

Abstract

The present study examines the ability of infants, as young as 9 months, to understand others' mental representation of the physical environment, and to use it in predicting others subsequent action. In the first experiment, infants viewed agent repeatedly grasps object A but not object B, while object B is either visible to the agent through a transparent screen, or blocked by an opaque screen. Infants respond by looking longer when agent eventually grasps object B in the test trial only in the transparent screen condition, indicating that infants interpret agent repeated grasping of object A as a preference over object B only when they assume the agent could see and know object B. Experiment 2 further tests this prediction by adding a preview trial, in which the agent himself placed object B in front of the opaque screen to indicate his awareness of it. Infants respond as if it was the transparent case since they assume agent know what is in front of the opaque screen even it is blocked from view, so they still interpret agent repeated grasping of object A as a preference indication. Yet changing object B to a new object disrupt the original representation since infants can no longer assume agent's preference of object A over a completely new object. Result in experiment 2 supports this prediction. Altogether, it indicates that 9-10 months infants can keep track of others representation of the physical environment, and subsequently use this representation to understand and predict others action.