Abstract:

During the pre-school years, children’s sociocognitive abilities to reason about their own and others’ beliefs develop substantially. A line of studies indicate that acquisition of perspective-marking syntax in the shape of complement clauses plays an important role in promoting such abilities to reason flexibly about mental states (e.g. de Villiers & de Pyers 2002, Low 2010).

The complement-clause construction is a syntactic strategy for communicating about relationships between persons and conceptions, as in: She thinks [it’s her doll], but I know [it’s mine], and it is found in the majority of the languages of the world (Dixon 2006). Correlation and training studies show a tight relationship between acquisition of complement clauses and belief reasoning, suggesting a case of linguistic mediation (e.g. Lohmann & Tomasello 2003, Schick et al. 2007).

However, critical uncertainties pertain to conclusions about this relationship. First, most studies use complement clauses in the sociocognitive tests, thus confounding the skills to be compared. Second, few studies include measures of executive functioning that are likely to influence performance on both types of tasks and could be responsible for the correlations. Third, the experiments typically target children around four years of age, but children make important advances in both belief reasoning and complement-clause acquisition at younger ages (Hansen 2010, Boeg Thomsen 2016), suggesting that the proposed influence from complement-clause acquisition should play its prime role at an earlier stage.

To test whether we still find a relationship between complement-clause mastery and false-belief reasoning when measuring the latter with complements-free tests and including a range of executive-functioning measures, we conducted a longitudinal study with 45 English 2-to-3-year-olds. Our main question was whether complement-clause performance at Time 1 (mean age: 3;1 years) would predict false-belief reasoning at Time 2 (mean age: 3;7 years) when we controlled a range of background measures: inhibitory control, rule-switching flexibility, short-term and working memory, vocabulary, syntax and eye-tracking measures of implicit belief tracking.

Complement-clause performance at age 2;9 to 3;5 emerged as a significant independent predictor of false-belief reasoning six months later, thus confirming the specificity of the relationship between complement syntax and social cognition while adding evidence for its
workings at a more fundamental level than previously recognized. While the predictive relationship yields support for a causal influence, we will scrutinize the question of causality further by comparing these results from natural development with results from an ongoing training study.

References:


