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Authors

Ash, Misha

Cooperrider, Kensy

Gentner, Dedre

et al.

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Co-thought gestures during abstract relational reasoning

Misha Ash

University of Chicago, Chicago, Illinois, United States

Kensy Cooperrider

University of Chicago, Chicago, Illinois, United States

Dedre Gentner

Northwestern University, Evanston, Illinois, United States

Susan Goldin-Meadow

University of Chicago, Chicago, Illinois, United States

Abstract

When talking about abstract relations like better and worse, people often use gestures arrayed in space to get their point across. But are these analogical gestures solely communicative props that make abstract content more accessible for listeners, or do they also reflect an integral part of reasoning? To address this question, we investigated whether people would produce analogical gestures outside of a communicative context. In a linear syllogism task, participants spontaneously gestured on 52.4% of trials on average; most participants (87.5%) gestured on at least one trial. Trials involving spatial relational terms prompted more gestures per trial than those with non-spatial terms (spatial: $M = 2.87$; non-spatial: $M = 2.29$; $F(1, 23) = 7.62$, $p = .011$). Analogical gestures thus do occur outside of communicative contexts, suggesting that they serve to aid the reasoning process itself. An in-progress follow-up study replicates and extends these findings.