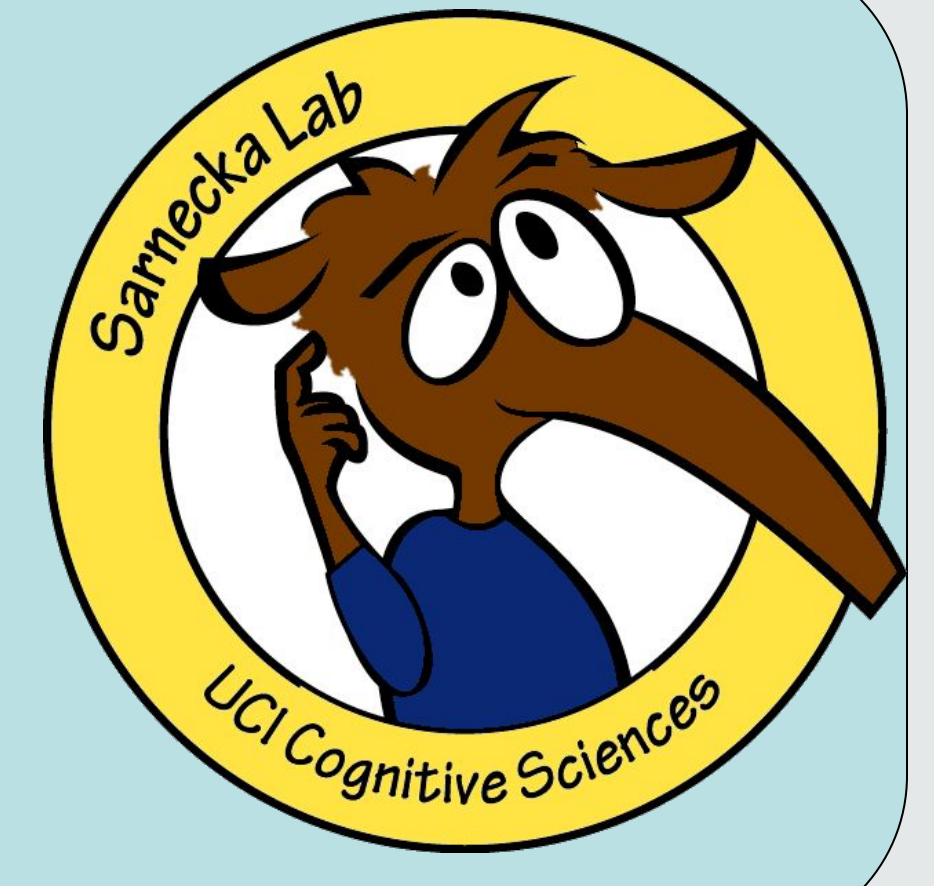




# Investigating Individual Differences in Risk-Taking Preferences Among Preschoolers

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## Introduction

- ❖ Although there is a large academic literature on adult and adolescent decision-making, little is known about how decision-making tendencies develop through childhood.
- ❖ Few studies have looked at decision-making strategies in preschool-aged children; those that have are often based off of adult tasks which do not take into account the cognitive limitations of young children.
- ❖ Past research has shown that children younger than 7 are likely to use a risk-taking strategy during gambling tasks. (Paulsen et al., 2012).
- ❖ However, few studies have looked at individual differences in strategies at this age.

## Current Study

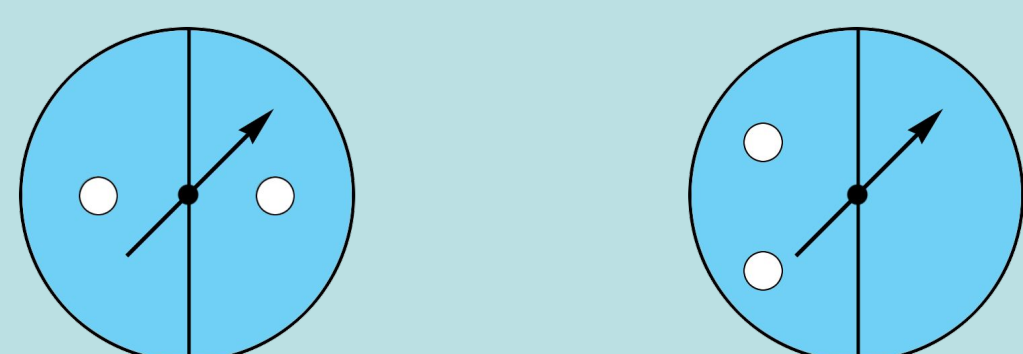
- ❖ We created a novel gambling paradigm for preschool aged children in which it took into consideration children cognitive limitations (e.g., difficulties with symbolic representation and object tracking).
- ❖ With this data, we used a latent mixture model with Bayesian inference to determine what strategies children were using.

## Behavioral Task

**Participants:** 43, 3-to 5-year-old children from local preschools in Southern California (mean = 54.04 months, range = 38.4 - 76.3 months).

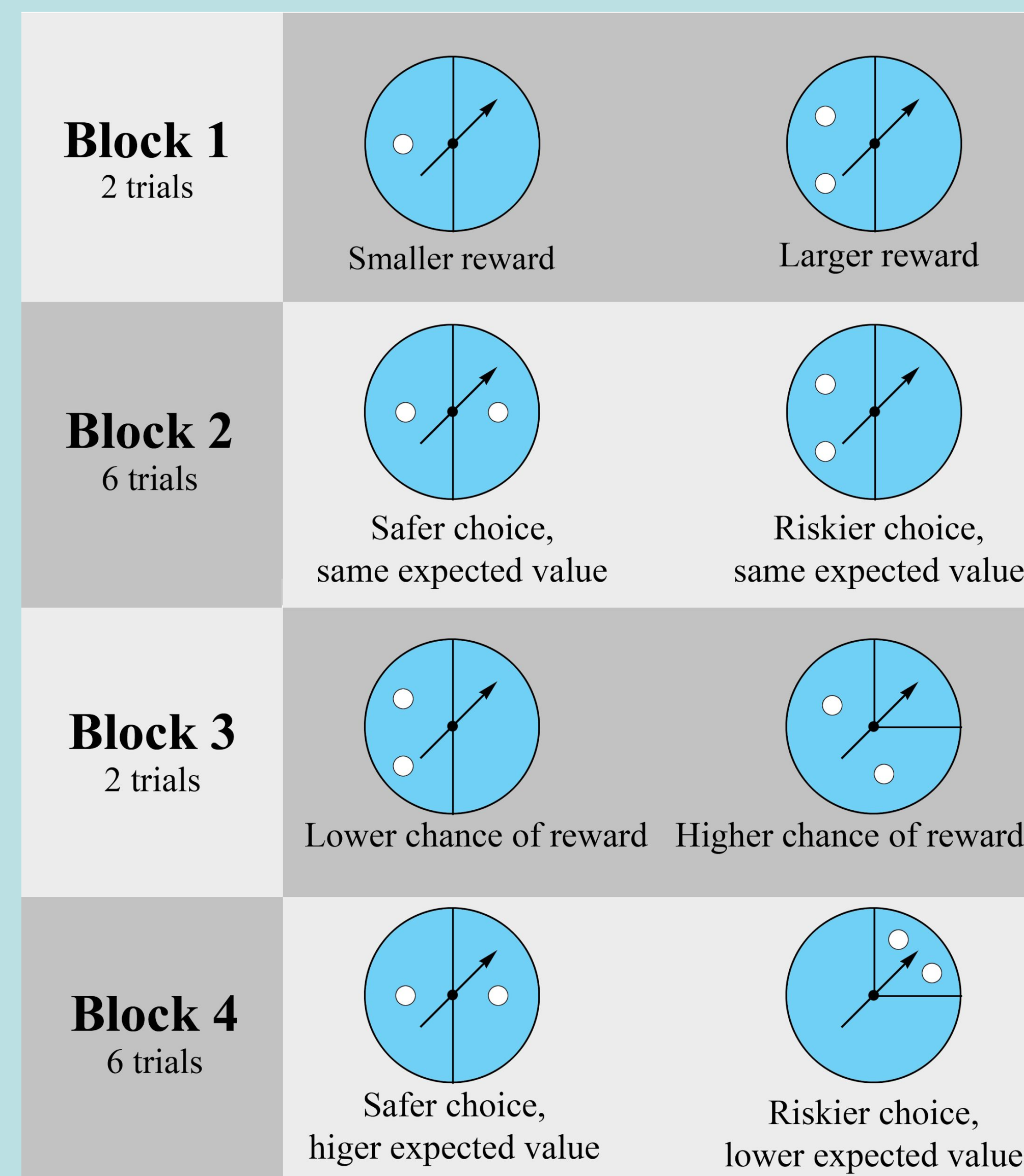
**Procedure:** Participants are told they are going to play a fun game to win stickers. Asked to make a series of decisions between two spinner wheels to win stickers to take home

“You get to keep the stickers the arrow points to.”

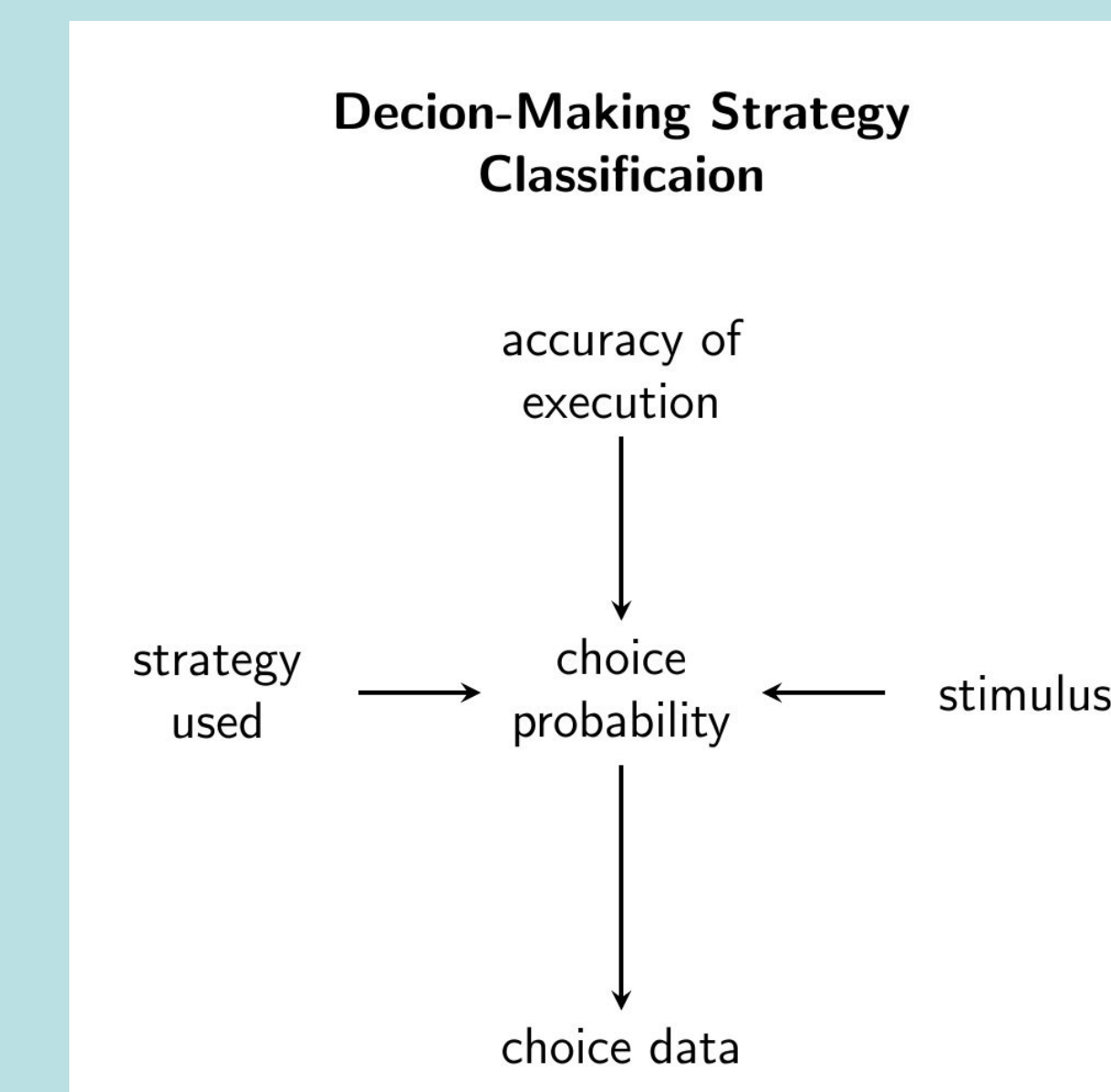


“You can only spin one, which spinner should we spin?”

## Experimental Design



## Model



Latent mixture model allows us to categorize children’s behavior into 6 different strategies:

### Contaminant Strategies

- 1) Guessing
- 2) Perseverate left
- 3) Perseverate right

### Strategies:

- 4) Risk taking
- 5) Risk averse
- 6) Strategy switch

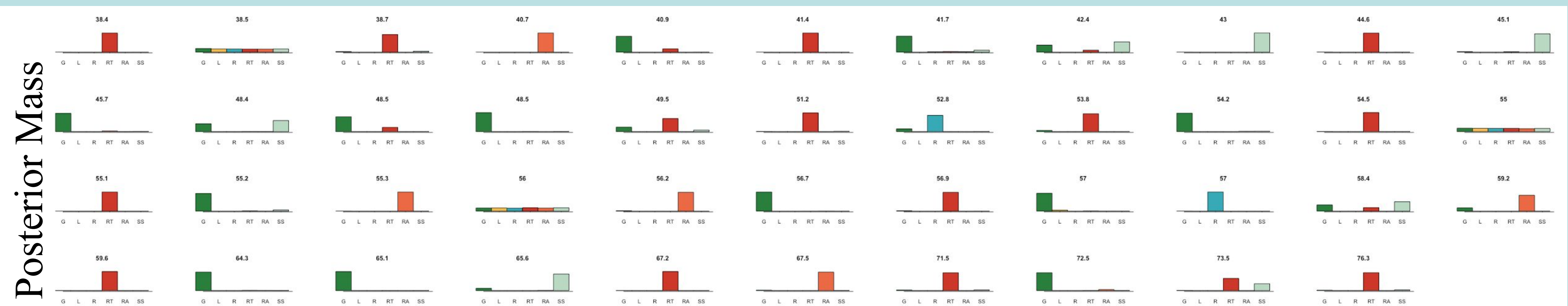


Technical Supplemental Material

## Discussion

- ❖ Introduces new method of assessing risk propensity in younger children
- ❖ Provides evidence for individual differences in decision strategies at an early age.
- ❖ Follow up analysis will reveal to what factors influence which strategy is used.

## Results



Each histogram represents the posterior inference for a given participant, organized by age in months.

Number of participants using each strategy: Guessing: 12, Perseveration: 2, Risk taking: 14, Risk Averse: 5, Strategy Switch: 4, Unsure: 6

## References

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