

Lying and Theory of Mind Meta-Analysis

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Introduction

This meta-analysis examined the relationship between lying and theory-of-mind (ToM) by combining findings from 81 studies involving 7,826 children aged 2 to 14 from 14 different collectivist and individualist cultures. Overall, there was a small but significant positive relationship. The following four major moderators were investigated: facet of lying; and culture (collectivist, individualist). The aspect of lying and the type of ToM were important moderators. ToM was positively related to all aspects of lying, but it was most strongly related to lie maintenance and least strongly related to spontaneous production. Both first-order and second-order ToM were positively related to lying [1].

Lying is the act of delivering what the speaker knows to be false information with the intent of manipulating the recipient's beliefs and/or behaviour. A child's lies are typically frowned upon by parents, who seize the first opportunity to correct the child for his or her "moral transgression." However, children have yet to fully understand the moral implications of lies, at least in the preschool years; thus, lying may be more a reflection of their cognitive ability to deceive than an intentional act of moral violation. The emergence of children's lying in the preschool period, in particular, has been identified as a key developmental milestone associated with their burgeoning theory-of-mind [2].

As a result, in the past, researchers used children's deceptive abilities as a proxy measure for their mental state understanding based on the assumption that ToM is associated with the ability to understand and produce lies. Researchers have since used a variety of tasks to empirically test the link between lying and ToM. Initially, researchers focused on how children's first-order ToM awareness of mental representations and reality are distinct entities, and that different people can have different mental representations of the same reality.

The literature on the relationship between lying and ToM has grown dramatically over the last decade, as researchers began to study not only children's conceptual understanding, but also their production of lies. Children's lie-telling has been studied in terms of whether or not they can lie when provoked to do so, their proclivity to lie spontaneously, and how well they can maintain their lies. Furthermore, in addition to the traditional focus on antisocial lies, researchers have turned their attention to lies told with prosocial intent. Researchers now commonly examine its relationships with not only first-order ToM but also second-order ToM—that is, the ability to entertain someone else's beliefs about their own—to parallel investigations into more sophisticated lying [3].

Discussion

Taken together, the rapid growth of the literature on the relationship

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between children's lying and ToM has been characterised by expansions in the methodological approaches used to study this relationship—the current literature is thus replete with potential moderating variables of theoretical interest. While it is difficult for a single study to investigate the role of each potential moderator in the relationship between children's lying and ToM, a meta-analysis has the scope and power to do so. In light of the methodological trends in the literature to date, the goal of this study was to provide a meta-analytic synthesis of the findings on the association between children's lying and ToM [4].

Researchers have focused on four major aspects of lying: conceptual understanding of lying, production of lies when directed to do so, spontaneous production of lies at the child's own volition, and maintenance of initially produced lies. To begin, in tasks designed to assess children's conceptual understanding of lies, children are typically presented with a story and asked to determine whether a character's statement was a lie or a truth or, in some cases, both.

Third, the Temptation Resistance Paradigm is frequently used to test children's spontaneous production of lies at their own will. In this paradigm, children are put in situations where they are tempted to cheat in a game and are then evaluated on whether or not they lie to conceal their transgression. In contrast to instigated lying tasks, which may more directly tap into children's ability to engage in deception (because the task specifically requires it), children's performance on spontaneous lying tasks may not necessarily reflect their ability to produce lies, as motivational factors may confound. In other words, spontaneous lying tasks may be a better indicator of a child's proclivity to lie than of their ability to lie [5].

Conclusion

Using a meta-analytic approach, we integrated findings from the literature on the association between children's lying and ToM and examined the influence of potential moderators on this association. To test the prevalent view in the literature that ToM is a critical underlying ability in children's understanding and production of lies, we first looked at the mean effect size of the association across all studies. Furthermore, by first synthesising across all findings, we were able to statistically investigate whether there was significant heterogeneity in effect sizes in the literature, warranting subsequent meta-regression moderator analyses.

Statistics from studies were easily converted into effect sizes. Studies that reported correlations between lying and ToM were only considered eligible if they reported raw correlations, so studies with partial correlations were excluded. In studies where the data were not continuous, effect sizes were calculated using means and standard deviations, provided the sample of children was divided into those who lied or told the truth, or those who passed or failed ToM tasks.

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Conflict of Interest

There are no conflicts of interest by author.

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