



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

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Value computation in the human brain: its basis and contagious nature

There is accumulating evidence to suggest that the brain represents the expected value or utility of options at the time of decision making. However, much less is known about how it is that value signals are constructed. In the first part of my talk, I will discuss how valuations for food rewards are constructed in the brain. Using a food-based decision task combined with multivariate analysis of fMRI data, I will demonstrate that values of food items can be predicted from beliefs about constituent nutritive attributes of food, and that those attributes are represented in lateral orbitofrontal cortex (IOFC), suggesting a key role for IOFC in encoding the precursor representations subsequently used to compute integrated subjective values. In the second part, I will present a study in which we explore the contagious nature of human valuation under risk. Using fMRI combined with computational modeling of behavioral data, I will show that human preference for risk can be systematically altered by the act of observing others' risk-related decisions. Furthermore, the contagious behavioral shift is implemented via a neural representation of risk in the striatum. These findings together provide a mechanistic account for how value is constructed in the brain.