

**What Waiting for a Second  
Marshmallow Doesn't Prove  
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## S'More Misrepresentation of Research What Waiting for a Second Marshmallow Doesn't Prove

By Alfie Kohn

[This article, which was published in Education Week under the title "The Deferred Gratification Myth," is adapted from *The Myth of the Spoiled Child*, which contains references to the relevant research.]

Traditional schooling isn't working for an awful lot of students. We can respond to that fact either by trying to fix the system (so it meets kids' needs better) or by trying to fix the kids (so they're more compliant and successful at whatever they're told to do).

The current enthusiasm for teaching self-discipline and persistence represents a vote for the second option. The more effort we devote to getting students to "[pay] attention to a teacher rather than daydreaming" and persist "on long-term assignments despite boredom and frustration" (in the words of "grit" proponent Angela Duckworth), the less likely we are to ask whether those assignments are actually worth doing or to rethink an arrangement where teachers mostly talk and students mostly listen.

Underlying self-discipline and grit is the idea of deferring gratification – for example, by putting off doing what you enjoy until you finish your "work." The appeal to many educators of transforming kids from lazy grasshoppers to hard-working ants explains the fresh wave of interest in a series of experiments conducted back in the 1960s known as the marshmallow studies.

By now you've probably heard the summary: At the Stanford University laboratory of a psychologist named Walter Mischel, preschool-age children were left alone in a room after having been told they could get a small treat (a marshmallow or pretzel) by ringing a bell at any time to summon the experimenter. But if they held out until he returned on his own, they could have a bigger treat (two marshmallows or pretzels). The outcome, as it's usually represented, is that the children who were able to wait for an extra treat scored better on measures of cognitive and social skills many years later and had higher SAT scores. Thus, if we teach kids to put off the payoff as long as possible, they'll be more successful.

But in several ways that simplistic conclusion misrepresents what the research actually found.

1. What mostly interested Mischel wasn't *whether* children could wait for a bigger treat – which, by the way, most of them could. It wasn't even whether waiters fared better in life than non-waiters. Rather, the central question was *how* children go about trying to wait and which strategies help. It turned out that kids waited longer when they were distracted by a toy. What worked best wasn't (in his words) "self-denial and grim determination" but doing something enjoyable while waiting so that *self-control wasn't needed at all*. Mischel and his colleagues systematically varied the details of the situation to see if this affected children's willingness to wait.

These changes included telling them about (vs. showing them) the marshmallow, encouraging them to think about its shape (vs. its taste), and suggesting a distraction strategy (vs. having kids come up with their own). Sure enough, such factors were more important for predicting the outcome than any trait the child possessed. This, of course, is precisely the opposite of the usual message that (a) self-control is a matter of individual character, which (b) we ought to help children develop.

2. Even to the extent that Mischel looked at characteristics of individual children in addition to situational details, when those children were tracked down ten years later, those who had been more likely to wait didn't have any more self-control or willpower than the others.

This makes sense because Mischel's primary focus was on strategies for how to think about (or stop thinking about) something attractive – and how those strategies may be related to other skills down the line. Those later outcomes weren't associated with the ability to defer gratification, per se, but only with the ability to distract oneself when distractions weren't provided by the experimenters. What's more, the ability to invent a distraction turned out to be correlated with plain old intelligence – a very interesting finding because other writers (like Duckworth) have argued that intelligence and self-discipline are totally different things and that we should train children to acquire the latter.

It shouldn't be surprising that kids' capacity to figure out a way to think about something other than the food was associated with their SAT scores. It's not that willpower makes kids successful; it's that the same loose cluster of mental proficiencies that helped them with distraction when they were young also helped them score well on a test of reasoning when they were older. In fact, when the researchers held those scores constant, most of the *other* long-term benefits associated with their marshmallow-related behavior disappeared. (ADDENDUM 2018: A replication study found that children's wait time at age 4 predicted next to nothing at age 15.)

3. Almost everyone who cites these experiments assumes that it's better to wait for two marshmallows – that is, to defer gratification. But is that always true? Mischel, for one, didn't think so. "In a given situation," he and his colleagues wrote, "postponing gratification may or may not be a wise or adaptive choice." Sometimes a marshmallow in the hand is better than two in the bush. It's true, for example, that if you spend too much of your money when you're young, you may regret it when you're old. But how much should you deprive yourself – and perhaps your children – in order to accumulate savings for retirement? (As one writer reminded us, "Those who cannot stop planning for the future are doomed to labor for a life they will never fully live.")

Moreover, while some tasks favor waiting, others favor taking what you can right now. In one experiment, researchers fiddled with the algorithm that determined how points were earned in a simulation game and then tracked the interaction between that change and the players' personalities. "Impulsivity," they concluded, "is not a purely maladaptive trait but one whose consequences hinge on the structure of the decision-making environment."

And here's another twist: The inclination to wait depends on one's experiences. "For a child accustomed to stolen possessions and broken promises, the only guaranteed treats are the ones you have already swallowed," remarked a group of social scientists at the University of Rochester. Last year they conducted an experiment in which children were encouraged to wait for "a brand-new set of exciting art supplies" rather than using the well-worn crayons and dinky little stickers that were already available. After a few minutes, the adult returned. Half the kids received the promised, far superior materials. But the other half got only an apology: "I'm sorry, but I made a mistake. We don't have any other art supplies after all."

Then it was time for the marshmallow challenge. And how long did the children wait for two to appear before they gave up and ate the one sitting in front of them? Well, it depended on what had happened earlier. Those for whom the adult had proved unreliable (by failing to deliver the promised art supplies) waited only about three minutes. But those who had learned that good things do come to those who wait were willing to hold off, on average, for a remarkable twelve minutes.

Thus, the decision about whether to defer gratification may tell us what the child has already learned about whether waiting is likely to be worth it. If her experience is that it isn't, then taking whatever is available at the moment is a perfectly reasonable choice. Notice that this finding also challenges the conclusion that the capacity to defer gratification produces various later-life benefits.

Self-restraint can be seen as a result of earlier experiences, not an explanation for how well one fares later.

The Rochester study clarifies what may have been going on in Mischel's original experiments, where there was no effort to learn about the children's lives before they walked into his lab. But even on its own Mischel's work doesn't support the case for will-power and self-denial that traditionalists have tried to make. Waiting for a bigger treat doesn't always make sense. And even when it does, the question is What changes in the environment can facilitate that choice such that self-discipline becomes less important?

Perhaps the broader message for educators is this: Focus less on "fixing the kids" and more on improving what and how they're taught.

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