

INFANTS HAVE SOCIAL SIGHTLINES

By Bruce Bower

One-year olds can translate personal experience into knowledge about others

incorporate their own visual experiences into a framework for understanding what other people can or can't see, a new study finds.

Personal experience enables social thinking in early childhood, say Andrew Meltzoff and Rechele Brooks, both psychologists at the University of Washington in Seattle.

In their experiments, briefly blocking the vision of 1-year-olds with a blindfold led the youngsters to appreciate that a blindfolded adult couldn't see toys resting on a table, an insight that typically eludes kids at that age.

Brief use of a trick, see-through blindfold led 18-month-olds to assume that a blindfolded adult could see objects in plain view, even though 18-month-old children rarely make such a mistake.

"This first-of-its-kind training study shows how infants use themselves and their own experiences to understand the inner lives of others," Meltzoff says. He and colleagues report their work in the September *Developmental Psychology*.

Speculation that children's actions and experiences shape social cognition extends back more than 50 years, to Swiss psychologist Jean Piaget. Yet little research has explored how personal experiences animate social learning, comments psychologist Amanda Woodward of the University of Maryland at College Park.

"Meltzoff and Brooks have conducted one of the first successful efforts to study this phenomenon in the lab," Woodward says.

The Seattle researchers describe an experiment in which 96 healthy 1-year-olds played with pieces of black cloth that had been placed under toys on a table. Children were then randomly assigned to receive no more play time or to play a game in which an experimenter periodically held either of two black blindfolds in front of the children's eyes and asked them to point out certain toys. One blindfold was regular, while the other contained eyeholes.

After the game, infants watched an experimenter put on a blindfold and turn to face a toy on the table. Video analyses showed that kids given experience with a regular blindfold spent little time following the experimenter's presumed gaze, a sign that they assumed that a blindfolded person could not see.

Children who had only played with cloth or had used a see-through blindfold persistently looked in the direction of the adult's presumed gaze, acting as if they thought the blindfolded experimenter could see.

The researchers then trained 72 healthy 18-month-olds. Children first played with pieces of cloth, some of which were made of mesh that could be seen through. Kids were then randomly assigned to play the blindfold game either with a regular or see-through blindfold.

Infants followed the assumed gaze of a blindfolded adult for an especially long time only if they had trained with a see-through blindfold.

During training, infants learned about spatial relations among a viewer, a barrier and an object, Meltzoff hypothesizes. The infants then applied this visual knowledge to other people, he suggests.

Meltzoff and Brooks are now studying how long such training effects last.

Even before age 1, children use the outcomes of their own actions to understand other people's goals, according to new research also published in September's *Developmental Psychology*.

After four to eight minutes of training in how to use a hooked cane to retrieve an out-of-reach toy, 10-month-olds spent much more time watching an adult who grasped a cane that cradled a toy than their untrained peers did, reports a team led by Jessica Sommerville, a University of Washington psychologist. That's because trained infants expected to see the adult use the cane to pull in the toy, the researchers say.