

Dynamics in social activity-travel patterns

Pauline van den Berg
Theo Arentze
Minou Weijs-Perrée



TU / **e**

Technische Universiteit
Eindhoven
University of Technology

Where innovation starts

Introduction

- **Activity-travel patterns for social purposes**

Number of trips



Distance



Introduction

- **Activity-travel patterns for social purposes**
- **Increasing attention for social activity-travel patterns**
- **Thus far: mainly a static approach**

Background

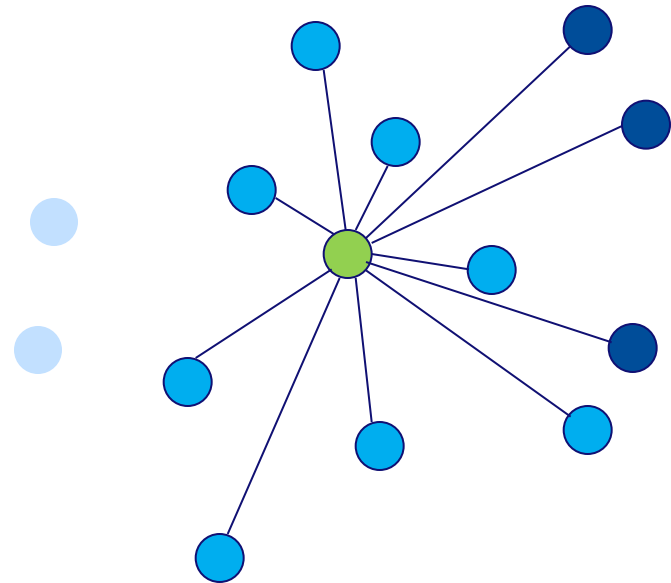
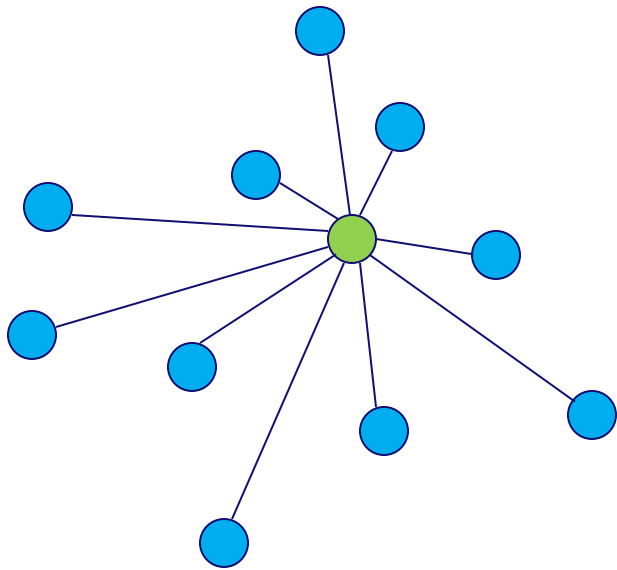
- **Dynamics of activity and travel behaviour**
- **Life-course approach**

Background

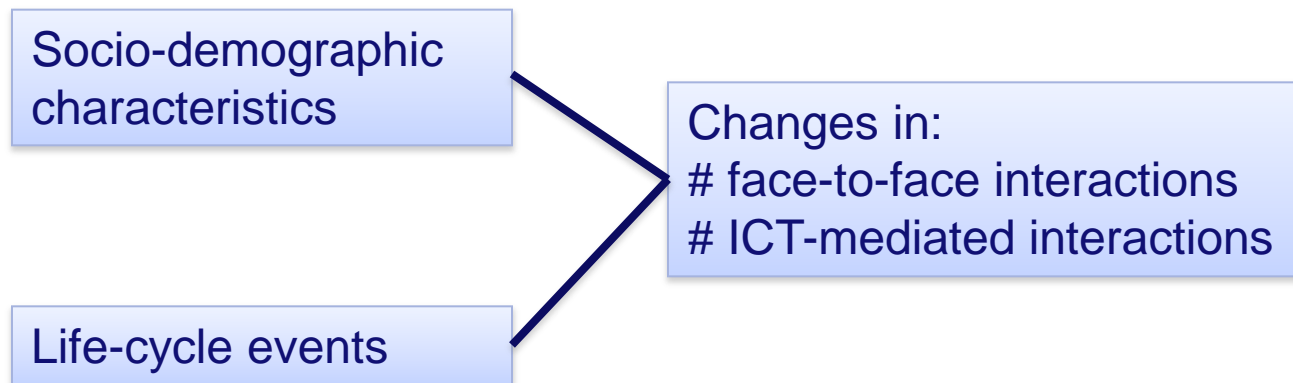
Dynamic social networks and interactions

Sociology – no focus on activity-travel

Transportation – Sharmeen; Carrasco



Aim



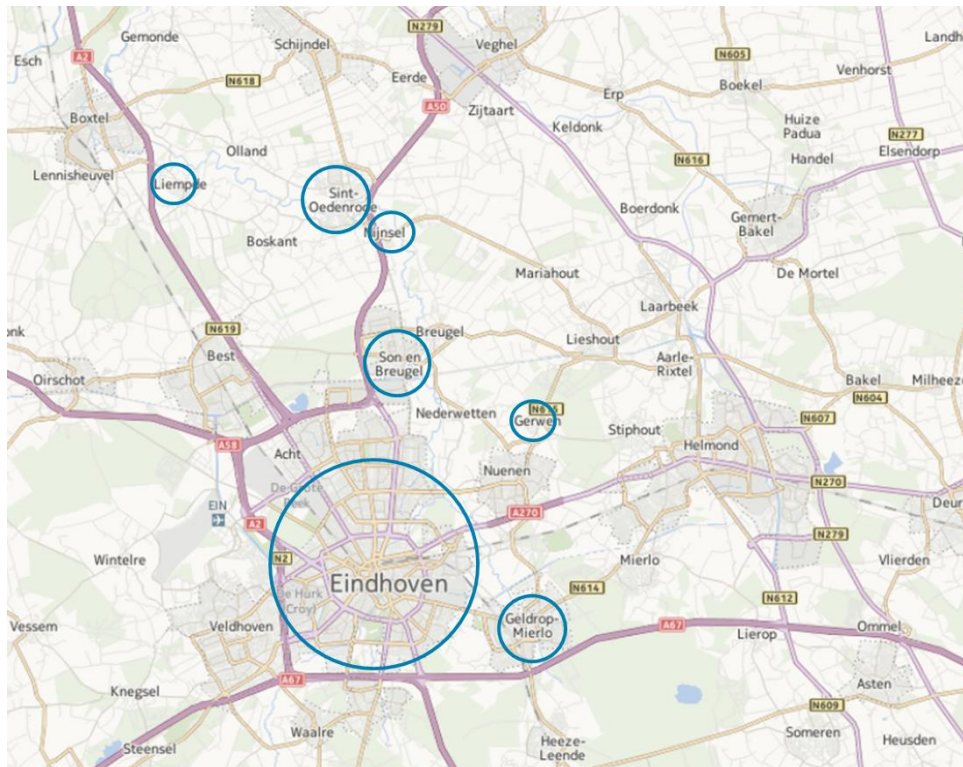
Data collection

- **Two waves: 2008 and 2014**
- **Eindhoven region**
- **Social interaction diary**
 - face-to-face and ICT interactions
- **Survey**
 - Socio-demographics
 - 2014: life-cycle events



Sample

- **2008** **747 respondents**
- **2014** **139 respondents**



Sample: socio-demographics

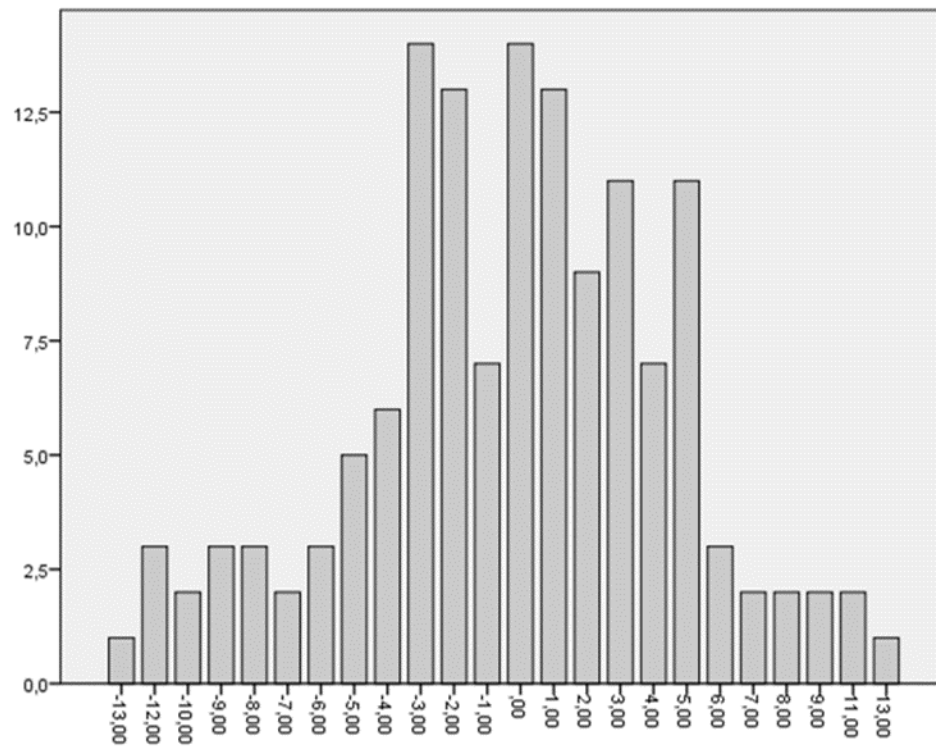
	2008	2014
	Mean	Mean
Age	46.5	58.0
	%	%
Male	39%	35%
Female	61%	65%
Single person household	11%	12%
Couple	47%	45%
Family with children	42%	44%
Primary education	23%	21%
Secondary education	31%	26%
Tertiary education	46%	53%
No work	35%	44%
Part time work	38%	35%
Full time work	27%	21%
Urban area	39%	35%
Suburban area	21%	39%
Rural area	40%	25%
No car	9%	6%
1 car	56%	66%
2 or more cars	33%	29%

Sample: life-cycle events

	N	%
New job	16	12%
Lost partner or relative	51	37%
Got married	3	2%
Birth of a child	10	7%
Residential relocation	7	5%
Child(ren) moved out	24	17%

Results

- Changes in # face-to-face social interactions



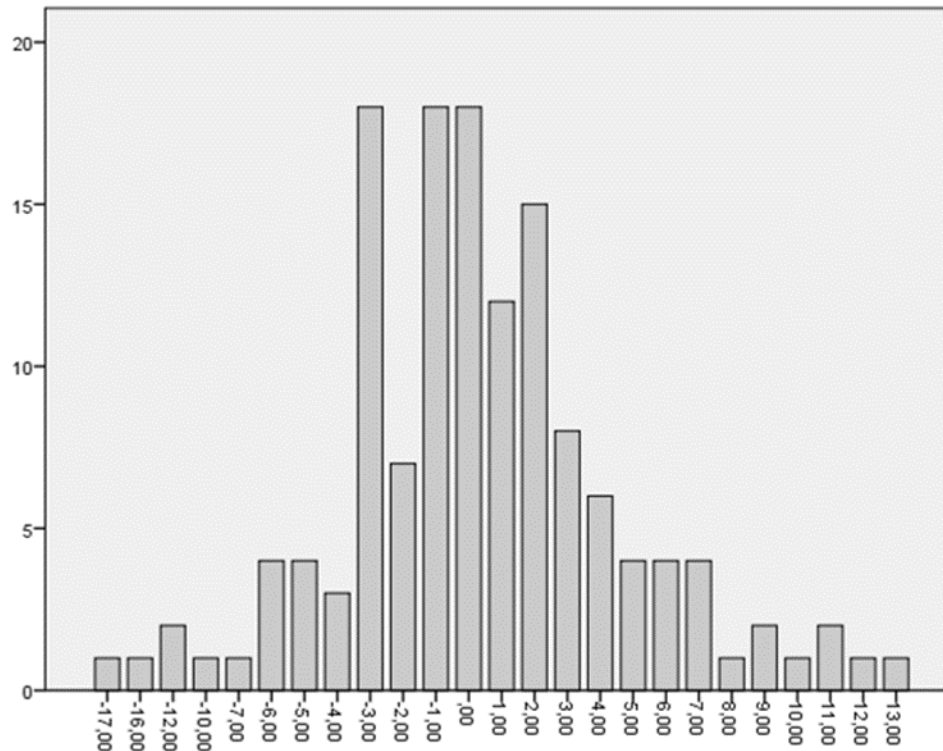
Results

- Linear regression models for changes in # face-to-face interactions

	Model 1		Model 2	
	B	Sig.	B	Sig.
Constant	3.695	0.000	0.964	0.412
# F2F interactions 2008	-0.545	0.000	-0.621	0.000
Frequency of cycling (1-7)			0.473	0.015
2 or more cars in household			1.765	0.023
Got married			-5.839	0.023
Got child			3.131	0.030
Adjusted R-Squared	0.234		0.313	

Results

- Changes in # ICT social interactions



Results

- Linear regression models for changes in # ICT interactions

	Model 1		Model 2	
	B	Sig.	B	Sig.
Constant	3.178	0.000	10.466	0.000
# ICT interactions 2008	-0.545	0.000	-0.703	0.000
Frequency of cycling (1-7)			0.373	0.025
Age			-0.079	0.000
Low education			-2.680	0.000
Partner			-4.257	0.000
Rural area			1.227	0.076
Adjusted R-Squared	0.267		0.473	

Conclusions

- **Extended knowledge of the dynamics of social activity-travel**
- **Effect of mobility on changes in face-to-face contacts**
- **Two life cycle events affect changes in face-to-face contacts**
- **No significant effects of life cycle events on changes in #ICT-mediated social interactions**

Dynamics in social activity-travel patterns

Pauline van den Berg
Theo Arentze
Minou Weijs-Perrée



TU / **e**

Technische Universiteit
Eindhoven
University of Technology

Where innovation starts