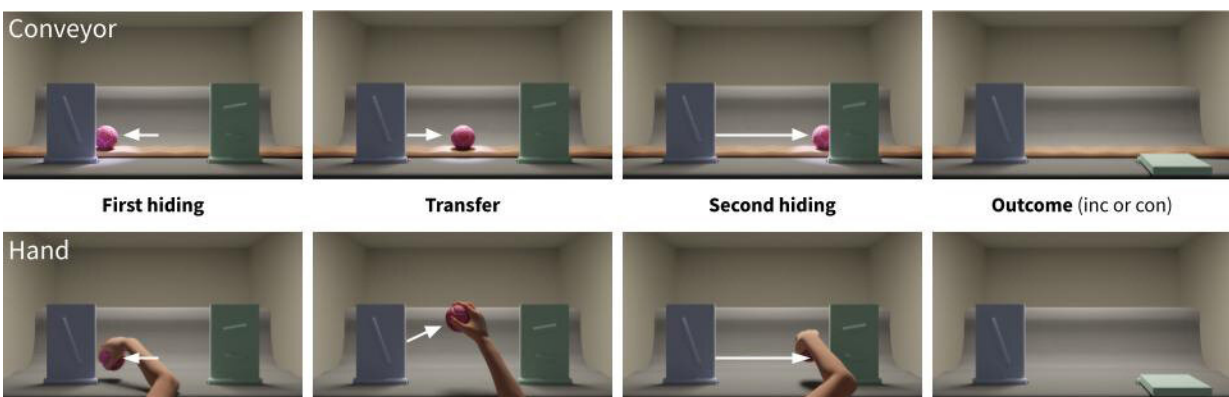


# Infants are not egocentric: Study finds they trust other people's attention more than their own observations

July 3 2023



In the initial trials, 8-month-old children had to follow a ball being moved by either a conveyor belt or a hand. In both cases, the children were able to figure out where the ball should be, even if it was mysteriously missing. Credit: University of Copenhagen

Children are often perceived as egocentric—and not without good reason. For example, it is well documented that 3-year-old children only use their own perspective when predicting someone else's actions. Adults also find it difficult to disregard theirs when empathizing with other people. Our egocentric tendencies continue throughout our life.

However, the story is different when it comes to [infants](#). This is shown

in a new research project from the University of Copenhagen, where researchers have studied the ability of 8- and 12-month-old infants to remember the location of a moving object.

The aim of the project was to test a theory that early in infancy there is a so-called altercentric bias: The infant trusts other's observations more than their own. The study, titled "An initial but receding altercentric bias in preverbal infants' memory," has been published in the journal *Proceedings of the Royal Society B*.

## **Following the attention of other people**

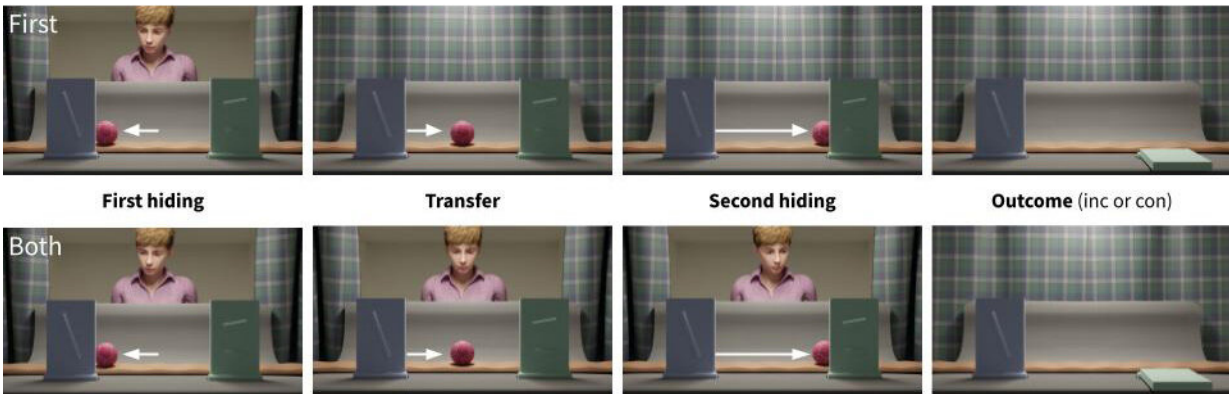
First, the researchers investigated whether infants as young as 8 months can remember the location of an object if it is moved from one hidden location to another. To do this, the researchers used an animation showing a [conveyor belt](#) or a hand moving a ball behind one screen and then behind another screen.

"When we then reveal either location as empty, the children look longer at the place where the ball should be. This shows us that the children have a memory of where the object moved to," says Velisar Manea, postdoc at the Department of Psychology, who led the research project.

To investigate how the attention of others affects infants' memory, the researchers then conducted an experiment in which an animated human character also followed the movement of the ball.

"While the ball is being transported to its first location, the [animated character](#) looks at the ball. Then we cover the character and the infants are left alone to watch the movement of the ball to the second location," explains Manea. "As predicted, babies expected to see the ball in the first location, even though they had seen it being moved to the second location. They prioritized the animated agent's attention to what they saw

afterwards."



In the next trials, the infants were put through a similar experiment, but the movement of the ball was fully or partially followed by an animated human. Here, the children's attention was dependent on the character's gaze when judging where the ball was. Credit: University of Copenhagen

The research team conducted a control experiment where the animated agent follows the ball's location from start to finish.

"To our surprise, infants looked equally to both revealed locations in this experiment. Once again, the 8-month-olds possibly expected the ball on both locations, as the agent attended both," says Manea.

## Self-confidence grows

But when does the child start to trust their own observations? The research team investigated this question by conducting similar experiments with 12-month-old children.

"Unlike the 8-month-old children, the 12-month-olds were able to remember the last position of the ball in the experiment, where the agent also saw the final location," says Manea.

In contrast, when the agent only saw the ball in the first hiding location, but the babies saw the transfer to the final location alone, they looked equally to both places.

"This suggests that 12-month-old [children](#) are in a transitional phase, where some infants are less affected by the perspective of others, while others are still strongly influenced," says Manea.

So why is the infant's memory built to initially rely more on the observations of the people surround it—and then later become more independent?

"We think that the altercentric bias facilitates the child's learning at a unique time in life when motoric immaturity limits the infant's interaction with the environment," Manea suggests.

**More information:** Velisar Manea et al, An initial but receding altercentric bias in preverbal infants' memory, *Proceedings of the Royal Society B: Biological Sciences* (2023). [DOI: 10.1098/rspb.2023.0738](https://doi.org/10.1098/rspb.2023.0738)

Provided by University of Copenhagen

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