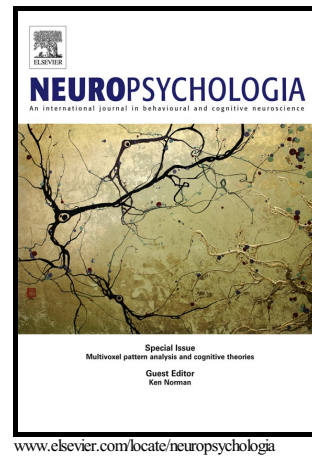


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Implicitly-learned spatial attention is unimpaired in patients with Parkinson's diseaseCaitlin A. Sisk^{a*}, Emily L. Twedell^b, Wilma Koutstaal^a, Scott E. Cooper^a, Yuhong V. Jiang^a^a*Department of Psychology, University of Minnesota*^b*Department of Neurology, University of Minnesota*

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Abstract

Extensive research has examined how current goals influence spatial attention. Yet the allocation of spatial attention is also guided by previous experience, which may induce consistent spatial preferences when a visual search target is frequently found in one region of space. Here, we examined the role of the dopaminergic system in acquiring and maintaining location probability learning. We tested Parkinson's patients and age-matched controls in a difficult visual search task in two sessions. In Session 1, unbeknownst to the participants, the target appeared most often in one quadrant in an early, training phase of the experiment. The target was randomly located in a later, testing phase. Both Parkinson's patients and controls acquired an attentional preference toward the high-probability quadrant during training that persisted in the testing phase. Learning yielded a large reduction in response time (345 ms) in Parkinson's

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