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Partner Models of Human and AI Learning Partners: Memory for Knowledge Levels

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Abstract

Successful interaction depends on accurate partner models of others. We examined *subjective partner models* (perceived human-likeness, competence, and trustworthiness) and *objective partner models* (memory for topic-specific knowledge levels of the learning partner) for different partner types. $N = 87$ participants were presented with a learning partner (between-subjects: described and labeled as human, anthropomorphized AI, or regular AI) and then received information on that partner's knowledge levels (high vs. medium vs. low) regarding several topics. After rating subjective impressions, participants retrieved topic-specific knowledge levels from memory. Humans were rated as more human-like and trustworthy than both AI conditions, while competence ratings did not differ. While for AI partners high and low levels were remembered better than medium levels, for the human partner, only low levels were remembered better than medium levels. Humans and AI partners seem to be modeled differently, both in subjective evaluations and objective memory-based partner models.