

Qualitative and quantitative aspects of infant-directed speech and their role in language development

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Infant-directed speech (IDS)

- Everyone uses IDS
- Children
- Across cultures/languages
- Speaker adaptations to the listener!



Our research on language development

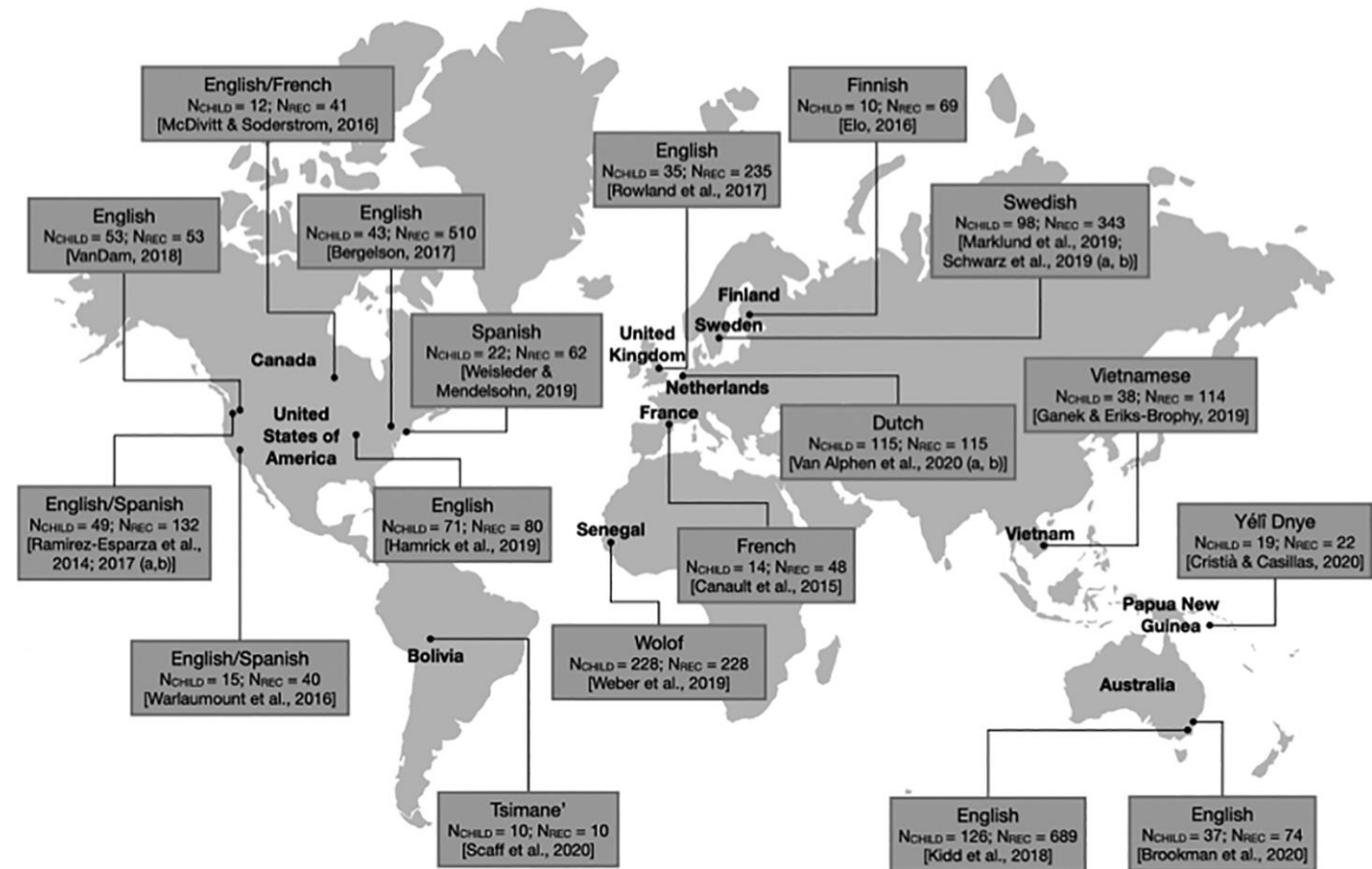
- Qualitative speaker adaptations
 - Affect (positive/neutral)
 - Hyperarticulation
- Language environment
 - Regularities and acoustic patterns
 - Exposure quantity
- Computational abilities in infant brain
 - Conditional learning
 - Distributional learning



A few examples of our studies...

Quantity of linguistic input matters

- 1001 infants (2-48 months) from 12 countries
- Day-long audio-recordings of language environment and infant vocalisations
- Correlation between amount of linguistic input and amount of child output?
- **Children who heard more talk produced more speech**



Bergelson, E., Soderstrom, M., Schwarz, I. C., Rowland, C. F., Ramírez-Esparza, N., R. Hamrick, L., ... & Cristià, A. (2023). Everyday language input and production in 1,001 children from six continents. *Proceedings of the National Academy of Sciences*, 120(52)

Quality of linguistic input – speaker adaptation

- 19 infants (12 months) and their parents
- In lab audio-recordings of parent speech and infant vocalisations
- Correlation between adult hyperarticulation (vowels) and infant phonetic complexity?
- **Parents' articulatory adaptation correlates with maturity of their infant vocalizations**



Marklund, E., Marklund, U., & Gustavsson, L. (2021). An association between phonetic complexity of infant vocalizations and parent vowel hyperarticulation. *Frontiers in Psychology*, 12

Infant-directed speech and word-learning

- 48 infants (14 months)
- Audio-visual word-learning experiment
- Infant-directed speech (IDS) vs adult-directed speech (ADS)?
- **Participants learned novel words in the IDS condition**



Gustavsson, L., Marklund Hjerpe, K., Ericsson, A., & Marklund, E. (*under revision*) Word-learning from infant-directed speech in 14-month-old Swedish-learning infants. Submitted to *Journal of Child Language*

Research in Child Language Development at the Department of Linguistics

<https://www.su.se/english/research/research-subjects/linguistics/child-language-development>