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# **Proceedings of the Annual Meeting of the Cognitive Science Society**

### **Title**

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### **Permalink**

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### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 45(45)

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### **Publication Date**

2023

Peer reviewed

# Predicting intentions: How do we predict other's action intentions?

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## Abstract

Intention prediction often plays a crucial role in successful social interaction. Previous studies have attempted to understand this skill by focusing on the role of movement kinematics in isolation. However, this approach is limited as the same kinematics typically map to multiple action possibilities (affordances) and as a result, individuals also employ contextual information to predict others' intentions. In this study we present preliminary findings from a qualitative study aimed at investigating intention prediction in naturalistic contexts. Participants viewed an individual reaching for a cup with one of two object-directed intentions: to drink OR to clear the table. A third non-object-directed intention was also included where the observed individual placed their hand on the table next to the cup. For each intention the contextual information was varied by changing the environmental scene between (1) cups full of juice, (2) almost empty cups, and (3) half-empty cups. The findings reveal that participants perceived the cup's functional (most salient) affordance - drink - for the intention so far as the movement kinematics specified an object-directed intention (drink or clear) with a context that clearly afforded it (full and half-full cups). However, participants were also sensitive to the kinematic differences between the object-directed intentions when the context made the functional affordance seem improbable (almost empty cups).