SILVIO RAVAIOLI

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EDUCATION

2022 (expected)	Ph.D. Economics	Columbia University	
	en route: M.A.	in Economics (2018), M	I.Phil. in Economics (2019)	
2015		M.Sc. Economics	University of Pisa	
	Double degree	of University of Pisa an	d Sant'Anna School of Advanced Studies	
	en route: Bach	elor of Science in Econo	mics (2012), Diploma in Economics (201	6)

RESEARCH FIELDS

Primary Field:	Behavioral and Experimental Economics
Secondary Fields:	Consumer Behavior, Microeconomic Theory, Industrial Organization

REFERENCES

Michael Woodford	Mark Dean	Alessandra Casella	Eric Johnson
John Bates Clark Professor of Political Economy	Associate Professor Department of Economics	Professor of Economics and Political Science	Norman Eig Professor of Business
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JOB MARKET PAPER

Coarse and Precise Information in Food Labeling

Public authorities and companies often adopt simple categorical labels to convey information and promote the purchase of healthy, ethical, or environmentally-friendly products. Why are these "coarse" labels favored over more detailed ones which should allow the consumer to make better decisions? This paper investigates whether precise labels can be more effective and informative than coarse ones. In a preregistered online study conducted on a representative US sample, I manipulate front-of-package labels about foods' calorie content. I find that coarse-categorical labels generate a larger reduction in calories per serving compared to detailed-numerical labels despite providing less information (-3% and -1% calories, respectively). Results also show that participants prefer coarse labels. Choices violate the predictions of Bayesian decision theory, suggesting that consumers are less responsive to detailed information. A bounded rationality model with precision overload can capture the main experimental results: detailed labels are more complex and harder to understand, and consumers face a tradeoff between simplicity and precision. Some information helps, but too much detail can be confusing, and lead to less healthy food choices.

PUBLICATIONS

Diverse Motives for Human Curiosity (with Kenji Kobayashi, Adrien Baranès, Michael Woodford, and Jacqueline Gottlieb), Nature Human Behavior, 2019.

Curiosity—our desire to know—is a fundamental drive in human behaviour, but its mechanisms are poorly understood. A classical question concerns the curiosity motives. What drives individuals to become curious about some but not other sources of information? Here we show that curiosity about probabilistic events depends on multiple aspects of the distribution of these events. Participants (n = 257) performed a task in which they could demand advance information about only one of two randomly selected monetary prizes that contributed to their income. Individuals differed markedly in the extent to which they requested information as a function of the ex-ante uncertainty or ex ante value of an individual prize. This heterogeneity was not captured by theoretical models describing curiosity as a desire to learn about the total rewards of a situation. Instead, it could be explained by an extended model that allowed for attribute-specific anticipatory utility—the savouring of individual components of the eventual reward—and postulates that this utility increased nonlinearly with the certainty of receiving the reward. Parameter values fitting individual choices were consistent for information about gains or losses, suggesting that attribute-specific anticipatory utility captures fundamental heterogeneity in the determinants of curiosity.

Is EEG Suitable for Marketing Research? A Systematic Review (with Andrea Bazzani, Leopoldo Trieste, Ugo Faraguna, and Giuseppe Turchetti), Frontiers in Neuroscience, 2020.

In the past decade, marketing studies have greatly benefited from the adoption of neuroscience techniques to explore conscious and unconscious drivers of consumer behavior. Electroencephalography (EEG) is one of the most frequently applied neuroscientific techniques for marketing studies, thanks to its low cost and high temporal resolution. We present an overview of EEG applications in consumer neuroscience. The aim of this review is to facilitate future research and to highlight reliable approaches for deriving research and managerial implications. We conducted a systematic review by querying five databases for the titles of articles published up to June 2020 with the terms [EEG] AND [neuromarketing] OR [consumer neuroscience]. We screened 264 abstracts and analyzed 113 articles, classified based on research topics (e.g., product characteristics, pricing, advertising attention and memorization, rational, and emotional messages) and characteristics of the experimental design (tasks, stimuli, participants, additional techniques). This review highlights the main applications of EEG to consumer neuroscience research and suggests several ways EEG technique can complement traditional experimental paradigms. Further research areas, including consumer profiling and social consumer neuroscience, have not been sufficiently explored yet and would benefit from EEG techniques to address unanswered questions.

WORKING PAPERS:

The Status Quo and Belief Polarization of Inattentive Agents: Theory and Experiment (with Vladimir Novak and Andrei Matveenko).

We show that rational but inattentive agents can become polarized, even in expectation. This is driven by agents' choice of not only how much information to acquire, but also what type of information. We present how optimal information acquisition, and subsequent belief formation, depends crucially on the agent-specific status quo valuation. Beliefs can systematically update away from the realized truth and even agents with the same initial beliefs might become polarized. We design a laboratory experiment to test the model's predictions; the results confirm our predictions about the mechanism (rational information acquisition) and its effect on beliefs (systematic polarization).

Avoidable Risk: An experiment on Context-Dependent Risk Aversion (with RC Xi Zhi Lim).

We study how risk preferences may be subject to context effect specific to the risk domain—the amount of avoidable risk at any given time. Avoidable risk is captured by the riskiness of the safest option in a choice set, which induces set-dependent risk preferences. In a laboratory experiment, we find that adding safer options systematically increases risk aversion, even when the added options are not themselves chosen. By contrast, adding riskier options does not result in a detectable change in risk attitude. Our finding suggests that context effect specialized to the risk domain may overwhelm those that are more generally applicable (such as the compromise effect) when it comes to studying context-dependent risk preferences.

Matching and Learning: An Experimental Study (with Lan Nguyen and Guillaume Haeringer).

We use a lab experiment to study the patterns and effects of learning in two classic centralized matching mechanisms widely used in school choice and other real-world settings. We use the Deferred Acceptance (DA, strategyproof but not efficient) and Immediate Acceptance (IA, efficient but not strategyproof) algorithms. Each matching problem (round) is repeated for several periods: after being informed about the outcome of the previous match, subjects are asked again the order in which they would apply to the same schools. Between one period and the other, students gradually learn about the environment (how difficult it is to get in the high-rank schools) and their opponent behavior (if they aim for the top). We observe that subjects achieve higher payoffs under the IA mechanism and are more truthful under the DA mechanism. Subjects become gradually less truthful within the round but payoffs do not decrease. Deviations from truthfulness that do not harm the players suggest that costless mistakes are compatible with extensive experience.

WORK IN PROGRESS

Dynamic Choice Between Biased Information Sources (with Michael Woodford and Jacqueline Gottlieb)

You Don't Know It Until You Need It (with Hassan Afrouzi)

Noisy Integration of Value Differences in Multi-Attribute Choice Problems

News (In)Accuracy and Speed: Model and Experiment (with Sara Saharaghi)

CONFERENCE PRESENTATIONS

2020: Economics Science Association Annual Conference (ESA, online), Student Workshop for Experimental Economics Techniques (Princeton, online).

2019: Sloan-Nomis Workshop on the Cognitive Foundations of Economic Behavior (NYU).

2018: Columbia University IIGSS seminar (Columbia).

2017: INET YSI Festival for New Economic Thinking (Edinburgh).

2016: Society of Neuroeconomics 2016 Annual Conference (Berlin, poster session).

2015: Society of Neuroeconomics 2015 Annual Conference (Miami, poster session).

WORK AND TEACHING EXPERIENCE

F 2019 - S 2021.	Lab Manager for CELSS (Columbia Experimental Laboratory).
S 2018, S 2019.	Teaching Assistant, Market Design (Instructor: Prof. Guillaume Haeringer),
	Columbia University.
F 2017, F 2018.	TA Cognitive Mechanisms and Economic Behavior (Instructor: Prof. Michael
	Woodford), Columbia University.
F 2015 - S 2016.	Research Assistant (Prof. Michael Woodford), Columbia University.
F 2014 - S 2015.	TA, Microeconomics I (Instructor: Prof. Pier Mario Pacini), University of Pisa

GRANTS AND ACADEMIC AWARDS

2021, IFREE Grant for the project "News Inaccuracy and Speed: Model and Experiment" (with Sara Saharaghi).

2021, Dissertation Fellowship, Department of Economics, Columbia University.

2020, Columbia PER Grant for the project "Coarse Labels for Inattentive Consumers."

2018, CELSS Seed grant for the project "The Status Quo and Beliefs Polarization of Inattentive Agents" (with Vladimir Novak).

2016, Cognitive and Behavioral Economics Fellowship, Columbia University.

2015, Graduated with Distinction from M.Sc. in Economics, University of Pisa.

2010, "Alfieri del Lavoro" Award, prize awarded by the President of Italian Republic.

2010, Winner of a place at Scuola Superiore Sant'Anna for a five-years scholarship.

MISCELLANEOUS

Birth Year:	1991.
Citizenship:	Italian.
Languages:	Italian (native), English (fluent), Spanish and German (elementary).
Programming Skills:	Matlab, R, Python, JavaScript, zTree/oTree.
Refereeing:	Journal of Economic Theory, European Economic Review.