

Linguistic recursion and Autism Spectrum Disorder

Irina Polyanskaya

Roskilde University

Torben Braüner

Roskilde University

Patrick Blackburn

Roskilde university

Abstract: Both first-order and second-order false-belief mastery are important in acquisition of Theory of Mind. Our logical analysis of second-order false-belief tasks shows that this sort of reasoning involves recursion. Language involves recursion as well; recursive possessive and complements clauses are examples.

Second-order social reasoning depends on both individual cognitive resources and immersion in a wide range of interactive contexts. But since the ‘usual’ interactive contexts do not make the same sense to children with Autism Spectrum Disorder (ASD), it has been proposed that they use language as scaffolding in false-belief understanding.

We hypothesize that competency in linguistic recursion predicts second-order false-belief mastery for children with ASD. We investigate this by training children with ASD to better comprehend and produce recursive possessive and complement clauses. We have developed and validated a tool to measure the recursion competency in the Danish language, and we apply this in a randomized controlled training study.