
Pragmatics in referential communication: An investigation of concept communication and the role of pragmatics with an emergent communication game

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Abstract

We study the communication of concepts at different levels of abstraction in an agent-based, interactive reference game. The agents are modeled with neural networks and develop a communication system from scratch. We compare three game settings to systematically study the question of what role pragmatic behavior plays in communicating about concepts in different contexts. A careful analysis of the emerging communication protocol and of the agents' performance will allow us to conclude whether successful referential communication about concepts is mainly driven by the agents' reasoning about the context or by reasoning about intentions as predicted by Gricean maxims.

Keywords: reference game, concepts, emergent communication

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