



What are you thinking? The role of mentalization in children's dyadic interactions with unfamiliar peers.

Emma Green, Claudia Labahn, & Heather Henderson

Department of Psychology, University of Waterloo



INTRODUCTION

Theory of mind (ToM) is the ability to accurately infer the beliefs, desires, intentions, and emotions of others (1,2)

Mentalization is the process of reasoning about the meaning behind others' emotional displays and actions (Dziobek et al., 2006)

- **Over mentalization:** Over interpretation of available information, with over-extended consideration of how situation affects emotion/thought processes
- **Under mentalization:** Inadequate interpretation of available information, with no consideration of how situation affects emotion/thought processes

Benefits of advanced ToM (Cutting & Dunn, 2002):

- Greater sensitivity to the thoughts and feelings of others
- Improved ability to get along with others, make friends, or explain individual perspective

Risks of advanced ToM:

- Children with more advanced ToM are more sensitive to teacher criticism (Cutting & Dunn, 2002)
- Adults with social anxiety tend towards over mentalization (Washburn et al., 2016)

In social settings:

- More experience in social settings is associated with better ToM (Carpendale & Lewis, 2004)
- Children with more advanced ToM tend to show more withdrawn temperaments in social settings (Moore et al, 2011)

HYPOTHESES

1. How do children mentalize about others' evaluations of them in social situations?
2. Do children's mentalization tendencies affect their own behaviours during social interactions?
3. Do children's mentalization tendencies affect their partner's behaviours during social interactions?

Research funded by SSHRC Insight Grant 435-2016-0494 (PI Henderson)

METHODS

Participants were 60 9–11-year-olds (M= 10.12, SD = 0.81, 60% female), participating in a wider study of temperament and social cognition.

Visit 1

Mentalizing task (Sharp et al., 2007)

- 15 ambiguous socio-evaluative scenarios with the prompt: "If this happened to you, what do you think other children would think about you?"
- Participants' responses coded for mentalization (under, correct, over).
- Bias scores created for over mentalizing (total over responses - total correct responses) and under mentalizing (total under responses - total correct responses)



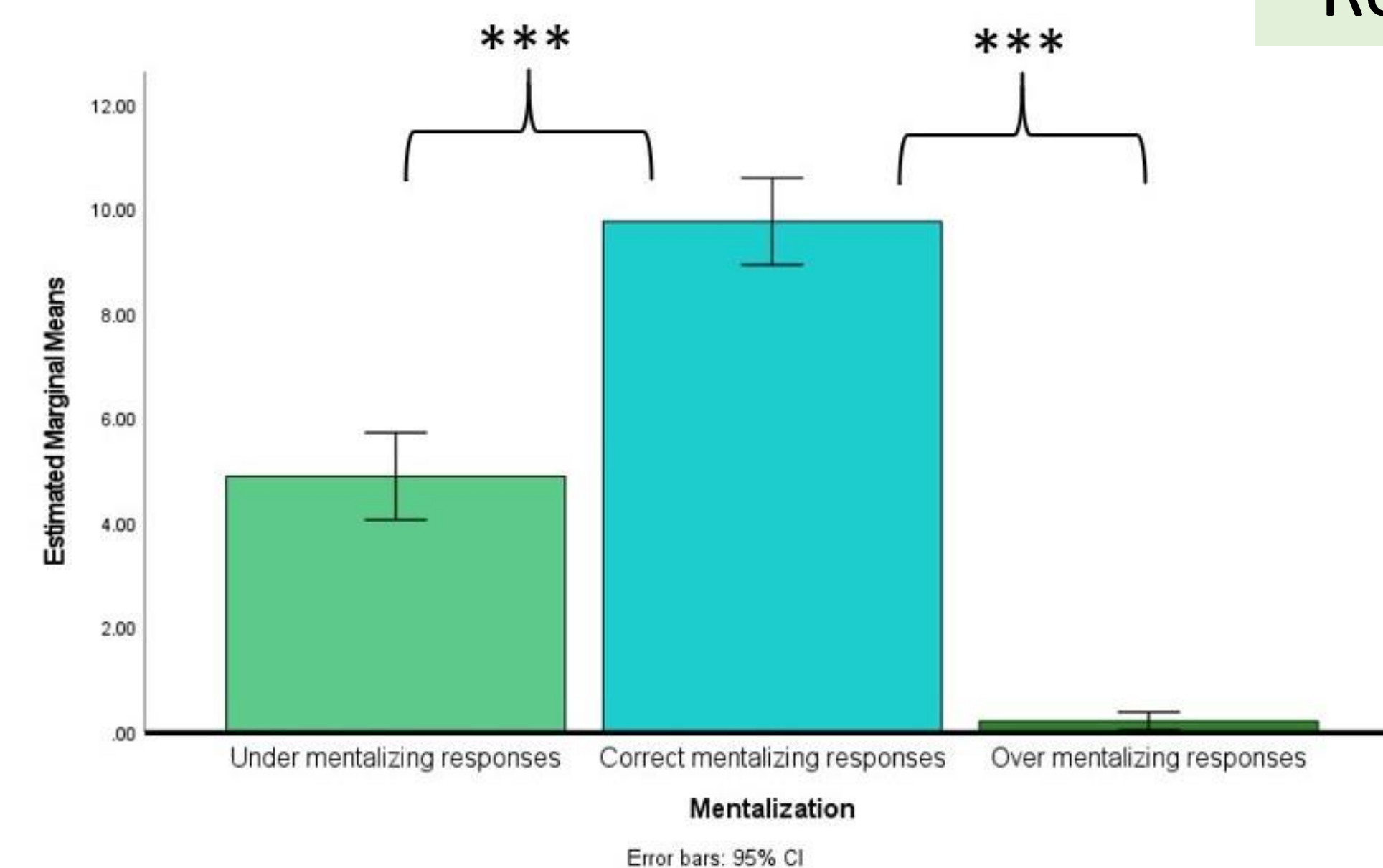
Visit 2

Peer Dyad: Getting to Know You Task

- Participants paired with age and gender matched unfamiliar peer
- 5-minute interaction with no instructions from experimenter
- Behaviour coded using Mangold INTERACT software to quantify participants' levels of openness, social ease, and conversation (1=low, 5=high)
- Frequencies of seeks (asking for information) and shares (giving information) coded
- Composite *Social Engagement* score - all global scores and frequencies

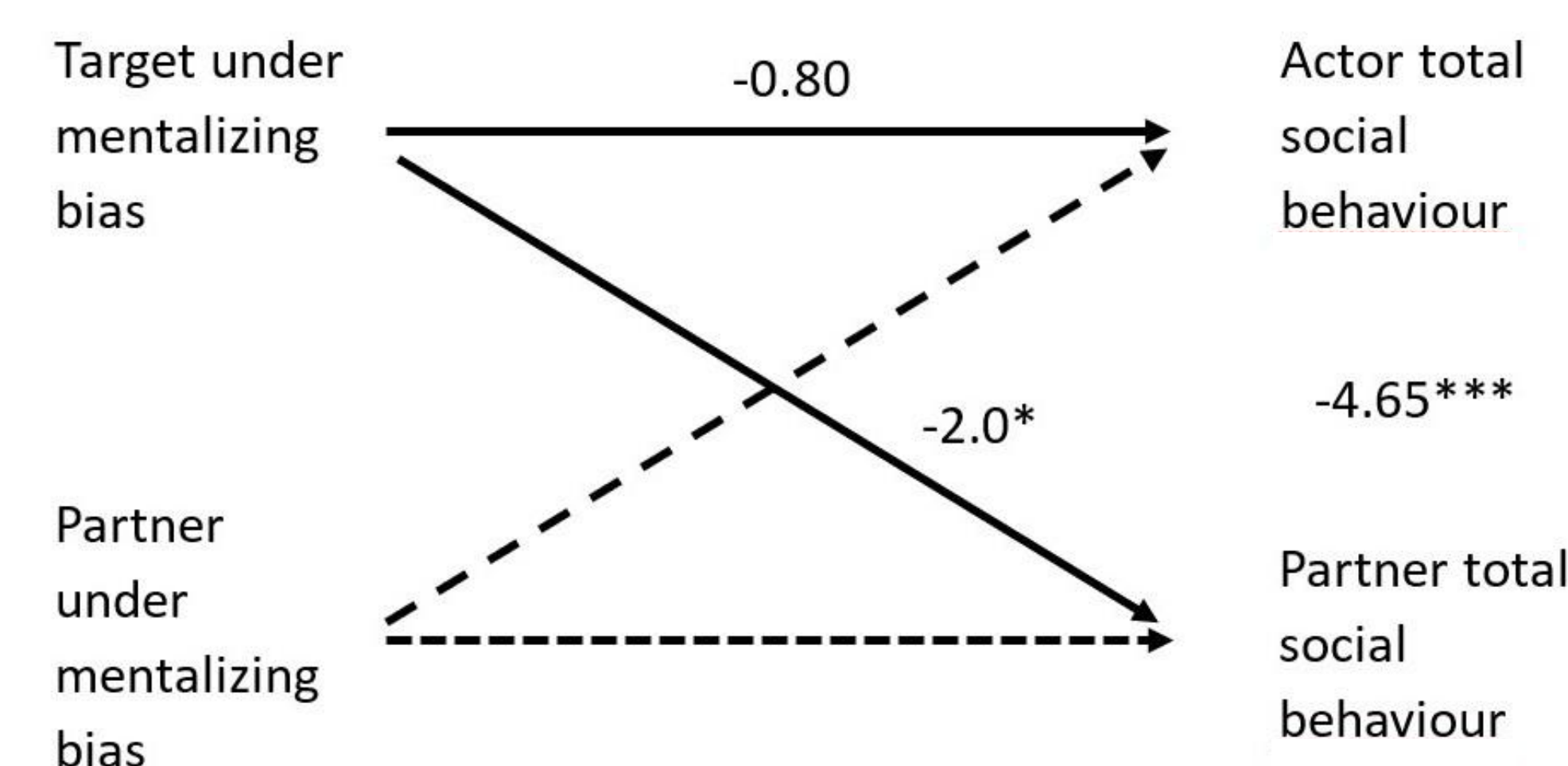
RESULTS

Research Question 1

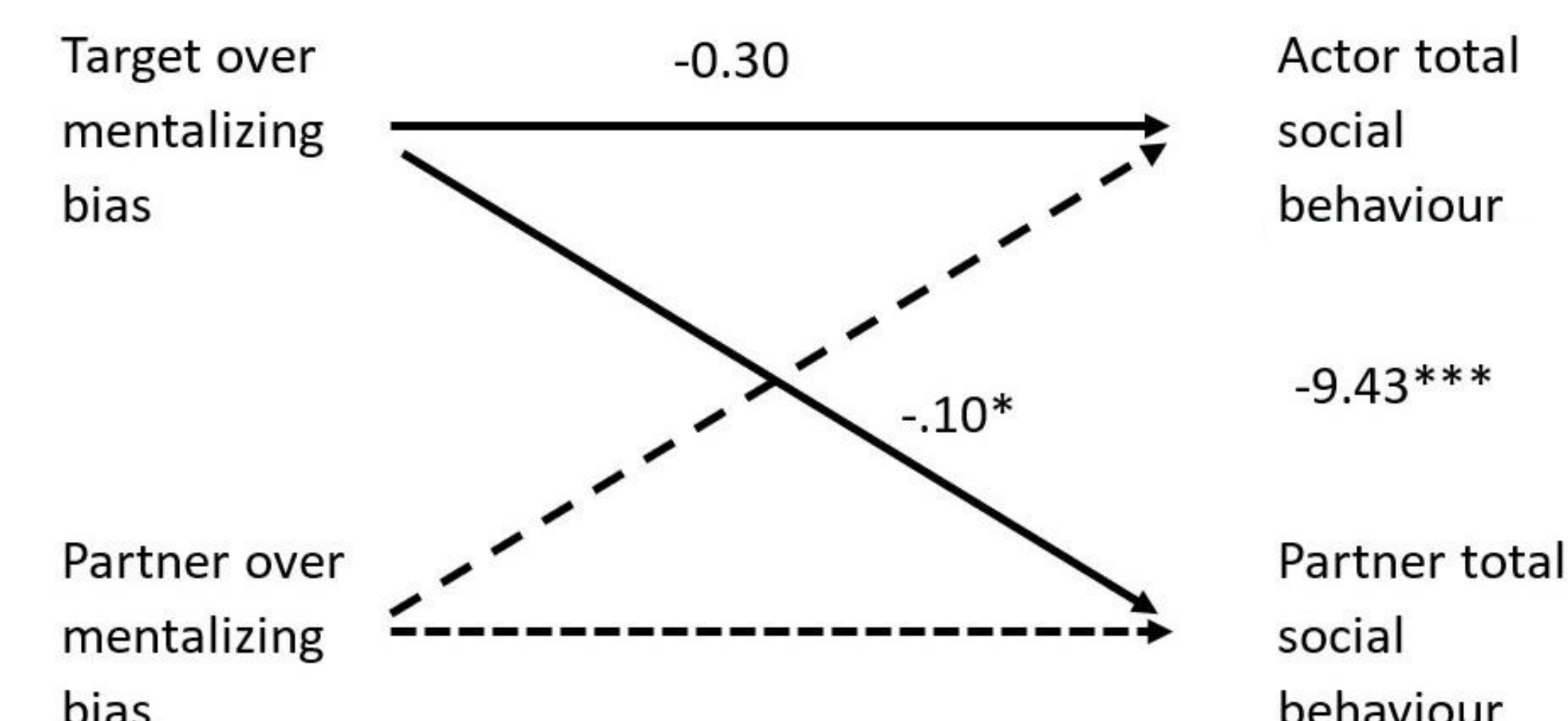


Children were more likely to provide correct mentalizing responses versus under or over mentalizing responses.

Research Questions 2 and 3



Children's under mentalizing tendencies were not associated with their own social engagement. However, under mentalizing tendencies were associated with their partner's social engagement.



Children's over mentalizing tendencies were not associated with their own social engagement. However, over mentalizing tendencies were associated with their partner's social engagement.

DISCUSSION & FUTURE DIRECTIONS

In general, children provided more correct mentalizing responses versus under or over mentalizing responses.

Children's mentalizing tendencies were not associated with their own social engagement in novel peer encounters.

- The impact of child's mentalizing tendencies on their own behaviour may not be apparent to outside observers.

- May be due to microexpressions such as eye contact or facial expressions not captured by coding scheme

However, children's mentalizing tendencies were associated with their peers' social engagement in novel peer encounters.

- **Under mentalizing:** children may be missing social cues due to lack of reasoning, and this results in appearing uninterested or disengaged to partners

- **Over mentalizing:** children's preoccupation with reasoning about previous social information from partner may result in missing more updated social information from partner, resulting in appearance of being disengaged or uninterested in social interaction.

- In both scenarios, perceived child disengagement may discourage further social behaviour from peer.

Future directions:

- Examine the connection between individual differences in social anxiety and mentalization tendencies to social behaviours

- Examine connection between mentalization tendencies and social behaviours in different social settings



REFERENCES

Carpendale, J. I., & Lewis, C. (2004). Constructing an understanding of mind: The development of children's social understanding within social interaction. *Behavioral and Brain Sciences*, 27(01). <https://doi.org/10.1017/S0140525x04000032>

Cutting, A. L., & Dunn, J. (2002). The cost of understanding other people: social cognition predicts young children's sensitivity to criticism. *Journal of Child Psychology and Psychiatry*, 43(7), 849–860. <https://doi.org/10.1111/1469-7610.101-1-00047>

Dziobek, I., Fleck, S., Kalbe, E., Rogers, K., Hassenstab, J., Brand, M., ... Convit, A. (2006). Introducing MASC: A Movie for the Assessment of Social Cognition. *Journal of Autism and Developmental Disorders*, 36(5), 623–636. <https://doi.org/10.1007/s10803-006-0107-0>

Moore, C., Bosacki, S. L., & Macgillivray, S. (2011). Theory of Mind and Social Interest in Zero-Acquaintance Play Situations. *Child Development*, 82(4), 1163–1172. <https://doi.org/10.1111/j.1467-8624.2011.01602.x>

Sabbagh, M. A. (2004). Understanding orbitofrontal contributions to theory-of-mind reasoning: Implications for autism. *Brain and Cognition*, 55(1), 209–219. <https://doi.org/10.1016/j.bandc.2003.04.002>

Sharp, C., Craudace, T. J., & Goodyer, I. M. (2007). Biased Mentalizing in Children Aged Seven to 11: Latent Class Confirmation of Response Styles to Social Scenarios and Associations with Psychopathology. *Social Development*, 16(1), 181–202. <https://doi.org/10.1111/j.1467-9507.2007.00378.x>

Washburn, D., Wilson, G., Roes, M., Rnic, K., & Harkness, K. L. (2016). Theory of mind in social anxiety disorder, depression, and comorbid conditions. *Journal of Anxiety Disorders*, 37, 71–77. <https://doi.org/10.1016/j.janxdis.2015.11.004>

Weilman, H. M. (1993). *The child's theory of mind*. MIT Press.