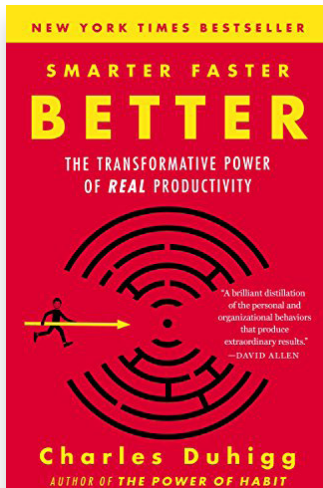


EXECUTIVE BOOK SUMMARIES

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ABOUT THE AUTHOR

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Charles Duhigg is a Pulitzer Prize-winning investigative reporter for the New York Times and author of The Power of Habit.

Smarter Faster Better

THE SUMMARY

Random House 2016

Introduction

This book is the result of my investigations into how productivity works, and my effort to understand why some people and companies are so much more productive than everyone else.

As I spoke to people such as poker players, airline pilots, military generals, executives, and cognitive scientists, a handful of key insights began to emerge. I noticed that some people kept mentioning the same concepts over and over. I came to believe a small number of ideas were at the core of why some people and companies get so much done.

Productivity isn't about working more or sweating harder. It's not simply spending longer hours at your desk or making bigger sacrifices. Rather, productivity is about making certain choices in certain ways. The way we choose to see ourselves and frame daily decisions, the stories we tell ourselves and the easy goals we ignore, the sense of community we build among teammates, and the creative cultures we establish as leaders are the things that separate the merely busy from the genuinely productive.

Chapter 1: Motivation

Motivation is like a skill akin to reading or writing that can be learned and honed. Scientists have found that people can get better at self-

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motivation if they practice the right way. The trick, researchers say, is to believe we have authority over our actions and surroundings. To motivate ourselves, we must feel like we are in control.

One way to prove to ourselves that we are in control is by making decisions. Even if making a decision delivers no benefit, people still want the freedom to choose. The first step in creating drive is giving people opportunities to make choices that provide them with a sense of autonomy and self-determination. In experiments, people are more motivated to complete difficult tasks when those chores are presented as decisions rather than commands.

This is a useful lesson for anyone hoping to motivate themselves or others, because it suggests an easy method for triggering the will to act is to find a choice that allows you to exert control. Motivation is triggered by making choices that demonstrate to ourselves that we are in control. The specific choice we make matters less than the assertion of control. It's this feeling of self-determination that gets us going.

To teach ourselves to self-motivate more easily, we need to learn to see our choices not just as expressions of control but also as affirmations of our values and goals. The choices that are most powerful in generating motivation are decisions that convince us we're in control *and* endow our actions with larger meaning. Choosing to climb a mountain can become an articulation of love for a daughter. Deciding to stage a nursing home insurrection can become proof that you're still alive. An internal locus of control emerges when we develop a mental habit of transforming chores into *meaningful choices*, and we assert that we have authority over our lives.

Unless we practice self-determination and give ourselves emotional rewards for subversive assertiveness, our capacity for self-motivation can fade. What's more, we need to prove to ourselves that our choices are meaningful. When we start a new task, or confront an unpleasant chore, we should take a moment to ask ourselves "why?" Why are we forcing ourselves to climb up this hill? Why are we pushing ourselves to walk away from the television? Why is it so important to return that email or deal with a co-worker whose requests seem so unimportant?

Once we start asking why, those small tasks become pieces of a larger constellation of meaningful projects, goals, and values. We start to recognize how small chores can have outsized emotional rewards, because they prove to ourselves that we are making meaningful choices, and that we are genuinely in control of our own lives. Self-motivation flourishes when we realize that replying to an email or helping a co-worker, on its own, might be relatively unimportant, but also realize it is part of a bigger project that we believe in and have *chosen* to do. Self-motivation is a choice we make because it is part of something bigger and more emotionally rewarding than the immediate task that needs doing.

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Chapter 2: Teams

Some might hypothesize that “good teams” are successful because their members are smarter and that group intelligence is nothing more than the intelligence of the individuals making up the team. But when researchers tested the participant’s IQs beforehand, they found that putting ten smart people in a room didn’t mean they solved problems more intelligently. In fact, those smart people were often outperformed by groups consisting of people who had scored lower on intelligence tests, but who worked smarter as a group. Others might argue that good teams had more decisive leaders. But the research showed that wasn’t right, either. The researchers eventually concluded that the good teams had succeeded not because of the innate qualities of team members, but because of how they treated one another.

There were two behaviors that all the good teams shared. First, all the members of the good teams spoke in roughly the same proportion, a phenomenon the researchers referred to as “equality in distribution of conversational turn-taking.” In some teams, for instance, everyone spoke during each task. In other groups conversation ebbed from assignment to assignment but, by the end of the day, everyone had spoken roughly the same amount.

Second, the good teams tested as having “high average social sensitivity,” which is a fancy way of saying that the groups were skilled at intuiting how members felt based on their tone of voice, how people held themselves, and the expressions on their faces.

How teams work matters more than *who* is on them. Research shows that you can take a team of average performers, and if you teach them to interact the right way, they’ll do things no superstar could ever accomplish.

- Teams need to believe that their work is important.
- Teams need to feel their work is personally meaningful.
- Teams need clear goals and defined roles.
- Team members need to know they can depend on one another.
- Most importantly, teams need psychological safety.

In general, the route to establishing psychological safety begins with the team leader. If you are leading a team, think about what message your choices send. Are you encouraging equality in speaking, or rewarding the loudest people? Are you modeling listening? Are you demonstrating sensitivity to what people think and feel, or are you letting decisive leadership be an excuse to not pay as close attention as you should?

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There are always good reasons for choosing behaviors that undermine psychological safety. It is often more efficient to cut off debate, to make a quick decision, to listen to whoever knows the most and ask others to hold their tongues. But a team will become an amplification of its internal culture, for better or worse. Study after study shows that while psychological safety might be less efficient in the short term, it's more productive over time.

If motivation comes from giving individuals a greater sense of control, then psychological safety is the caveat we must remember when individuals come together in a group. Establishing control requires more than just seizing self-determination. When people come together in a group, sometimes we need to *give* control to others. Ultimately, team norms are individuals willingly giving a measure of control to their teammates. That only works when people feel like they can trust one another, or they feel psychologically safe.

Chapter 3: Focus

All people rely on mental models to some degree. We all tell ourselves stories about how the world works, whether we realize we're doing it or not. But some of us build more robust models than others. We envision the conversations we're going to have with more specificity, and imagine what we're going to do later that day in greater detail. As a result, we're better at choosing where to focus and what to ignore.

Researchers have found that people who know how to manage their attention and who habitually build robust mental models tend to earn more money and get better grades. Moreover, experiments show that anyone can learn to habitually construct mental models. By developing a habit of telling ourselves stories about what's going on around us we learn to sharpen where our attention goes. These story-telling moments can be as small as trying to envision a coming meeting while driving to work by forcing yourself to imagine how the meeting will start, what points you will raise if the boss asks for comments, or what objections your coworkers are likely to bring up. They can also be as big as a nurse telling herself stories about what healthy infants ought to look like as she walks through the NICU.

If you want to make yourself more sensitive to the small details in your work, cultivate a habit of imagining, as specifically as possible, what you'd expect to see and do when you get to your desk. Then you'll be prone to notice the tiny ways in which real life deviates from the narrative in your head. If you want to become better at listening to your children, tell yourself stories about what they said to you at dinnertime last night. Narrate your life, as you are living it, and you'll encode those experiences deeper in your brain. If you need to improve your focus and learn to avoid distractions, take a moment to visualize, with as much detail as possible, what you are about to do. It is easier to know what's ahead when there's a well-rounded script inside your head.

Mental models can put even the worst situations within our control. Mental models help us by providing a scaffold for the torrent of information that constantly surrounds us. Models help us choose where to direct our attention, so we can make decisions, rather than just react.

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Think for a moment about the pressures you face each day. If you are in a meeting and the CEO suddenly asks you for an opinion, your mind is likely to snap from passive listening to active involvement and, if you're not careful, a cognitive tunnel might prompt you to say something you regret. If you are juggling multiple conversations and tasks at once and an important email arrives, reactive thinking can cause you to type a reply before you've really thought out what you want to say.

So what's the solution? If you want to do a better job of paying attention to what really matters, of not getting overwhelmed and distracted by the constant flow of emails and conversations and interruptions that are part of every day, of knowing where to focus and what to ignore, get into the habit of telling yourself stories. Narrate your life as it's occurring, and then when your boss suddenly asks a question or an urgent note arrives and you have only minutes to reply, the spotlight inside your head will be ready to shine the right way.

To become genuinely productive, we must take control of our attention. We must build mental models that put us firmly in charge. When you're driving to work, force yourself to envision your day. While you're sitting in a meeting or a lunch, describe to yourself what you're seeing and what it means. Find other people to hear your theories and challenge them. Get in a pattern of forcing yourself to anticipate what's next. If you are a parent, anticipate what your children will say at the dinner table. Then you'll notice what goes unmentioned or if there's a stray comment that you see as a warning sign.

Richard de Crespigny said, "You can't delegate thinking. Computers fail, checklists fail, everything can fail. But people can't. We have to make decisions, and that includes deciding what deserves our attention. The key is forcing yourself to think. As long as you're thinking, you're halfway home."

Chapter 4: Goal Setting

An emotional need for cognitive closure, in many settings, can be a great strength. People who have a strong urge for closure are more likely to be self-disciplined and seen as leaders by their peers. An instinct to make a judgment and then stick with it forestalls needless second-guessing and prolonged debate. The best chess players typically display a high need for closure, which helps them focus on a specific problem during stressful moments rather than obsessing over past mistakes. All of us crave closure to some degree, and that's good, because the basic level of personal organization is a prerequisite for success. What's more, making a decision and moving on to the next question *feels* productive.

There are risks associated with a high need for closure. When people begin craving the emotional satisfaction that comes from making a decision they are more likely to make hasty decisions and less likely to reconsider an unwise choice. A high need for closure has been shown to trigger close-mindedness, authoritarian impulses, and a preference for conflict over cooperation. Put differently,

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an instinct for decisiveness is great until it's not. When people rush toward decisions simply because it makes them *feel* like they are getting something done, missteps are more likely to occur.

Researchers describe the need for closure as having multiple components. There is a need to “seize” a goal, as well as a separate urge to “freeze” on an objective once it has been selected. Decisive people have an instinct to “seize” on a choice when it meets a minimum threshold of acceptability. This is a useful impulse, because it helps us commit to projects rather than endlessly debating questions or second-guessing ourselves into a state of paralysis.

However, if our urge for closure is *too* strong, we “freeze” on our goals and yearn to grab that feeling of productivity at the expense of common sense. When we're overly focused on feeling productive, we become blind to details that should give us pause. It feels good to achieve closure. Sometimes, though, we become unwilling to sacrifice that good sensation even when it's clear we're making a mistake.

In the 1940s, GE had formalized a corporate goal-setting system that would eventually become a model around the world. This system evolved into so-called SMART goals that were “specific, measurable, achievable, realistic, and based on a timeline.” Fulfilling SMART goals can give a real sense of accomplishment, but an obsession with achievable though inconsequential goals leads to a focus on unimportant short-term objectives rather than more ambitious plans. If you're being constantly told to focus on achievable results, you're only going to think of achievable goals. You're not going to dream big.

Numerous academic studies have examined the impact of stretch goals, and have consistently found that forcing people to commit to ambitious, seemingly out-of-reach objectives can spark outsized jumps in innovation and productivity. There is an important caveat to the power of stretch goals, however. Studies show that if a stretch goal is audacious, it can spark innovation. It can also cause panic and convince people that success is impossible because the goal is *too* big. There is a fine line between an ambition that helps people achieve something amazing and one that crushes morale.

It's often not clear how to start on a stretch goal. For a stretch goal to become more than an aspiration, we need a disciplined mindset to show us how to turn a far-off objective into a series of realistic short-term aims. Big objectives can be broken into manageable parts, and this can help put the impossible within reach.

Chapter 5: Managing Others

A Stanford University study found the way a business treats workers was critical to its success. Within most companies, no matter how great the product or loyal the customer, things would eventually fall apart unless employees trusted one another.

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They concluded that most companies had cultures that fell into one of five categories: “star performers,” “engineering approach,” “bureaucratic led,” “autocratic led” or “commitment to staff.” Over ten years, a “commitment” culture outperformed every other type of management style hands down in almost every meaningful way.

In the study, none of the commitment firms failed. They were also the fastest companies to go public, had the highest profitability ratios, and tended to be leaner, with fewer middle managers. Employees in commitment firms wasted less time on internal rivalries because everyone was committed to the company, rather than to personal agendas. Commitment companies tended to know their customers better than other kinds of firms, and as a result could detect shifts in the market faster.

Commitment cultures often adopt an “agile methodology,” encouraging collaboration by allowing teams to self-manage and self-organize. They devolve decision making to the person closest to the problem. They emphatically insist on a culture of commitment and trust.

One of the reasons commitment cultures were successful was because a sense of trust emerged among workers, managers and customers that enticed everyone to work harder and stick together through the setbacks that are inevitable in any industry. Most commitment companies avoided layoffs unless there was no other alternative. They invested heavily in training. There were higher levels of teamwork and psychological safety. Commitment firms valued making employees happy over quick profits and, as a result, workers tended to turn down higher-paying jobs at rival firms. Customers stayed loyal because they had relationships that stretched over years.

Employees work smarter and better when they believe they have more decision-making authority *and* when they believe their colleagues are committed to their success. A sense of control can fuel motivation, but for that drive to produce insights and innovations, people need to know their suggestions won’t be ignored, and that their mistakes won’t be held against them. They need to know that everyone else has their back.

The decentralization of decision making can make anyone into an expert within their company, but if trust doesn’t exist, or if employees don’t believe management is committed to them, organizations lose access to the vast experience we all carry within our heads. When people are allowed to stop the assembly line, redirect a huge software project, or follow an instinct, they take responsibility for making sure an enterprise will succeed.

A culture of commitment and trust isn’t a magic bullet. It doesn’t guarantee that a product will sell or an idea will bear fruit, but it’s the best bet for making sure the right conditions are in place when a great idea comes along.

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That said, there are good reasons companies don't decentralize authority. There is a powerful logic behind investing power in only a few hands. But, in the end, the rewards of autonomy and commitment cultures outweigh the cost. The bigger misstep is when there is never an opportunity for an employee to make a mistake.

Chapter 6: Decision Making

Many of our most important decisions are, in fact, attempts to forecast the future. When we send a child to private school, it is, in part, a bet that money spent today on schooling will yield happiness and opportunities in the future. When we decide to have a baby, we're forecasting the joy of becoming a parent will outweigh the cost of sleepless nights. When we choose to get married we are, at some level, calculating that the benefits of settling down are greater than the opportunity of seeing who else comes along. Good decision making is contingent on a basic ability to envision what happens *next*.

What fascinates psychologists and economists is how frequently people manage, in the course of their everyday lives, to choose among various futures without becoming paralyzed by the complexities of each choice. What's more, it appears that some people are more skilled than others at envisioning various futures and choosing the best ones for themselves. Why were some people able to make better decisions?

Making good decisions relies on forecasting the future, but forecasting is an imprecise, often terrifying science because it forces us to confront how much we don't know. The paradox of learning how to make better decisions is that it requires developing a comfort with doubt.

There are ways, however, of learning to grapple with uncertainty. There are methods for making a vague future more foreseeable by calculating, with some precision, what you do and don't know. Giving study participants even brief training sessions in research and statistical techniques boosted the accuracy of their predictions. Most surprising, a particular kind of lesson—training in how to think probabilistically—significantly increased people's abilities to forecast the future.

These lessons on probabilistic thinking had instructed participants to think of the future not as what's going to happen, but rather as a series of possibilities that *might* occur. It taught them to envision tomorrow as an array of potential outcomes, all of which had different odds of coming true, with the goal of turning their intuitions into statistical estimates. Exposure to probabilistic training was associated with as much as a 50 percent increase in the accuracy of their predictions.

Probabilistic thinking is the ability to hold multiple, conflicting outcomes in your mind and estimate their relative likelihoods. Contradictory futures can be combined into a single prediction. The future isn't one thing. Rather, it is a multitude of possibilities that often contradict one another until one of them comes true, and those futures can be combined in order for someone to predict which one is more likely to occur.

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Learning to think probabilistically requires us to question our assumptions and live with uncertainty. To become better at predicting the future we need to know the difference between what we hope will happen and what is more and less likely to occur. Serious poker players know that losers are always looking for certainty at the table. Winners are comfortable admitting to themselves what they *don't* know. In fact, in poker, knowing what you don't know is a huge advantage which is something that can be used against other players.

Even if we have very little data, we can still forecast the future by making assumptions and then skewing them based on what we observe about the world. But this only works if we start with the right assumptions. So how do we get the right assumptions? By making sure we are exposed to a full spectrum of experiences. Our assumptions are based on what we've encountered in life, but our experiences often draw on biased samples. In particular, we are much more likely to pay attention to or remember successes and forget about failures. We hardly notice the empty restaurants we pass on the way to our favorite, crowded pizza place. We become trained, in other words, to notice success and then, as a result, we predict successful outcomes too often because we're relying on experiences and assumptions that are biased toward all the successes we've seen rather than the failures we've overlooked.

Many successful people, in contrast, spend an enormous amount of time seeking out information on failures. We all have a natural proclivity to be optimistic, to ignore our mistakes and forget other's tiny errors. But making good predictions relies on realistic assumptions, and those are based on our experiences. If we pay attention only to good news, we're handicapping ourselves.

How do we learn to make better decisions? In part, it's by training ourselves to think probabilistically. To do that, we must force ourselves to envision various futures by holding contradictory scenarios in our minds simultaneously. Then we must expose ourselves to a wide spectrum of successes and failures to develop an intuition about which forecasts are more or less likely to come true. Anyone can learn to make better decisions.

Chapter 7: Innovation

The conundrum of how to spur innovation on a deadline is a challenge for the millions of people who confront problems that require inventive answers delivered as quickly as possible. As the economy changes and our capacity to achieve creative insights becomes more important than ever, the need for fast originality is even more urgent.

One remarkably effective process for jump-starting the creative process is taking proven, conventional ideas from other settings and combining them in new ways. Every wrong step gets us closer to what works.

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Within sociology, intellectual middlemen who have learned how to transfer knowledge between industries or groups are referred to as idea or innovation brokers. Anyone can become an idea broker by drawing on their own lives as creative fodder. A key part of learning how to broker insights is learning to pay attention to how things make us react and feel, and then connect experiences we've had to synthesize new things.

We're more likely to recognize discoveries hidden in our experiences when necessity pushes us, or when panic or frustrations cause us to throw old ideas into new settings. Psychologists call this "creative desperation." Effective brokers aren't always cool and collected. They're often worried and afraid. Creativity can't be reduced to a formula. At its core, it needs novelty, surprise, and other elements that cannot be planned in advance to seem fresh and new. There is no checklist that, if followed, delivers innovation on demand.

The *creative process* is different. We can create the conditions that help creativity to flourish. We know, for example, that innovation becomes more likely when old ideas are mixed in new ways. We know the odds of success go up when brokers (people with fresh, different perspectives who have seen ideas in a variety of settings) draw on the diversity within their heads. We know that, sometimes, a little disturbance can help jolt us out of the ruts that even the most creative thinkers fall into, as long as those shake-ups are the right size.

If you want to become a broker and increase the productivity of your own creative process, there are three things that can help. First, be sensitive to your own experience. Pay attention to how things make you think and feel. That's how we distinguish clichés from true insights. Look into your own life as creative fodder, and broker your own experiences into the wider world.

Second, recognize that the panic and stress you feel as you try to create isn't a sign that everything is falling apart. Rather, it's the condition that helps make us flexible enough to seize something new. Creative desperation can be critical; anxiety is what often pushes us to see old ideas in new ways. The path out of that turmoil is to look at what you know, to re-inspect conventions you've seen work, and try to apply them to fresh problems. The creative pain should be embraced.

Finally, remember that the relief accompanying a creative breakthrough, while sweet, can also blind us to seeing alternatives. It is critical to maintain some distance from what we create. Without self-criticism, and without tension, one idea can quickly crowd out competitors. We can regain that critical distance by forcing ourselves to critique what we've already done; by making ourselves look at it from a completely different perspective, and by changing the power dynamics in the room or giving new authority to someone who didn't have it before. Disturbances are essential, and we retain clear eyes by embracing destruction and upheaval, as long as we're sensitive to making the disturbance the right size.

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The idea running through these three lessons is that the creative process can be broken down and explained. That's important, because it means that anyone can become more creative. We can all become innovation brokers. We all have experiences and tools, disturbances and tensions that can make us into brokers if we're willing to embrace that desperation and upheaval and try to see our old ideas in new ways.

Chapter 8: Absorbing Data

Data can be transformative, but only if people know how to *use* it. There is a difference between finding an answer and understanding what it means. In the past two decades the amount of information embedded in our daily lives has skyrocketed. There are smart phones that count our steps, websites that track our spending, digital maps to plot our commutes, software that watches our Web browsing, and apps to manage our schedules. We can precisely measure how many calories we eat each day, how much our cholesterol scores have improved each month, and how many dollars were spent at restaurants. This information can be incredibly powerful. If harnessed correctly, data can make our days more productive, our diets healthier, our schools more effective, and our lives less stressful.

Unfortunately, however, our ability to learn from information hasn't necessarily kept pace with its proliferation. Though we can track our spending and cholesterol, we still often eat and spend in ways we know we should avoid.

In theory, the ongoing explosion in information should make the right answers more obvious. In practice, being surrounded by data makes it harder to make decisions. This inability to take advantage of data as it becomes more plentiful is called "information blindness." Just as snow blindness refers to people losing the capacity to distinguish trees from hills under a blanket of powder, so information blindness refers to our mind's tendency to stop absorbing data when there's too much to take in.

Information blindness occurs because of the way our brain's capacity for learning has evolved. Humans are exceptionally good at absorbing information as long as we can break data into a series of smaller and smaller pieces. This process is known as "winnowing" or "scaffolding." Mental scaffolds are like file cabinets filled with folders and subfolders that help us store and access information when the need arises to make a decision. We do this so quickly that, most of the time, we're hardly aware it's occurring. When we're faced with a lot of information, we start automatically arranging it into mental folders and subfolders and sub-subfolders. This is how our brains turn information into knowledge. We learn which facts or lessons to apply in a given situation by learning which folders to consult. Experts are distinguished from novices, in part, by how many folders they carry in their heads.

One way to overcome information blindness is to force ourselves to grapple with the data in front of us, to manipulate information by transforming it into a sequence of questions to be answered

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or choices to be made. (First, “red or white?” Then, “expensive or cheap?” Finally, “Chardonnay or Sauvignon Blanc?”)

This is sometimes referred to as “creating disfluency” because it relies on doing a little bit of work forcing data through a procedure that makes it easier to digest. When you ask yourself a few questions about which wine you want, or compare the fees on various 401(k) plans, the data becomes less monolithic and more like a series of decisions. When information is made disfluent, we learn more.

Our brain wants to find a simple frame and stick with it. We can cast our experience in a new light by using a formal decision-making system such as a flowchart, a prescribed series of questions, or the engineering design process so that when we face complex data, our brains are denied the easy options we crave.

The people who are most successful at learning are the ones who know how to use disfluency to their advantage. They transform what life throws at them, rather than just taking it as it comes. They know the best lessons are those that force us to take action and to manipulate information. When we encounter new information and want to learn from it, we should force ourselves to *do something* with the data.