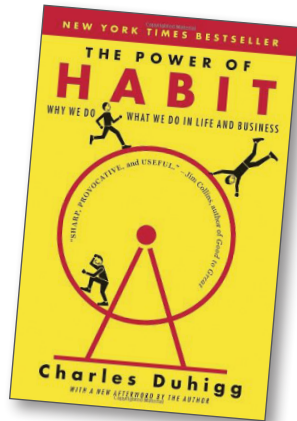


The Power of Habit

Charles Duhigg



The Summary in Brief

In *The Power of Habit*, Charles Duhigg explores our habits – what makes them form and how we can change them. He became interested in the science behind habits as a newspaper reporter in Baghdad. He became aware that the US military focuses on habits to teach soldiers what to do, setting in place behaviors. Duhigg wanted to understand better how habits influence our lives.

The book uses hundreds of studies and interviews with scientists and executives, as well as research performed at many organizations. It examines how individuals, organizations and societies can change habits for improvement. Duhigg also shows how habits can be advantageous or disadvantageous in different circumstances.

This book will help you question what you do and why, looking at the science of habit formation. It will show you how you can change personal, organizational or societal habits for the better – helping you to solve difficult challenges you face, and make better decisions.

In this summary you will learn

- How habits are formed from cues, routines and rewards, and why to change habits you need to change your cravings and routines.
- Why the belief of being able to change is critical in actually being able to change habits.
- What “keystone habits” are and why changing these habits can drive change in other areas/habits.
- Why self-discipline is essential, and what the role of willpower is in habits.

The Author: Charles Duhigg

Charles Duhigg is a journalist working for the New York Times business section. He has won a Pulitzer Prize for his reporting. Prior to the New York Times, Duhigg served as a writer at the Los Angeles Times.

Duhigg has worked at the New York Times since 2006. It was his series called “The iEconomy” that focused on Apple which won him the coveted prize for explanatory reporting. He also worked on other series like “Golden Opportunities”, “The Reckoning” and “Toxic Waters.”

Hailing from New Mexico, Duhigg holds a history degree from Yale University and an MBA from Harvard Business School. He has appeared on NPR, This American Life, Frontline and The News Hour. For more information about Charles Duhigg see: <http://charlesduhigg.com/>

The Power of Habit

Science has shown that by looking at our brains and their neurological activity that once we decide to make a change to what is known as a “keystone habit” we can reprogram other activities in our lives as well. This can actually be seen in the activity in our brains in the area where behavioral inhibition and self-discipline forms. Individuals, but also organizations can transform in this way.

Our lives are a mass of habits (William James, 1892). What we do may seem like thought out decision making but mostly it is habits – a Duke University researcher found that 405 of what we do is habits. Most mean little on their own. Recently, scientists and marketers have begun to understand how habits work to understand how they can change.

Habits are defined as: “the choices that all of us deliberately make at some point and then stop thinking about but continue doing, often every day.” This is a natural result of neurology. What is important to know is that we can change these patterns and rebuild them any way we like. It may not be quick, simple or easy but it can be done.

Part One: The Habits of Individuals

The Habit Loop

Researching habits - Eugene Pauly (EP) transformed much of what we know about habits. He got viral encephalitis, a disease which in rare cases can get to the brain and cause catastrophic damage. EP amazed doctors by making what

appeared to be a full recovery, despite the damage done to his brain. His wife however, was concerned as he did not regain his memory and would do strange things like cook and eat breakfast twice. His wife took him to the University of California, San Diego, where he was introduced to Larry Squire – a professor studying the neuroanatomy of memory. Squire ran tests with EP and found he could remember a lot from the last 3 decades but could not memorize a string of numbers and could not retain new information for more than a minute. EP could not draw a map of his own house, but could apparently remember the process of going to the bathroom without hesitation.

EP and his wife moved house and she set up a routine of walking around the block every day, always on the same route. One day, EP got out on his own. His wife was very worried, but he returned, and then he started doing this more often, but he always came back. It was discovered this had nothing to do with conscious memory. He was absorbing information but not actively remembering it. This led Squire to question how the new habits were forming.

Some labs at MIT helped to understand this. The MIT researchers found that the basal ganglia in the brain were integral to habits. Habit formation relies on the basal ganglia. Habits are stored there even if the rest of the brain is asleep. This works for habits as simple as cleaning your teeth to as complex as backing the car out of the drive, and beyond. Storing habits here makes it easier for the brain to free up capacity for other thoughts.

The three step loop (Cue – Routine – Reward) – our brain uses cues to help us decide which habit to use and how to avoid danger. There is a first cue which is a trigger telling the brain to go into automatic mode and which habit to use. The second is the routine which could be physical, mental or emotional. The third is the reward which helps the brain decide if the loop is worth remembering for future use. We need these loops to avoid being overwhelmed by life. Cues can be anything from a candy bar to an emotion or a person. Rewards include food, drugs, emotional payoffs and pride, among others.

When a habit emerges, the brain stops actively engaging in decision making and diverts attention to other tasks. Once you learn the structure of the habit loop you can control habits more easily. Habits do not really disappear. If we can take control of the loop, we can force bad ways into the background.

Habits can be great but relying on automatic routines always can be dangerous. If cues change even a little bit, habits

can fall apart. We may cling onto habits to the detriment of everything else sometimes. Behavior that starts being once a month can easily creep up to twice a week or more as cues and rewards develop a habit.

The Craving Brain

In the 1900s Claude C Hopkins, a prominent American businessman had created an approach to get consumers to create new habits. The rules he created are still used today. Hopkins was able to turn Americans into non-teeth cleaning people to those that brushed their teeth frequently, and this habit spread around the world. In just 10 years after Hopkins' campaign for Pepsodent half the American population were brushing their teeth. Hopkins achieved this by creating a craving, and it is craving that powers the habit loop. The cue was the "film" felt and seen on teeth, the routine, the brushing of them and the reward, sparkly teeth.

Hopkins had two rules:

- 1) Find a simple and obvious cue**
- 2) Clearly define the rewards**

These rules are still used widely today as the basis of advertising campaigns. However, there is also a third rule that is needed to create a habit, to drive the cue in the first place. This is the anticipation of the reward. Over time brain activity changes, and we start to anticipate rewards and crave them. Once the brain anticipates the reward it is hard to become distracted from it. Therefore, a third rule is:

- 3) There must be a craving developed for the reward.**

New habits are created by putting together a cue, a routine and a reward and then cultivating a craving that drives the habit loop. Neurochemicals in the brain change as cravings become built-in. Wanting can become obsessive. We can learn to ignore the temptations by using mechanisms, but we need to be aware of the anticipation to do so.

The role of cravings - studies have shown that people start exercising sometimes on a whim but they continue doing it due to a craving. For example, one study showed that 92% of people that habitually exercise did it because it made them feel good. They craved the endorphins and neurochemicals their exercise gave them. For others, it was a feeling of achievement (67%). Cravings can be good or bad – such as craving unhealthy food. Cravings can be used for marketing – such as the way Febreze was eventually marketed as a good smell after cleaning – and people started craving the good smell. In the case of Pepsodent (unknowingly to Hopkins) a

craving was created for the cool, tingling sensation people get in their mouths after brushing, which helped them think their teeth were clean.

There are lots of habits that people should be forming such as putting sunscreen on to lower the risk of skin cancer, yet very few people do this every day because no habit has been formed. Cravings have to be developed to achieve this.

The Golden Rule of Habit Change

Tony Dungy became the head coach of the Tampa Bay Buccaneers, which was one of the worst teams in the National Football League. He aimed to change this by changing the players' old habits, rather than by creating new ones. He planned to change the routine part of the habit loop. This led to the development of the Golden Rule of habit change.

The Golden Rule of habit change – this is one of the most powerful tools for creating change. Instead of changing a habit you have to keep the old cue, and deliver the old reward but put in place a new routine. If you do this, you can change the routine and the habit – and this is true of any behavior if cue and reward remain the same. The golden rule of habit change is: **you can't extinguish a bad habit – you can only change it.** This rule has influenced treatments for alcoholism and obesity among other damaging behavior. It led Dungy to success with the Buccaneers.

Alcoholics Anonymous and habits - Bill Wilson built Alcoholics Anonymous on this golden rule. That is because AA focuses on the habits people have around alcohol use. Changing alcoholism shows that any habit can be changed. AA focuses on spirituality instead of alcohol. Alcoholics use the same cues and get the same reward but the routine is different. AA feeds the craving by putting in place a new routine. The rewards are not intoxication, but escape and relaxation, among others. Members have a sponsor who they can talk to, or they can go to a meeting rather than going to a bar. Finding alternative routines to deal with stress is a big part of what AA does. These approaches have since been used for a range of therapies.

Recognizing cues and rewards for change - once people know how their habits work and can recognize the cues and rewards they can much more easily work on changing them. Habit reversal therapy is used for depression, smoking, gambling, anxiety, procrastination and many other issues. One of the challenges in doing this is understanding the cravings driving the habits – we have to look for these to change habits.

Importance of beliefs - Even if habits are changed through routine, things can sometimes go wrong in periods of intense pressure, such as when former alcoholics are faced with a major life crisis. Those that did not fall off the wagon were those that had a belief – in the case of the alcoholics this was the belief in a higher power (sometimes God). In others it was a belief that things would improve. The psychology of the belief is not well understood, but it is understood that when people believe that change is possible, it can be.

Believing change is possible is fundamental to changing a habit, and for many people a group is needed to help that occur. This is partly due to commitment to changing as part of a group.

Part Two: The Habits of Successful Organizations

Keystone Habits

The Aluminum Company of America (Alcoa) had a new CEO in 1987, following various missteps and bad decisions, leading to competitors stealing customers. Paul O'Neill was the man chosen. In his first meeting in front of the press, investors and analysts, instead of talking about the usual profits and ratios, he said the focus was going to be on reducing safety issues and creating a habit of excellence. This, he explained was how the company would be judged. Stock was sold, but this was a bad decision, and within a year the company hit a new high of profitability. When O'Neill left the organization, the net annual income was five times higher than when he started. O'Neill achieved this by attacking a habit and seeing changes moving through the organization.

Keystone habits – O'Neill thought that some habits can start a chain reaction. These are keystone habits – they start a process that in time changes everything. The habits that are most important are those that when they start to change they change other patterns too. They explain why a person might concurrently lose many pounds, become more productive but still find more time for their family. They also explain the situation at Alcoa. For individuals, exercise is a keystone habit that promotes change elsewhere.

Organizational habits – these can be dangerous because they occur without thinking, but where change occurs success can also. When O'Neill went into Alcoa there were lots of problems, but he did not choose quality or efficiency as priorities to solve first. Instead he focused on safety, and zero injuries. Why he chose this was because if you understand why injuries are occurring you can see how the manufacturing

process is going wrong. To do that you had to bring people in who could educate workers about quality and efficiency.

The habit loop at Alcoa – O’Neill introduced a habit loop. The cue was an employee injury. The routine was that any time someone got injured O’Neill had to be informed and present a plan to show how it would not happen again. The reward was promotion for those following the plan. This meant communication in the chain of command had to improve so vice presidents would know about the problem right away and could inform O’Neill quickly too. This led to the building of new corporate habits. Safety went down and at the same time so did costs, while quality and productivity went up. There was less wastage, and higher quality products.

Finding and changing keystone habits – finding these habits is hard. They are known as “**small wins**” and help other habits to succeed by creating new structures and new cultures. It can be hard to cross the gap between understanding the principles and making the change.

Small wins – have big power and set in process other changes, by leveraging tiny advantages into patterns that show people that bigger successes are possible. Small wins are likely to be scattered rather than easily seen to be linked together. They can start to snowball once set in motion. This creates a climate for new ideas. At Alcoa safety habits led to an atmosphere of other behaviors merging – such as the creation of a real time safety data system for sharing suggestions and emailing. This email habit led to the posting and sharing of other information not just safety. This occurred years ahead of the competitors.

Keystone habits even make tough choices like firing people easier, because when the culture is violated they have to go. That is because keystone habits make values clear that help with decision making in times of uncertainty.

The Habit of Success

Travis Leach turned his life around from a situation where his father would overdose from heroin, and both his parents took this drug. He initially at 16, did not do well at work, but by 25, 6 years after joining Starbucks, he manages two branches, oversees 40 employees, and is responsible for \$2 million of revenues each year. He has no debt, is never late and does not get upset at work.

Starbucks training and willpower – Starbucks training changed his life. It teaches how to live, focus get to work on time and manage emotions, and particularly how to have willpower. The company focuses on willpower as a keystone

habit for success. Studies have shown how willpower drives success in students. Self-discipline is more of a predictor of success than IQ for academic performance. When willpower becomes a habit and becomes automatic success can be achieved.

The importance of willpower – at Starbucks willpower is important as if baristas get pulled down by their personal problems at work this impacts on how they treat customers. A focused, disciplined barista however can deliver better service, so the company decided to focus on self-discipline, building willpower in their lives as a habit.

Willpower is a learnable skill – those with willpower can learn habits to delay their cravings and these habits spill over to other areas of life. Willpower is like a muscle which gets tired as it has to work harder, leaving less power for other things. Willpower can also be strengthened as people get better at regulating their impulses.

Self-discipline as an organizational habit - in the case of Starbucks, many people starting there are entry level workers. They may want to do a good job but struggle due to a lack of self-discipline. Making self-discipline an organizational habit was the key to success.

Inflection Points - A study of patients showed that where patients designed willpower habits to help them overcome painful inflection points they were more likely to succeed. Those that do not think about how to deal with pain do not design willpower habits and are less likely to have resolve. Starbucks found that its workers were also more likely to fail when they hit these inflection points – they needed institutional habits to help them gather their self-discipline. The organization developed materials, a routine, to follow with such inflection points like a customer screaming at them or an angry line of people. This was drilled in through role play and training until it became routine. This provided **willpower habit loops**. Employees work their own plans out for responding as well.

The LATTE method – at Starbucks when dealing with an unpleasant situation employees are encouraged to **L**isten to the customer, **A**cknowledge their problems, **T**ake action by solving it, **T**hanking them and **E**xplaining why it occurred. There is also the What What Why system for giving criticism and the Connect, Discover and Respond system that is used for taking orders when things get busy. Employees write out how they will handle inflection points and practice until it is automatic, and **willpower becomes a habit**. Other companies also use willpower and inflection points in this way.

Personal choice – experiments have shown that when people are treated better and are asked to take self-control and can be made to think they are doing it for personal reasons – to help someone else or because they enjoy it – they will have more willpower. If they have no autonomy however, their willpower will fade. This means at work giving people real decision making authority can increase their energy and focus. Starbucks has done this and it has worked.

The Power of a Crisis

Destructive habits – these can come about as a result of thoughtlessness, where the culture is not thought about and where leaders do not offer guidance for change.

An Evolutionary Theory of Economic Change – this was a book published in 1982 which initially only academics paid attention to. It was by Richard Nelson and Sidney Winter, and it argued that much of firm behavior comes about as a result of general habits and strategic orientations from the firm's past. That is, organizations may seem to make rational choices based on deliberate decision making, but actually instead they make decisions based on organizational habits. The book turned out to be a guide to survival in corporate America.

Organizational habits / routines – these are very important because without them work would not get done. Routines offer unwritten rules for operation. They are an organizational memory and they reduce uncertainty. They also reduce conflict between groups in organizations. Despite the level of conflict often inherent in organizations, they often move along peacefully as a result of routines that create truces so that everyone can put their conflict aside and get the job done. The established patterns help the company to be profitable. People can be ambitious but if they are too ruthless people unite against them. If people boost their own departments instead of undermining others this will likely get noticed over time. Most of the time routines work.

Company handbook versus the reality – most people have a company handbook, but if they were asked how to actually succeed at the company they would tell you who was trustworthy, who to avoid and what to do to get things done. This is an informal power structure of relationships, alliances and conflicts.

The Role of Leadership – creating truces is not enough. For organizations to succeed there is more involved than balancing authority. There must also be habits cultivated by leaders that create a real peace, and show who is in charge.

In a crisis - routines may be arbitrary. They can be there for a reason and that reason may seem logical and sensible, but in a crisis this can cause failure to occur. A truce can lead to great dangers. For example, a set of routines and rules led to the fire in Kings Cross on the London Underground taking 31 lives, with nobody taking responsibility because the rules associated with the truce meant they should not. As a result, someone does need to be in charge, even if this threatens the balance of power.

Crisis situations present opportunities for improvement as in turmoil organizational habits become easier to change and develop a new balance of power. This is extremely valuable. A crisis leads to people realizing there is a need for change and opening up to it. Good leaders grab crises to change organizational habits for the better. Sometimes the leader may prolong the sense of emergency for longer to make the most of it. This can lead to considerable organizational shifts because people know something has to change.

How Target Knows What You Want Before You Do

Statistics at Target - Andrew Pole was a statistician at Target. Target sells groceries, clothing, electronics and more. The company knows about its customers by tracking their buying and loyalty cards. Buying helped them understand more about the customer – for example if someone buys new towels, sheets and silverware they may be buying a new house or getting divorced. Pole was asked to see if it was possible to see which of the customers were pregnant based on buying patterns. This was because pregnant women and new parents are product-hungry and price insensitive. As customers they are worth a lot.

Supermarkets understand a lot about human behavior in general and where to put items to get people to buy them in stores. However, in the last 20 years Target realized it needed to know about individual shopper habits to personalize pitches. Researchers found out that people might have lists but they buy the same items regardless of the list when they see them – despite best intentions. People buy the same even if they mean to cut back.

Habits – people rely on habits to drive their shopping purchases, though people have different habits and these are unique to each person – Target wanted to take advantage of this by analyzing the data it had collected. The massive amount of data allows Target to send appropriate coupons at the right time to customers, trying to guess what people habitually buy. The data is useless without statisticians to help

make sense of it. For example, statisticians can see that those buying bikinis in April may want sunscreen in June and weight loss books in December. Target knew they would be likely to buy these items because they had before.

Deviating from habits and having a baby – sometimes people start buying new items. Researchers have looked at why this is, and sometimes habits change when going through a major life event like getting married. Retailers notice the changes. Having a baby is the biggest event for most. Pregnant women and new parents spend a lot on the baby, but also their buying habits change. Target believes if it can get parents buying diapers from them they will buy everything else there too because it is convenient, and this makes them valuable customers.

Using baby shower registry information to track change

- Target used the information from its baby shower registry to look at how women’s shopping habits changed as the due date arrived. This allowed it to see which trimester women were buying certain items and find patterns. This led to a pregnancy prediction score. This in turn led to concerns about privacy laws and advertising overtly on this basis, as customers do not like it. Women would be happy to get coupons as long as it did not feel like Target was spying. By trial and error, they found out that women will use coupons as long as they do not feel spied on – this is achieved by making the ads seem familiar and anonymous.

Changing how we live – this type of process can change how we live. For example, the YMCA gathered data that showed that what makes people join gyms may be availability of work out machines, but what got them to stay was familiarity or a friendly hello on arrival – a connection. YMCA had to sell a new habit.

Part Three: The Habits of Societies

Saddleback Church and the Montgomery Bus Boycott

Rosa Parks - in Montgomery in Alabama in 1955, Rosa Parks who was black sat in a section of the bus behind the white section where anyone was allowed to sit. A white man was standing as the bus got more crowded and the bus driver shouted at the black passengers in Parks’ area to give up their seats. Parks did not move, and she was jailed. This pivoted the civil rights movement, and the Montgomery buses were boycotted by blacks, crippling the company.

The role of social patterns – Parks was defiant but the incident also came about as a result of social patterns. Social

habits happen over and over again and create world changing movements. There were other similar events before Parks yet these did not lead to change.

The difference in the Parks case – Parks was very respected in her community and this respect triggered social habits, those of friendship which led to protests. She had lots of friendships and affiliations across racial and economic lines. She was a part of many social stratifications in the black community and in Montgomery overall. Her many friends called for a boycott, and information became known about the arrest in influential communities. The injustice resonated with those who knew her. Her friends followed social habits of their friendship and agreed to show support. Others became a part of it due to social peer pressure or the “power of weak ties” so it was hard for them not to join in.

Weak ties – weak ties have been shown to give us access to social networks where we otherwise do not belong, and are in some ways more important than strong tie friends. Just sticking with strong tie friends weakens us, but having a wider social access gives us more views and power.

Peer pressure – peer pressure encourages us to conform to group expectations. Peer pressure spreads through weak ties. When people shrug off peer pressure they may lose social standing. That means when people do not help one another out those people get a reputation. **When strong ties of friendship and weak ties of peer pressure merge it can create massive momentum and widespread social change.** When it is embarrassing not to take part, change can occur. In the case of Rosa Parks, the community stood together for fear of not participating leading to them being thought of as not someone to be friends with.

This movement led to new social habits that spread rapidly to many states through peaceful demonstrations and sit ins, which led to change.

Rick Warren – was a young seminary student, white, who wanted to start a new congregation but did not know where to go. He found a place called Saddleback Valley, Orange County California. It was a fast growing region and there were not enough churches to support the population. Warren had read an article which indicated that people would only follow Christ if it was part of their normal social relationship. Warren started with a prayer group of seven and 30 years later it is one of the largest ministries in the world.

Getting people to church – at the outset Warren talked to people to understand their lack of church attendance. He addressed all of the complaints (bad music, did not want to

dress up, uncomfortable seats). He preached on practical topics like how to raise healthy families. It worked and the church grew.

Changing habits – Bible study was growing big so he asked church members to hold study in their homes, and the congregation loved it. This changed church going to a habit that drew on already-present social urges and patterns. At the church there is a big crowd reminding them why they go at all, and the small groups draw close friends together. Again – **people attracted by a sense of community and weak ties as well as strong close friendships in smaller groups** (like with Rosa Parks), and their faith getting wound up in their daily lives.

Adapting habits further – Warren found there was not enough study of God at the groups so he created curriculums to teach new habits. He used strong and weak ties to grow the church. It became self-propelling, and this is how social habits drive movements.

The Neurology of Free Will

Angie Bachmann started gambling when bored, and over time it became a habit. She ended up losing a lot of money and building up thousands of dollars of debt. Her lawyer argued that she gambled out of habit, not choice and so should not have culpability for losses. The question arises of to what extent people are responsible. There are also cases of people committing crimes, even murder while sleep walking, and they argue they are not responsible due to automation. Society has started to agree through courts and juries that sometimes we are not responsible.

Sleepwalking – when people sleepwalk they are in incomplete paralysis and their bodies are active while they sleep or dream. People might dream about a cake and find they have raided the fridge when they go to the kitchen in the morning. They have operated motor boats, boiled water and made tea. Yet sleepwalkers do not normally do dangerous things.

Sleep terrors are different – this is not normal dreaming – the brain shuts down except for primitive neurological regions. Sleep terrors are a primal habit. Habits as sleep terrors differ because there is no possibility of conscious intervention – it cannot be overridden with reason. People in a sleep terror follow the habit loop regardless of where it leads. For some people sleep terrors involve violent impulses. This has been the case in a number of murder cases in the USA and UK. In some cases, these people have been set free.

We consider Bachmann the gambler guiltier than these sleep terror murderers, but is this fair?

Returning to gambling – after all the problems of gambling, Bachmann moved to a different state and did what she could to prevent the habit returning. Then she had a bad day following the death of her parents and went gambling as a “one-time thing” to ease the pain. The customer tracking system swung back into motion and she was offered excellent deals and freebies to encourage her to keep gambling – “Pavlovian marketing”. This occurred despite the fact the casino knew she had been bankrupt. She kept giving in.

Gamblers’ brains and responsibility – in pathological gamblers’ brains near misses look like wins and brains react in the same way – this does not occur in non-pathological gamblers. It differs neurologically. Near misses encourage them to place more bets, while non-problem gamblers stop because they do not want it to get worse. It is unclear if their brains are different from nature or from exposure to gambling, but what is known is that in these cases people do not have control. Does this make them responsible?

Society says yes, and Bachmann was held responsible. As shown in this book, since habits can be changed, Bachmann should be held responsible. If you can believe you can change, then you can change.