The marshmallow test, designed to measure children’s self-control in the face of temptation, is one of history’s most famous psychological experiments. Research in Psychological Science suggests that it may also measure their interest in social approval.

“Our results suggest that even young children care about how they are perceived by others and can adjust their behavior strategically to enhance their reputations,” said developmental psychologist Gail Heyman (University of California, San Diego), a corresponding author on the study.

As a result, tests that ask children to delay gratification may be predictive of their long-term life outcomes because they measure how motivated they are to gain other people’s approval, Heyman said.

The classic marshmallow test presents children with the opportunity to eat one marshmallow immediately or two if they can wait. Heyman and colleagues explored how anticipated social rewards influence children’s decision-making. The researchers conducted three studies involving 210 preschool-age children in China. In each study, a female researcher gave the children one sticker or cookie and told
them that they could receive additional rewards if they waited 15 minutes for a timer-controlled box to open before returning to their classroom. The researcher then left the room.

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In the first study, just 10% of children waited for the box to release a second sticker when they thought they could leave the room without the researcher knowing. This percentage increased to 33% when the box contained three stickers and the children believed the researcher would be unaware of when they left the room. Ultimately, social rewards appeared to carry greater weight than physical ones: When they had to ring a bell to alert the researcher that they wanted to leave the room early, 40% of children waited the full 15 minutes for a second sticker.

In the second study, the researcher offered the children cookies instead of stickers. The results remained largely the same as the findings in the first study. While 10% of children waited for a second cookie and 13% waited for three additional cookies, 43% of children waited for a second cookie when they had to ring a bell to alert the researchers that they wanted to leave the room.

Finally, the researchers simplified the experiment by removing the bell from the equation. Instead, the children were informed that the researcher would be waiting for them outside the door to walk them back to their classroom when they were ready to leave. In this condition, 50% of children waited for the box to release a second sticker.

This research presents a new way to think about how children respond to potential rewards, she added.

“When young children respond to such offers, they do not necessarily care about the reward itself,” Heyman said. “Instead, they may be responding to the offer as a social signal about what is valued and be motivated by the desire for social approval.”

In future work, Heyman would like to investigate how these findings may generalize to other populations, as well as the specific inferences children make when they are offered incentives. For example, when children are offered a reward for eating a new food, they might infer that it doesn’t taste good. That could influence their behavior in unexpected ways, she suggested.

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