Title: Seeding the Herd: Pricing and Welfare Effects of Social Learning Manipulation

Abstract: This paper is motivated by the recent emergence of various interference tactics employed by sellers attempting to manipulate social learning. We revisit the classic model of observational social learning, and extend it to allow for (i) asymmetric information on product value between the seller and the consumers, and (ii) the ability of the seller to "seed" the observational learning process with a fake purchase, in an attempt to manipulate consumer beliefs. We examine the interaction between social learning manipulation and equilibrium market outcomes, as well as the impact of anti-manipulation measures aimed at detecting and punishing misconduct. The analysis yields three main insights. First, we show that increasing the intensity of anti-manipulation measures can have unintended consequences, often inducing higher levels of manipulation as well as higher equilibrium prices. Second, we find that although measures of high intensity can completely deter misconduct, such measures do not lead to any improvement in either seller or consumer payoffs, relative to the case where no measures are present. Third, we demonstrate that in many cases, measures of intermediate intensity can leverage seller manipulation to simultaneously improve both seller and consumer payoffs.