

Workshop Exercises – Modelling on the Move 3, 12th April 2013

Each group will try two of the following five exercises.

1. EXERCISE ON USING STAKEHOLDER DATA TO MODEL HOW A SYSTEM WORKS

DATA: Two extracts from interview transcripts with policy stakeholders (total – 6 sides A4) about cars and CO2 policy-making, with a focus on how different organisations lobbied differently (or not) and how that affected the policy process.

Talk about building a SD model of policy change, based on this and similar data. Start drawing part of a causal loop diagram, thinking about how organisational and other factors (e.g. economics) shaped the European policy processes. Also think about limitations of using data from stakeholder interviews in this way. How can we ensure that the data accurately represents ‘what went on’?

2. THINKING MORE BROADLY ABOUT USING IN-DEPTH AND ‘MESSY’ QUALITATIVE DATA

DATA: An unedited (25 sides A4) transcript of a ‘go-along’ with a mother who cycles with her son in a cargo bike. Includes informal interview, talk about the route, and brief field notes by the interviewer.

Rather than read this full transcript in detail, skim read the different sections and discuss how we can use ‘messy’ and ethnographic data in modelling. What kind of models can be built out of this kind of data? What would the process of analysis for re-use look like? What advantages and disadvantages does this kind of data have for modelling compared with other types of data (e.g. more structured interviews)?

3. USING INTERVIEWS TO CREATE A MODEL LOOKING AT THE IMPACT OF CAR SHARING

DATA An extract (5 sides A4 – 3 pages transcript, 2 pages analysis) from an interview with a user of a car share club, focusing on her club use/membership and how it affects her travel choices.

Discuss using this data to create a model of the impact that participation in car sharing has on other travel decisions. This could be an ABM looking at how people make decisions, or an SD model looking at take-up of car sharing on a systems level. What inferences can you draw from this kind of data and what are its limits?

4. MODELLING CONCEPTS DERIVED FROM QUALITATIVE DATA

DATA: Extracts from data illustrating three themes (7 sides A4) – well-being, collective learning, and sacrifice. Extracts are varied and quite short from interviews, field notes, etc. – more focus on analysis.

How do you think these concepts would fit within ABM or SD modelling? For example, you might think about modelling well-being at a systems level, and how changes in well-being relate to social trends in transport. How can transport modelling better incorporate concepts derived from qualitative data and what are the limitations of this kind of approach?

5. MODELLING LONGER-TERM HISTORICAL CHANGE

DATA: Very short extracts from interviews (4 sides A4) dealing with three main themes – travelling to work in the past, children’s independent mobility, and attitudes to walking in the 21st Century.

How can this kind of data and analysis be used to model longer-term historical change? For example, this might involve using an SD model to map how attitudes to independence, comfort etc. have shifted at a societal scale and how this affects, and is affected by transport choices. Try and draw some causal loop diagrams to illustrate these historical shifts. What are the limits and possibilities of using historical and longitudinal data to generate models?