Whom will Granny thank? Thinking about what could have been informs children's inferences about relative helpfulness

Sophie Bridgers (sbridge@stanford.edu), Chuyi Yang, Tobias Gerstenberg, & Hyowon Gweon | Department of Psychology, Stanford University

Background

Social evaluation of others’ actions involves reasoning about...

- intention
- and
- outcome

But also... prevented outcomes, what could have been if agent hadn’t acted (counterfactual outcomes)

Research Question

Can young children reason about prevented outcomes to determine relative helpfulness of others’ actions?

- 3- to 7-year-olds reason about future hypothetical outcomes to determine how to help
- Evidence for counterfactual reasoning is mixed

Motivation

Potential window into early counterfactual reasoning.

- Simple question with low linguistic demand
- Solving the problem requires counterfactual thought but we do not directly ask a counterfactual question

Methods

Experiment 1: 60% predict Granny will thank agent who prevented worse outcome in both conditions (p < .0001)
- More likely to thank Susie in Apples than Cans (p < .001)
- Apples: 64% predict Susie (p = .034)
- Cans: 74% predict Annie (p = .002)

Experiment 2: 43% correct in both conditions (p = .011)
- Apples: 60% predict Susie
- Cans: 52% predict Annie

Results

Discussion

- 3- to 5-year-olds evaluate relative helpfulness of two actions based on severity of prevented outcomes
- Evidence for early counterfactual reasoning using a simple question (low linguistic demand)

Future Directions

- More intuitive physical scenarios
  - Minimize need for training
  - Reasoning about unexpected outcomes requires counterfactual thinking
- Increased severity of worse prevented outcome

References:
4. Martin & Olson (2013). Dev Psych
5. Bridgers, Jara-Ettinger, & Gweon (2020). Nat Hum Behav