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Local versus global coherence in the generalization of category training

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Abstract

In recent evidence, classification training can elicit two qualitative patterns of generalization: one is exemplar-based such that close proximity to known members of a category best predicts membership in that category; the other involves inducing a global form of coherence in the mapping between input space and category membership. Such global coherence is an abstraction about category membership – not in the form of clusters or prototypes, but grounded in regularities like categories alternating in input space (Kurtz & Wetzel, 2021) or one category having correlated feature values while the other is anti-correlated (Conaway & Kurtz, 2017). We investigate the extent to which categorization is driven by local match to exemplars versus conforming to global structural regularities using generalization items as critical tests: proximal to members of one category but conforming to the global regularity underlying the other. Results are discussed in terms of implications for theoretical accounts of category learning.