
Mixture of modes for weekdays



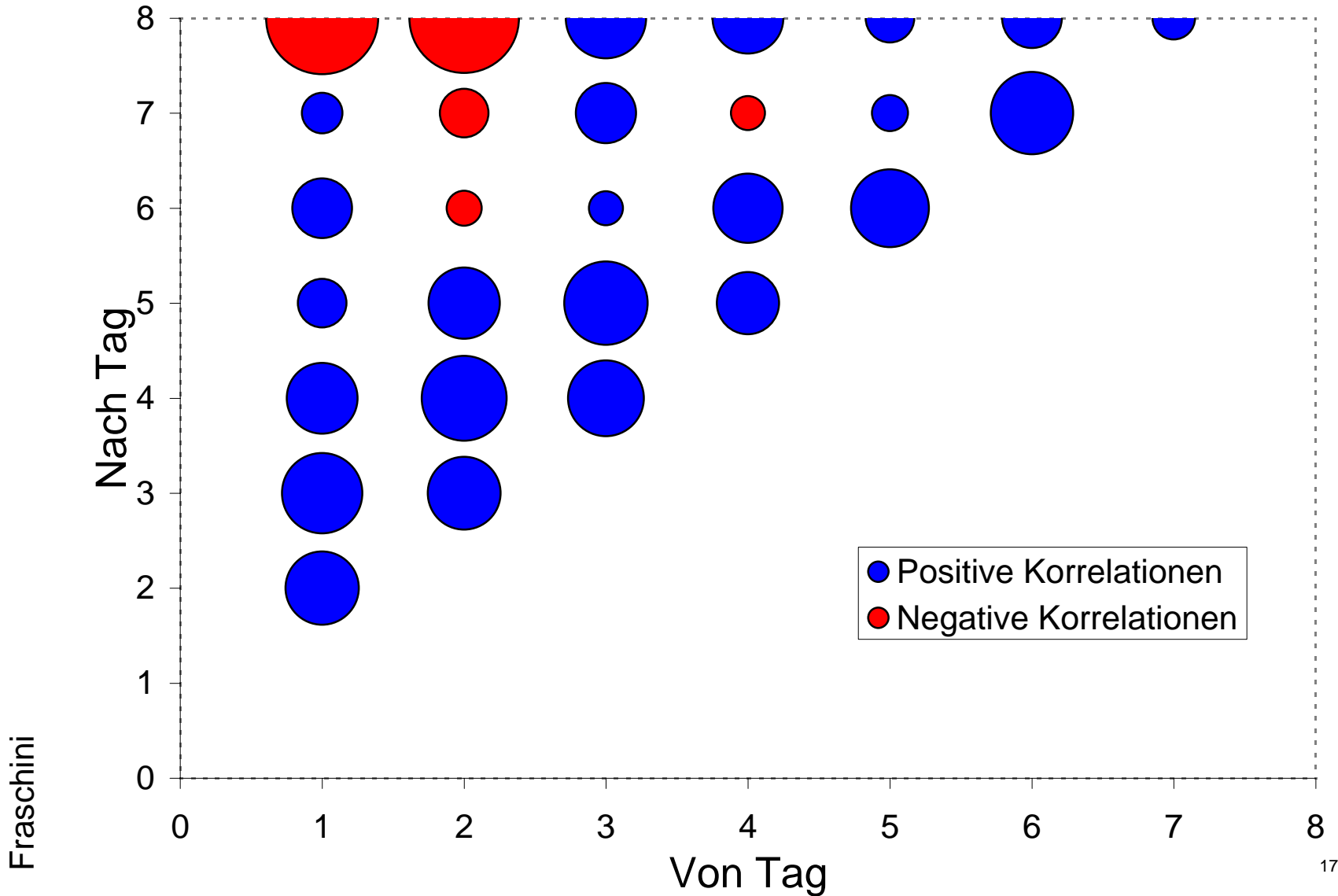
Mixture of modes for the weekend



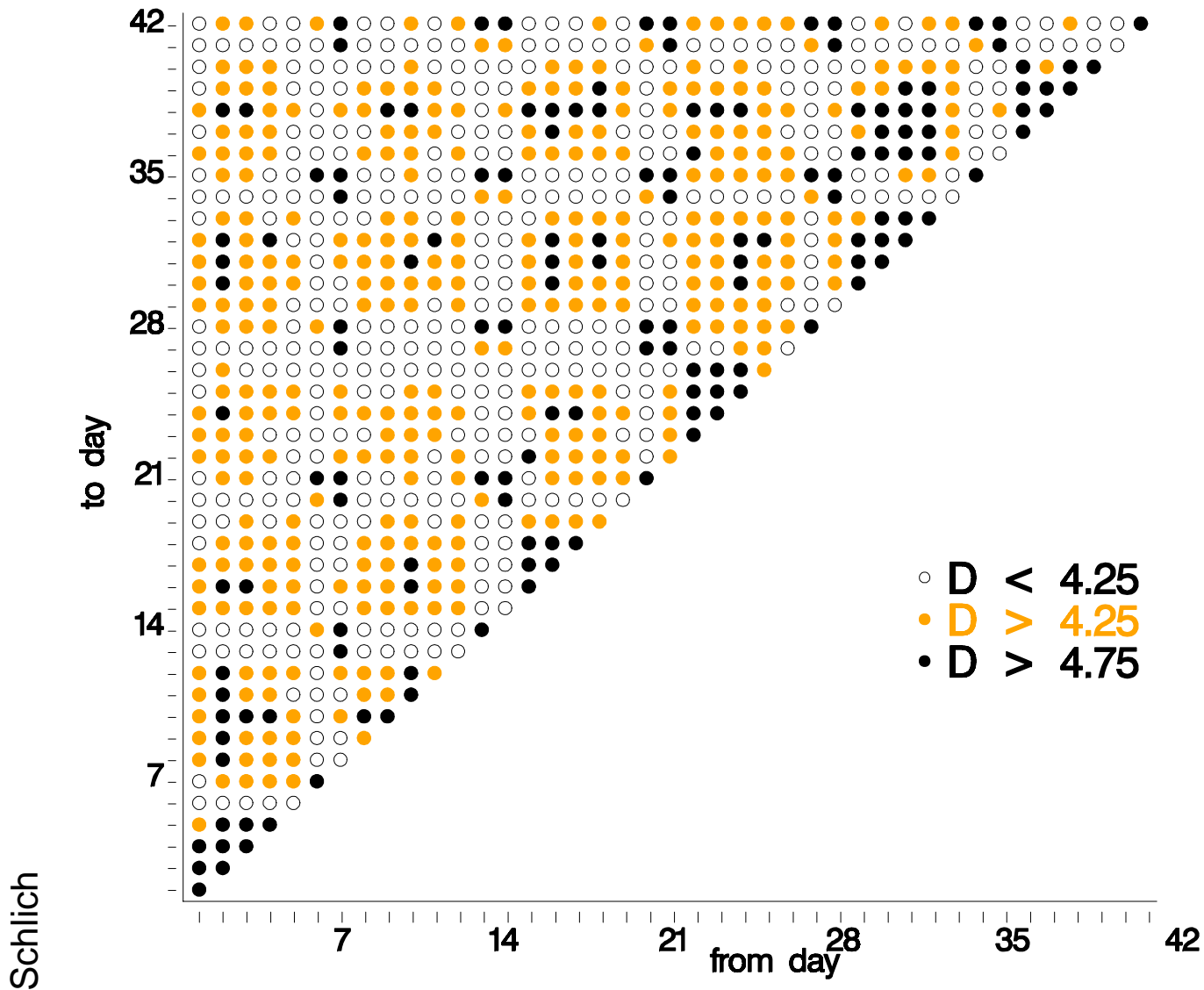
Rhythms of activity participation



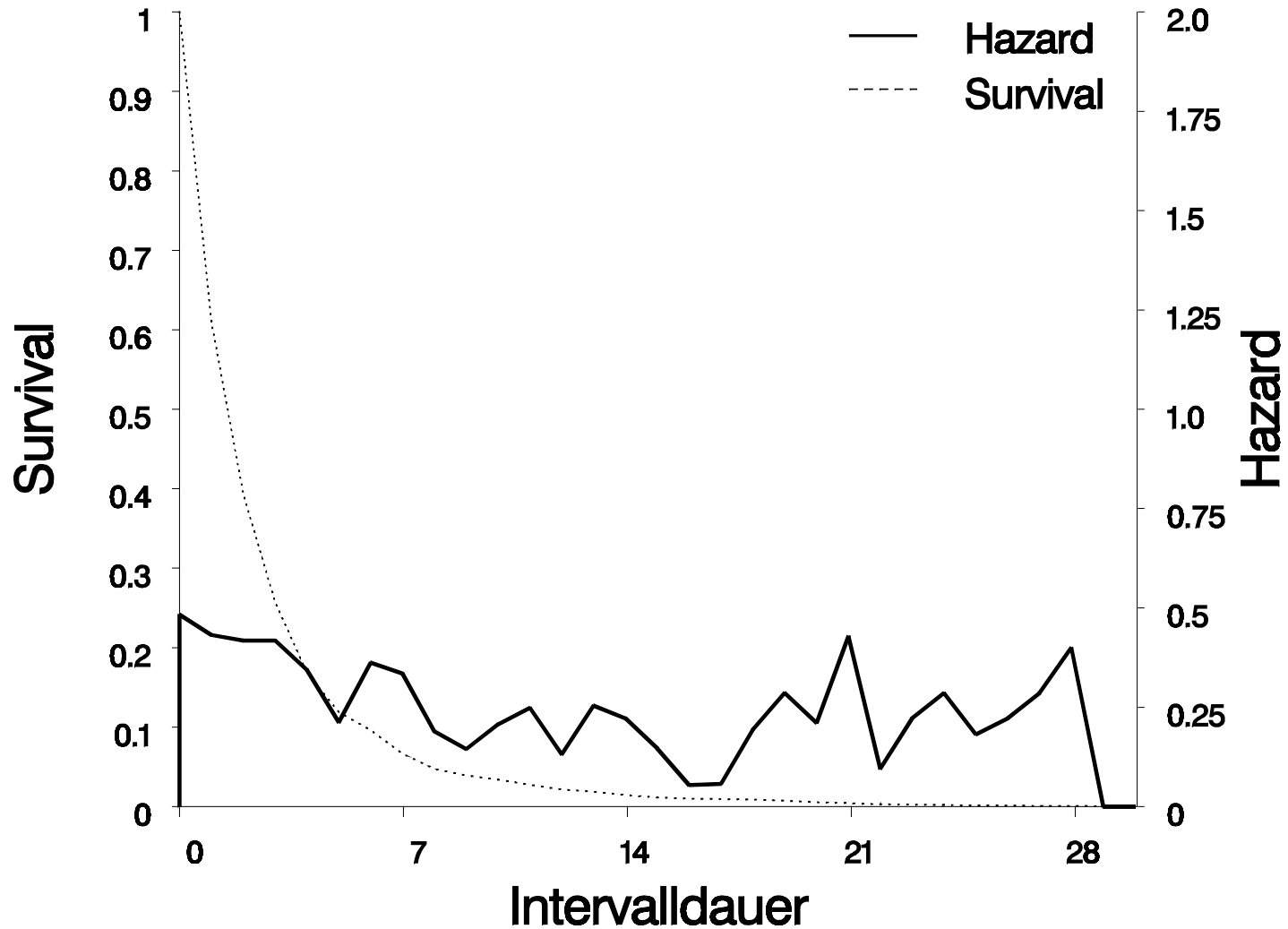
Mean correlation of trip frequency



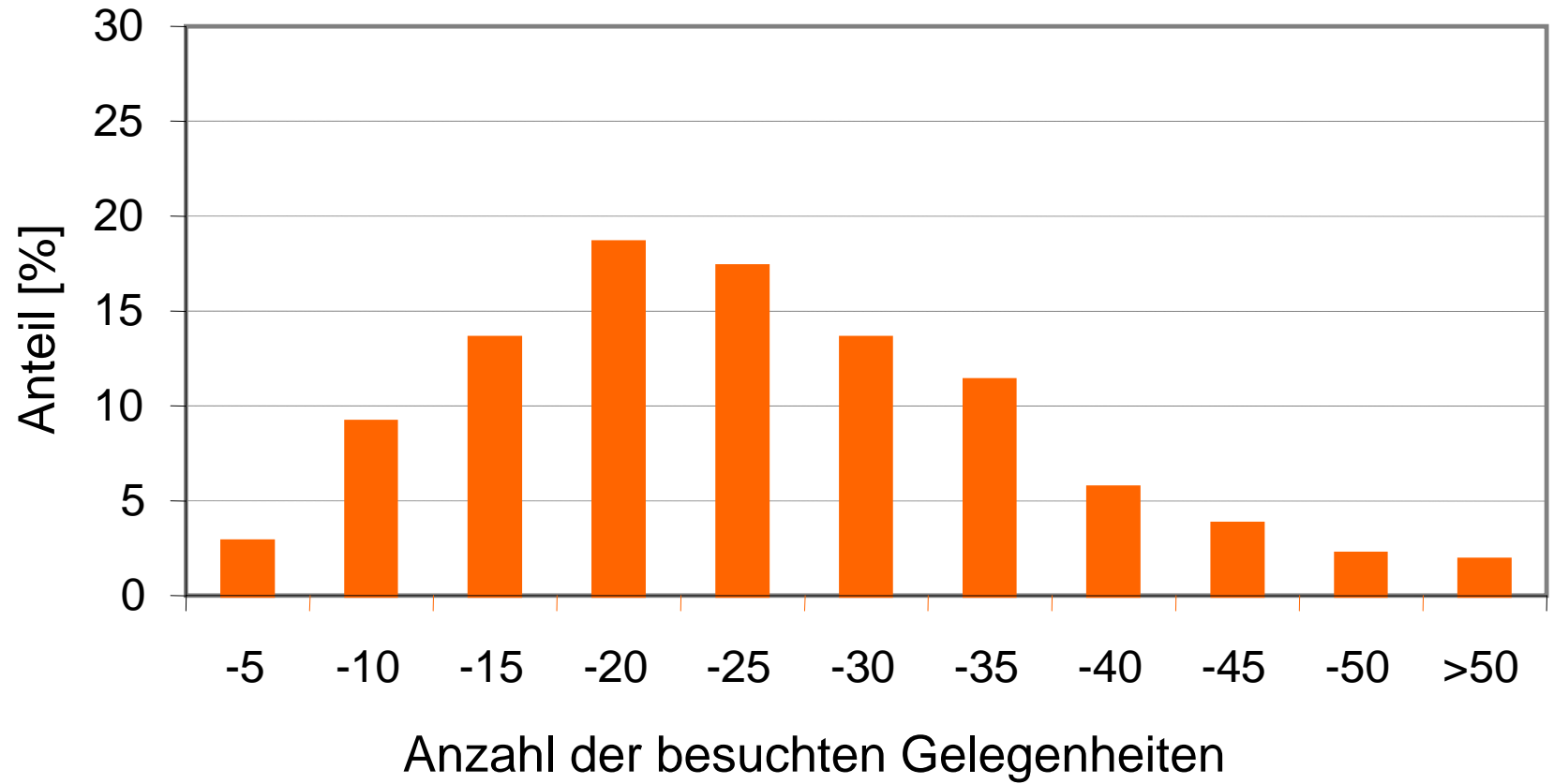
Similarity (Sequence alignment - Multi-dimensional)



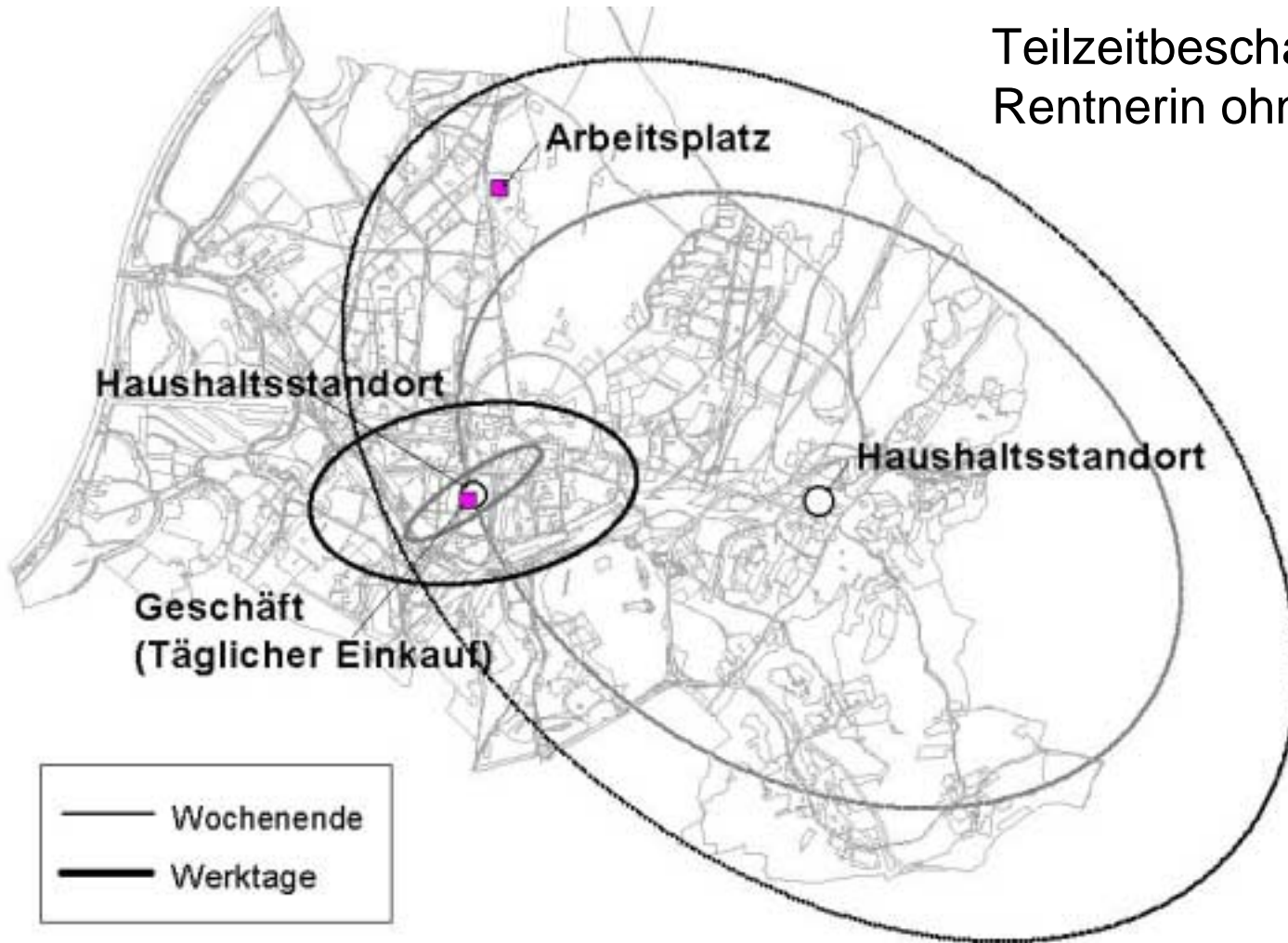
Individual rhythms: Daily shopping



Number of places visited/person



Activity spaces (confidence - ellipses)



Teilzeitbeschäftigt mit PW;
Rentnerin ohne PW

Challenges

- Modelling of the rhythms and of their structures
- Modelling of scheduling
- Interaction between information, prices and behavioural response
- Are variable travellers truly flexible travellers ?