

# Microsimulation of emergence and exit in political economy

## Formalisms and lessons from history

Wolfgang Radax

Economics, University of Technology, Vienna

[wolfgang.radax@econ.tuwien.ac.at](mailto:wolfgang.radax@econ.tuwien.ac.at)

Manuel Wäckerle

Economics, University of Technology, Vienna

[manuel.waeckerle@econ.tuwien.ac.at](mailto:manuel.waeckerle@econ.tuwien.ac.at)

Hardy Hanappi

Economics, University of Technology, Vienna

[www.tuwien.ac.at/hanappi/](http://www.tuwien.ac.at/hanappi/)

[Hanappi@econ.tuwien.ac.at](mailto:Hanappi@econ.tuwien.ac.at)

Paper contributed to the 2nd General Conference of the International Microsimulation Association, "Microsimulation: Bridging Data and Policy", Ottawa, Ontario, Canada; June 8th to 10th, 2009.

### Abstract

Theories of the evolution of political economy are crowded with subjects all playing their respective, more or less malicious roles – physical individuals, firms, unions, social institutions, nation states, international organizations, and so on – but only rarely emergence and fading away of these entities has been systematically investigated. Usually their existence is simply assumed, at best some non-formal descriptions of empirical observations concerning emergence can be found. In this paper we show how microsimulation can help to investigate general features of emergence. In particular the use of simulations with a manageably large amount of different types of heterogeneous agents proves to be a good starting point. In other words, the first part of the paper will present a fresh framework which is able to handle a prototype of the emergent-entity-process in political economy.

The second part shows that the proposed framework is plausible. Of course, to do so the starting point is always the observation of historical examples with which the *force of abstraction* that is usually applied in economic theory is able to distil key features of emergence. As our argument shows, it is of utmost importance to clearly identify the set of essential types of micro- and meso-entities, *as well as* to provide the correct life spans and time horizons for them. With so many details entering the first step of the simulation as exogenous inputs it rather looks like only little formalized historical story-telling. But this is only step 1 simulation! As we show in several examples, the *really exciting* part of the following steps of microsimulation is *how and where more general elements* are introduced. In our view it is *the work process on microsimulation* which is the *key element for scientific advance*, whereas specific simulation runs and their interpretation play a comparably minor role.

In a conclusion we will try to return to the discussion of the framework of part 1 under the perspective elaborated in part 2. Some limitations and possible future research directions are discussed.