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Key words:

Critical Mass; Protest; Simulation; Social Movements; Swarm

Abstract:

This paper presents an agent-based simulation model of protest activity. Agents are located in a two dimensional grid and have limited ability to observe the behavior of other agents in the grid. The model is used to explore questions inspired by research on different theories of individual motivation and the so-called theory of critical mass. The simulations describe individuals who support an effort to change a policy, but acting in support of that effort is costly. When the marginal effect of participation reaches a certain level, people are more likely to get involved. With certain configurations of parameter values, the simulations produce no sustained widespread participation in protest regardless of the presence of activists; under other conditions high levels of protest are usually sustained, even without activists. However, the addition of a surprisingly small group of activists radically changes the aggregate behavior of the model under some conditions, making high and sustained protest possible when it otherwise would not have been.