



# The acquisition of words during the first years of life

Claudia Cecilia Zuniga Montanez

# Vocabulary learning

- Language acquisition
  - When do infants start talking?
  - Which words do they learn first?

New born -  
sounds

15 to 24  
months old -  
50 to 300  
words

3 year olds -  
highly skilled  
word learners

# Vocabulary learning

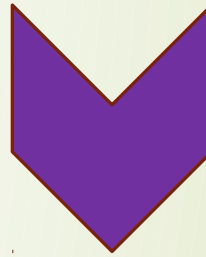
- Context flexible – generalization



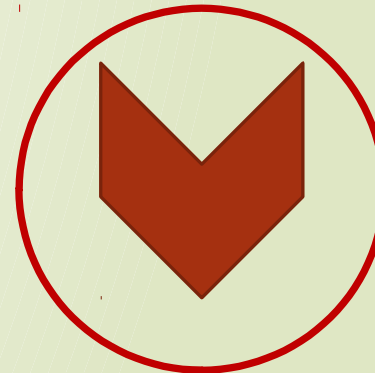
# Shape bias

- Objects that are called the same have the same shape (Perry & Samuelson, 2011).

“This is a gaz”



“Where is the other gaz?”





# Shape bias

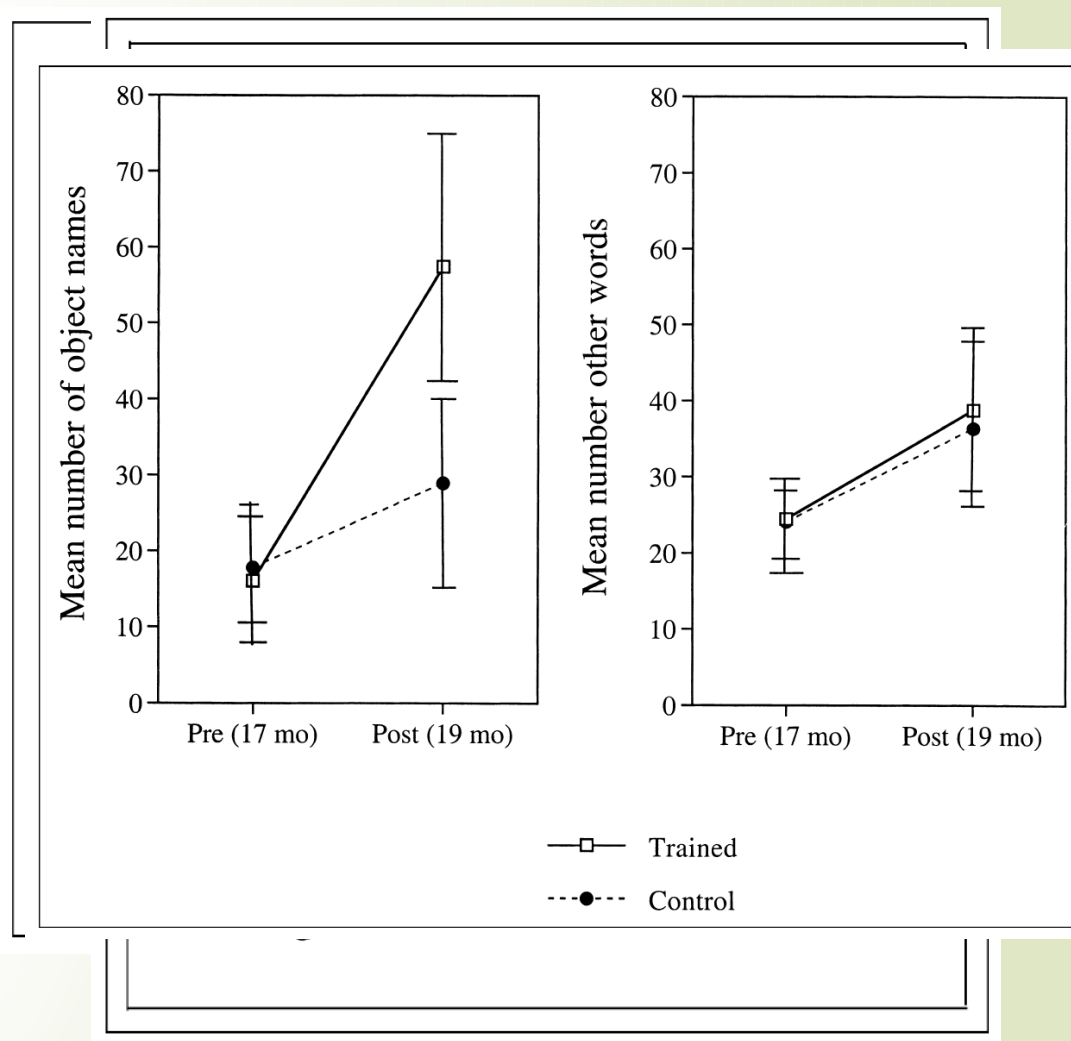
- Preference to organize, name and generalize by shape and not colour, texture, size (Dansereau, 2016).
- Based in real life experiences
- Assumption – but not a conscious decision
- Visible at 24 months (Hupp, 2015; Vlach, 2016).



# Shape bias

- Why shape?
  - Availability and easier to perceive (Landau, et al.,1988)
  - Does not require experience (Graham, Williams, & Huber, 1999)
  - Objects of the same category usually have the same shape (Graham, et al.,1999)

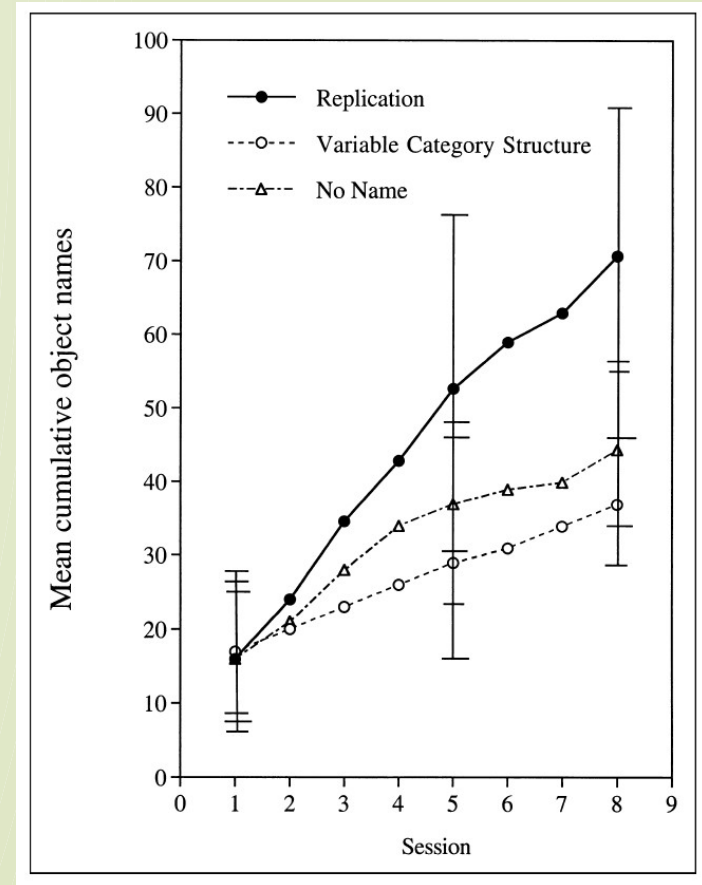
# Vocabulary growth – shape bias training (Smith, et al., 2002)



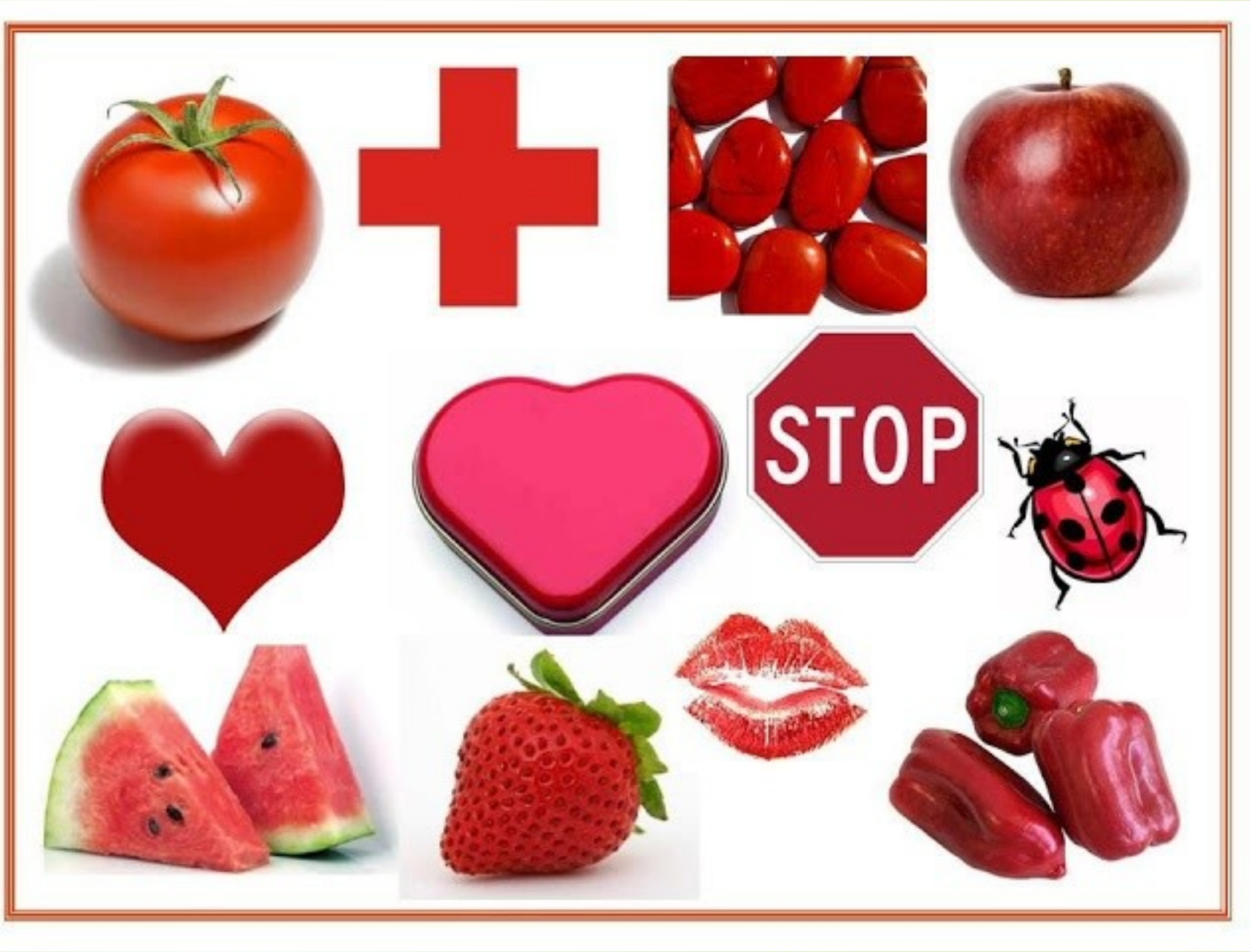


# Vocabulary growth – shape bias training (Smith, et al., 2002)

- Color and texture
- Why not?
  - Color and texture – confusing
  - In real life, is this useful?









# And function?

- Objects can also be classified by their function
- Used by older children and adults (Diesendruck, Markson & Bloom, 2003).







# Attention to function

- ▮ Objects can be used for the same purpose and have different properties
- ▮ Function can be more difficult to understand - less intuitive and not obvious
- ▮ When and under which conditions a successful function mapping occurs?
  - ▮ Contradictory results
  - ▮ Different methodologies and stimuli

- ❑ Can infants learn to attend to shape or function when learning and generalizing novel words?
- ❑ Can infants transfer/generalize this knowledge?
- ❑ Attending to shape or function can boost infant's vocabulary?
- ❑ Training is better than no training?
- ❑ Which training is better?





# Objectives



Teach infants to focus either on shape or function when learning and generalizing novel words.

Assess the effects the two strategies have in vocabulary growth.

# Methodology

- ▢ Participants
  - ▢ 32 infants - 17 month-olds
  - ▢ 4 conditions
    - ▢ Shape training condition
    - ▢ Function training condition
    - ▢ Control shape condition
    - ▢ Control function condition
- ▢ Initial and final vocabulary assessment - CDI

Animals	U	U/S
animal	O	O
bear	O	O
bee	O	O
bird	O	O
bunny / rabbit	O	O
butterfly	O	O
cat	O	O
chicken	O	O
cow	O	O
deer	O	O
dog	O	O
donkey	O	O
duck	O	O
elephant	O	O
fish	O	O
frog	O	O
giraffe	O	O
goose	O	O



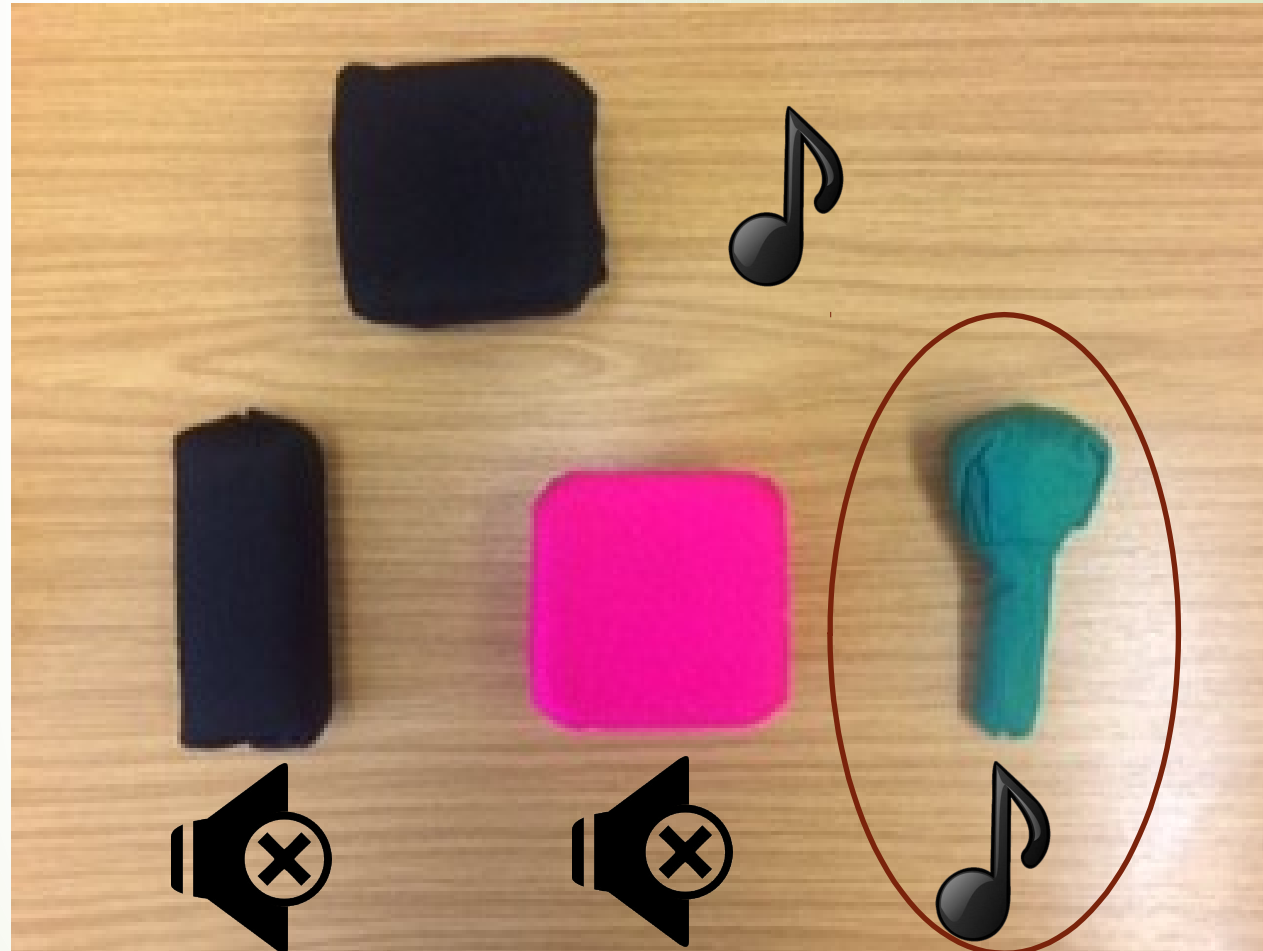
# Shape training condition

- 9 sessions: 7 training sessions and 2 test sessions



# Function training condition

- 9 sessions: 7 training sessions and 2 test sessions





# Control conditions

- ▮ Free play during 7 sessions
- ▮ Same tests during session 8 and 9 than training conditions



# Hypotheses/Expected results

- ▢ Shape training condition
  - ▢ Prefer shape matching objects
  - ▢ Significant productive vocabulary growth - higher than other conditions
- ▢ Function training condition
  - ▢ Prefer function matching objects
  - ▢ Significant vocabulary growth?
  - ▢ Shape vs function?
- ▢ Control shape condition and control function condition
  - ▢ Random selection
  - ▢ Reduced significant vocabulary growth compared to training conditions



# Future directions



Results will provide information regarding techniques to boost the vocabulary of typically developed infants, and potentially infants with language delays.

Study 2 : Late talkers and the use of shape bias as a language intervention



# References

- ▮ Bloom, P. (2000). How children learn the meaning of words. Cambridge, MA: MIT Press.
- ▮ Dansereau, D. R. (2016). Young children, sound-producing objects, and the shape bias. *Psychology of Music*, 030573561665346. doi:10.1177/0305735616653465
- ▮ Diesendruck, G., Markson, L., & Bloom, P. (2003). Children's reliance on creator's intent in extending names for Artifacts. *Psychological Science*, 14(2), 164-169. doi:10.1111/1467-9280.t01-1-01436
- ▮ Graham, S. A., Williams, L. D., & Huber, J. F. (1999). Preschoolers' and Adults' Reliance on Object Shape and Object Function for Lexical Extension. *Journal of Experimental Child Psychology*, 74(2), 128-151. doi:10.1006/jecp.1999.2514
- ▮ Hoff, E. (2014). *Language development*. Belmont, CA: Wadsworth/Thomson Learning.
- ▮ Hupp, J. M. (2015). Development of the Shape Bias During the Second Year. *The Journal of Genetic Psychology*, 176(2), 82-92. doi:10.1080/00221325.2015.1006563
- ▮ Landau, B., Smith, L. B., & Jones, S. S. (1988). The importance of shape in early lexical learning. *Cognitive Development*, 3(3), 299-321. doi:10.1016/0885-2014(88)90014-7
- ▮ Perry, L. K., & Samuelson, L. K. (2011). The Shape of the Vocabulary Predicts the Shape of the Bias. *Frontiers in Psychology*, 2. doi:10.3389/fpsyg.2011.00345
- ▮ Smith, L. B., Jones, S. S., Landau, B., Gershkoff-Stowe, L., & Samuelson, L. (2002). Object name Learning Provides On-the-Job Training for Attention. *Psychological Science*, 13(1), 13-19. doi:10.1111/1467-9280.00403
- ▮ Vlach, H. A. (2016). How we categorize objects is related to how we remember them: The shape bias as a memory bias. *Journal of Experimental Child Psychology*, 152, 12-30. doi:10.1016/j.jecp.2016.06.013



Thank you