



PURDUE UNIVERSITY Infant Labs

Introduction

Infants have trouble learning the meaning for two phonetically similar words (Shvachkin, 1973).

Possible Explanations

- *Holistic* - First words aren't represented in phonetic detail (Ferguson & Farwell, 1975; Menyuk & Menn, 1979).
- *Attentional* - Attentional demands prevent infants from combining skill at word learning with skill at phonetic distinction. (Stager & Werker, 2002).
- *Normalization* - Infants must deal with many different pronunciations and know phonetic distinctions between talkers are not always the same.
- *Source Memory/Proactive Interference* - Infants remember learning both words, but in test phase, cannot remember specifically which words refer to which object. Problem is not in encoding, but in retrieval.

Method

Infants were tested at 14, 18, 22, and 26 months of age. They sat in a caregiver's lap while a camera recorded their looking responses.

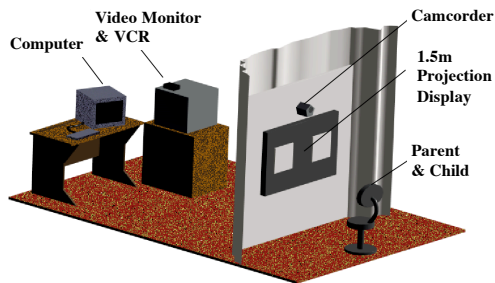


Fig. 1. The splitscreen preferential looking paradigm. Infants sit on a parent's lap 1m from a 1.5m projection display.

Poster presented at the biannual meeting of the Society for Research in Child Development in Atlanta, GA, April, 2005. For more information, contact Julia Wales at jwales@purdue.edu.

Factors Influencing Infants' Learning of Similar Sounding Words

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Design

Infants heard a word labeled 8 times in sentence form while viewing an image. The preferential looking method was then used to test whether infants had successfully mapped that label to the object. Similar sounding familiar (book/ball) and unfamiliar words (boog/booch, gipe/gidge, chab/chas) were used.

Table 1

The design of order 1. Order of presentation was counterbalanced.

	Trial	Audio	Video
Familiar Block			
Training	Look at the book		
Salience	Look at that		 
Label	Look at the book		 
Other	Look at the ball		 
Unfamiliar Block 1			
Training x2	Look at the chas		
Salience	Look at that		 
Label	Look at the chas		 
Other	Look at the chab		 
Unfamiliar Block 2			
Training x2	Look at the chab		
Salience	Look at that		 
Label	Look at the chab		 
Other	Look at the chas		 

Results

Looking times were coded off-line and are presented in figures 2 and 3.

- In the Familiar Block, all infants looked longer at the requested objects.
- In Unfamiliar Block 1, a similar looking pattern was found, although infants showed an initial preference for the other object during salience.
- In Unfamiliar Block 2, the 24 month olds had the same looking pattern as in previous blocks. Younger infants looked at the original object regardless of which object was requested.

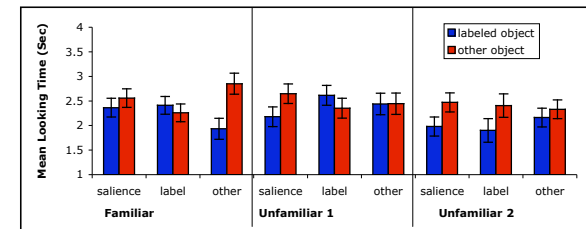


Fig. 2. Mean looking to labeled object and other object across trials for younger children (14, 18, 22, months collapsed).

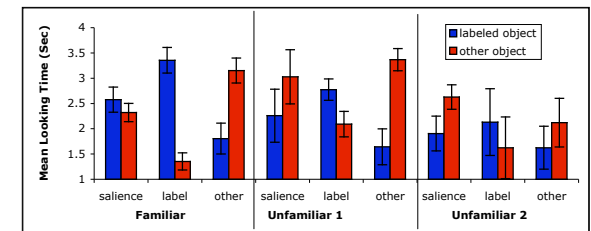


Fig. 3. Mean looking to labeled object and other object across trials for older children (24 months)

Main Conclusions

- Infants' success in Unfamiliar Block 1 suggests that they are not learning new words holistically, nor do they have attentional limitations. Infants can attend to phonetic detail while learning new words and they don't false alarm to phonetically similar words.
- Younger infants may have difficulty learning a second similar sounding word while older infants do not - possibly due to source memory errors.