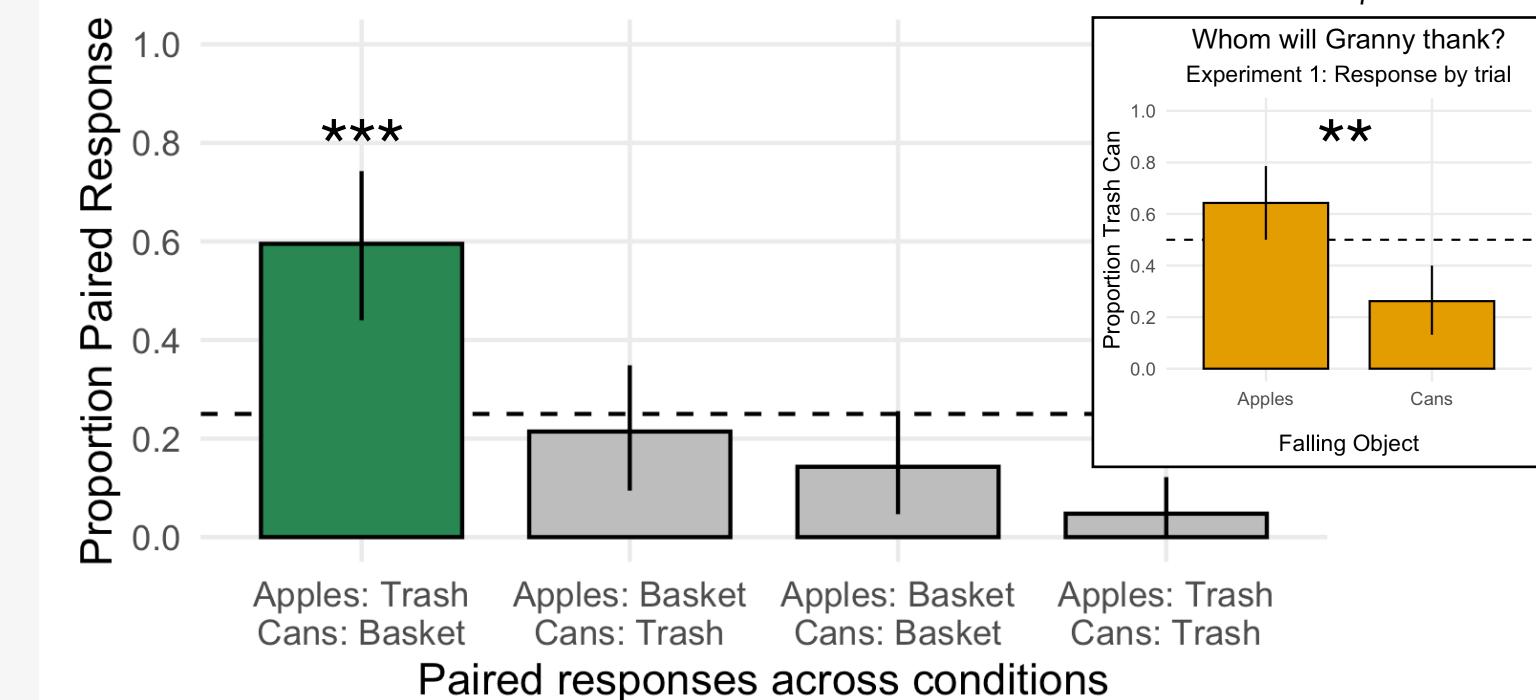


Results

Whom will Granny thank?
Experiment 1: Paired Responses



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)

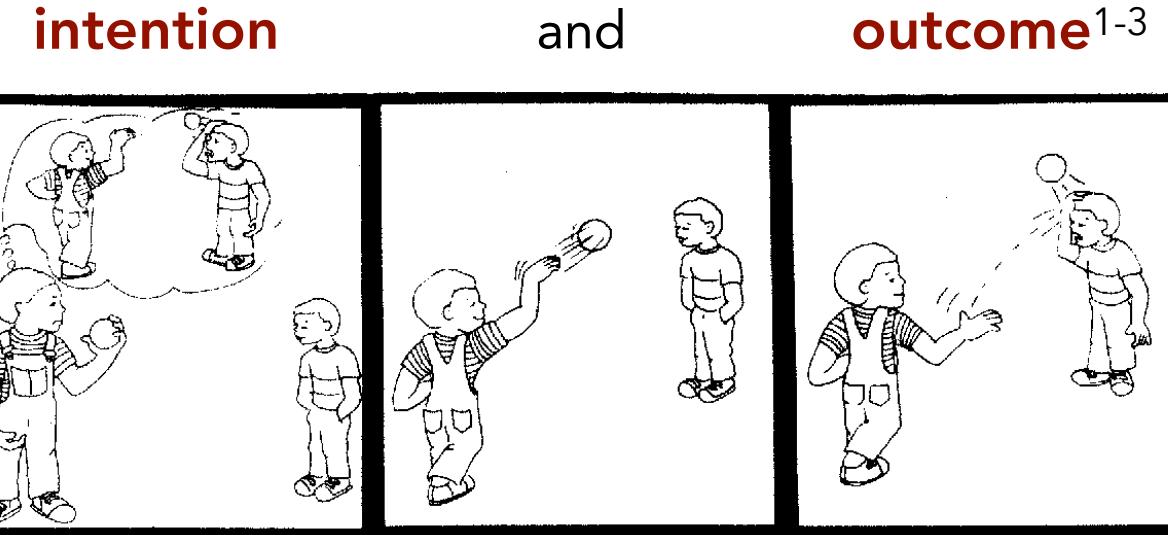
Future Directions

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

Background

Social evaluation of others' actions

involves reasoning about...



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^{4,5}
- Evidence for counterfactual reasoning is mixed^{7,8}

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

Apples Condition

Methods

Oh no!
The apples are rolling off the table!



Susie and Annie catch the apples!

What happens next?

Does Granny thank Susie?



OR

Does Granny thank Annie?



Cans Condition

Identical to Apples condition but with empty, crushed cans

Oh no!
The cans are rolling off the table!



Susie and Annie catch the cans!

Predictions
Apples: Granny thanks Susie (saved apple from trash)
Cans: Granny thanks Annie (saved can from fruit basket)

Experiment 1

Evaluating helpfulness of actions

N = 42; M(SD) = 58(7) months



Physics training trial
(balls roll off table & fall into trash and basket)

Experiment 2 OSF

Preregistered (Ongoing) Replication

Current n = 42; M(SD) = 52(7) months

(Planned N = 96)

Physics training trial from Exp. 1
+
Training trials to practice pointing at scene that comes next in the story.