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A dynamic understanding of travel demand: a sketch

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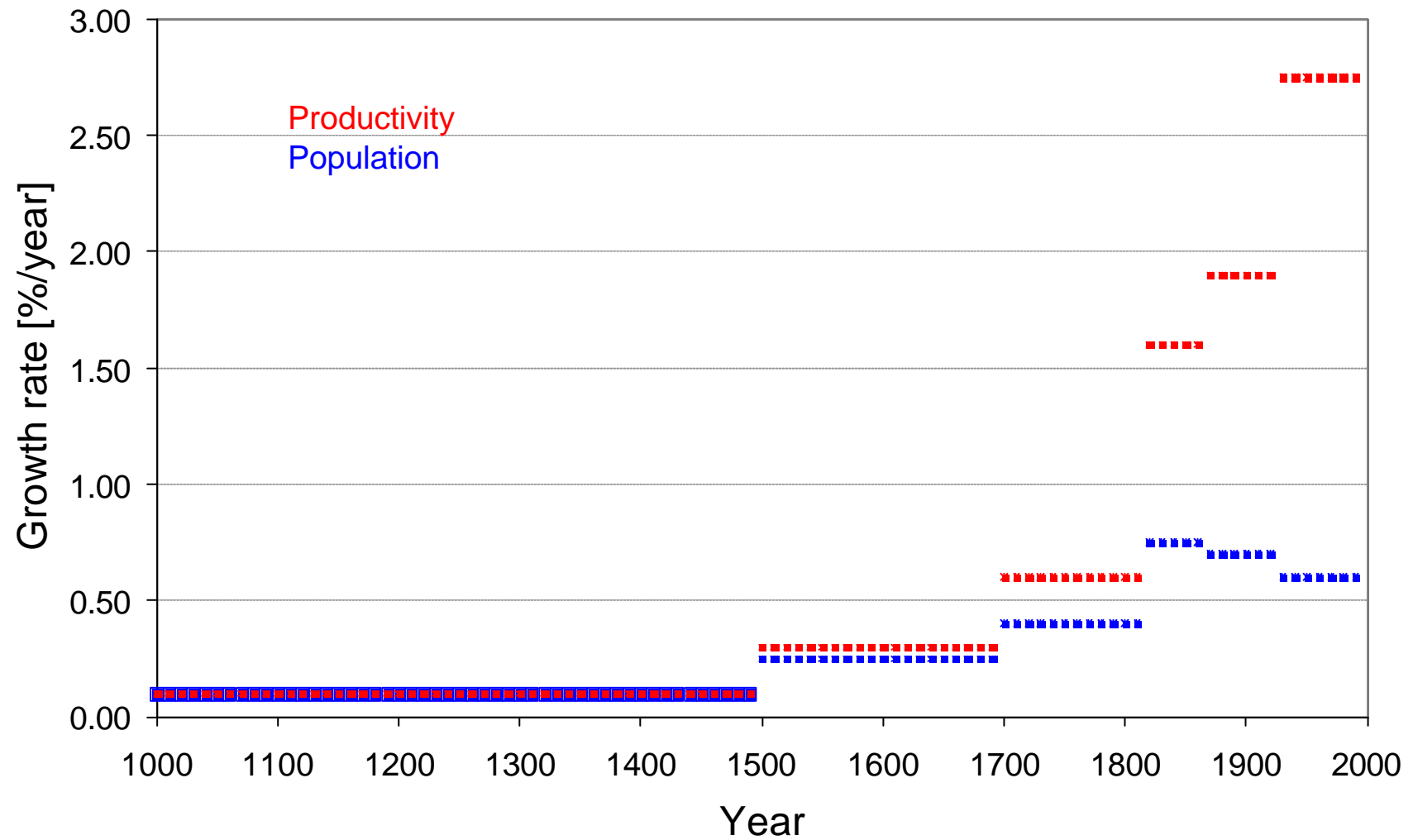
Aim

Highlighting three areas:

- Social networks and travel
- Activity space impacts
- Day-to-day activity generation

assuming a dynamic micro-simulation of activity participation as the framework

A look back: Productivity growth since 1000 (W Europe)



Galor and Weil (2000)

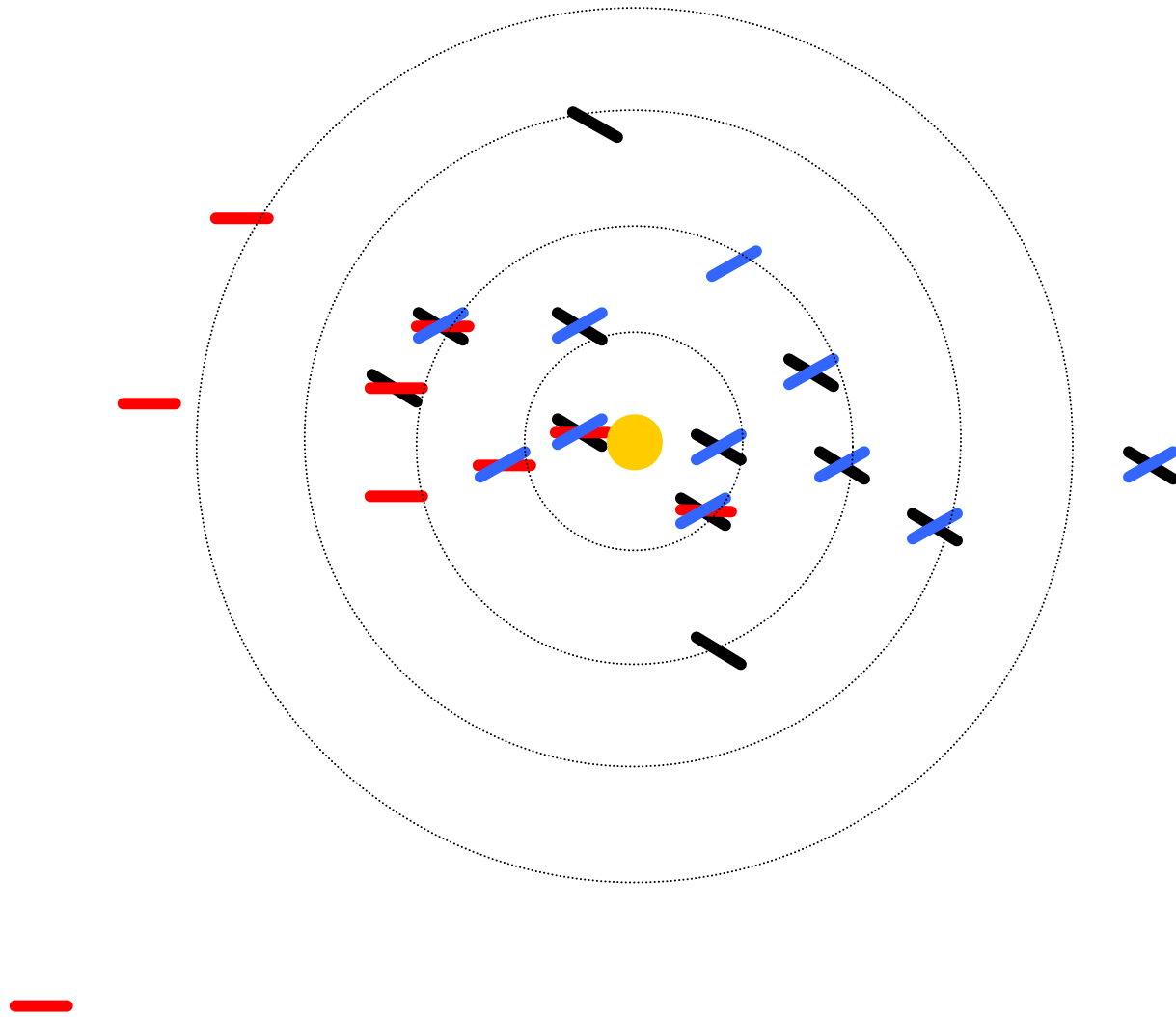
Summary for the look back

Extraordinary income streams have been created and are consumed (in part) as

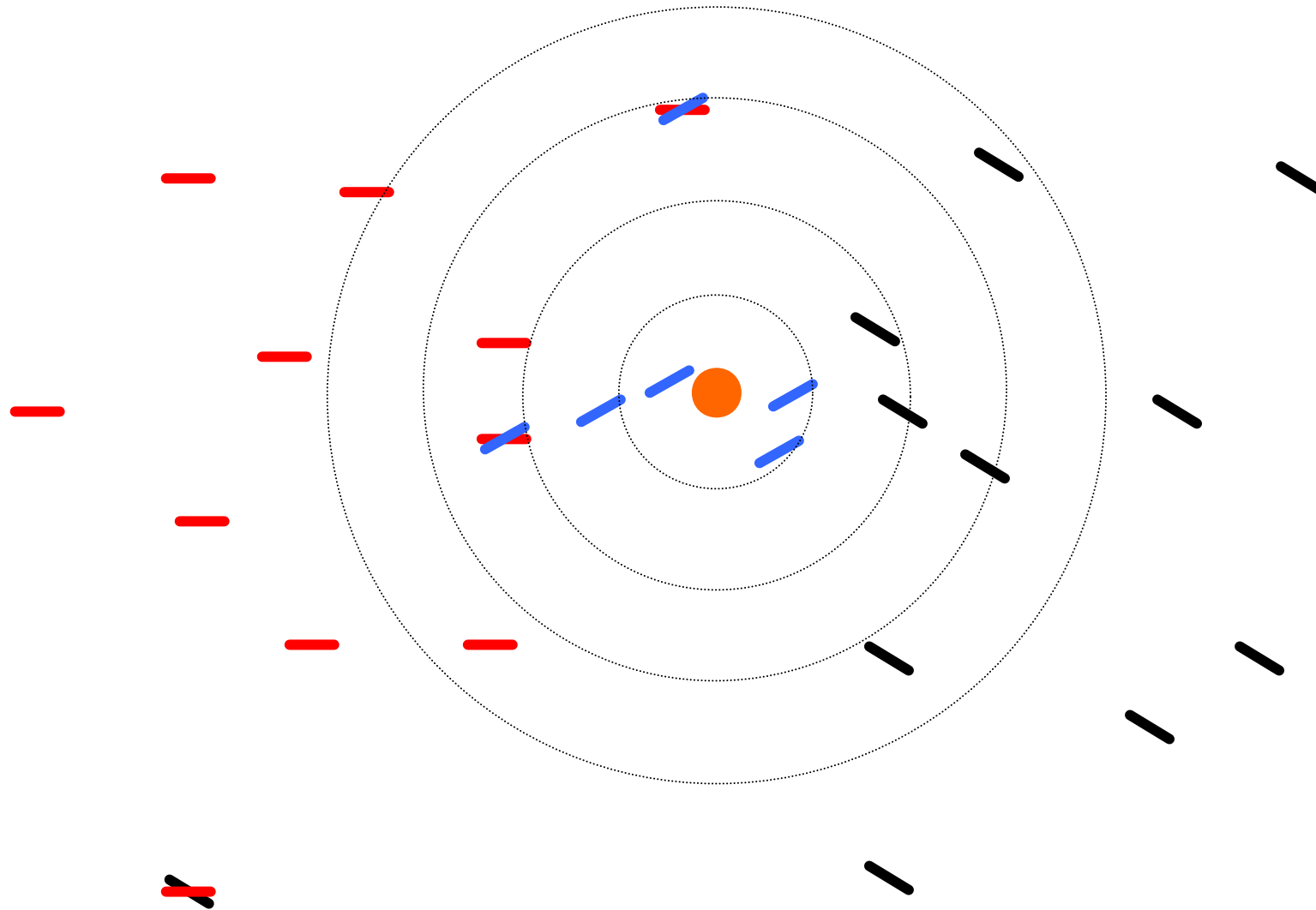
- Travel (Speed)
- More (and dispersed) housing
- Long-distance communication
- Longer lives with less work

- Independence/Isolation
- Relative more spending on travel and communication

Long term commitments: Social network structure past?



Long term commitments: Social networks today ?



Changes in social network structures

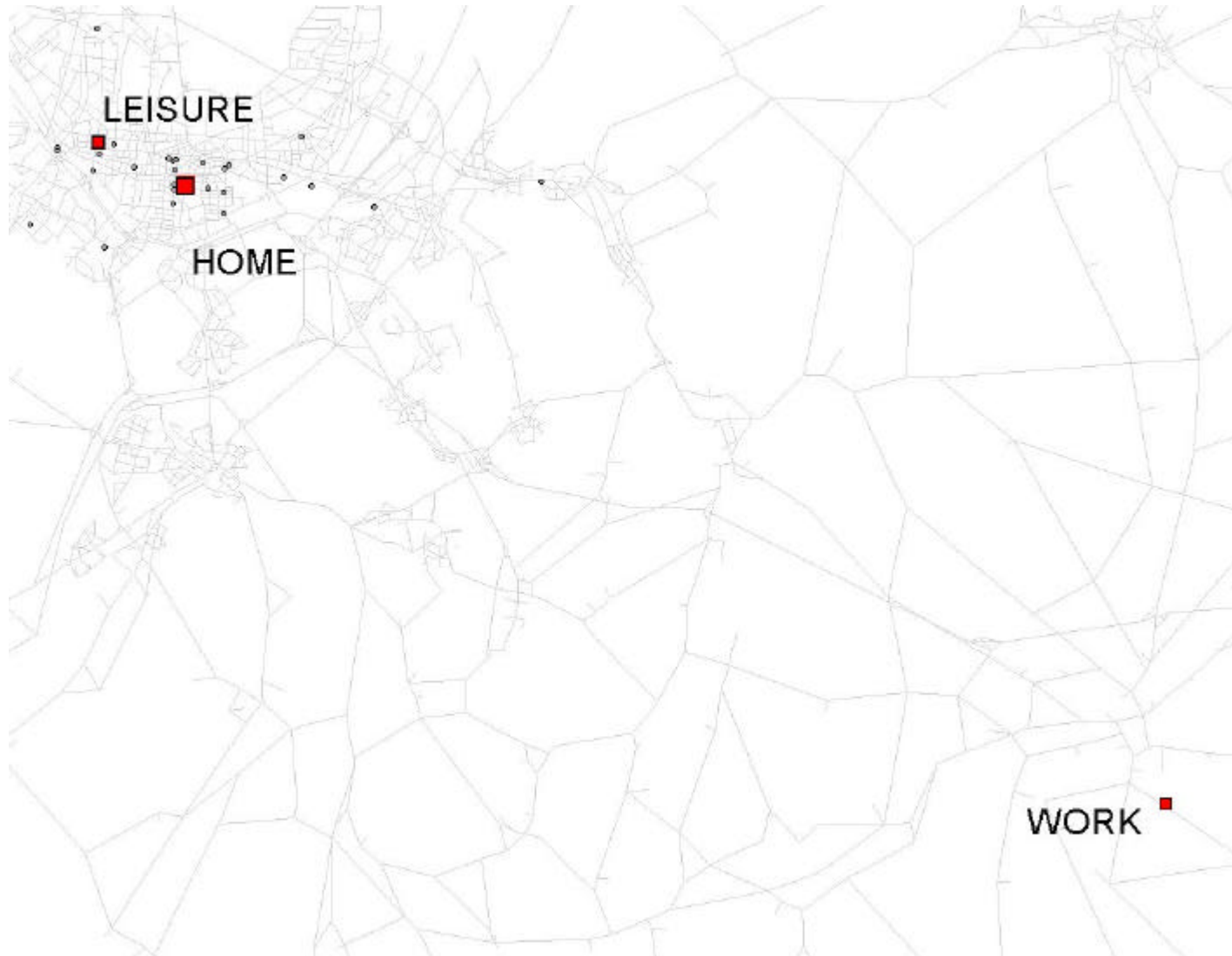
- Spatial distribution of the home locations of the members of the networks will be wider than in the past
- The networks will have less overlap in membership
- The activity spaces of the members will overlap less

- The set of contacts will be bigger than in the past
- The contacts will be spread among more networks
- The maintenance of each contact requires more effort for a given level of quality

Long term commitments

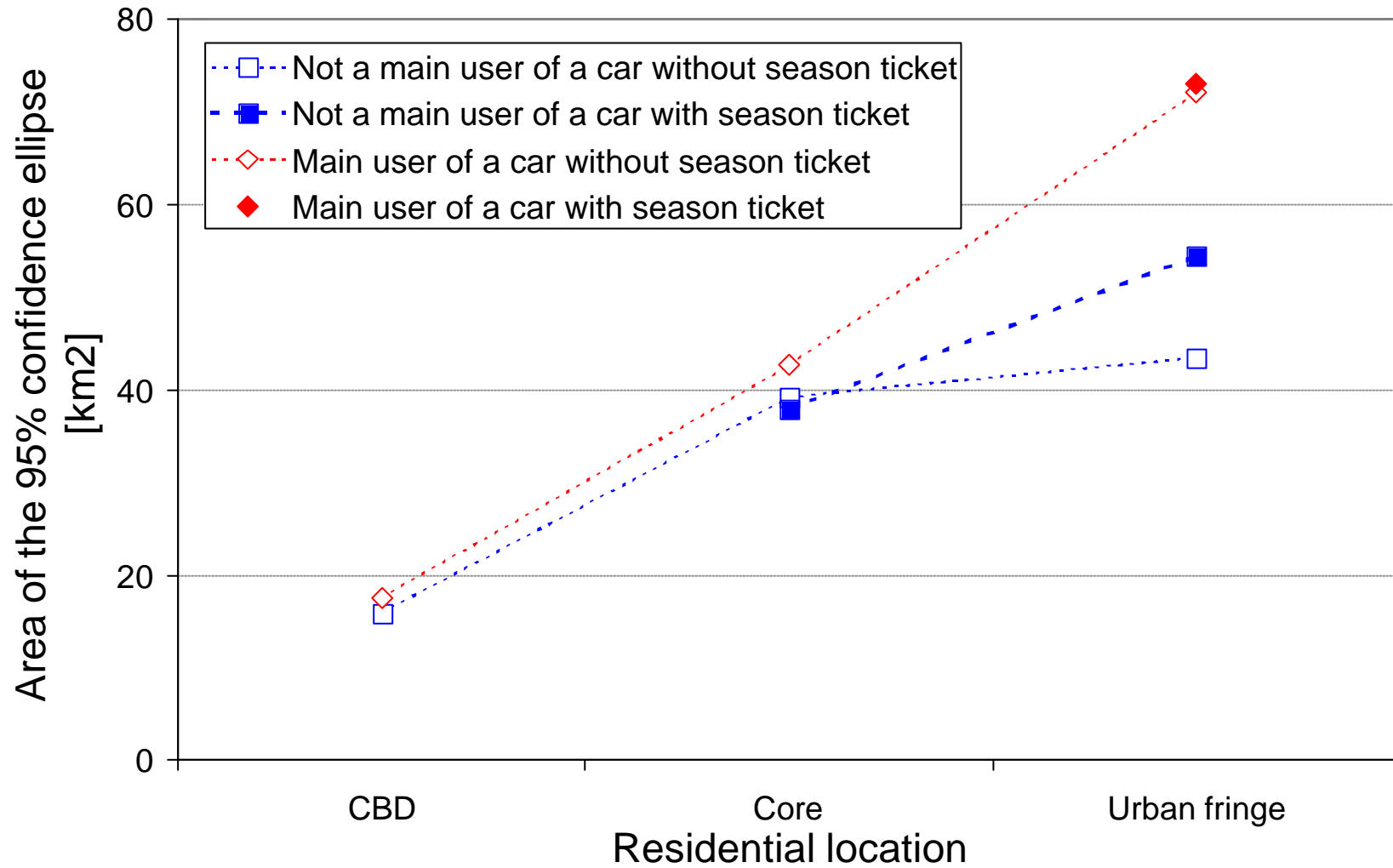
- Work/school location
- Housing location/style of neighbourhood
- Mobility tool ownership
 - car, motor cycle
 - bicycle
 - public transport season ticket

Activity space (Mobidrive 6 week diary, Karlsruhe)



Schönfelder

Long term commitments: Activity space effects



Long term commitments: Summary

Daily life is constraint and enabled by the long term commitments:

- Work
- Housing
- Mobility tools
- Social networks

Models of daily life should properly account for these commitments through:

- Modelling self-selection
- Inclusion of appropriate variables

Long term commitments: Research questions

- Mobility biographies
- Biographies of social network involvement
- Spatial patterns of social life

Day-to-day dynamics: Personal world

Concepts used:

- *Mental map* - Focus on networks and generalised costs of travel
- *Knowledge space* - Focus on spatial distribution of opportunities and their generalised costs
- *Activity repertoire* - Focus on specific activities and activity ideas, experiences, locations and generalised costs of participation

Day-to-day dynamics: Activity calendar

Filled from activity repertoire and external ideas, but structured through:

- Physiological requirements (sleep, personal care, eating)
- Commitments (work, school, family and household, civic)
- Projects

and

- Reserve times for the unforeseen

Day-to-day dynamics: (Daily) activity programme

Constructed from the elements of the activity calendar given

- Scripts, building blocks, routines
- Urgency/desire (time since last performance)
- Replacability

Day-to-day-dynamics: Research questions

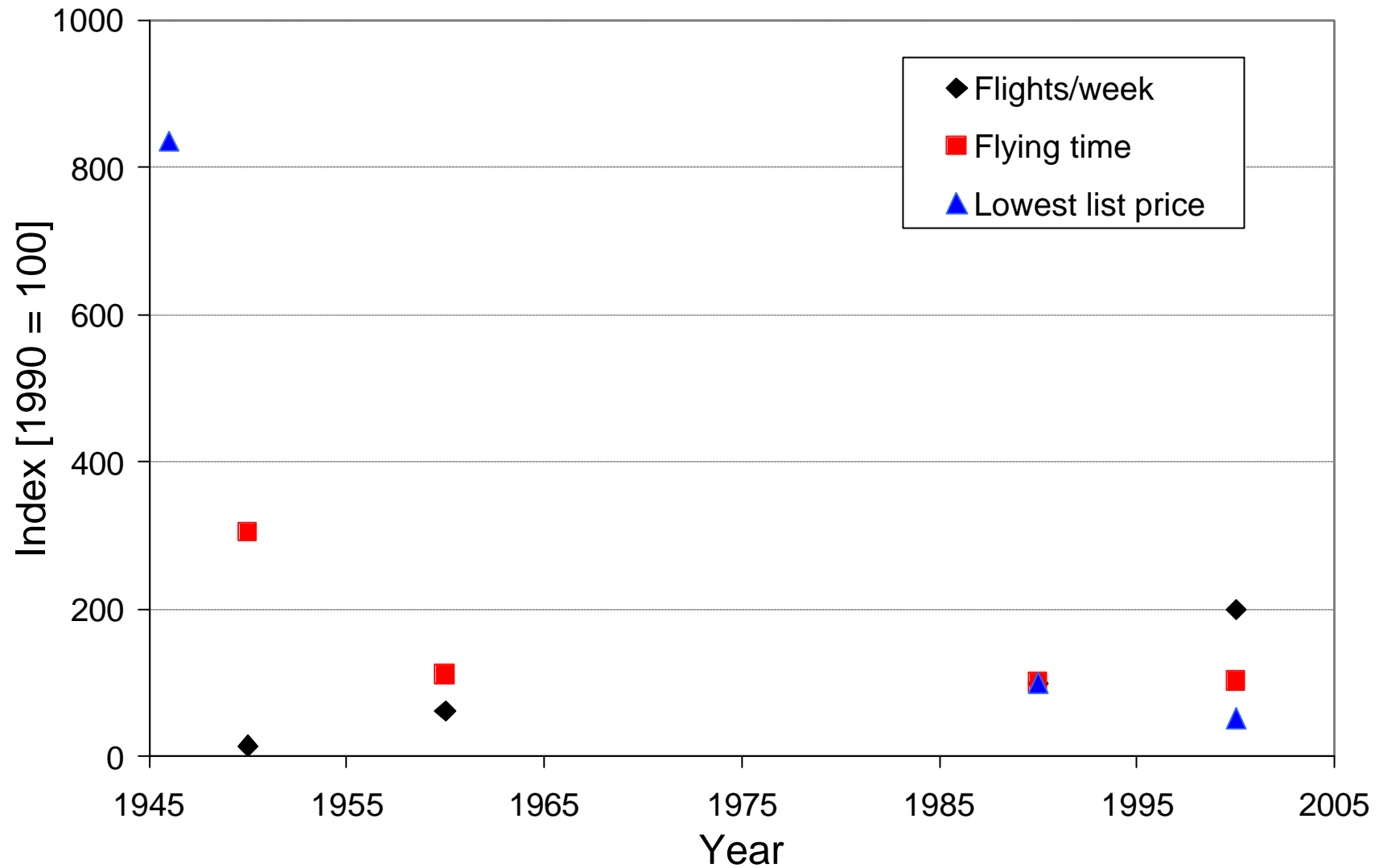
- Functioning of the activity calendar
- Updating of the personal world
- Project formulation, selection and implementation

Literature

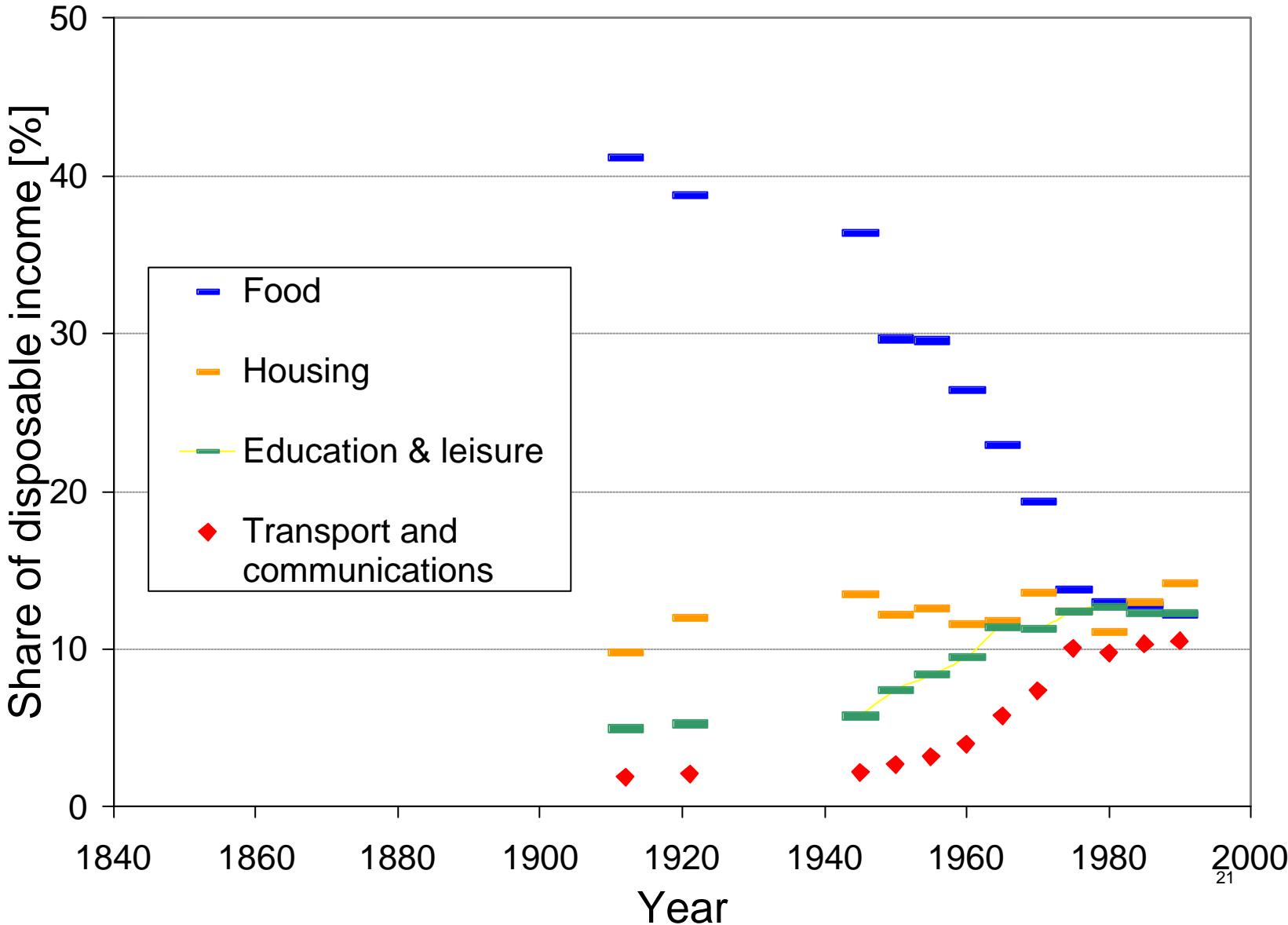
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Appendix

A look back: Travel between Zürich and New York

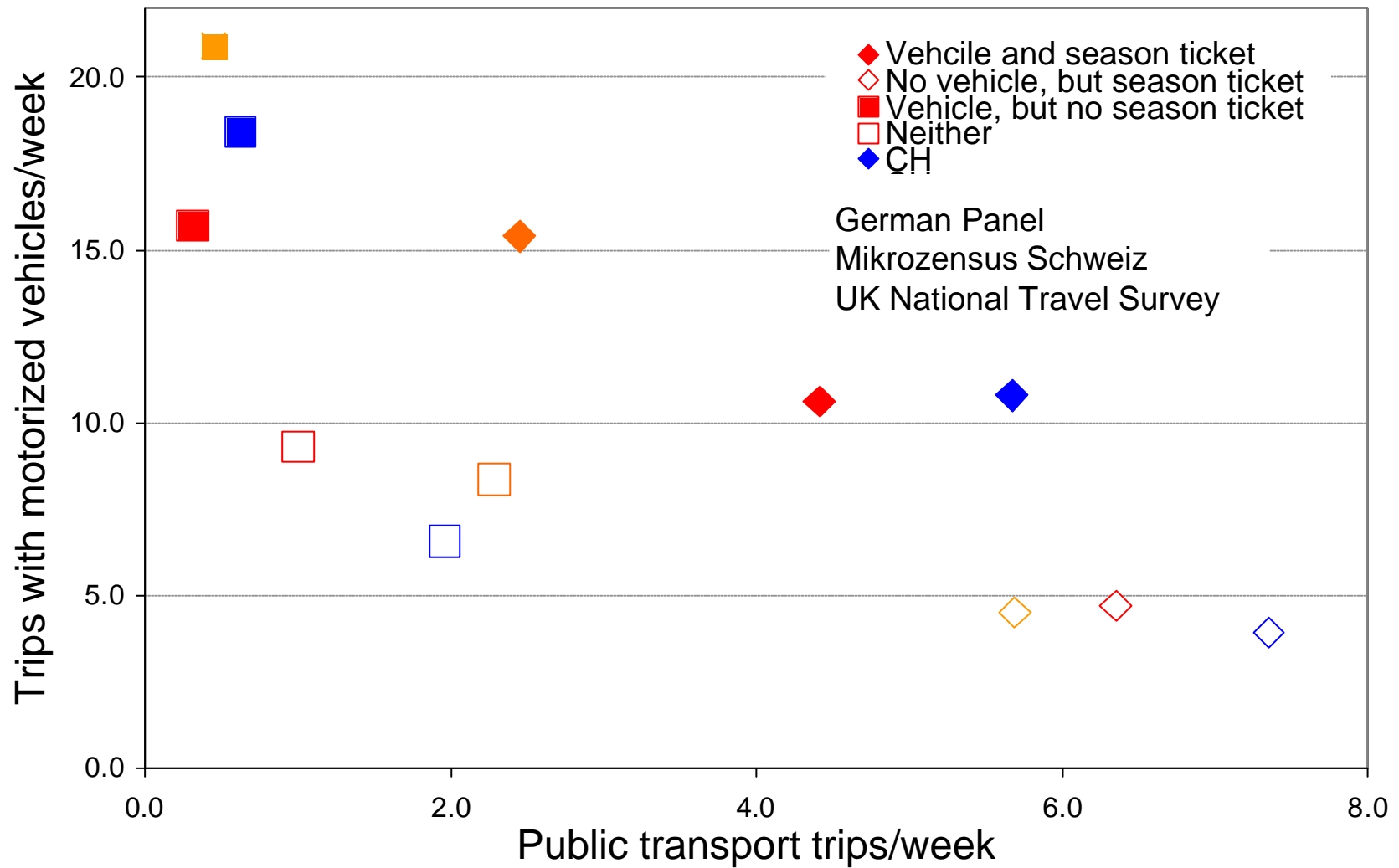


A look back: Expenditure shares in Switzerland



Widmer (2001) 19

Long term commitments and mode choice



Long term commitments: Activity space (Borlänge)

