Chinese Child-Directed Speech Is Faster and More Fluent Than Adult-Directed Speech

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Child-directed speech (CDS) is often believed to have a slower speaking rate and to be more fluent than adult-directed speech (ADS), but is this true across languages and all utterances? This study investigated the differences in speaking rate and fluency between Chinese CDS and ADS. We analyzed a corpus of Chinese ADS and CDS including forty mothers telling the same story to their 18- or 24-month-old children and an adult. We manually annotated 6740 utterances in this corpus and extracted the fluency measures including speech rate (including utterance-internal silent pauses), articulation rate (excluding utterance-internal silent pauses), frequencies of silent pauses, filled pauses, repairs, and repetitions. We found that: First, CDS was generally more fluent than ADS, with fewer silent and filled pauses. Second, there were no significant differences in speaking rate between CDS and ADS for short utterances, but CDS was significantly faster than ADS for longer utterances. Moreover, there were age-related differences in speaking rate in relation to utterance length. Specifically, at 18 months, there were no significant differences in speech rate between CDS and ADS when the utterances were shorter than 10 syllables ($N = 2533$, p's > 0.06). However, CDS was significantly faster than ADS for utterances longer than 11 syllables ($N = 518$, p's < 0.05). At 24 months, when utterances were less than 4 syllables, there were no significant differences in speech rate between CDS and ADS ($N = 941$, p's > 0.1). However, CDS was significantly faster than ADS for utterances longer than 5 syllables ($N = 1976$, p's < 0.05). These findings highlight language-specificity in the temporal aspects of CDS. As Chinese CDS is not slower but can be faster than ADS, we should consider cross-linguistic differences when it comes to slowing down as a common feature of CDS.