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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 45(45)

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Publication Date

2023

Peer reviewed

Learning Regularity in a Sequence of Decision-Making Tasks

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Abstract

When people make decisions, these are often sequential, and later decisions frequently depend on the outcome of the previous decision. For instance, a doctor will first decide on a patient's treatment and then its duration. Grammar learning shows that humans can learn temporal regularities between such sequential information. However, little is known about sequential category learning tasks. Here, we investigate learning of regularities between two categorization tasks and generalization to novel objects. In an experiment, we varied whether a contingency between the outcome of two categorization tasks existed and whether they were adjacent (the tasks followed each other) or non-adjacent (an intervening task in between). Participants learned to categorize the objects of the second task in adjacent condition better than other conditions. However, both regularity conditions were beneficial to categorize novel objects (generalization). The results show the importance of considering temporal regularities between decision tasks in theories of category learning.