Parental sign input to Deaf children of Deaf parents: Vocabulary and syntax

BACKGROUND

- Large literature shows relationships between parental language measures and children's spoken language development¹
- Not every aspect of language shows specific relationships²

VOCABULARY

- Measures of input quality relate to child vocabulary skill at different points in development, even with SES and quantity of input controlled³
 - 2nd year: quantity
 - □ 3rd year: diversity
 - □ 4th year: decontextualized language

GRAMMAR

Mothers may be sensitive to the child's growing linguistic competence, though relations between input and child's level are complex⁴

What about potential relationships between input and sign language development?

- Child-directed signing exhibits modifications of sign size, space⁵
- No systematic increases over time in Type-Token Ratio of mother's NGT input to deaf children⁶
- Little increase in MLU over time for NGT signers⁶

PARTICIPANTS

> 3 Deaf children with at least one Deaf parent

> Acquiring American Sign Language from birth

Pseudonym	Sex	Age Range	Number of Sessions
Aby	F	1;06-3;04	14
Jil	F	1;08-4;02	9
Ned	Μ	1;09-3;06	10

METHOD

- \succ Spontaneous signing during play, reading, or family meals
- Transcribed following SLAAASh guidelines, using Signbank⁷
- ➤ First 100 words (NDW) / 100 utterances (IPSyn)
- > Only child-directed utterances analyzed
- > Coded by 2 independent coders. Point-by-point reliability:
 - □ 96% (92-100%) for child-directed utterances
 - □ 83% (70-94%) for utterance breaks & glosses
 - □ 87% (81-90%) for ASL-IPSyn⁸
 - □ 98% (95-100%) for MLU in words (MLUw)

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RESULTS





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DISCUSSION

Mothers typically use a wider variety of signs and sentence types, as well as longer utterances than children

Little evidence mothers systematically alter their productions based on the language skills of the child in this age range (1;06-4;00)

- Individual differences between mothers □ Aby's mother uses a wider variety of
 - constructions as child ages/matures
 - Ned's mother uses a wide variety of constructions from the youngest age

MLU may not be a good measure of language

- development for signing children in this age range □ Slow-developing MLU may be similar to
 - Cantonese-style languages⁹
 - Only small increases in child MLU observed in other sign languages⁶
 - □ Highly dependent on utterance boundaries, our least-reliable coding

> NDW shows more development, but seems to plateau

□ Also observed in monolingual English children¹⁰

Productivity of depicting signs vs. lexical signs > ASL-IPSyn is most sensitive measure of language development

Order of acquisition data presented @ BUCLD 20178

FUTURE RESEARCH

Additional sessions & additional children Other measures of language development

- Mean Length of Utterance in Morphemes
- Phonological development
- Measures of interaction

Comparison with adult-directed signing

Selected References

1.Hoff (2006). How social contexts support and shape language development **2**. Newport et al (1977). Mother, I'd rather do it myself. **3.** Rowe (2012). A longitudinal investigation of the role of quantity and quality of CDS in vocabulary development. 4. Nelson et al. (1984). Maternal Input Adjustments and Non-adjustments as related to children's linguistics advances and to language acquisition theories. 5. Erting et al. (1990). The interactional context of Deaf mother-infant communication. 6. van den Bogaerde (2000). Input and interaction in Deaf families. **7.** Hochgesang, Crasborn & Lillo-Martin (2018). ASL Signbank. 8. Lillo-Martin et al. (2017). ASL-IPSyn: A new measure of grammatical development **9.** Klee et al. (2004). Utterance Length and Lexical Diversity in Cantonese-Speaking Children With and Without Specific Language Impairment 10. As can be observed in the monolingual KidEval norms, Bernstein Ratner & MacWhinney (2016). Your laptop to the rescue: using the CHILDES archive and CLAN utilities to improve child language sample analysis.

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