

# THE SOCIAL DYNAMICS OF JOINT ATTENTION IN AMERICAN SIGN LANGUAGE INTERACTIONS BETWEEN DEAF CHILDREN AND THEIR PARENTS

AMY LIEBERMAN, ALLISON FITCH & ERIC SETZER  
BOSTON UNIVERSITY

## JOINT ATTENTION, ESPECIALLY WHEN THE PARENT FOLLOWS THE CHILD'S FOCUS OF INTEREST, IS A ROBUST PREDICTOR OF LANGUAGE OUTCOMES


- For hearing children, this is often achieved when the caregiver follows the child's gaze to an object of interest, and provides an object label **while** the child is looking at that object  
*Akhtar et al., 1991; Tomasello & Farrar, 1986*
- Deaf children acquiring ASL receive all of their language input in the visual modality, and therefore cannot simultaneously receive linguistic input and attend to objects in the visual world.
- Follow-in joint attention interactions require a more complex sequence of gaze following, attention-getting, alternation of gaze, and linguistic input, that must be negotiated between conversational partners.  
*e.g. Lieberman et al., 2014*





**CURRENT STUDY:** CHARACTERIZES THE DYNAMICS OF JOINT ATTENTION INTERACTIONS BETWEEN DEAF CHILDREN AND THEIR PARENTS. WE FOCUS ON THE TIMING AND CONTENT OF PARENTS' NOUN LABELS RELATIVE TO WHAT THEIR CHILDREN LOOK AT AND PLAY WITH.


## METHODS

**24 Dyads** — Deaf children acquiring ASL (9-60 months)  
— Their deaf (n = 15) or hearing (n = 9) parents

 Deaf, native ASL signers and hearing ASL signers transcribed the parents' language and attention-getting cues, and the child's eye gaze object touch.

 Dyads played with a standard set of toys for 15 minutes

 We identified all "accessible" nouns (produced while the child was looking at the parent). There were **442** accessible nouns in our dataset.

 The interaction was recorded from three angles, and 12 minutes of each was coded offline

## ANALYSIS

Within each interaction, we analyzed:

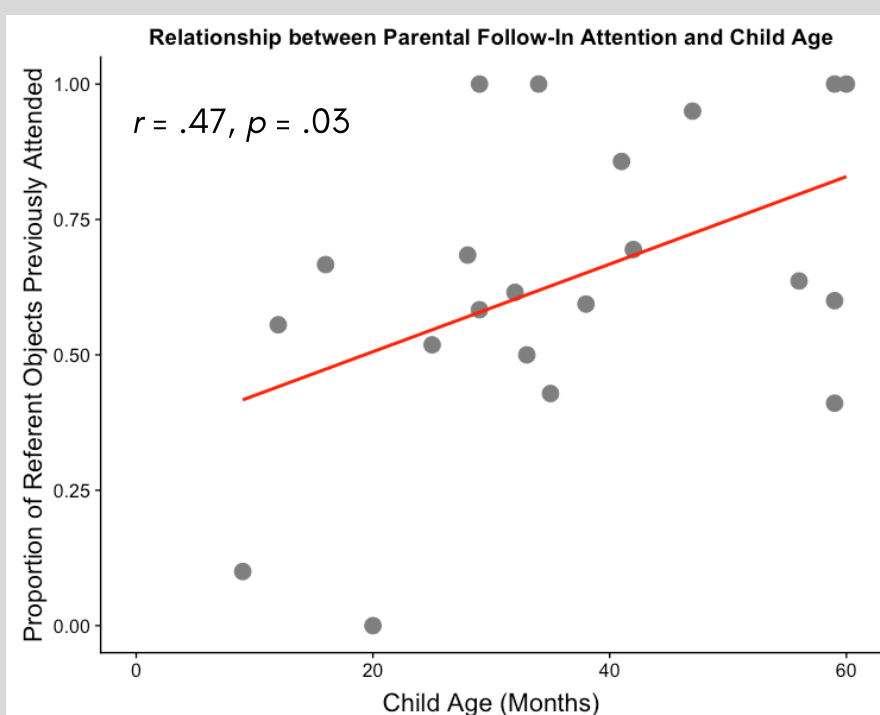
- 1) Whether the parent used a **"follow-in"** approach or a **"lead-in"** approach. Follow-in approaches were those where the parent commented on the object to which the child had been attending.
- 2) For noun labels that used the "follow-in" approach, we determined whether a) the parent **elicited** the child's attention using a tap, wave, or other cue, or b) **waited for a spontaneous gaze shift** from the child to the parent to label the object.
- 3) We asked whether adult strategies to achieve joint attention changed with the child's age.

## FINDINGS

Parents used a "follow-in" approach: labels followed children's gaze and/or touch an average of **63%**

Parents utilized an attention-getter before **32%** of follow-in labels

Proportion of labels that followed gaze and/or touch was positively correlated with age



## DISCUSSION

### Parents tend to follow their children's focus of attention when labeling, especially as children age

- Parents followed their child's gaze and/or touch more than they led
- Proportion of "follow-in" labeling instances correlated with age

### Young deaf children acquiring ASL are remarkably good at alternating attention between their parents and visual referents

- Parents infrequently used attention getting cues

### Refs:

- Akhtar, N., Dunham, F., & Dunham, P. J. (1991). Directive interactions and early vocabulary development: The role of joint attentional focus. *Journal of child language*, 18(1), 41-49.
- Lieberman, A. M., Hatrak, M., & Mayberry, R. I. (2014). Learning to look for language: Development of joint attention in young deaf children. *Language Learning and Development*, 10(1), 19-35.
- Tomasello, M., & Farrar, M. J. (1986). Joint attention and early language. *Child Development*, 57(6), 1454-1463.

Funding: R01DC015272



CONTACT: ALIEBER@BU.EDU / AFITCH@BU.EDU