University of Zurich[UZH]

Department of Economics – Neuroeconomics Seminar

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Mel Win Khaw
Columbia University

Perceptual Principles in Subjective Valuation

I will discuss two recent projects that exemplify how economic valuation can be understood using broadly-applicable principles from sensory and perceptual neuroscience. First, I will discuss history-dependent fluctuations in auction bids that are predicted by divisive normalization. Historically, divisive normalization was first proposed to describe the activity of primary visual area neurons. At present, normalized value coding explains why people over and under-bid depending on recently-experienced values. Second, I will present an explanation of risk aversion commonly observed in lottery choice experiments. Here we propose a model whereby individuals are assumed to be comparing estimates of noisily perceived payoff magnitudes. Under this model of perceived payoffs, apparent risk aversion and choice sensitivity are both explained simultaneously (without further assumptions about explicit choice and utility functions). Taken together, these studies show that different stages of valuation can be reconciled effectively and directly with relatively simple perceptual principles.