

## Babies Assume Relationships Based on Saliva Sharing

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April 17, 2022

The idea of sharing saliva with strangers, whether it be drinking from one straw or licking the same ice cream cone, generally triggers disgust. According to STAT Correspondant Andrew Joseph, this innate reaction may have been generated through evolution to protect us from pathogens (Joseph). However, humans tend to put that barrier aside when dealing with those closest to them. Thus, babies recognize saliva exchange as a sign of “thick” relationships—those characterized by strong attachment, obligation, and mutual responsiveness (“Babies Can Tell Who Has Close Relationships Based on One Clue”).

A 2022 study done by MIT and Harvard researchers found that babies expect people who share saliva to come to each other’s aid in times of distress (Thomas et al.). These researchers showed infants and toddlers (ranging from 8 to 18 months) two interactions. In the first interaction, a woman took a bite of an orange slice, placed the slice in the mouth of a fuzzy blue puppet, then took another bite. In the second interaction, the same puppet tossed a ball back and forth with a different woman. After the two interactions, the team observed the babies’ reactions as they watched the puppet, who sat between the two women, begin to cry. The babies consistently looked first and much longer at the woman who had shared food, “as though expecting the actress to react to the puppet’s distress” (Joseph). When the seated puppet was swapped with a different puppet that also began to cry, the babies did not look at the orange-sharing actress first or longer than the ball-passing actress. This suggests that the children’s expectations about who would respond were not tied to whether they viewed the person as simply nice, explained Ashley Thomas, MIT developmental psychologist and lead

researcher of the study (Joseph). Instead, the babies decided who to look first and longer at based on the different actions of the women.

Additionally, as a control, a different group of babies were presented with the same two women and a new puppet. Neither woman shared an orange with the puppet, and when the puppet began to cry, the babies spent an equivalent amount of time looking at each of the women. This suggests the determining factor of the babies' glancing to be the different actions of the women, food sharing versus ball throwing.

To further confirm their conclusions, the researchers also displayed another set of interactions containing a purple and green puppet. A woman touched her forehead, the forehead of the purple puppet, then her own forehead again. She then put a finger in her mouth, in the mouth of the green puppet, then back in her own mouth. Afterwards, the woman sat down between the two puppets and acted distressed. Expecting the green puppet to console the woman, the babies largely turned their focus in its direction. These sets of experiments indicate that babies can identify saliva transferral, even in atypical forms, as a sign of intimacy. The research team wrote that saliva-sharing interactions "provide externally observable cues of thick relationships, and young humans can use these cues to make predictions about subsequent social interactions" (Joseph).

This study does not delve into the *why* behind babies' saliva-recognizing phenomenon. It does not consider the question of whether connecting saliva interchange to thick relationships is something we innately know or discover with experience. However, the baby participants were quite young, so "at the very least, they're able to rapidly learn this connection," said Thomas (Joseph).

The 2022 MIT study suggests that from a young age, babies are able to recognize saliva sharing as a sign of closeness.

Sources:

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3. Thomas, Ashley J., et al. "Early Concepts of Intimacy: Young Humans Use Saliva Sharing to Infer Close Relationships." *Science*, vol. 375, no. 6578, Jan. 2022, pp. 311–15. DOI.org (Crossref), <https://doi.org/10.1126/science.abh1054>.
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