Bier, J. & W. Schinkel (under review). Building Better Ecological Machines: Complexity Theory and Alternative Economic Models.

In this paper we analyze the implications of ecology and machine metaphors in contemporary macroeconomic modeling. Agent-Based modeling (ABM) comes from complexity theory and draws heavily on metaphors of the economy as ecology. After the 2008 onset of the current crisis, ABM is quickly becoming an influential alternative to the more dominant Dynamic Stochastic General Equilibrium (DSGE) approach, where the market is depicted as a machine. We argue that notions of ecology are not necessarily more open than conceptions of a machine. Yet rather than abandoning these metaphors, we use Donna Haraway's figure of the cyborg to analyze how complexity models use them in combination, as ecological machines. We argue that a more explicit recognition of the cyborg character of macroeconomic models allows for a reimagining of both machines and ecologies in ways that enable more varied economic models.