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Social Connection and Mental State Reasoning

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Abstract

Cognitive scientists have long investigated infants' abilities to reason about others' minds. Here, we identify a limitation to research on early mental state reasoning: that this research has mostly challenged infants to reason about the minds of strangers. In this commentary, we call on cognitive scientists to consider the role of social relationships when studying mental state reasoning and cognition more broadly.

Social Connection and Mental State Reasoning

Thomas (2024) reviews evidence that infants have core knowledge about social relationships: Infants reason about how people are connected, not only to each other, but to the infants themselves. At the same time that there is this growing body of research examining infants' capacities for reasoning about relationships, there is a large body of research examining infants' capacities for reasoning about others' minds (e.g., Scott & Baillargeon, 2017); Spelke, 2022; Woodward, 2009). The majority of research on infants' capacities for mental state reasoning has presented infants with individuals who are strangers (or near strangers) to the infants (e.g., Onishi & Baillargeon, 2005; Luo & Johnson, 2009; Southgate et al., 2007; Woo et al., 2024; Woodward, 1998). Yet, the people whose minds may matter most for infants' everyday lives may be the people in their social networks: especially, their own caregivers.

Thomas reviews research that demonstrates that from birth, infants are attuned to their caregivers (e.g., DeCasper & Fifer, 1980; Field et al., 1984; Porter & Winberg, 1999), and that later in infancy, infants learn from their caregivers' social interactions about potential new social partners for themselves (Thomas et al., 2022). It is possible that infants may be attuned not only to their caregivers' voice, smell, appearance, and social interactions, but also to their caregivers' mental states. For infants, reasoning about their caregivers' goals is likely highly relevant for them to learn from and interact with their caregivers. Psychologists have long studied and debated the development of infants' abilities to reason about different kinds of mental states (e.g., Baillargeon et al., 2018; Phillips et al., 2021; Poulin-Dubois et al., 2018; Woo et al., 2022): goals, knowledge states, and beliefs. It is possible that in presenting infants with strangers, we have underestimated their abilities to reason about certain kinds of mental states.

There is evidence that relationships matter for learning. For example, toddlers learn more effectively from their caregivers (van Rooijen et al., 2019). Moreover, there is even evidence that toddlers learn more effectively from novel people who are socially engaging (i.e., making eye contact, smiling, and using infant-directed speech) (Breitfeld et al., 2024), and that toddlers more readily help people who have passed a ball to them (Cortes Barragan & Dweck, 2014). That is, infants do not only learn more effectively from and cooperate more effectively with people with whom they have long-established relationships (i.e., their caregivers), but also novel people who have sought to engage them. These findings may reflect an enhanced understanding of an individual's mental states. For children to learn, they need to understand the goal of the teacher (e.g., the goal of labeling an object) (Gweon, 2021). For children to help a person achieve a goal, they must understand the goal of the person (Hobbs & Spelke, 2015; see also, Woo & Spelke, 2023). How do children come to develop new relationships, identifying people whom they can learn from and cooperate with?

Thomas's research demonstrates that from their caregivers' social actions, infants learn about their caregivers' relationships, as well as how the infants themselves may be connected to other people (Thomas et al., 2022): that someone could be part of the infants' own social networks. Such inferences could guide infants' learning. It is possible that infants may learn better from people within their social networks. When infants identify a person as being part of their social network, they may also be more motivated to learn from and cooperate with that person.

Educational researchers have examined the role that parents and guardians play in their children's learning. There is evidence that parental involvement in schools is positively associated with the development of skills relevant to literacy in preschool (Arnold et al., 2008),

as well as with achievement in reading and mathematics in elementary school (Park & Holloway, 2017). These findings may reflect that, from increased parental involvement, children have inferred that their parents and teachers have a relationship: that the teacher is part of their social network. From increased parental involvement in schools, children may therefore learn more effectively from their teachers. Future research could test this possibility more directly and perhaps experimentally. We also note that education researchers, to our knowledge, appear not to have studied the role of parental involvement in learning in infancy. Given the findings that Thomas reviews, however, it appears that infants do track the relationships that their caregivers have with others. Thus, we call on psychologists and education researchers to investigate how parental involvement influences learning in infancy.

In sum, the evidence for core knowledge about social relationships should inspire researchers to consider how social connection shapes early mental state reasoning, learning, and cognition broadly. Children may reason about the minds of many people, but they may be especially likely to do so from people within their social networks. A comprehensive understanding of early mental state reasoning requires that we also understand children's relationships.

Competing Interest Declaration

Competing interests: none.

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