

do...I prefer people who can help me in some way or another, and most of my friendships are accidental." Williams himself, of course, was not immune from this destructive streak. He drank heavily, and eventually died alone on a hotel-room floor, next to an empty vial of pills and a couple of wine-bottle corks.

Contemporary, particularly young, theatre-goers accustomed to both open acceptance of homosexuality and frank depictions of sex in all its permutations on stage and screen, may find Williams's treatment of desire overwrought or archaic. But for his time he was radical. He moved the social realism of Eugene O'Neill and Anton Chekhov inward, to the human heart (and loins). If by the end of his life his work seemed rather old-fashioned, it was he who had made the fashion. ■

A memoir of gratification

Desire delayed

The Marshmallow Test: Mastering

Self-Control. By Walter Mischel. *Little, Brown & Company*; 326 pages; \$29. Bantam; £20

IN THE 1960s Walter Mischel, then an up-and-coming researcher in psychology, devised a simple but ingenious experiment to study delayed gratification. It is now famously known as the marshmallow test. In a sparsely furnished room Mr Mischel presented a group of children aged four and five from Stanford University's Bing Nursery School with a difficult challenge. They were left alone with a treat of their choosing, such as a marshmallow or a biscuit. They could help themselves at once, or receive a larger reward (two marshmallows or biscuits) if they managed to wait for up to 20 minutes.

Mr Mischel, now of Columbia University, reveals in his first non-academic book, "The Marshmallow Test", that the purpose of the study was to look at the methods children use to delay gratification—not to measure how well they did it. He admits now that he did not expect that the time they managed to wait "would predict anything worth knowing about their later years". But after his daughters, who had attended the Bing Nursery, told him years later about how their friends from preschool were doing, Mr Mischel noticed that those who did well socially and academically tended to be those who had waited longest in the test.

He went on to survey many of the 550-or-so children who were tested between 1968 and 1974. To his surprise, the longer the five-year-olds had waited for their marshmallows, the higher they scored on

standardised tests for college admissions a decade later. The patient children had a lower body-mass index when they grew up, greater psychological well-being, and were less likely to misuse drugs than those who had quickly gobbled up the treat.

Mr Mischel has published more than 200 academic papers, and at the age of 84 is still an active researcher. His book is best read as a memoir of gratification and as a tribute to the many researchers who have explored the field of delayed gratification that he once pioneered. His aim in his new book is to tell the reader about the latest "in the marshmallow work".

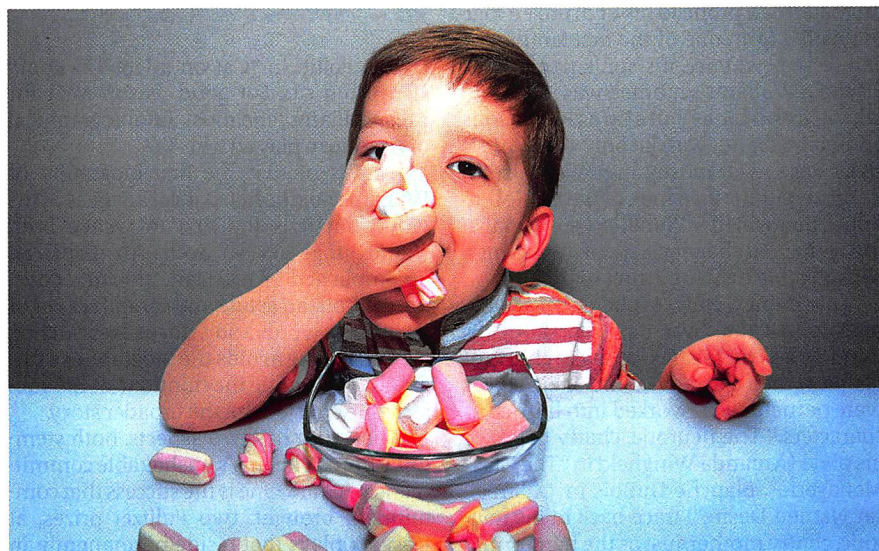
The key to understanding the test lies in looking at what Mr Mischel calls two systems in the brain: a "hot" system that is simple, reflexive and emotional and a "cool" one that is rational, reflective and strategic. (Those familiar with Daniel Kahneman's "Thinking Fast and Slow" will quickly get the distinction between the two systems; one of Mr Mischel's chapters is even entitled "Thinking Hot and Cool".) Using the cool system helps children to wait for the extra marshmallow, and brain scans show that this system is more likely to be activated when people think about the distant future. Shifting from thinking about the "now" to pondering about the "later" can improve self-control. The author even tried out the experiment on himself; he overcame his own smoking addiction in part by focusing on the long-term consequences and by reminding himself of the cancer risks.

Mr Mischel goes to some lengths to put an end to the notion that willpower is an innate trait that you either have or don't have. Citing recent research, he writes that "the genome can be as malleable as we once believed only environments could be." He uses the recorded upward trend in IQ scores in developed countries as an example. There have been big increases in

scores on intelligence tests from one generation to the next, which is too fast a progression to be caused by evolution or genetic changes. Self-control, like smartness, may be affected by genes. But nature sets only the direction—not the destiny.

The marshmallow test is often thought of simply as a measure of a child's self-control. But the author shows that there is much more to it. One of Mr Mischel's early studies in Trinidad suggests that a preference for delayed rewards also can be a matter of trust. Children who grow up with absent parents, Mr Mischel surmised, may be less likely to believe that they will actually get the promised delayed reward from the stranger who is carrying out the experiment. Indeed, he found that children with absent fathers, in particular, were prone to opt for immediate rewards. He believes the test also shows how the ability to postpone rewards is closely related to vigorously pursuing goals and to holding positive expectations. These traits, in turn, help explain why waiting for marshmallows at the age of five has such a strong relationship to outcomes in adult life.

Mr Mischel is so keen on his test that he may occasionally see too much in it. His claim that postponing rewards may be causally related to better close relationships, for example, may seem a little far-fetched. On the whole, though, "The Marshmallow Test" is a fascinating read. By making good use of a 50-year-old study that still has plenty of life in it, the author manages to avoid the trap of repeating past work that is no longer relevant while also making his readers interested in the future. In crisp, clear English he explains the latest research and helps readers understand better the surprising results of one of the most well-known psychological experiments of all time. That alone is a considerable achievement—and makes the book well worth the wait. ■



Stuffing your face means more than you'd think