

1106-91-2405 **Mitchell Eithun*** (eithunm@ripon.edu), **McKenzie Lamb** and **Andrea Young**. *Modeling Monopoly with Monte Carlo Simulations*. Preliminary report.

The board game *Monopoly* is often criticized for its lack of strategy. That is, the game has too many random elements to make the game worthwhile. Using a computer model involving Monte Carlo simulations, we will explore the effects of different *Monopoly* strategies on the outcome and length of the game. By reducing *Monopoly* strategy to a set of parameters, we use optimization techniques such as hill climbing and genetic algorithms to approximate optimal *Monopoly* strategies. Other topics will include the most landed on properties, indicators used to predict game winners, and how changes in upcoming "house rules" edition change the outcome of the game. (Received September 16, 2014)