

Factors Influencing Infants' Learning of Similar Sounding Words

Julia Wales & George Hollich

Purdue University








(paper or poster)

Research in phonological perception has demonstrated that infants are born with the ability to make fine phonetic discriminations (Cristophe, Jacques, & Sebastian-Galles, 2001). However, despite this ability, word-learning research has suggested infants have a great deal of difficulty in learning similar sounding words (Werker & Tees, 2002). Why? The current study suggests that infants have detailed phonetic representations for newly acquired words but source-attribution errors can lead to the difficulties seen in previous work. In essence, the similarity of the words combined with the close proximity of their training leads infants to forget which word went with which object.

The present study used the splitscreen preferential looking paradigm to test 14- to 26-month-old infants on their ability to learn two similar words. Importantly, one word was taught and tested before attempting to train the second. If source attribution was responsible for errors, then infants should learn the first word without difficulty and show errors only after trying to teach the similar word. Infants' learning was examined in four types of trials. In training trials, infants were presented with a single object on the screen and heard the novel label for that object. In salience trials, the labeled object was presented on one side of the screen while another object was presented on the other side and a neutral auditory stimulus was played (e.g., "What do you see?"). In the label trials, the label that the infants heard during training was requested; in the new trials, the similar word was requested.

Although performance increased with age, even at 14 months, infants looked significantly longer at the labeled object when it was requested during the first sequence; furthermore, infants looked longer at the unlabeled object in the salience and new trials. This switch in looking suggests that infants noticed and rejected phonetic differences in learning the first word, demonstrating that they can make fine phonetic discriminations in the context of a word-learning task. However, when we attempted to explicitly train the second word, infants looked exclusively at the originally labeled object, suggesting that the task of attaching meaning to the second similar word caused difficulty. Thus, the current results suggest that infants do possess fine phonetic distinctions in a word-learning task, even at 14 months, but that memory problems (specifically source-attribution errors) create the difficulties observed in traditional testing.

Figure 1. Diagram of sample procedure.

Trial	Audio	Video
Label 1		
Training x2	Look at the chas	
Saliience	Look at that	
New	Look at the chab	
Label	Look at the chas	
Label 2		
Training x2	Look at the chab	
Saliience	Look at that	
Label	Look at the chab	
New	Look at the chas	