

The screenshot shows a web browser window with the URL `http://localhost:8888/uk.ac.ki.MoPX2/index.htm?session=PEuedeQmOclH7BEZRVGf5b#Started`. The interface includes a navigation menu with buttons for 'Behaviour Composer', 'Full-Library', 'History', 'Search', 'Help', 'Epidemic-Library', 'Epidemic-Guide', and 'RANDOM-ENCOUNTER'. The main content area displays the following text:

*If I'm infected then individuals I randomly encounter may become infected.*

**RANDOM-ENCOUNTER**

```
do-every 1
  [do-if my-state = "infected"
    [do-for-n the-encounter-rate
      all-individuals with [my-state != "dead"]
      [set [my-last-encounter] of the-other myself
        add-behaviour POSSIBLE-INFECTION]]]
```

**Variants**

This models individuals that have *the-encounter-rate* encounters per time period (a week). The time period can be changed by replacing the 1 in *do-every 1*.

**Related Micro-behaviours**

This relies upon the [POSSIBLE-INFECTION](#) micro-behaviour to possibly infect the other. [CREATE-ENCOUNTER-RATE-SLIDER](#) defines the *the-encounter-rate* variable used here.

## BehaviourComposer

### Purpose

BehaviourComposer enables non-programmers to create, run, and analyse computer models that consist of many interacting heterogeneous individuals or agents.

### Description

One begins building models using the BehaviourComposer by browsing a web site containing fragments of computer code we call micro-behaviours. There are micro-behaviours for movement, reproduction, social networks, encounters, and much more. A single click adds a micro-behaviour to an individual. Models typically are constructed by assembling the behaviours of a few individuals that are then copied to populate the model. When the user wishes to run the current model, the BehaviourComposer assembles a complete program and launches it. The program is run by NetLogo – a modelling tool designed for use by both students and researchers. An animation of the model being executed can be viewed and graphs that are dynamically updated as the simulation runs are easy to create. Experiments exploring the parameter space can be automated.

Sample models that have been created with the BehaviourComposer include collective decision-making in animal groups, vaccination and epidemics, relative agreement in sociology, ecologies, and network formation in economics.

Students without any prior programming experience can create models in an hour or two. Students can focus upon exploring the domain of their model and the process of model building without first investing in acquiring technical skills.

## Ways of using this tool

BehaviourComposer can be used in classroom, tutorial, or thesis research for students to investigate and/or create computer models and analyse the results.

## Learn More

<http://modelling4all.nsms.ox.ac.uk/about/index.html>

## Access

Access is free and open: <http://modelling4all.org/>

This document is part of a larger set aimed at introducing the reader to a wide range of technologies. Please visit this web page for more information:

<http://www.oucs.ox.ac.uk/ltg/>

*Your primary support for IT issues comes from your department or college. If you would like advice on using computer models in learning and teaching at Oxford please contact OUCS.*