

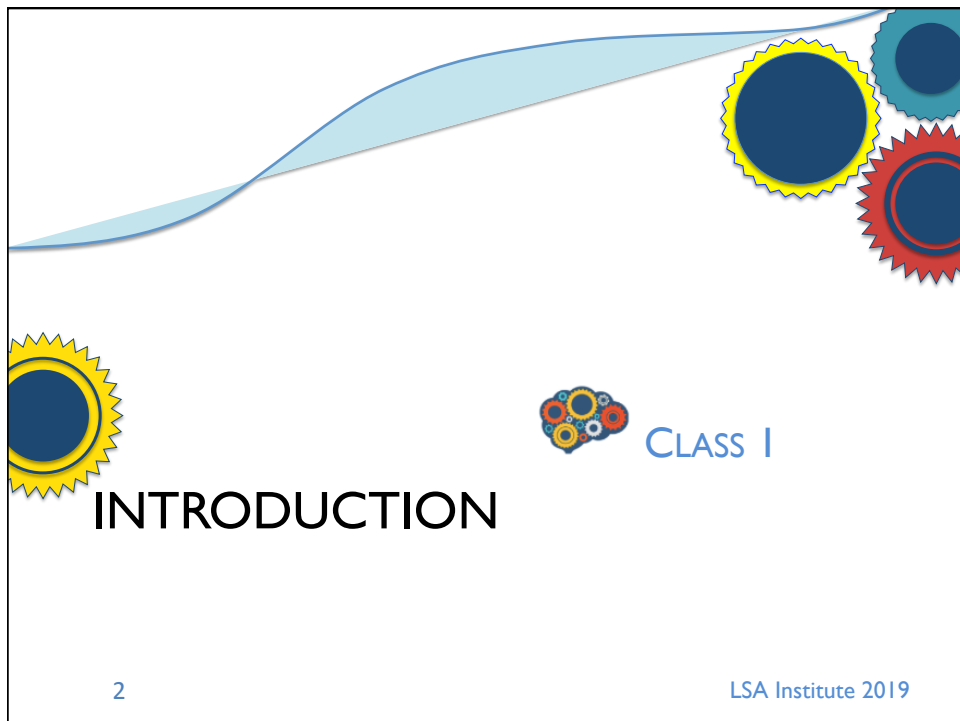


# Acquisition of Semantics

LSA Institute 2019  
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**2019 Linguistic Institute**  
University of California, Davis



**CLASS I**

# INTRODUCTION

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## Acquisition of Semantics

- Why investigate this topic?
  - Kids are cute, and it's fun to study them.
  - Children the world over encounter the same challenges and milestones in language acquisition.
  - Basic aspects of meaning interact with fundamental concepts of human cognition.



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## Acquisition of Semantics

- Around the world and across many different environments, children face the same challenges and eventually become proficient speakers of (at least one) language.



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## Acquisition of Semantics

- What will we be studying?
  - How children acquire meaning
  - What children know about meaning during development
  - How they assign meaning in context
  - How their knowledge compares with adults'
  - Methodologies for investigating child language
  - How linguistic theory and language acquisition investigations are mutually informative



## Acquisition of Semantics

- What topics will we be covering?
  - Word learning
  - Adjectives
  - Comparatives
  - Verb Learning and Syntactic Bootstrapping
  - Quantifier Raising and Quantifier Scope
  - Scalar Implicatures
  - Collectivity and Distributivity
  - Plurals



**Your Final Project: Propose a Study  
Assignment and Instructions on Orbund  
Due Saturday!**

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**Getting to know you**

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## Word Learning

- How does a child identify the meaning of a word given the inherent noise of the environment, and the vast hypothesis space of word meanings?



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## Word learning

- Once children have segmented the speech stream, and identified what counts as a word, they have to assign it a meaning.
- How do they do this?

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Gavagai!



Quine, 1960

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Gavagai!



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## Word Learning

- One hypothesis:
- “If we will observe how children learn languages, we shall find that to make them understand what the names of simple ideas or substances stand for, people ordinarily show them the thing whereof they would have them have the idea; and then repeat to them the name that stands for it, as ‘white’, ‘sweet’, ‘milk’, ‘sugar’, ‘cat’, ‘dog’.” Locke (1690/1964, Book 3.IX.9)
- This may happen, but this cannot be how children acquire language.



## Word Learning

- Children do not learn through imitation.







## Not imitation

I hate you! You're the worst mommy ever!



Lila Gleitman

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## Not imitation


Don't giggle me!



Melissa Bowerman


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## Not imitation

Joey will get there first than Jason.




From the Kuczaj corpus (Abe)

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## Not imitation



and then the dinosaurs got in the car and they drove...and they go to the candy store.

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## Not imitation or correction

- CH: Want other one spoon, Daddy.  
 Fath: You mean, you want THE OTHER SPOON.  
 CH: Yes, I want other one spoon, please, Daddy.  
 Fath: Can you say “the other spoon?”  
 CH: Other...one...spoon.  
 Fath: Say... “other.”  
 CH: Other.  
 Fath: “Spoon.”  
 CH: Spoon.  
 Fath: “Other...spoon.”  
 CH: Other...spoon.  
 Now give me other one spoon? Martin Braine

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## Constraining the Hypothesis Space

- Whole Object Bias (Markman 1994)
- Taxonomic Bias (Klibanoff & Waxman 2000; Waxman & Markow 1998)
- Shape Bias (Landau, Smith, & Jones 1988, 1998)
- Mutual Exclusivity (Markman & Wachtel 1988)/ Novel-name Nameless-Category (Golinkoff, Mervis, & Hirsh-Pasek 1994)
- Principle of Contrast (Clark 1987)
- Joint attention (Tomasello 2001, Clark 2004)

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## Constraining the Hypothesis Space

Infants “tend to pick up on the most frequent nouns, verbs and adjectives first, and then extend their range. In doing this, they depend on **social interaction**. They attend to what is in the **joint focus of attention** for adult and child, to what is physically and conversationally present, and hence to the language directed to them as addressees. Indeed, social interaction is essential to the process of acquisition.” Clark (2004)



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## Word learning

- Taxonomic bias (Markman (1994))

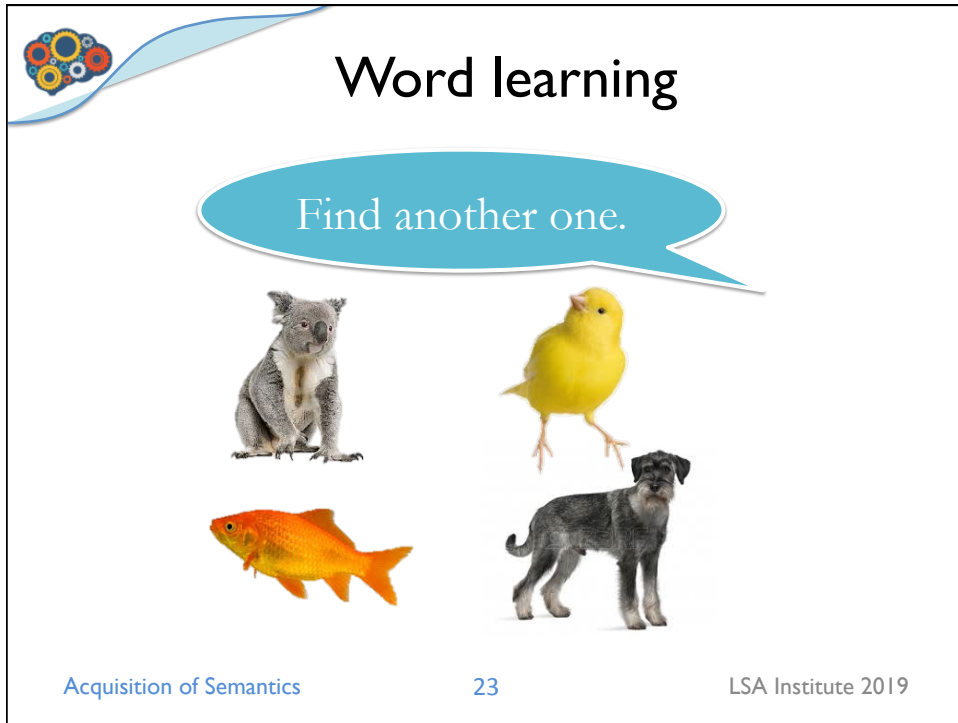
This is a bif.



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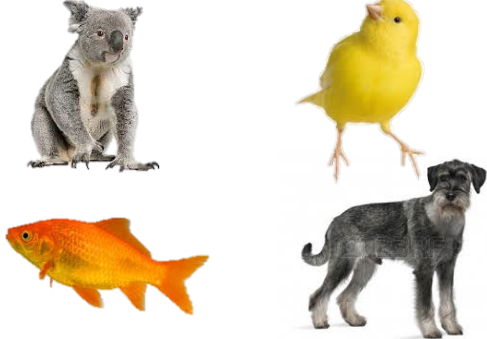
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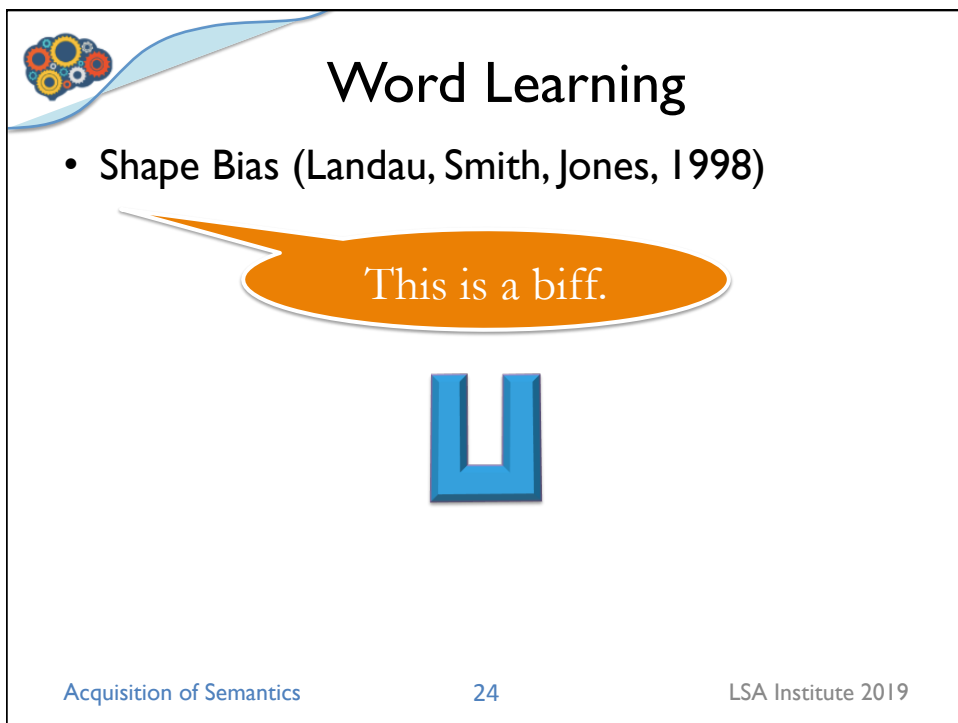
**Word learning**

Find another one.



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This slide features a decorative graphic of colorful gears in the top-left corner. The main title is "Word learning". Below it, a blue speech bubble contains the instruction "Find another one.". Four images are arranged in a 2x2 grid: a koala (top-left), a yellow bird (top-right), a goldfish (bottom-left), and a dog (bottom-right). The footer contains the text "Acquisition of Semantics", the number "23", and "LSA Institute 2019".



**Word Learning**

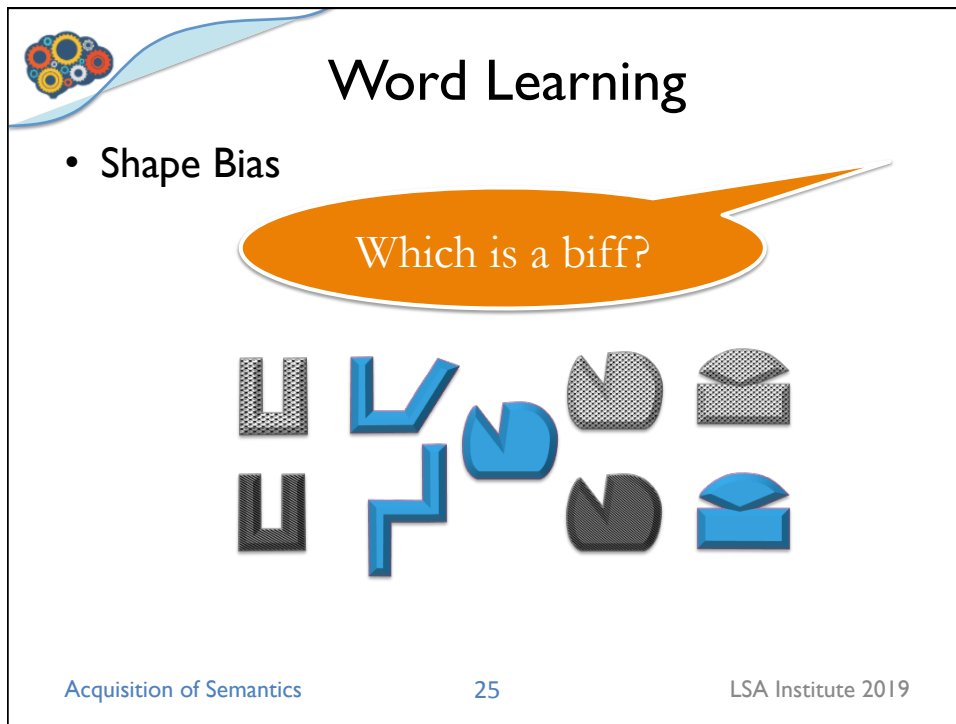
- Shape Bias (Landau, Smith, Jones, 1998)

This is a biff.



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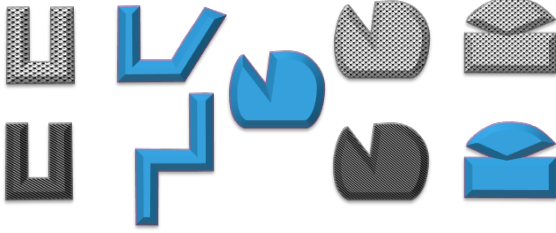
This slide features a decorative graphic of colorful gears in the top-left corner. The main title is "Word Learning". Below it, a bullet point lists "Shape Bias (Landau, Smith, Jones, 1998)". An orange speech bubble contains the text "This is a biff.". Below the speech bubble is a blue U-shaped object. The footer contains the text "Acquisition of Semantics", the number "24", and "LSA Institute 2019".



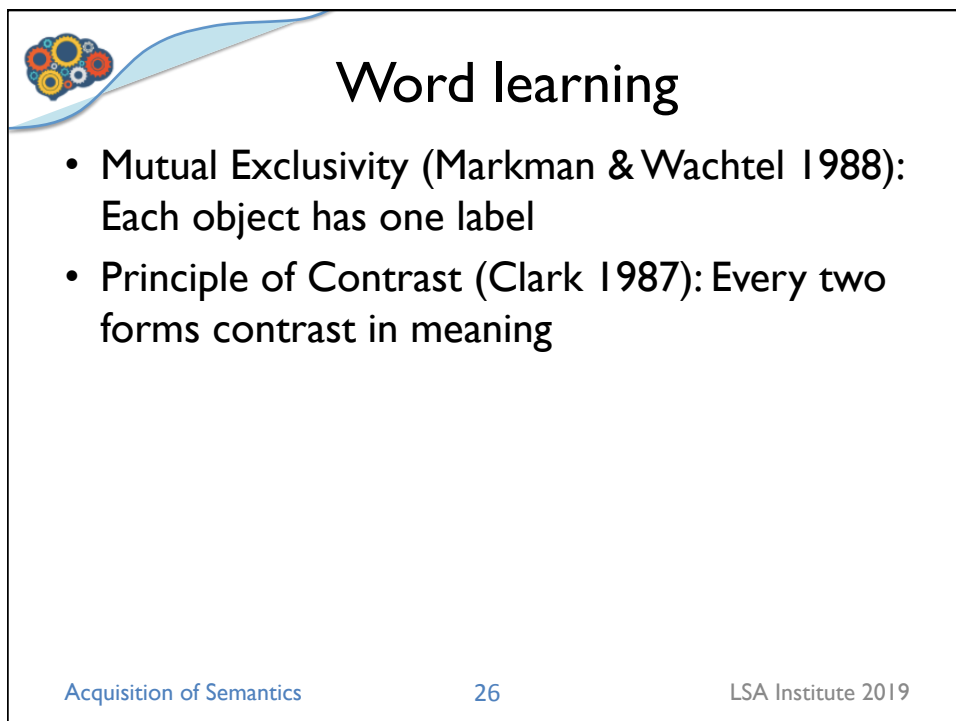
**Word Learning**

- Shape Bias

Which is a biff?



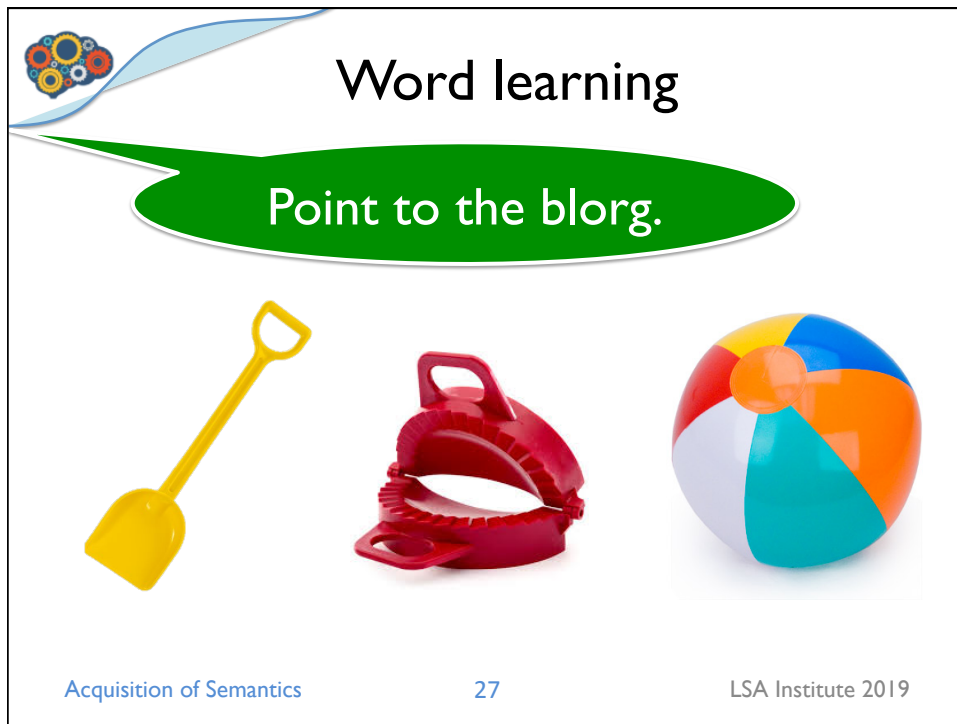
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**Word learning**

- Mutual Exclusivity (Markman & Wachtel 1988): Each object has one label
- Principle of Contrast (Clark 1987): Every two forms contrast in meaning

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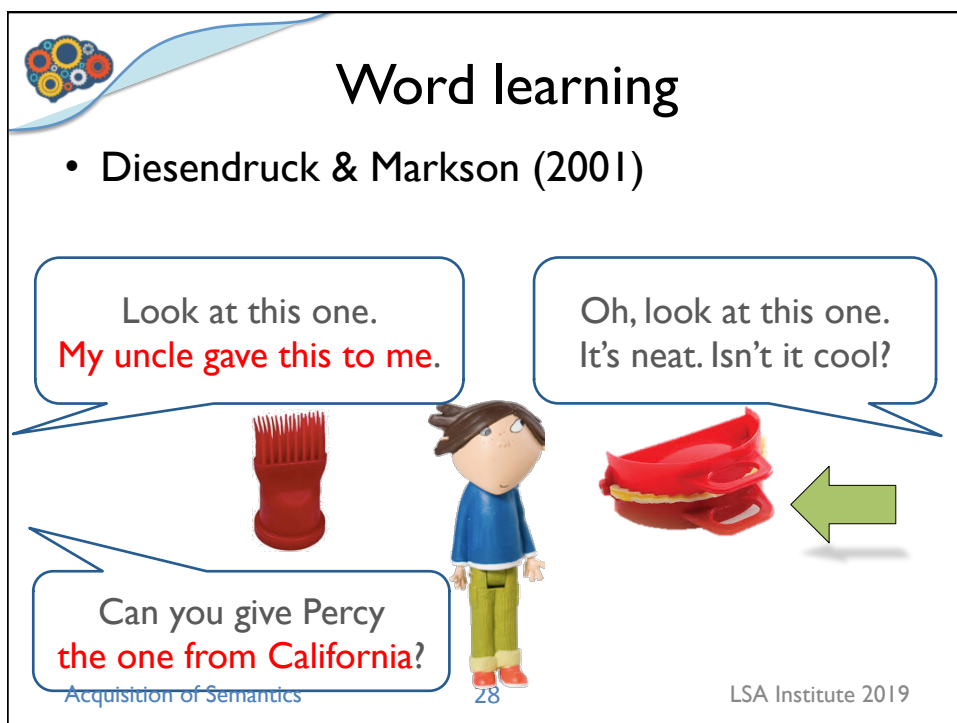


**Word learning**

Point to the blorg.

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This slide features a decorative graphic of colorful gears in the top left corner. The main title is "Word learning". Below it, a green speech bubble contains the instruction "Point to the blorg.". Three objects are displayed: a yellow shovel, a red toy, and a colorful beach ball. At the bottom, the text "Acquisition of Semantics 27 LSA Institute 2019" is present.



**Word learning**

- Diesendruck & Markson (2001)

Look at this one.  
My uncle gave this to me.

Oh, look at this one.  
It's neat. Isn't it cool?

Can you give Percy  
the one from California?

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This slide features a decorative graphic of colorful gears in the top left corner. The main title is "Word learning". Below it, a list item "• Diesendruck & Markson (2001)" is shown. A cartoon character stands in the center. To the left is a red comb with a speech bubble above it: "Look at this one. My uncle gave this to me." To the right is a red toy with a speech bubble above it: "Oh, look at this one. It's neat. Isn't it cool?" and a green arrow pointing to it. Below the character is a speech bubble: "Can you give Percy the one from California?". At the bottom, the text "Acquisition of Semantics 28 LSA Institute 2019" is present.



## Word learning

- Different kinds of words pose different kinds of challenges.



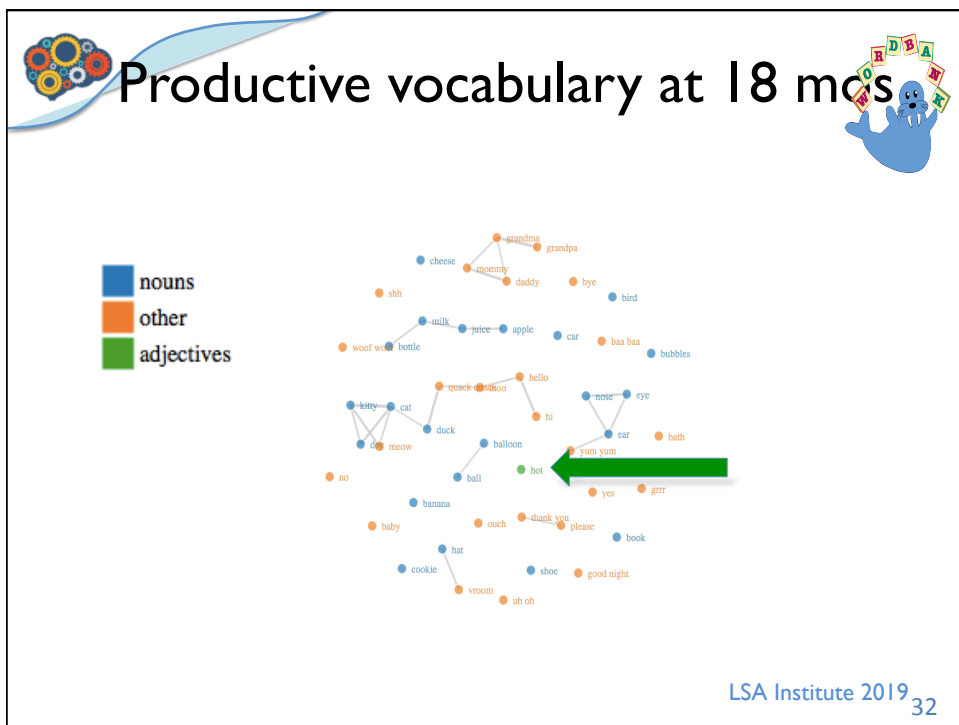
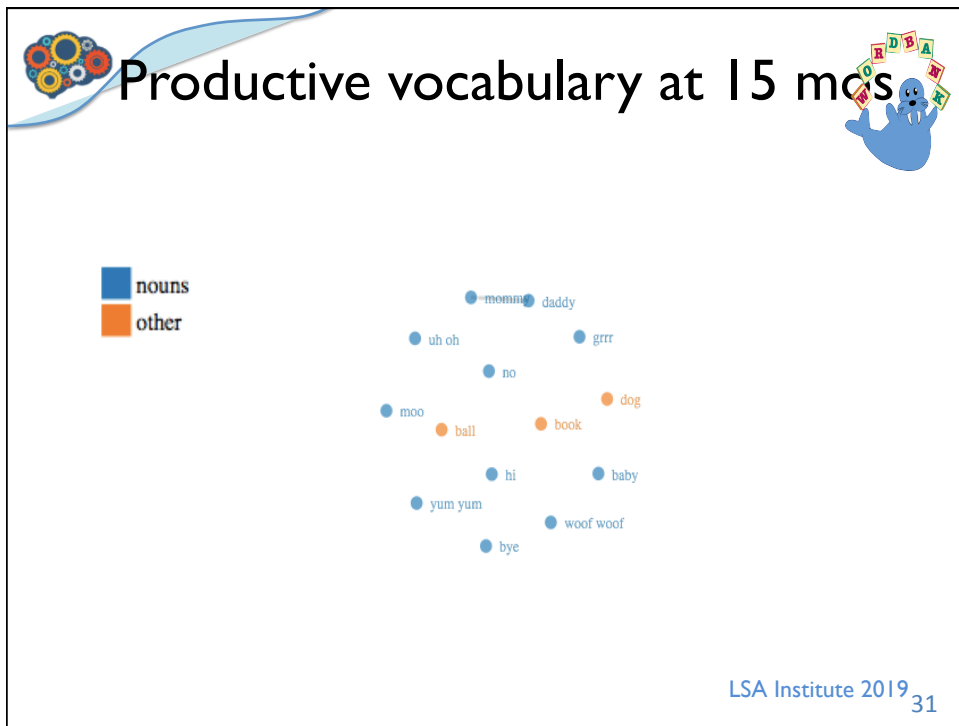
## Productive Vocabulary at 12 mos




■ nouns  
■ other










## Word Learning


- “Nouns are frequently used in deictic-ostensive contexts to young learners...while verbs are much rarer in such contexts” (Fisher et al. 1994, pg. 335)

This is a ball.




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This is hopping.



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## Word learning

- Next class:
- We'll focus on one kind of word (adjectives) that pose special challenges to the word learner, and see what young children understand about them.
- Focus
  - Gradable adjectives
  - Distributive predicates

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