

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

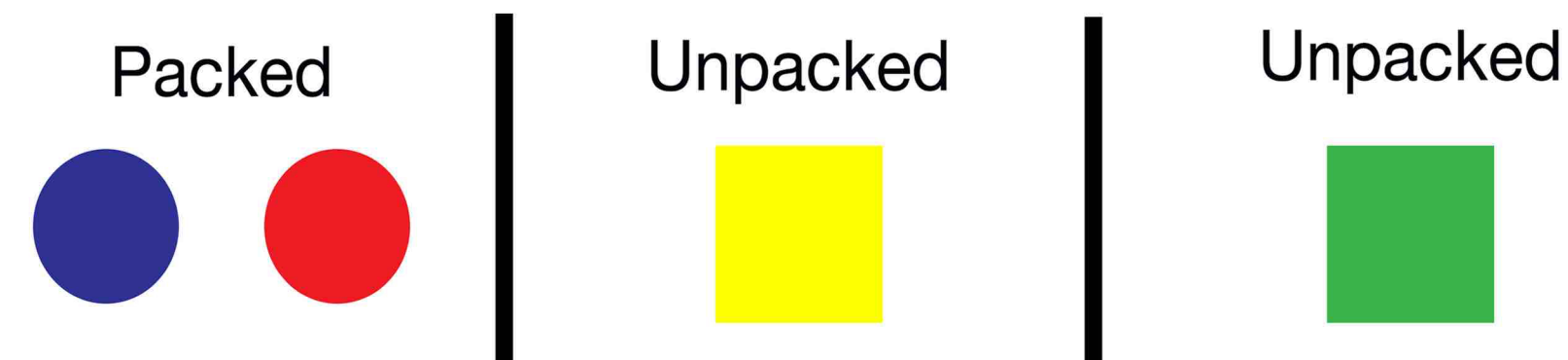
- Resource Allocation: Adults tend to allocate financial aid differently depending on the grouping of income brackets³.
- Choice: Doctors will prescribe more or less aggressive treatment based on the grouping of treatment options⁴.

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

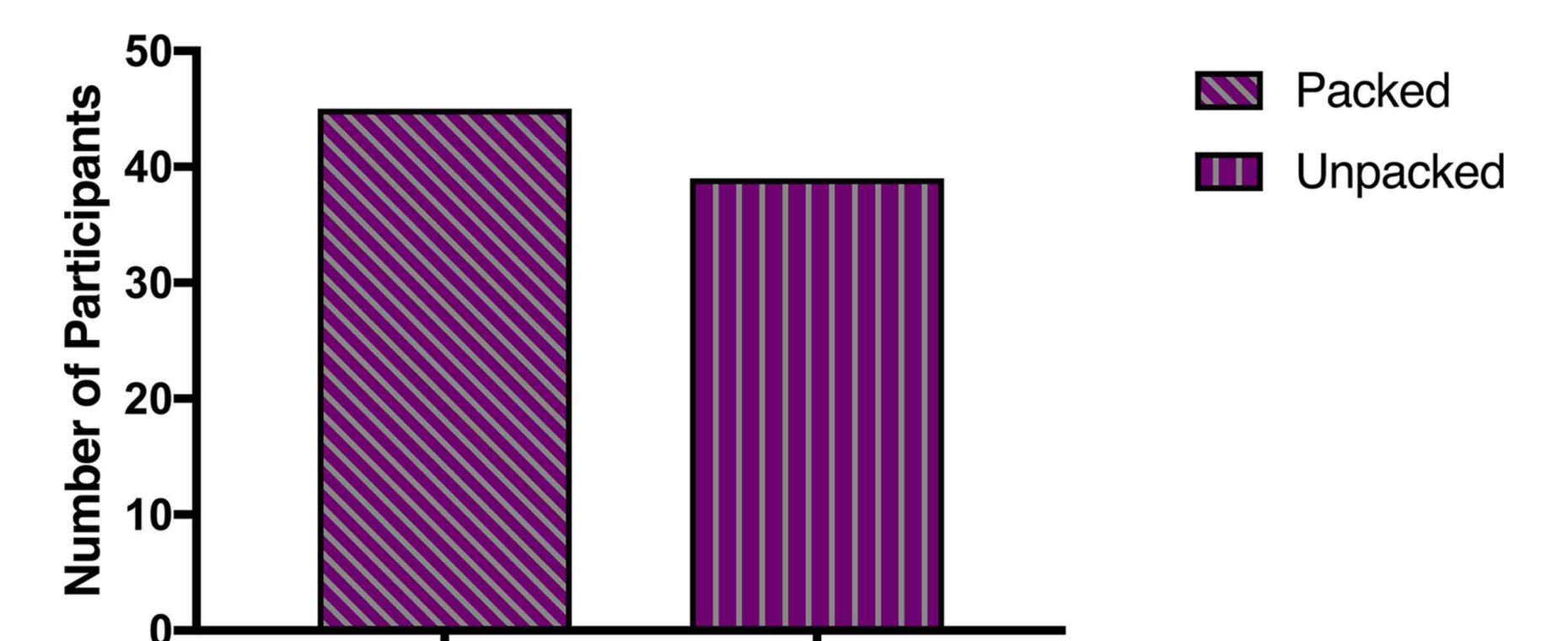
- Participants were randomly assigned to one of four conditions:

Condition	Column 1	Column 2	Column 3
1			
2			
3			
4			

Results

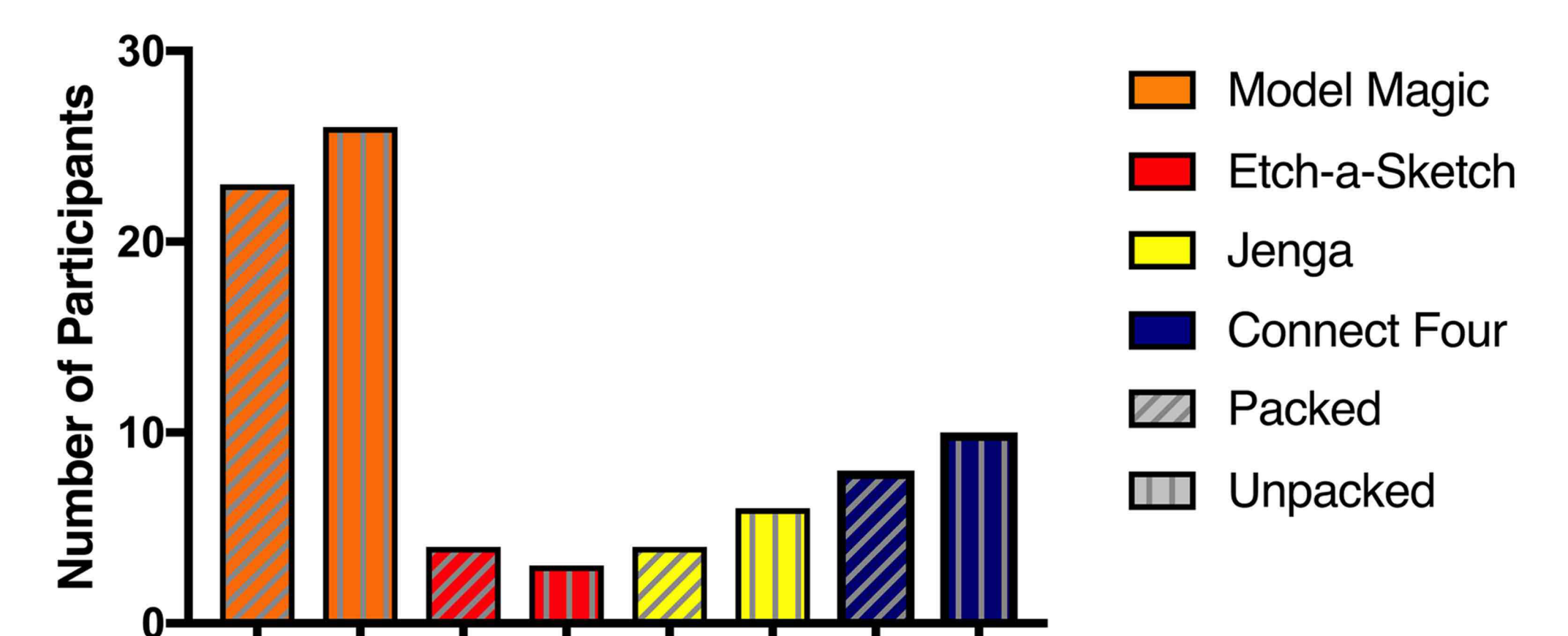
- 54 percent ($n = 45$) participants selected an activity from the packed column. 46 percent ($n = 39$) selected from an unpacked column. They did not significantly pick from the packed or unpacked group more than 50 percent of the time. ($p = .586$).

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

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