

Partition Dependence in Preschool Years: Evidence from a Single Choice Task

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Introduction

Partition Dependence: The human tendency to make decisions based on arbitrary groupings of options¹.
Example: Groupings by category change the number of objects we pick from each category².



Partition Dependence in Adults

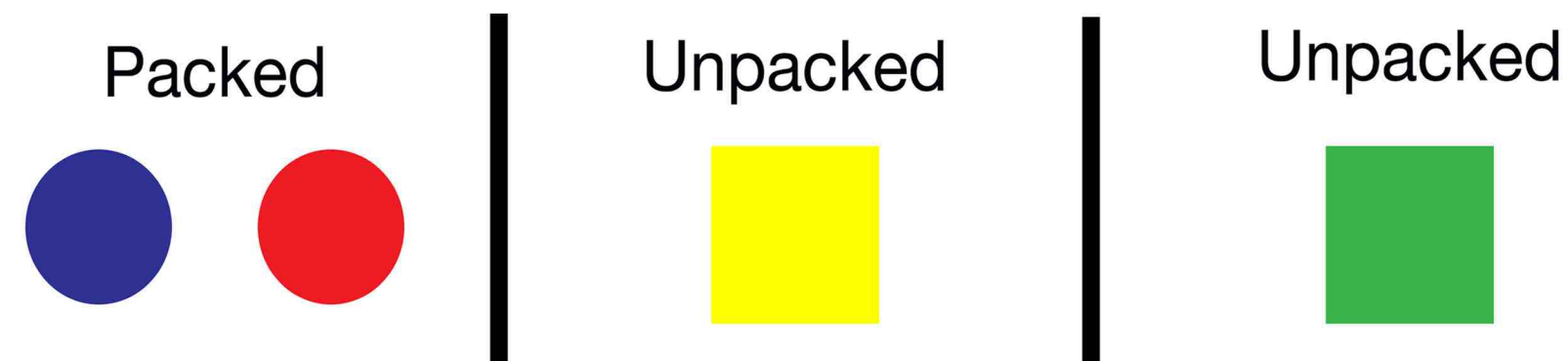
- Resource Allocation: Adults tend to allocate financial aid differently depending on the grouping of income brackets³.
- Choice: Doctors will prescribe more or less aggressive treatment based on the grouping of treatment options⁴.

Partition Dependence in Children

- Resource Allocation: Children's allocations of hypothetical food to zoo animals are influenced by the partitions of the animals².

Packing and Unpacking Stimuli

Do you prefer the circles, the yellow square, or the green square?



- **Packed stimuli** are two or more options presented in a single group. The packed stimuli may belong to a clear conceptual category independent of the unpacked stimuli.
- **Unpacked stimuli** are two or more options presented independently. The unpacked stimuli may belong to a clear conceptual category independent of the packed stimuli.

Objectives

- The goal of this study was to investigate the ways in which children's choices are influenced by the way presented options are partitioned.
- A single-choice task allows us to determine the child's greatest preference.
- All questions and methods were pre-registered.

Methods

Participants

- (N = 86) participants between the ages of 3 and 6 years (M = 4.68, SD = .98).

Procedure

- Participants were asked to select an activity from a board with four images of their options.
- Activities were from two conceptual groups: art and games. Two columns presented items as unpacked. One presented items as packed.
- The researcher and participant did the selected activity.

Logic

- If participants select from the packed or unpacked columns more than 50 percent of the time, preschoolers demonstrate partition dependence on this task.

"I have Model Magic Clay, Etch-a-Sketch, Jenga, and Connect Four. Which would you like to choose?"

ACTIVITIES



Counterbalancing

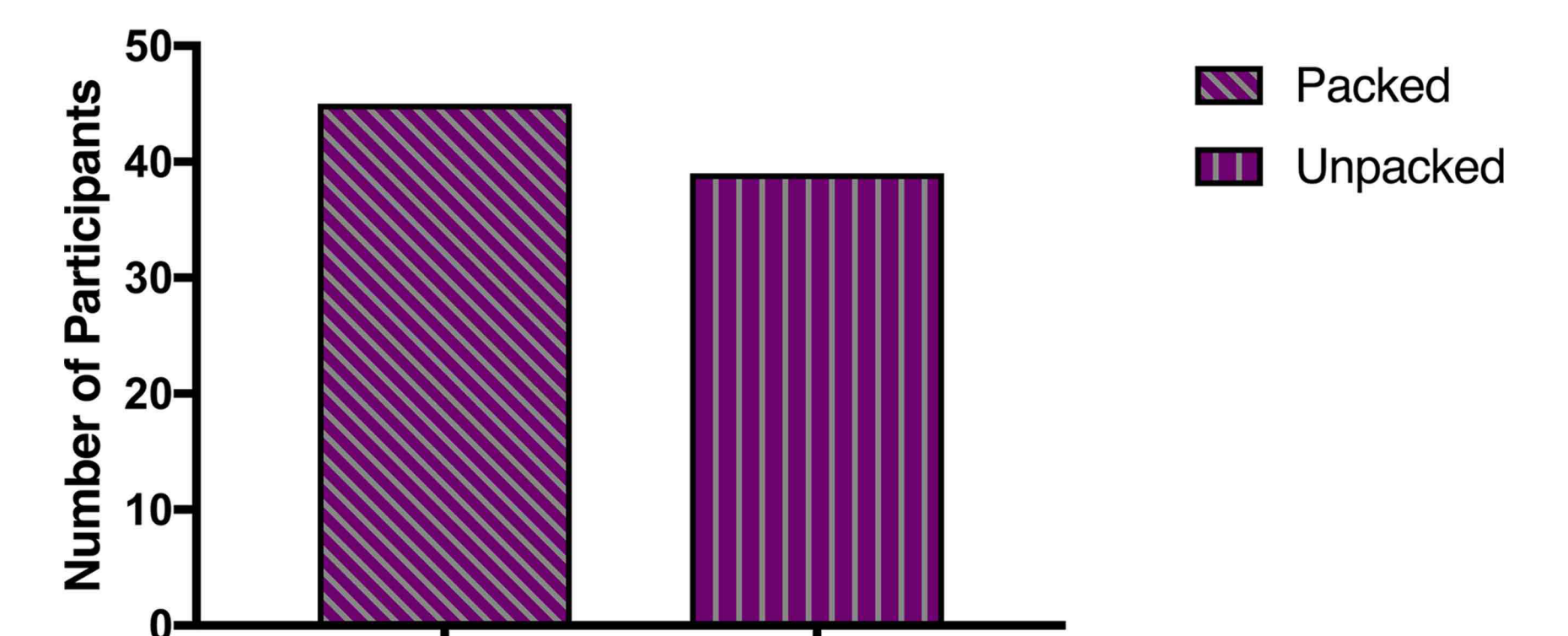
- Participants were randomly assigned to one of four conditions:

Condition	Column 1	Column 2	Column 3
1			
2			
3			
4			

Results

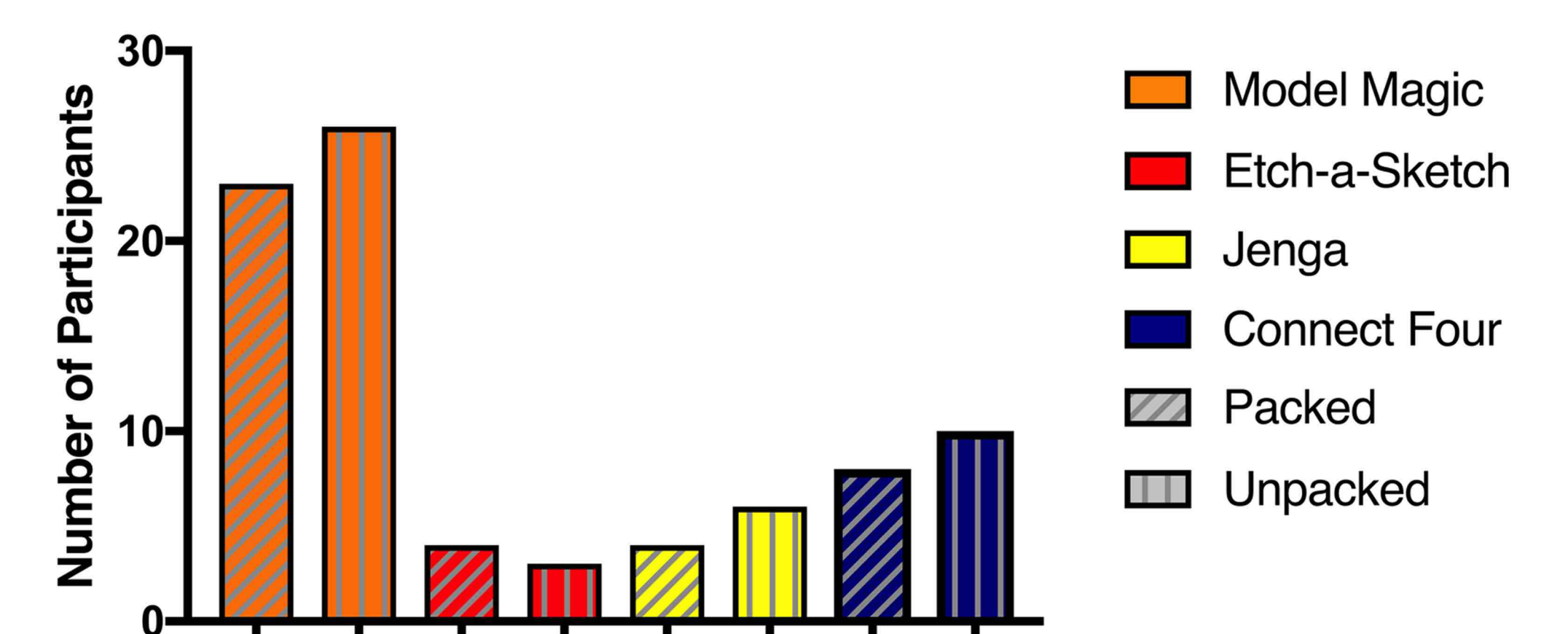
- 54 percent (n = 45) participants selected an activity from the packed column. 46 percent (n = 39) selected from an unpacked column. They did not significantly pick from the packed or unpacked group more than 50 percent of the time. (p = .586).

Packed and Unpacked Selections



- The findings were consistent within each activity: Model Magic Clay (p = .775); Etch-a-Sketch (p = 1.000); Jenga (p = .754); Connect Four (p = .815).

Packed and Unpacked by Activity Selected



Discussion

- Preschoolers' selections were not influenced by the groupings of options in this task.
- Do preschoolers' preexisting preferences have a stronger influence on decisions than partitions?
- Next step: Do preschoolers show partition dependence with novel stimuli?

Acknowledgements and References

We would like to thank all researchers who collected data for this study: Kerry Brew, Sophie Charles, Jenny Chelmon, Taylor Clark, Taylor Dillon, and Sofia Kinney. Thank you to the Connecticut Science Center for providing a space for us to collect data in the Living Lab. Lastly, thank you to the participating families. We appreciate you taking time out of your busy schedules to help us pursue science!

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This work was supported by NSF DRL-1561214.