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A model of online latent state learning

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Title: A model of online latent state learning

Abstract: Researchers are increasingly interested in how humans perform a structured form of learning known as latent-state inferences. Latent state inferences refers to someone's ability to weigh competing hypotheses about one's environment. Critically, this type of learning can help explain behavior and neural activity important to cognitive neuroscience and psychiatry. I will present a model of latent state learning that uses online, or recursive, updates. I demonstrate that this model can capture many learning experiments using simulation and can explain actual behavioral data better than other learning models. In the future, we hope to explore differential learning of latent-state inferences between individuals with PTSD and healthy controls.