

Smartcuts.

Shane Snow—2014.

Introduction.

- At the time I sat down to watch Nate played a game, 22 years after its release, the standing world record for completing all of the levels of super Mario brothers was 33 minutes, 24 seconds. When they cleared the final level that day and Idaho, dumping the final boss, Bowser, into a pit of lava and signifying the end of the game, Thomas stopwatch read six minutes, 28 seconds.
- This dilemma is an exercise in lateral thinking. It's the kind of puzzle in which the most elegant solutions is revealed only when you attack it sideways. Your ideas emerge when you question the assumptions upon which a problem is based (in this case: it's that you can only help one person).
- Overachievers have always applied lateral thinking to success in a variety of fields and endeavors. In doing this, I plan to convince you that the fastest route to success is never traditional, and that the conventions we grow up with can be hacked.
- I can only describe as "overachiever clubs," such as the Young Entrepreneur Council.
- www.ShaneSnow.com
- Lateral thinking doesn't replace hard work, it eliminates unnecessary cycles.
- Momentum – not experience – is the single biggest predictor of business and personal success. It's easier to build a huge business than a small one.

Part one: short chain.

Chapter 1: hacking the latter.

- We find it among other groups as well. Throughout history, fast rising companies, rock star executives, "overnight" movie stars, and top-selling products have outrun their peers by acting more like latter hackers than ladder climbers. The best way to explain how that latter hacking works comes from the Mormons.
- Bigger or better illustrations an interesting fact: **people** are generally willing to take a chance on something if it only feels like a small stretch.
- That's how a group of bored students transformed a toothpick into a TV, a remarkably quicker than if they'd worked there seven dollar per hour college town jobs and saved up for one. With each trade, the players exchange or provided value – including entertainment value. Now, if the BYU kids had gone door to door asking for free television, they would have succeeded so quickly. Few people are willing to make that kind of stretch. This is like an intern applying for is CEO job, or brand-new startup bidding on NASA contract. The players eliminated resistance by breaking the big challenge, acquiring something viable like a TV, into a series of easier, repeatable challenges. Researchers call this psychology of "small wins."
- "By itself, one small win may seem unimportant," writes Dr. Karl Weick in a seminal paper for American psychologist in 1984. "A series of wins at small but significant tasks however, reveals a pattern that may attract allies, to turn opponents and lower resistance to subsequent proposals."
- While its good advice, the key to the board more main student success was not just the rapid cycle time. It was the direction they traded: sideways. The players then simply parlay toothpicks

for pieces of wood of increasing size, they traded toothpicks for pens and mirrors for old bikes. They didn't wait around for the owner of a vacant house to show up, they also could ask for a trade, and a dinner knock on the same door over and over until a know became a yes. When the door was shut to them, they immediately picked another one. When the latter became insufficient, they hacked it. And that is what made them so successful quickly. The key to Bigger or Better, in other words, is the war.

- Award-winning actress Zoe Saldana was a ballet dancer before coming a movie star. This is often how “overnight success” happens for entertainers and public figures, they work hard in their field, then switch latter is a level up, to observers surprise. Business research shows that this kind of latter switching generally tends to accelerate the company's growth. Companies that pay of it – that is, switch business models or products – while on the upswing tend to perform much better than those that stayed on a single course. The 2011 startup genome report of new technology company stated that, “startups that pivoted once or twice raced 2.5 times more money, have 3.6 times better user growth and are 52% less likely to scale prematurely.”
- The common pattern among these fast rising US presidents journey is that, like the BYU students, they didn't parlay up a linear path. They climbed various ladders of success and then switch to the presidential latter.
- The yardstick the public uses when judging a presidential candidate, it turns out, is not how much time the candidate has in politics. “It's leadership qualities,” explains the presidential historian Doug Wead, a former advisor to George HW Bush and the author of 30 books on the presidents. Indeed, polls indicate that being a strong and decisive leader is the number one characteristic a president candidate can have.
- Dwight D Eisenhower led the United States and its allies to victory against Hitler. He had never held an elected office. He had won by a landslide with five times elect world votes of his rival. “If you can make it there, he can make it anywhere,” the US voters decided.
- The presidents, for the most part, got high into office by not playing the game everyone else plays. They acquire leadership experience in desperate fields, then use Frank's a notch or style credibility to switch latter's to politics.
- We'll see throughout the following chapters how Sinatra style credibility and the latter switching – always parlaying for something more – are the find nations for how the most interesting people and companies in the world succeed. It's not just how presidents get to the top. It's how CEOs and comedians and racecar drivers hone their skills to make it.

Chapter 2: training with masters.

- This is not the response she expected. It turns out that while his peers at St. Rose College memorized NFL rosters and the names of their favorite rock band drummers, Jimmy had tirelessly followed his heroes and comedy. He fixated on the careers of comics like Sandler and Spade and track the movements of their management teams, agencies, films and TV shows as if he was earning school credit for.
- Mentorship is the secret of many of the highest profile achievers throughout history.
- From the karate kid to Star Wars to the matrix, adventure stories often adhere to a template in which a protagonist forsakes humble beginnings and embarks on a great quest. Before the quest

heats up, however, he or she receives training from a master. Quickly, the heroes ready to face overwhelming challenges. Much more quickly than if he'd gone to light saber school.

- Business research backs this up to. Analysis shows that entrepreneurs who have a mentor and up raising seven times as much capital for their businesses, and experience 3.5 times faster growth than those without mentors. And in fact, of the companies surveyed, few managed to scale a profitable business model without mentor's aid.
- Mentoring programs breakdown in the workplace so often that scholarly research contradicts itself about the value of mentoring at all, and prompts Harvard business review articles with titles such as "why men touring doesn't work."
- The mentorship slip is illustrated well by family businesses: 70% of them fail one pass to the second generation."
- Right away the Gosh team observed several differences between the Ferrari routine and their own. The pit crew meticulously planned out every possible scenario of what could go wrong during a handover and practiced each scenario until it became a habit, Gosh staff, on the other hand, handled surprises on the fly. For Ari crew members operated with lots of physical space between them, the hospital staff constantly got in each other's way – by virtue of the small space, they claimed. But a dozen grown man with power tools managed to gather around about as small as space during every race without bottlenecking anyone. Far pit crews had a dedicated overseer who ran the show. This overseer, often called a "lollipop man," with stand back to watch and direct the operation holistic glee. Only when he waived his flag with the car be allowed back onto the track. In the hospital room full of surgeons, anesthesiologists and nurses, there was no conductor, no lollipop man. Each staff member simply helped out where he or she thought was needed. Finally, the Gosh doctors noted that the Ferrari technicians worked in silence. In contrast, hospital handovers were full of chatter, they not only talk through what was happening, but just chatted during the procedure. When the doctors returned to London, they hired a dance choreographer to practice movements and add space to the small working area around the hospital bed. They turn the handover scramble into a routine, where each staffer had a prescribed set of actions. Contingencies for various scenarios were mapped out, then practiced. The head anesthesiologist became the lollipop man, stemming back to observe and direct. And everyone shut up. Before long, the hospital had reduced its worst handover areas by 66%.
- The statistics showed that business people who wear mentors in the workplace tended to achieve slightly more at work, on average, than those who didn't. Counter intuitively, however, "informal men touring," Underhill found, "produced a larger and more significant effect on career outcomes than formal mentoring."
- In fact, one-on-one mentoring in which an organization formally matched people proved to be nearly as worthless as a person having not been mentored at all.
- The Gosh doctors and nurses needed to model moves of master handoverers and nobody beat Formula One pit crews at complicated equipment swaps. For Ari's process for tire replacement bitmap Ackley how to unhook and reflux ventilators, but it's a masterful approach to teamwork in tight spaces. That's obvious short-term problem. But long-term success of the hospital was accelerated by the deep relationship. Over the next several years, the Formula One made Gosh its official charity, raising more than \$3 million for the children and posting events were sick kids and their parents could hang out with the racing stars. There's a big difference, in other words, putting having a mentor guide your practice and having a mentor guide your journey.

- On the other hand, a smart cut savvy men key approaches things a bit differently. She develops personal relationships with her mentors, asks for their advice on other aspects of life, not just the formal challenge at hand. She cares about her mentors lives to.
- I can building deeper relationships with master mentors be a smart card if it hinges on our being lucky enough to know the master? Hip-hop icon Jay-Z gives us a clue in one of his lyrics, “we were kids without fathers... So we found our fathers on wax and on the streets and in history. We got picked and choose the ancestors who would inspire the world we were going to make for ourselves.” In ancient Greece, few people had access to the best mentors. Jay-Z didn’t either, but he had books from which he could get an inkling about what those kinds of mentors were like. With every increase in communication, with every autobiography published, and every YouTube video of a superstar created, we increase our access to the great models in every category. This allows us to at least study the moves that makes Masters great – which is a start.
- The problem is that two people can study the same business model, watches a video, or even take the same advice from a mentor, and one person might pick up critical details that the other misses
- “First-class notice her” this is a key difference between those who learn more quickly than others.
- The best kind of mentors are ones that are invested in your success, who showed vulnerability and cared enough to tell them what they didn’t want to hear when they needed to hear it, force them to examine success critical details more closely than they might have on their own.
- From a young age, Jimmy Fallon created relationships with comedians he hadn’t met. He would study their videos obsessively, learn everything about their lives and what they were like. When Siegel called him the first time, Jimmy Artie knew who she was, he memorized her name and even more facts about his mentor Adam Sandler. Jimmy’s intimate connection with these comedians drove him to master the tiny details that would separate his performance from aspiring comic who moved on once their celebrity impressions were good enough.

Chapter 3: rapid feedback.

- I’d soon learned that this terrible comedy was the root of a smart cut that had transformed businesses across the globe, as well as the careers of many budding entertainers. To fully understand just what that something was, and how it through the same method Upwards the might get people to care more about do Gooding and mocking celebrities, we are going to have a little talk about death.
- It turns out that after you adjust for statistical margin of error, and entrepreneur food failed in previous venture was not likely to do better than someone who never run a business in their life. Expecting to be suddenly great a business after running one into the ground is akin to losing the first basketball game you’ve ever played in expecting to win the next game just because you lost the first one. According to the study, successful entrepreneurs, on the other hand, are 50% more likely to succeed in a second venture. The more you win, the more likely you are to win again.
- So, failing in business doesn’t make us better or smarter. But succeeding makes us more likely to continue to succeed.
- It turns out that the surgeons who botched the new procedure tended to do worse and subsequent surgeries. Rather than learning from their mistakes, their success rates continually declined. On the other hand, when surgeons did well on the new surgery, more successes tended to follow.

- **But what's interesting** is what happened to the surgeons who saw their colleagues fail at the new CABG procedure. These showed significant increases in their own success rates with every failure that they saw another doctor experience. Further perplexing, however: senior colleague perform a successful surgery didn't seem to translate to one's own future success.
- Look at what they did. They each attributed their company's failures to external factors. Things that made them feel better about themselves. Think back to last time you lost the competition, or your favorite sports team lost the game. Do you blame the weather or the referees? Or perhaps player injuries or a lucky roll of the dice? If you did – or were tempted to – you are normal. We are wired to think this way.
- On the other hand, we tend to pin our successes on internal factors. Think back to the last competition you one. It was your hard work, your skill your quick thinking in the heat of the moment that won the day. Right? This is exactly what the heart surgeons did.
- “When interpreting their own failures, individuals tend to make external attributions, .2 factors that are outside of their direct control, such as luck. As a result, their motivation to exert effort on the same task in the future is reduced.” Interesting. When doctors failed due to what they perceived as bad luck, they didn't tend to work any smarter the next time. The attributed failure in a way that made them feel good as they could about themselves.
- The cardiac surgeons, this made the failure of a colleague quite valuable. Since it was that guy's fault, fellow surgeons instinctively zeroed in on the mistakes. “I'll make sure not to do that,” they said subconsciously.
- The secret – The Second Cities hack – one learns, is in what happens each evening after the show. Every night, once the curtains close, the cast comes back out on stage. The show's over, but the audience can stick around if it likes, while the cast practices improv. The having a hearse this, they say. But we promise to try and keep you laughing.
- Since the early 20th century, psychologists have argued about the effect of feedback interventions or critiques, on behavior and performance. Various studies have shown that such interventions improved learning, while others “prove” that feedback has negative effects on performance. For years, academics debated whether positive feedback – you are doing great – was more helpful than negative feedback – you did that wrong – and argued about whether direct, drill sergeant like feedback was more helpful than kind, tactful feedback. Results are all over the map. Everything works sometimes, and everything didn't work other times.
- **However**, some feedback was very helpful to boosting performance, and it had nothing to do with bedside manner. The difference was how much the feedback cause the person to focus on himself rather than the task.
- All the feedback made you worse at bowling. Not because it wasn't decent advice, but because a high pressure feedback but rise tends to make a self-conscious. We get stuck inside our own heads. As a bowling anxiety, the closer feedback moves our attention to ourselves, the worse it is for us. The research shows that experts – people who were masters at a trade – vastly preferred negative feedback to positive. It spurred the most improvement. That was because criticism is generally more actionable than complements. “You did well” is less helpful in improving your bowling game than “you turned your wrists too much.”
- Crucially, experts tended to be able to turn off the part of the egos that took legitimate feedback personally when it came to their craft, and they were confident enough to parse helpful feedback from incorrect feedback. Meanwhile novice's psych themselves out.

- The Second City teaches its students to take such things in stride, to become scientists who see audience reactions as commentary on the joke, not the Joker. To turn off part of their brain that tells them “I fail” when they get negative feedback. And then the school has students continually parlay up to harder audiences and harsher feedback as they grow more comfortable. This forces them to both tying up and push creative boundaries. With this process, the second city transforms failure and to simply feedback hundreds of times a week.
- The second city manages to commerce Street things to accelerate its performance growth:
 1. it gives them rapid feedback
 2. it depersonalize is the feedback
 3. It lowers the stakes and pressure, the students take risks that force them to improve.
- By embracing all these tiny failures, there is no actual failure. In contrast, a typical acting class might spend an entire semester building up to a single performance. Students practice together in class, but they don’t know if the audience will like their show until the final day. And if the audience hates it, there’s nothing students can do. If you think about it, that’s how most businesses operate. When releasing a new product, a company will spend months sometimes years, fine-tuning, building up to one critical moment, the launch. Then on launch day the product either is a success or failure.
- Shall give the go-ahead on scenes she knows the audience will not laugh at, because your students don’t become funnier by preventing them from taking risks. “Funny is right at the line. Just a little bit uncomfortable. Just at the place where could fail.” And just like a muscle, yet the fail a little bit in order to improve.
- Sachs family tells the camera how knowing he would die has helped them realize what matters in their life is to find true meaning. “It’s really simple, actually just try and make people happy.
- **The Zach Sobiec story** illustrates how Upworthy used rapid feedback to do it: According to upworthys calculations, My Last Days had the potential to reach a lot of people. But so far, few had seen it. The filmmaker had posted the documentary under the headline, “my last days, meet Zach,” through descriptive it was suboptimal packaging. In the ADD world of Facebook and Twitter, it’s no surprise few people clicked. They reposted the video with a new title: “we lost this kid 80 years too early. I’m glad he went out with a bang,” and shared it with a small number of its subscribers, then waited to see who clicked. Meanwhile, Upworthy sent the same video with a handful of other headlines to different subscribers. For example, “I cried through this entire video. That’s okay though, because this kid’s life was wonderful” and “the happiest story about a kid dying of cancer I’ve ever seen.” They watch the feedback pouring, monitoring both the percentage of people who clicked each headline and the number of people who shared it with their friends. It was a perfect, this passionate science experiment, where the feedback could show how editors exactly which packaging would have the biggest impact – before they released to the rest of the world. In moments, the results became clear: people clicked on the third headline 20% more often than the original but that wasn’t the end of the test. They wrote alternate versions of the winning headline and sent it out to several other groups. They repeated the process a ruthless 18 times, for a total of 75 variations in all.
- The winning thumbnail image – a photo of Zach and his girlfriend, four heads touching – added another 69% click through rate. Finally, editors were satisfied, and launch the story to the rest of their fans and the broader Internet. This rapid feedback process didn’t just increase views to the video by calculated 186%, they increased views by that percentage for every cycle of sharers. So

when you share the video with your friends, they were three times as likely to click and share with their friends. And those people were three times as likely to click and share and so on. Like the second city, upworthy turned its work into rapid scientific experiments. It turned out tiny failures into the personalized feedback and created an environment where total failure was nearly impossible. And in the end, more than 10 million people got to see Zack story.

Part two leverage.

Chapter 4: platforms.

- There is a difference between treading water and methodically searching for the least wasteful way to learn something or level up, which is what the HH did.
- Platforms are tools and environments that let us do just that. It's clear how using platforms applies in computer programming, but what if we wanted to apply perform thinking to something outside of tech startups #
- In the spring of 2010, Dr. Tony Wagner, a Harvard researcher, took a trip to Scandinavia to observe what was going on at schools in Finland, a country roughly the size and population of the US state of Minnesota. Finland students consistently ranked at the top – or very near the top – each year on international mathematics, science and reading tests. Finland had left the states – and pretty much everyone else in the dust.
- The number one ranking it wasn't the phenomenon. It was at Finland somehow managed to be the best with less effort than everyone else. Finish students entered school one year later than most others. They take fewer classes and spent less time in school per day. They had fewer tests and less homework. They thought school was fun. Furthermore, teachers and Finland spent about half as much time each year in the classroom, 600 hours to Americans teachers 1100. The results of Finland success were evident not only in the students test scores, they rippled throughout its economy. There were more researchers per capita in Finland than any other country, and Finland will ranked number one in the world in technology innovation, according to various studies. Unemployment was below average, and 82% of adults had the equivalent of a high school degree, which is 12% more than the developed world's average. And yet, a few decades ago, Finland's educational system had been decidedly mediocre. Students performed well in reading, but were just average or below and everything else. In other words, in a generation, finish education went from unremarkable to the envy of the planet. The question on Wagner's mind as his plane descended into Finland was, how?
- I think it's a great mistake to force children to learn mathematics, said renowned physicist Freeman Dyson, as I sat lunch with him at the Institute for advanced study in Princeton New Jersey. Then 89, Dyson had spent the better part of the century advancing quantum physics, before turning his attention to the study of game theory. "How much high-level mathematics ought to be taught in schools?" He looked at me in between bites of swordfish. "I would put it at zero." That's a particular strange thing for a math genius to say. Dyson explained that it's not that we don't need education. Obviously there are things that a citizen ought to know, but we are using the entire wrong approach. Dyson believes that American schools teach kids to, metaphorically, drive on bumpy grass instead of two pilot cars on highways. Memorization of facts and figures is the primary culprit. What we really need, he says, is to teach kids to use tools that do math for us.

- In other words, no more multiplication tables. Calculators at age 6. Parent and teachers, prepare your pitchforks.
- A FEW HOURS FROM the airport from which Wagner's plane departed for Helsinki, lives a programmer named Samantha John, who had quit her job to build a computer game.
- "With another swipe, you can make the squid repeat everything you dragged into the box, creating a loop, making the squid turn in circles. This is what that MIT mathematician Seymour Papert calls constructionism, or learning by making and manipulating objects. It's incredibly effective for concept mastery and recall, and it's almost always aided by platforms.
- •-Many of these kids don't even know long division. But John says that's OK. "You need to know what you don't know, and how to figure it out," she explained. Hopscotch is a platform that leads kids by the hand to learn basic concepts, then encourages them to want to figure the rest out. Instead of forcing kids to learn code through lectures and drills and mandatory classes, she built a toy that kids actually download and play with because they want to. And Hopscotch isn't the only company that's onto this idea; encouragingly, thousands of young children have learned to program video games and robots through similar constructionist games like Gamestar Mechanic and LEGO.
- Studies show that students who use calculators have better attitudes toward math, and are more likely to pursue highly computational careers in science, technology, engineering, and mathematics (STEM) than those who don't or can't. This is certainly the case with games like John's, too. Dyson says, and Papert confirms, that to get kids to become interested in an academic subject on their own, they have to play. Building with LEGOs, visiting museums, experimenting with tools. Says Dyson. "Mathematics ought to be entertainment."
- Moursund says that before high school, we devote roughly $\frac{3}{4}$ of our math education to memorizing and practicing the use of rules. This leaves little time for higher order thinking: applying math to solving problems, creating models or enhancing our understanding of the world. Calculators and computers can replace some of the memorizing.
- Get the thinking right in the skills come largely for free.
- The overwhelming majority of academic research about calculators indicates that leveraging such tools improves conceptual understanding. By learning the tool (calculator) first, we actually master the discipline (math) faster.
- This is the point that Dyson was making earlier. Hands-on will get rapid feedback, and to actually learning and the use of tools, he says, helps us to want to learn, to get rapid feedback, and to actually grasp math better than memorizing facts from the bottom up.
- And while we may need deep expertise in our industries too become innovators, we actually need only higher-order thinking and the ability to use platforms to do everything else.
- In an age of platforms, creative problem solving is more valuable than computational skill.
- In fact, after studying decades of calculator usage in classrooms, researchers warn, "If schools do not teach students to use these devices from an early age, the rising generation will lack necessary work skills
- The secret of the Finland phenomenon, Wagner discovered, was a platform it built by elevating the education level of its teachers. Finland's public school system was experiencing the same thing that made Harvard University's curriculum and network the "envy of the academic world: it hired only teachers with incredible qualifications and it had for them mentor students closely.

- Of course, there are incredible, qualified teachers sprinkled around the globe who do a wonderful job. But to truly raise an education system, every educator must be extremely educated. Students can't have one star teacher and a dozen mediocre instructors if they are to advance more quickly than average, as Finland's students did. Finland made teaching jobs more desirable and job competition increased. Its standards for teachers became higher than other countries. "The whole teaching profession has been re-invented there," Wagner said. "They have much, much better working conditions to prepare lessons, to collaborate with colleagues, to meet with parents and students." Teaching in Finland became a prestigious profession where master's degrees were required to teach on every level. And only 10 percent of applicants are even chosen to begin teacher training. Once they had jobs, teachers often stayed in the profession until they retired. (Roughly half of American teachers leave in the first five years.) Perhaps the most important benefit of having super educated instructors is that a better-trained teacher is more adept at teaching children how to learn, whereas the coach-turned-geography teacher will often teach how to memorize.
- Finnish educators reflect that: focuses on teaching students how to think, not what to think.
- Instead of a surface level understanding of every topic, they went deeper in a few. And as you may have guessed, Finnish schools allowed students unrestricted use of calculators.
- "Kids there have much more sense that they're going to have to construct their own future," Wagner says. They're taught to be entrepreneurs of their own lives. Instead of standing passively on an education assembly line and being handed reams of facts and figures, they are thrown into rooms of bricks and asked to build castles.
- Edward de Bono, who coined the term "lateral thinking" in 1967, put the "Einstein" quote a bit differently: "You cannot dig a hole in a different place by digging the same hole deeper."
- When DHH returned to visit his home racetrack in Chicago, the same set of drivers still dominated the lower leagues. He came back and effortlessly beat them.
- As we've seen, platforms can take the form of tools and technology like games and tires and calculators; they can also take the form of environments like pro racing leagues or super standard schools. In either case, the platform amplifies the effort and teaches skills in the process of using it. Is it any wonder that nearly 2/3 of the e patents filed over the last three decades came from twenty metropolitan areas with only one-third of the US population? More innovation, creativity, and art per person happens in large metro areas than other places; what Jonah Lehrer calls "urban friction" and Richard Florida calls the "creative class" turns cities into for Platforms are why so higher platforms for success-seekers.
- Platforms are why so many aspiring actors migrate to Los Angeles and why budding fashion bloggers move to New York. Platforms are why Harvard Law graduates have easier times finding jobs than those from other schools. Though it's much more difficult to get into Harvard than other law schools, you will get more leverage with a degree from Harvard. That's from a combination of Sinatra-Style credibility and premium educators, both of which make up Harvard's platform.
- Effort for the sake of effort is as foolish a tradition as paying dues. How much better is hard work when it's amplified by a lever? Platforms teach us skills and allow us to focus on being great rather than reinventing wheels or repeating ourselves. "You can build on top of a lot of things that exist in this world" David Heinemeier Hansson told me. "Somebody goes in and does that hard, ground level science based work. "And then on top of that," he smiles, "you build the art."

Chapter 5: waves, Moore and Moore”

- But as one of the event announcers, Leila Hurst, points out, world championships aren't won by surfing skill, and this heat was no exception. “It's really not about surfing and practicing,” Hurst says, on air. “It's just a matter of waiting for the right wave.”
- Luck is often talked about as “being in the right place at the right time.” But like a surfer, some people—and companies—are adept at placing themselves at the right place at the right time. They seek out opportunity rather than wait for it. This chapter is about hacking that process.
- This is called destructive and constructive interference. The former means the waves collide and go flat. The latter forms a megawave. In 2004 two waves collided in American teen culture, resulting in a fast and powerful megawave. Those waves were social networking and scream. From First to Last happened to be in the water when the megawave came, and had the foresight to paddle for
- There are two ways to catch a wave: exhausting hard work paddling—and pattern recognition—spotting a wave early and casually drifting to the sweet spot. “There are people who make careers based on the fact that they know how to read the ocean better than others.
- The researchers sat the students down and instructed them to watch video clips from two college basketball games and rate the difficulty of each shot a player took. Half the students were instructed to make their assessments using intuition—the first thought they had—and half were instructed to use careful analytical reasoning to judge each shot and to ignore “gut instincts.” Before the test began, the second group created lists of factors from which to assess the shots, things like the number of nearby defenders, whether the shooter was stationary, and how many points the shot was worth. Answers would be compared to a key created by top basketball coaches. When the results from the intuition test came back, the high expertise students performed close to 50 percent better than those with low expertise. As one might expect. The surprise came on the analytical test, where the high- and low-expertise students scored nearly the same, and better than the, high-expertise students' intuition. The low-expertise students who used their guts to guess at a shot's difficulty did poorly, as expected. But when these same students used thoughtful criteria, they outperformed the intuition of experienced players.
- In a given domain—be it surfing or accounting or political fund-raising—the familiarity that leads to pattern recognition seems to come with experience and practice. Fencing masters recognize opportunities in opponents' moves because of the sheer amount of practice time logged into their heads. Leaders and managers who use their gut to make decisions often do so based on decades of experience, archived and filed away in the folds of their cerebrums. “Intuition is the result of non conscious pattern recognition,” Dane tells me. However, his research shows that, while logging hours of practice helps us see patterns subconsciously, we can often do just as well by deliberately looking for them. In many fields, such pattern hunting and deliberate analysis can yield results just as in the basketball example—high accuracy on the first try, And that's where, like the dues-paying presidents or overly patient programmers, want we take for granted often gets in the way of our own success. Deliberate pattern spotting can compensate for experience. . But we often don't even give it a shot.
- This explains how so many inexperienced companies and entrepreneurs beat the norm and build businesses that disrupt established players. Through deliberate analysis, the little guy can spot

waves better than the big company that relies on experience and instinct once it's at the top. And a wave can take an amateur farther than an expert can swim.

- Like Twitter, as we learned in chapter 4, both Gmail and AdSense started off as side projects. Google was in the water when the waves of Internet traffic came because it was tinkering with new ideas under the umbrella of Google's famous "20% Time." "20% Time" is not Google indigenous. It was borrowed from a company formerly known as Minnesota Mining and manufacturing, aka 3M, which allowed its employees to spend 15 percent of their work hours experimenting with new ideas, no questions asked. 3M's "15% Time" brought us, among other things, Post-it Notes. Behind this concept (which is meticulously outlined in an excellent book by Ryan Tate called *The 20% Doctrine*) is the idea of constantly tinkering with potential trends—having a toe in interesting waters in case waves form.
- In contrast, companies that are too focused on defending their current business practice and too fearful to experiment often get overtaken.
- The best way to be in the water when the wave comes is to budget time for swimming.
- Over the years, entrepreneurs and academics have suggested that first movers in business—the first to catch a commercial wave—enjoy an unfair advantage over their competitors. In 1988 Stanford professors Marvin Lieberman and David Montgomery popularized the concept, suggesting that the first competitor to move into a market has the opportunity to gain proprietary learning, snatch up patents, and build up buyer switching costs. Later researchers added that first movers receive outsize branding benefits, that a reputation for being "the original," often enjoys a marketing advantage over copycats. (Think Tylenol versus generic acetaminophen. Or Apple's iPad versus other tablets that came after it.) "The first mover advantage is huge," declared venture capitalist Ken Lerer. I wrote his quote down in enormous letters in my notebook when he emphatically said it to a group of fellow entrepreneurship-curious journalists when I was a student at Columbia University. According to Lerer, when we look at history and emerging competitions—we ought to expect the first mover to win a disproportionate amount of the time. Except if we did, we'd be wrong.
- Did Moore beat Conlogue because the former studied the waves harder that day, while the latter took her experience in these waves for granted? It appears so.
- We also see from Moore's championship heat that, in surfing the first mover often doesn't have the advantage. The second or third wave in a multi-wave set is often the more powerful. Perhaps we shouldn't be surprised to learn, then, that being the first mover is not much of an advantage in business either.
- Startlingly, the research showed that 47 percent of first movers failed. Only about half the companies that started selling a product first remained the market leader five years later, and only 11% of first movers remained market leaders over the long term.
- By contrast, early leaders – companies that took control of the products market share after the first movers pioneered them – had only 8% failure rate. 53% of the time in the Golder and Tellis study, an early leader became the market leader in the category.
- Fast followers, on the other hand, benefit from free-rider effects. The pioneers clear the way in terms of market education and steal what works, learn objectively from the first movers' failures, and spend more effort elsewhere. The first wave clears the way for a more powerful ride.
- Pattern recognition can help here as well. The way to predict the best waves in a proverbial set is established by researchers Fernando F. Suarez and Gianvito Lanzolla, who in *Academy of*

Management Review explain that when market and technology growth are smooth and steady, the first mover gets the inertia and an advantage. When industry change is choppy, the fast follower—the second mover—gets the benefits of the first mover’s pioneering work and often catches a bigger wave, unencumbered.

- While living in that warehouse, Sonny had started releasing his EDM tracks online, for free. It was good stuff, and between the parties and social networks, his body of work started to gain recognition.
- The artist known as Skrillex, head-bangs over his turntables, his 15-inch-long hair flying against a backdrop of white electricity. In the past three years, Skrillex has won six Grammys, including best dance/electronic album twice in a row (and a nomination for best new artist), and has come to symbolize a genre into which thousands of artists—and millions of fans—are flooding. “He is this generation’s Kurt Cobain,” says Joe Villacrusis, tour manager and music industry veteran who’s traveled with and babysat rock stars since the early ‘90s. “Look at the history of music ... he’s the face of a movement.” The once-king of scream was now the king of dubstep, having caught not one, but two gigantic musical waves in less than a decade.
- A casual observer might conclude that Sonny just happened to be in the right place at the right time, two times. That he was just lucky. But that’s not what happened. Sonny actively experimented with trends when they were still early—the Web, social networks, ream-singing, EDM—sticking his toe in different waters until he recognized incoming waves. And it should be noted that he tried some things that didn’t work (a solo career as a rock singer) and was quick to shift strategies.
- Conventional thinking leads talented and driven people to believe that if they simply work hard, luck will eventually strike. That’s like saying if a surfer treads water in the same spot for long enough, a wave will come; it certainly happens to some people. Once in a while, but it’s not the most effective strategy for success. Paradoxically, it’s actually a lazier move.
- **There’s a reason** some people practice things for twenty years and never become experts; a golfer can put in 30,000 hours of practice and not improve his game if he’s gripping his clubs wrong the whole time, A business can work five times harder and longer than its neighbors and still lose to rivals that read the market better. ‘. Just like a pro surfer never wins by staying in one spot.
- “I think that being able to pick and read good waves is almost more important than surfing well,” Moore tells me. “If you don’t have a good or better platform to perform on than your opponent, you are going to lose.”
- Her secret, and Sonny’s (and Google’s and 3M’s and General Motors’), isn’t practice—though that certainly helps. It’s going to the beach to watch the waves and getting into the water to Experiment. And if you’re in the sweet spot when that superwave does come. Sonny says, “its pure energy.

Chapter 6 super connectors, ‘Space, Wars, and Storytellers’

- Which is easier—making friends with a thousand people one by one or making friends with someone who already has a thousand friends? Which is faster—going door to door with a message or broadcasting the message to a million homes at once? This is the idea behind what I call super connecting, the act of making mass connections by tapping into hubs with many spokes. It’s what Castro needed to do if he ever wanted to convert the Cuban people to his cause.

- That was the kind of influence the Castro brothers attained when Che Guevara brought the contraband equipment to their mountain camp in February 1958. The device that helped turn the tide of the revolution, if you hadn't guessed, was a radio transmitter.
- When Guevara marched troops to the key city of Santa Clara on December 28, 1958, peasant crowds cheered. Residents use overturned cars to create makeshift barricades that blocked the advance of Batista's armored vehicles, and citizens within the city
- The guy who makes Star Wars movies for a living works out of a three-story building in Santa Monica, California, that bears the moniker "National Typewriter Company." No, it's not George Lucas, and the guy doesn't actually make typewriters; he just likes them. His company is actually called Bad Robot Productions, and the tiny wooden plaque on the charcoal door to the left of the typewriter sign—next to the door with no handle and above the keypad with the glowing green button—reads, "Are you ready?" I was ready. But I didn't make it inside that door. Reports from those who have indicated that the office beyond is full of eclectic sci-fi artwork and a bookshelf that opens to reveal a secret toilet. The middle-aged man in business attire who approached me from those who have indicated that the office beyond is full of eclectic sci-fi artwork and a bookshelf that opens to reveal a secret toilet. The middle-aged man in business attire who approached me from outside after I knocked said that, "The typewriter repair shop isn't open to public," but I was welcome to check out the website, nationaltypewriters.com, I peeked beyond the door when he used his key to slip inside, and it certainly wasn't a typewriter shop. I'd been emailing with the Bad Robot people earlier and they'd tried to shield me from this place, and from the man behind the company: Jeffrey Jacob Abrams, the recently tapped director of Star Wars VII.
- Dr. Adam Grant, professor of organizational psychology at the Wharton School of the University of Pennsylvania, says this is because J. J. Abrams is "a giver," a rarity in an industry full of takers.
- Grant would know. He wrote the book on the subject. In his, bestseller. *Give and Take*, he presents rigorous research showing that a disproportionate number of the most successful people in a given industry are extremely generous. From medical students to engineers to salespeople, his studies find givers at the top of the ladder.
- "Radio Rebelde truly became our means of mass communication, to talk to the people," Castro later recalled. But he and his crew knew that talk was not enough to win the people to the cause. Their countrymen's basic needs had to be met, and trust had to be gained. So, Guevara started teaching peasants how to read. The revolutionaries, largely an educated bunch, walked into villages and set up classes. They taught the poor how to farm, how to be self-sufficient. They taught them self-defense. The villagers began to see the rebels as their allies—people actively improving their immediate circumstances. The rebels' service; spoke much louder than Batista's pompous speeches.
- Che, true to his giving self, eventually headed off to Congo and Bolivia to teach them and join their freedom fights.
- No matter the medium or method, giving is the timeless smart cut for harnessing super connectors and creating serendipity.

PART III SOAR

Chapter 7: momentum, Depressed billionaires

- Searching for patterns in what affects people’s “inner” work lives the most dramatically. The answer, it turned out, is simply progress. A sense of forward motion. Regardless how small.
- And that’s the interesting part. Amabile found that minor victories at work were nearly as psychologically powerful as major breakthroughs. To motivate stuck employees, as Amabile and her colleague Steven J. Kramer suggest in their book, *The Progress Principle*, businesses need to help their workers experience lots of tiny wins, (And as we learned from the bored BYU students in chapter 1, breaking up big challenges into tiny ones also speeds up progress)
- **Momentum** isn’t just a powerful ingredient of success; it’s also a powerful predictor of success.
- **The Oreo** Tweet case study proves that the perception of momentum is often as good as momentum.
- Like a surfer arriving hours before a competition to watch the waves, “I would study the algorithm of YouTube’s front page” for months, Phan says. “I noticed that they only would post up videos with a lot of views [on the home page], and you only have 2 days to capitalize off of all these views.” However, YouTube didn’t update the home page on weekends, she realized. If she managed to get a video on there on a Thursday, “I [could] be there for an extra 2 days,” So she uploaded her Gaga video at the optimal moment and then notified her little group of fans to watch it at once. It was enough to reach the home page. This was the tiny nudge that got the snowball rolling. And, as the video hung on the homepage for those extra days, a writer from BuzzFeed noticed it and wrote a story about it.
- As we’ve learned from Michelle Phan’s story, the secret to harnessing momentum is to build up potential energy, so that unexpected opportunities can be amplified.
- But each of their backlogs became reservoirs, ready to become torrents as soon as the dam was removed.
- The untold portion of the Oreo tweet story, the part that most of the salivating bloggers missed, is what 360i and Oreo did before the Super Bowl. For six months, Oreo had been posting culturally relevant images like “Dunk in the Dark” on Twitter every day of the week. It had slowly built up a following. In the process, Oreo had honed its publishing process, which for big companies was not nearly as simple as writing 140 characters and pressing “Tweet,” This was at a time when social media managers at Fortune 500 companies typically had to brave a phalanx of corporate approvers to publish anything,*
- While building its content backlog, Oreo managed to get its tweet approval process down to a few minutes’ time—just enough time to say, “You can still dunk in the dark” before the Superdome lights came back on—and to grow a following among consumers and press that could kick-start momentum when the company needed it. And that is what won 360i its Cannes and Clios,

Chapter 8: simplicity, Hot Babes and Paradise”

- Sometimes bigger is not better. Sometimes more of a good thing is too much. Sometimes the smartest next step is a step back. In the case of neonatal incubators, incrementally bigger and more powerful improvements meant, at the very most, incrementally less expensive (though it was usually the opposite). The hacker’s approach to NICU design was to think smaller. In doing so, Chen’s team created something world class.
- **Simplification** often makes the difference between good and amazing.

- Let's step back for a moment and talk about innovation. Over the last several years, we've bastardized the word.
- There are a lot of great inventors and improvers in the world. But those who hack world-class success tend to be the ones who can focus relentlessly on a tiny number of things. In other words J to soar, we need to simplify.
- Tech writer Brian Lam, known to friends as Blam, was one of the first to give me a shot as a journalist. In his early career, he worked both smart and hard, parlaying from photocopying intern at Wired to editor in chief of Gizmodo, Gawker's popular gadget blog. He took the blog from 13 million to 180 million page views per month during his five-year tenure. Blam pioneered a new style of tech blogging, consistently scooped mainstream media, and made Gawker CEO Nick Denton a lot of money. But he also gained 30 pounds, and was, as he tells me, "an angry boss and boyfriend and pretty miserable." The next rung on Blam's ladder was not a prestigious job at CNN or the New York Times, as one might expect, (He had plenty of such offers.) Instead, he moved to Hawaii to become a surf bum. Well, not just a surf bum. He leveraged his Gizmodo cred (Frank Sinatra style!) to launch a small website called TheWirecutter, a gadget-review site that takes simplicity seriously.
- If you want to know which type of wireless speakers to buy, a typical blog—or store—will show you scads of options. Brands. Versions. Specs. Upgrades. Pros and cons. Features! Benefits! STRESS Blam will simply tell you that Logitech's UE Mini Boom speakers are the best. And then he'll go surfing. Rather than worrying about inventories and shipping and cost-of-goods-sold and all the other headaches of a typical electronics business, his website sends you to Amazon. When you buy those Mini Boom speakers there (as I recently did), TheWirecutter gets a small kickback. With simplified costs and no full-time employees, Blam 'was soon working one day a week, living in paradise, and making more money than he ever did at Gizmodo. Most important, he was a lot happier.
- Often, the thing holding us back from success is our inability to say no.
- This is why Apple founder Steve Jobs' closet was filled with dozens of identical black turtlenecks and Levi's 501 jeans—to simplify his choices. US presidents do the same thing. "You'll see only gray or blue suits," President Barack Obama
- "I don't want to make decisions about what I'm eating or wearing. Because I have so many other decisions to make.
- What he's talking about has been proven in experiments led by Dr. Kathleen Vohs of the University of Minnesota, experiments that show that making lots of tiny choices depletes one's sequent self control.
- That's why so many busy and powerful people practice mind clearing meditation and stick to rigid daily routine: to minimize distractions and maximize good decision-making
- Simplification is why Steve Jobs' Magic Mouse doubled Apple's mouse market share overnight. With zero buttons (the whole thing is a button, actually) and a touch screen glass top, the mouse is both pretty and intuitive—a huge departure from the conventional "innovative" mouse arms race, which amounted to adding more bulk and more buttons. Similarly, Apple's iPod won the MP3 player war with breakthrough simplicity, both in physical design and how the company explained it. While other companies touted "4 Gigabytes and a 0.5 Gigahertz processor!" Apple simply said "one thousand songs in your pocket."

- Constraints like that in Jane Lnens ‘Design for Extreme Affordability’ challenge are often the forcing functions that lead to breakthrough innovation.
- What if I asked you to do the following exercise:
 - Say something funny.
 - Most of us freeze at such a broad challenge. Sure, there’s a lot of “freedom” in it, but somehow it’s tough to come up with something on the spot. Now, say I put a constraint on the exercise:
 - Tell me a knock-knock joke.
- Walk into the typical high school in America. What do you see? The first thing you see? A wall full of trophies. Are they academic trophies? Hell no. They are athletic trophies,” Wagner says “We don’t celebrate academic achievements,” Wagner says. “celebrate athleticism.
- Geniuses and presidents strip meaningless choices from their day, so they can simplify their lives and think

Chapter 9: 10 X THINKING, “The Rocketeer”

- Musk built a factory designed to input aluminum and spit out rocket parts. Rather than paying NASA prices for engine nozzles and manifolds and heat shields, SpaceX manufactured its own at a fraction of the cost. The happy side-benefit of this was greater control over inventory, as aerospace delivery times for parts from manufacturers were notoriously bad.
- Next, Musk sought simplification. He reduced complexity by making the various stages of his rocket the same diameter, with the same engines. Whereas most rockets used fuel tanks of diminishing fatness (the Shuttle, for example, had two small boosters and one big booster, which required different tools, parts, and procedures to build and maintain), Falcon’s two stages could be with the same jigs and tooling, the same electronics, and the same engineers.
- 10x Thinking is the art of the extremely big swings
- No amount of weight lifting or swing practice will get you there. Such a goal requires you to think radically different.
- The secret sounds a bit crazy. Says Teller, “It’s often easier to make something 10 times better than it is to make it 10 percent better.
- **Incremental progress**, he says, depends on working harder. More resources, more effort, 10x progress is built on bravery and creativity instead. Working smarter.
- “Elon Musk calls this “getting to first principles,” In the 1800’s 10 percent style thinking for faster personal transportation translated into trying to breed stronger horses. First principles would suggest instead thinking about the physics of forward movement. Then building up from there, leveraging the latest technology—like the internal combustion engine.
- Most “innovation” inside industries and companies today focuses on making faster horses, not automobiles. That’s why so many of us fall victim to the innovator’s dilemma, wherein competitors usurp while we think we’re being innovative.
- But wait, are we just building a10x style swings based on the word of billionaire-funded crazy people! Academic research actually shows that we’re less likely to perform at our peak potential when we’re reaching for low-hanging fruit. That’s in part because there’s more competition at the bottom of the tree than at the top. And competition in large numbers doesn’t just decrease general odds of winning. It creates underperformance.

- In 2009 behavioral psychologists Stephen M. Garcia and Avishalom Tor showed that merely knowing there are more competitors in a competition decreases our performance. Not relative to a group, but in absolute terms. They call this the N-Effect. To prove it, Garcia and Tor had students take competitive tests, some with only ten people taking the test, others with 100. Over and over, they changed the variables of the experiment: the students took the test in the same room or they took them alone, but they knew others were taking it too. Without fail, the students competing in smaller clusters scored higher. At a certain point, adding more competitors dampened the effect (if you're competing against a thousand kids or ten thousand, it doesn't make much of a difference), but with few competitors, students will push themselves harder, without even realizing it.
- "For my part," he said, "I will never give up. And I mean never."
- Big causes attract big believers, big investors, big capital, big name advisers and big talent. They force us to rethink convention and hacked a ladder of success.

EPILOGUE

- Day in and out, Edwards filed paperwork. But one day, the company installed suggestion boxes around the office to solicit employee feedback. One of the boxes was right by his desk, Edwards began putting his index cards into it. Every day, he dropped a new shoe sketch through the slit of that wooden box, asking for feedback on each design.
- #1: HACKING THE LADDER
 - "I always wanted to be better," Edwards built his own nontraditional ladder and constantly pushed himself to climb. There was no comfortable plateau, but always a trade for something more, "I challenge my kids to be better than they were yesterday," he says. "When you look at your life in daily increments to try to succeed daily, that builds over time," It was his sideways path into shoe design that made his shoes sell so well. And, like the best presidents. It was Edwards's sideways ladder switch from the top of his industry—and the Sinatra-style credibility of having designed for Michael Jordan—that made that made PENSOLE successful so quickly.