

# Novel noun learning during naturalistic picture book reading in 14-, 18-, and 22-month-olds

Perspectives beyond the lab: Language input in Naturalistic Contexts  
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# What amount and kind of input supports word learning over development?



# Infants' + Toddlers' Early Abilities



**~ 6 Months**

- Detect patterns in native language
- Start understanding common words



**~ 12 Months**

- Begin to produce words
- Comprehension Boost



**2nd year**

- Use words + gestures
- Start combining words

# What amount and kind of input supports word learning over development?



Fully Naturalistic



Current Project



Lab-based Studies



# Shared Book Reading: New but Old Method

Creates a naturalistic setting for word learning that incorporates **joint attention**, **clear object naming**, **interactive responses**, and **repeated exposure** to words.

Extensions beyond the book

- Builds connections to familiar items
- Reinforce word learning



# Current Questions

1. Can toddlers learn new words in two weeks?
  2. If they can, what aspects of the input facilitate this learning?
- How does age contribute to this story?



**Current Project**

# Methods

## Procedure:

Caregivers recorded book-reading sessions 2/day for 2 weeks

- The short picture book contained three novel word/object pairing: “shang”, “blick”, and “dax”.
- Each appeared in differing positions and sizes

For each word:

$9x/\text{read-through} * 14 \text{ days} * 2x/\text{day} = 252 \text{ exposures}$

- Also provided caregivers with a short-survey about their reading habits and beliefs



Shang, Blick, and Dax  
Bergelson Lab



# Methods

Participants: 32 caregiver-child dyads

14-month-olds (n = 7)

18-month-olds (n = 10)

22-month-olds (n = 15)

In total:

~ 2,688 minutes of data for this collection

\*Data collection still in progress



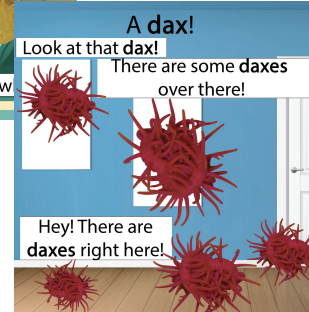
# Annotation Process

Broad tally for variables:

Input:

- # of times caregivers say each target word (Shang, Blick, and Dax)
- # of caregivers extensions beyond book

Main outcome: children's production of target words



# Current Questions

1. Can toddlers learn new words in two weeks?
2. If they can, what aspects of the input facilitate this learning?

How does age contribute to this story?



**Current Project**

# Do the toddlers produce the words at all?

Yes?

22-mos produced the words

~90% of 22-mos produced 1 word after 1 week

~50% of 22-mos produced all 3 words

18-mos somewhat produced the words

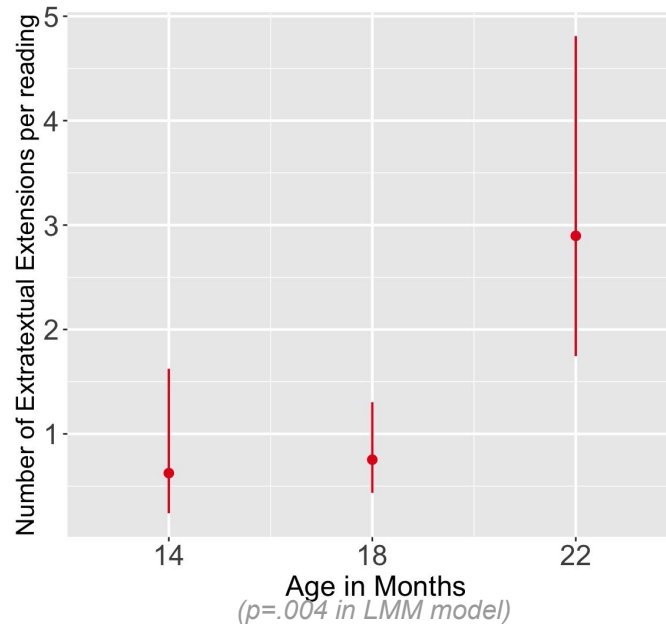
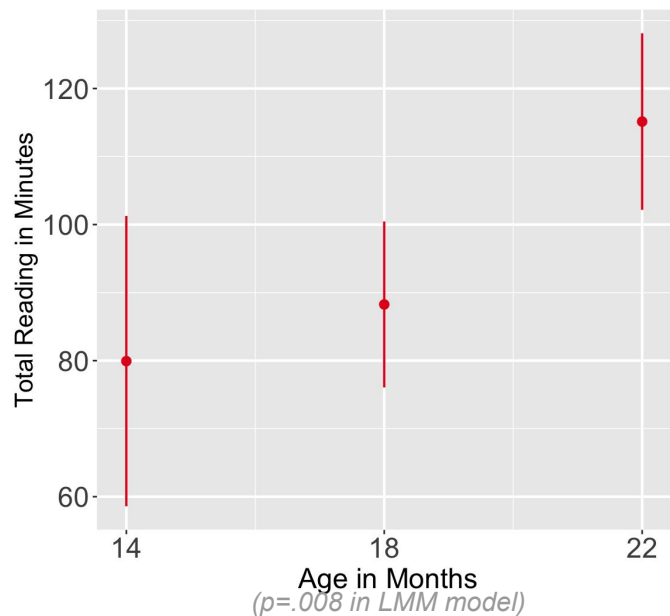
~40% of 18-mos produced a new word

14-mos did not really produce the words

Only ~14% of 14-mos produced a new word



# Do caregivers read differently for different age groups?



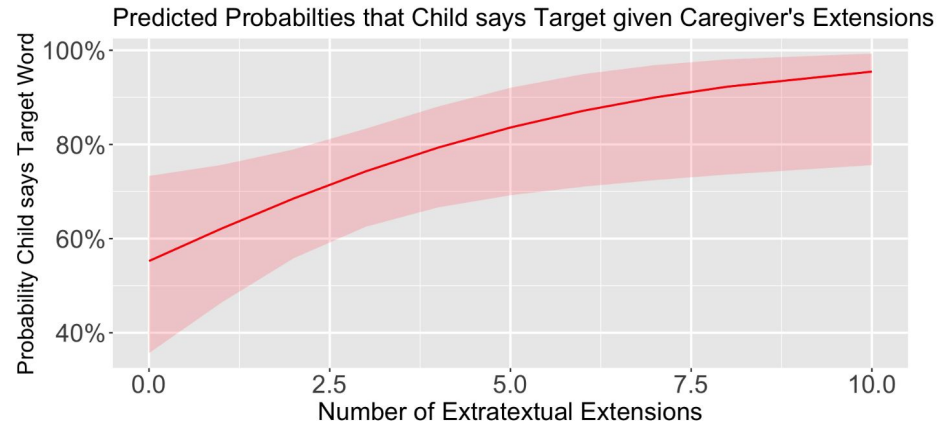
- 22 month olds hear ~40 more minutes of book reading than 18 or 14mo.
  - 22mo hear ~3x as many extensions per reading as 18 or 14mo.

# Do the # of caregiver extensions predict 22-mos' word production?

So far: Yes!

For 22-mos, for each additional extension lead to about a 5% increase in likelihood of producing a target word

- Is it just that more extensions reflect more exposure to target words?
  - No! Caregivers said each word ~9 times per session

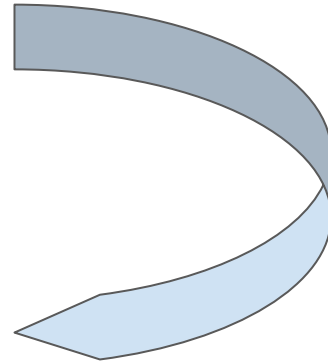
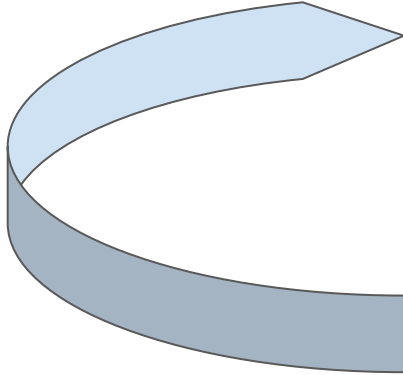


*GLM: child\_says\_target ~ extensions\_number + (1|child)*

*(p = 0.022)*

# Discussion: What is driving the relationship between caregivers' reading and children's vocalizations?

3rd variable?



**Causality is  
hard, ask  
me more!**

# What about the younger age groups' word learning?

Eyetracking and selection-based task in progress!



# Conclusion: What does it take to learn a new word?

- For 22-month olds, 252 instances over 2 weeks was enough exposure to learn a few new words!
- Caregiver extensions predicted toddler's productions of new words.





The Bergelson Lab!



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All the wonderful families!

