

Abstract

Master thesis elaborates on agent-based modelling (ABM, computer simulation method) founded on the concept of analytical sociology and its use in empirical sociology. The use is demonstrated by creation of a model based on the principal of environmental sociology studying the influence of social factors on the environment. Thesis works with the empirical-theoretical concept New ecological paradigm (NEP) measuring the values and opinions on the environment. The origin of the paper was motivated by the absence of the projects combining the method of empirically calibrated agent-based modelling and sociological grounds, particularly in the Czech context, but also abroad. Based on the environmental module of Czech data ISSP 2010 and research question „How parameters of social network influence the willingness to sort waste?“ model was created and analyzed. Relationship between both types of agents (sorting and not sorting waste during the whole simulation) and their neighbourhood was found. The higher the number of neighbours, the more agents with this particular type of behaviour. The likelihood of bond creation with long-distance agent at the expense of bond abolition with close neighbour was without any influence on the number of non/sorting agents. It seems the agents tend to replicate behaviour of their close neighbours so they could feel comfortable.

Keywords

Agent-based modelling, ABM, social simulation, environmental sociology, New ecological paradigm, ISSP