

Faculty of Business and Economics Faculty of Psychology



11th Bernoulli Lecture for the Behavioral Sciences

Risk in Sequential Decisions

Prof. Dr. Peter Dayan Director, Max Planck Institute for Biological Professor at the University of Tübingen, Germany

> Tuesday, October 17, 2023, 18:15 – 19:45 Bernoullianum, Grosser Hörsaal Bernoullistr. 30, 4056 Basel The Lecture is free and open to the public.

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The Bernoulli Lectures for the Behavioral Sciences honor researchers who have contributed significantly to the development of the behavioral sciences, particularly in the fields of Psychology and Economics. The Bernoulli lectures are organized yearly by the Bernoulli Network for the Behavioral Sciences, a joint initiative of the Faculty of Psychology and the Faculty of Business and Economics of the University of Basel, with the aim of fostering interdisciplinary dialogue in the behavioral sciences.

Risk in Sequential Decisions

Since the days of the Bernoullis themselves, risky decision-making has attracted substantial theoretical and empirical study. There are marked differences between the risk attitudes of different people, and extremes are associated with psychiatric dysfunctions, notably in anxiety disorders. Most work in the area has focused on isolated decisions, such as separate lotteries or bets; but most decision-making involves whole trajectories or sequences of choices and outcomes, allowing peril to accumulate. I will discuss our recent theoretical and experimental work in this domain. This is joint work with Kevin Chen, Chris Gagne, Kevin Lloyd and Xin Sui.



Peter Dayan read Mathematics at Cambridge, studied for his PhD with David Willshaw in Edinburgh, and did postdocs with Terry Sejnowski at the Salk Institute and Geoff Hinton in Toronto. He was an assistant professor in the Department of Brain and Cognitive Sciences at MIT, and was a founding faculty member of the Gatsby Computational Neuroscience Unit at UCL, which he then ran for 15 years. He is currently a Director at the Max Planck Institute for Biological Cybernetics and a Professor at the University of Tübingen. His interests include affective decision making and neural reinforcement learning.

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