AGENT-BASED MODELS IN PHILOSOPHY

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Abstract

The Guest Editor introduces the relevance of Agent-based models in Philosophy, the topic of this issue's opening feature

Keywords

Agent-based models; philosophy of science

I am very glad to be again Guest Editor for *The Reasoner*. This time, my chosen topic is agent-based modelling (ABM) in philosophy of science. Agent-based models (ABMs) have revolutionized our approach to understanding complex systems across numerous fields. Unlike traditional analytical methods that often rely on simplifying assumptions and struggle with non-linear relations, ABMs simulate from the bottom up the behaviour of individual, heterogeneous agents and their interactions. ABMs have been used to address critical questions in epidemiology (e.g.

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spread of disease through social networks), economics (e.g. emergence of financial market bubbles), and the social sciences (e.g. dynamics of opinion polarization), among other disciplines.

In the last few years, following their success in modelling complex systems across scientific disciplines, ABMs have become the weapon of choice of more and more philosophers of science, too, for investigating phenomena such as theory choice, scientific collaboration, and knowledge diffusion. Without further ado, let us delve deeper into the topic with Dunja Šešelja, a leading expert in the field, and two of her collaborators, Samuli Reijula and Matteo Michelini.

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