

*Commentary***From false belief to friendship: Commentary on Fink, Begeer, Peterson, Slaughter, and de Rosnay**Matthew D. Lerner^{1*} and Angeline S. Lillard²¹Stony Brook University, Stony Brook, New York, USA²University of Virginia, Charlottesville, Virginia, USA

Fink, Begeer, Peterson, Slaughter, and de Rosnay (*Brit. J. Dev. Psychol.*, 2015; 33, 1–17) represent a welcome contribution in providing empirical evidence of the link from false belief understanding at Time 1 to mutual friendship 2 years later, controlling for several other possible contributors. This opens a new and important line of inquiry into the practical significance of a Theory of Mind. As is typical of pioneering research, further study is needed to address some issues; here, we point out some of these issues and then briefly discuss the broader implications of Fink *et al.*'s findings.

A Theory of Mind (ToM) is presumed to have practical value. Theoretically, a ToM (A) could undergird social competence (B) (Lerner, Hutchins, & Prelock, 2011), which could support making friends (C). Fink, Begeer, Peterson, Slaughter, and de Rosnay (2015) provide empirical evidence of the link from A to C, from false belief understanding at Time 1 to mutual friendship 2 years later, controlling for several other possible contributors. This represents a welcome contribution, opening a new and important line of inquiry into the practical significance of a ToM. As is typical of pioneering research, further study is needed to address some issues; here, we point out some of these issues and then briefly discuss the broader implications of Fink *et al.*'s findings.

Our first concern is with the measures used. The middle-income sample used here was rather senior (5.6 years) for the four basic false belief tasks that constituted most of the ToM task. However, they also used two 'advanced' ToM tasks. Unfortunately, these tasks are less prevalent and were not well described, but they concerned understanding belief–emotion relations. The study also included an emotion understanding measure (Test of Emotion Comprehension; TEC), which has several items that rely on understanding beliefs. Indeed, although they claim understanding of emotion and belief is distinct, strong relations between a ToM battery (that did not include emotion understanding items) and the TEC have been reported (Lillard & Kavanaugh, 2014). In addition, the authors used the two advanced ToM tasks in the calculation of both the ToM score and emotion understanding score. This crossover increases the correlation (and reifies construct overlap) between the two. Future research would do well to use a sample whose age range was better suited to the tasks, or a set of ToM and emotion understanding tasks that was clearly distinct and better suited to the age. The field would benefit greatly from a ToM

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scale aimed at older children. Finally, as Fink *et al.* note, the choice modification of the delay of gratification task is problematic (see references in Lillard, 2012, p. 386). Children are perhaps sometimes arbitrary in their choices on this measure, which would explain the odd patterns of effects found.

Regarding the statistical analyses, friendship (both cross-sectional and change) was modelled categorically, not continuously. This approach might artificially reinforce the categorical finding (friendless vs. friended categories as driving the effect), rather than permitting a potential continuous one. Second, sociometric data are usually highly nested within classrooms. As such, sociometric ratings are almost always more correlated within classroom, which can bias effect estimates in regression models that treat observations as uncorrelated. Regardless of any classroom-level factors that may covary with this effect (e.g., social climates, language scores), failure to model these data dependences will usually influence obtained parameters. Thus, analytically, accounting for within- and between-classroom variance, as with hierarchical linear modelling, would be useful in further research.

Finally, the theoretical framework and resulting models limit interpretations. For instance, several third variables (ethnicity, cultural backgrounds, parent education, income) bear on the constructs of interest and could undergird observed relations. Additionally, the possibility that ‘Children could gain insight into another person’s thoughts in unique ways by sharing the intimacy of a reciprocated friendship’ (p. 5) is not ruled out by the present study because ToM is only tested at T1; prior friendship could lead to ToM. There could also be a reciprocal or cyclical process, which may either accrue among friended children or canalize among friendless ones over time.

Fink *et al.*’s finding of clear cross-sectional and longitudinal relations between ToM and friendship is all the more impressive given that the relations emerged *despite* some of the limitations just mentioned. We now consider some implications of this result. First, it is interesting that the most important contrast categories appear to be *friendlessness* versus *any mutual friends at all*. This highlights the categorical difference – suggested in previous literature – of having *any* friends. It might be the case that having ‘enough’ ToM may yield a ‘threshold effect’ for friendship. Regarding interventions, this would imply that rather than targeting all children for ToM improvement, perhaps just those below a given threshold would benefit from ToM-focused treatment. Likewise, this suggests a level above which interventions may be discontinued. Conversely, the findings suggests that, although poor ToM may keep a child ‘stuck’ without friends, it also does not appear to make a child *lose* friends over time. If replicated, this also provides useful insight regarding the value-added (cumulative rather than corrosive) nature of ToM in social development.

The obtained relation between ToM and friendship also begets questions about mediating process – How does understanding false belief lead to friends? One possibility is that ToM begets prosocial behaviour which, in turn, begets friendships. However, there was no effect of prosocial behaviour in any of Fink *et al.*’s models. Although the authors raise concerns about their prosocial measure, and measurement occasions did not permit cross-lagged analyses, this nonetheless raises the intriguing possibility that a less intuitive process is at play. For instance, we have previously posited that ToM leads to social pretend play (Lillard *et al.*, 2013). Social pretend play also predicts later sociometrics. The possibility of social pretence as a mediator of this relation may bear investigation.

Finally, from a clinical standpoint, some populations exhibit both chronic ToM challenges and high rates of friendlessness (e.g., those with autism spectrum disorders). Nonetheless, the link between these constructs has rarely been examined in these populations. Future work examining whether the direction and magnitude of these

relations holds for such children will be invaluable for maximizing the applicability of these findings for those who need it most. Overall, despite methodological concerns, Fink *et al.* have provided a needed contribution that elucidates important presumed construct links and provides a clear avenue for future research in this domain.

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