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Babies show sense of fairness, altruism as early as 15 months

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A new study presents the first evidence that a basic sense of fairness and altruism appears in infancy. Babies as young as 15 months perceived the difference between equal and unequal distribution of food, and their awareness of equal rations was linked to their willingness to share a toy.

"Our findings show that these norms of fairness and altruism are more rapidly acquired than we thought," said Jessica Sommerville, a University of Washington associate professor of psychology who led the study.

"These results also show a connection between fairness and altruism in infants, such that babies who were more sensitive to the fair distribution of food were also more likely to share their preferred toy," she said.

The study has implications for nurturing human egalitarianism and cooperation. The journal PLoS ONE published the findings online Oct. 7, 2011. Co-author is Marco Schmidt, a doctoral student at the Max Planck Institute for Evolutionary Anthropology.

Previous studies reveal that 2-year-old children can help others – considered a measure of altruism – and that around age 6 or 7 they display a sense of fairness. Sommerville, an expert in early childhood development, suspected that these qualities could be apparent at even younger ages.

Babies around 15 months old begin to show cooperative behaviors, such

as spontaneously helping others. "We suspected that fairness and altruism might also be apparent then, which could indicate the earliest emergence of fairness," Sommerville said.

During the experiment, a 15-month old baby sat on his or her parent's lap and watched two short videos of experimenters acting out a sharing task. In one video an experimenter holding a bowl of crackers distributed the food between two other experimenters. They did the food allocation twice, once with an equal allotment of crackers and the other with one recipient getting more crackers.

The second movie had the same plot, but the experimenters used a pitcher of milk instead of crackers.

Then the experimenters measured as the babies – 47 in all who were tested individually – looked at the food distributions. According to a phenomenon called "violation of expectancy," babies pay more attention when they are surprised. Similarly, the researchers found that babies spent more time looking if one recipient got more food than the other.

"The infants expected an equal and fair distribution of food, and they were surprised to see one person given more crackers or milk than the other," Sommerville said.

To see if the babies' sense of fairness related to their own willingness to share, the researchers did a second task in which a baby could choose between two toys: a simple LEGO block or a more elaborate LEGO doll. Whichever toy the babies chose, the researchers labeled as the infant's preferred toy.

Then an experimenter who the babies had not seen before gestured toward the toys and asked, "Can I have one?" In response, one third of the infants shared their preferred toy and another third shared their non-

preferred toy. The other third of infants did not share either toy, which might be because they were nervous around a stranger or were unmotivated to share.

"The results of the sharing experiment show that early in life there are individual differences in altruism," Sommerville said.

Comparing the toy-sharing task and the food-distribution task results, the researchers found that 92 percent of the babies who shared their preferred toy – called "altruistic sharers" – spent more time looking at the unequal distributions of food. In contrast, 86 percent of the babies who shared their less-preferred toy, the "selfish sharers," were more surprised, and paid more attention, when there was a fair division of food.

"The altruistic sharers were really sensitive to the violation of fairness in the food task," Sommerville said. Meanwhile, the selfish sharers showed an almost opposite effect, she said.

Does this mean that fairness and altruism are due to nature, or can these qualities be nurtured? Sommerville's research team is investigating this question now, looking at how parents' values and beliefs alter an infant's development.

"It's likely that infants pick up on these norms in a nonverbal way, by observing how people treat each other," Sommerville said.

Provided by University of Washington