

Andreas Duus Pape: Service Statement

There were three areas I contributed to the Binghamton community: my work with the Complex Systems community on campus (‘Complex Systems’ or ‘Complex Adaptive Systems’ is the name of the larger field that agent-based modeling is a part of); my work with David Sloan Wilson’s “Launchpad Binghamton” project; and my work in the department in more traditional service.

1 Complex Systems

I act as associate director of CoCo, the Collective Dynamics of Complex Systems working group, under the director and founder, Associate Professor Hiroki Sayama in the departments of Bioengineering and Systems Science. Complex Systems is a young field that currently exists institutionally at a small number of universities, including my alma mater, the University of Michigan, where I was trained in these methods. Complex Systems focuses on the study of emergent properties of collections of individual agents: for example, swarm behavior or economic behavior. (Much of my research in economics is in agent-based modeling, which is a part of complex systems. Please see the research statement for details.) With two other members of CoCo, we were able to develop and get approval for the Advanced Graduate Certificate in Complex Systems Science and Engineering and we have begun issuing certificates to Masters and PhD students who complete this sequence. More information on this certificate is available on this web page: <http://www2.binghamton.edu/cx/>. My graduate course “Agent-based Policy Modeling” is a core course in that certificate (please see the teaching statement for details). We may be able to develop this certificate further in the future into a stand-alone Masters program.

2 Launchpad Binghamton

Launchpad Binghamton is a Binghamton University initiative to develop student-run businesses on the West Side. The Executive Committee of Launchpad includes David Sloan Wilson, who leads Launchpad Binghamton, which grew out of his class “The Binghamton Microcosm” and his work with the Binghamton Neighborhood Project; and Vishal Gupta, a professor of entrepreneurship in the School of Management, who provides expert direction and advice to the student businesses in Launchpad Binghamton and the business aspects of the demand simulation. We had a series of events in which we solicited student ideas for business, built teams around the most promising ideas, and tried to organize them into seeking business loans. The project has not yet yielded any business start-ups, and we considering alternative ways to organize this enterprise.

Toward this project, I applied for funds through the Sustainable Communities TAE to develop an agent-based demand model of West Side residents (including students) to support these new businesses. It was intended to be the foundation for a larger agent-based model of the Binghamton political economy. The work would support local economic development, University undergraduate education, and, in the end, would result in a decision tool that could be used by community leaders, researchers from different fields, local business people, and students. The TAE chose not to fund it this cycle, but perhaps this project will become a reality in the future.

3 Traditional Departmental Service

I have served three years on the department's executive committee. I believe I have offered helpful ideas to that group. I ran a course for the PhD students in research. I think the students would agree that I was helpful in describing how to pursue research topics and present them. I also ran the economics department seminar series twice; one semester I co-ordinated with CoCo (see Section 1) to bring agent-based modeling economists to campus.