



Hierarchical Noun Phrase Structure in 18-month-old English Learners

Project on Children’s Language Learning
Department of Linguistics

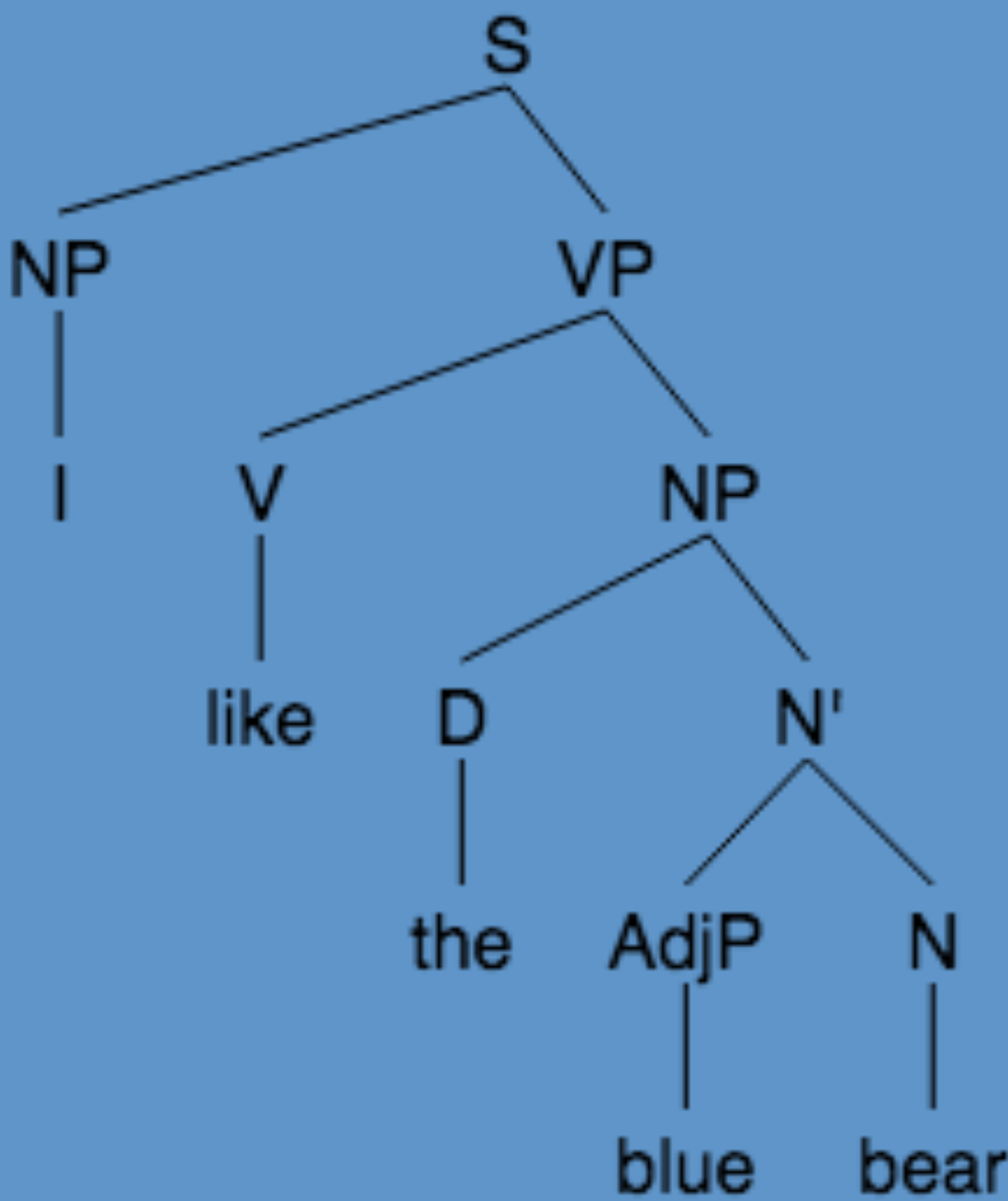
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Background

Adults must recognize the hierarchical structure of phrases to understand how their structures relate to their meanings.¹

“I like the blue bear.”



✗ I like the color blue and bears.

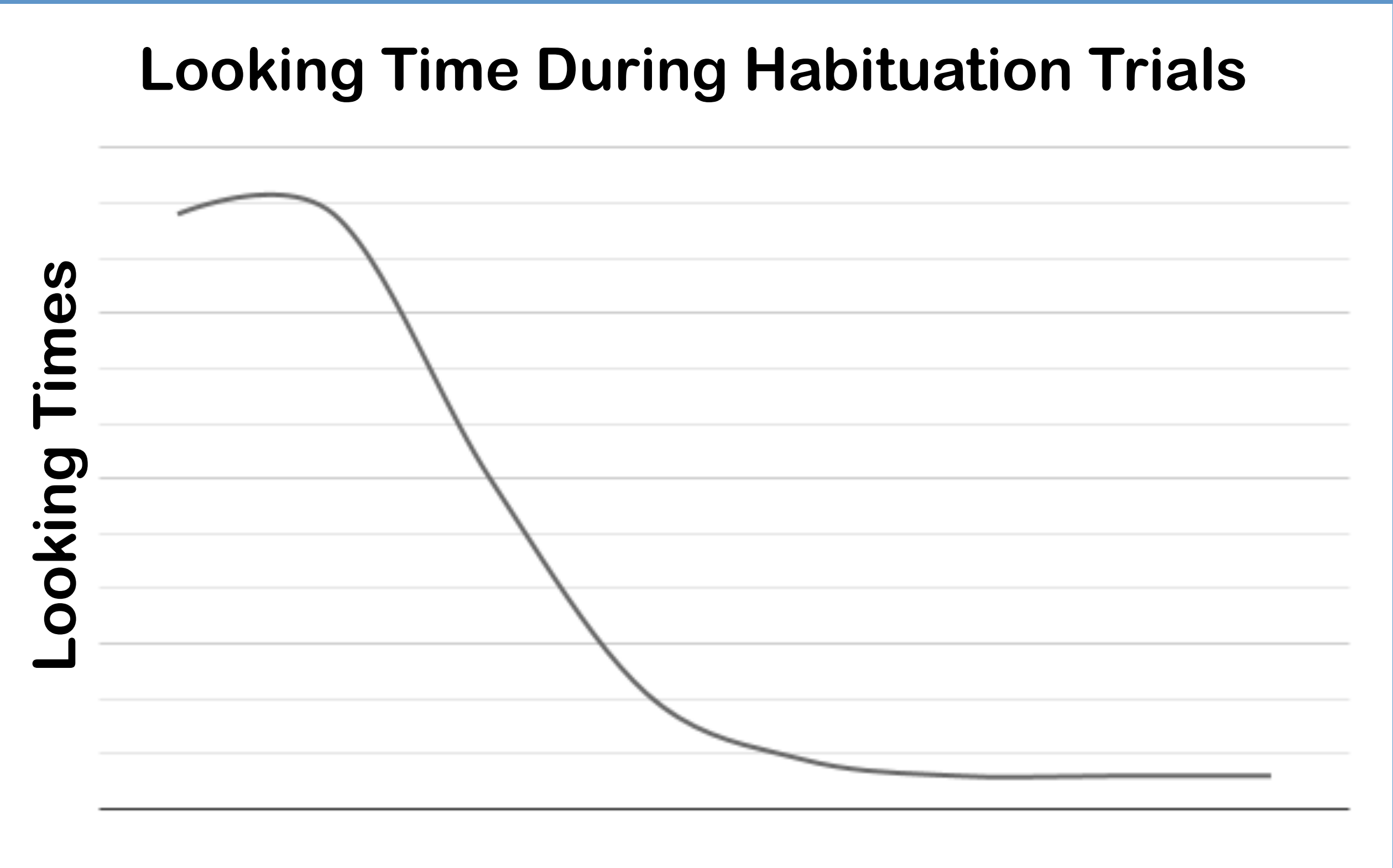
✓ I like a particular blue bear.

In this structure, the adjective “blue” modifies the noun “bear” to form the phrase “blue bear.”

Method

Habituation-Switch Paradigm²

Habituation trials: expose the participant to a stimulus until they lose interest



Test trials: present a new stimulus to the participant and measure the participant’s interest in the new stimulus

Interest in the stimulus is measured by looking time. Increased interest in the test trial stimuli demonstrates recognition of a change in stimulus.

Stimuli

The participants are presented with either **congruent** or **incongruent** video-audio pairings. Each pairing is 30 seconds long.

Phase		Visual stimuli	Audio stimuli
Habituation			“Look, it’s a blue bear!”
			“Look, it’s a bear!”
Test	Congruent switch		“Look, it’s a bear!”
	Incongruent switch		“Look, it’s a blue bear!”

Research Question

Do 18-month-olds build hierarchical structure of noun phrases?

Hypotheses

Hypothesis 1: 18-month-olds build hierarchical structure of noun phrases.

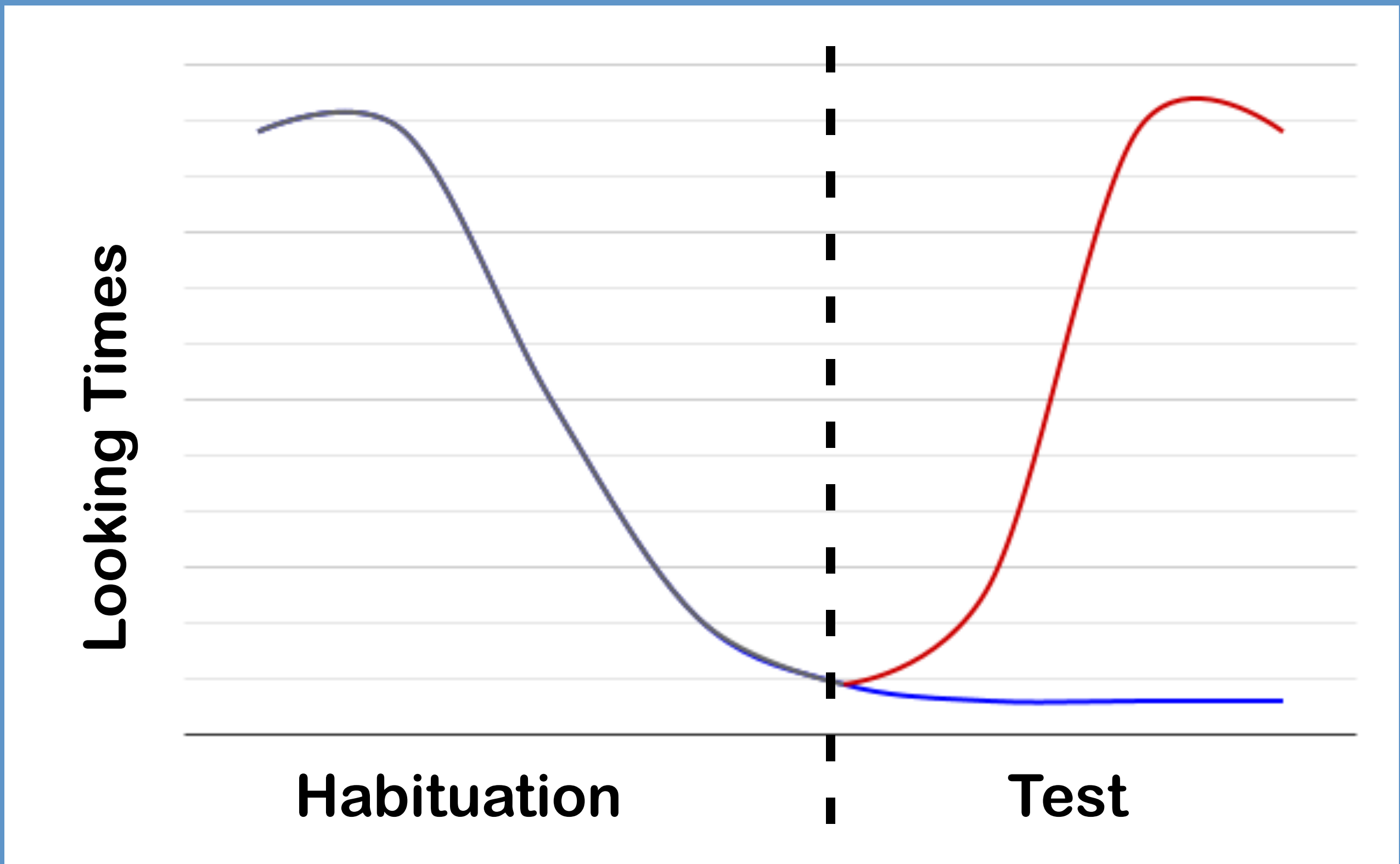
Hypothesis 2: 18-month-olds do not build hierarchical structure of noun phrases.

References [1] Baker 1978, Introduction to generative transformational syntax, Englewood Cliffs, NJ: Prentice Hall. [2] Younger & Cohen 1986. Developmental change in infants’ perception of correlations among attributes, *Child Development* 57(3). [3] Lidz, Waxman, & Freedman 2003, What infants know about syntax but couldn’t have learned: experimental evidence for syntactic structure at 18 months, *Cognition* 89(3). Thank you Tara Mease and The Project on Child Language Learning

Predictions

If 18-month-olds build hierarchical structure:

- **increased interest in the incongruent switch**
- **remain disinterested in the congruent switch**



Participants

Total participants: 48
Age range³: 17.5 months – 18.5 months

Participants per condition
Control: 16
Congruent Switch: 16
Incongruent Switch: 16

Next Steps

- If the data supports Hypothesis 1, the next question is to push the age range to younger
- If the data supports Hypothesis 2, run an older age group as a control group and consider any addition conditions that might be needed