



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

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Moving beyond optimality in models of perceptual decision making

The idea that human perceptual decision making is often optimal or nearly optimal has gained attention and traction in the field. I will discuss two problems with this trend. First, general claims about the optimality of perceptual decision making are not supported empirically. We reviewed over 300 research papers that tested the optimality of perceptual decisions and found suboptimal behavior in every class of tasks we examined. Second, a focus on optimality leads to several pitfalls when modeling human behavior. I will discuss these pitfalls and how to avoid them by building and testing observer models that are not wedded to notions of optimality. I will illustrate these points with examples from my own research on how attention affects perceptual decision making. Overall, I will argue that while normative considerations can be useful to guide research, moving beyond a focus on optimality will lead to more complete and more accurate models of perception and behavior.