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A Broader View of Motor Adaptation



Abstract:

Motor adaptation is often invoked as a textbook example of implicit learning and memory. This makes sense – adaptation often proceeds without one being aware that they have adapted, and typically involves small, gradual changes to motor behavior. However, when one considers the range of inputs to the adaptation system (e.g., high-level motor plans, salient sensory cues and contexts, etc.), a simple story that frames adaptation as an isolated implicit learning system doesn't suffice. Here I will present new and published data from my lab that supports a more holistic view of motor adaptation, one that centers the role of cognitive variables and attempts to link adaptation to other forms of learning. I will also challenge the view that explicit and implicit forms of motor learning can be easily separated and modularized.

Biographical Information:

Sam earned his BA in Neuroscience & Behavior from Vassar College in 2009 and his PhD in Psychology from Princeton University in 2018. After completing a postdoctoral fellowship at UC Berkeley, Sam opened his lab – the Action, Computation, & Thinking (ACT) Lab – in Yale's Department of Psychology in 2020. His lab's research is generally focused on bridging cognition and action, using behavioral, computational, neuroimaging, and neuropsychological methods. Sam enjoys playing and performing old-time, folk, and bluegrass music (fiddle and guitar), and backyard lounging with his partner Kelly and his son Leo.