

The Marshmallow Experiment

Original research done at Sandford in the 1960s and 1970s. 3-4 year old children were placed in a room alone at a table and given one marshmallow – and were told if they waited 15 minutes they'd be given a second marshmallow, and they could eat it now. The purpose was to measure the capacity for delayed gratification. Here are some links of more recent instances of the same experiment.

<https://www.youtube.com/watch?v=Yo4WF3cSd9Q>

Some children lasted mere seconds before eating, others tried to wait – showing many different strategies designed to keep themselves from eating. Covering the eyes, pretending to sleep, walking around the room, talking to themselves. Some licked, some sniffed. Year later the researchers revisited the original children – now grown and found correlations between the degree of self-regulation of the children and things like SAT scores, level of education, and body mass index. As a result they postulated that children with a better ability to self-regulate had a greater likelihood of success in later life. Was this all too simple?

In 2011, the University of Rochester set up a study to see the extent to which a rational thought process was involved in self regulation, in an effort to understand why some children do better on self regulation than others.

The topic was an art project and the children were placed into one of two groups – a reliable situation and an unreliable one. The children were told they had a choice – either to start the project using the materials to hand (a few old worn out crayons in a jar, or they could wait for the teacher to bring a big supply of art materials.

All the children decided to wait. A few moments later the 'reliable' teacher came into the room with the supply of materials as promised, in the 'unreliable' situation she returned to say she was sorry but didn't have the materials after all. In the footage the response of the children was clearly evident, with profound disappointment for the latter group. Those who didn't get the supplies as was promised were less likely to engage enthusiastically in the art project.

The researchers were actually interested in the relationship between marshmallows and self-regulation. Telling the children it was snack time, and were each given a marshmallow. Like the original experiment they were told, if they waited for the teacher to return they would get a second marshmallow. All the children in both groups ate their marshmallow before the 15 minutes was up, however, those in the reliable group were able to delay their gratification 4 times as long (12 minutes on average) than the children in the unreliable group, who lasted 3 minutes on average. Demonstrating that the quality of the children's self regulation was related to the environment and experience.



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Conclusions :

When placed in a context where long term gain is rare, it makes sense to maximise the reward in the here and now. The children figured out it wasn't worth the emotional labour to delay gratification, if they don't trust it will actually come. Those in the reliable group (even though they did all eat the sweets) had a greater level of trust that it was worth the wait.

How does all this relate to motivation? In the workplace people are constantly appraising how reliable or unreliable, safe or threatening, trustworthy or untrustworthy the environment is. We explored this somewhat in the module on trust. Thus, an individual is much more likely to exhibit high quality self-regulation when the setting is reliable, safe and trustworthy. And even the very best of workplaces or other contexts can have disappointments, promises broken, bad feelings, and other negative attributes. So, if as people we cannot 100% count on a perfect context, the other option is to learn greater self regulation.