

Speech Rate in Male and Female Infant Directed Speech

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As parent-child interactions are crucial for the cognitive, emotional and social development of a child, the way parents talk to their infants may lay the ground for early socialisation of gender norms. But while previous research on infant directed speech (IDS) has largely focussed on its modifications from adult directed speech (ADS) (Ferguson, 1964, p. 103) and its role in language acquisition (DePaulo & Bonvillian, 1978), less attention has been given to the potential variations in IDS based the sex of the infant addressee. The current doctoral project explores whether German-speaking mothers adjust their speech differently when addressing their sons versus their daughters in spontaneous interactions. This presentation focuses speech rate – typically slower in IDS compared to ADS (Ferguson, 2004). Systematic differences in rate of speech addressed to boys and girls could contribute to the broader discussion on gendered communication styles. Studies suggest (Binnenpoorte et al., 2005; Pépiot, 2014; Whiteside, 1996) for instance, that in adult conversation, men generally speak faster than women.

This present study analyses audio recordings of interactions between 24 mothers and their 7- to 10-month-old infants (12 with daughters, 12 with sons) during routine diaper-changing sessions. Additionally, adult directed speech (ADS) samples were collected via semi-guided interviews with the mothers. Speech data was transcribed orthographically in ELAN (Max Planck Institute for Psycholinguistics, The Language Archive, 2024), segmented using a BAS pipeline without automatic speech recognition (Kisler et al., 2017), and manually corrected in PRAAT (Boersma & Weenink, 2025). Speech rate is measured using *Mean Syllable Duration* (in milliseconds) and *Syllable Rate* (number of syllables per second, including intra-utterance pauses). To determine whether adjustments in speech rate differ by infant's sex, the degree of slowing down in IDS was calculated relative to each speaker's ADS baseline.

The results show, that – as expected - mothers generally speak more slowly with their infants than with the adult interviewer (longer mean syllable durations and lower syllable rate). However, there is no evidence that the sex of the infant explains the individual variation in the degree of slowdown.

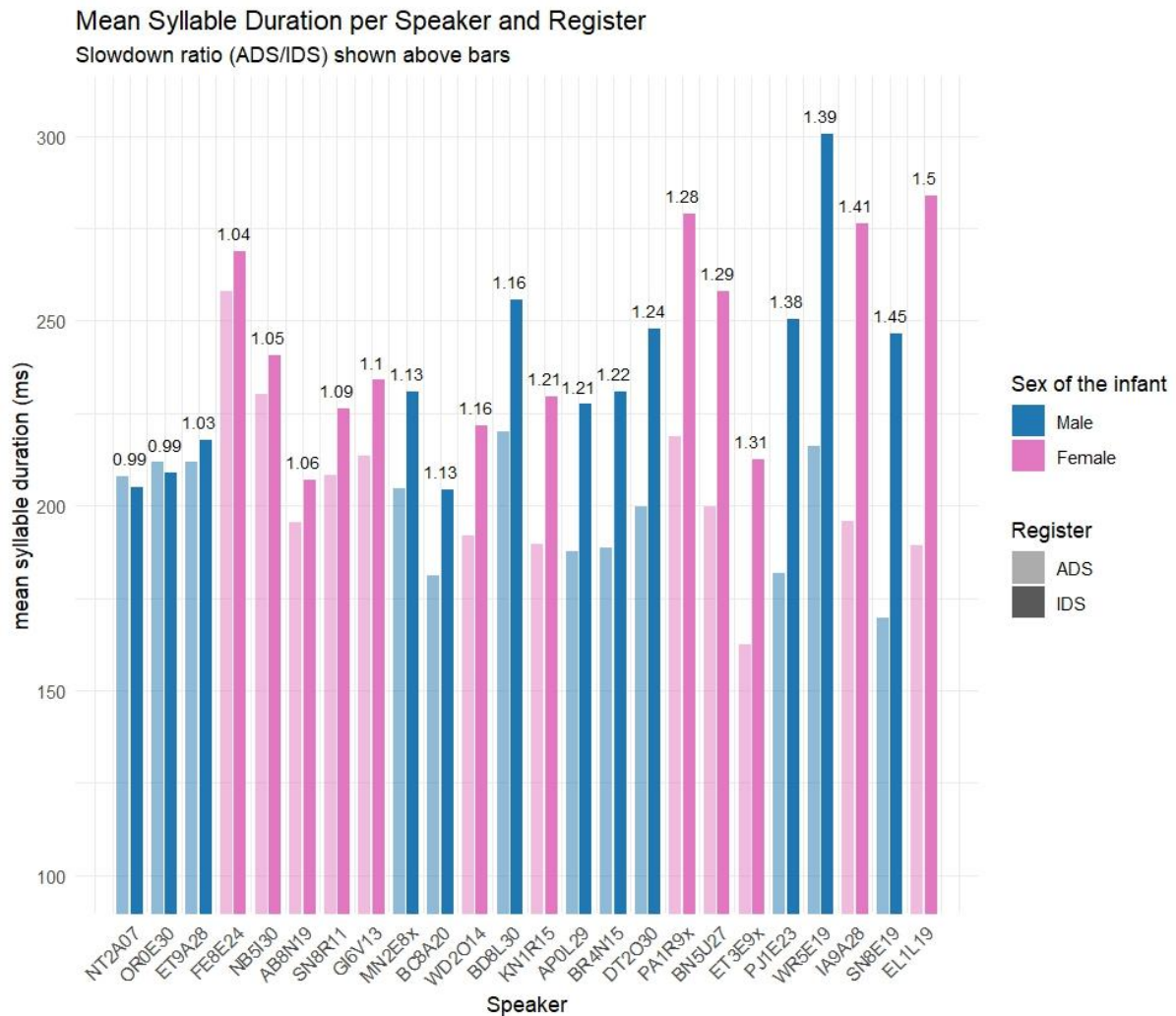


Figure 1. mean syllable duration for ADS and IDS for each speaker with slowdown ration and sex of

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