Mitchell Eithun, McKenzie Lamb* (lambm@ripon.edu) and Andrea Young. Short-Term vs Long-Term Strategy in the Game of Monopoly. Preliminary report.

Using a computer model, we analyze and compare various types of strategies for the game of Monopoly. Using an elementary hill-climbing algorithm and the linear algebra behind the Google PageRank algorithm, we identify several aspects of effective game play. In particular, we identify a ranking of the property groups from most to least desirable and give evidence that this ranking yields a highly effective strategy. We also demonstrate that it seldom pays to ignore the long-term goals determined by this ranking in order to maximize short-term gains. (Received September 21, 2015)