

Learning generated categories: Applying PACKER to category assignments

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Abstract

Research into categorization has primarily focused on how people learn categories and extend category membership to novel exemplars. However, it is unclear how people generate new categories. In previous work, we presented PACKER (Producing Alike and Contrasting Knowledge using Exemplar Representations), an exemplar model that accounts for category generation by measuring not only the similarity of an exemplar with a target category but also its dissimilarity with contrast categories. As predicted by PACKER, we found that people generated new categories that contrast from a given category. In this work, we examine whether category contrast also plays a role in category learning. Specifically, we conducted a novel experiment where participants learned categories generated by participants in our previous work. We demonstrate how category contrast allows PACKER to explain empirical data in both category learning and category generation paradigms better than competing theories, providing evidence for category contrast as a fundamental factor in categorization.

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