



**University of  
Zurich** <sup>UZH</sup>

## Department of Economics – Neuroeconomics Seminar

**November 11, 2021 - 17:00 - 18:00**

Nathan J. Evans  
University of Queensland

### **The role of passing time in decision-making**

Theories of perceptual decision-making have been dominated by the idea that evidence accumulates in favour of different alternatives until some fixed threshold amount is reached, which triggers a decision. Recent theories have suggested that these thresholds may not be fixed during each decision, but change as time passes. These collapsing thresholds can improve performance in particular decision environments, but reviews of data from typical decision-making paradigms have failed to support collapsing thresholds. This talk discusses a range of experimental paradigms where collapsing thresholds are theoretically beneficial, and assesses under which of these conditions people appear to adopt collapsing thresholds. Specifically, an emphasis on decision speed encouraged the adoption of collapsing thresholds – most strongly through the use of response deadlines, but also through instruction to a lesser extent – but setting an explicit goal of reward rate optimality through both instructions and task design did not. Furthermore, when people experienced decision contexts matched to those experienced by non-human primates – extensive task practice, or time-based penalties – they displayed increasing levels of urgency over time (i.e., collapsing thresholds), in precisely the same manner as non-human primates. These results provide a new explanation for previous findings regarding decision-making differences between humans and non-human primates.