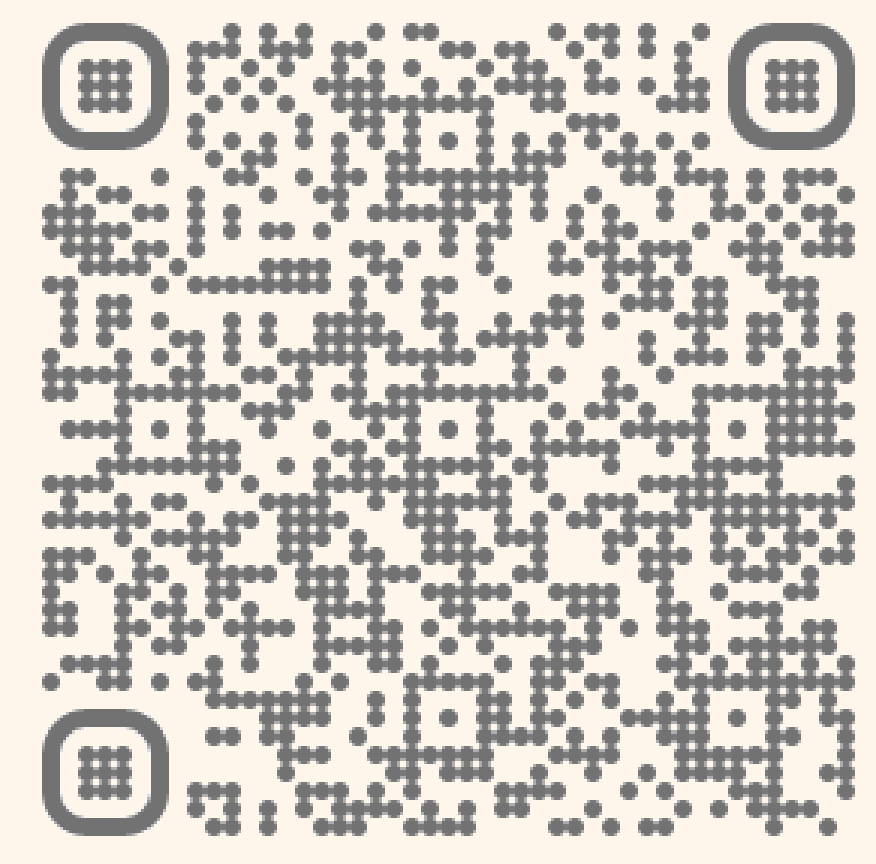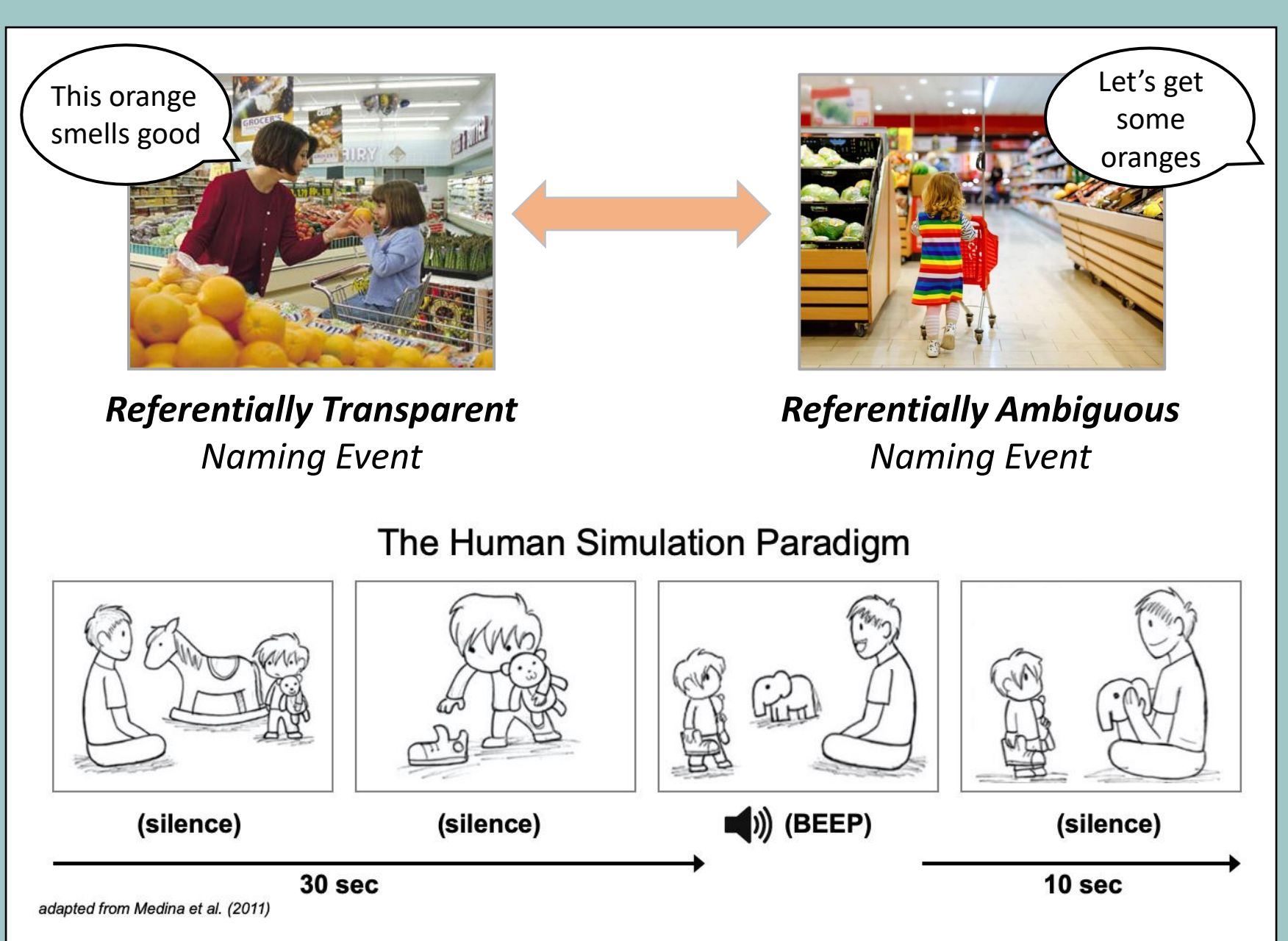# Apples to Oranges: The Effects of Semantic Context on Referential Ambiguity

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INTRODUCTION

Referentially Transparent Naming Event — *Referentially Ambiguous Naming Event*

The Human Simulation Paradigm

(silence) (silence) (BEEP) (silence)
30 sec — 10 sec
adapted from Medina et al. (2011)

- "Referential Transparency" and "Referential Ambiguity" are central constructs in the study of children's early word learning
- A commonly used method for studying referential transparency and referential ambiguity is the Human Simulation Paradigm (HSP), which has revealed that the large majority of naming events are referentially ambiguous (Medina et al., 2011)
- Most HSP studies do not offer the rich contextual structure found in child-directed speech, including the fact that words in the same semantic categories tend to co-occur (Tamis-LeMonda et al., 2019)
- **RESEARCH GOAL**: The current study examines how referentially ambiguity is impacted by the semantic contexts in which naming events occur.

PRELIMINARY WORK

- In prior work, our laboratory created a picture book adaptation of the Human Simulation Paradigm
- Most naming events in picture books were found to be referentially ambiguous
- The current study asks whether the surrounding semantic context can alter the degree of ambiguity


Type in the NOUN you think best fits this on page

EXPERIMENTAL DESIGN

Semantically Structured (top row) / Randomly Structured (bottom row) — **Target Trial**
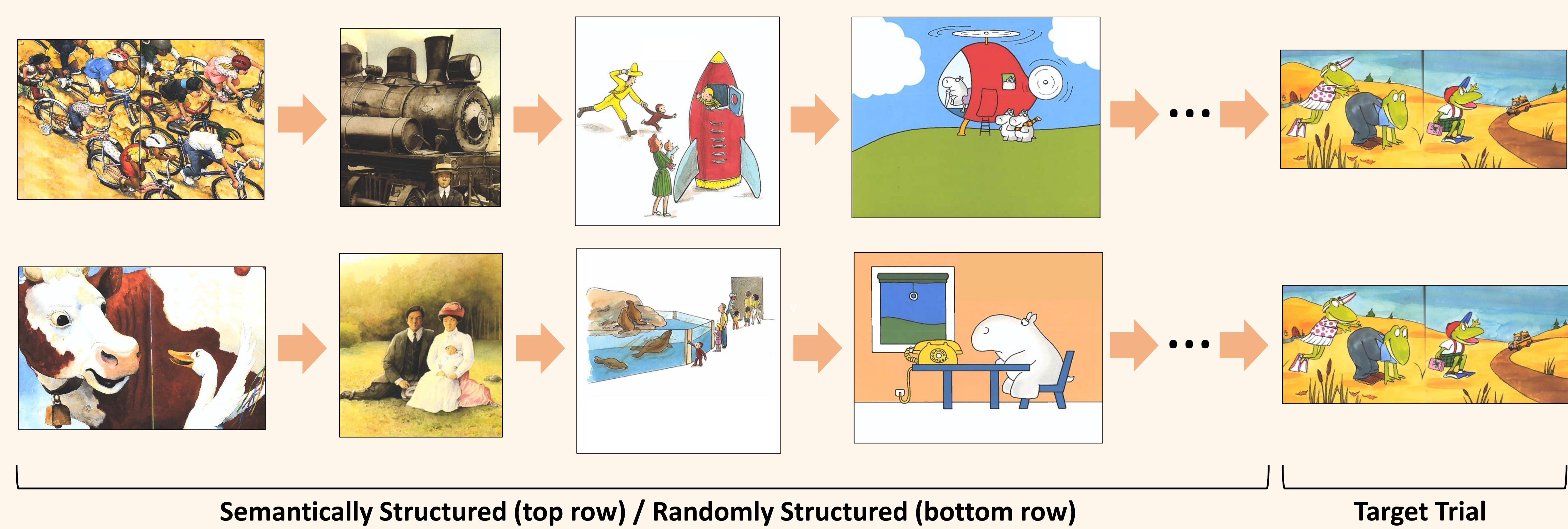
- 96 participants were randomly assigned to either the 'Semantically Structured' or 'Randomly Structured' condition
- In both conditions, participants saw blocks of 8 scenes: 7 stimuli that did or did not share (depending on condition) a semantic category as the referent of the ambiguous target scene, and then the target scene
- For all scenes, participants task was to note the noun they thought "best fits" the page; participants completed six different blocks
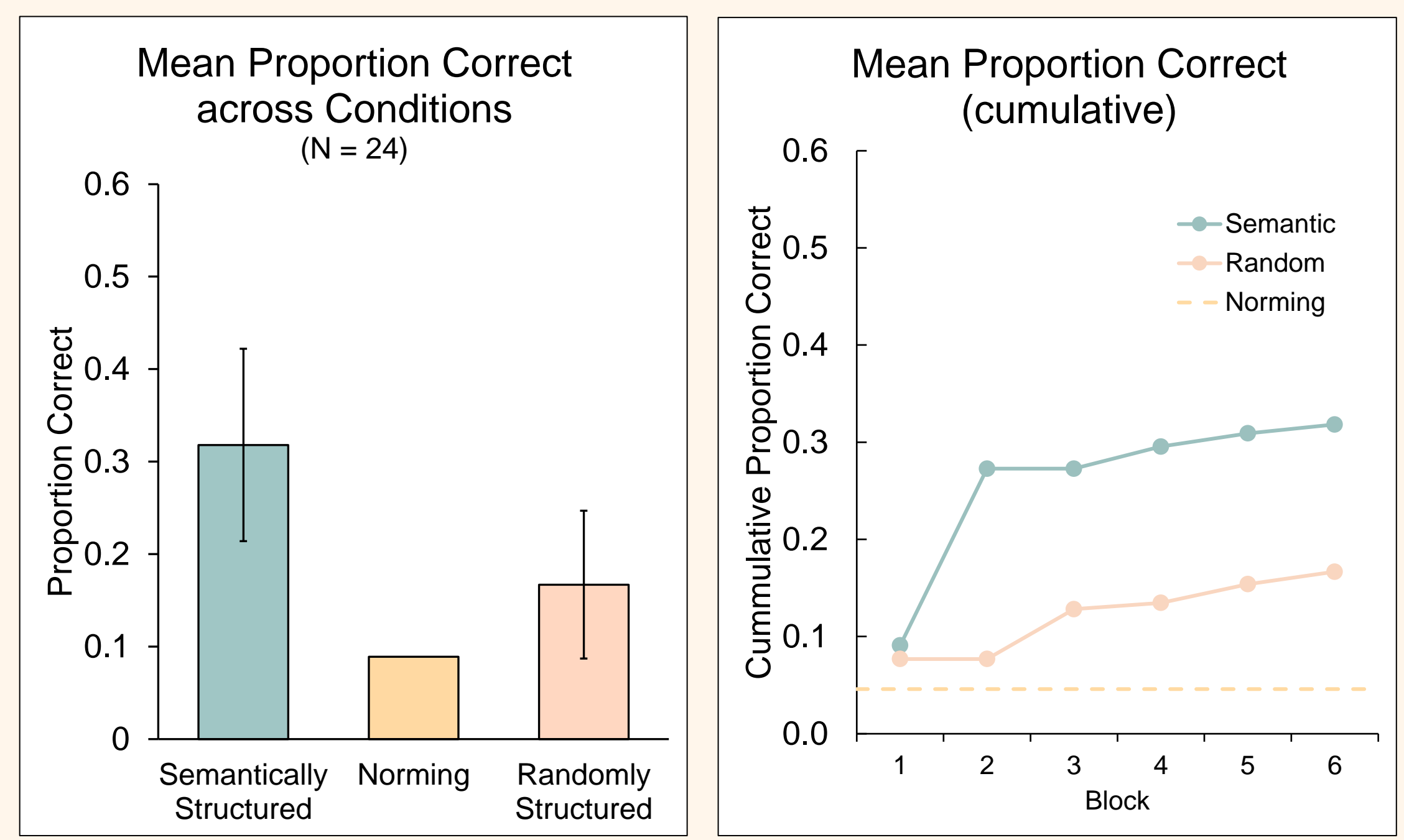
EXPERIMENT RESULTS

Mean Proportion Correct across Conditions (N = 96)

ORANGE, BUS, FOOT, HAT, CHAIR, PIANO
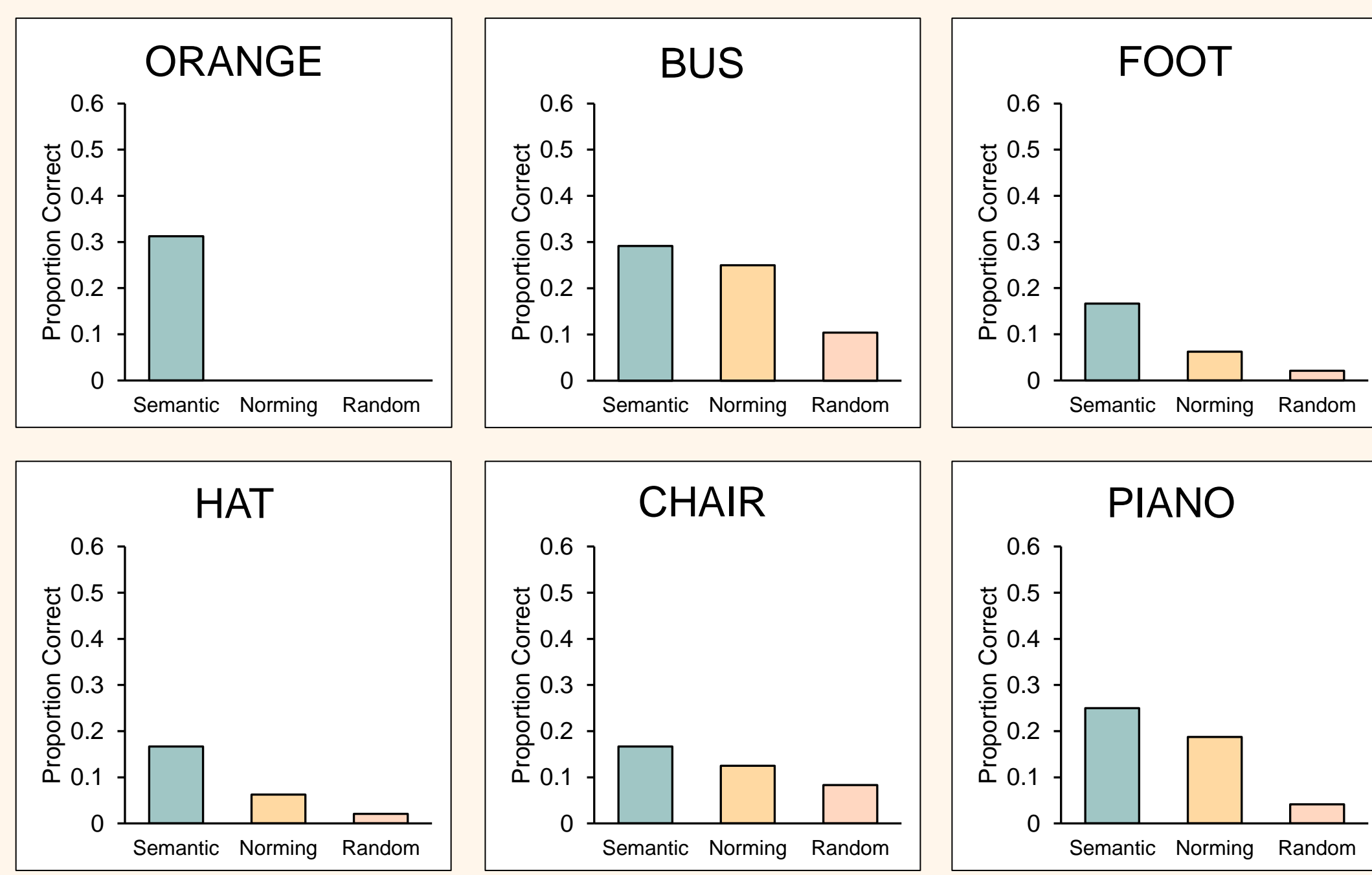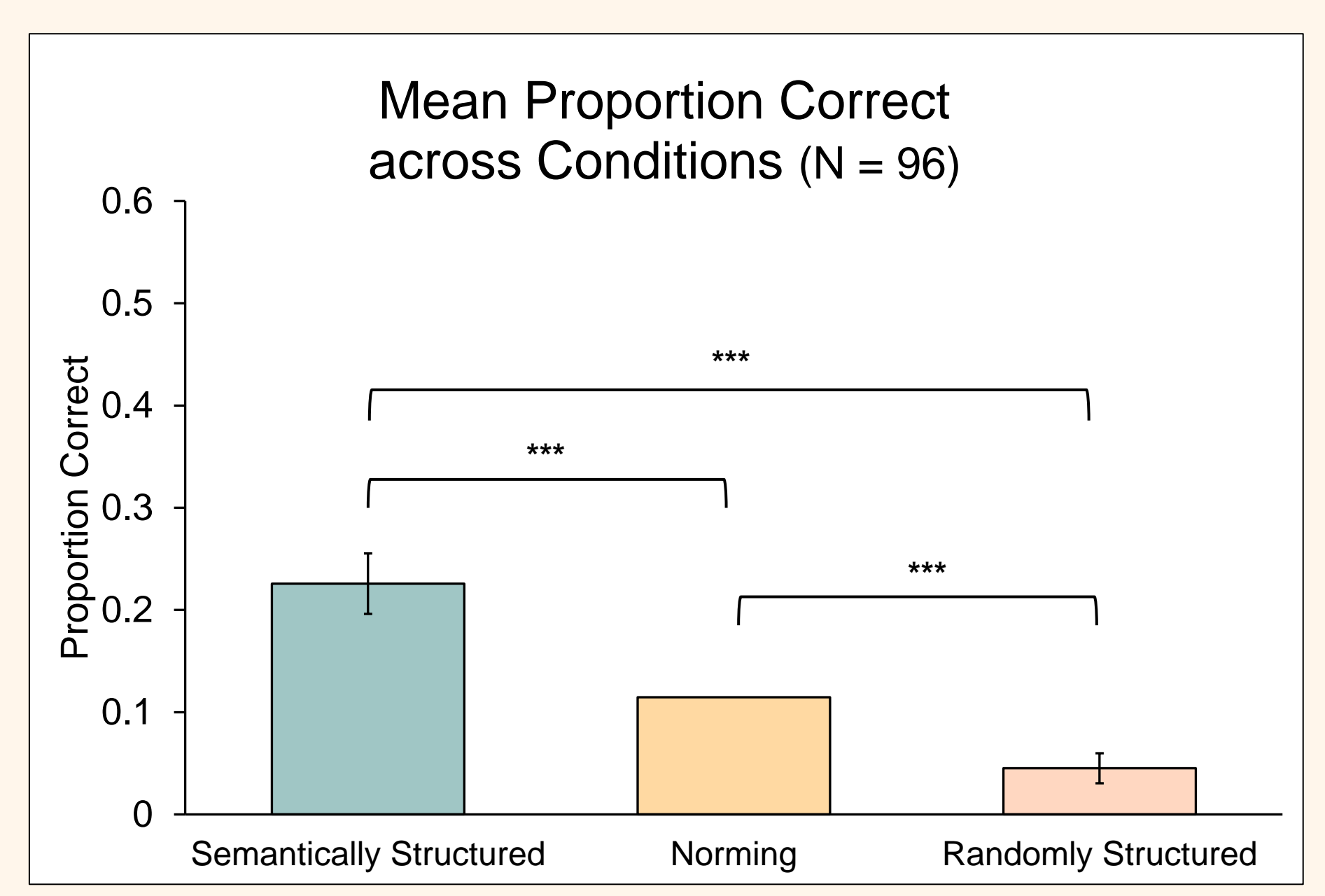
LEARNING STUDY (PILOT)
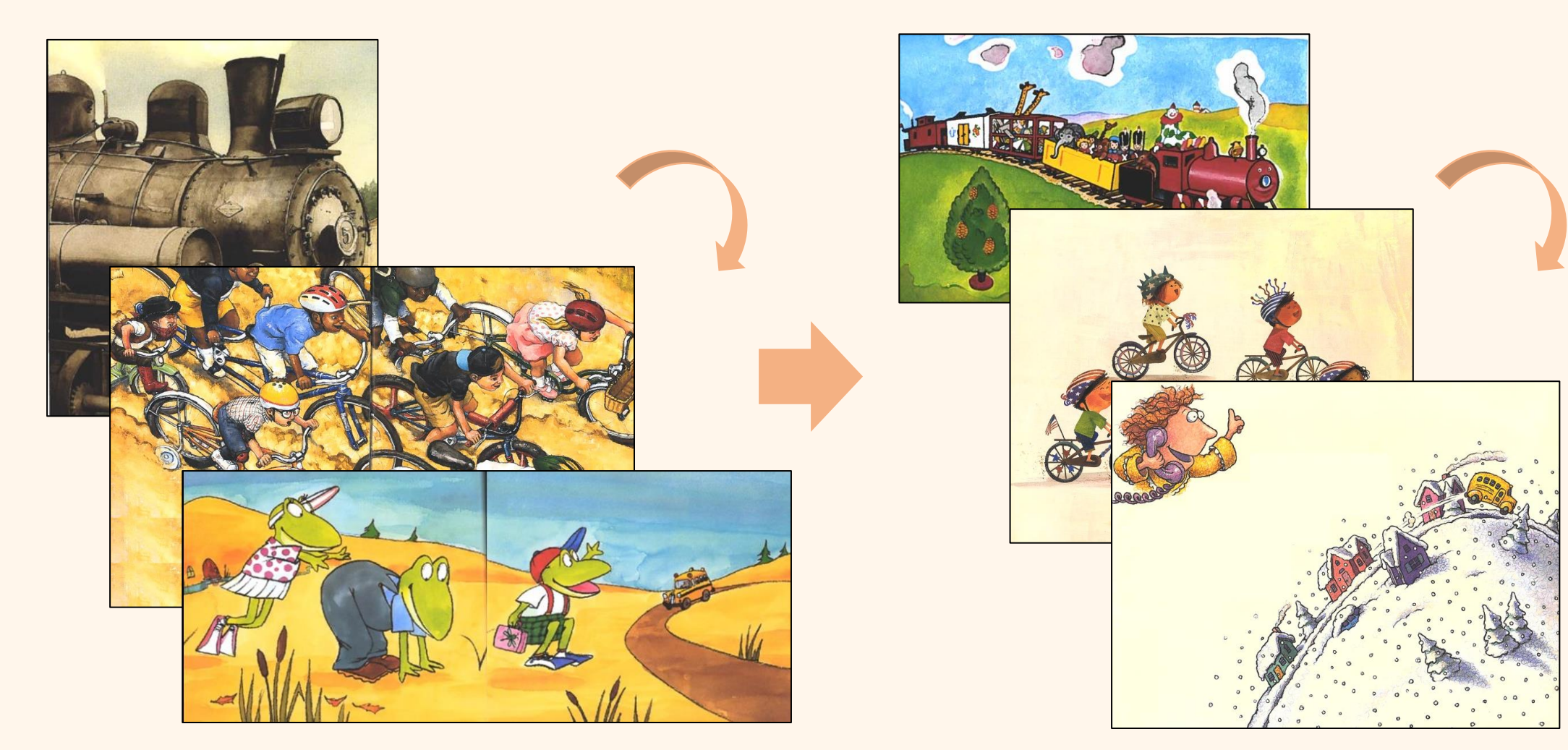
- A recent pilot study examined how semantic context influences learning from multiple ambiguous naming events

Mean Proportion Correct across Conditions (N = 24)

Mean Proportion Correct (cumulative)

DISCUSSION

- Whether children's input is best characterized as referentially ambiguous or referentially transparent is a matter of debate (see Gleitman & Trueswell, 2020; Tamis-LeMonda et al., 2014)
- Reproducing the contextual structure found in everyday word-learning environments (Custode & Tamis-LeMonda, 2020; Tamis-LeMonda et al., 2019) within an experimental context reduces the degree of referential ambiguity of identical naming events (Chen & Yu, 2017; Dautriche & Chemla, 2014)
- These results highlight how the ambiguity naming events is not only shaped by the in-the-moment properties of naming events, but also the properties of the broader semantic and discourse context

FUTURE DIRECTIONS

Test the limits of context by using more ambiguous cueing events

Test current effects with vignettes of child-directed speech

Test children's sensitivity to contextual effects

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