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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, 48(0)

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Publication Date

2026

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Peer reviewed

Abstraction Facilitates Coordination in Repeated Social Interactions

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Abstract

Every day social life requires repeatedly solving coordination problems: aligning actions to cooperate with others, often with incomplete communication. In contrast to rational accounts of coordination that predict its outcome based on payoffs, we interrogate the cognitive process that allows people to progressively generalize new coordination points based on past experience. We introduce the Progressive Coordination Paradigm (PCP) as a framework for studying the intersection of abstraction, generalization, and social coordination. Participants are asked to coordinate on sequences of patterned clicks on a grid. By progressively varying the layout of the grids, we show that people form shared abstractions after only a few interactions, learning from early coordination successes and flexibly generalizing core solution features to novel contexts. We show that the resultant abstractions are predictably path-dependent. These findings illustrate how human *ad hoc* conventions depend on mutually-constructed abstractions.