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Talk Title:

Neurocomputational mechanisms of effort-based decision-making for self and others

Abstract:

Effort is typically considered costly and aversive. If two courses of action are associated with the same rewarding outcome, most individuals will choose the less effortful course. This phenomenon, referred to as effort discounting, relies on computations in which rewards are devalued by exerting effort. However, helping ourselves and helping other people typically requires effort. In order to solve major challenges of the 21st century such as climate change and infectious disease, people will have to engage in effortful actions, yet the computational and neural mechanisms of how and when we decide to act remain elusive.

I will present recent work that examines the computational mechanisms of prosocial motivation, how willing we are to put in physical effort to help others, and compares it to decisions where we have to put in effort to help ourselves. I will show that we are willing to put in effort to help, but much less willing than when the same acts will benefit ourselves. I will then discuss how there are important differences in these decision-making and action initiation processes as we grow older. Finally, I will discuss recent neuroimaging work that combines the latest advances in model-based neuroimaging with representational similarity analysis to show common and distinct neural representations of effort and subjective value during effortful acts that benefit self and other.