

DECISIVE

HOW TO MAKE BETTER CHOICES IN LIFE AND WORK



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THE BESTSELLING AUTHORS OF *SWITCH* AND *MADE TO STICK*

(Back Matter & Endnotes)

Introduction & Chapter 1 from *Decisive* by Chip and Dan Heath

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NEXT STEPS

If you've finished *Decisive* and are hungry for more, visit our website: <http://www.heathbrothers.com/>

Check out the "Resources" section. You can register to get instant access to *free* materials like these:

One-Page Overview. A printable overview of the WRAP framework, perfect for tacking up next to your desk.

The Decisive Workbook. A collection of tips and suggestions for putting into practice the ideas in this book. For example:

- A technique that stops group discussions from getting stuck in a narrow frame
- Advice about how to find the people who have solved your problem
- A question for challenging the "status-quo bias," which deters us from making useful changes
- More thoughts on setting tripwires in your life and work

12 Decision Situations. Some thoughts on applying the WRAP framework to these dilemmas:

- Should I break up with my boyfriend/girlfriend?
- Which TV should I buy?
- What do I do about the coworker I hate?
- And nine others!

The Decisive podcasts. Short podcasts, recorded by the authors, that cover the following topics in more depth:

- "Decisive for the Chronically Indecisive"
- "Decisive for Job Decisions"

Decisive Book Club Guide. If you're reading *Decisive* as part of a book club, this guide offers suggested questions and topics for your discussion.

RECOMMENDATIONS FOR FURTHER READING

Start Here:

Daniel Kahneman (2011). *Thinking, Fast and Slow*. A very complete picture of what we know about the psychology of decision making from the Nobel Prize winner who did much of the trailblazing research. Brilliant, insightful, and fun to read.

J. Edward Russo and Paul J. H. Schoemaker (2002). *Winning Decisions: Getting It Right the First Time*. This is a powerful and easy-to-read book offering an overview of the problems of decision making, along with the authors' solid recommendations for tackling those problems.

For Even More:

Dan Ariely (2008). *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. A popular book about the irrational decisions we make, written with wit by one of the cleverest researchers in the field of decision making.

Richard H. Thaler and Cass R. Sunstein (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Great book by a behavioral economist and a law professor. Should be required reading for HR leaders, government officials, and anyone else who designs systems that allow other people to make choices.

Michael A. Roberto (2009). *Know What You Don't Know: How Great Leaders Prevent Problems Before They Happen*. This is an insightful book for leaders in government, health care, public safety, and technology who need to prepare for the unexpected.

Paul B. Carroll and Chunka Mui (2008). *Billion Dollar Lessons: What You Can Learn from the Most Inexcusable Business Failures of the Last 25 Years*. The authors, a journalist and a consultant, analyze a series of billion-dollar mistakes in the business world and share advice on how to avoid similar mistakes (on a smaller scale). If you're involved in strategic decisions for your organization, this book will help you avoid major pitfalls.

John Mullins and Randy Komisar (2009). *Getting to Plan B: Breaking Through to a Better Business Model*. Entrepreneurs everywhere will benefit from this framework, created by a Silicon Valley venture capitalist and a business school professor, that explains how to make the critical decisions that determine whether a good idea will develop into a viable business.

Andrew Hallam (2011). *Millionaire Teacher: The Nine Rules of Wealth You Should Have Learned in School*. If you're worried about how to save effectively for retirement, you'll benefit from the insights and advice in this book. Hallam does a great job summarizing the research literature on this topic and giving practical advice based on it.

Aaron T. Beck (1989). *Love Is Never Enough: How Couples Can Overcome Misunderstandings, Resolve Conflicts, and Solve Relationship Problems Through Cognitive Therapy*. Need fresh ideas about making better choices in your relationship? You might get useful ideas from this book, authored by the founder of cognitive behavioral therapy. Though written for married couples, the book's principles can also be applied to other relationships, such as those with co-workers or kids.

CLINICS

In the following three “Clinics,” we’ll describe a real-world situation and challenge you to think about how to apply the WRAP framework to make a better decision. We hope that you’ll find the Clinics a useful synthesis of the book.

Spoiler alert: There are no neat or happy endings to any of the following situations. This is deliberate. A good decision can’t be assessed by the outcome, or else every roulette winner in Vegas would be a decision-making genius. Our focus here is on the process—how can these protagonists tip the odds in their favor by using the WRAP approach?

CLINIC 1

Should a Small Company Sue a Bigger Competitor?

SITUATION

(Note: All the facts in this clinic are drawn from a case study in *Inc.* magazine, written by Jennifer Alsever. See endnotes for link.)

Kim Etheredge and her friend Wendi Levy cofounded Mixed Chicks, a brand of hair products for mixed-race women. After eight years of work, they’d built up the annual revenues to \$5 million. Then, in February 2011, Kim got a disturbing e-mail. One of the retailers who stocked Mixed Chicks reported that Sally Beauty Supply—a retail giant with \$3 billion in revenue—had just started marketing its own line of products for mixed-race women. The name? Mixed Silk. Etheredge couldn’t believe it. An hour later, another retailer called with a similar report.

Etheredge and Levy sent out a colleague to buy a sample, and when they saw the Mixed Silk product, they were furious. It was a rip-off of their own product, they felt, with a similar bottle and package—even the same fonts. And it sold for about half the price of their own product.

They were unimpressed by the quality of Mixed Silk, but they worried that customers wouldn't know the difference when they saw the two products side by side. Soon, they heard from more retailers, who reported that customers were buying the cheaper option.

What are their options?

Etheredge and Levy researched what other entrepreneurs had done in similar situations, and they talked with lawyers about their legal options. They could send a cease-and-desist letter, demanding that Sally Beauty Supply stop making Mixed Silk immediately. But that was risky: If the court ruled against them, they'd have to reimburse the giant retailer for lost revenue, which could be substantial. On the other hand, if they filed a lawsuit and won, they could drive Mixed Silk off the shelves permanently and collect damages on top of that.

The legal option was very expensive: experts estimated \$250,000 to \$500,000 per year in legal costs. The case could drag on for years. Was it worth the time and the distraction?

Then again, what if Mixed Silk and its lower price point ended up crushing Mixed Chicks? How would they feel having not stood up for themselves?

The two founders agonized over the question: Should we sue or not?

How can they make a good decision?

- *Widen Your Options.* The “whether or not to sue” framing is a warning that they may be trapped in a narrow frame. Remember, one question you can ask, to break out of a narrow frame, is the “opportunity cost” question: *What else could we do with the same time and resources?* Imagine the impact if, instead of spending a half million dollars per year on legal fees, Mixed Chicks spent that money on ad-

vertising, or used it to hire 10 new salespeople. A retail expert cited by *Inc.*, James T. Noble, took this analysis a step further, suggesting a great alternative: "Rather than sue, Etheredge and Levy could have repositioned their product as the premium offering and ridden the wave of publicity and market growth created by Sally Beauty. . . . In a way, Sally Beauty's entering the market could be the best thing that ever happens to the business." As another alternative, Mixed Chicks could have used the money and time to wage war on the PR front. They have a classic David vs. Goliath story to tell.

- *Reality-Test Your Assumptions.* Etheredge and Levy were wise to seek out other business owners who had faced similar situations. That's a great way for them to reality-check themselves. They should exercise caution when investigating their legal options, being careful to seek out disconfirming evidence. Certainly the lawyers who might represent them—and earn \$500,000 per year in legal fees—will not be neutral parties! (And we hope those cost estimates came from the "base rates" of other business owners, not from the predictions of lawyers. It would be a disaster if the lawyers were lowballing and the real costs came to \$1 million per year.) To get more accurate legal information, could the founding duo "consider the opposite"? Suppose they sought out the counsel of a corporate lawyer—the kind of person who might represent Sally Beauty Supply—and pay for a few hours of their advice. That counselor could help them zoom out, understanding the base rates of success for lawsuits of this kind. But the lawyer might also help them zoom in, offering them a close-up of *what it's like to be part of a lawsuit like this*. (How does it feel, day-to-day? Does it take over your life? Does it affect your health?)

- *Attain Distance Before Deciding.* As it happens, a month later—in March 2011—Mixed Chicks filed suit. "Kim and I felt the same way," said Levy. "There was no way we could just sit there." This worries us, because it sounds like a decision that may not have been

evaluated with a distanced, long-term view of future consequences. The desire to “stick it” to Sally Beauty Supply is completely understandable—we’d feel it too in their shoes—but is it possible they let their anger dictate their choice? We wonder what would have happened if they’d asked, “What would our successors do?” Looking at the situation from another perspective might have helped them get distance. Another way to look at the situation is to ask: What are their core priorities? If they founded the company to serve the hair needs of mixed-race women, does the lawsuit really serve that goal better than any other option? And what are they going to *stop doing* to make room in their lives for the lawsuit? We suspect they didn’t have a lot of idle time, as growth entrepreneurs, before the suit began. What “List A” items will suffer as a result of this choice?

- *Prepare to Be Wrong.* Levy and Etheredge should run a “pre-mortem” to identify the biggest risks of filing the lawsuit. The biggest risk in our minds is that the lawsuit bleeds their cash reserves, dragging on for years, and it saps their entrepreneurial motivation, leaving them stressed-out and distracted from the rigors of managing a growing business. This situation, in which there’s no clear-cut ending, cries out for a tripwire. Perhaps they could have promised themselves not to spend a dollar over \$750,000. Or that they wouldn’t let it drag on longer than 18 months. They can’t afford to let the lawsuit take over their work, especially when they can anticipate that the day-to-day emotions will be strong and bitter.

Reflections on the process

To us, the biggest risks to avoid in this decision were (1) getting trapped in the narrow frame of “to sue or not to sue” and missing other good options; and (2) making a costly decision because of visceral emotion. At press time, the lawsuit is still ongoing.

CLINIC 2

Should a Young Professional Move to the City?**SITUATION**

Sophia, a single woman in her late 20s, was born in China but immigrated to the United States, earning her MBA at a top-ranked business school. In 2012, she lived in Fort Wayne, Indiana, where she worked in corporate strategy for a large fashion company. She liked her job and her coworkers, but she also wanted a family. “I can’t picture myself being 35 and not being married,” she said. After living in Fort Wayne for five years, and enduring a pretty bleak dating experience, she had begun to worry whether she’d ever find the right guy in the area. “There are no single men here. . . . This is a place where people come to buy a house in the suburbs and raise a family,” she said. One of Sophia’s colleagues actually lived in Chicago and commuted, when necessary, to the Fort Wayne office. She urged Sophia to do the same. With 1.3 million men in the city, Sophia couldn’t complain about a lack of options. (Note: Sophia’s name and location are disguised—so Fort Wayne single men should not take offense—but all other details are accurate.)

What are her options?

Sophia had been flirting with the idea of moving to Chicago for a year or two—she believed her boss would sign off on the move—but she hadn’t gotten serious about it. It seemed like such a hassle: She’d need to sell her home in Fort Wayne, find a place to live in Chicago, and get to know a totally different city. But as the months flew by, with no progress on the dating front, she wondered whether she needed to take the plunge. Should she move or not?

How can she make a good decision?

- *Widen Your Options.* Note the binary choice: Should she move or not? Most of the time that’s a sign of narrow framing. But actually, to her credit, Sophia had considered several other options. She considered

finding a new job, which might entail a move to a better place for singles, but decided that she valued her current job and colleagues too much. And she was still considering ways to make a more intense effort to meet people in Fort Wayne, perhaps by finding some kind of social group to join.

- *Reality-Test Your Assumptions.* How could Sophia gather trustworthy information to guide her decision? First she should consult the world's foremost expert on this subject—i.e., her colleague who lives in Chicago and commutes to Fort Wayne! She should be careful to ask her colleague disconfirming questions: *What's the worst part of living remotely? What regrets do you have about living there? How long did it take you to meet new friends to hang out with there?* On a different front, note that this is a situation where it might be hard to ooch: She could certainly spend a week here and there in Chicago, but that might be the worst of both worlds, with all the hassles of commuting but none of the joys of making new friends and starting a new way of life. This feels like a situation where ooching would be "emotional tiptoeing." She either needs to leap—or, for her own peace of mind, stop thinking about leaping.

- *Attain Distance Before Deciding.* Sophia had been thinking about the move for some time, and the decision ultimately boiled down to whether she was ready to take a risk. Fort Wayne may have been lacking in single men, but it was familiar. It was comfortable. Chicago was exciting to think about, but there were so many unknowns. What if she hated it? What if it was worse? (Notice the echoes here of both mere exposure and loss aversion.) One night, at dinner, a colleague asked her: "What would you tell your best friend to do if she were in this situation?" And Sophia said, without hesitation, "Oh, move to Chicago!" She seemed a bit shocked at how easily the answer had popped out. And that same night, she texted her boss, wondering if he was still amenable to the idea of her moving.

- *Prepare to Be Wrong.* Having resolved to move, Sophia should think through her options if Chicago does not work out. One of her best moves would be to keep her house in Fort Wayne for a trial period of, say, 9 or 12 months, renting it out to pay the mortgage. That way, she could easily come right back to her previous life if need be. Sophia should also get a “realistic job preview” from her friend in Chicago: What’s the “warts and all” reality that she should prepare herself for? (Note that by asking disconfirming questions of her friend earlier, she already got some of this texture.) Finally, she could also set a personal tripwire: If she didn’t manage to have a few interesting dates within her first year in Chicago, she might conclude that the problem is with her lifestyle rather than her location. In that scenario, she might resolve to travel less or make a bigger effort to get involved in social activities through a volunteer organization, church, or professional group. (Or, better yet, why not think “AND not OR” and do both? That is, move to Chicago AND start new social activities?)

Reflections on the process

We have warned repeatedly about a binary decision like “move to Chicago or not,” but this one seems legitimate. (She has explored and rejected other options.) So, to us, the critical part of Sophia’s decision was the need to attain distance, to let what was important shine through. In her case, the question “What would you tell your best friend to do?” gave her the distance she needed. At press time, she is still planning to move but had not yet moved. (Maybe she needs a tripwire.)

CLINIC 3

Should We Discount Our Software?**SITUATION**

You are a sales executive at a software company. Your primary product is a tool that helps clients manage their online customer-service interactions more effectively. To date, you have developed a stronghold among high-tech clients, but the senior leaders at your firm are eager to expand sales to government agencies that deal with a high volume of citizens. Unfortunately, the early efforts to sell to government clients have not been impressive. Despite six months of effort by two full-time salespeople, only a few small accounts have been landed. One of your sales reps, Tom, has repeatedly told you that you need to cut prices for the government customers. But you've been a sales manager for a long time, and you know that salespeople always want to lower prices. So you have some healthy skepticism about whether lowering prices is the right move.

What are your options?

It's your job to do something to improve sales in the government market. But it's not clear what your options are. You could do nothing—sometimes it takes time to cultivate relationships; maybe it will simply take more time for the sales efforts to pay off. Or you could cut prices right away and see if that makes a difference. It's not clear what else you could try. That ambiguity is part of your problem.

How can you make a good decision?

- *Widen Your Options.* It's important not to be framed by Tom's complaints into a narrow decision about "whether or not" to reduce price. Price isn't the only variable that explains why customers buy. What other options do you have? If none comes immediately to mind, do your "laddering." First look internally at your bright spots. You've al-

ready closed a few accounts; what can you learn from those successes? Then you can ladder up and see what other software firms are doing in the government market. What seems to work for them? Laddering further up, you might study any product that is sold both to corporations and to government agencies. What are the differences in how the products are configured and sold? Maybe you'd learn, for instance, that government customers expect more hands-on service than do your savvy tech clients. In short, you shouldn't fixate on pricing before you have more data. You need more options and more information.

- *Reality-Test Your Assumptions.* First, ooch. Give Tom the leeway to offer substantial discounts to one or two customers. See what happens. Why guess when you can know? Simultaneously, try considering the opposite: If the theory is that price is the problem, go looking for evidence that price is *not* the problem. For example, you could ask your other sales rep to charge a *higher* price—but one that includes an extensive service package. A few experiments with higher and lower pricing should tell you a lot. As you run these experiments, gather more information by zooming out and zooming in. To zoom out, you might look for third parties—market research companies, for instance—who could tell you whether software companies typically discount for government clients, and if so, how much. (That would be a flavor of “base rate.”) Also, you could zoom in by joining your sales reps for a few customer visits. Meeting your clients personally and hearing their feedback would give you some much-needed texture on the situation.

- *Attain Distance Before Deciding.* You aren't ready to make a decision here. You need better information and more options first. That said, if Tom turns out to be right, you may have competing core priorities on your hands: Should you slash prices (cutting profits) for the sake of building a base of government clients? Is the core priority market share or profit margin? It's worth sounding out your leaders for their perspective.

- *Prepare to Be Wrong.* Without knowing your decision, it's hard to prepare for the aftermath. But you can almost always set a tripwire. For instance, you could set a limit on the experiments you're trying with your salespeople. You might work with Tom on an appropriate tripwire—i.e., if he hasn't closed a deal in two months, given the freedom to discount the price as he requested, then you'll both agree to try a different approach.

Reflections on the process

To deliver procedural justice, it's important to make Tom feel heard in this situation (though that's not the same thing as automatically accepting his perspective). Give him a chance to prove his point of view. As the leader of this effort, though, you can't afford to shut down other options while you pursue Tom's theory. You've got to multitask. Seeking out multiple streams of information, and conducting some smart experiments, will help you clarify what your best options are.

OVERCOMING OBSTACLES

Below are a dozen common roadblocks to using the WRAP process effectively, along with some advice for overcoming them. (Note that the advice is written in jargon-ish shorthand—only someone who has read the book will understand what we're talking about.)

1. I'm a good decision maker, but I make decisions more slowly than I'd like and my choices end up being pretty cautious. How can I be quicker/bolder?

Advice: (1) Sounds like you lean toward the prevention mindset, so ask yourself promotion-minded questions such as, "How would I make this decision if I was focused on opening up opportunities for myself?" (2) Try asking yourself, "What would I advise my best friend to do?" Your caution may be the result of short-term fears (such as embarrassment) that aren't that important in the long run. Attaining some mental distance may help you see that. (3) If you're worried what will happen if your choice turns out poorly, consider setting a tripwire (based on a date or a budget) that will make you comfortable that you've limited your losses.

2. We are an understaffed firm in a chaotic market. We don't have time to work through an elaborate process every time we make a decision.

Advice: Here's an Express Version of the WRAP process. (1) Widen: Add one more option to your consideration set. (If you can't think of one easily, look for someone who's solved your problem, via your network of contacts or a simple

Internet search.) (2) Reality-Test: Call one expert who can educate you about the “base rates” in your situation (for example, odds of success or typical timelines). (3) Attain Distance: Resolve tough dilemmas by asking which option best fits your core priorities. (4) Prepare: Bookend the future—spend an hour thinking about what could go wrong and what could go right, and then do something to prepare for both contingencies.

3. My spouse (or my coworker) wants to do something I think is crazy.

Advice: (1) Perhaps they’re falling prey to an overly narrow frame, thinking that the crazy idea is the only one that would achieve their goals. Can you propose a couple of other options that would be attractive but less wacko? (2) Can you get them to “go to the *genba*”? That is, can you send them on a mission where they will absorb useful texture and nuance? (For example, a budding jewelry designer might be sent to a crafts fair to count the underwhelming number of sales made by a particular jeweler in a 30-minute period.) (3) Remember the topiary-sculpture business example from the text: You can use tripwires to specify the acceptable risk for a crazy idea.

4. We analyze and analyze, but nothing ever seems to get decided.

Advice: (1) If your slowness is driven by “bargaining,” then maybe it’s worth the wait. Your team’s decision may improve as a result of considering different options and opposing views. (2) Are you analyzing something that would be quicker to test? Reframe your choice as an experiment, a la Intuit. (3) Ask the Andy Grove question: If you were replaced, what would your successors do? (4) If it’s fear of risk that’s making you slow to decide, do a premortem analysis and figure out ways to cap your potential losses.

5. The problem we have is that everyone is scared to make a decision. Doing anything new is a big career risk because you are putting your neck on the chopping block. It’s safer to keep doing what we’re doing.

Advice: (1) Try using the Roger Martin question: “What would have to be

true for each option to be right?" Answering that question in a group can help *distribute ownership* of the decision. If everyone agrees on the "conditions" that you'll use to make the final choice, then everyone is equally responsible for the decision. (2) Keep your head off the chopping block by ooching before you leap. If an ooch flops, you've only taken a limited risk. (3) Mere exposure makes the status quo seem safe and comfortable, while new ideas seem risky. Try to make the new idea feel safer by finding someone else who has solved your problem. Talk up the fact that the solution already exists—someone else has already taken the risk. (4) Remember Dave Hitz's comment that the "best way to defend a decision is to point out its flaws"? Acknowledge the risks in your idea AND set tripwires that specify the conditions under which you'd reverse yourself. (If you've publicly anticipated and prepared for bad outcomes, it's less likely you'll be scapegoated.)

6. How do I know when I've got enough options?

Advice: (1) Try to "fall in love twice." Keep searching until you've got two really good options. (2) The purpose of multitracking is to let you easily compare and contrast options, which helps you map out the landscape of what's possible. If incremental options aren't helping you get smarter, you've probably done enough. Call off the search for more. (3) Be careful not to collect so many options that you don't have the time or resources to "reality-test" them. (For example, the aspiring home buyer will need to limit her serious options to about 4 to 7 homes rather than 30, just because of logistical reality.) (4) If one of your options doesn't have any advocates, drop it from contention. (Or, if it's a personal decision, discard any option that never seems to cycle to the top of your mental wish list.)

7. We always go through the motions of exploring and analyzing decisions, but then ultimately the boss does what he wants to do.

Advice: (1) Consider the opposite: Maybe the boss is right. He may be considering a wider set of information than you; recall FDR's advisers who were surprised that he knew their tidbit of gossip and something else besides. But if you're still skeptical about your boss's judgment, read on. (2) If your boss

will inevitably make the final call based on his “gut,” then could you invest in training his gut? For instance, you could try to arrange a “close-up” for him—some kind of real-world visit (to a retail store, a customer site, a patient’s home, etc.) that would inform his intuition. (3) In meetings, find ways to remind the group of the organization’s core priorities. Surfacing those priorities might make it harder for your boss to go rogue. (4) Give up on today’s decision but start thinking about the next round: Try to get your boss on record about some tripwires. For example, what circumstances would convince him to reconsider the decision nine months down the road?

8. I have tried advising my son/daughter using ideas similar to these and they just won’t listen. They do what they want to do anyway.

Advice: (1) For kids of a certain age, parents are genetically disqualified as advisers. So find someone more “credible” whom they might trust. Perhaps you could get someone who has lived their choice to give your kid a realistic preview of what’s involved. (For example, a teen contemplating skipping college to pursue an acting career in NYC might benefit from hearing—from the mouth of an actual struggling actor—what that lifestyle will be like.) (2) Ask your kid, “If I let you make this choice, what am I going to see that will convince me that you’ve made the best possible choice?” (Sample answer for the aspiring NYC actor: “Mom, I just know this is going to make me happy and that I can live frugally enough to make it.”) Having these overconfident predictions on record will give you leverage when/if the claims prove false. (Or, conversely, they may help you to realize that your kid was right all along!)

9. We have too much information. A blizzard of customer data. To really process all of it would make our decisions take four times as long.

Advice: (1) Maybe you’re too zoomed in. Experts make better predictions when they zoom out and look at base rates rather than trying to predict based on the idiosyncrasies of individual cases. (2) You don’t need to predict when you can know. Is there a way you can ooch and thereby avoid the cycle

of over-thinking? (3) Could you be obsessing about a decision that just isn't worth it? Try doing the 10/10/10 analysis to see whether the outcome truly matters enough to agonize about.

10. The culture here makes no one want to give up on a bad project or bad idea, because that means you have to admit failure. This silly persistence hurts us because it drains resources that could go to new projects. What should I do?

Advice: (1) Remember to toggle between the prevention and promotion mindsets, as did the companies who fared best after recessions. In your situation, the promotion mindset may help people reorient themselves toward seizing new opportunities rather than sticking with failed choices. (2) Try to insert some disconfirming views. Can you have people war-game what competitors or customers will do if the bad project persists? Better to admit failure now than face disaster in the future. (3) Andy Grove faced a similar situation with Intel's memory business, which had begun as a tremendous success but slid slowly into trouble. The question "What would our successors do?" gave him the strength to declare defeat on memories—while doubling down on microprocessors. (4) Set up a tripwire in the form of a resource partition that forces re-evaluation at a specified time. (For example, "We are going to give this legacy project six more months, or \$250,000 in additional investment, but if it doesn't turn around by then, we'll rethink it.") That may make it easier and less political to change course.

11. I know what the right thing to do is, but I'm not sure I could ever sell it politically. So should I fight for the right thing or just resign myself to the "sausage factory"?

Advice: (1) Think "AND not OR": Be careful not to frame the issue in black-and-white terms until you've made sure there are no solutions that would allow you to do the right thing AND satisfy your colleagues' issues. (2) Be a devil's advocate. Even if you don't sway the final decision, you might still have an impact on the way the decision is implemented. (3) Appeal to core priorities. If the "right thing" is what's most consistent with your organization's

stated values, then the burden should be on your colleagues to dispute those values, instead of arguing with you personally. (4) If the cause is lost, shift to bookending. Find ways to cap the potential harm you envision. In doing so, you'll be protecting the organization—and also marking yourself as the one wise person who saw the harm coming. (5) And don't forget to assume positive intent: Your colleagues may be wrong (or you may be), but chances are all of you want to do what's best.

ENDNOTES

Introduction

- 2 **Daniel Kahneman.** The “rarely stumped” quote is from page 97, and the “normal state” quote is from page 85 of Daniel Kahneman (2011), *Thinking, Fast and Slow* (New York: Farrar, Straus & Giroux). In this book, Kahneman brilliantly simplifies the confusing zoo of biases and errors that have been documented by the decision literature and shows how they are systematically produced by “what you see is all there is.” To see how this principle produces the biases we cover in *Decisive*, see his analysis of narrow framing (p. 87), overconfidence (pp. 199–201, 209–12, and 259–63), confirmation bias (pp. 80–84), and emotion and indecision (pp. 401–6).
- 3 **Career choices.** The 40% failure rate is described in Brooke Masters, “Rise of a Headhunter,” *Financial Times*, March 30, 2009, <http://www.ft.com/cms/s/0/19975256-1af2-11de-8aa3-0000779fd2ac.html#axzz2401DwtbW>. Describing the costs of these decisions, Kevin Kelly, the CEO of the prominent executive search firm Heidrick & Struggles, says, “It’s expensive in terms of lost revenue. It’s expensive in terms of the individual’s hiring. It’s damaging to morale.” The teaching study is National Commission on Teaching and America’s Future, “Policy Brief: The High Cost of Teacher Turnover,” <http://nctaf.org/wp-content/uploads/NCTAFCostofTeacherTurnoverpolicybrief.pdf>. The lawyer statistic is from Alex Williams, “The Falling-Down Professions,” *New York Times*, January 6, 2008, <http://www.nytimes.com/2008/01/06/fashion/06professions.html>. (Interestingly, 60% of doctors had considered getting out of medicine because of low morale.)
- 3 **Business decisions.** The study of 2,207 business decisions is cited in Dan Lovallo and Olivier Sibony (2010), “The Case for Behavioral Strategy,” *McKinsey Quarterly* 2: 30–45. A study by KPMG International in 1999 looked at shareholder returns on corporate mergers relative to the performance of other companies in the same industry one year after the announcement of the

- merger. Using this commonly cited standard of success, it “found that 83% of mergers failed to unlock value.” David Harding and Sam Rovit (2004), *Mastering the Merger* (Boston: Harvard Business School Press). Of mergers, 83% failed to increase shareholder and half actually destroyed it.
- 3 **On the personal front.** Elderly regrets are discussed in Thomas Gilovich and Victoria Husted Medvec (1995), “The Experience of Regret: What, When, and Why,” *Psychological Review* 102: 379–95.
 - 4 **Guts full of questionable advice.** The Ultimate Red Velvet Cheesecake is here: <http://abcnews.go.com/Business/diet-disasters-top-calorie-heavy-menu-items/story?id=14114606#.UA2nOLTUPYQ;McDonald'scheeseburgers>, <http://nutrition.mcdonalds.com/getnutrition/nutritionfacts.pdf>; Skittles, <http://www.wrigley.com/global/brands/skittles.aspx#panel-3>. Liz Taylor's marriage history can be found in her entry in Wikipedia.
 - 5 **Guts can't make up their minds.** Tattoo reversals: http://www.boston.com/lifestyle/fashion/articles/2011/09/02/tattoo_remove_fuels_reverse_trend_tattoo_removal/ (accessed 9/27/2012). The New Year's resolutions study was by Richard Wiseman of the University of Hertfordshire and is discussed in Alok Jha, “New Year Resolution? Don't Wait Until New Year's Eve,” *Guardian*, December 27, 2007, <http://www.guardian.co.uk/science/2007/dec/28/sciencenews.research>.
 - 5 **Lovallo and Sibony study.** This impressive study is described in Dan Lovallo and Olivier Sibony (2010), “The Case for Behavioral Strategy,” *McKinsey Quarterly* 2: 30–45. The Sibony analogy of the courtroom is in Bill Huyett and Tim Keller (2011), “How CFOs Can Keep Strategic Decisions on Track,” *McKinsey on Finance* 38: 10–15. The Lovallo quote is from an interview of Dan Lovallo by Chip Heath in April 2012.
 - 7 **Franklin moral algebra.** The full text of this letter is widely available on the Web or in John Towill Rutt (1831), *Life and Correspondence of Joseph Priestley in Two Volumes*, vol. 1 (London: R Hunter). See entry for September 10, 1772, on page 182.

Chapter 1: The Four Villains of Decision Making

- 9 **Steve Cole, AND not OR.** Cole quotes are from interviews of Cole by Chip Heath in May 2011 and June 2012.
- 11 **One vendor that was uniquely capable.** Paul Nutt, whom we'll introduce in chapter 2, found in one large study that when organizations asked vendors for one round of solutions and picked the best option (the typical proposal process in most organizations), they ended up choosing an option

- that was a long-term success 51% of the time (see table 4, page 83). When they used the input from the initial search to learn about the field and then conducted a second search, their success rate jumped to 100%. Paul C. Nutt (1999), "Surprising but True: Half the Decisions in Organizations Fail," *Academy of Management Executive* 13: 75–90.
- 11 **Confirmation bias.** The smoker study is Timothy C. Brock (1965), "Commitment to Exposure as a Determinant of Information Receptivity," *Journal of Personality and Social Psychology* 2: 10–19. The Lovallo quote is from an interview of Dan Lovallo by Chip Heath in April 2012.
 - 14 **Memory chips at Intel.** This story is on pages 81–93 of Andy Grove's memoir. Andrew S. Grove (1996), *Only the Paranoid Survive* (New York: Currency Doubleday). The Grove quotes summarizing 1984 and the "new CEO" test are on page 89. The Intel stock calculations were performed on Wolfram-Alpha on April 3, 2012. Barry M. Staw, who has done more than any other researcher to understand the organizational reasons why people irrationally escalate commitment to losing courses of action, predicted that the Grove technique would be effective. He says that one way to distinguish reasonable effort from overcommitment is to "schedule regular times to step back and look at a project from an outsider's perspective. A good question to ask oneself at these times is, 'If I took over this job for the first time today and found this project going on, would I support it or get rid of it?'" See page 5 of Barry M. Staw & Jerry Ross (1987), "Knowing When to Pull the Plug," *Harvard Business Review*, March–April 1987: 1–7.
 - 15 **Decision-making as spreadsheets.** The field of decision analysis is based on this kind of approach. For a smart, accessible version of this style of advice, see John S. Hammond, Ralph L. Keeney, and Howard Raiffa (1999), *Smart Choices: A Practical Guide to Making Better Life Decisions* (Boston: Harvard Business School Press).
 - 16 **Odds of a meltdown.** "Odds of Meltdown 'One in 10,000 Years,' Soviet Official Says," April 29, 1986, search "odds of meltdown" at www.apnewsarchive.com.
 - 16 **Who wants to hear actors talk?** Clifford Pickover, "Traveling Through Time," PBS Nova blog, October 12, 1999, <http://www.pbs.org/wgbh/nova/time/through2.html>.
 - 16 **An electrical toy.** This quote is widely reported, but it is so hubristically wrongheaded that we thought it might be an urban legend. The technology historian David A. Hounshell says that this particular version of the quote may or may not be apocryphal, but he reports multiple examples from letters at the

- time of Bell's patent where knowledgeable telegraph scientists and business-people referred to it as a "toy." David A. Hounshell (1975), "Elisha Gray and the Telephone: On the Disadvantages of Being an Expert," *Technology and Culture* 16: 133–61.
- 16 **Beatles story.** See Josh Sanburn, "Four-Piece Groups with Guitars Are Finished," *Time*, October 21, 2011, http://www.time.com/time/specials/packages/article/0,28804,2097462_2097456_2097466,00.html, and the Beatles Bible, <http://www.beatlesbible.com/1962/01/01/recording-decca-audition/>. The Lennon quote is from The Beatles (2000), *The Beatles Anthology* (San Francisco: Chronicle Books), p. 67. Dick Rowe later repented of his "guitar groups are finished" decision and, on the advice of George Harrison, signed the Rolling Stones a year later in 1963. According to Wikipedia, Decca Records' "regret at not signing The Beatles" made Decca willing to bend a great deal in the negotiations with the Rolling Stones. The Stones got "three times the typical royalty rate for a new act, full artistic control of recordings, and ownership of the recording masters" (see http://en.wikipedia.org/wiki/The_Rolling_Stones).
 - 18 **Four steps.** There is wide agreement across authors on the basic stages of a decision process, although in practice every decision book slices and labels them a tad differently. Our slicing of the steps probably owes the most to a great book by J. Edward Russo and Paul J. H. Schoemaker (2002), *Winning Decisions: Getting It Right the First Time* (New York: Currency/Doubleday). Chip taught students for years from an earlier version of their model in a book called *Decision Traps* and is eternally grateful to them for making his early years of teaching easier. The award for the decision model that is most likely to inspire a cartoon spin-off goes to the GOFER model (Goals clarification, Options generation, Fact-finding, consideration of Effects, Review and implementation), from Leon Mann, Ros Harmoni, Colin Power, and Gery Beswick (1988), "Effectiveness of the GOFER Course in Decision Making for High School Students," *Journal of Behavioral Decision Making* 1: 159–68.
 - 19 **Joseph Priestley.** The pros-and-cons analysis is based on Priestley's letters, as compiled by John Towill Rutt (1831), *Life and Correspondence of Joseph Priestley in Two Volumes*, vol. 1 (London: R Hunter). See, especially, letters in 1772 to Dr. Price (July 21, August 25, September 27), Reverend W. Turner (August 24), Reverend T. Lindsey (undated), and Reverend Joshua Toulmin (December 15) and the famous moral-algebra letter from Dr. Franklin (September 10) on pages 175–87. Our overview of Priestley's career benefited from material on his life and accomplishments by the American Chemical Society, which

awards a Priestley Medal each year for contributions to chemistry (search for "Priestley" at acs.org).

- 25 **Intuitive decisions.** A few years back, there was a strong move to celebrate intuition in day-to-day and business decisions. See, for example, Malcolm Gladwell's (2007) account in *Blink: The Power of Thinking Without Thinking* (New York: Back Bay Books), or Gary Klein (2003), *The Power of Intuition: How to Use Your Gut Feelings to Make Better Decisions at Work* (New York: Crown Business). Recently, thanks in part to Daniel Kahneman's accessible explanation of intuition in *Thinking Fast and Slow*, there is a growing popular awareness of the limitations of intuition.

What is sometimes lost in the work celebrating intuition is a sense of the relatively limited domain where it can help us make good decisions. A research consensus is now emerging about situations where intuition reliably generates reasonable answers. Robin Hogarth, one of the researchers who have done the most to clarify situations where intuition does and doesn't work, describes learning environments along a continuum from kind to wicked. When we acquire our intuitions in a kind environment, our gut instincts are likely to be good, but intuitions acquired in wicked environments are likely to be bad. Feedback in kind environments is clear, immediate, and unbiased by the act of prediction. Forecasting the weather for tomorrow is a kind environment. Feedback is rapid (next day) and clear (it snows or it doesn't). And the act of making a prediction doesn't bias the outcome—the rain and snow don't care about the forecaster.

In contrast, the learning environment in an emergency room is wicked because of the lack of long-term feedback. Most ER docs and nurses get good short-term feedback (I either help the patient stop bleeding or I don't) but bad long-term feedback, since they don't see what happens to a patient once he or she leaves the emergency room (e.g., did something we did to stop the bleeding cause greater complications down the road?). The learning environment for new-product launches is wicked on all three dimensions. Feedback is unclear (perhaps Pets.com was a bad idea or perhaps it was just ahead of its time), it is delayed (often for months or years), and it is biased by the very act of prediction (classifying a launch as high priority or low has self-fulfilling ramifications for, say, its ad budget or the quality of the personnel on the launch team). Because of the environments they operate in, we will be better off trusting the intuitions of the weatherman than the entrepreneur or brand manager launching a new product. We should trust the ER doc to find an effective short-term

solution to a health crisis but not to recommend good long-term actions for a chronic condition. For a brief summary of Hogarth's argument, see Robin Hogarth (2001), *Educating Intuition* (Chicago: University of Chicago Press), pp. 218–19.

Somewhat depressingly, the situations where we should most trust our instincts don't characterize many of the most important decisions that we make in life—which college to go to, whom to marry, which product to launch, which employee to promote. Professor Rick Larrick of Duke University has a compact summary of the kinds of environments that have been reliably found to develop good intuition: He calls them “video game worlds”—they are environments that provide quick, unambiguous, unalterable feedback. Video games, however, allow you to die and come back to life multiple times as you learn. For the kinds of decisions that we cover in this book, life doesn't typically allow many do-overs.

Interestingly, Danny Kahneman and Gary Klein had a long debate, extending over several years, about the value of intuition and ended up converging in their views (and in a direction consistent with Hogarth's account above). Even Klein, a strong proponent of the value of intuition, treats intuitive feelings as just one input to the decision process. When asked by *McKinsey Quarterly* whether executives should trust their gut, he responded, “If you mean, ‘My gut feeling is telling me this; therefore I can act on it and I don't have to worry,’ we say you should never trust your gut. You need to take your gut feeling as an important data point, but then you have to consciously and deliberately evaluate it, to see if it makes sense in this context.” Kahneman and Klein eventually agreed that intuition was more trustworthy in situations where the learning environment (1) is predictable and (2) provides good feedback. For the Klein quote, see “When Can You Trust Your Gut?” *McKinsey Quarterly* 2010 2: 58–67. For the account of their conversation written for psychologists, see Daniel Kahneman and Gary Klein (2009), “Conditions for Intuitive Expertise: A Failure to Disagree,” *American Psychologist* 64: 515–26.

- 26 **Van Halen, brown M&Ms.** We first wrote a version of the David Lee Roth tale in a *Fast Company* column published in March 2010. All David Lee Roth quotes are from his autobiography: David Lee Roth (1997), *Crazy from the Heat* (New York: Hyperion). The television story is on page 156, and the brown M&M clause is on pages 97–98. Roth says a university in Colorado didn't pay close attention to the weight guidelines in the contract and the Van Halen stage *sank* through its new rubberized basketball flooring, leading to a replacement cost of \$80,000. The press reported that Roth had trashed the

dressings room and done \$85,000 of damage. "Who am I to get in the way of a good rumor?" says Roth.

- 28 **Baumeister turns.** Roy F. Baumeister, et al. (1998), "Ego Depletion: Is the Active Self a Limited Resource?" *Journal of Personality and Social Psychology* 4: 1252.

Chapter 2: Avoid a Narrow Frame

- 33 **Teen decisions.** The "break up or not?" discussion is from <http://www.ask.com/answers/177313841/break-up-or-not>. The research study is described in Baruch Fischhoff (1996), "The Real World: What Good Is It?" *Organizational Behavior and Human Decision Processes* 65: 232–48. See Fischhoff's summary on page 234 and table 1. (Fischhoff says that 65% of the teens' decisions had no explicit alternatives or one, 30% had two or more real alternatives; a final 5% of cases were decisions that Fischhoff called "seeking or 'designing' options" such as decisions about "what to do about . . ."; we didn't know exactly how to classify the final 5%, so our discussion in the text refers only to the first two categories.) The one category of decisions that violated the "whether or not" tendency to consider only one option was decisions related to clothing. The world's marketers have made it much easier to consider alternatives. Even so, 40% of the teenagers' clothing decisions lacked a second option.
- 35 **Quaker acquires Snapple.** Most of the background and analysis of this case study is in Paul C. Nutt (2004), "Expanding the Search for Alternatives During Strategic Decision-Making," *Academy of Management Executive* 18: 13–28. He covers the Snapple acquisition on pages 17–18. The "billion dollars too high" assessment is in Barnaby J. Feder, "Quaker to Sell Snapple for \$300 Million," *New York Times*, March 28, 1997, <http://www.nytimes.com/1997/03/28/business/quaker-to-sell-snapple-for-300-million.html?pagewanted=all&src=pm>. On the day that Smithburg announced this largest acquisition in company history, the stock of both companies sank, Quaker's by 10%. See Glenn Collins, "Quaker Oats to Acquire Snapple," *New York Times*, November 3, 1994, <http://www.nytimes.com/1994/11/03/business/company-reports-quaker-oats-to-acquire-snapple.html?pagewanted=2>. The "arguing the 'no' side of the evaluation" quote is from page 98 of one of our favorite reads on business decision making, Sydney Finkelstein (2003), *Why Smart Executives Fail* (New York: Portfolio). Finkelstein also discusses the problem of the debt incurred by Quaker. The Feder article above notes that shares of Quaker *rose* when it sold off Snapple at a loss, suggesting that investors applauded the belated decision to get out of a bad situation.

- 36 **A KPMG study.** The Sydney Finkelstein book *Why Smart Executives Fail* devotes a whole chapter to the problems of mergers and acquisitions (see chapter 4, pp. 77–107). The KPMG study is discussed on page 77.
- 37 **Nutt study of 168 strategic decisions.** Paul C. Nutt (1993), “The Identification of Solution Ideas During Organizational Decision Making,” *Management Science* 39: 1071–85. The comparison of failure rates of “whether or not,” single-alternative decisions to failure rates of multiple-alternative decisions is in table 4 on page 1079. Nutt explains the perils of “whether or not” decisions on page 78 of Paul C. Nutt (1999), “Surprising but True: Half the Decisions in Organizations Fail,” *Academy of Management Executive* 13: 75–90.
- 40 **Heidi Price helps students.** The Heidi Price story is based on two conversations between Dan Heath and Heidi Price in July 2011 and April 2012 and a conversation with Caufield Schnug in July 2012.
- 40 **Smart enough to get into Yale.** Economists studied students who had been admitted to two schools of higher and lower prestige but decided to attend the school with lower prestige. Estimated sacrifice in lifetime earnings from attending the less prestigious school: none. See this excellent summary of two studies by Princeton economists Stacy Dale and Alan Krueger: David Leonhardt, “Revisiting the Value of Elite Colleges,” *New York Times*, February 21, 2011, <http://economix.blogs.nytimes.com/2011/02/21/revisiting-the-value-of-elite-colleges/>. The paper that initially established this result is Stacy Berg Dale and Alan B. Krueger (2002), “Estimating the Payoff of Attending a More Selective College: An Application of Selection on Observables and Unobservables,” *Quarterly Journal of Economics* 107: 1491–1527. Leonhardt quotes Krueger: “My advice to students: Don’t believe that the only school worth attending is one that would not admit you. . . . Your own motivation, ambition and talents will determine your success more than the college name on your diploma.”
- 41 **Father J. Brian Bransfield.** Conversation between Dan Heath and J. Brian Bransfield in June 2011 and a subsequent e-mail exchange.
- 43 **Keep the \$14.99 for other purchases.** The opportunity-cost study is discussed in Shane Frederick, et al. (2009), “Opportunity Cost Neglect,” *Journal of Consumer Research* 36: 553–61. The “consider how much hamburger” and Eisenhower quotes are from this same journal article. The stereo story is told in the article without attribution; the additional story background is from a conversation between Chip Heath and Shane Frederick in March 2012.
- 47 **Should Sanders fire Anna?** Story from an interview between “Margaret Sanders” and Dan Heath in October 2011; both “Margaret Sanders” and “Anna” are disguised names.

Chapter 3: Multitrack

- 50 **Lexicon.** The Lexicon story is from a conversation between Dan Heath and David Placek in September 2010 and an older case study on Lexicon that was developed by Chip Heath and Victoria Chang (2002), "Lexicon (A)," Stanford GSB M300A. A version of this story first appeared in a *Fast Company* column we wrote: Dan Heath and Chip Heath, "How to Pick the Perfect Brand Name," *Fast Company*, December/January 2011.
- 53 **Web banner design study.** The study manipulating whether teams designed ads simultaneously or one at a time is Steven P. Dow, et al. (2010), "Parallel Prototyping Leads to Better Design Results, More Divergence, and Increased Self-Efficacy," *Transactions on Computer-Human Interaction* 17 (4). The facts about how participants reacted to the design procedures are on page 16. The Klemmer quotes are from an interview of Scott Klemmer by Chip Heath in September 2010.
- 55 **Eisenhardt Silicon Valley study.** The Eisenhardt research is in Kathleen M. Eisenhardt (1989), "Making Fast Strategic Decisions in High-Velocity Environments," *Academy of Management Journal* 32: 543–76.
- 56 **24 different kinds of jam.** Sheena S. Iyengar and Mark R. Lepper (2000), "When Choice Is Demotivating: Can One Desire Too Much of a Good Thing?" *Journal of Personality and Social Psychology* 79: 995–1006.
- 57 **Triggering decision paralysis.** The best evidence in the research literature is that decision paralysis is not likely to occur until the number of options moves past six, and some recent reviews have questioned whether it exists at all. The typical study in the literature has contrasted a small assortment of 4 to 6 items with a large assortment of 20 to 30 items and, like the jam study discussed here, the initial studies found that people were more likely to delay or resist choosing with the larger, 20- to 30-item assortment. The state of the literature as of the early 2000s was summarized by Barry Schwartz, who argued strongly for choice overload in his 2004 book *The Paradox of Choice: Why More Is Less* (New York: HarperCollins). We wrote about the choice-overload research in our books *Switch* and *Made to Stick*, citing research by Eldar Shafir and others who have found evidence of decision paralysis with as few as two options. But the typical study has implicitly assumed that paralysis kicks in somewhere between 6 options and 20.

Recently some researchers have argued that choice paralysis is not a serious problem even with the larger assortments. The initial demonstrations of choice paralysis attracted a lot of interest, so by 2010 a group of researchers was able to conduct a meta-analysis of over 50 published papers with more

than 5,000 participants. They found that in the studies they reviewed, increasing the number of options did not reliably reduce satisfaction or motivation to choose. Indeed, in situations where people had expertise or well-developed preferences (e.g., common food categories like coffee), more choices tended to increase satisfaction. Benjamin Scheibehenne, Rainer Greifeneder, and Peter M. Todd (2010), "Can There Ever Be Too Many Options? A Meta-analytic Review of Choice Overload," *Journal of Consumer Research* 37: 409–25.

The debate is still ongoing, so if we ever rewrite *Made to Stick* or *Switch*, we'll revisit it to decide whether or not to continue highlighting the research studies of overload that we discussed in those books. But in terms of our advice to multitrack, we simply note that even if choice paralysis kicks in for the twentieth option, the research literature suggests that this is unlikely to be a serious problem for someone adding a second or third option, which is our recommendation here. And even if choice overload turns out to be a problem at small numbers, we suspect, based on Paul Nutt's work and the German technology-firm study below, that it would be worth trading off a little pain from choice overload for a lot of benefits of being able to choose from a set of two or three.

- 57 **Medium-sized German technology firm.** Hans Georg Gemünden and Jürgen Hauschildt (1985), "Number of Alternatives and Efficiency in Different Types of Top-Management Decisions," *European Journal of Operational Research* 22: 178–90. The procedure used to evaluate the decisions retrospectively was rigorous, unfolding in four different sessions of four hours (when was the last time you spent four hours reviewing your previous decisions?), and the distribution suggests the graders were tough on themselves; they rated only 26% of their decisions as very good, with 34% judged as poor and 40% as satisfactory. Of course this evidence is correlational rather than causal, but the researchers eliminated one major possible confound by showing that the superiority of multiple-alternative decisions held for both complex and simple decisions; so it didn't seem to be the case that the only decisions where multiple alternatives were available were the easy ones.
- 59 **Kissinger on options.** The "only one real option" quote is on page 418 of Henry Kissinger (1979), *White House Years* (New York: Little, Brown).
- 60 **Prevention and promotion.** In general, the "prevention" mindset is activated when we think about what we "ought" to do, our duties and obligations (as in the conversation with your son about his club presidency) or when we think about losses (your home price) or dangers (the new technology on the radio). The "promotion" mindset is activated when we think about our

goals, aspirations (as in your son's big goals for his club), or ideals (as in your home-improvement ideas) and when we think about gains or opportunities (as with the new technology). Our culture provides aphorisms that are designed to tickle each mindset. The prevention mindset is represented in "Better safe than sorry" and "A bird in the hand . . ." and "Look before you leap." The promotion mindset is represented in "Seize the day" and "Nothing ventured, nothing gained" and "He who hesitates is lost."

The psychologist who discovered these mindsets is Tory Higgins of Columbia University. He has a forthcoming book on this topic: Heidi Grant Halvorson and E. Tory Higgins (2013), *Focus: Use Different Ways of Seeing the World to Power Success and Influence* (New York: Hudson Street Press).

- 61 **How companies navigated three global recessions.** Ranjay Gulati, Nitin Nohria, and Franz Wohlgezogen (2010), "Roaring Out of Recession," *Harvard Business Review*, March 2010, pp. 4–10.
- 63 **Doreen.** The Doreen story is on pages 89–91 of Susan Nolen-Hoeksema (2003), *Women Who Think Too Much: How to Break Free of Overthinking and Reclaim Your Life* (New York: Holt).

Chapter 4: Find Someone Who's Solved Your Problem

- 68 **The massive scale of Walmart.** The 2012 revenue figure is from Michael T. Duke, "To Our Shareholders, Associates and Customers," <http://www.walmartstores.com/sites/annual-report/2012/CEOletter.aspx>. Other fun facts: Walmart is the world's third-largest employer, behind the U.S. Department of Defense and the People's Liberation Army of China. Ruth Alexander, "Which Is the World's Biggest Employer?" *BBC News Magazine*, March 19, 2012, <http://www.bbc.co.uk/news/magazine-17429786>. If it were a country, it would have the nineteenth-largest economy in the world. "Scary (but True) Facts About Wal-Mart," *Business Pundit*, July 1, 2012, <http://www.businesspundit.com/stats-on-walmart/>. Did you know there are no Walmarts in Australia, continental Europe, or New York City? Walmart, "Our Locations"; <http://corporate.walmart.com/our-story/locations/>; Matt Chaban, "Walmart in New York City: Just How Desperate Is the Retail Giant to Open in the Big Apple?" *Huffington Post*, August 6, 2012, http://www.huffingtonpost.com/2012/08/06/wal-mart-in-new-york-city-losing-fight-to-open-store_n_1748039.html.
- 68 **Sam Walton.** The centralized-checkout story and the "copied" quote are from pages 336–39 of Richard S. Tedlow (2003), *Giants of Enterprise: Seven Business Innovators in the Empires They Built* (New York: Collins). The other examples of borrowing are from Walton's autobiography: Sam Walton and

John Huey (1992), *Sam Walton: Made in America* (New York: Doubleday). The Kmart quote is on page 104, discussion of other discounters on page 54, and distribution-center ideas on page 102. He says that during the early period Walmart was “too small and insignificant for any of the big boys to notice,” so he would show up to the headquarters of a discounter in another part of the country and say, “Hi, I’m Sam Walton from Bentonville, Arkansas. We’ve got a few stores out there.” He reports that most people would bring him in to chat, “perhaps out of curiosity,” and he says, “I would ask lots of questions about pricing and distribution, whatever. I learned a lot that way” (page 105). This is the discount-store equivalent of the pet owners who raise the cute baby alligator until one day it’s big enough to swallow the family dog.

- 70 **Kaiser Permanente.** This story is based on conversations between Chip Heath and Doctors Robert Pearl, Alan Whippy, and Diane Craig in August 2012. Background for the statistical comparison to prostate and breast cancer: Nationwide, it is estimated that between 210,000 and 350,000 patients a year die from sepsis. National Institutes of Health, “Sepsis Fact Sheet,” October 2009, http://www.nigms.nih.gov/education/factsheet_sepsis.htm. Taking the midpoint of that range, if hospitals could match Kaiser Permanente’s 28% reduction, it would be the yearly equivalent of saving 78,000 lives. According to the National Vital Statistics Report for 2009, breast cancer kills about 41,000 and prostate cancer kills 28,000. Kenneth D. Kochanek, et al., “Deaths: Final Data for 2009,” *National Vital Statistics Reports* 60, no. 3 (December 29, 2011): 105 (http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf). Full disclosure: Chip has consulted with Kaiser Permanente on several of their change efforts, which is where he heard of this story, though he had not talked with Whippy or Craig before the conversations for this case study.

- 74 **Dion Hughes and Mark Johnson.** This story is from conversations between Chip Heath and Dion Hughes in September 2010 and March 2012. We asked Scott Goodson, the CEO of StrawberryFrog, who has worked with the two, to talk about his experience with them. Goodson’s agency was founded on a network model, maintaining relationships with a couple of hundred freelancers around the world and picking a relevant subset to pitch each project for clients such as Frito-Lay, Heineken, Google, and Smart Car. Exposed to creative talent around the world, he has high praise for the ideas he gets from Hughes and Johnson: “When I work with them, I’ll give them a couple of days to think about stuff, then I’ll get on the phone and every idea will be like, ‘Oh f*#@, that’s amazing. That’s such a perceptive way of thinking.’” Dion and Mark have

- a unique ability to be super, super strategic, to think about the brand and its promise and what's going on in the world and to tie all that together."
- 79 **Kevin Dunbar's scientific analogies.** The "search for other problems that have been solved" quote and the idea that scientists are often unaware of the critical role analogies play are in Kevin Dunbar (2000), "How Scientists Think in the Real World: Implications for Science Education," *Journal of Applied Developmental Psychology* 21: 49–58. The other quotes and observations are from Kevin Dunbar (1996), "How Scientists Really Reason," in *The Nature of Insight*, ed. Robert J. Sternberg and Janet E. Davidson (Boston: MIT Press).
- 82 **Medical plastics designer analogies.** Bo T. Christensen and Christian D. Schunn (2007), "The Relationship of Analogical Distance to Analogical Function and Preinventive Structure: The Case of Engineering Design," *Memory & Cognition* 35: 29–38.
- 83 **Laddering.** Some marketers use the term "laddering" to talk about processes that get to the core needs of a consumer. A girl may use soap to wash her face, but a marketing "laddering" technique would ask the girl "why" a couple of times to determine that her deeper needs and desires are for "beauty." For the marketers, the movement upward on the ladder is moving upward on an abstract hierarchy of needs. We use the term a little more visually—as you step up the ladder of analogies you will see more, a wider range of analogies and more distant analogies.
- 84 **Fairhurst swimsuit design.** The bulk of the content of this example and most of the quotes, including the extended scene in the Natural History Museum, come from American Public Media, "The Waldo Canyon Fire," *The Story* (hosted by Dick Gordon), June 29, 2012, available at http://thestory.org/archive/The_Story_62912.mp3/view. The "roughness is the key" quote and "83% of medals" statistic are from a video describing why Fairhurst was a finalist in an award for European Inventor of the Year in 2009, hosted at <http://www.epo.org/news-issues/european-inventor/finalists/2009/fairhurst.html>. The "torpedo" quote is from "Inventor Awards to Be Announced," BBC, April 28, 2009, http://news.bbc.co.uk/today/hi/today/newsid_8022000/8022077.stm. An account of the controversy and the ban of Fairhurst-inspired swimsuits is in Deidre Crawford, "London Olympics: Advances in Swimwear for Athletes—and You," *Los Angeles Times*, July 29, 2012, <http://articles.latimes.com/2012/jul/29/image/la-ig-olympic-swimwear-20120729>.
- 85 **Reduce drag and increase thrust.** Peter Reuell, "A Swimsuit Like Shark Skin? Not So Fast," *Harvard Gazette*, February 9, 2012, <http://news.harvard.edu/gazette/story/2012/02/a-swimsuit-like-shark-skin-not-so>

-fast/ (accessed 9/11/2012). What's funny is that the same scientist believes that the Speedo team didn't do a good enough job replicating sharkskin. He thinks, based on some testing, that the performance improvement is largely due to the "torpedo" aspect.

Chapter 5: Consider the Opposite

- 92 **Hayward and Hambrick, CEO hubris.** The material in this section, including the average 41% premium and the punchline of the Buffett quote, is in Mathew L. A. Hayward and Donald C. Hambrick (1997), "Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris," *Administrative Science Quarterly* 42: 103–27. We use a longer version of the Buffett quote from pages 137–39 in Warren E. Buffett, "The Essays of Warren Buffett: Lessons for Corporate America," ed. Lawrence A. Cunningham, <http://bit.ly/fAQgBX>. Hayward and Hambrick also showed that when the CEOs paid a premium, they overpaid: Subsequent performance was measurably worse in situations where CEOs paid bigger premiums.
- 95 **Alfred Sloan story.** Peter F. Drucker (2006), *The Effective Executive* (New York: HarperBusiness), p. 148.
- 95 **Meta-analysis of confirmation bias.** William Hart, et al. (2009), "Feeling Validated Versus Being Correct: A Meta-analysis of Selected Exposure to Information," *Psychological Bulletin* 135: 555–58.
- 96 **Devil's advocate.** Discussion of the devil's advocate and its role in the Catholic Church is from Paul B. Carroll and Chunka Mui (2008), *Billion Dollar Lessons: What You Can Learn from the Most Inexcusable Business Failures of the Last Twenty-Five Years* (New York: Portfolio Books). The value of seeking out existing (authentic) dissent is consistent with research at the University of California at Berkeley: Charlan Nemeth, Keith Brown, and John Rogers (2001), "Devil's Advocate Versus Authentic Dissent: Stimulating Quantity and Quality," *European Journal of Social Psychology* 31: 707–20.
- 97 **Murder board, Gong Show.** Chip Heath, Richard P. Larrick, and Joshua Klayman (1998), "Cognitive Repairs: How Organizational Practices Can Compensate for Individual Shortcomings," *Research in Organizational Behavior* 20: 1–37.
- 98 **Roger Martin and Copper Range mine.** The Copper Range mining story is based on interviews by Chip Heath of Roger Martin (March 2012), Richard Ross (April 2012), and John Sanders (May 2012). It also draws from a blog post by Roger Martin: "My Eureka Moment with Strategy," *Harvard Business Review: HBR Blog Network*, May 30, 2010, <http://blogs>

- .hbr.org/martin/2010/05/the-day-i-discovered-the-most.html. The “If you think an idea is the wrong way to approach a problem” quote is from this blog post.
- 103 **Judge Schiltz advice to law students.** U.S. District Court Judge Patrick J. Schiltz (1999), “On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession,” *Vanderbilt Law Review* 52: 945–48. We found a PDF available online, but the link did not seem permanent enough to cite here; our advice is to search for “Schiltz unhappy unethical” and, with any luck, you will find a source too.
- 103 **iPod study.** Julie A. Minson, Nicole E. Ruedy, and Maurice E. Schweitzer (2012), “There Is Such a Thing as a Stupid Question: Question Disclosure in Strategic Communication,” Working paper, Wharton School of Business, University of Pennsylvania.
- 104 **Joseph H. case study.** Allen Barbour (1995), *Caring for Patients* (Stanford, CA: Stanford University Press), pp. 10–12.
- 107 **18 seconds.** This study by Dr. Howard Beckman at the University of Rochester and his coauthors caused consternation when it was published in 1984. In 1999, after 15 years of efforts by medical schools to train doctors to be more patient focused, Beckman and his colleagues published a follow-up study that found that doctors had improved . . . to 23 seconds. At that rate of improvement, patients in the year 2110 will be able to talk for over a minute without interruption. Meredith Levine, “Tell the Doctor All Your Problems, but Keep It to Less Than a Minute,” *New York Times*, June 1, 2004, <http://www.nytimes.com/2004/06/01/health/tell-the-doctor-all-your-problems-but-keep-it-to-less-than-a-minute.html>.
- 108 **Beck’s marriage diaries.** See Aaron T. Beck (1989), *Love Is Never Enough* (New York: HarperPerennial). The Goldstein study is described on page 248, and the marriage-diary exercise for Ted and Karen is on pages 245–46.
- 109 **Assume positive intent.** The Indra Nooyi quote is in “The Best Advice I Ever Got,” *CNNMoney*, April 30, 2008, <http://money.cnn.com/galleries/2008/fortune/0804/gallery.bestadvice.fortune/7.html>. The quote from Rochelle Arnold-Simmons is from Rochelle Arnold-Simmons, “Day 158 Honoring My Husband Beyond Affection,” *I Will Honor My Husband*, July 22, 2011, <http://iwillhonormyhusband.blogspot.com/2011/07/day-158-honoring-my-husband.html>. The Industrial Scientific example is from Malia Spencer, “Conversational Nuances Come with Working in Asia,” *Pittsburgh Business Times*, June 15, 2012, <http://www.bizjournals.com/pittsburgh/print-edition/2012/06/15/conversational-nuances-asia.html>.
- 110 **See endnotes for more.** The value of “consider the opposite” is re-

viewed in Katherine L. Milkman, Dolly Chugh, and Max H. Bazerman (2009), "How Can Decision Making Be Improved?" *Perspectives on Psychological Science* 4: 379–85. Considering the opposite has been shown to reduce several biases that have been regarded as especially thorny: the overconfident conclusions that we highlight in chapter 10 (and that were demonstrated by CEOs in the hubris study in this chapter) and other, quite different, biases ranging from a hindsight bias that leads us to see anything that happens as inevitable to a tendency to anchor too strongly on a specific numerical value (e.g., basing this year's budget allocation heavily on last year's, even if the situation has changed dramatically).

- 110 **Schoemaker's deliberate mistake.** The RFP deliberate mistake story is told in Paul J. H. Schoemaker (2011), *Brilliant Mistakes: Finding Success on the Far Side of Failure* (Philadelphia: Wharton Press). The "why leave mistakes to serendipity?" quote is from a conversation between Chip Heath and Schoemaker in August 2012. The other quotes are from Schoemaker's account in *Brilliant Mistakes*.
- 112 **Deliberate mistakes in dating.** See John T. Molloy (2003), *Why Men Marry Some Women and Not Others* (New York: Warner Books), p. 73.

Chapter 6: Zoom Out, Zoom In

- 115 **Polynesian Resort.** The beautiful pictures are at <http://polynesian-resort.com/Amenities.html> (accessed on July 8, 2011), the dirty hotel awards are described at http://www.tripadvisor.com/PressCenter-i4557-c1-Press_Releases.html (accessed on September 27, 2012), and all the reviews are from TripAdvisor, http://www.tripadvisor.com/ShowUserReviews-g54359-d259744-r115031196-Polynesian_Beach_Golf_Resort-Myrtle_Beach_South_Carolina.html#CHECK_RATES_CONT (accessed on July 8, 2011). The "debaucherous spring break" review came from dangle2011, posted on October 27, 2009 (and accessed on September 27, 2012).
- 118 **On computing base rates.** One of the challenges of using base rates is knowing which base rates to trust. Do we examine the set of all entrepreneurs who have started a business or just those who have started a restaurant? Or those who've started restaurants in Texas? Or in Austin? Or do we hold out for an exact hit—the set of people who've started Thai restaurants in downtown Austin? One decision-making expert, Josh Klayman, a professor at the University of Chicago's business school, suggests a rule of thumb: Pick the narrowest possible set that still provides 10 to 20 examples. So if there are 15 Thai res-

- taurants in Austin, that's your set; if there are only 6, you could broaden your sample, perhaps to all Asian restaurants in Austin.
- 118 **Kahneman curriculum development story.** The "unnatural exercise" quote and the curriculum-team story are from a class Kahneman taught to a very distinguished group of scientists and entrepreneurs (including the founders of Google and Amazon). Daniel Kahneman, "A Short Course on Thinking About Thinking" (Edge Master Class 07, Rutherford, CA, July 20–22, 2007). An online transcript, located at edge.org/3rd_culture/kahneman07/kahneman07_index.html, shows what he covered with this group.
- 119 **Expert doesn't have to be credentialed authority.** Studies of dyadic interaction find that people are almost always more accurate when they incorporate the opinions of others, even if the other doesn't have specialized expertise. In these studies, where people tend to have similar expertise, they tend to weight their own opinion at 70% and the other person's at 30%, whereas they would typically perform better if they weighted the other person equal to themselves. (In one study where people were paired with a partner from another country, people still rated their own views more strongly than their partner's about 65% of the time, even on questions about their partner's country!) If you're consulting someone who knows a little more than you, you should probably err on the side of weighting your own views less than you are tempted to. Jack B. Soll and Richard P. Larrick (2009), "Strategies for Revising Judgment: How (and How Well) People Use Others' Opinions," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 35: 780–805.
- 123 **Brian Zikmund-Fisher.** Details of Brian Zikmund-Fisher's story are from conversations between Chip Heath and Brian in March and July 2012.
- 127 **The right kind of emotion.** Notice that Zikmund-Fisher makes his final decision by stepping out of his own perspective and seeing things through the eyes of another (his future daughter). This is something we saw before in Andy Grove's revolving-door test in chapter 1 and we will see again in the chapter on overcoming short-term emotions through simulating social distance (the "what would you advise a friend to do?" question). Priorities often become clarified when we step out of the short-term fog of our emotions by adding some distance.
- 128 **FDR.** We found many of the examples in this section in a great paper by Lorraine Riley, a student fellow at the Center for the Study of the Presidency and Congress. See Lorraine Ashley Riley, "A Finger in Every Pie: FDR's Mastery of Alternative Channels of Information Gathering," in *A Dialogue on Presidential*

Challenges and Leadership: Papers of the 2006–2007 Center Fellows (Washington: Center for the Study of the Presidency and Congress, 2007), pp. 22–32. The document can be accessed here: <http://www.thepresidency.org/storage/documents/Vater/Section1.pdf>. Roosevelt's use of the mail was particularly important in an era in which the science of polling had not yet developed. The staffer quote on presenting a "juicy morsel" only to find out FDR already knew it is from Richard E. Neustadt (1960), *Presidential Power: The Politics of Leadership* (New York: Wiley), p. 132. From Schlesinger's book on the New Deal are the "wind in your nose" and Eleanor Roosevelt quotes (p. 498), the Ickes complaint (p. 524), and the "finger in every pie" quote (p. 528). Arthur M. Schlesinger (1958), *The Coming of the New Deal* (New York: Houghton Mifflin). Interestingly, FDR understood that experts didn't have to be credentialed authorities; he would often ask visitors questions "outside their jurisdiction," and he would drag smart people from a meeting during one hour into his next scheduled meeting regardless of topic. Schlesinger comments, "All this, irritating as it was to tidy minds, enlarged the variety of reactions to him in areas where no one was infallible" (p. 498). These were great techniques for Widening Options and for Reality-Testing by getting people in the room who were more likely to consider different options and to ask disconfirming questions.

- 130 **Anne Mulcahy, Xerox.** The Customer Officer of the Day and Focus 500 programs are described in Bertrand Marotte, "The New Xerox Battle Cry," *Globe and Mail*, October 15, 2005, p. B3. The background financial information is in Kevin Maney, "Mulcahy Traces Steps of Xerox's Comeback," *USA Today*, September 21, 2006, p. B4.
- 131 **Genba.** *Genba* background comes from Wikipedia: <http://en.wikipedia.org/wiki/Gemba>.
- 131 **Paul Smith, P&G.** The Paul Smith story is from conversations between Chip Heath and Paul Smith in February and July 2012.

Chapter 7: Ooch

- 136 **"Ooch before we leap."** The material in this case study is from a conversation between Chip Heath and John Hanks in December 2010 and a follow-up between Dan Heath and Hanks in April 2011.
- 138 **Physical therapy requirement.** See <http://www.hunter.cuny.edu/pt/admissions/clinical-experience-requirement>.
- 138 **Peggy, legal secretary.** The story of Peggy is in Matthew McKay, Martha Davis, and Patrick Fanning (2011), *Thoughts and Feelings: Taking Control of*

- Your Moods and Your Life*, 4th ed. (Oakland, CA: New Harbinger Publications). Kindle location 1669/5148.
- 140 **Small experiments, prototypes, etc.** “Fire bullets then cannonballs”—in their studies of which companies survive market dislocations, Collins and Hansen find that the survivors don’t make big bets on innovations before they run simple, low-cost tests; the failed companies are just as likely to do something “innovative,” but they bet all in before testing and sometimes fail big. Jim Collins and Morten T. Hansen (2011), *Great by Choice: Uncertainty, Chaos, and Luck—Why Some Thrive* (New York: HarperBusiness); Peter Sims (2011), *Little Bets: How Breakthrough Ideas Emerge from Small Discoveries* (New York: Free Press).
- 142 **Tetlock study of experts.** Philip E. Tetlock (2005), *Expert Political Judgment: How Good Is It? How Can We Know?* (Princeton, NJ: Princeton University Press). The sample prediction questions for the experts are from pages 246–47. The opening “sky was not falling” anecdote is in Tetlock’s introduction at page xiv. The academic paper with the clever subtitle is Colin F. Camerer and Eric J. Johnson (1991), “The Process-Performance Paradox in Expert Judgment: How Can the Experts Know So Much and Predict So Badly?” in *Toward a General Theory of Expertise: Prospects and Limits*, ed. K. A. Ericsson and J. Smith (Cambridge, England: Cambridge University Press), pp. 195–217.
- 145 **CarsDirect.com.** Interview: “Andy Zimmerman on How Fresh Ideas Turn into Real, Live Internet-Related Companies at idealab!” *Business News New Jersey* 13 (September 26, 2000), p. 15.
- 145 **Sarasvathy entrepreneurs vs. executives.** See Saras D. Sarasvathy (2002), “What Makes Entrepreneurs Entrepreneurial?” Working paper, Darden Graduate School of Business Administration. The quote is from page 6 of the PDF version at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=909038. See also the popular account by Leigh Buchanan: “How Great Entrepreneurs Think,” *Inc.*, February 1, 2001, http://www.inc.com/magazine/20110201/how-great-entrepreneurs-think_pagen_2.html.
- 146 **Scott Cook, Intuit India example.** This example is from a conversation between Chip Heath and Scott Cook in August 2011. The “politics, persuasion, and PowerPoint” line is from a speech by Cook: “Leadership in an Agile Age” (lecture at Innovation 2011: Entrepreneurship for a Disruptive World conference, March 2011), transcribed at <http://network.intuit.com/2011/04/20/leadership-in-the-agile-age/>.
- 149 **Interviews are less predictive.** See discussion on page 189 of David

- G. Myers (2002), *Intuition: Its Power and Perils*. New Haven, CT: Yale University Press. The Richard Nisbett comments about the “interview illusion” are on pages 190–91. Note that this section draws from one of our columns: “Why It Might Be Wiser to Hire People Without Meeting Them,” *Fast Company*, June 2009.
- 150 **Accept 50 more students.** The experience of the University of Texas Medical School is described on pages 87–88 of Robyn M. Dawes (1994), *House of Cards: Psychology and Psychotherapy Built on Myth* (New York: Free Press).
- 151 **Steve Cole, HopeLab hiring.** Cole quotes are from an interview of Cole by Chip Heath in May 2011.

Chapter 8: Overcome Short-Term Emotion

- 156 **Car sales tactics.** Chandler Phillips, “Confessions of a Car Salesman,” Edmunds.com, January 18, 2001, <http://www.edmunds.com/car-buying/confessions-of-a-car-salesman.html>.
- 158 **Millionaire teacher buys car.** This story is from a great book: Andrew Hallam (2011), *Millionaire Teacher: The Nine Rules of Wealth You Should Have Learned in School* (New York: Wiley). He discusses his car-buying technique and his frugal hints for saving in the first chapter. Rule 1: Spend like you want to grow rich.
- 160 **10/10/10.** Suzy Welch (2009), *10/10/10* (New York: Scribner). Welch has created one of the world’s most clever and compact pieces of decision advice. The Annie and Karl story (names disguised) is from a conversation between “Annie” and Dan Heath in May 2012; the e-mail follow-up is from August 2012.
- 164 **Mere exposure.** The blackboard study is Rick Crandall (1972), “Field Extension of the Frequency-Affect Findings,” *Psychological Reports* 31: 371–74. Robert Zajonc’s classic paper on mere exposure, one of the most highly cited in the social psychology literature, is Robert Zajonc (1968), “Attitudinal Effects of Mere Exposure,” *Journal of Personality and Social Psychology* 9: 1–27. The face-flipping study is Theodore H. Mita, Marshall Dermer, and Jeffrey Knight (1977), “Reversed Facial Images and the Mere Exposure Hypothesis,” *Journal of Personality and Social Psychology* 35: 597–601. Repetition sparked trust: Alice Dechêne, et al. (2010), “The Truth About the Truth: A Meta-analytic Review of the Truth Effect,” *Personality and Social Psychology Review* 14: 238–57.
- 165 **Loss aversion.** The classic first discussion of loss aversion is Daniel Kahneman and Amos Tversky (1979), “Prospect Theory: An Analysis of Decision

- Under Risk," *Econometrica* 47: 263–92. This paper by two psychologists appeared in the journal that is the high temple of technical economics and became the most cited paper ever to appear in the journal. It was one of the pieces of research discussed in Kahneman's Nobel Prize citation (sadly, Amos Tversky had died a few years earlier). The coin-flip example is from that paper. Purchase protection: David M. Cutler and Richard Zeckhauser (2004), "Extending the Theory to Meet the Practice of Insurance," Working paper, Harvard University. Coffee-mug study: Daniel Kahneman, Jack L. Knetsch, and Richard Thaler (1990), "Experimental Tests of the Endowment Effect and the Coase Theorem," *Journal of Political Economy* 98: 1325–48.
- 166 **Max Levchin cofounded PayPal.** PayPal was actually first called Confinity, and it produced a product called PayPal, but it was later renamed PayPal after a merger. To keep it simple, we just call it PayPal. This case study is from a fun book by Jessica Livingston where she interviews the founders of almost three dozen start-ups, including Craigslist, Adobe, Hotmail, and others. Jessica Livingston (2008), *Founders at Work: Stories of Startup's Early Days* (New York: Apress), pp. 1–17.
- 170 **Construal-level theory.** This is a recent area of research, and there are few accounts of it written for nonresearchers. A good review of the research is Yaacove Trope and Nira Liberman (2010), "Construal Level Theory of Psychological Distance," *Psychological Review* 117: 440–63.
- 170 **Job A or Job B study.** This is study 1 in Laura Kray and Richard Gonzalez (1999), "Weighting in Choice Versus Advice: I'll Do This, You Do That," *Journal of Behavioral Decision Making* 12: 207–17.
- 171 **Girl from your psychology class study.** See Amy H. Beisswanger, et al. (2003), "Risk Taking in Relationships: Differences in Deciding for Oneself Versus for a Friend," *Basic and Applied Social Psychology* 25: 121–35.

Chapter 9: Honor Your Core Priorities

- 175 **Kim Ramirez.** This story is from a conversation between Dan Heath and "Kim Ramirez" in February 2012. "Kim Ramirez" and "Josh" are disguised names; all other details are accurate.
- 183 **Interplast.** The Interplast discussion is from a Stanford GSB case and video by Jim Phillips (2006), "Interplast's Dilemma," Stanford Graduate School of Business, Case SI-14. The "it changed everything" quote and other background details are from an interview of Susan Hayes by Chip Heath in March 2012.
- 186 **Wayne's Rules at Dell Computer.** This story is taken from interviews of Wayne Roberts by Chip Heath in November 2011 and July 2012.

- 187 **"No manager reported any activity."** The Pounds quote is from page 40 of Morgan W. McCall and Robert E. Kaplan (1990), *Whatever It Takes: The Realities of Managerial Decision-Making*. Upper Saddle River, NJ: Prentice-Hall.
- 187 **Jim Collins's "stop-doing" list.** Jim Collins, "Best New Year's Resolution? A 'Stop Doing' List," *USA Today*, December 30, 2003.
- 188 **Captain Abrashoff, USS Benfold.** The list A/list B story is on pages 46–48, and the "mini-Olympics" testing procedure is on pages 102–3 of Captain D. Michael Abrashoff (2002), *It's Your Ship: Management Techniques from the Best Damn Ship in the Navy* (New York: Business Plus).
- 190 **"To be doing right now."** See Daniel H. Pink, "The Power of an Hourly Beep," October 24, 2011, <http://www.danpink.com/archives/2011/10/the-power-of-an-hourly-beep>. Bregman's book on how to remove distractions and focus on priorities is filled with good advice: Peter Bregman (2011), *Eighteen Minutes* (New York: Business Plus).

Chapter 10: Bookend the Future

- 194 **Byron Penstock, Coinstar investment.** The Penstock/Coinstar story comes from interviews of Byron Penstock by Dan Heath in September 2011, March 2012, and August 2012. Revenue (p. 63) and kiosk count (p. 35) are from CSTR 2009 10K. In the aftermath of the sale, the Coinstar stock promptly shot through the roof, reaching a peak of \$66.98 on November 24 before receding again in the months that followed. Penstock wishes he had sold in November rather than October, of course, but he is untroubled about missing the second spike. If he'd maintained the investment, it would have meant betting that the stock would hit its upper bookend, which was not a bet he was comfortable with.
- 199 **Invest in index funds.** For our full-fledged soapbox treatment of this topic, see our article "The Horror of Mutual Funds" in our collection *The Myth of the Garage*, which is available for free at <http://www.heathbrothers.com/the-myth-of-the-garage/>. For a clear and understandable account of the research on the advantages of index funds, see the book by the millionaire teacher Andrew Hallam, from the short-term emotion chapter, who figured out how to buy a car without falling victim to sleazy car sales tactics. Andrew Hallam (2011), *Millionaire Teacher: The Nine Rules of Wealth You Should Have Learned in School* (New York: Wiley). On investments, see his brilliant chapter on rule 3, which quotes four Nobel Prize winners in economics recommending the index-funds strategy, then unpacks the hidden costs and expenses in the typical mutual fund. He quotes one study from the *Journal of Portfolio Man-*

- agement that found that over a 15-year period 96% of actively managed mutual funds underperformed an index fund. And individual investors frequently do worse, particularly when they trade more because of overconfidence. See Brad M. Barber and Terrance Odean (2001), "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *Quarterly Journal of Economics* 116: 261–92.
- 200 **Jack Soll and Joshua Klayman.** The 80% confidence interval study is Jack B. Soll and Joshua Klayman (2004), "Overconfidence in Interval Estimates," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 30, 299–314. The box-office statistics for Angelina Jolie are from <http://boxofficemojo.com/people/chart/?view=Actor&id=angelinajolie.htm>.
- 202 **First Asian American president.** Our future-president scenario was inspired by an example given by Jay E. Russo and Paul J. H. Schoemaker (2002), *Winning Decisions* (New York: Currency/Doubleday), pp. 111–12. The employee scenario is from the original study of the phenomenon: Deborah J. Mitchell, J. Edward Russo, and Nancy Pennington (1989), "Back to the Future: Temporal Perspective in the Explanation of Events," *Journal of Behavioral Decision Making* 2: 25–38.
- 203 **Premortem.** Gary Klein (2009), *Streetlights and Shadows: Searching for the Keys to Adaptive Decision Making* (Cambridge, MA: MIT Press), pp. 63, 235–236.
- 203 **100,000 Homes.** The FMEA and Myron stories are from interviews by Dan Heath of Christina Gunther-Murphy in September 2011, Beth Sandor and Jessica Venegas (of the Community Solutions team) in September 2011, and Mattie Lord in July 2012, as well as periodic communications with Becky Kanis. The launch date for the campaign can be found at 100,000 Homes, "100,000 Homes Campaign Launch Video," <http://100khomes.org/blog/watch-100000-homes-campaign-launch-video>. Gunther-Murphy works for the Institute for Healthcare Improvement (IHI), which launched the 100,000 Lives Campaign. The campaign succeeded—it's an incredible story, and many people have written about it. (See the first chapter of *Switch* for our take on it.)
- 207 **Minnetonka Softsoap.** The pump lockup is described on pages 60–61 of Hugh Courtney (2001), *20/20 Foresight: Crafting Strategy in an Uncertain World* (Boston: Harvard Business School Press). The background details of the story are told in a Harvard Business School case study by Adam Brandenburger and Vijay Krishna (1995), "Minnetonka Corporation: From Softsoap to Eternity" (HBS case 9-795-163).
- 208 **An emergency landing.** Readers in the United States will remember the

- remarkable story of US Airways Flight 1549, which experienced this event in 2009. See http://en.wikipedia.org/wiki/US_Airways_Flight_1549.
- 209 **Safety factor.** The safety factors given here come from Wayne Hale, "Factors of Safety," *Wayne Hale's Blog*, http://blogs.nasa.gov/cm/blog/waynehalesblog/posts/post_1229459081779.html.
- 209 **Schedule buffers at Microsoft.** See Michael A. Cusumano and Richard Selby (1995), *Microsoft Secrets* (New York: Free Press), p. 94.
- 210 **Call center case study, Evolv.** Max Simkoff (CEO of Evolv), interviews with Chip Heath and Dan Heath in August and September 2011.
- 212 **40 studies of realistic job previews.** Jean M. Phillips (1998), "Effects of Realistic Job Previews on Multiple Organizational Outcomes: a Meta-analysis," *Academy of Management Journal* 41: 673–90.

Chapter 11: Set a Tripwire

- 218 **Zappos.** The forgotten-shoes story has been widely reported, e.g., here: Jim Ryan, "Outstanding Customer Service Beyond Zappos," *Interactive Depot*, May 15, 2012, <http://talk2rep-call-centers-idea-depot.com/tag/zappos/>. The white-lilies-and-roses story is from Meg Marco, "Zappos Sends You Flowers," *The Consumerist*, October 16, 2007, <http://con.st/311369>. Chip Heath interviewed Jon Wolske in August 2011.
- 221 **Peel a banana.** See video at <http://www.youtube.com/watch?v=nBJV56WUDng>. (The video claims this is how monkeys eat a banana, but even a few minutes of YouTube research shows that monkeys dive in directly in the middle.) Kirschner responded via e-mail to a request we put out on our newsletter for autopilot stories in August 2012. He says his other "aha" video was one of Martha Stewart folding a T-shirt. "The hardest part of doing laundry for me was folding it. And any technique I could find to decrease the time would be helpful." See how Martha Stewart saves time here: <http://www.youtube.com/watch?v=Jvcuy4k17DI>. On better conversations at dinner, Chip and his family borrowed a "sad, mad, glad" technique from a parenting advice board—the family goes around the table and each person talks about one thing in their day that made them sad, mad, and glad. So far, it has worked to produce great conversations with kids ages 2 to 10, but we offer no warranties for kids past puberty.
- 223 **Kodak.** The Kodak story is from pages 88–100 of Paul B. Carroll and Chunka Mui (2008), *Billion Dollar Lessons: What You Can Learn from the Most Inexcusable Business Failures of the Last Twenty-five Years* (New York: Portfolio). The market-cap history is from Wolfram Alpha <http://www.wolframalpha.com>

- /input/?i=market+cap+eastman+kodak+history&dataset= (accessed on July 20, 2012).
- 227 **Amos Tversky and Eldar Shafir.** Amos Tversky and Eldar Shafir (1992), "Choice Under Conflict: The Dynamics of Deferred Decision," *Psychological Science* 3: 358–61.
- 227 **Decided to eliminate submission deadlines.** The Economic and Social Research Council example is from Colin Camerer, et al. (2003), "Regulation for Conservatives: Behavioral Economics and the Case for 'Asymmetric Paternalism,'" *University of Pennsylvania Law Review* 151: 1211–54.
- 229 **Partitioning study.** The cookie study is from Dilip Soman and Amar Cheema, "The Effects of Partitioning on Consumption," *Rotman*, Spring 2008, pp. 20–24. The day-laborer study is from Dilip Soman, "Earmarking Money," *Rotman*, Fall 2009, pp. 96–98.
- 230 **Mental budgets and escalation.** See Chip Heath (1995), "Escalation and De-escalation of Commitment in Response to Sunk Costs: The Role of Budgeting in Mental Accounting," *Organizational Behavior and Human Decision Processes* 62: 38–54.
- 232 **Lucile Packard, rapid-response teams.** The quotes in this article are from interviews of Kit Leong and Karla Earnest by Chip Heath in March 2012. The paper reporting their work is Paul J. Sharek, et al. (2007), "Mortality and Code Rates Outside the ICU in a Children's Hospital," *Journal of the American Medical Association* 298: 2267–74.
- 234 **Unexpected success.** The Drucker quote is in Drucker Institute, "We'll Accept It if You Like This Post for Reasons We Didn't Anticipate," *Drucker Exchange*, November 14, 2011, <http://thedx.druckerinstitute.com/2011/11/well-accept-it-if-you-like-this-post-for-reasons-we-didnt-anticipate/>. The Rogaine story is told in Wikipedia at <http://en.wikipedia.org/wiki/Minoxidil>. The Viagra story is from "Viagra: A Chronology," *Viagra.md*, <http://www.about-ed.com/viagra-history>. The journalist's quote is from Simon Davies, "The Discovery of Viagra," *Biotech/Pharmaceuticals@Suite101*, August 1, 2007, <http://suite101.com/article/the-discovery-of-viagra-a27733>.
- 236 **Awesome Thing #523.** "When You Learn a New Word and Then Suddenly Start Seeing It Everywhere," *1000 Awesome Things*, April 20, 2010, <http://1000awesomethings.com/2010/04/20/523-when-you-learn-a-new-word-and-then-suddenly-start-seeing-it-everywhere/>.

Chapter 12: Trusting the Process

240 **Bargaining study by Nutt.** Paul C. Nutt (2005), "Search During Decision Making," *European Journal of Operational Research* 160: 851–76. On the quality of decisions: Decisions using bargaining were more often rated by independent raters as "good" or "outstanding." On the time advantages of bargaining: Compare two of the decision patterns that Nutt studied, championed ideas and bargains. Championed ideas happened when an idea champion spotted a good thing to do and set off to convince the organization to pursue it. (*We should adopt the order processing system used by Lands' End; it's more efficient!*) This is the pattern of innovation often celebrated in the popular press: *Find an idea champion! Support your innovators!* Not surprisingly, since the idea champion already has a prepackaged idea, these decisions are made quickly—in six months on average, compared with nine months for the typical decision in Nutt's database. Bargains were slower at 7.5 months (though, interestingly, still faster than the average).

But the championed ideas, though fast in the decision stage, suffered in the implementation phase. Once the decision was "made," championed ideas were initially implemented only 56% of the time, compared with 79% of the bargains. And a couple of years later, only 40% of the championed ideas had been completely implemented, compared with 75% of the bargains. This pattern suggests that what idea champions gain in speed from the initial decision stage they more than sacrifice on speed and success during the implementation period. (Note that Nutt calls championed ideas "emergent opportunities"—we feel that the "championed ideas" terminology is more accurate.)

243 **Procedural justice.** The conclusions about the relative happiness of Mike, Carlos, and Jen are based on a robust statistical interaction effect described in Joel Brockner and Batia M. Wisenfeld (1996), "An Integrative Framework for Explaining Reactions to Decisions: Interactive Effects of Outcomes and Procedures," *Psychological Bulletin* 120: 189–208.

244 **"State back the other side's position better than they could."** Chip remembers Mnookin making this comment in a decision-making/negotiation workshop around 1989. It was striking enough that he has remembered it ever since.

244 **Dave Hitz, the founder of NetApp.** This strategy for handling opposition is found in Dave Hitz (2009), *How to Castrate a Bull: Unexpected Lessons on Risk, Growth, and Success in Business* (San Francisco: Jossey-Bass), p. 152. This book is insightful and very funny, and it should be on the reading list of any entrepreneur who is trying to grow a business.

- 246 **Matt D'Arrigo.** This case is based on conversations between Chip Heath or Dan Heath and Matt D'Arrigo in June 2010, August 2010, February 2012, March 2012, and July 2012.
- 252 **Regrets of the elderly.** See Nina Hattiangadi, Victoria Husted Medvec, and Thomas Gilovich (1995), "Failing to Act: Regrets of Terman's Geniuses," *International Journal of Aging and Human Development* 40: 175–85. This paper uses the responses of "Terman's geniuses," a set of children with genius-level IQs who were initially enrolled in the study by Stanford psychologist Lewis Terman in the 1920s and were followed actively by researchers until their deaths around the turn of the century. Even for this group of very successful and accomplished people, regrets of not acting outnumbered regrets from action more than four to one. In general, Gilovich and Medvec's research has found that our short-run regrets focus on things we did do that we shouldn't have, but in the long run we regret those things we might have done. In this paper, they quote poet John Greenleaf Whittier: "Of all sad words of tongue or pen, the saddest are these: 'it might have been' " (p. 176).

Clinics

- 257 **Clinic 1: Should a Small Company Sue?** The *Inc.* magazine case study is Jennifer Alsever (January 24, 2012). "Case Study: To Sue or Not to Sue." *Inc.*, <http://www.inc.com/magazine/201202/case-study-the-rival-mixed-chicks-sally-beauty.html>.



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