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Department of Economics – Neuroeconomics Seminar

20 October 2016 - 17:00 - 18:00
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The Coffee Shop Conundrum: A New Exploration-Exploitation Task

Consumers often have to choose between the most rewarding option experienced so far and trying a new option with an unknown reward. Although the multi-armed bandit paradigm is designed to capture trade-offs between exploitation and exploration, it is different: the highest experienced reward cannot typically be "frozen" and exploited. We introduce a new task that mimics the consumer decision: subjects choose T times among infinitely many options that each yield an initially unknown, deterministic reward. The simplicity of this task allows for a detailed characterization of optimal behavior and, consequently, of the suboptimalities of human behavior. We find evidence that human decisions are unduly influenced by the number of choices made, the preceding choice, the preceding reward, and the average reward obtained so far.