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Carmen A Iasiello* (ciasiell@masonlive.gmu.edu). *Uses of Agent Based Modeling for Social Science Hypothesis Development.*

When using agent based modeling (ABM), the model may act as either the theory being tested or the evidence. When the theory being examined is the computational model, there is a natural tension between attempts to falsify the theory in pursuit of proper science and bringing about practical application of the model as an evidentiary basis. In this session, I will present the benefits of using ABM in the hypothesis development phase, to improve the overall experimentation phase in a given social science experiment. I will argue for ABM as a uniquely useful tool in moving between the inductive and deductive processes, and present three brief examples of ABM use in hypothesis development in archeology, economics, and psychology. In archeology, I present how ABM allows for identification of socio-politically relevant hypotheses to explain the gap between the demise of the late Neolithic era and rise of the early state in East Asia. In economics, I demonstrate the use of ABM in examining the Hollywood labor system, and developing hypotheses for sufficiently explaining the phenomena of Hollywood racial minority underrepresentation. Finally, in psychology, I demonstrate the use of ABM in development of hypotheses of workplace incentive and disincentive frameworks. (Received September 25, 2018)