GENERATIVE SOCIAL SCIENCE
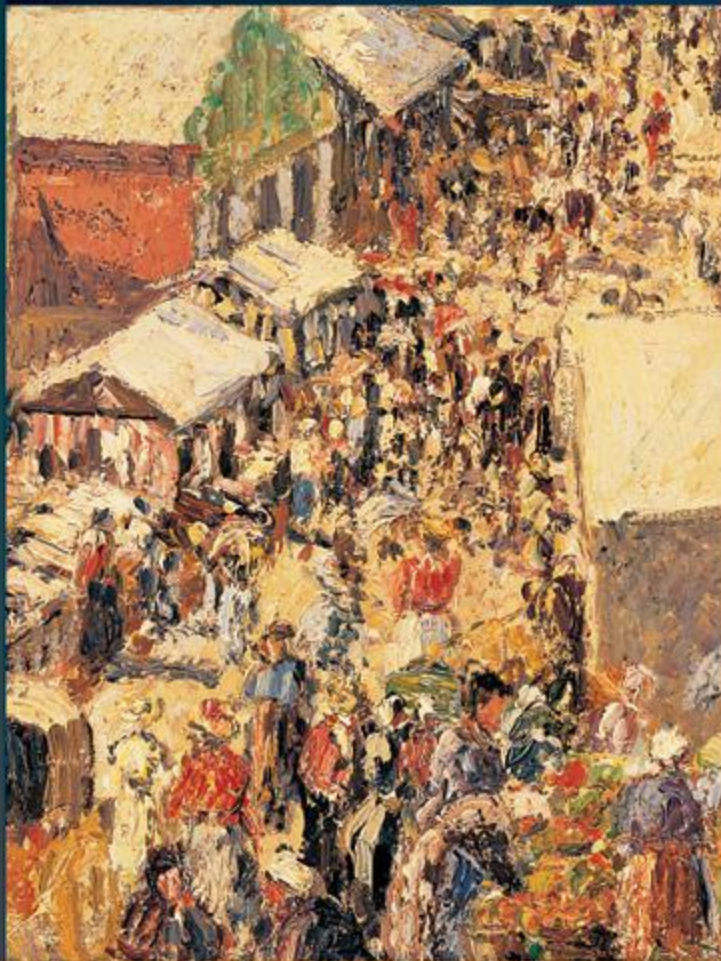
STUDIES IN AGENT-BASED COMPUTATIONAL MODELING

JOSHUA M. EPSTEIN

View Movies

Run Models

CD Information

Generative Social
Science Home Page

READ ME FILE FOR CD
There are two ways to use this CD. First, one can play the movies corresponding to model runs discussed in the various chapters. These movies are read-only (i.e., cannot be modified). Second, one can run models as Ascape applets, adjusting parameters at will. These modes of using the CD are discussed below.
When the CD is inserted into your computer, a book jacket and menu of options should automatically open. If it does not, open "My Computer" and click on the drive letter corresponding to your CD drive. For technical help, see below.

PLAY MOVIES
To play the movies, choose the "View Movies" option from the main CD menu. You will see a list of folders corresponding to chapters of the book. Open the folder for a chapter, and click on the movie you wish to view. These are the full movies corresponding to the snapshots presented in the text. You can pause and restart the movie using the control bar at the bottom of the movie frame. You can use the menu options at the lower right to return to the movie menu, the main menu, or advance to the next movie referenced in the book.

RUN MODELS AND ADJUST PARAMETERS
You can also load and run many of the models discussed in the book. To do this, select "Run Models" from the main CD menu. This will open a dialog box titled "Open Model" with a pull-down menu listing all the available models. Select the model you wish to run, and then click "Open". (Note that when the dialogue box opens, Prisoners' Dilemma (PD) is listed in the model window. Despite this, to run the PD applet, you must pull down the menu and select the PD again explicitly from the list).
Once you have opened a model, you will see several windows created. The number of windows created will depend on which model you selected. However, there will always be a window titled CONTROL BAR. This is the control bar for ASCAPE, a modeling platform developed at the Brookings Institution. The control bar will allow you to start, pause, and restart the model. It will also allow you to change some of the model's variables. You can change these variables on the fly (i.e., mid-run) or you can change them at the beginning of a model run. To change the variables, click on the picture of the globe on the control bar. You can now edit variables as you see fit. (Some of the Applets require that, having made your change, you unclick the entry). There are many more things one can do (e.g., create new time series, call up real time cell inspectors, create pie charts and histograms). For a detailed description of Ascape's full runtime functionality see http://jasss.soc.surrey.ac.uk/4/1/5.html.

The models in this book that are included as Ascape applets on the CD are:
    The Artificial Anasazi (Chapters 4-6)
    The Retirement Model (Chapter 7)
    The Classes Model (Chapter 8)
    The Prisoners' Dilemma Model (Chapter 9)
    The Norms Model (Chapter 10)

The models not in this book that download with Ascape, and are also included on this CD are:
    The Epstein-Axtell Sugarscape Model and Conway's model "Life."[1]
In courses on agent-based modeling, one could read a book chapter and play the movies of runs discussed in the text. Then, as projects, one could ask students to load the

models in Ascape and alter the assumptions, explore sensitivities, or analyze variations. For example, the demographic Prisoners' Dilemma Ascape code is completely general. To explore the demographic Coordination Game, simply load the PD Model, change the payoffs, and re-run. Beyond their pedagogical applications, the same models can obviously be used for research.

The variations possible in this mode, while extensive, are largely parametric. To change the agent rules syntactically, or to make up completely new ones, access to the source code is required. Subject to the copyright restrictions noted below, Ascape source code for all models is available from the author on request. Finally, experienced programmers can, of course, build entirely new Ascape models from scratch. Once again, detailed information is available at http://jasss.soc.surrey.ac.uk/4/1/5.html, where many of the models included on the CD are also discussed further.

For general technical assistance with the CD, contact Vickie Kearn at vickie_kearn@pupress.princeton.edu. This CD is not designed to run on Macintosh computers.

[1] Note that the Firms model and the Heat Bugs model have been deleted from this CD. However, since they normally download with Ascape, they are listed in the pull-down models menu.