

CHAPTER 1

WHAT IS WILLPOWER?

How I spend my days

“I’m exactly the type of person I wanted to be.” My favorite film director, Clint Eastwood, once said something cool like that.

There’s no way I could ever say that. But I am spending the types of days that I used to want to spend. I’d like to give you a look at an average day in my life.

MY SCHEDULE ON A TYPICAL DAY

5 a.m.	Get up > do some yoga.
5:30 a.m.	Meditate.
6:00 a.m.	Work on my writing or my blog.
7 a.m.	Clean house > take a shower > do the laundry > have breakfast > prepare my lunch.
8 a.m.	Write in my diary > practice English > read the news or social media.
9:10 a.m.	Take a power nap (a strategic way to go back to bed).
9:30 a.m.	“Commute” to the library.
11:30 a.m.	Eat lunch.
2:30 p.m.	Leave the library.
3 p.m.	Take a power nap.
3:30 p.m.	Go to the gym.
5:30 p.m.	Shop for groceries at the supermarket, return emails and check social media.
6 p.m.	Watch a movie after dinner.
9 p.m.	Bring out my yoga mat and stretch.

9:30
p.m.

Go to bed.

My schedule is basically the same each day, and it doesn't change whether it's the weekend or a holiday. My off days are when I have special plans like seeing friends, going to events, or traveling. I take about a day off each week. I'm now thirty-eight and single. I live alone, and I write as an occupation.

"Anyone can do that if they're single and they have freedom as a freelancer," you may think. But things were completely different for me when I first obtained the time and freedom that I had dreamed of.

Enjoying retirement for a while

All of humanity's problems stem from man's inability to sit quietly in a room alone.

—Blaise Pascal

In 2016, I left the publishing company where I worked and began writing freelance. As I had just received a bonus I wouldn't have to worry about money for a while. No one would get mad at me no matter how much I slept each day, and I was free to go out and frolic during business hours. I had spent twelve busy years working as an editor. It wouldn't hurt to take it easy for a while. That's what I thought.

So, I took up diving, surfing, marathon running, taking on many challenges that had been on my bucket list. There are many new skills I've learned, too: driving a car, growing vegetables, and DIY work. I moved from Tokyo to Kyoto, and enjoyed visiting places I didn't know in the Kansai area.

This may appear to be an ideal situation. Many people would probably like to spend their time like this if they won the lottery or after they retire: not doing things you don't like doing, and doing everything you've ever wanted to do.

We're happier if we don't have too much free time

When I was working as an editor, it had been a great joy to read books during the short breaks I had after eating lunch. I thought I'd have more time to enjoy myself if I quit work, but in reality, it wasn't like that. You don't tend to read when you have the whole day to read.

People often imagine that they "could do something if they had the time," but sometimes you can't if you have *too much* time on your hands.

It was also tough to find something to do each day. I'd come up with a chore and take care of it, and I'd find a place that looked interesting to visit and go there, but I would eventually get bored.

I ended up daydreaming more often. I would throw my abdominal release ball at the ceiling and catch it as it came back down. This was the only thing I had lately gotten good at doing. One time, I went to a nearby hot spring spa in the neighborhood in the afternoon—but then I realized that for some reason, I wasn't happy at all. It was no wonder—I had no stress or fatigue that needed to be healed.

According to a study conducted by the Japanese government, the level of our happiness is said to decrease when we have more than seven free hours in a day. I really agree. I think the conditions for happiness are the luxury of time and the freedom to do what you want. But being totally immersed in time and freedom isn't going to make you happy, either.

What awaited me after I escaped from a lack of freedom was the pain of freedom. Gandhi once said, "Indolence is a delightful but distressing state; we must be doing something to be happy." I feel the same way. There was delight, but it was very distressing. The vegetables I started planting wouldn't grow at all. I looked at those vegetables and thought they were kind of like me. This wasn't the way things were supposed to be.

People often say, "Let's just do the things that we like to do." That's a good idea. But it's completely different from "doing *only* the things that we like to do."

A safety net called minimalism

What saved me was the fact that I was practicing a minimalist lifestyle. I had few things at home, and I had a habit of tidying up and cleaning house. There's a connection between the state of your mind and the state of your home. I think the fact that my place was always clean supported me like a safety net when I fell into depression. I'm really glad I reduced my possessions.

It was also good that I had already stopped drinking. If I hadn't, I think I would have started drinking in broad daylight to distract myself. What had been missing in me was a sense of achievement in my everyday life, feeling a sense of self-development. I should have known deep down. Playing hooky and staying away from school might make you happy if you can get away with it, but the pleasure will eventually wear off. More than once I felt tormented after thinking up some excuse and writing it on our schedule board and leaving the office.

I feel a strong sense of fate in the fact that I had chosen "habits" as my next theme to write about after minimalism. Without this theme, my mind might have gone back to my sloppy pre-minimalist days.

Of course, with my current habits, I take advantage of my position as a freelancer, and they wouldn't be possible if I had young children. But you can't acquire habits just because you have lots of time and energy, and in fact these things can sometimes turn out to be obstacles. I believe that the efforts I made and the things I learned in order to acquire habits will be useful in some way even to people who are busy with their work or raising children.

Why do New Year's resolutions end up being failures?

All of mine have been failures.

- Getting up early in the morning and living an ordered life
- Maintaining a clean place to live
- Not overeating or drinking excessively and maintaining my proper weight
- Exercising regularly

- Getting started on my studies and my work instead of postponing things

Sleep, cleaning house, eating, exercising, studying, and work. The habits that we want to acquire are mostly the same for everyone. The problem lies in identifying why it's so tough to accomplish them.

I'm no exception. I've always continued to set objectives for the New Year. In one study, the probability of these targets being accomplished by the end of the year was a mere 8 percent. My objectives were always among the 92 percent that weren't fulfilled, and my "New Year's resolutions" never changed.

I always thought that it was because I had "weak willpower." "I have a weak will." Everyone says that when they can't accomplish something. It's a way of thinking that there are people in this world who have a strong will, and those who have a weak will.

It's this "willpower" that I'd like to consider. Although it might get a little complicated, I'd like to give detailed consideration to this willpower that everyone mentions, without really knowing too much about what it is and how it works.

Why is it so tough to acquire habits in the first place? It's because there are contradictions between the "rewards" that we see in front of us and the "rewards" in the future.

Everything is based on "reward" and "punishment"

As the ideas of "reward" and "punishment" are indispensable themes for habits, I'd like to sort through them in advance.

- Eating good food
- Getting plenty of sleep
- Earning money
- Interacting with your favorite people and peers
- Getting "likes" on social media

All of these are rewards. You can simply consider them “things that make you feel good.”

We can consider that all human actions are taken looking for some type of reward. The problem is that there are sometimes contradictions.

It’s a reward to eat the sweets set in front of you. It’s also a reward to make an effort not to eat them, and to get healthy or enhance your figure instead. We can say that gaining weight or getting sick as a result of eating too much are punishments. It means that if we keep enjoying the rewards in front of us, we’ll not only be unable to obtain rewards in the future, but will also end up getting punished someday.

We know the types of actions we’re supposed to take:

- Losing weight by making an effort not to eat
- Exercising instead of lying around
- Getting up early in the morning instead of staying up late engaging in some pastime
- Getting to our work or studies instead of playing games or using our smartphones

But it isn’t all that easy. We know we’ll be able to get ready to go out in the morning at a leisurely pace and board the train before rush hour (a reward) if we get up early, but we can’t overcome the temptation of staying in bed for five more minutes (a reward), and keep hitting the snooze button. Even when we know that “This is booze that will give me a hangover!” (a punishment), we can’t stop drinking from the bottle of wine in our hand (a reward). We’re aware that waiting to get started on our work or our homework will result in getting frantic (a punishment) later on, yet we can’t help getting wrapped up in a game or our smartphone (a reward).

The reason why we can’t acquire good habits is because we often surrender to the reward in front of us. People who can overcome the rewards flashing in front of their eyes in order to win rewards in the future or avoid punishment are sometimes called “people with strong willpower.”

An apple today or two apples tomorrow?

What if Billy came home from school one day and his mom said to him:

“Hi Billy. You can have a cake a year from now if you do your homework before you go out to play.”

Wouldn't Billy—or anyone else for that matter—head straight to the field where his friend is waiting for him?

It isn't easy for people to imagine future rewards. So, they tend to see the value of, and choose, rewards that are in front of them instead of those that await them in the future. It was apples that Richard Thaler, a theorist in behavioral economics, used in an experiment to consider this issue. I would like you to think about which of the following choices you would make.

Question 1

Would you rather:

- A. Receive an apple a year from today
- B. Receive two apples a year and a day from today

The majority of people who were asked this chose B. They will have had to wait a whole year; another day won't make them suffer. They chose to obtain two apples. However ...

Question 2

Would you rather:

- A. Receive an apple today
- B. Receive two apples tomorrow

In this case, many people, even those who chose B as their previous choice, choose A. The necessary action of waiting an additional day to receive an additional apple, and the reward for waiting, are exactly the same, but for some reason, the responses change.

Some people may not like apples; not everyone is as attracted to apples as Adam was. So an experiment was also conducted using money, which everyone should like.

Question 3

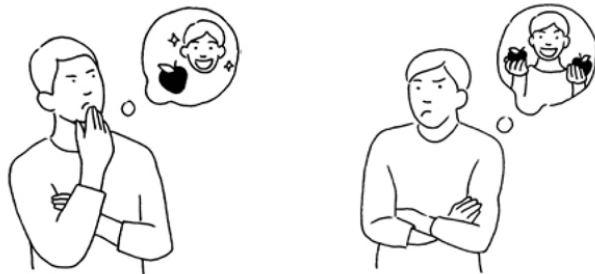
Would you rather:

- A. Receive cash on Friday (for example, receive \$10)
- B. Receive 25 percent more cash on Monday (i.e., three days later) (for example, receive \$12.50)

The interesting thing is that when asked before Friday, most people would rationally choose B, but when they're asked on Friday, 60 percent change their minds and choose the lesser amount in front of them. Maybe you'll choose B when you're calm-headed, like when you're reading this book. But what if a ten-dollar bill is being waved in front of you?

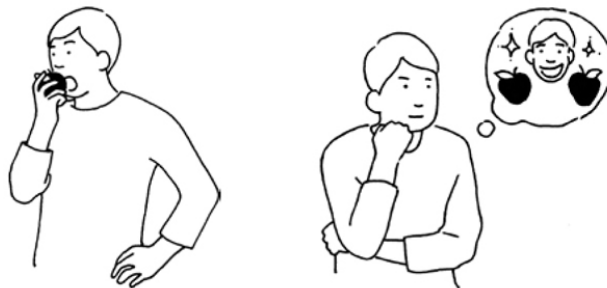
Hyperbolic discounting

A Question 1 **B**



Receive an apple a year from today Receive two apples a year and a day from today

A Question 2 **B**



Receive an apple today Receive two apples tomorrow

It's hard to visualize an apple that you'll be receiving a year from now, and it doesn't really seem to concern you, so you choose the response with the extra day of waiting. The more distant a reward may be in the future, the less value it seems to have. This doesn't only apply to rewards. The same thing can be said for punishment. You'll be pressured right before your exams if you don't start studying early, but at that earlier point, you can't imagine how you'll feel in the future.

You might develop lung cancer if you smoke, and you might become diabetic if you continue to eat sweets, but punishment in the future tends to be looked at lightly. It means there's greater value in the nicotine or sugars that are now in front of you.

A pressing desire to have the reward in front of us

In these ways, people tend to overestimate the rewards in front of them and underestimate the rewards and punishments that exist in the future. In behavioral economics, this is called "hyperbolic discounting." People can't rationally evaluate value like a computer. We want to eat an apple that's set in front of us right now, and we want \$10 now rather than \$12.50 three days from now. We can't wait.

And when the reward is a great distance away, we can't get in the mood to do something. It isn't as if refraining from eating the tasty dish in front of us or running today will allow us to lose a couple of pounds tomorrow. It might take a month or three months to lose those pounds.

Hyperbolic discounting can explain why it's hard for us to acquire good habits like dieting, exercising, living an orderly life, or getting right to work.

Why can't we wait for a reward in the future?

Why is it, then, that people follow an annoying practice like hyperbolic discounting? It's because there still isn't a big difference between the workings of people who lived in ancient times, hunting and gathering, and people who live today. Human civilization is only around five thousand

years old, and that's only 0.2 percent of the history of humans. So, 99 percent of human development in body and mind has been in service of hunting and gathering. It takes tens of thousands of years for a species to evolve. We're still unconsciously deploying strategies that were effective during ancient times.

What was necessary to live at that time had to have been, above all, to obtain food. When you didn't know when the next time would be that you would have access to food, it must have been an effective strategy to eat food as soon as you found it.

The situation is completely different today. In an advanced country like Japan, most people don't have trouble feeding themselves. There's more than enough delicious, high-calorie food at supermarkets and convenience stores. What's necessary now is to avoid that type of temptation as much as possible and to exercise in order to use up your extra calories. That's become a new secret for staying healthy and living a long life.

What should really be the most efficient way to live well is to take in only the necessary amount of calories, and then sleep like a cat. But unlike cats, humans have created a society where they can't survive by simply sleeping all the time. The work that's done by each human being has become highly sophisticated, which has made it necessary to endure boring studies and to take difficult exams to receive credentials, which give us an edge in our work and allow us to make large sums of money.

Men who lived during a period when they could be attacked and killed by a carnivore the next day probably didn't have the time to enjoy romance or live it up as a bachelor. I'm sure they would have gone straight to sex and producing offspring when they found a woman who was willing to accept them. But men like that probably wouldn't be accepted today.

The rules of the game played by society have changed to not jumping to grab the rewards in front of you but instead obtaining the rewards further on down the line, yet the nature of the players hasn't changed. That's why annoying phenomena like hyperbolic discounting occur.

Children who are somehow able to wait for marshmallows

Still, there are some people who can quickly adapt to the rules of such new games. They're the ones with the "strong willpower" who can maintain good habits and make efforts to achieve their objectives. What's the difference between people who give in to the rewards in front of them and those who can wait for rewards in the future?

An answer lies in the famous "marshmallow test" conducted by psychologist Walter Mischel concerning this issue. I would like you to pay attention to this marshmallow test, as it will be one of the central themes in this book.

This test was conducted on children aged four to five at Stanford University's Bing Nursery School during the 1960s. First, children chose what they wanted to eat the most from among snacks like marshmallows, cookies, and pretzels. One of those snacks (I'll use marshmallows here as an example) is placed on the table where a child is seated. He or she is then prompted to choose from the following. It's really a simple experiment.

- A. Eat the marshmallow in front of them right now.
- B. Do not eat the marshmallow and wait for a maximum of twenty minutes for the researcher to come back.
Receive two marshmallows if they can wait.

A bell is placed near the marshmallow. The children can ring it and eat the marshmallow if they can't wait. The children will receive two marshmallows as a reward if they can refrain from leaving the table or eating the marshmallow before the researcher comes back.

What's important about this test is that it encapsulates the skill to forgo the temptation of the reward in front of them to obtain a bigger reward in the future, which is necessary for forming good habits.

The children sniff at the marshmallow dreamily, pretend to bite it, or lick the powder from the marshmallow on their hands as they wait. The majority of children who continued to stare at the marshmallows failed to not eat it. Once they allowed themselves to take just a bite, it wasn't possible for them to stop. They were no different from adults in the way they placed their hands on their cheeks and suffered as they faced the dilemma of not being able to eat when they wanted to.

In the test, the children were able to wait for an average of six minutes, and two-thirds of them were unable to wait and ended up eating the marshmallow in front of them. The remaining third were able to wait, and obtained two marshmallows.

Can we predict the future with the marshmallow test?

This experiment starts to get interesting from here. A surprising result of long-term follow-up studies on the children who took the marshmallow test was that the longer they were able to wait when they took the test as preschoolers, the better they did on their SATs.

Children who had been able to wait for fifteen minutes scored better than those who failed in thirty seconds by 210 points.

Children who had been able to wait for their marshmallows were liked more by their peers and their teachers and obtained higher-paying jobs. They didn't become obese when they became middle-aged, their body mass index (BMI) was lower on average, and their risks of drug abuse were low as well. It's scary that a test taken when people were four or five years old could predict the type of life that they would have in decades to follow.

A study conducted on a thousand New Zealanders from the time of their birth to the age of thirty-two yielded similar results, showing that children who had higher rates of self-control at an early age demonstrated lower rates of obesity as adults, fewer sexually transmitted diseases, and better dental and overall health.

Questions that arise from the marshmallow test

The first thing that comes to mind when you look at these results is this: "Okay, okay. So it's decided from birth whether a child has the capacity to obtain rewards in the future without grabbing the rewards in front of them. I now know why I can't acquire good habits. Fine." And you give up. But in contrast to the clear results, I think it's an experiment that generates various questions. Here are two that I came up with:

1. The children who were able to wait used something like “willpower” to forgo the temptation of the marshmallows in front of them. How does such willpower work, if it exists? (If it’s true that good habits are acquired because of “strong willpower” like everyone says, then an understanding of willpower should deepen our understanding of habits.)
2. Is that “willpower” already determined at the age of four or five? Isn’t it possible to acquire willpower later on?

The radish test: Will our willpower be reduced if we use it?

First, I’d like to think about question 1. How does this “willpower” that some of the children seem to have used to forgo the temptation in front of them, work?

The “radish test” is the most famous test in considering the issue of “willpower.” It’s an experiment that psychologist Roy Baumeister conducted using chocolate chip cookies and radishes.

A group of hungry college students were made to sit at a table set with cookies and a bowl of radishes. The room was filled with the sweet smell of fresh-baked cookies.

The students were divided into three groups:

- A. Students who were allowed to eat the chocolate chip cookies
- B. Students who were only allowed to eat the raw radishes
- C. Students who were not allowed to eat anything and had to remain hungry

The poor subjects in group B were told that because the cookies were being used in the next experiment, they could only eat the radishes. Although none ate the cookies, it was clear that they were attracted to the cookies as they sniffed at their aroma or picked them up and accidentally dropped them on the floor.

Next, the students were instructed to solve a puzzle in a separate room. Cruelly, these puzzles were set up so that they couldn't be solved. The students were being tested not on their intelligence or ability to solve puzzles, but in order to see how long it would take them to give up on the tough challenge.

The students in group A who ate the cookies and those in group C who didn't eat anything were able to work on the puzzles for an average of twenty minutes. The students in group B were only able to work on them for an average of eight minutes before giving up.

For a long time, this experiment was interpreted as follows: The students in the group that had only been able to eat radishes had already used up a considerable amount of their willpower by refraining from eating the cookies, and that was why they gave up the difficult puzzle that required willpower. In other words, willpower was like a limited resource, and the more it was used, the less of it there was.

It's easy to imagine from this example that willpower is limited. Perhaps we can imagine it as spiritual strength that has limitations, something like the MPs (magic points) that are required to use magic in an RPG (role-playing game). If you aren't familiar with RPGs, you can simply think of it as gasoline in the fuel tank of a car. When you drive your car, the amount of gasoline in the fuel tank decreases.

This seems to perfectly explain the actions that we can't help taking in our daily lives.

If we continue to work overtime at work, we stop by a convenience store on our way home and buy sweets or drink lots of alcohol. In that state, we get short-tempered over the smallest actions by someone else.

In one experiment, students who were stressed wouldn't exercise, their consumption of cigarettes and junk food increased, and they got lazy in brushing their teeth or shaving. They were also sleeping in more and making impulsive purchases.

These types of things are probably familiar occurrences for anyone. They happen all too often to me, anyway. Willpower really does seem to be something that becomes "reduced." No one can continue to make complicated calculations or engage in difficult creative work over long periods. Energy really does become depleted at some point, and it becomes necessary for us to rest or to get some sleep.

Willpower isn't something that is easily reduced

Given those examples, some people thought, "Isn't willpower simply a matter of your blood sugar level?" This hypothesis was checked using "real lemonade" sweetened with sugar and "fake lemonade" made with artificial sweetener. The blood sugar level didn't increase for the subjects who were made to drink fake lemonade, and they didn't continue the test. Everyone knows that you won't feel like doing anything if you're too hungry.

Is it okay to consider willpower simply as an issue of blood sugar levels and energy being reduced when you use it? I don't think so, because there are too many things that can't be explained with these experiments alone.

For example, there are several entries in my diary of "Eating ramen noodles > ended up eating potato chips, too > also ate ice cream to top it off." It's like, I've already eaten ramen noodles, so it doesn't make any difference whether I go ahead and eat potato chips and ice cream, too! And that's how we eat and drink too much.

Since I didn't force myself to refrain from eating ramen or potato chips, I shouldn't have had to use my willpower, and my blood sugar level should have fully recovered. Why hadn't I been able to use that willpower that I preserved and recovered to stay away from that ice cream?

We should be hungry and our willpower should have recovered after we've exercised at the gym. But even if I stop by a supermarket on the way home, I don't feel like reaching for unhealthy foods. On the other hand, it's when I've been lazing around thinking that I should go to the gym but don't manage to do so that I reach for those sinful foods.

There are types of willpower that will be reduced by "not taking action"

If willpower is like energy that's reduced when you use it, "preserving" it as much as possible should be an effective strategy. It's like Kaede Rukawa in *Slam Dunk* forfeiting the first half of a basketball game and concentrating in the second half.

But that would mean that you can use your willpower more effectively by sleeping in in the morning and always going to meetings at the last minute. Is there anyone who would see you slacking off in the morning who'd think, "Has he possibly ... forfeited the morning?" People who slack off in the morning also tend to slack off in the afternoon.

Unless I get up properly in the morning, I am often unable to focus on my work after that or on my workout to follow. I have regrets about not doing what I should have done and sometimes can't proceed to whatever it is that I'm supposed to do next. In other words, willpower can be reduced not only by doing something, but also by "not doing" something.

Willpower is affected by emotions

I believe it's emotions that we lose out on by "not doing something." Our blood sugar level will recover if we eat or drink too much, but the emotion of regretting will also be generated. It's the same when we're unable to acquire a habit that we've decided to acquire; we'll develop a lack of confidence in ourselves.

Various puzzles can be solved if we consider our emotions as a key factor. Towards the end of a marathon, we sometimes high-five the people who line the streets to cheer us on. Our knees hurt and we may feel that we've reached our limit, but exchanging a high-five with an excited child will give us the will to go on just a little longer. It's the recovery of our willpower.

There are variations of the lemonade test I mentioned earlier that go like this: Test subjects' willpower recovered right away when instead of drinking "real lemonade," they were made to spit it out right away. The lemonade that they only had in their mouths was probably something like a high-five.

It isn't as if it replenished their energy or sugar. It just seemed like a little treat that made them feel happy.

Uncertainty will reduce our willpower

The emotion of joy that's generated when we put lemonade in our mouth or do a high-five will allow us to recover our willpower. Conversely, uncertainty and a lack of confidence are negative emotions that exhaust our willpower. And we fall into a vicious cycle of reduced willpower that leads to an inability to tackle the next challenge.

There was an experiment using serotonin that supports this. Serotonin balances our sympathetic and parasympathetic nerves and stabilizes our mind. People feel uncertainty if these aren't functioning properly. It's known that serotonin is inert in the brains of people who suffer from depression.

In an experiment in which the serotonin level in people's brains was temporarily increased and decreased, the subjects tried to take the rewards in front of them when their serotonin levels were low, though they tried to wait for future rewards when their serotonin levels were high. It means that low serotonin levels, or uncertainties, cause reductions in willpower and inhibit the achievement of good habits.

It isn't willpower, but emotions, that can be spent

When we consider the radish test from such a perspective of emotions, it, too, can be seen in a different light. In front of you are chocolate chip cookies that smell good, but you're told that those aren't something that you can eat. Wouldn't you feel like you aren't being respected and simply become sad? Hadn't it actually been this emotion that was affected in the radish test, and not willpower?

There will be times when you're busy with your work and have simple meals consisting of items that you buy at a convenience store. You should have been able to preserve your willpower as you haven't done any complicated cooking, yet you're somehow left with a sense of melancholy. Isn't it because of the feeling that you aren't treating yourself well, rather than an issue with the flavor of the food? I think women are able to paint their nails and vigorously engage in making themselves beautiful, despite the need for willpower to do these tedious things, because they're boosting their self-esteem by taking care of themselves.

It's the same for me when I make an effort to clean up more often when I'm busy. People's homes get messy when they're busy, and that's because they tend to think, "I don't have the time to do something like that!" But my feeling is that it's actually more effective to tackle your tasks after cleaning house. Our willpower increases because we feel good that we've tidied up.

We can wait for our marshmallows if we're feeling good

The results from the marshmallow test also varied depending on the emotions that people experienced at the time. Children who were told to "think of something fun while they wait" were able to wait three times longer. On the other hand, children who were told to think about something sad could no longer wait at all.

There's also an experiment conducted by psychologist Tim Edwards-Hart. He formed two groups and showed the subjects one of two films before putting them to work:

- A. A happy film
- B. A sad film

Work efficiency improved by more than 20 percent for the subjects in group A. It appears that it isn't just for show that the film company Pixar has a slide at their offices, or that the offices at Google are colorful, full of toys, and almost like a nursery school for adults.

A hot system and a cool system

"Not doing" something will generate negative emotions and uncertainties, and it will also stop people from becoming motivated, which is another ongoing challenge. Why is it that such an awful vicious circle awaits us? In order to understand that, we need to take a look at our brain. The brain is structured like an onion, where the new parts that have been generated

through evolution wrap around the old, primitive parts. And many researchers believe that the brain has two systems:

1. Instinctive. It's reflexive, and the speed is fast; a system that determines things through emotions and intuition. Corresponds to the limbic system, the striatum, and the amygdala: the "old brain."
2. Rational. The response speed is slower, and it won't work unless there's an awareness of something. A system that enables thinking, the imagination, and planning. Corresponds to the frontal lobe, or the "new brain."

While there are various names for these two systems, I would like to follow Walter Mischel from the marshmallow test and call them the following:

(1) the "hot system" and (2) the "cool system"

It's a little complicated, but I think it's easy to understand if you can envision the following types of images:

1. The hot system is hot because you're driven by your emotions or desires ("Yay! A marshmallow! I'm going to eat it!").
2. The cool system calmly analyzes and deals with something ("Okay, so I get a bigger reward later on if I don't eat this ...").

With the hot system and the cool system, one won't function as strongly if the other is activated. They're constantly interacting with and supplementing each other.

Stress can make the hot system can go wild

Our instinctive hot system becomes active when we feel negative or have uncertain thoughts. As I said earlier, a lot of our body systems are holdovers