

The development of turn-taking skills in autistic and typically developing children

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Turn-taking and language go hand in hand for adults, but long before children start to produce and understand words, they engage in reciprocal vocal communication with their caregivers. To engage in vocal communication with caregivers, young children have to adapt and respond to caregivers' cues in real time. In this study, we empirically evaluate existing meta-analytic findings that suggest no reliable changes in turn-taking as children develop and longer pauses between turns in conversations with autistic children (Nguyen et al., 2022). By analyzing spontaneous speech in 64 parent-child dyads from a longitudinal corpus, we extend the state-of-the-art by assessing how individual differences in linguistic, socio-cognitive and motor development relate to different turntaking behaviours. We included 32 children diagnosed with autism and 32 linguistically matched typically developing children (mean age at recruitment respectively 32.76 and 20.27 months). Multi-level Bayesian ex-Gaussian regressions were used to model turn-by-turn conversational dynamics in terms of concurrent self-adjustment (intrapersonal autocorrelation of latencies) and interpersonal adjustment. As shown in Figure 1, we revise and advance previous meta-analytic findings. Children with autism respond faster on average than typically developing ones ($ER = 24$) due to higher speech overlapping, and both groups decrease response latency with development (children with ASD by 78 [54; 102] ms, every 4 months, TD 47 [30; 64] ms). Individual differences also play a role in turn-taking; the faster the response, the higher the socialization, linguistic and motor scores of the child ($ERs > 20$). Children and caregivers also display positive self- and interpersonal adjustment in both groups; both variables persist across 3-5 turns, creating joint "waves" of slower and then faster sequences of turns. With these findings, we advance the meta-analytic results and argue that these mechanisms of turn-taking provide useful insights into the reciprocal nature of language development.