

# Selective Sampling with Information-Storage Constraints\*

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May 9, 2018

## Abstract

A decision-maker acquires payoff-relevant information until she reaches her storing capacity, at which point she either terminates the decision-making and chooses an action, or discards some information. By conditioning the probability of termination on the information collected, she controls the correlation between the payoff state and her terminal action. We provide an optimality condition for the emerging stochastic choice. The condition highlights the benefits of selective memory applied to the extracted signals. The constrained-optimal choice rule exhibits (i) confirmation bias, (ii) speed-accuracy complementarity, (iii) overweighting of rare events, and (iv) salience effect.

**Keywords:** bounded rationality, cognitive constraints, information processing, stochastic choice, confirmation bias, speed-accuracy complementarity, probability weighting, salience.

**JEL codes:** D03, D80, D81, D83, D89, D90.

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\*This paper has been previously circulated under the title: “On Second Thoughts, Selective Memory, and Resulting Behavioral Biases.” We thank Mark Dean, Alessandro Pavan, Philip Reny, Larry Samuelson, Colin Stewart, Balazs Szentes, colleagues at the University of Edinburgh and the audiences at Bocconi, Queen Mary, Columbia, Ecole Polytechnique, Zurich and St Andrews universities and workshops and conferences in Erice, Alghero, Faro, Gerzensee, New York, Cambridge, and Vancouver. Ludmila Matysková and Jan Šedek provided excellent research assistance. Deborah Nováková and Laura Straková have helped with English. Jakub Steiner has received financial support from the Czech Science Foundation grant 16-00703S. Philippe Jehiel thanks the ERC grant n° 742816 for funding.

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