



# The Influence of Sharing Experiences on Third-Party Punishment in Children



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## Introduction

- Adults punish unfairness at a personal cost even when they are an uninvolved third-party<sup>1</sup>. This so-called costly third-party punishment emerges around 5 to 6 years of age<sup>2</sup>.
- However, previous research with children used imagined players or puppets as a partner. Thus, it was unknown whether children enact third-party punishment in live interactions with peers.
- Research with adults suggests that taking the perspective of victims could increase punishment against perpetrators. For example, adults enact more third-party punishment when asked to imagine the feelings of victims compared to when asked to remain objective and detached<sup>3</sup>.
- In the current study, we (1) validated the use of computer games with children and (2) examined if children's experience as a victim of unfair sharing would increase third-party punishment.

## Research Questions

### Study 1

- Do children show third-party punishment in a live interaction with peers?

### Study 2

- Do children's unfair sharing experiences increase third-party punishment?

## Study 1

### Participants

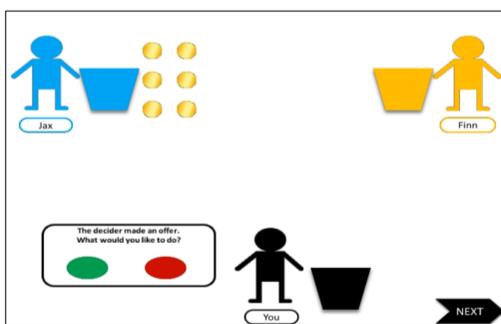
N = 36 5- to 9-year-old children in Boston (18 female)

### Procedure

#### 1. Introduction

Children learned that they could collect coins that would later be exchanged for prizes.

#### 2. Third-party Game



- Children watched how a divider (upper left) allocates 6 coins between the self and a recipient (upper right).
- The divider made either fair (3:3) or unfair (6:0) offer.
- In every round, children were asked to press either the green or red button.
- Each child played 12 rounds in total (6 fair offer and 6 unfair offer rounds).

	Green Button	Red Button
<b>Outcome</b>	Acceptance of offer	Rejection of offer
<b>Cost to Participants</b>	No cost	1 coin

### Results

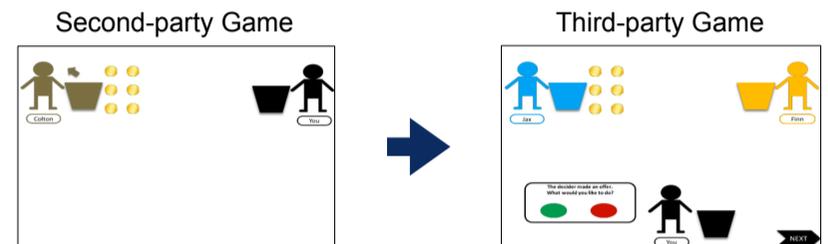
- Children punished unfair offers more often than fair offers ( $b = 1.95$ ,  $SE = 0.28$ ,  $\chi^2(1) = 59.1$ ,  $p < .001$ ), showing costly third-party punishment. There was no significant effect involving age,  $\chi^2(1) < 1.4$ ,  $ps > .23$ .
- Study 1 replicated the results from previous research that was not computer-based<sup>2</sup>. These results validate the use of computer games for studying children's economic interactions with peers in a live setting.

## Study 2

### Participants

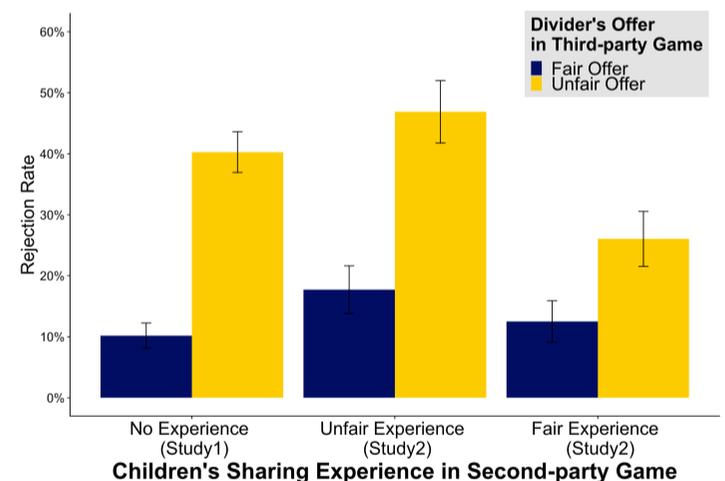
N = 32 5- and 6-year-old children in Ann Arbor (16 female; 16 assigned to unfair experience condition)

### Procedure



- In the second-party game, children experienced either fair or unfair sharing as a recipient for 4 consecutive rounds.
- Two between-subject conditions
  - Unfair experience: A divider kept 6 and gave 0 to the child.
  - Fair experience: A divider kept 3 and gave 3 to the child.
- After the second-party game, children played a third-party game identical to that in Study 1.

### Results



- Children enacted third-party punishment more often in the unfair experience condition than in the fair experience condition,  $b = 1.09$ ,  $SE = 0.54$ ,  $\chi^2(1) = 4.29$ ,  $p < .05$ .
- As in Study 1, they punished unfair offers more often than fair offers,  $b = 1.44$ ,  $SE = 0.29$ ,  $\chi^2(1) = 28.48$ ,  $p < .001$ .
- Neither effects with age nor interaction between condition and offer type was significant,  $\chi^2(1) < 1.14$ ,  $ps > .24$ .

## Conclusions

- We developed and validated a novel, child-friendly computer game for studying children's economic decision-making in live interactions.
- Children show increased third-party punishment when they previously experienced unfair sharing than when they experienced fair sharing.
- An ongoing study tests a wider age range (5 to 9 years) and a bigger sample size (planned  $N = 120$ ; 25% complete) with all three conditions.