The Role of Metarepresentation in Theory of Mind Development in Preschoolers

by

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Abstract

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The role of metarepresentation in theory of mind development has been hotly debated. On one side of the debate, researchers suggest that theory of mind develops through a domain general change in representational processing of both mental and non-mental representations. On the opposing side, researchers suggest that a unique domain-specific mechanism is required for processing mental representations (i.e., theory of mind). The objective of the current work was to clarify the role of metarepresentation in theory of mind development by examining the relations between children’s false belief understanding (mental representations) and non-mental representations (propositional and pictorial representations) understanding. A secondary objective was to investigate the role of conflict inhibition in understanding the representational qualities of beliefs, words, and signs. One-hundred and four three-and-four year old children were included in the current analyses. Children’s theory of mind understanding was assessed using the false belief (change in location), and the false belief (unexpected contents) tasks. Children’s metalinguistic awareness (i.e., propositional representational understanding) was assessed using the Synonym and Homonym Judgment Tasks (see, Doherty & Perner, 1998). False sign tasks were used to assess children’s understanding of pictorial representations. Conflict inhibition—the ability to supress a dominant response in favour of an alternative response—was also measured. Frequentist analyses results showed no significant relationships between false belief understanding and metalinguistic awareness, or false sign understanding. Bayesian regression analyses revealed that Synonym/Homonym Judgement tasks, False sign tasks, and conflict inhibition supported the null hypothesis of no effect in predicting false belief task performance. These results provide preliminary evidence for unique, domain-specific mechanisms involved in theory of mind development. Results also show that conflict inhibition may be particularly important for success on both the metalinguistic and false
sign tasks. Future research should consider looking at the prospective relations between false belief understanding, metalinguistic awareness, and false signs over the preschool period.