

# Preschoolers' use of a speaker's perceptual knowledge when learning words

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## INTRODUCTION

Previous research has shown that children will follow the gaze direction of a speaker to determine the meaning of a novel word even when the referent is hidden to the child (Baldwin, 1993) and when the referent is hidden to both the speaker and the child (Akhtar & Tomasello, 1996).

In these studies, the preschoolers did not have to disregard their own knowledge when interpreting the novel word, because the objects were hidden to the children. There is some evidence that children find perspective-taking in language tasks to be difficult when the child can see objects that are hidden to the speaker (Epley, Morewedge & Keysar, 2004).

In the present research, we examine whether 4-year-olds are able to learn novel words even when they must disregard their own knowledge and take into account the speaker's perspective.

## EXPERIMENT 1: VISUAL ACCESS

**Goal:** To test whether preschoolers will use a speaker's *perceptual access* to determine the referent of a novel word.

### Method

**Participants.** 32 preschoolers (mean = 4;1)

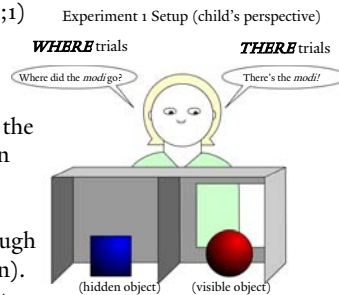
### Procedure.

1. Introduce two novel objects. Speaker leaves the room with the objects in plain view.
2. Place objects in the screen (one visible through the window, one hidden).
3. Speaker returns, fixates on the object in the window, and asks the test question:

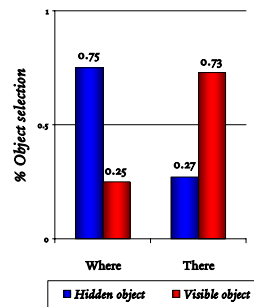
**Where** trials: "Oh, where's the *modi*? Where did the *modi* go? Can I have the *modi*?"

**There** trials "Oh, there's the *modi*! Yep, there's the *modi*! Can I have the *modi*?"

**Results:** On *Where* trials, children chose the hidden object more than expected by chance. On *There* trials, they chose the visible object more than chance.



EXPERIMENT 1: RESULTS



## EXPERIMENT 2: KNOWLEDGE

**Goal:** Children could succeed in Experiment 1 by tracking the speaker's visual access, without considering the speaker's ignorance. Here, we tested whether they will track a speaker's *knowledge* to determine the referent of a novel word.

### Method

**Participants.** 18 preschoolers (mean = 3;10)

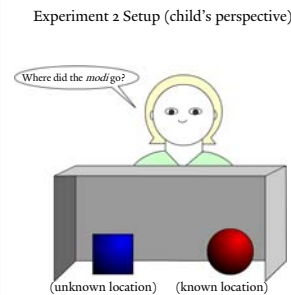
### Procedure.

1. Introduce two novel objects.

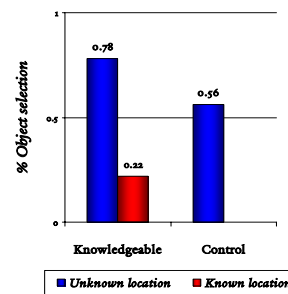
**Knowledgeable** trials: Speaker places one object in the screen, leaving the other in plain view.

**Control** trial: Speaker leaves both objects in plain view.

2. Speaker leaves the room while all remaining objects are placed in the screen.
3. Speaker returns and asks the test question: "Oh! Where's the *modi*? Where did the *modi* go? Can I have the *modi*?"



EXPERIMENT 2: RESULTS



**Results:** On *Knowledgeable* trials, children chose the object whose location was unknown to the speaker more than expected by chance. When the speaker was ignorant about the location of both objects, children were at chance.

## CONCLUSIONS

When determining the referent of a new word, 4-year-olds are sensitive to:

1. *A speaker's visual perspective.* 4-year-olds consider the speaker's perspective, even with conflicting eye gaze cues.
2. *A speaker's knowledge.* 4-year-olds attend to what a speaker knows and does not know, and take this into account when interpreting the meaning of a new word.

These findings suggest that when learning language, preschoolers are not simply associating the novel word with the target of a speaker's gaze. Rather, they flexibly use their understanding of the speaker's knowledge state and visual perspective when determining the referent of a new word.

## REFERENCES

- Akhtar, N., & Tomasello, M. (1996). Two-year-olds learn words for absent objects and actions. *British Journal of Developmental Psychology*, 14, 79-93
- Baldwin, D. A. (1993). Early referential understanding: Infants' ability to recognize referential acts for what they are. *Developmental Psychology*, 29, 832-843.
- Epley, N., Morewedge, C. K., & Keysar, B. (2004). Perspective taking in children and adults: Equivalent egocentrism but differential correction. *Journal of Experimental Social Psychology*, 40, 760-768.

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