



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

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Mathias Pessiglione

Institut du Cerveau et de la Moelle épinière

How to resist temptation: insights from neuroscience of inter-temporal choice

The capacity to resist temptation of immediate pleasures is a major factor of social insertion and professional success. Two brain regions have been suggested to help favoring bigger long-term rewards in inter-temporal choices: 1) the lateral prefrontal cortex, through executive control and 2) the hippocampus, through episodic simulation. In this talk, I will provide evidence for the implication of these two brain regions. First, performance of difficult executive tasks over a workday has been observed to reduce the excitability of the lateral prefrontal cortex and relatedly to enhance the propensity to choose immediate rewards. Second, damage to the hippocampus, as occurring in amnesic syndromes, has been shown to bias choices toward immediate rewards, specifically when long-term rewards have to be imagined (in the absence of pictures). Thus, alteration of these brain regions might restrict desires to the immediate environment. On the contrary, developing executive control and episodic simulation abilities might help with resisting temptation of immediate rewards and pursuing long-term goals.