Assignment 3 - Simulation in Sociology

The article addresses some of the popular ways simulation has been traditionally used across the Social Sciences, and particularly in sociology. Two of these methods discussed are multi-agent systems and cellular automata. While both have their merits and can add to our analysis of social processes, it is important to be aware of their shortcomings. While multi-agent systems can provide us with a more nuanced way of how each agent would behave, the results of the simulation might not give us a very satisfying macro level analysis, as the actions are happening at a micro level. It may also be difficult to quantitatively understand some of the actions being done by these agents especially in the context of sociology. As for cellular automata, the spatial component is a drawback because of the *nature* of each block of the simulation. It is limited to its neighbours and surroundings, and is formalised. Another huge limitation of cellular automata is the use of synchronous updating of states. All updates happen at the same time which is not similar to how real world processes occur.

As for dynamic feedback, the author describes the creation of a role as a possible way in which loops could help define behaviour. Because social roles are a process which evolve and are a result of other phenomenon which it itself costs, there is a feedback effect. A possible way to observe this in political science could be political mobilisation on twitter and other social media, where once a message goes “viral”, it is constantly bolstered by others in the system, creating a loop of dynamic feedback.