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MADE TO STICK

Why Some Ideas Survive
and Others Die

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CHIP HEATH

&

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INTRODUCTION

WHAT STICKS?

A friend of a friend of ours is a frequent business traveler. Let's call him Dave. Dave was recently in Atlantic City for an important meeting with clients. Afterward, he had some time to kill before his flight, so he went to a local bar for a drink.

He'd just finished one drink when an attractive woman approached and asked if she could buy him another. He was surprised but flattered. Sure, he said. The woman walked to the bar and brought back two more drinks—one for her and one for him. He thanked her and took a sip. And that was the last thing he remembered.

Rather, that was the last thing he remembered until he woke up, disoriented, lying in a hotel bathtub, his body submerged in ice.

He looked around frantically, trying to figure out where he was and how he got there. Then he spotted the note:

DON'T MOVE. CALL 911.

A cell phone rested on a small table beside the bathtub. He picked it up and called 911, his fingers numb and clumsy from the ice. The operator seemed oddly familiar with his situation. She said,

"Sir, I want you to reach behind you, slowly and carefully. Is there a tube protruding from your lower back?"

Anxious, he felt around behind him. Sure enough, there was a tube.

The operator said, "Sir, don't panic, but one of your kidneys has been harvested. There's a ring of organ thieves operating in this city, and they got to you. Paramedics are on their way. Don't move until they arrive."

You've just read one of the most successful urban legends of the past fifteen years. The first clue is the classic urban-legend opening: "A friend of a friend . . ." Have you ever noticed that our friends' friends have much more interesting lives than our friends themselves?

You've probably heard the Kidney Heist tale before. There are hundreds of versions in circulation, and all of them share a core of three elements: (1) the drugged drink, (2) the ice-filled bathtub, and (3) the kidney-theft punch line. One version features a married man who receives the drugged drink from a prostitute he has invited to his room in Las Vegas. It's a morality play with kidneys.

Imagine that you closed the book right now, took an hourlong break, then called a friend and told the story, without rereading it. Chances are you could tell it almost perfectly. You might forget that the traveler was in Atlantic City for "an important meeting with clients" — who cares about that? But you'd remember all the important stuff.

The Kidney Heist is a story that sticks. We understand it, we remember it, and we can retell it later. And if we believe it's true, it might change our behavior permanently—at least in terms of accepting drinks from attractive strangers.

Contrast the Kidney Heist story with this passage, drawn from a paper distributed by a nonprofit organization. "Comprehensive community building naturally lends itself to a return-on-investment ra-

tionale that can be modeled, drawing on existing practice," it begins, going on to argue that "[a] factor constraining the flow of resources to CCIIs is that funders must often resort to targeting or categorical requirements in grant making to ensure accountability."

Imagine that you closed the book right now and took an hourlong break. In fact, don't even take a break; just call up a friend and retell that passage without rereading it. Good luck.

Is this a fair comparison—an urban legend to a cherry-picked bad passage? Of course not. But here's where things get interesting: Think of our two examples as two poles on a spectrum of memorability. Which sounds closer to the communications you encounter at work? If you're like most people, your workplace gravitates toward the non-profit pole as though it were the North Star.

Maybe this is perfectly natural; some ideas are inherently interesting and some are inherently uninteresting. A gang of organ thieves—inherently interesting! Nonprofit financial strategy—inherently uninteresting! It's the nature versus nurture debate applied to ideas: Are ideas born interesting or made interesting?

Well, this is a nurture book.

So how do we nurture our ideas so they'll succeed in the world? Many of us struggle with how to communicate ideas effectively, how to get our ideas to make a difference. A biology teacher spends an hour explaining mitosis, and a week later only three kids remember what it is. A manager makes a speech unveiling a new strategy as the staffers nod their heads enthusiastically, and the next day the frontline employees are observed cheerfully implementing the old one.

Good ideas often have a hard time succeeding in the world. Yet the ridiculous Kidney Heist tale keeps circulating, with no resources whatsoever to support it.

Why? Is it simply because hijacked kidneys sell better than other topics? Or is it possible to make a *true*, *worthwhile* idea circulate as effectively as this false idea?

The Truth About Movie Popcorn

Art Silverman stared at a bag of movie popcorn. It looked out of place sitting on his desk. His office had long since filled up with fake-butter fumes. Silverman knew, because of his organization's research, that the popcorn on his desk was unhealthy. Shockingly unhealthy, in fact. His job was to figure out a way to communicate this message to the unsuspecting moviegoers of America.

Silverman worked for the Center for Science in the Public Interest (CSPI), a nonprofit group that educates the public about nutrition. The CSPI sent bags of movie popcorn from a dozen theaters in three major cities to a lab for nutritional analysis. The results surprised everyone.

The United States Department of Agriculture (USDA) recommends that a normal diet contain no more than 20 grams of saturated fat each day. According to the lab results, the typical bag of popcorn had 37 grams.

The culprit was coconut oil, which theaters used to pop their popcorn. Coconut oil had some big advantages over other oils. It gave the popcorn a nice, silky texture, and released a more pleasant and natural aroma than the alternative oils. Unfortunately, as the lab results showed, coconut oil was also brimming with saturated fat.

The single serving of popcorn on Silverman's desk—a snack someone might scarf down between meals—had nearly two days' worth of saturated fat. And those 37 grams of saturated fat were packed into a medium-sized serving of popcorn. No doubt a decent-sized bucket could have cleared triple digits.

The challenge, Silverman realized, was that few people know what "37 grams of saturated fat" means. Most of us don't memorize the USDA's daily nutrition recommendations. Is 37 grams good or bad? And even if we have an intuition that it's bad, we'd wonder if it was "bad bad" (like cigarettes) or "normal bad" (like a cookie or a milk shake).

Even the phrase "37 grams of saturated fat" by itself was enough to cause most people's eyes to glaze over. "Saturated fat has zero appeal," Silverman says. "It's dry, it's academic, who cares?"

Silverman could have created some kind of visual comparison—perhaps an advertisement comparing the amount of saturated fat in the popcorn with the USDA's recommended daily allowance. Think of a bar graph, with one of the bars stretching twice as high as the other.

But that was too scientific somehow. Too rational. The amount of fat in this popcorn was, in some sense, not rational. It was ludicrous. The CSPI needed a way to shape the message in a way that fully communicated this ludicrousness.

Silverman came up with a solution.

CSPI called a press conference on September 27, 1992. Here's the message it presented: "A medium-sized 'butter' popcorn at a typical neighborhood movie theater contains more artery-clogging fat than a bacon-and-eggs breakfast, a Big Mac and fries for lunch, and a steak dinner with all the trimmings—combined!"

The folks at CSPI didn't neglect the visuals—they laid out the full buffet of greasy food for the television cameras. An entire day's worth of unhealthy eating, displayed on a table. All that saturated-fat—stuffed into a single bag of popcorn.

The story was an immediate sensation, featured on CBS, NBC, ABC, and CNN. It made the front pages of *USA Today*, the *Los Angeles Times*, and *The Washington Post's* Style section. Leno and Letterman cracked jokes about fat-soaked popcorn, and headline writers trotted out some doozies: "Popcorn Gets an 'R' Rating," "Lights, Action, Cholesterol!" "Theater Popcorn is Double Feature of Fat."

The idea stuck. Moviegoers, repulsed by these findings, avoided popcorn in droves. Sales plunged. The service staff at movie houses grew accustomed to fielding questions about whether the popcorn

was popped in the “bad” oil. Soon after, most of the nation’s biggest theater chains—including United Artists, AMC, and Loews—announced that they would stop using coconut oil.

On Stickiness

This is an idea success story. Even better, it’s a *truthful* idea success story. The people at CSPI knew something about the world that they needed to share. They figured out a way to communicate the idea so that people would listen and care. And the idea stuck—just like the Kidney Heist tale.

And, let’s be honest, the odds were stacked against the CSPI. The “movie popcorn is fatty” story lacks the lurid appeal of an organ-thieving gang. No one woke up in an oil-filled bathtub. The story wasn’t sensational, and it wasn’t even particularly entertaining. Furthermore, there was no natural constituency for the news—few of us make an effort to “stay up to date with popcorn news.” There were no celebrities, models, or adorable pets involved.

In short, the popcorn idea was a lot like the ideas that most of us traffic in every day—ideas that are interesting but not sensational, truthful but not mind-blowing, important but not “life-or-death.” Unless you’re in advertising or public relations, you probably don’t have many resources to back your ideas. You don’t have a multimillion-dollar ad budget or a team of professional spinners. Your ideas need to stand on their own merits.

We wrote this book to help you make your ideas stick. By “stick,” we mean that your ideas are understood and remembered, and have a lasting impact—they change your audience’s opinions or behavior.

At this point, it’s worth asking why you’d *need* to make your ideas stick. After all, the vast majority of our daily communication doesn’t require stickiness. “Pass the gravy” doesn’t have to be memorable. When we tell our friends about our relationship problems, we’re not trying to have a “lasting impact.”

So not every idea is stick-worthy. When we ask people how often they need to make an idea stick, they tell us that the need arises between once a month and once a week, twelve to fifty-two times per year. For managers, these are “big ideas” about new strategic directions and guidelines for behavior. Teachers try to convey themes and conflicts and trends to their students—the kinds of themes and ways of thinking that will endure long after the individual factoids have faded. Columnists try to change readers’ opinions on policy issues. Religious leaders try to share spiritual wisdom with their congregants. Nonprofit organizations try to persuade volunteers to contribute their time and donors to contribute their money to a worthy cause.

Given the importance of making ideas stick, it’s surprising how little attention is paid to the subject. When we get advice on communicating, it often concerns our delivery: “Stand up straight, make eye contact, use appropriate hand gestures. Practice, practice, practice (but don’t sound canned).” Sometimes we get advice about structure: “Tell ‘em what you’re going to tell ‘em. Tell ‘em, then tell ‘em what you told ‘em.” Or “Start by getting their attention—tell a joke or a story.”

Another genre concerns knowing your audience: “Know what your listeners care about, so you can tailor your communication to them.” And, finally, there’s the most common refrain in the realm of communication advice: Use repetition, repetition, repetition.

All of this advice has obvious merit, except, perhaps, for the emphasis on repetition. (If you have to tell someone the same thing ten times, the idea probably wasn’t very well designed. No urban legend has to be repeated ten times.) But this set of advice has one glaring shortcoming: It doesn’t help Art Silverman as he tries to figure out the best way to explain that movie popcorn is *really* unhealthy.

Silverman no doubt knows that he should make eye contact and practice. But what message is he supposed to practice? He knows his audience—they’re people who like popcorn and don’t realize how unhealthy it is. So what message does he share with them? Compli-

cating matters, Silverman knew that he wouldn't have the luxury of repetition—he had only one shot to make the media care about his story.

Or think about an elementary-school teacher. She knows her goal: to teach the material mandated by the state curriculum committee. She knows her audience: third graders with a range of knowledge and skills. She knows *how* to speak effectively—she's a virtuoso of posture and diction and eye contact. So the goal is clear, the audience is clear, and the format is clear. But the design of the message itself is far from clear. The biology students need to understand mitosis—okay, now what? There are an infinite number of ways to teach mitosis. Which way will stick? And how do you know *in advance*?

What Led to Made to Stick

The broad question, then, is how do you design an idea that sticks?

A few years ago the two of us—brothers Chip and Dan—realized that both of us had been studying how ideas stick for about ten years. Our expertise came from very different fields, but we had zeroed in on the same question: Why do some ideas succeed while others fail?

Dan had developed a passion for education. He co-founded a start-up publishing company called Thinkwell that asked a somewhat heretical question: If you were going to build a textbook from scratch, using video and technology instead of text, how would you do it? As the editor in chief of Thinkwell, Dan had to work with his team to determine the best ways to teach subjects like economics, biology, calculus, and physics. He had an opportunity to work with some of the most effective and best-loved professors in the country: the calculus teacher who was also a stand-up comic; the biology teacher who was named national Teacher of the Year; the economics teacher who was also a chaplain and a playwright. Essentially, Dan enjoyed a crash course in what makes great teachers great. And he found that, while

each teacher had a unique style, collectively their instructional *methodologies* were almost identical.

Chip, as a professor at Stanford University, had spent about ten years asking why bad ideas sometimes won out in the social marketplace of ideas. How could a false idea displace a true one? And what made some ideas more viral than others? As an entry point into these topics, he dove into the realm of “naturally sticky” ideas such as urban legends and conspiracy theories. Over the years, he's become uncomfortably familiar with some of the most repulsive and absurd tales in the annals of ideas. He's heard them all. Here's a very small sampler:

- The Kentucky Fried Rat. Really, any tale that involves rats and fast food is on fertile ground.
- Coca-Cola rots your bones. This fear is big in Japan, but so far the country hasn't experienced an epidemic of gelatinous teenagers.
- If you flash your brights at a car whose headlights are off, you will be shot by a gang member.
- The Great Wall of China is the only man-made object that is visible from space. (The Wall is really long but not very wide. Think about it: If the Wall were visible, then any interstate highway would also be visible, and maybe a few Wal-Mart superstores as well.)
- You use only 10 percent of your brain. (If this were true, it would certainly make brain damage a lot less worrisome.)

Chip, along with his students, has spent hundreds of hours collecting, coding, and analyzing naturally sticky ideas: urban legends, wartime rumors, proverbs, conspiracy theories, and jokes. Urban legends are false, but many naturally sticky ideas are true. In fact, perhaps the oldest class of naturally sticky ideas is the proverb—a nugget

of wisdom that often endures over centuries and across cultures. As an example, versions of the proverb "Where there's smoke there's fire" have appeared in more than fifty-five different languages.

In studying naturally sticky ideas, both trivial and profound, Chip has conducted more than forty experiments with more than 1,700 participants on topics such as:

- Why Nostradamus's prophecies are still read after 400 years
- Why *Chicken Soup for the Soul* stories are inspirational
- Why ineffective folk remedies persist

A few years ago, he started teaching a course at Stanford called "How to Make Ideas Stick." The premise of the course was that if we understood what made ideas naturally sticky we might be better at making our own messages stick. During the past few years he has taught this topic to a few hundred students bound for careers as managers, public-policy analysts, journalists, designers, and film directors.

To complete the story of the Brothers Heath, in 2004 it dawned on us that we had been approaching the same problem from different angles. Chip had researched and taught what made ideas stick. Dan had tried to figure out pragmatic ways to make ideas stick. Chip had compared the success of different urban legends and stories. Dan had compared the success of different math and government lessons. Chip was the researcher and the teacher. Dan was the practitioner and the writer. (And we knew that we could make our parents happy by spending more quality time together.)

We wanted to take apart sticky ideas — both natural and created — and figure out what made them stick. What makes urban legends so compelling? Why do some chemistry lessons work better than others? Why does virtually every society circulate a set of proverbs? Why do some political ideas circulate widely while others fall short?

In short, we were looking to understand what sticks. We adopted

the "what sticks" terminology from one of our favorite authors, Malcolm Gladwell. In 2000, Gladwell wrote a brilliant book called *The Tipping Point*, which examined the forces that cause social phenomena to "tip," or make the leap from small groups to big groups, the way contagious diseases spread rapidly once they infect a certain critical mass of people. Why did Hush Puppies experience a rebirth? Why did crime rates abruptly plummet in New York City? Why did the book *Divine Secrets of the Ya-Ya Sisterhood* catch on?

The Tipping Point has three sections. The first addresses the need to get the right people, and the third addresses the need for the right context. The middle section of the book, "The Stickiness Factor," argues that innovations are more likely to tip when they're sticky. When *The Tipping Point* was published, Chip realized that "stickiness" was the perfect word for the attribute that he was chasing with his research into the marketplace of ideas.

This book is a complement to *The Tipping Point* in the sense that we will identify *the traits* that make ideas sticky, a subject that was beyond the scope of Gladwell's book. Gladwell was interested in what makes social epidemics epidemic. Our interest is in how effective ideas are constructed — what makes some ideas stick and others disappear. So, while our focus will veer away from *The Tipping Point's* turf, we want to pay tribute to Gladwell for the word "stickiness." It stuck.

Who Spoiled Halloween?

In the 1960s and 1970s, the tradition of Halloween trick-or-treating came under attack. Rumors circulated about Halloween sadists who put razor blades in apples and booby-trapped pieces of candy. The rumors affected the Halloween tradition nationwide. Parents carefully examined their children's candy bags. Schools opened their doors at night so that kids could trick-or-treat in a safe environment. Hospitals volunteered to X-ray candy bags.

In 1985, an ABC News poll showed that 60 percent of parents worried that their children might be victimized. To this day, many parents warn their children not to eat any snacks that aren't prepackaged. This is a sad story: a family holiday sullied by bad people who, inexplicably, wish to harm children. But in 1985 the story took a strange twist. Researchers discovered something shocking about the candy-tampering epidemic: It was a myth.

The researchers, sociologists Joel Best and Gerald Horiuchi, studied every reported Halloween incident since 1958. They found no instances where strangers caused children life-threatening harm on Halloween by tampering with their candy.

Two children did die on Halloween, but their deaths weren't caused by strangers. A five-year-old boy found his uncle's heroin stash and overdosed. His relatives initially tried to cover their tracks by sprinkling heroin on his candy. In another case, a father, hoping to collect on an insurance settlement, caused the death of his own son by contaminating his candy with cyanide.

In other words, the best social science evidence reveals that taking candy from strangers is perfectly okay. It's your family you should worry about.

The candy-tampering story has changed the behavior of millions of parents over the past thirty years. Sadly, it has made neighbors suspicious of neighbors. It has even changed the laws of this country: Both California and New Jersey passed laws that carry special penalties for candy-tamperers. Why was this idea so successful?

Six Principles of Sticky Ideas

The Halloween-candy story is, in a sense, the evil twin of the CSPI story.

Both stories highlighted an unexpected danger in a common activity: eating Halloween candy and eating movie popcorn. Both sto-

ries called for simple action: examining your child's candy and avoiding movie popcorn. Both made use of vivid, concrete images that cling easily to memory: an apple with a buried razor blade and a table full of greasy foods. And both stories tapped into emotion: fear in the case of Halloween candy and disgust in the case of movie popcorn.

The Kidney Heist, too, shares many of these traits. A highly *unexpected* outcome: a guy who stops for a drink and ends up one kidney short of a pair. A lot of *concrete* details: the ice-filled bathtub, the weird tube protruding from the lower back. *Emotion*: fear, disgust, suspicion.

We began to see the same themes, the same attributes, reflected in a wide range of successful ideas. What we found based on Chip's research—and by reviewing the research of dozens of folklorists, psychologists, educational researchers, political scientists, and proverb-hunters—was that sticky ideas shared certain key traits. There is no “formula” for a sticky idea—we don't want to overstate the case. But sticky ideas do draw from a common set of traits, which make them more likely to succeed.

It's like discussing the attributes of a great basketball player. You can be pretty sure that any great player has some subset of traits like height, speed, agility, power, and court sense. But you don't need all of these traits in order to be great: Some great guards are five feet ten and scrawny. And having all the traits doesn't guarantee greatness: No doubt there are plenty of slow, clumsy seven-footers. It's clear, though, that if you're on the neighborhood court, choosing your team from among strangers, you should probably take a gamble on the seven-foot dude:

Ideas work in much the same way. One skill we can learn is the ability to *spot* ideas that have “natural talent,” like the seven-foot stranger. Later in the book, we'll discuss Subway's advertising campaign that focused on Jared, an obese college student who lost more than 200 pounds by eating Subway sandwiches every day. The cam-

paign was a huge success. And it wasn't created by a Madison Avenue advertising agency; it started with a single store owner who had the good sense to spot an amazing story.

But here's where our basketball analogy breaks down: In the world of ideas, we can genetically engineer our players. We can *create* ideas with an eye to maximizing their stickiness.

As we pored over hundreds of sticky ideas, we saw, over and over, the same six principles at work.

PRINCIPLE 1: SIMPLICITY

How do we find the essential core of our ideas? A successful defense lawyer says, "If you argue ten points, even if each is a good point, when they get back to the jury room they won't remember any." To strip an idea down to its core, we must be masters of exclusion. We must relentlessly prioritize. Saying something short is not the mission — sound bites are not the ideal. Proverbs are the ideal. We must create ideas that are both simple *and* profound. The Golden Rule is the ultimate model of simplicity: a one-sentence statement so profound that an individual could spend a lifetime learning to follow it.

PRINCIPLE 2: UNEXPECTEDNESS

How do we get our audience to pay attention to our ideas, and how do we maintain their interest when we need time to get the ideas across? We need to violate people's expectations. We need to be counterintuitive. A bag of popcorn is as unhealthy as a whole day's worth of fatty foods! We can use surprise—an emotion whose function is to increase alertness and cause focus—to grab people's attention. But surprise doesn't last. For our idea to endure, we must generate *interest* and *curiosity*. How do you keep students engaged during the forty-eighth history class of the year? We can engage people's curiosity over a long period of time by systematically "opening gaps" in their knowledge—and then filling those gaps.

PRINCIPLE 3: CONCRETENESS

How do we make our ideas clear? We must explain our ideas in terms of human actions, in terms of sensory information. This is where so much business communication goes awry. Mission statements, synergies, strategies, visions—they are often ambiguous to the point of being meaningless. Naturally sticky ideas are full of concrete images—ice-filled bathtubs, apples with razors—because our brains are wired to remember concrete data. In proverbs, abstract truths are often encoded in concrete language: "A bird in hand is worth two in the bush." Speaking concretely is the only way to ensure that our idea will mean the same thing to everyone in our audience.

PRINCIPLE 4: CREDIBILITY

How do we make people believe our ideas? When the former surgeon general C. Everett Koop talks about a public-health issue, most people accept his ideas without skepticism. But in most day-to-day situations we don't enjoy this authority. Sticky ideas have to carry their own credentials. We need ways to help people test our ideas for themselves—a "try before you buy" philosophy for the world of ideas. When we're trying to build a case for something, most of us instinctively grasp for hard numbers. But in many cases this is exactly the wrong approach. In the sole U.S. presidential debate in 1980 between Ronald Reagan and Jimmy Carter, Reagan could have cited innumerable statistics demonstrating the sluggishness of the economy. Instead, he asked a simple question that allowed voters to test for themselves: "Before you vote, ask yourself if you are better off today than you were four years ago."

PRINCIPLE 5: EMOTIONS

How do we get people to care about our ideas? We make them *feel* something. In the case of movie popcorn, we make them feel dis-

gusted by its unhealthiness. The statistic "37 grams" doesn't elicit any emotions. Research shows that people are more likely to make a charitable gift to a single needy individual than to an entire impoverished region. We are wired to feel things for people, not for abstractions. Sometimes the hard part is finding the right emotion to harness. For instance, it's difficult to get teenagers to quit smoking by instilling in them a fear of the consequences, but it's easier to get them to quit by tapping into their resentment of the duplicity of Big Tobacco.

PRINCIPLE 6: STORIES

How do we get people to act on our ideas? We tell stories. Firefighters naturally swap stories after every fire, and by doing so they multiply their experience; after years of hearing stories, they have a richer, more complete mental catalog of critical situations they might confront during a fire and the appropriate responses to those situations. Research shows that mentally rehearsing a situation helps us perform better when we encounter that situation in the physical environment. Similarly, hearing stories acts as a kind of mental flight simulator, preparing us to respond more quickly and effectively.

Those are the six principles of successful ideas. To summarize, here's our checklist for creating a successful idea: a Simple Unexpected Concrete Credentialed Emotional Story. A clever observer will note that this sentence can be compacted into the acronym SUCCEsS. This is sheer coincidence, of course. (Okay, we admit, SUCCEsS is a little corny. We could have changed "Simple" to "Core" and reordered a few letters. But, you have to admit, CCUCES is less memorable.)

No special expertise is needed to apply these principles. There are no licensed stickologists. Moreover, many of the principles have a commonsense ring to them: Didn't most of us already have the intu-

ition that we should "be simple" and "use stories"? It's not as though there's a powerful constituency for overcomplicated, lifeless prose.

But wait a minute. We claim that using these principles is easy. And most of them do seem relatively commonsensical. So why aren't we deluged with brilliantly designed sticky ideas? Why is our life filled with more process memos than proverbs?

Sadly, there is a villain in our story. The villain is a natural psychological tendency that consistently confounds our ability to create ideas using these principles. It's called the Curse of Knowledge. (We will capitalize the phrase throughout the book to give it the drama we think it deserves.)

Tappers and Listeners

In 1990, Elizabeth Newton earned a Ph.D. in psychology at Stanford by studying a simple game in which she assigned people to one of two roles: "tappers" or "listeners." Tappers received a list of twenty-five well-known songs, such as "Happy Birthday to You" and "The Star Spangled Banner." Each tapper was asked to pick a song and tap out the rhythm to a listener (by knocking on a table). The listener's job was to guess the song, based on the rhythm being tapped. (By the way, this experiment is fun to try at home if there's a good "listener" candidate nearby.)

The listener's job in this game is quite difficult. Over the course of Newton's experiment, 120 songs were tapped out. Listeners guessed only 2.5 percent of the songs: 3 out of 120.

But here's what made the result worthy of a dissertation in psychology. Before the listeners guessed the name of the song, Newton asked the tappers to predict the odds that the listeners would guess correctly. They predicted that the odds were 50 percent.

The tappers got their message across 1 time in 40, but they thought they were getting their message across 1 time in 2. Why?

When a tapper taps, she is *hearing the song in her head*. Go ahead and try it for yourself—tap out “The Star-Spangled Banner.” It’s impossible to avoid hearing the tune in your head. Meanwhile, the listeners can’t hear that tune—all they can hear is a bunch of disconnected taps, like a kind of bizarre Morse Code.

In the experiment, tappers are flabbergasted at how hard the listeners seem to be working to pick up the tune. *Isn’t the song obvious?* The tappers’ expressions, when a listener guesses “Happy Birthday to You” for “The Star-Spangled Banner,” are priceless: *How could you be so stupid?*

It’s hard to be a tapper. The problem is that tappers have been given knowledge (the song title) that makes it impossible for them to imagine what it’s like to *lack* that knowledge. When they’re tapping, they can’t imagine what it’s like for the listeners to hear isolated taps rather than a song. This is the Curse of Knowledge. Once we know something, we find it hard to imagine what it was like not to know it. Our knowledge has “cursed” us. And it becomes difficult for us to share our knowledge with others, because we can’t readily re-create our listeners’ state of mind.

The tapper/listener experiment is reenacted every day across the world. The tappers and listeners are CEOs and frontline employees, teachers and students, politicians and voters, marketers and customers, writers and readers. All of these groups rely on ongoing communication, but, like the tappers and listeners, they suffer from enormous information imbalances. When a CEO discusses “unlocking shareholder value,” there is a tune playing in her head that the employees can’t hear.

It’s a hard problem to avoid—a CEO might have thirty years of daily immersion in the logic and conventions of business. Reversing the process is as impossible as un-ricing a bell. You can’t unlearn what you already know. There are, in fact, only two ways to beat the Curse of Knowledge reliably. The first is not to learn anything. The second is to take your ideas and transform them.

This book will teach you how to transform your ideas to beat the Curse of Knowledge. The six principles presented earlier are your best weapons. They can be used as a kind of checklist. Let’s take the CEO who announces to her staff that they must strive to “maximize shareholder value.”

Is this idea simple? Yes, in the sense that it’s short, but it lacks the useful simplicity of a proverb. Is it unexpected? No. Concrete? Not at all. Credible? Only in the sense that it’s coming from the mouth of the CEO. Emotional? Um, no. A story? No.

Contrast the “maximize shareholder value” idea with John F. Kennedy’s famous 1961 call to “put a man on the moon and return him safely by the end of the decade.” Simple? Yes. Unexpected? Yes. Concrete? Amazingly so. Credible? The goal seemed like science fiction, but the source was credible. Emotional? Yes. Story? In miniature.

Had John F. Kennedy been a CEO, he would have said, “Our mission is to become the international leader in the space industry through maximum team-centered innovation and strategically targeted aerospace initiatives.” Fortunately, JFK was more intuitive than a modern-day CEO; he knew that opaque, abstract missions don’t captivate and inspire people. The moon mission was a classic case of a communicator’s dodging the Curse of Knowledge. It was a brilliant and beautiful idea—a single idea that motivated the actions of millions of people for a decade.

Systematic Creativity

Picture in your mind the type of person who’s great at coming up with ideas. Have a mental image of the person? A lot of people, when asked to do this, describe a familiar stereotype—the “creative genius,” the kind of person who thinks up slogans in a hot advertising agency. Maybe, like us, you picture someone with gelled hair and hip clothing, carrying a dog-eared notebook full of ironies and epiphanies, ready to drop everything and launch a four-hour brainstorming ses-

sion in a room full of caffeine and whiteboards. Or maybe your stereotype isn't quite so elaborate.

There's no question that some people are more creative than others. Perhaps they're just born that way. So maybe you'll never be the Michael Jordan of sticky ideas. But the premise of this book is that creating sticky ideas is something that can be learned.

In 1999, an Israeli research team assembled a group of 200 highly regarded ads—ads that were finalists and award winners in the top advertising competitions. They found that 89 percent of the award-winning ads could be classified into six basic categories, or *templates*. That's remarkable. We might expect great creative concepts to be highly idiosyncratic—emerging from the whims of born creative types. It turns out that six simple templates go a long way.

Most of these templates relate to the principle of unexpectedness. For example, the *Extreme Consequences* template points out unexpected consequences of a product attribute. One ad emphasizes the power of a car stereo system—when the stereo belts out a tune, a bridge starts oscillating to the music, and when the speakers are cranked up the bridge shimmies so hard that it nearly collapses. This same template also describes the famous World War II slogan devised by the Ad Council, a nonprofit organization that creates public-service campaigns for other nonprofits and government agencies: “Loose Lips Sink Ships.” And speaking of extreme consequences, let's not forget the eggs sizzling in the 1980s commercial “This is your brain on drugs” (also designed by the Ad Council). The template also pops up spontaneously in naturally sticky ideas—for example, the legend that Newton discovered gravity when an apple fell on his head. (For the other templates, see the endnotes.)

The researchers also tried to use their six templates to classify 200 other ads—from the same publications and for the same types of products—that had not received awards. Amazingly, when the researchers tried to classify these “less successful” ads, they could classify only 2 percent of them.

The surprising lesson of this story: Highly creative ads are more predictable than uncreative ones. It's like Tolstoy's quote: “All happy families resemble each other, but each unhappy family is unhappy in its own way.” All creative ads resemble one another, but each loser is uncreative in its own way.

But if creative ads consistently make use of the same basic set of templates, perhaps “creativity” can be taught. Perhaps even novices—with no creative experience—could produce better ideas if they understood the templates. The Israeli researchers, curious about the ability to teach creativity, decided to see just how far a template could take someone.

They brought in three groups of novices and gave each group some background information about three products: a shampoo, a diet-food item, and a sneaker. One group received the background information on the products and immediately started generating ads, with no training. An experienced creative director, who didn't know how the group had been trained, selected its top fifteen ads. Then those ads were tested by consumers. The group's ads stood out: Consumers rated them as “annoying.” (Could this be the long-awaited explanation for the ads of local car dealerships?)

A second group was trained for two hours by an experienced creativity instructor who showed the participants how to use a free-association brainstorming method. This technique is a standard method for teaching creativity; it's supposed to broaden associations, spark unexpected connections, and get lots of creative ideas on the table so that people can select the very best. If you've ever sat in a class on brainstorming great ideas, this method is probably the one you were taught.

Again, the fifteen best ads were selected by the same creative director, who didn't know how the group had been trained, and the ads were then tested by consumers. This group's ads were rated as less annoying than those of the untrained group but no more creative.

The final group was trained for two hours on how to use the six

creative templates. Once again, the fifteen best ads were selected by the creative director and tested with consumers. Suddenly these novices sprouted creativity. Their ads were rated as 50 percent more creative and produced a 55 percent more positive attitude toward the products advertised. This is a stunning improvement for a two-hour investment in learning a few basic templates! It appears that there are indeed systematic ways to produce creative ideas.

What this Israeli research team did for advertisements is what this book does for your ideas. We will give you suggestions for tailoring your ideas in a way that makes them more creative and more effective with your audience. We've created our checklist of six principles for precisely this purpose.

But isn't the use of a template or a checklist confining? Surely we're not arguing that a "color by numbers" approach will yield more creative work than a blank-canvas approach?

Actually, yes, that's exactly what we're saying. If you want to spread your ideas to other people, you should work within the confines of the rules that have allowed other ideas to succeed over time. You want to invent new ideas, not new rules.

This book can't offer a foolproof recipe. We'll admit it up front: We won't be able to show you how to get twelve-year-olds to gossip about mitosis around the campfire. And in all likelihood your process-improvement memo will not circulate decades from now as a proverb in another culture.

But we can promise you this: Regardless of your level of "natural creativity," we will show you how a little focused effort can make almost any idea stickier, and a sticky idea is an idea that is more likely to make a difference. All you need to do is understand the six principles of powerful ideas.

CHAPTER 1

SIMPLE

Every move an Army soldier makes is preceded by a staggering amount of planning, which can be traced to an original order from the president of the United States. The president orders the Joint Chiefs of Staff to accomplish an objective, and the Joint Chiefs set the parameters of the operation. Then the orders and plans begin to cascade downward—from generals to colonels to captains.

The plans are quite thorough, specifying the "scheme of maneuver" and the "concept of fires"—what each unit will do, which equipment it will use, how it will replace munitions, and so on. The orders snowball until they accumulate enough specificity to guide the actions of individual foot soldiers at particular moments in time.

The Army invests enormous energy in its planning, and its processes have been refined over many years. The system is a marvel of communication. There's just one drawback: The plans often turn out to be useless.

"The trite expression we always use is *No plan survives contact with the enemy*," says Colonel Tom Kolditz, the head of the behavioral sciences division at West Point. "You may start off trying to fight your plan, but the enemy gets a vote. Unpredictable things happen—the weather changes, a key asset is destroyed, the enemy responds in

the moral of the story. Aesop's lesson has traveled the world. In Hungary, people say *savanyu a szolo*—"sour grapes" in Hungarian. In China, they say, "Grapes are sour because you cannot reach them." In Sweden, a little local color was added; the Swedish expression *Surt sa riven om römbären* means "Sour, the fox said, about the rowan-berries."

Clearly, Aesop was illustrating a universal human shortcoming. The fable would not have survived for more than 2,500 years if it didn't reflect some profound truth about human nature. But there are many profound truths that have not seeped into the day-to-day language and thinking of dozens of cultures. This truth is especially sticky because of the way it was *encoded*. The concrete images evoked by the fable—the grapes, the fox, the dismissive comment about sour grapes—allowed its message to persist. One suspects that the life span of Aesop's ideas would have been shorter if they'd been encoded as *Aesop's Helpful Suggestions*—"Don't be such a bitter jerk when you fail."

What the world needs is a lot more fables. On the Web, a satirical site features a "Business Buzzword Generator." Readers can produce their own business buzzwords by combining one word each from three columns, which yields phrases like "reciprocal cost-based re-engineering," "customer-oriented visionary paradigm," and "strategic logistical values." (All of these sound eerily plausible as buzzwords, by the way.) Teachers have their own buzzwords: metacognitive skills, intrinsic motivation, portfolio assessment, developmentally appropriate, thematic learning. And if you've ever talked to a doctor, we don't even have to provide examples. Our favorite from medicine: "idiopathic cardiomyopathy." "Cardiomyopathy" means something is wrong with your heart, and "idiopathic" means "we have no idea why yours isn't working."

Language is often abstract, but *life* is not abstract. Teachers teach students about battles and animals and books. Doctors repair prob-

CHAPTER 3

CONCRETE

One hot summer day a Fox was strolling through an orchard. He saw a bunch of Grapes ripening high on a grape vine. "Just the thing to quench my thirst," he said. Backing up a few paces, he took a run and jumped at the grapes, just missing. Turning around again, he ran faster and jumped again. Still a miss. Again and again he jumped, until at last he gave up out of exhaustion. Walking away with his nose in the air, he said: "I am sure they are sour." It is easy to despise what you can't get.

The fable above, "The Fox and the Grapes," was written by Aesop. According to Herodotus, he was a slave (though he was later freed). Aesop authored some of the stickiest stories in world history. We've all heard his greatest hits: "The Tortoise and the Hare," "The Boy Who Cried Wolf," "The Goose That Laid the Golden Eggs," "The Wolf in Sheep's Clothing," and many more. If any story told in this book is still circulating a few millennia from now, odds are it will be "The Fox and the Grapes."

Even English speakers who've never heard "The Fox and the Grapes" will recognize the phrase "sour grapes," which encapsulates

lems with our stomachs, backs, and hearts. Companies create software, build planes, distribute newspapers; they build cars that are cheaper, faster, or fancier than last year's. Even the most abstract business strategy must eventually show up in the tangible actions of human beings. It's easier to understand those tangible actions than to understand an abstract strategy statement—just as it's easier to understand a fox dissing some grapes than an abstract commentary about the human psyche.

Abstraction makes it harder to understand an idea and to remember it. It also makes it harder to coordinate our activities with others, who may interpret the abstraction in very different ways. Concrete helps us avoid these problems. This is perhaps the most important lesson that Aesop can teach us.

The Nature Conservancy

For fifty years, The Nature Conservancy (TNC) has helped protect environmentally precious areas in the world using the simplest possible method: It buys them. It buys land at market prices, making it off-limits to environmentally damaging uses, such as development or logging. This strategy has come to be known within TNC as "bucks and acres." It had appeal to donors and benefactors, because the results of their gifts were so clear. A big gift bought a big piece of land. A small gift bought a small piece of land. As one donor commented, TNC produced "results you could walk around on."

In 2002, Mike Sweeney, the COO of TNC California, was facing a big challenge. California is particularly important to TNC, because it contains so many environmentally critical areas. California is one of only five Mediterranean climate regions in the world. (The others are the *fynbos* of South Africa, the *matorral* of Chile, the *kwongan* of Australia, and, of course, the Mediterranean.) These Mediterranean climate zones occupy only 2 percent of the world's landmass but host

more than 20 percent of its plant species. If you want to buy environmentally precious land, Mediterranean climates give you a lot of bang for your buck.

In 2002, Sweeney and his staff had taken a map of California and colored in the most environmentally sensitive areas, the areas worth preserving. Astonishingly, 40 percent of the map was colored. This was a non-starter: There weren't enough bucks out there to buy that many acres.

Yet 9 percent of the state was classified as being in "critical danger." Nine percent of California was still far too much to contemplate purchasing, but these regions were environmentally essential; TNC couldn't simply give up on them.

TNC decided to implement some new approaches. "Bucks and acres" couldn't succeed with this vast quantity of land. So instead of owning the land outright, TNC would ensure that the critical areas were *protected against damage*. The organization would pay landowners not to develop their land, buying what's known as a "conservation easement." It would work with local and state governments to change policies and encourage conservation of private and public land. It would focus on important marine areas, where there was no land to buy.

These new strategies made sense—TNC could protect more areas than it could reach through "bucks and acres." But they also had drawbacks. First, they were much less concrete to donors. Donors can't "walk around on" a favorable government regulation. Second, they were also potentially demoralizing for employees—they made progress less tangible. When TNC was focused on land deals, Sweeney said, "it was easy to celebrate a deal closing, to tell everyone, 'John and Mary got this land,' and to pat them on the back." These "milestone moments," so great for morale, were harder to find in the new model. How could TNC make the new strategy more concrete?

What would you do in this situation? Is there a way to recapture

the invaluable tangibility of the "bucks and acres" strategy in a context that was necessarily more ambiguous? You've got 40 percent (or at least 9 percent) of the state to protect, and you can't buy it. How do you explain yourself to donors and partners?

Chip has discussed this case with his students at Stanford, and in grappling with the need for concreteness some students respond by breaking up the impossibly large scale of the challenge—40 percent of California! 9 percent in critical need!—by subdividing it into more tangible "subgoals." For example: "We will protect a 2 percent chunk of California every year for twenty years." Others try to invoke a unit of measurement that we can understand, such as the acre. Most people can visualize an acre. But the scale is too big: 2 percent of California is about two million acres. No one can picture two million acres.

The students are wisely trying to find a way to break up a big, abstract goal into smaller, more concrete subgoals. This is the right idea. But in this case the numbers are just too big. And "acreage" is not necessarily the best way to think. There are 1,500-acre plots of land that are more environmentally precious than other 90,000-acre plots. Thinking about "acreage per year" is akin to a museum curator thinking about "canvases per year," without regard to period, style, or painter.

Here's what TNC did: Instead of talking in terms of land area, it talked about a "landscape." A landscape is a contiguous plot of land with unique, environmentally precious features. The TNC set a goal of preserving fifty *landscapes*—of which twenty-five were an immediate priority—over a ten-year period. Five landscapes per year sounds more realistic than 2 million acres per year, and it's much more concrete.

To the east of Silicon Valley there is a set of brown hills that are the beginnings of a wilderness the size of Yosemite. The brown hills are an important watershed for the San Francisco Bay, but they are

quickly being chipped away by Silicon Valley sprawl. Although the area is important ecologically, it is not like the redwoods or the coast, with beautiful visuals that engage people's imaginations. The hills are covered with grass interspersed with a few oak trees. Most of the year, the grass is brown. Sweeney admits that it's not very sexy. Even local groups in the Silicon Valley area that were interested in protecting open spaces weren't paying attention to the brown hills. But, says Sweeney, "We don't go after stuff because it's pretty. We go after it because it's an ecologically important part of creation."

TNC named the oak savanna the Mount Hamilton Wilderness (based on its highest peak, the site of a local observatory). Identifying the area as a coherent landscape and naming it put it on the map for local groups and policymakers. Before, Sweeney says, Silicon Valley groups wanted to protect important areas close to their homes, but they didn't know where to start. "If you say, 'There's a really important area to the east of Silicon Valley,' it's just not exciting, because it's not tangible. But when you say, 'The Mount Hamilton Wilderness,' their interest perks up."

The Packard Foundation, a Silicon Valley institution created by one of the founders of the Hewlett-Packard Company, provided a large grant to protect the Mount Hamilton Wilderness. Other environmental groups in the Bay Area started campaigning to preserve the area. Sweeney says, "We're always laughing now, because we see other people's documents and they're talking about the Mount Hamilton Wilderness. We say, 'You know we made that up.'"

People who live in cities tend to name and define their neighborhoods: "the Castro," "SoHo," "Lincoln Park," and so forth. These names come to define an area and its traits. Neighborhoods have personalities. The Nature Conservancy created the same effect with its landscapes. The Mount Hamilton Wilderness is not a set of acres; it's an eco-celebrity.

This is not a story about land; it's a story about abstraction. TNC

avoided the trap of abstraction—saving 2 million acres per year—by converting abstract blobs on a map into tangible landscapes. TNC realized, wisely, that the context had grown more ambiguous, and the solutions had grown more ambiguous, but that their *messages* could not be allowed to grow more ambiguous. Concreteness is an indispensable component of sticky ideas.

Understanding Subtraction

What makes something “concrete”? If you can examine something with your senses, it’s concrete. A V8 engine is concrete. “High performance” is abstract. Most of the time, concreteness boils down to specific people doing specific things. In the “Unexpected” chapter, we talked about Nordstrom’s world-class customer service. “World-class customer service” is abstract. A Nordie ironing a customer’s shirt is concrete.

Concrete language helps people, especially novices, understand new concepts. Abstraction is the luxury of the expert. If you’ve got to teach an idea to a room full of people, and you aren’t certain what they know, concreteness is the only safe language.

To see this, we can start by studying math classrooms in Asia. We know, from the news over the years, that East Asian children outperform American children in, well, just about everything (except the consumption of fatty foods). This is especially evident in math. The math skills of Americans fall behind those of Asians early—the gap is apparent in the first grade, and it widens throughout elementary school.

What are Asian schools doing differently? Our stereotype is that these schools operate with almost robotic efficiency. Hours are long and discipline is strict. We think of East Asian students as being less “creative” somehow; we like to think they outperform our students through rote mechanics and memorization. The truth, it turns out, is almost exactly the opposite.

In 1993, a group of researchers studied ten schools in Japan, ten in Taiwan, and twenty in the United States. In each school, they picked two different math teachers to observe, and they observed four lessons with each teacher. The researchers found that *all* the teachers used rote recall quite a bit; it was standard procedure in at least half the lessons observed in every country. But other techniques varied greatly among the three countries.

For instance, consider this question by a Japanese teacher: “You had 100 yen but then you bought a notebook for 70 yen. How much money do you still have?” Or this question, posed by a teacher in Taiwan: “Originally there are three kids playing ball. Two more came later, and then one more joined them. How many are playing now?” As she talked, she drew stick figures on the board and wrote down the equation $3 + 2 + 1$.

Notice that these teachers are explaining abstract mathematical concepts by emphasizing things that are concrete and familiar—buying school supplies and playing ball. Their explanations take advantage of preexisting schemas, a tactic we explored in the “Simple” chapter. Teachers take an existing schema—the dynamics of a six-person ball game—and overlay a new layer of abstraction.

The researchers called this style of questioning Computing in Context. It is pretty much the opposite of “rote recall.” And, contrary to our stereotypes, it occurred about twice as much in Asia as it did in the United States (61 percent of lessons versus 31 percent).

In another case, a Japanese teacher placed on a desk 5 rows of 10 tiles each. Then she took away 3 rows of 10 tiles. She asked a student how many tiles were left, and he gave the correct answer: 20. The teacher then asked the students how they knew that this was a subtraction problem. This teacher provided her students with a visual image of subtraction. Students could build an abstract concept—“subtraction”—on a concrete foundation: 30 tiles being yanked away from an original set of 50. The researchers coded questions like this one as Conceptual Knowledge questions. This type of question was

asked in 37 percent of lessons in Japan, 20 percent in Taiwan, but only 2 percent in the United States.

Using concreteness as a foundation for abstraction is not just good for mathematical instruction; it is a basic principle of understanding. Novices crave concreteness. Have you ever read an academic paper or a technical article or even a memo and found yourself so flummoxed by the fancy abstract language that you were crying out for *an example*?

Or maybe you've experienced the frustration of cooking from a recipe that was too abstract: "Cook until the mixture reaches a hearty consistency." Huh? Just tell me how many minutes to stir! Show me a picture of what it looks like! After we've cooked the dish a few times, then the phrase "hearty consistency" might start to make sense. We build a sensory image of what that phrase represents. But the first time it's as meaningless as $3 + 2 + 1$ would be to a three-year-old.

This is how concreteness helps us understand—it helps us construct higher, more abstract insights on the building blocks of our existing knowledge and perceptions. Abstraction demands some concrete foundation. Trying to teach an abstract principle without concrete foundations is like trying to start a house by building a roof in the air.

Concrete Is Memorable

Concrete ideas are easier to remember. Take individual words, for instance. Experiments in human memory have shown that people are better at remembering concrete, easily visualized nouns ("bicycle" or "avocado") than abstract ones ("justice" or "personality").

Naturally sticky ideas are stuffed full of concrete words and images—think of the Kentucky Fried Rat or the Kidney Heist's ice-filled bathtub. The Kidney Heist legend would have been far less sticky if the man had woken up and found that someone had absconded with his self-esteem.

Yale researcher Eric Havelock studies tales that have been passed down by word of mouth, such as the *Iliad* and the *Odyssey*. He notes that these tales are characterized by lots of concrete actions, with few abstractions. Why? The ancient Greeks certainly had no problem with abstraction—this was the society that produced Plato and Aristotle, after all. Havelock believes that the stories evolved away from abstraction over time. When they were passed along from generation to generation, the more memorable concrete details survived and the abstractions evaporated.

Let's skip to the modern world and another timeless and beautiful domain of expression: accounting. Put yourself in the shoes of an accounting professor who has to introduce accounting principles to college students. To a new student, accounting can seem bewilderingly abstract—the income statement, the balance sheet, T-accounts, accounts receivable, treasury stock. No people or sensory data in sight.

As the teacher, how do you make accounting concepts vivid? Two professors from Georgia State University, Carol Springer and Faye Borthick, decided to try something radically different. In the fall of 2000, Springer and Borthick taught a semester of accounting using, as a centerpiece, a semester-long case study. The case study followed a new business launched by two imaginary college sophomores, Kris and Sandy, at LeGrande State University.

Kris and Sandy had an idea for a new product called Safe Night Out (SNO), a device targeted at parents with teenagers who were old enough to drive. Installed in the teenager's car, the device would record the route and speed of the car. For the first time, parents could confirm whether their car was being driven responsibly.

At this point you, as a student in introductory accounting, become part of the story. Kris and Sandy are your friends, and they've heard that you're taking an accounting class. They need your help. They ask, Is our business idea feasible? How many units would we have to sell in order to pay for our tuition? You are given guidance on how to track

down the costs of the relevant materials (GPS receivers, storage hardware) and partnerships (how much it would cost to sell it on eBay).

The semester-long Kris and Sandy soap opera revealed the role that accounting plays in business life. Every accounting course defines the distinction between fixed and variable costs, but in the soap opera this distinction wasn't so much defined as *discovered*. Kris and Sandy have to pay some costs no matter what, such as the programming expense for developing the product. Those are fixed costs. Other costs are incurred only when products are made or sold—the cost of the materials or eBay's commission, for example. Those are variable costs. If your friends are pouring their tuition money into a start-up business, those distinctions matter.

The case study is an example of learning in context, similar to the teachers in the Asian math classrooms. But in the math classrooms a student might encounter 300 different examples over the course of a semester. In the accounting class, students had one example that was sufficiently rich to encompass a semester's worth of material.

As the semester progresses, you witness, from your hot seat as Kris and Sandy's accountant, the evolution of their business. A local court approaches Kris and Sandy wanting to use the SNO device for its parolees, but it wants to lease the device rather than buy it. How should Kris and Sandy respond? Later, the business begins to grow rapidly, but suddenly Kris and Sandy make a panicked call to you, having bounced a check. They've been selling more units than ever, yet there's no cash in the bank. How is that possible? (This problem is faced by many start-up businesses, and it introduces the difference between profitability and cash flow.) The answer becomes clear to you only after you've worked through a month of payment slips and eBay receipts.

So, did the students learn better? At first it was hard to say. The changes to the course made it hard to compare final exams directly with those of previous years. Some students seemed more enthusiastic about the new course, but others grouched because the case study demanded a lot of time. Over time, however, the benefits of the con-

crete case study became increasingly obvious. After experiencing the case study, students with high GPAs were more likely to major in accounting. The concreteness actually made the most capable students want to become accountants.

But the case study also had positive effects for regular students. In the next accounting course—taken an average of two years later—the first section of the course built heavily on the concepts that students were supposed to have learned in introductory accounting. Students who had worked through the case study scored noticeably higher on this first exam. In fact, the difference in scores was particularly dramatic for students with a C average overall. Generally speaking, they scored twelve points higher. And remember, this is two years after the case study ended. Concreteness sticks.

The Velcro Theory of Memory

What is it about concreteness that makes ideas stick? The answer lies with the nature of our memories.

Many of us have a sense that remembering something is a bit like putting it in storage. To remember a story is to file it away in our cerebral filing cabinets. There's nothing wrong with that analogy. But the surprising thing is that there may be completely different filing cabinets for different kinds of memories.

You can actually test this idea for yourself. The following set of sentences will ask you to remember various ideas. Spend five or ten seconds lingering on each one—don't rush through them. As you move from one sentence to another, you'll notice that it *feels different* to remember different kinds of things.

- Remember the capital of Kansas.
- Remember the first line of "Hey Jude" (or some other song that you know well).
- Remember the *Mona Lisa*.

- Remember the house where you spent most of your childhood.
- Remember the definition of "truth."
- Remember the definition of "watermelon."

David Rubin, a cognitive psychologist at Duke University, uses this exercise to illustrate the nature of memory. Each command to remember seems to trigger a different mental activity. Remembering the capital of Kansas is an abstract exercise, unless you happen to live in Topeka. By contrast, when you think about "Hey Jude," you may hear Paul McCartney's voice and piano playing. (If the phrase "Hey Jude" drew a blank, please exchange this book for a Beatles album. You'll be happier.)

No doubt the *Mona Lisa* memory conjured a visual image of that famously enigmatic smile. Remembering your childhood home might have evoked a host of memories—smells, sounds, sights. You might even have felt yourself running through your home, or remembering where your parents used to sit.

The definition of "truth" may have been a bit harder to summon—you certainly have a sense of what "truth" means, but you probably had no preformulated definition to pluck out of memory, as with the *Mona Lisa*. You might have had to create a definition on the fly that seemed to fit with your sense of what "truth" means.

The definition of "watermelon" might also have involved some mental gyrations. The word "watermelon" immediately evoked sense memories—the striped green rind and red fruit, the sweet smell and taste, the heft of a whole watermelon. Then you might have felt your gears switch as you tried to encapsulate these sense memories into a definition.

Memory, then, is not like a single filing cabinet. It is more like Velcro. If you look at the two sides of Velcro material, you'll see that one is covered with thousands of tiny hooks and the other is covered

with thousands of tiny loops. When you press the two sides together, a huge number of hooks get snagged inside the loops, and that's what causes Velcro to seal.

Your brain hosts a truly staggering number of loops. The more hooks an idea has, the better it will cling to memory. Your childhood home has a gazillion hooks in your brain. A new credit card number has one, if it's lucky.

Great teachers have a knack for multiplying the hooks in a particular idea. A teacher from Iowa named Jane Elliott once designed a message so powerful—tapping into so many different aspects of emotion and memory—that, twenty years later, her students still remember it vividly.

Brown Eyes, Blue Eyes

Martin Luther King, Jr., was assassinated on April 4, 1968. The next day, Jane Elliott, an elementary-school teacher in Iowa, found herself trying to explain his death to her classroom of third-graders. In the all-white town of Riceville, Iowa, students were familiar with King but could not understand who would want him dead, or why.

Elliott said, "I knew it was time to deal with this in a concrete way, because we'd *talked* about discrimination since the first day of school. But the shooting of Martin Luther King, one of our 'Heroes of the Month' two months earlier, couldn't be explained to little third-graders in Riceville, Iowa."

She came to class the next day with a plan: She aimed to make prejudice tangible to her students. At the start of class, she divided the students into two groups: brown-eyed kids and blue-eyed kids. She then made a shocking announcement: Brown-eyed kids were superior to blue-eyed kids—"They're the better people in this room." The groups were separated: Blue-eyed kids were forced to sit at the back of the classroom. Brown-eyed kids were told that they were smarter.

They were given extra time at recess. The blue-eyed kids had to wear special collars, so that everyone would know their eye color from a distance. The two groups were not allowed to mix at recess.

Elliott was shocked at how quickly the class was transformed. "I watched those kids turn into nasty, vicious, discriminating third-graders . . . it was ghastly," she said. "Friendships seemed to dissolve instantly, as brown-eyed kids taunted their blue-eyed former friends. One brown-eyed student asked Elliott how she could be the teacher 'if you've got dem blue eyes.'"

At the start of class the following day, Elliott walked in and announced that she had been wrong. It was actually the *brown-eyed* children who were inferior. This reversal of fortune was embraced instantly. A shout of glee went up from the blue-eyed kids as they ran to place their collars on their lesser, brown-eyed counterparts.

On the day when they were in the inferior group, students described themselves as sad, bad, stupid, and mean. "When we were down," one boy said, his voice cracking, "it felt like everything bad was happening to us." When they were on top, the students felt happy, good, and smart.

Even their performance on academic tasks changed. One of the reading exercises was a phonics card pack that the kids were supposed to go through as quickly as possible. The first day, when the *blue-eyed* kids were on the bottom, it took them 5.5 minutes. On the second day, when they were on top, it took 2.5 minutes. "Why couldn't you go this fast yesterday?" Elliott asked. One blue-eyed girl said, "We had those collars on. . . ." Another student chimed in, "We couldn't stop thinking about those collars."

Elliott's simulation made prejudice concrete—brutally concrete. It also had an enduring impact on the students' lives. Studies conducted ten and twenty years later showed that Elliott's students were significantly less prejudiced than their peers who had not been through the exercise.

Students still remember the simulation vividly. A fifteen-year re-

union of Elliott's students broadcast on the PBS series *Frontline* revealed how deeply it had moved them. Ray Hansen, remembering the way his understanding changed from one day to the next, said, "It was one of the most profound learning experiences I've ever had." Sue Ginder Rolland said, "Prejudice has to be worked out young or it will be with you all your life. Sometimes I catch myself [discriminating], stop myself, think back to the third grade, and remember what it was like to be put down."

Jane Elliott put hooks into the idea of prejudice. It would have been easy for her to treat the idea of prejudice the way other classroom ideas are treated—as an important but abstract bit of knowledge, like the capital of Kansas or the definition of "truth." She could have treated prejudice as something to be learned, like the story of a World War II battle. Instead, Elliott turned prejudice into an *experience*. Think of the "hooks" involved: The sight of a friend suddenly sneering at you. The feel of a collar around your neck. The despair at feeling inferior. The shock you get when you look at your own eyes in the mirror. This experience put so many hooks into the students' memories that, decades later, it could not be forgotten.

The Path to Abstraction: The Blueprint and the Machine

Jane Elliott's simulation of prejudice is compelling evidence of the power of concreteness. But if concreteness is so powerful, why do we slip so easily into abstraction?

The reason is simple: because the difference between an expert and a novice is the ability to think abstractly. New jurors are struck by lawyers' personalities and factual details and courtroom rituals. Meanwhile, judges weigh the current case against the abstract lessons of past cases and legal precedent. Biology students try to remember whether reptiles lay eggs or not. Biology teachers think in terms of the grand system of animal taxonomy.

Novices perceive concrete details as concrete details. Experts perceive concrete details as symbols of patterns and insights that they have learned through years of experience. And, because they are capable of seeing a higher level of insight, they naturally want to talk on a higher level. They want to talk about chess strategies, not about bishops moving diagonally.

And here is where our classic villain, the Curse of Knowledge, inserts itself. A researcher named Beth Bechky studied a manufacturing firm that designed and built the complicated machinery used to produce silicon chips. To build such machinery, the firm needed two sets of skills: engineers who could create brilliant designs, and skilled manufacturing people who could transform those designs into complex physical machines.

If the firm was to succeed, these two sets of people had to be able to communicate smoothly. But, not surprisingly, they spoke different languages. The engineers tended to think abstractly—they spent their day agonizing over drawings and blueprints. The manufacturing team, on the other hand, tended to think on a physical level—they spent their day building machines.

What's most revealing for the Curse of Knowledge is what happened when something went wrong on the manufacturing floor. The manufacturing folks would sometimes run into a problem—something didn't fit or perhaps wasn't receiving enough power. The manufacturers would bring the problem to the engineers, and the engineers would immediately get to work. Specifically, they'd get to work *fixing their drawings*.

For example, the manufacturing team might find a part that didn't fit on the machine. When the team showed the part to the engineers, they wanted to pull out the blueprints and move things around on the drawing. In other words, the engineers instinctively wanted to jump to a higher level of abstraction.

The engineers, Bechky found, made their drawings "increasingly

elaborate" in the hope that the enhanced drawings would clarify the process for the manufacturers. Over time, the drawings became more abstract, which further hampered communication.

The engineers were behaving like American tourists who travel to foreign countries and try to make themselves understood by speaking English more slowly and loudly. They were suffering from the Curse of Knowledge. They had lost the ability to imagine what it was like to look at a technical drawing from the perspective of a nonexpert.

The manufacturing people were thinking, *Why don't you just come down to the factory floor and show me where the part should go?* And the engineering people were thinking, *What do I need to do to make the drawings better?*

The miscommunication has a quality that is familiar, no doubt, to many readers who don't work on silicon chip-making machinery. So how do you fix it? Should both parties learn greater empathy for the other and, in essence, meet in the middle? Actually, no. The solution is for the engineers to change their behavior. Why? As Bechky notes, the physical machine was the most effective and relevant domain of communication. *Everyone* understands the machines fluently. Therefore problems should be solved at the level of the machine.

It's easy to lose awareness that we're talking like an expert. We start to suffer from the Curse of Knowledge, like the tappers in the "tappers and listeners" game. It can feel unnatural to speak concretely about subject matter we've known intimately for years. But if we're willing to make the effort we'll see the rewards: Our audience will understand what we're saying and remember it.

The moral of this story is not to "dumb things down." The manufacturing people faced complex problems and they needed smart answers. Rather, the moral of the story is to find a "universal language," one that everyone speaks fluently. Inevitably, that universal language will be concrete.

Concrete Allows Coordination

In the last chapter, we closed with two unexpected slogans that were used to motivate and coordinate large groups of smart people. The slogans were challenges to build a "pocketable radio" and to "put a man on the moon within the decade." Notice that these slogans are also pleasingly concrete. It is doubtful that Japanese engineers were paralyzed with uncertainty about their mission, or that much time was spent at NASA quibbling about the meaning of "man," "moon," or "decade."

Concreteness makes targets transparent. Even experts need transparency. Consider a software start-up whose goal is to build "the next great search engine." Within the start-up are two programmers with nearly identical knowledge, working in neighboring cubes. To one "the next great search engine" means completeness, ensuring that the search engine returns everything on the Web that might be relevant, no matter how obscure. To the other it means speed, ensuring pretty good results very fast. Their efforts will not be fully aligned until the goal is made concrete.

When Boeing prepared to launch the design of the 727 passenger plane in the 1960s, its managers set a goal that was deliberately concrete: The 727 must seat 131 passengers, fly nonstop from Miami to New York City, and land on Runway 4-22 at La Guardia. ~~The 4-22 runway was chosen for its length—less than a mile, which was much too short for any of the existing passenger jets.~~ With a goal this concrete, Boeing effectively coordinated the actions of thousands of experts in various aspects of engineering or manufacturing. Imagine how much harder it would have been to build a 727 whose goal was to be "the best passenger plane in the world."

The Ferraris Go to Disney World in the R & D Lab

Stone Yamashita Partners, a small consulting firm in San Francisco, was founded by Robert Stone and Keith Yamashita, former Apple cre-

atives. Stone Yamashita is a master of using concrete techniques to help organizations create change. "Almost everything we do is visceral and visual," Keith Yamashita says. The "product" of most consulting firms is often a PowerPoint presentation. At Stone Yamashita, it's much more likely to be a simulation, an event, or a creative installation.

Around 2002, Stone Yamashita was approached by Hewlett-Packard (HP). HP's top management team hoped to win a partnership with Disney, and they asked Stone Yamashita to help prepare a proposal that would highlight HP research, and show how it could help Disney run its theme parks.

HP, like many technology firms, generates great research in its laboratories, but that research isn't always translated into tangible physical products. Researchers get excited about pushing the boundaries of a technology, making products that are complex and sophisticated, while customers generally seek out products that are easy and reliable. The desires of researchers and customers don't always dovetail.

The "presentation" that Stone Yamashita designed was an exhibit that filled 6,000 square feet. Yamashita describes the gist: "We invented a fictitious family called the Ferraris, three generations of them, and built an exhibit about their life and their visit to Disney World."

Walking into the exhibit, you began in the Ferraris' living room, furnished with family photos. Each subsequent room followed the Ferraris through various scenes of their Disney World vacation. HP technology helped them buy tickets, sped their entry into the park, and scheduled their reservations for dinner. Another bit of technology helped them enjoy their favorite rides while minimizing waiting time. Back inside their hotel room at the end of the day, there was a final twist: A digital picture frame had automatically downloaded a picture of them as they rode a Disney World roller coaster.

Stone Yamashita, working with HP's engineers, turned a message about the benefits of collaboration—what could have been a PowerPoint presentation—into a living, breathing simulation. Stone Yama-

shita put hooks into the idea of e-services. They took an abstract idea and made it concrete with an intense sensory experience.

Note that there were two different audiences for the exhibit. The first audience was Disney. Disney's execs were the "novices"—they needed to be shown, in tangible terms, what HP's technology could do for them. Then there were HP's employees, particularly the engineers. They were far from novices. Many engineers had been skeptical about the value of Yamashita's demos. Once the exhibit opened, however, it produced tremendous enthusiasm within HP. It was initially intended to stay up long enough to make the Disney pitch, but, because it was so popular, it remained for three or four months afterward. One observer said, "It became very viral in that others began to ask, 'Did you see that great thing that the labs team did? Did you know that we could do this? Did you know that they did it in only twenty-eight days?'"

Concreteness helped this team of experts coordinate. A diverse group of engineers, accustomed to contemplating difficult technology problems, suddenly came face-to-face with the Ferrari family. By grappling with one family's concrete needs—their tickets and reservations and photos—they did something remarkable: They took abstract ideas from their research labs and turned them into a family picture on a roller-coaster ride.

Concrete Brings Knowledge to Bear: White Things

Grab a pencil and a piece of paper and find a way to time yourself (a watch, a spouse who likes to count, etc.). Here is a do-it-yourself test on concreteness. You'll do two brief fifteen-second exercises. When you've got your supplies ready, set your timer for fifteen seconds, then follow the instructions for Step 1 below.

STEP 1 INSTRUCTIONS:

Write down as many things that are white in color as you can think of.

STOP. Reset your timer for fifteen seconds. Turn the page for the instructions for Step 2.

STEP 2 INSTRUCTIONS:

Write down as many white things in your refrigerator as you can think of.

Most people, remarkably, can list about as many white things from their refrigerators as white anything. This result is stunning because, well, our fridges don't include a particularly large part of the universe. Even people who list more white anything often feel that the refrigerator test is "easier."

Why does this happen? Because concreteness is a way of mobilizing and focusing your brain. For another example of this phenomenon, consider these two statements: (1) Think of five silly things that people have done in the world in the past ten years. (2) Think about five silly things your child has done in the past ten years.

Sure, this is a neat brain trick. But what value does it have? Consider a situation where an entrepreneur used this neat brain trick to earn a \$4.5 million investment from a savvy and sophisticated group of investors.

Kaplan and Go Computers

For an entrepreneur, having the chance to pitch a business idea to local venture capitalists is a big deal, like a budding actor getting an audition with an independent film director. But having a chance to pitch an idea to Kleiner Perkins—the most prestigious firm in Silicon Valley—is more like a private one-on-one audition with Steven Spielberg. You could walk out a star, or you could walk out having blown the biggest chance of your life.

And that's why twenty-nine-year-old Jerry Kaplan was nervous as he stood in the Kleiner Perkins office in early 1987. His presentation would start in about thirty minutes. Kaplan was a former researcher at Stanford who had quit to work at Lotus in its early days. Lotus, with its bestselling Lotus 1-2-3 spreadsheet, became a stock market darling.

Now Kaplan was ready for the next challenge. He had a vision for a smaller, more portable generation of personal computers.

He hung around outside the conference room as the previous entrepreneur finished his presentation. Watching the other entrepreneur, he felt underprepared. As he observed, his nervousness advanced toward panic. The other entrepreneur wore a dark pin-striped suit with a red power tie. Kaplan had on a sport jacket with an open-collared shirt. The other entrepreneur was projecting an impressive color graph onto the whiteboard. Kaplan was carrying a maroon portfolio with a blank pad of paper inside. This did not bode well.

Kaplan had thought that he was showing up for an informal "get to know you" session, but, standing there, he realized how naive he'd been. He had "no business plan, no slides, no charts, no financial projections, no prototypes." Worst of all, the überprepared entrepreneur in the boardroom was facing a skeptical audience that now peppered him with tough questions.

When Kaplan's turn arrived, one of the partners introduced him. Kaplan took a deep breath and started: "I believe that a new type of computer, more like a notebook than a typewriter, and operated by a pen rather than a keyboard, will serve the needs of professionals like ourselves when we are away from our desks. We will use them to take notes, send and receive messages through cellular telephone links; look up addresses, phone numbers, price lists, and inventories; do spreadsheet calculations; and fill out order forms."

He covered the required technology, highlighting the major unknown: whether a machine could reliably recognize handwriting and convert it into commands. Kaplan recounts what happened next:

My audience seemed tense. I couldn't tell whether they were annoyed by my lack of preparation or merely concentrating on what I was saying. . . . Thinking I had already blown it, and therefore had little to lose, I decided to risk some theatrics.

"If I were carrying a portable PC right now, you would sure as

hell know it. You probably didn't realize that I am holding a model of the future of computing right here in my hands."

I tossed my maroon leather case in the air. It sailed to the center of the table where it landed with a loud clap.

"Gentlemen, here is a model of the next step in the computer revolution."

For a moment, I thought this final act of drama might get me thrown out of the room. They were sitting in stunned silence, staring at my plain leather folder—which lay motionless on the table—as though it were suddenly going to come to life. Brook Byers, the youthful-looking but long-time partner in the firm, slowly reached out and touched the portfolio as if it were some sort of talisman. He asked the first question.

"Just how much information could you store in something like this?"

John Doerr [another partner] answered before I could respond. "It doesn't matter. Memory chips are getting smaller and cheaper each year and the capacity will probably double for the same size and price annually."

Someone else chimed in. "But bear in mind, John, that unless you translate the handwriting efficiently, it's likely to take up a lot more room." The speaker was Vinod Khosla, the founding CEO of Sun Microsystems, who helped the partnership evaluate technology deals.

Kaplan said that from that point on he hardly had to speak, as partners and associates traded questions and insights that fleshed out his proposal. Periodically, he said, someone would reach out to touch or examine his portfolio. "It had been magically transformed from a stationery-store accessory into a symbol of the future of technology."

A few days later, Kaplan got a call from Kleiner Perkins. The partners had decided to back the idea. Their investment valued Kaplan's nonexistent company at \$4.5 million.

What transformed this meeting from a grill session—with an anxious entrepreneur in the hot seat—to a brainstorming session? The maroon portfolio. The portfolio presented a challenge to the boardroom participants—a way of focusing their thoughts and bringing their existing knowledge to bear. It changed their attitude from reactive and critical to active and creative.

The presence of the portfolio made it easier for the venture capitalists to brainstorm, in the same way that focusing on "white things in our refrigerator" made it easier for us to brainstorm. When they saw the size of the portfolio, it sparked certain questions: How much memory could you fit in that thing? Which PC components will shrink in the next few years, and which won't? What new technology would have to be invented to make it feasible? This same process was sparked in Sony's Japanese engineering team by the concept of a "pocketable radio."

Concreteness creates a shared "turf" on which people can collaborate. Everybody in the room feels comfortable that they're tackling the same challenge. Even experts—even the Kleiner Perkins venture capitalists, the rock stars of the technology world—benefit from concrete talk that puts them on common ground.

CLINIC

Oral Rehydration Therapy Saves Children's Lives!

THE SITUATION: Each year more than a million children in countries around the world die from dehydration caused by diarrhea. This problem can be prevented at very low cost by getting kids the right kind of fluids. How do you get people invested in this idea?

MESSAGE 1: Here's an explanation from PSI, a nonprofit group that addresses health problems in developing countries:

Diarrhea is one of the leading killers of young children in developing countries, causing over 1.5 million child deaths annually. Diarrhea itself is not the cause of death, but rather dehydration, the loss of body fluid. Approximately three quarters of the body is composed of water, and if fluid loss exceeds ten percent of total body fluid, vital organs collapse, followed by death. If an episode is severe, as with cholera, death can occur within just eight hours.

To prevent life-threatening dehydration it is necessary to increase liquid intake in quantities sufficient to replenish the fluids and electrolytes lost with diarrhea. The best liquid for this purpose is a blend of electrolytes, sugar, and water, known as oral rehydration salts. ORS restores body fluid and electrolytes more rapidly than any other liquid, and does so even when the intestinal wall is compromised by disease.

COMMENTS ON MESSAGE 1: Quick: How solvable is this problem? Suppose you were a health official in a developing nation. What would you do tomorrow to start saving kids?

To be fair, this message appears on a Web page that describes what PSI has been doing to solve this problem. The text doesn't necessarily reflect how the organization might approach decision-makers to persuade them to act. The information is written in language that creates credibility; there is lots of scientific language and exposition. If the problem sounds too complex, however, that could deter people from trying to solve it.

MESSAGE 2: This message is from James Grant, who was the director of UNICEF for many years. Grant always traveled with a packet filled

with one teaspoon of salt and eight teaspoons of sugar—the ingredients for Oral Rehydration Therapy (ORT) when mixed with a liter of water. When he met with the prime ministers of developing countries, he would take out his packet of salt and sugar and say, "Do you know that this costs less than a cup of tea and it can save hundreds of thousands of children's lives in your country?"

COMMENTS ON MESSAGE 2: Quick: How solvable is this problem? What are you going to do tomorrow to start saving these children's lives? Grant's message brings you to the table, helps you bring your knowledge to bear. Maybe you're brainstorming ways of getting salt/sugar packets to schools. Maybe you're thinking about publicity campaigns to teach mothers the right ratio of salt and sugar.

Grant is clearly a master of making ideas stick. He brings out a concrete prop and starts with an attention-grabbing unexpected contrast: This packet costs less than a cup of tea, but it can have a real impact. Prime ministers spend their time thinking about elaborate complex social problems—building infrastructure, constructing hospitals, maintaining a healthy environment—and suddenly here's a bag of salt and sugar that can save hundreds of thousands of children.

Grant's message does sacrifice the statistics and the scientific description that add credibility to the PSI message. But, as the director of UNICEF, he had enough credibility to keep people from questioning his facts. So Grant left the (uncontested) factual battle behind and fought the motivational battle. His bag of salt and sugar is the equivalent of Kaplan's maroon portfolio in the venture-capital presentation: It helps the members of the audience bring their expertise to the problem. You can't see it and not start brainstorming about the possibilities.

SCORECARD		
Checklist	Message 1	Message 2
Simple		✓
Unexpected		✓
Concrete		✓
Credible	✓	
Emotional	✓	
Story		

PUNCH LINE: This Clinic is one of our favorite before-and-after examples in the book, because it shows how powerful a concrete idea can be. The moral is to find some way to invite people to the table, to help them bring their knowledge to bear. Here, a prop works better than a scientific description.

Making Ideas Concrete

How do we move toward concrete ideas for our own messages? We might find our own decisions easier to make if they are guided by the needs of specific people: our readers, our students, our customers.

General Mills is one of the world's largest manufacturers of consumer products. Its brands include Pillsbury, Cheerios, Green Giant, Betty Crocker, Chex, and many others. One of the largest brands in the company, from a sales perspective, is Hamburger Helper. Melissa Studzinski, a twenty-eight-year-old from Michigan, joined General Mills in 2004 as Hamburger Helper's brand manager.

When she joined the team, Hamburger Helper had been in a decade-long slump. The CEO, frustrated by the decline, announced that his number one goal for 2005 was to fix and grow the Hamburger

Helper brand. Studzinski, the newest person on the team, was eager to tackle the challenge.

When she started the job, she was given three huge binders full of data and stats: sales and volume data, advertising-strategy briefs, product information, and market research on the brand's customers. The binders were difficult to pick up, let alone absorb into memory. She called them the "death binders."

A few months later, Studzinski's team decided to put the data aside and try something new. They made plans to send members of the Hamburger Helper team—marketing, advertising, and R & D staffers—out into the homes of Hamburger Helper customers. The idea was known informally as "Fingertips," because the General Mills employees needed to have a picture of the brand's customers at their fingertips.

A call went out for mothers (the predominant customers of Hamburger Helper) who were willing to let strangers come into their homes and gawk at them while they cooked. The team visited two to three dozen homes. Studzinski visited three homes, and the experience stuck with her. "I had read and I could recite all the data about our customers," she says. "I knew their demographics by heart. But it was a very different experience to walk into a customer's home and experience a little bit of her life. I'll never forget one woman, who had a toddler on her hip while she was mixing up dinner on the stove. We know that 'convenience' is an important attribute of our product, but it's a different thing to see the need for convenience firsthand."

Most of all, Studzinski learned that moms and their kids really valued predictability. Hamburger Helper had eleven different pasta shapes, but kids didn't care about different shapes. What they did care about was flavor, and moms just wanted to buy the same predictable flavor their kids wouldn't reject. But Hamburger Helper had more than thirty different flavors, and moms struggled to find their favorites among the massive grocery-store displays. Food and beverage companies constantly push to develop new flavors and packages, but Studzinski needed to resist this push. "Moms saw new flavors as risky," she says.

Using this concrete information about moms and kids, the team convinced a diverse collection of people across the organization—in groups ranging from supply chain and manufacturing to finance—to simplify the product line. According to Studzinski, the cost savings were “huge,” yet moms were happier because it was easier to find their families’ favorites on grocery store shelves. The insight to simplify the product line—along with other key insights concerning pricing and advertising—sparked a turnaround for the brand. At the end of fiscal year 2005, Hamburger Helper’s sales had increased 11 percent.

Studzinski says, “Now when I’ve got a decision to make about the brand, I think of the women I met. I wonder what they would do if they were in my shoes. And it’s amazing how helpful it is to think that way.”

The same philosophy is just as useful for ideas that are more transcendent. The Saddleback Church is a very successful church in a suburb of Irvine, California, that has grown to more than 50,000 members. Over the years, the church’s leaders have created a detailed picture of the kind of person they’re trying to reach. They call him “Saddleback Sam.” Here’s how Rick Warren, the minister of the Saddleback Church, describes him:

Saddleback Sam is the typical unchurched man who lives in our area. His age is late thirties or early forties. He has a college degree and may have an advanced degree. . . . He is married to Saddleback Samantha, and they have two kids, Steve and Sally.

Surveys show that Sam likes his job, he likes where he lives, and he thinks he’s enjoying life more now than he was five years ago. He’s self-satisfied, even smug, about his station in life. He’s either a professional, a manager, or a successful entrepreneur.

. . . Another important characteristic of Sam is that he’s skeptical of what he calls “organized” religion. He’s likely to say, “I believe in Jesus. I just don’t like organized religion.”

The profile goes into much greater depth: Sam and Samantha’s tastes in pop culture, their preferences about social events, and so on.

What does “Saddleback Sam” accomplish for church leaders? Sam forces them to view their decisions through a different lens. Say someone proposes a telemarketing campaign to local community members. It sounds as if it has great potential to reach new people. But the leaders know from their research that Sam hates telemarketers, so the idea is scratched.

And thinking about Saddleback Sam and Samantha isn’t limited to church leaders. There are hundreds of small ministries at the Saddleback Church: grade school classes, Mother’s Day Out programs, a men’s basketball league. All are led by volunteer members who don’t receive day-to-day direction from paid church staff. But these diverse programs work together because people throughout the church know whom they’re trying to reach. “Most of our members would have no trouble describing Sam,” Warren says.

By making Saddleback Sam and Samantha a living, breathing, concrete presence in the minds of the members of the Saddleback Church, the church has managed to reach 50,000 real Sams and Samanthas.

Of the six traits of stickiness that we review in this book, concreteness is perhaps the easiest to embrace. It may also be the most effective of the traits.

To be simple—to find our core message—is quite difficult. (It’s certainly worth the effort, but let’s not kid ourselves that it’s easy.) Crafting our ideas in an unexpected way takes a fair amount of effort and applied creativity. But being concrete isn’t hard, and it doesn’t require a lot of effort. The barrier is simply forgetfulness—we forget that we’re slipping into abstractionspeak. We forget that other people don’t know what we know. We’re the engineers who keep flipping back to our drawings, not noticing that the assemblers just want us to follow them down to the factory floor.