



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

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Tobias U. Hauser
University College London

When brain juices make you noisy: The role of catecholamines in choice inconsistencies

Humans are consistently inconsistent. Even when facing identical choice options, they often make self-contradictory choices. Since the early days of psychology and behavioural economics, we discard this variability as some form of measurement imprecision, and we dedicate separate noise modules in our computational models to soak up what we cannot explain.

In my talk, I will show that by ignoring behavioural variability, we fail to investigate meaningful signal that provides critical insights in the neurocomputational mechanisms underlying behaviour. Firstly, in a real-time fMRI study, I will demonstrate how endogenous fluctuations of the dopaminergic midbrain directly influence risk taking variability. Secondly, I will show pharmacological evidence for the role of dopamine and noradrenaline in different forms of exploration.

My talk will demonstrate how behavioural variability can arise from neurobiological and epistemic processes and why inconsistencies form a critical aspect in our behaviour.