Simulating the Social Processes of Science

Challenging the field of social simulation to produce good models of how science operates

Context

During the last forty years, a variety of explanatory, exploratory, and metaphorical models of the science system have been used in a number of different fields. As a consequence, this topic has appeared at a variety of different conferences, resulting in a string of rather isolated papers. We believe the time is right to try and consolidate and focus these efforts – to attempt serious models that address the link between the micro-behaviour of scientists with the global patterns of science.

Aim

To stimulate interest in simulating the social processes that occur within science, particularly to motivate some agent-based modellers into producing models of the inter-scientist processes that contribute to the phenomenon we call science.

Strategy

1. Invite a number of position papers, describing the features and issues they would like to see in a social simulation of science.
2. Publish these as a collection in the Forum Section of JASSS (*Journal of Artificial Societies and Social Simulation* – the main journal for social simulators), with a foreword challenging social simulators to address these issues.
3. Organise and run a residential workshop in 2012 open to researchers to present and discuss their simulations, with a few philosophers and sociologists present.
4. Publish a special issue or book of revised papers on this topic based on the simulations presented at the workshop.

What we are asking of you

To write a position paper for this project. It should be directed to the social simulation community, with an aim of: stimulating them to develop models of science, guiding them to some of the important properties, issues and evidence that they should address in their simulations, and possibly indicating which aspects might (or might not) be amenable to such an approach. The simulations will probably include both cognitive and social aspects of science and scientists. We are open to all viewpoints on the efficacy and nature of science, but would appreciate a focus on areas where you think simulation can contribute to our understanding.

So please write a short essay, with a guideline of 3000 words, to be delivered in a Microsoft Word readable format (.doc .docx .rtf .odt) and emailed to bruce@edmonds.name by the ***1st April 20101***. Please contact us if you have any questions, or suggestions.

Co-Chairs/Co-Organisers

Petra Ahrweiler, Professor of Technology and Innovation Management and Director of the Innovation Research Unit at University College Dublin. http://casl.ucd.ie/people/petra.ahrweiler

Nigel Gilbert, Professor of Sociology and Director of the Centre for Research in Social Simulation, University of Surrey, United Kingdom, and General Editor of JASSS. http://www.soc.surrey.ac.uk/staff/ngilbert

Bruce Edmonds, Director of the Centre for Policy Modelling and Senior Research Fellow at the Manchester Metropolitan University. http://bruce.edmonds.name

Andrea Scharnhorst, Senior Research Fellow at the DANS (Data Archiving and Networked Services)/ e-humanities groups at the Royal Netherlands Academy for Arts and Sciences http://virtualknowledgestudio.nl/andrea-scharnhorst/