



Introduction

At birth, infants can make fine phonetic distinctions. Yet, in word learning tasks, even 24-month-olds have trouble mapping similar sounding words to different objects (Shvachkin, 1973).

Possible Explanations

- *Attentional* - Attentional demands prevent infants from combining skill at word learning with skill at phonemic discrimination (Werker, Fennell, Corcoran, & Stager, 2002).
- *Auditory dominance* - infants are more likely to attend to auditory than visual stimuli when presented with both (Sloutsky & Napolitano, 2003; Lewkowicz, 1994).
- *Mispronunciations* - infants assume similar words mean the same thing. (Swingly & Aslin, 2002).
- *Pragmatic* - infants must deal with many different pronunciations and know phonetic distinctions between talkers are not the same.

Do they attend to visual stimuli when presented with visual and auditory stimuli simultaneously?

Are they pragmatic? Do they use within-talker distinctions, but become more accepting of cross-talker variability?

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.

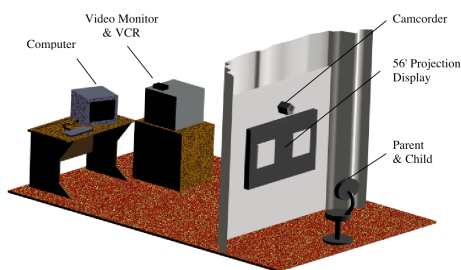


Figure 1. The splitscreen preferential looking paradigm. Infants sit on a parent's lap 3' from a 56" projection display.

"I Say Tomato, You say Tomaato:" Infants' Learning of Similar Words

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Design

Infants heard a new word 8 times in sentence form while viewing an image. The preferential looking method was then used to test whether infants had successfully mapped the sound to the object. This procedure was repeated using a similar sounding word paired with a different object. Two orders were created for counterbalancing purposes.

Table 1. The design of order 1. Training trials were presented twice. Order of presentation was counterbalanced.

	Trial	Audio	Video
Familiar			
Male voice	Training	Look at the book	
	Salience	Look at that	
	New	Look at the ball	
	Label	Look at the book	
Label 1			
Male voice	Training x2	Look at the chas	
	Salience	Look at that	
	New	Look at the chab	
	Label	Look at the chas	
Label 2			
Female voice	Training x2	Look at the chab	
	Salience	Look at that	
	Label	Look at the chab	
	New	Look at the chas	

Results

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

- Infants looked longer at the familiar object they had been trained with (book) when prompted. They also looked longer at the new familiar object (ball) when prompted.
- The same looking pattern was found for the Object 1 sequence.
- After being taught a second unfamiliar word with a different talker, infants looked longer at the first object they were taught.

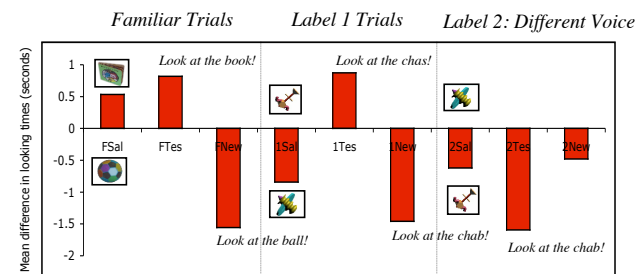


Figure 2. Mean difference in looking to labeled object across the trials.

Implications and Future Directions

- Looking times during the first new object task suggests infants are able to make fine phonetic distinctions while engaged in mapping tasks if it is the same talker.
- However, if they are taught a second similar sounding word by a different talker, word learning is impaired.
- These effects are not due to lack of attention to visual, nor are they due to an inability to learn two words at once (Hollich et al, 2000).
- Are these effects really due to the change in talker or phonetic similarity?
- These words differed in place, manner, and articulation, what is the difference was more subtle? What would happen if an allophonic difference was used rather than phonemic one?

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