MARKETING COLLOQUIA

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Nancy Wang
PhD Candidate, ECON
MIT, Department of Economics

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ALGORITHMS AND PARASITIC CONTENT

To shed light on how recommendation algorithms are optimized to maintain user attention with content that makes users worse off, we introduce the concept of parasitic content and show its relevance in two experiments. We first define parasitic content in a dual self model of a user interacting with an algorithm. Parasitic content is a user-specific temptation good, targeted to a user tagged as susceptible based on her consumption of related, non-tempting content. We study this phenomenon in an eight-week online field experiment, where 424 young women were incentivized to use randomly assigned TikTok accounts seeded with varying levels of body-positive engagement. Leveraging second-by-second watch histories spanning 1.38 million videos, we find that body-positive seeding caused the algorithm to serve not only more body-positive but also more weight-loss content, and worsened body image by 0.27 standard deviations. To disentangle the roles of body-positive and weight-loss content in this decline, we conducted a mechanism experiment with 1,000 young women. Weight-loss content worsened body image and mood, while body-positive content improved them. Consistent with weight-loss content being a temptation good, nearly half of participants preferred ex ante to avoid being exposed to it—37% of whom were willing to pay to do so—yet consumed it when served. Thus, for many young women, weight-loss content is parasitic to body-positive content on TikTok. Watch histories from the field experiment further demonstrate that weight-loss content served in response to body-positive seeding increased ad revenue and per-video watch time. By learning how consumption of one good predicts consumption of others, algorithms can identify and deliver personalized temptations, increasing revenue at the expense of user well-being