

Preschool children reason about third-party goals when evaluating acoustic environments

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Background

- **Children as flexible learners**
 - Learning flexibility in children includes:
 - Adjusting attention to stimuli that is learnable (Gerken et al., 2011; Kidd, 2011)
 - Using emotional expressions as cues for novel object exploration (Wu & Gweon, 2021)
 - Reasoning about environmental structure and goals to determine approach strategies (Meder et al., 2021)
- **Background noise and learning**
 - Acoustic noise is ubiquitous
 - Repeated noise exposure influences learning and development in critical ways:
 - Reduces speech perception and word recognition (Klatte et al., 2013; Bjorklund et al., 1990)
 - Decreases word learning (McMillan & Saffran, 2016)
 - Impinges on already limited cognitive resources for adaptive strategy building (Loh et al., 2022)
- **(Ecological) Active learning**
 - Traditional active learning:
 - Learners interact with individual stimuli within their environment (Settles, 2009)
 - Accurate stimuli labeling is a primary goal
- **Environmental selection**
 - Learners preferentially select acoustic environments that align with a set of goals
 - Emphasizes acoustic information
 - Goal-directed
 - Addresses variabilities across environments

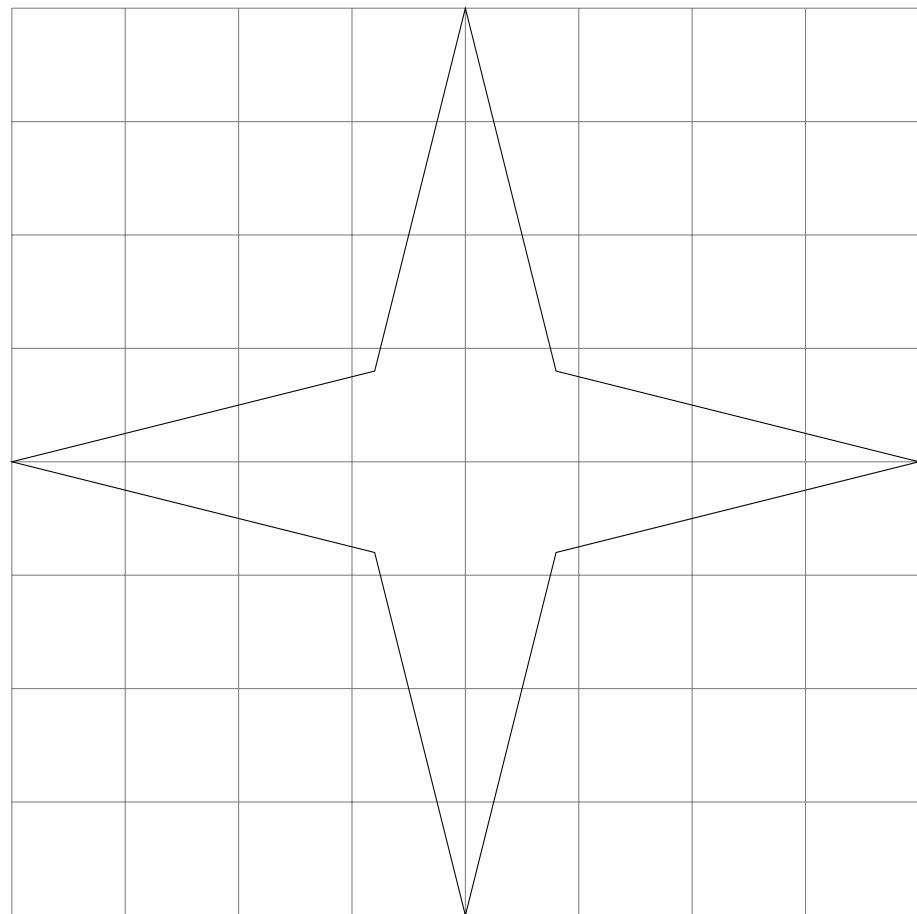


Figure 1. A figure caption.

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Background: Metacognition

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- **Libero tincidunt** a duis congue vitae
- **Dui ac pretium** morbi justo neque, ullamcorper

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Research question

Methods

- **Participants**
 - Experiment 1
 - N = 72 [μ = 4.46 years]
 - African American/Black = 4.2%
 - Asian American/Pacific Islander = 23.6%
 - Caucasian/White = 27.8%
 - Hispanic/Latinx = 8.3%
 - Multiracial = 26.4%
 - Other = 8.3%
 - Experiment 2
 - Children
 - N = 54 [μ = 4.55 years]
 - African American/Black = 3.7%
 - Asian American/Pacific Islander = 37%
 - Caucasian/White = 31.5%
 - Hispanic/Latinx = 7.4%
 - Multiracial = 20.4%
 - Adults
 - N = 37 [μ = 40.43 years]
 - African American/Black = 4.2%
 - Asian American/Pacific Islander = 70.3
 - Caucasian/White = 31.5%
 - Hispanic/Latinx = 70.3
 - Multiracial = 31.5%
 - Other = 31.5%

test





Dance	Read	Sleep	Talk
			

Table 1. Study 1 Stimuli



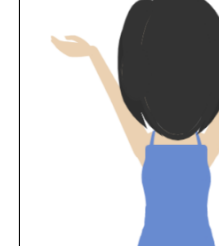

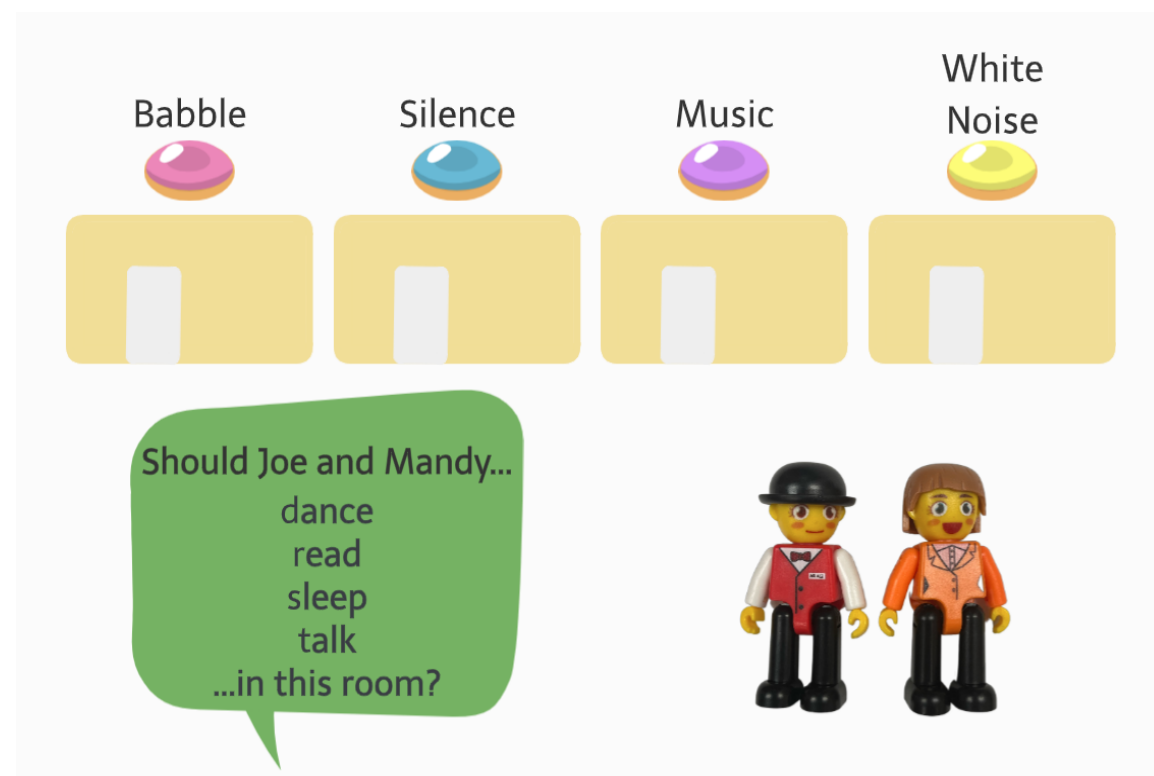
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Table 2. Study 2 Stimuli



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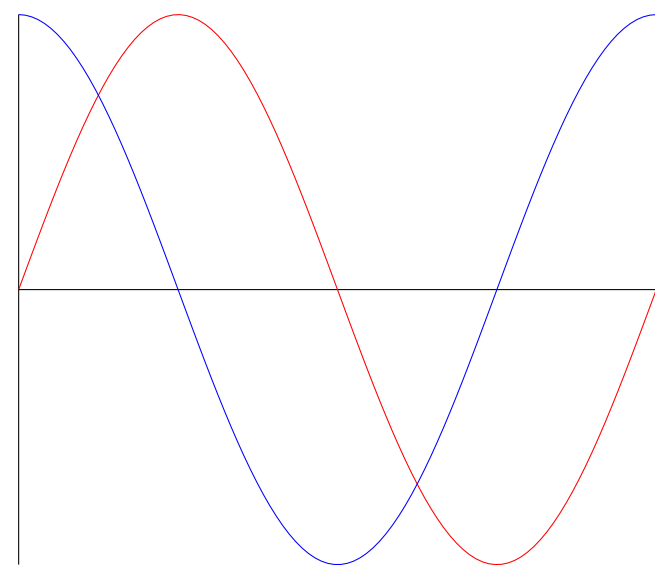


Figure 2. Another figure caption.

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A highlighted block

To what extent do preschool children use environmental selection as an adaptive strategy for learning in noisy acoustic environments?
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