1163-L5-1645 **Michael Czekanski*** (mczekanski1@gmail.com), 14 Old Chapel Road, Middlebury, VT 05753, and **Alex Lyford**, 14 Old Chapel Road, Middlebury, VT 05753. *Probabilistic Decision Making—Looking Beyond Expected Value.*

Life is full of decisions. Whether it's decisions about catching the next train, beating traffic, or playing board games, we constantly engage with probabilistic decision making. Students in introductory statistics courses often learn that we should maximize the expected value of our decisions, which is a good strategy in the long run, but not necessarily the best decision given the circumstances. In this talk, we examine the efficacy of this rule and others in the board game Camel Up. By implementing a series of intelligent agents, we explore how these rules perform and how they work against each other. Furthermore, we look at how these rules perform in comparison to the intuition that students gain in an introductory statistics course. We seek to determine if there is an optimal rule for playing Camel Up, and if so, is it easy to remember? Computers can create complex strategies for games that often beat the best humans. We investigate if a simple, easy-to-learn decision-making strategy based on more than just expected value can perform similarly to that of complex algorithms. (Received September 15, 2020)