Dynamic Resonance and Complex Imitation in Autistic Speech: Creativity Competing with Engagement in Chinese Children with ASD.

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Keywords: Resonance, Creativity, Ad hoc constructions, Chinese, ASD, Corpus-based

Resonance in interaction involves complex imitation (Arbib 2012), whereby speakers/writers re-using (parts of) the utterances of their interlocutors (Du Bois 2014). This leads to the formation of ad hoc constructions (Brône & Zima 2014) that result from an overt dialogic engagement with other people's speech. When resonance is creative, speakers/writers engage with others' language to express something new. Persistent creative resonance is a key indicator of interactional engagement and reciprocity at talk (Tantucci & Wang 2022b). Conversely, consistent absence of it underpins interactional detachment, which tends to be distinctive of ASD speech (Tantucci & Wang 2022a, 2022c). The present study addresses resonance in relation to creativity and provides a new applied model to measure intersubjective engagement in ASD vs neurotypical populations' speech. We retrieved 2000 utterances involving syntactical and/or lexical analogy from a preceding turn at talk from the corpora of neurotypical first language acquisition of Mandarin Chinese Zhou2, Zhou3 (Li & Zhou, 2004; Zhang & Jing, 2009) and the Shanghai corpus of children with ASD (cf. Zhou & Zhang, 2020). We fitted a multifactorial mixed effects linear regression combined with conditional inference tree modelling (e.g. Levshina 2021) to measure the degree to which children creatively resonated with one another. This involved modelling the frequency and the magnitude of new constructions of varying complexity that were based on what was previously said by their interlocutors. Our results indicate that in both neurotypical and ASD populations, dialogic resonance significantly correlates with engagement and creativity. However, our key finding was that creativity and intersubjective engagement (Tantucci 2021) are in competition in speech produced by children with ASD, while they are simultaneously at play in the neurotypical population. Additionally, there was also a significant tendency of children with ASD to resonate with their own speech rather than with the one of their interlocutors. This approach points to an applied implementation of Construction Grammar in naturalistic interaction. The present case-study provides large-scale evidence to suggest a relatively impeded ability in children with ASD to resonate creatively with their interlocutors during the here-and-now of a dialogic event.

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