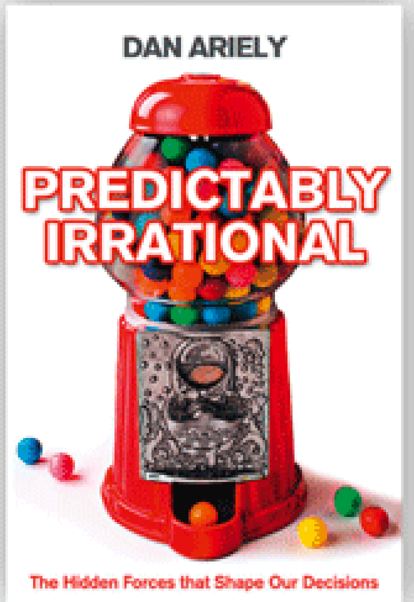
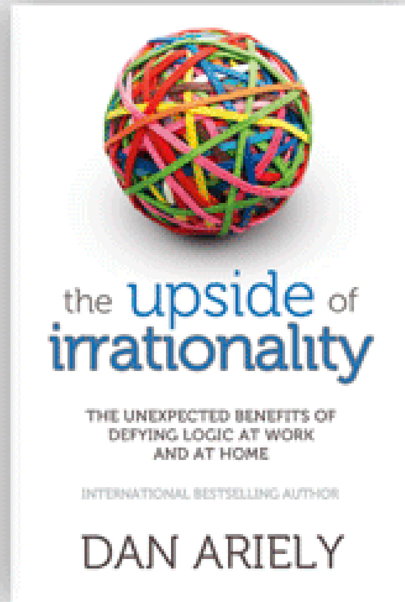
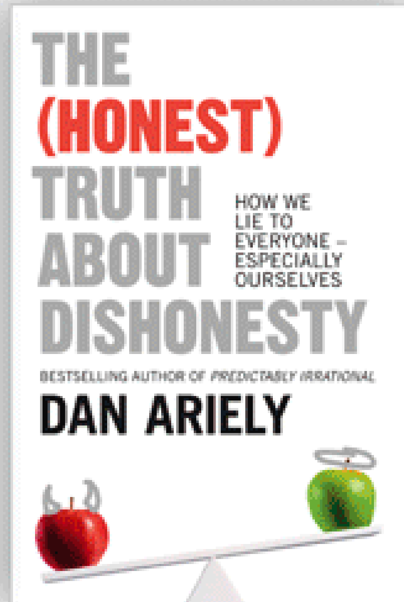
THE IRRATIONAL BUNDLE

INCLUDES PREDICTABLY IRRATIONAL, THE UPSIDE OF IRRATIONALITY AND THE (HONEST) TRUTH ABOUT DISHONESTY







DAN ARIELY

Dan Ariely

The Irrational Bundle

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Ariely D.

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Dan Ariely's three New York Times bestselling books on his groundbreaking behavioral economics research, Predictably Irrational, The Upside of Irrationality, and The (Honest) Truth About Dishonesty, are now available for the first time in a single volume.This ebook has been optimised for reading on colour screens. The majority of the text will appear the same across all devices, but there is one exercise that will not work unless viewed on a colour screen.

Содержание

Contents


DAN ARIELY
PREDICTABLY IRRATIONAL
The Hidden Forces that Shape Our Decisions

DAN ARIELY

PREDICTABLY IRRATIONAL

The Hidden Forces that Shape Our Decisions

HARPER

Dedication
To my mentors, colleagues, and students—
who make research exciting

Contents

Introduction

How an Injury Led Me to Irrationality and
to the Research Described Here

I have been told by many people that I have an unusual way of looking at the world. Over the last 20 years or so of my research career, it's enabled me to have a lot of fun figuring out what really influences our decisions in daily life (as opposed to what we think, often with great confidence, influences them).

Do you know why we so often promise ourselves to diet, only to have the thought vanish when the dessert cart rolls by?

Do you know why we sometimes find ourselves excitedly buying things we don't really need?

Do you know why we still have a headache after taking a one-cent aspirin, but why that same headache vanishes when the aspirin costs 50 cents?

Do you know why people who have been asked to recall the Ten Commandments tend to be more honest (at least immediately afterward) than those who haven't? Or why honor codes actually do reduce dishonesty in the workplace?

By the end of this book, you'll know the answers to these and many other questions that have implications for your personal life, for your business life, and for the way you look at the world. Understanding the answer to the question about aspirin, for example, has implications not only for your choice of drugs, but for one of the biggest issues facing our society: the cost and effectiveness of health insurance. Understanding the impact of the Ten Commandments in curbing dishonesty might help prevent the next Enron-like fraud. And understanding the dynamics of impulsive eating has implications for every other impulsive decision in our lives—including why it's so hard to save money for a rainy day.

My goal, by the end of this book, is to help you fundamentally rethink what makes you and the people around you tick. I hope to lead you there by presenting a wide range of scientific experiments, findings, and anecdotes that are in many cases quite amusing. Once you see how systematic certain mistakes are—how we repeat them again and again—I think you will begin to learn how to avoid some of them.

But before I tell you about my curious, practical, entertaining (and in some cases even delicious) research on eating, shopping, love, money, procrastination, beer, honesty, and other areas of life, I feel it is important that I tell you about the origins of my somewhat unorthodox worldview—and therefore of this book. Tragically, my introduction to this arena started with an accident many years ago that was anything but amusing.

ON WHAT WOULD otherwise have been a normal Friday afternoon in the life of an eighteen-year-old Israeli, everything changed irreversibly in a matter of a few seconds. An explosion of a large magnesium flare, the kind used to illuminate battlefields at night, left 70 percent of my body covered with third-degree burns.

The next three years found me wrapped in bandages in a hospital and then emerging into public only occasionally, dressed in a tight synthetic suit and mask that made me look like a crooked version of Spider-Man. Without the ability to participate in the same daily activities as my friends and family, I felt partially separated from society and as a consequence started to observe the very activities that were once my daily routine as if I were an outsider. As if I had come from a different culture (or planet), I started reflecting on the goals of different behaviors, mine and those of others. For example, I started wondering why I loved one girl but not another, why my daily routine was designed to be comfortable for the physicians but not for me, why I loved going rock climbing but not studying history, why I cared so much about what other people thought of me, and mostly what it is about life that motivates people and causes us to behave as we do.

During the years in the hospital following my accident, I had extensive experience with different types of pain and a great deal of time between treatments and operations to reflect on it. Initially, my daily agony was largely played out in the "bath," a procedure in which I was soaked in disinfectant solution, the bandages were removed, and the dead particles of skin were scraped off. When the skin is intact, disinfectants create a low-level sting, and in general the bandages come off easily. But when there is little or no skin—as in my case because of my extensive burns—the disinfectant stings unbearably, the bandages stick to the flesh, and removing them (often tearing them) hurts like nothing else I can describe.

Early on in the burn department I started talking to the nurses who administered my daily bath, in order to understand their approach to my treatment. The nurses would routinely grab hold of a bandage and rip it off as fast as possible, creating a relatively short burst of pain; they would repeat this process for an hour or so until they had removed every one of the bandages. Once this process was over I was covered with ointment and with new bandages, in order to repeat the process again the next day.

The nurses, I quickly learned, had theorized that a vigorous tug at the bandages, which caused a sharp spike of pain, was preferable (to the patient) to a slow pulling of the wrappings, which might not lead to such a severe spike of pain but would extend the treatment, and therefore be more painful overall. The nurses had also concluded that there was no difference between two possible methods: starting at the most painful part of the body and working their way to the least painful part; or starting at the least painful part and advancing to the most excruciating areas.

As someone who had actually experienced the pain of the bandage removal process, I did not share their beliefs (which had never been scientifically tested). Moreover, their theories gave no consideration to the amount of fear that the patient felt anticipating the treatment; to the difficulties of dealing with fluctuations of pain over time; to the unpredictability of not knowing when the pain will start and ease off; or to the benefits of being comforted with the possibility that the pain would be reduced over time. But, given my helpless position, I had little influence over the way I was treated.

As soon as I was able to leave the hospital for a prolonged period (I would still return for occasional operations and treatments for another five years), I began studying at Tel Aviv University. During my first semester, I took a class that profoundly changed my outlook on research and largely determined my future. This was a class on the physiology of the brain, taught by professor Hanan Frenk. In addition to the fascinating material Professor Frenk presented about the workings of the brain, what struck me most about this class was his attitude to questions and alternative theories. Many times, when I raised my hand in class or stopped by his office to suggest a different interpretation of some results he had presented, he replied that my theory was indeed a possibility (somewhat unlikely, but a possibility nevertheless)—and would then challenge me to propose an empirical test to distinguish it from the conventional theory.

Coming up with such tests was not easy, but the idea that science is an empirical endeavor in which all the participants, including a new student like myself, could come up with alternative theories, as long as they found empirical ways to test these theories, opened up a new world to me. On one of my visits to Professor Frenk's office, I proposed a theory explaining how a certain stage of epilepsy developed, and included an idea for how one might test it in rats.

Professor Frenk liked the idea, and for the next three months I operated on about 50 rats, implanting catheters in their spinal cords and giving them different substances to create and reduce their epileptic seizures. One of the practical problems with this approach was that the movements of my hands were very limited, because of my injury, and as a consequence it was very difficult for me to operate on the rats. Luckily for me, my best friend, Ron Weisberg (an avid vegetarian and animal lover), agreed to come with me to the lab for several weekends and help me with the procedures—a true test of friendship if ever there was one.

In the end, it turned out that my theory was wrong, but this did not diminish my enthusiasm. I was able to learn something about my theory, after all, and even though the theory was wrong, it was good to know this with high certainty. I always had many questions about how things work and how people behave, and my new understanding—that science provides the tools and opportunities to examine anything I found interesting—lured me into the study of how people behave.

With these new tools, I focused much of my initial efforts on understanding how we experience pain. For obvious reasons I was most concerned with such situations as the bath treatment, in which pain must be delivered to a patient over a long period of time. Was it possible to reduce the overall agony of such pain? Over the next few years I was able to carry out a set of laboratory experiments on myself, my friends, and volunteers—using physical pain induced by heat, cold water, pressure, loud sounds, and even the psychological pain of losing money in the stock market—to probe for the answers.

By the time I had finished, I realized that the nurses in the burn unit were kind and generous individuals (well, there was one exception) with a lot of experience in soaking and removing bandages, but they still didn't have the right theory about what would minimize their patients' pain. How could they be so wrong, I wondered, considering their vast experience? Since I knew these nurses personally, I knew that their behavior was not due to maliciousness, stupidity, or neglect. Rather, they were most likely the victims of inherent biases in their perceptions of their patients' pain—biases that apparently were not altered even by their vast experience.

For these reasons, I was particularly excited when I returned to the burn department one morning and presented my results, in the hope of influencing the bandage removal procedures for other patients. It turns out, I told the nurses and physicians, that people feel less pain if treatments (such as removing bandages in a bath) are carried out with lower intensity and longer duration than if the same goal is achieved through high intensity and a shorter duration. In other words, I would have suffered less if they had pulled the bandages off slowly rather than with their quick-pull method.

The nurses were genuinely surprised by my conclusions, but I was equally surprised by what Etty, my favorite nurse, had to say. She admitted that their understanding had been lacking and that they should change their methods. But she also pointed out that a discussion of the pain inflicted in the bath treatment should also take into account the psychological pain that the nurses experienced when their patients screamed in agony. Pulling the bandages quickly might be more understandable, she explained, if it were indeed the nurses' way of shortening their own torment (and their faces often did reveal that they were suffering). In the end, though, we all agreed that the procedures should be changed, and indeed, some of the nurses followed my recommendations.

My recommendations never changed the bandage removal process on a greater scale (as far as I know), but the episode left a special impression on me. If the nurses, with all their experience, misunderstood what constituted reality for the patients they cared so much about, perhaps other people similarly misunderstand the consequences of their behaviors and, for that reason, repeatedly make the wrong decisions. I decided to expand my scope of research, from pain to the examination of cases in which individuals make repeated mistakes—without being able to learn much from their experiences.

THIS JOURNEY INTO the many ways in which we are all irrational, then, is what this book is about. The discipline that allows me to play with this subject matter is called behavioral economics, or judgment and decision making (JDM).

Behavioral economics is a relatively new field, one that draws on aspects of both psychology and economics. It has led me to study everything from our reluctance to save for retirement to our inability to think clearly during sexual arousal. It's not just the behavior that I have tried to understand, though, but also the decision-making processes behind such behavior—yours, mine, and everybody else's. Before I go on, let me try to explain, briefly, what behavioral economics is all about and how it is different from standard economics. Let me start out with a bit of Shakespeare:

What a piece of work is a man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! The beauty of the world, the paragon of animals. —from Act II, scene 2, of Hamlet

The predominant view of human nature, largely shared by economists, policy makers, nonprofessionals, and everyday Joes, is the one reflected in this quotation. Of course, this view is largely correct. Our minds and bodies are capable of amazing acts. We can see a ball thrown from a distance, instantly calculate its trajectory and impact, and then move our body and hands in order to catch it. We can learn new languages with ease, particularly as young children. We can master chess. We can recognize thousands of faces without confusing them. We can produce music, literature, technology, and art—and the list goes on and on.

Shakespeare is not alone in his appreciation for the human mind. In fact, we all think of ourselves along the lines of Shakespeare's depiction (although we do realize that our neighbors, spouses, and bosses do not always live up to this standard). Within the domain of science, these assumptions about our ability for perfect reasoning have found their way into economics. In economics, this very basic idea, called rationality, provides the foundation for economic theories, predictions, and recommendations.

From this perspective, and to the extent that we all believe in human rationality, we are all economists. I don't mean that each of us can intuitively develop complex game-theoretical models or understand the generalized axiom of revealed preference (GARP); rather, I mean that we hold the basic beliefs about human nature on which economics is built. In this book, when I mention the rational economic model, I refer to the basic assumption that most economists and many of us hold about human nature—the simple and compelling idea that we are capable of making the right decisions for ourselves.

Although a feeling of awe at the capability of humans is clearly justified, there is a large difference between a deep sense of admiration and the assumption that our reasoning abilities are perfect. In fact, this book is about human irrationality—about our distance from perfection. I believe that recognizing where we depart from the ideal is an important part of the quest to truly understand ourselves, and one that promises many practical benefits. Understanding irrationality is important for our everyday actions and decisions, and for understanding how we design our environment and the choices it presents to us.

My further observation is that we are not only irrational, but predictably irrational—that our irrationality happens the same way, again and again. Whether we are acting as consumers, businesspeople, or policy makers, understanding how we are predictably irrational provides a starting point for improving our decision making and changing the way we live for the better.

This leads me to the real "rub" (as Shakespeare might have called it) between conventional economics and behavioral economics. In conventional economics, the assumption that we are all rational implies that, in everyday life, we compute the value of all the options we face and then follow the best possible path of action. What if we make a mistake and do something irrational? Here, too, traditional economics has an answer: "market forces" will sweep down on us and swiftly set us back on the path of righteousness and rationality. On the basis of these assumptions, in fact, generations of economists since Adam Smith have been able to develop far-reaching conclusions about everything from taxation and health-care policies to the pricing of goods and services.

But, as you will see in this book, we are really far less rational than standard economic theory assumes. Moreover, these irrational behaviors of ours are neither random nor senseless. They are systematic, and since we repeat them again and again, predictable. So, wouldn't it make sense to modify standard economics, to move it away from naive psychology (which often fails the tests of reason, introspection, and—most important—empirical scrutiny)? This is exactly what the emerging field of behavioral economics, and this book as a small part of that enterprise, is trying to accomplish.

AS YOU WILL see in the pages ahead, each of the chapters in this book is based on a few experiments I carried out over the years with some terrific colleagues (at the end of the book, I have included short biographies of my amazing collaborators). Why experiments? Life is complex, with multiple forces simultaneously exerting their influences on us, and this complexity makes it difficult to figure out exactly how each of these forces shapes our behavior. For social scientists, experiments are like microscopes or strobe lights. They help us slow human behavior to a frame-by-frame narration of events, isolate individual forces, and examine those forces carefully and in more detail. They let us test directly and unambiguously what makes us tick.

There is one other point I want to emphasize about experiments. If the lessons learned in any experiment were limited to the exact environment of the experiment, their value would be limited. Instead, I would like you to think about experiments as an illustration of a general principle, providing insight into how we think and how we make decisions—not only in the context of a particular experiment but, by extrapolation, in many contexts of life.

In each chapter, then, I have taken a step in extrapolating the findings from the experiments to other contexts, attempting to describe some of their possible implications for life, business, and public policy. The implications I have drawn are, of course, just a partial list.

To get real value from this, and from social science in general, it is important that you, the reader, spend some time thinking about how the principles of human behavior identified in the experiments apply to your life. My suggestion to you is to pause at the end of each chapter and consider whether the principles revealed in the experiments might make your life better or worse, and more importantly what you could do differently, given your new understanding of human nature. This is where the real adventure lies.

And now for the journey.

CHAPTER 1

The Truth about Relativity

Why Everything Is Relative—Even

When It Shouldn't Be

One day while browsing the World Wide Web (obviously for work—not just wasting time), I stumbled on the following ad, on the Web site of a magazine, the Economist.

I read these offers one at a time. The first offer—the Internet subscription for $59—seemed reasonable. The second option—the $125 print subscription—seemed a bit expensive, but still reasonable.

But then I read the third option: a print and Internet subscription for $125. I read it twice before my eye ran back to the previous options. Who would want to buy the print option alone, I wondered, when both the Internet and the print subscriptions were offered for the same price? Now, the print-only option may have been a typographical error, but I suspect that the clever people at the Economist's London offices (and they are clever—and quite mischievous in a British sort of way) were actually manipulating me. I am pretty certain that they wanted me to skip the Internet-only option (which they assumed would be my choice, since I was reading the advertisement on the Web) and jump to the more expensive option: Internet and print.

But how could they manipulate me? I suspect it's because the Economist's marketing wizards (and I could just picture them in their school ties and blazers) knew something important about human behavior: humans rarely choose things in absolute terms. We don't have an internal value meter that tells us how much things are worth. Rather, we focus on the relative advantage of one thing over another, and estimate value accordingly. (For instance, we don't know how much a six-cylinder car is worth, but we can assume it's more expensive than the four-cylinder model.)

In the case of the Economist, I may not have known whether the Internet-only subscription at $59 was a better deal than the print-only option at $125. But I certainly knew that the print-and-Internet option for $125 was better than the print-only option at $125. In fact, you could reasonably deduce that in the combination package, the Internet subscription is FREE! "It's a bloody steal—go for it, governor!" I could almost hear them shout from the riverbanks of the Thames. And I have to admit, if I had been inclined to subscribe I probably would have taken the package deal myself. (Later, when I tested the offer on a large number of participants, the vast majority preferred the Internet-and-print deal.)

So what was going on here? Let me start with a fundamental observation: most people don't know what they want unless they see it in context. We don't know what kind of racing bike we want —until we see a champ in the Tour de France ratcheting the gears on a particular model. We don't know what kind of speaker system we like—until we hear a set of speakers that sounds better than the previous one. We don't even know what we want to do with our lives—until we find a relative or a friend who is doing just what we think we should be doing. Everything is relative, and that's the point. Like an airplane pilot landing in the dark, we want runway lights on either side of us, guiding us to the place where we can touch down our wheels.

In the case of the Economist, the decision between the Internet-only and print-only options would take a bit of thinking. Thinking is difficult and sometimes unpleasant. So the Economist's marketers offered us a no-brainer: relative to the print-only option, the print-and-Internet option looks clearly superior.

The geniuses at the Economist aren't the only ones who understand the importance of relativity. Take Sam, the television salesman. He plays the same general type of trick on us when he decides which televisions to put together on display:

36-inch Panasonic for $690

42-inch Toshiba for $850

50-inch Philips for $1,480

Which one would you choose? In this case, Sam knows that customers find it difficult to compute the value of different options. (Who really knows if the Panasonic at $690 is a better deal than the Philips at $1,480?) But Sam also knows that given three choices, most people will take the middle choice (as in landing your plane between the runway lights). So guess which television Sam prices as the middle option? That's right—the one he wants to sell!

Of course, Sam is not alone in his cleverness. The New York Times ran a story recently about Gregg Rapp, a restaurant consultant, who gets paid to work out the pricing for menus. He knows, for instance, how lamb sold this year as opposed to last year; whether lamb did better paired with squash or with risotto; and whether orders decreased when the price of the main course was hiked from $39 to $41.

One thing Rapp has learned is that high-priced entrées on the menu boost revenue for the restaurant—even if no one buys them. Why? Because even though people generally won't buy the most expensive dish on the menu, they will order the second most expensive dish. Thus, by creating an expensive dish, a restaurateur can lure customers into ordering the second most expensive choice (which can be cleverly engineered to deliver a higher profit margin).[1]

SO LET'S RUN through the Economist's sleight of hand in slow motion.

As you recall, the choices were:

1. Internet-only subscription for $59.
2. Print-only subscription for $125.
3. Print-and-Internet subscription for $125.

When I gave these options to 100 students at MIT's Sloan School of Management, they opted as follows:

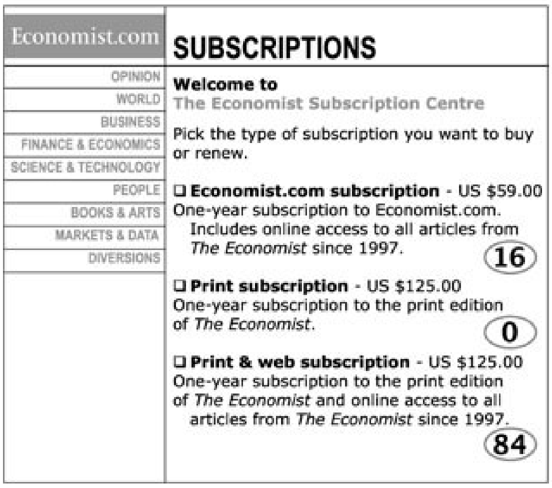
1. Internet-only subscription for $59—16 students
2. Print-only subscription for $125—zero students
3. Print-and-Internet subscription for $125—84 students

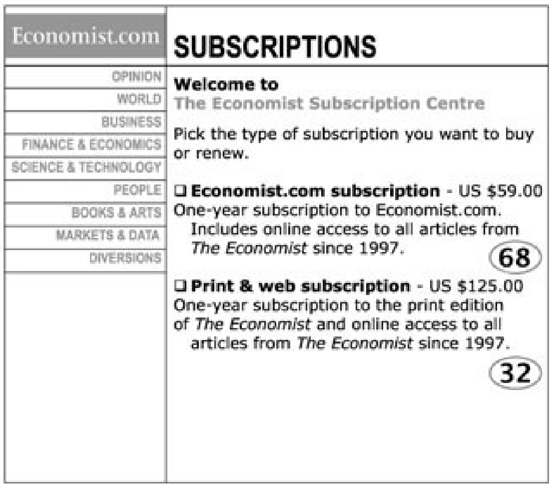
So far these Sloan MBAs are smart cookies. They all saw the advantage in the print-and-Internet offer over the print-only offer. But were they influenced by the mere presence of the print-only option (which I will henceforth, and for good reason, call the "decoy"). In other words, suppose that I removed the decoy so that the choices would be the ones seen in the figure below:

Would the students respond as before (16 for the Internet only and 84 for the combination)?

Certainly they would react the same way, wouldn't they? After all, the option I took out was one that no one selected, so it should make no difference. Right?

Au contraire! This time, 68 of the students chose the Internet-only option for $59, up from 16 before. And only 32 chose the combination subscription for $125, down from 84 before.*

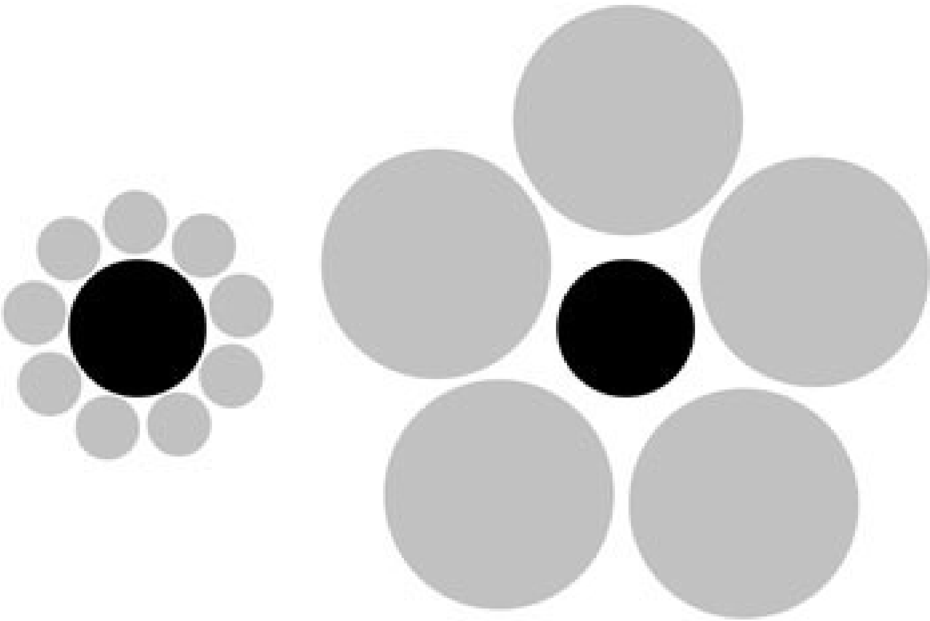




What could have possibly changed their minds? Nothing rational, I assure you. It was the mere presence of the decoy that sent 84 of them to the print-and-Internet option (and 16 to the Internet-only option). And the absence of the decoy had them choosing differently, with 32 for print-and-Internet and 68 for Internet-only.

This is not only irrational but predictably irrational as well. Why? I'm glad you asked.

LET ME OFFER you this visual demonstration of relativity.



As you can see, the middle circle can't seem to stay the same size. When placed among the larger circles, it gets smaller. When placed among the smaller circles, it grows bigger. The middle circle is the same size in both positions, of course, but it appears to change depending on what we place next to it.

This might be a mere curiosity, but for the fact that it mirrors the way the mind is wired: we are always looking at the things around us in relation to others. We can't help it. This holds true not only for physical things—toasters, bicycles, puppies, restaurant entrées, and spouses—but for experiences such as vacations and educational options, and for ephemeral things as well: emotions, attitudes, and points of view.

We always compare jobs with jobs, vacations with vacations, lovers with lovers, and wines with wines. All this relativity reminds me of a line from the film Crocodile Dundee, when a street hoodlum pulls a switchblade against our hero, Paul Hogan. "You call that a knife?" says Hogan incredulously, withdrawing a bowie blade from the back of his boot. "Now this," he says with a sly grin, "is a knife."

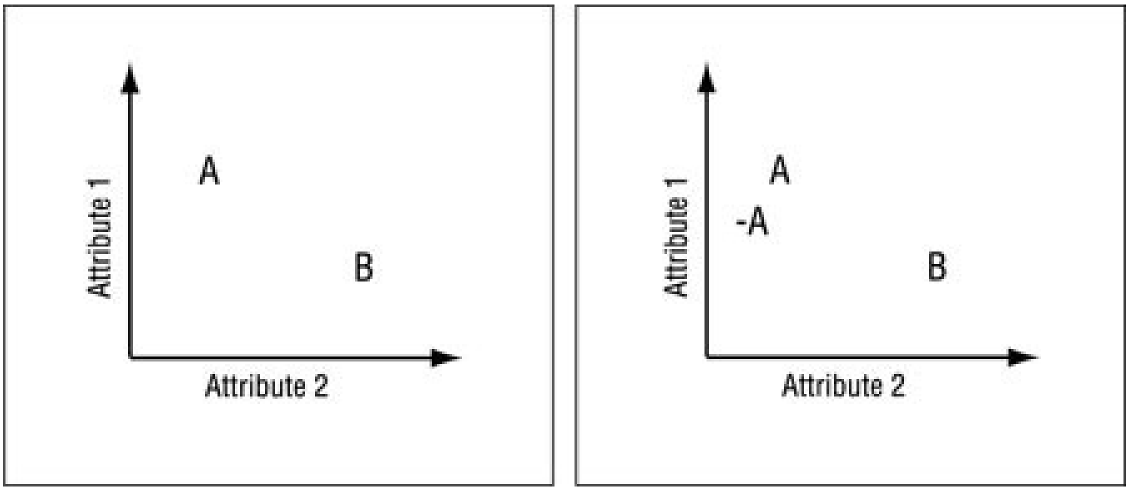
RELATIVITY IS (RELATIVELY) easy to understand. But there's one aspect of relativity that consistently trips us up. It's this: we not only tend to compare things with one another but also tend to focus on comparing things that are easily comparable—and avoid comparing things that cannot be compared easily.

That may be a confusing thought, so let me give you an example. Suppose you're shopping for a house in a new town. Your real estate agent guides you to three houses, all of which interest you. One of them is a contemporary, and two are colonials. All three cost about the same; they are all equally desirable; and the only difference is that one of the colonials (the "decoy") needs a new roof and the owner has knocked a few thousand dollars off the price to cover the additional expense.

So which one will you choose?

The chances are good that you will not choose the contemporary and you will not choose the colonial that needs the new roof, but you will choose the other colonial. Why? Here's the rationale (which is actually quite irrational). We like to make decisions based on comparisons. In the case of the three houses, we don't know much about the contemporary (we don't have another house to compare it with), so that house goes on the sidelines. But we do know that one of the colonials is better than the other one. That is, the colonial with the good roof is better than the one with the bad roof. Therefore, we will reason that it is better overall and go for the colonial with the good roof, spurning the contemporary and the colonial that needs a new roof.

To better understand how relativity works, consider the following illustration:



In the left side of this illustration we see two options, each of which is better on a different attribute. Option (A) is better on attribute 1—let's say quality. Option (B) is better on attribute 2—let's say beauty. Obviously these are two very different options and the choice between them is not simple. Now consider what happens if we add another option, called (–A) (see the right side of the illustration). This option is clearly worse than option (A), but it is also very similar to it, making the comparison between them easy, and suggesting that (A) is not only better than (–A) but also better than (B).

In essence, introducing (–A), the decoy, creates a simple relative comparison with (A), and hence makes (A) look better, not just relative to (–A), but overall as well. As a consequence, the inclusion of (–A) in the set, even if no one ever selects it, makes people more likely to make (A) their final choice.

Does this selection process sound familiar? Remember the pitch put together by the Economist? The marketers there knew that we didn't know whether we wanted an Internet subscription or a print subscription. But they figured that, of the three options, the print-and-Internet combination would be the offer we would take.

Here's another example of the decoy effect. Suppose you are planning a honeymoon in Europe. You've already decided to go to one of the major romantic cities and have narrowed your choices to Rome and Paris, your two favorites. The travel agent presents you with the vacation packages for each city, which includes airfare, hotel accommodations, sightseeing tours, and a free breakfast every morning. Which would you select?

For most people, the decision between a week in Rome and a week in Paris is not effortless. Rome has the Coliseum; Paris, the Louvre. Both have a romantic ambience, fabulous food, and fashionable shopping. It's not an easy call. But suppose you were offered a third option: Rome without the free breakfast, called -Rome or the decoy.

If you were to consider these three options (Paris, Rome, -Rome), you would immediately recognize that whereas Rome with the free breakfast is about as appealing as Paris with the free breakfast, the inferior option, which is Rome without the free breakfast, is a step down. The comparison between the clearly inferior option (-Rome) makes Rome with the free breakfast seem even better. In fact, -Rome makes Rome with the free breakfast look so good that you judge it to be even better than the difficult-to-compare option, Paris with the free breakfast.

ONCE YOU SEE the decoy effect in action, you realize that it is the secret agent in more decisions than we could imagine. It even helps us decide whom to date—and, ultimately, whom to marry. Let me describe an experiment that explored just this subject.

As students hurried around MIT one cold weekday, I asked some of them whether they would allow me to take their pictures for a study. In some cases, I got disapproving looks. A few students walked away. But most of them were happy to participate, and before long, the card in my digital camera was filled with images of smiling students. I returned to my office and printed 60 of them —30 of women and 30 of men.

The following week I made an unusual request of 25 of my undergraduates. I asked them to pair the 30 photographs of men and the 30 of women by physical attractiveness (matching the men with other men, and the women with other women). That is, I had them pair the Brad Pitts and the George Clooneys of MIT, as well as the Woody Allens and the Danny DeVitos (sorry, Woody and Danny). Out of these 30 pairs, I selected the six pairs—three female pairs and three male pairs—that my students seemed to agree were most alike.

Now, like Dr. Frankenstein himself, I set about giving these faces my special treatment. Using Photoshop, I mutated the pictures just a bit, creating a slightly but noticeably less attractive version of each of them. I found that just the slightest movement of the nose threw off the symmetry. Using another tool, I enlarged one eye, eliminated some of the hair, and added traces of acne.

No flashes of lightning illuminated my laboratory; nor was there a baying of the hounds on the moor. But this was still a good day for science. By the time I was through, I had the MIT equivalent of George Clooney in his prime (A) and the MIT equivalent of Brad Pitt in his prime (B), and also a George Clooney with a slightly drooping eye and thicker nose (–A, the decoy) and a less symmetrical version of Brad Pitt (-B, another decoy). I followed the same procedure for the less attractive pairs. I had the MIT equivalent of Woody Allen with his usual lopsided grin (A) and Woody Allen with an unnervingly misplaced eye (–A), as well as Danny DeVito (B) and a slightly disfigured version of Danny DeVito (–B).

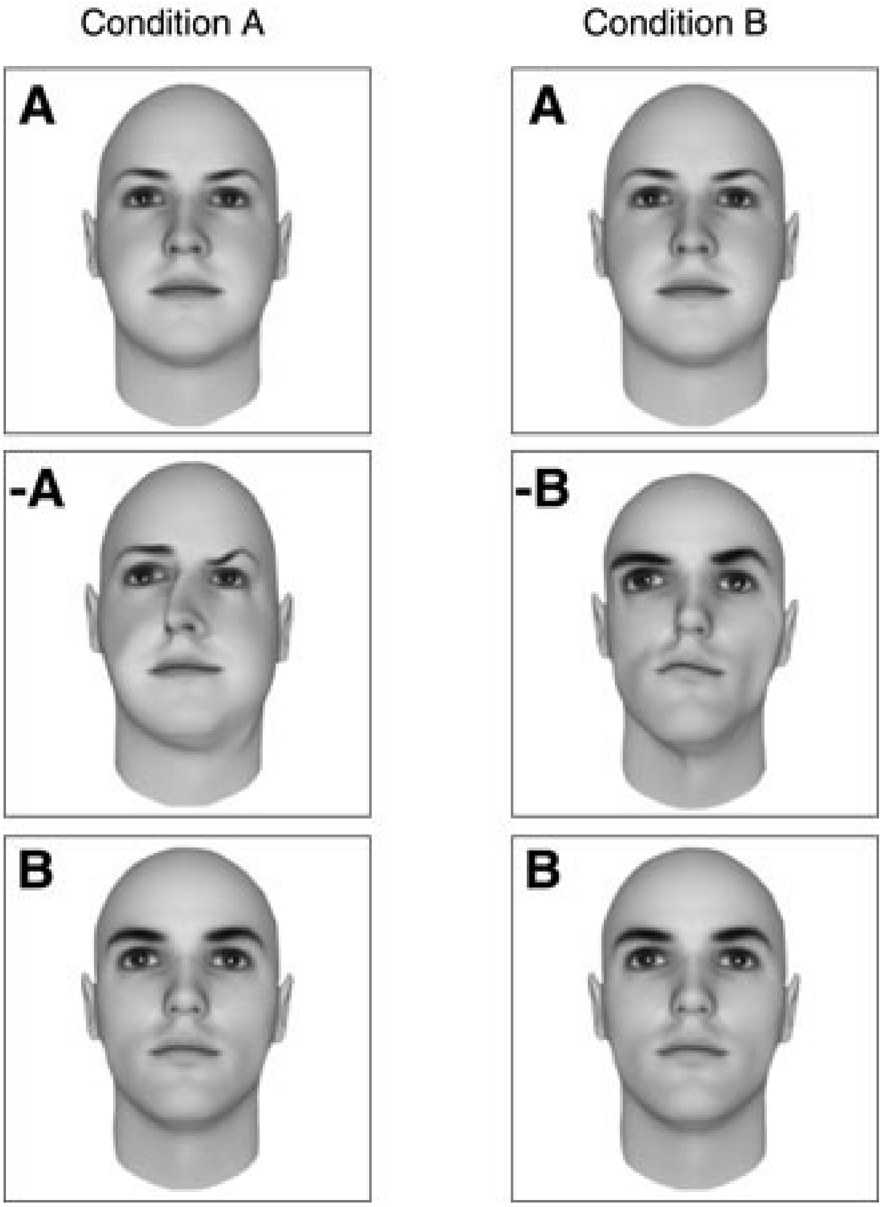
For each of the 12 photographs, in fact, I now had a regular version as well as an inferior (–) decoy version. (See the illustration for an example of the two conditions used in the study.)

It was now time for the main part of the experiment. I took all the sets of pictures and made my way over to the student union. Approaching one student after another, I asked each to participate. When the students agreed, I handed them a sheet with three pictures (as in the illustration here). Some of them had the regular picture (A), the decoy of that picture (–A), and the other regular picture (B). Others had the regular picture (B), the decoy of that picture (–B), and the other regular picture (A).

For example, a set might include a regular Clooney (A), a decoy Clooney (–A), and a regular Pitt (B); or a regular Pitt (B), a decoy Pitt (–B), and a regular Clooney (A). After selecting a sheet with either male or female pictures, according to their preferences, I asked the students to circle the people they would pick to go on a date with, if they had a choice. All this took quite a while, and when I was done, I had distributed 600 sheets.

What was my motive in all this? Simply to determine if the existence of the distorted picture (–A or –B) would push my participants to choose the similar but undistorted picture. In other words, would a slightly less attractive George Clooney (–A) push the participants to choose the perfect George Clooney over the perfect Brad Pitt?

There were no pictures of Brad Pitt or George Clooney in my experiment, of course. Pictures (A) and (B) showed ordinary students. But do you remember how the existence of a colonial-style house needing a new roof might push you to choose a perfect colonial over a contemporary house—simply because the decoy colonial would give you something against which to compare the regular colonial? And in the Economist's ad, didn't the print-only option for $125 push people to take the print-and-Internet option for $125? Similarly, would the existence of a less perfect person (–A or –B) push people to choose the perfect one (A or B), simply because the decoy option served as a point of comparison?



Note: For this illustration, I used computerized faces, not those of the MIT students. And of course, the letters did not appear on the original sheets.

It did. Whenever I handed out a sheet that had a regular picture, its inferior version, and another regular picture, the participants said they would prefer to date the "regular" person—the one who was similar, but clearly superior, to the distorted version—over the other, undistorted person on the sheet. This was not just a close call—it happened 75 percent of the time.

To explain the decoy effect further, let me tell you something about bread-making machines. When Williams-Sonoma first introduced a home "bread bakery" machine (for $275), most consumers were not interested. What was a home bread-making machine, anyway? Was it good or bad? Did one really need home-baked bread? Why not just buy a fancy coffeemaker sitting nearby instead? Flustered by poor sales, the manufacturer of the bread machine brought in a marketing research firm, which suggested a fix: introduce an additional model of the bread maker, one that was not only larger but priced about 50 percent higher than the initial machine.

Now sales began to rise (along with many loaves of bread), though it was not the large bread maker that was being sold. Why? Simply because consumers now had two models of bread makers to choose from. Since one was clearly larger and much more expensive than the other, people didn't have to make their decision in a vacuum. They could say: “Well, I don’t know much about bread makers, but I do know that if I were to buy one, I’d rather have the smaller one for less money.” And that’s when bread makers began to fly off the shelves.[2]

OK for bread makers. But let’s take a look at the decoy effect in a completely different situation. What if you are single, and hope to appeal to as many attractive potential dating partners as possible at an upcoming singles event? My advice would be to bring a friend who has your basic physical characteristics (similar coloring, body type, facial features), but is slightly less attractive (–you).

Why? Because the folks you want to attract will have a hard time evaluating you with no comparables around. However, if you are compared with a “–you,” the decoy friend will do a lot to make you look better, not just in comparison with the decoy but also in general, and in comparison with all the other people around. It may sound irrational (and I can’t guarantee this), but the chances are good that you will get some extra attention. Of course, don’t just stop at looks. If great conversation will win the day, be sure to pick a friend for the singles event who can’t match your smooth delivery and rapier wit. By comparison, you’ll sound great.

Now that you know this secret, be careful: when a similar but better-looking friend of the same sex asks you to accompany him or her for a night out, you might wonder whether you have been invited along for your company or merely as a decoy.

RELATIVITY HELPS US make decisions in life. But it can also make us downright miserable. Why? Because jealousy and envy spring from comparing our lot in life with that of others.

It was for good reason, after all, that the Ten Commandments admonished, “Neither shall you desire your neighbor’s house nor field, or male or female slave, or donkey or anything that belongs to your neighbor.” This might just be the toughest commandment to follow, considering that by our very nature we are wired to compare.

Modern life makes this weakness even more pronounced. A few years ago, for instance, I met with one of the top executives of one of the big investment companies. Over the course of our conversation he mentioned that one of his employees had recently come to him to complain about his salary.

“How long have you been with the firm?” the executive asked the young man.

“Three years. I came straight from college,” was the answer.

“And when you joined us, how much did you expect to be making in three years?”

“I was hoping to be making about a hundred thousand.”

The executive eyed him curiously.

“And now you are making almost three hundred thousand, so how can you possibly complain?” he asked.

“Well,” the young man stammered, “it’s just that a couple of the guys at the desks next to me, they’re not any better than I am, and they are making three hundred ten.”

The executive shook his head.

An ironic aspect of this story is that in 1993, federal securities regulators forced companies, for the first time, to reveal details about the pay and perks of their top executives. The idea was that once pay was in the open, boards would be reluctant to give executives outrageous salaries and benefits. This, it was hoped, would stop the rise in executive compensation, which neither regulation, legislation, nor shareholder pressure had been able to stop. And indeed, it needed to stop: in 1976 the average CEO was paid 36 times as much as the average worker. By 1993, the average CEO was paid 131 times as much.

But guess what happened. Once salaries became public information, the media regularly ran special stories ranking CEOs by pay. Rather than suppressing the executive perks, the publicity had CEOs in America comparing their pay with that of everyone else. In response, executives’ salaries skyrocketed. The trend was further “helped” by compensation consulting firms (scathingly dubbed “Ratchet, Ratchet, and Bingo” by the investor Warren Buffett) that advised their CEO clients to demand outrageous raises. The result? Now the average CEO makes about 369 times as much as the average worker—about three times the salary before executive compensation went public.

Keeping that in mind, I had a few questions for the executive I met with.

"What would happen," I ventured, "if the information in your salary database became known throughout the company?"

The executive looked at me with alarm. "We could get over a lot of things here—insider trading, financial scandals, and the like—but if everyone knew everyone else's salary, it would be a true catastrophe. All but the highest-paid individual would feel underpaid—and I wouldn't be surprised if they went out and looked for another job."

Isn't this odd? It has been shown repeatedly that the link between amount of salary and happiness is not as strong as one would expect it to be (in fact, it is rather weak). Studies even find that countries with the "happiest" people are not among those with the highest personal income. Yet we keep pushing toward a higher salary. Much of that can be blamed on sheer envy. As H. L. Mencken, the twentieth-century journalist, satirist, social critic, cynic, and freethinker noted, a man's satisfaction with his salary depends on (are you ready for this?) whether he makes more than his wife's sister's husband. Why the wife's sister's husband? Because (and I have a feeling that Mencken's wife kept him fully informed of her sister's husband's salary) this is a comparison that is salient and readily available.*

All this extravagance in CEOs' pay has had a damaging effect on society. Instead of causing shame, every new outrage in compensation encourages other CEOs to demand even more. "In the Web World," according to a headline in the New York Times, the "Rich Now Envy the Superrich."

In another news story, a physician explained that he had graduated from Harvard with the dream of someday receiving a Nobel Prize for cancer research. This was his goal. This was his dream. But a few years later, he realized that several of his colleagues were making more as medical investment advisers at Wall Street firms than he was making in medicine. He had previously been happy with his income, but hearing of his friends' yachts and vacation homes, he suddenly felt very poor. So he took another route with his career—the route of Wall Street.[3] By the time he arrived at his twentieth class reunion, he was making 10 times what most of his peers were making in medicine. You can almost see him, standing in the middle of the room at the reunion, drink in hand—a large circle of influence with smaller circles gathering around him. He had not won the Nobel Prize, but he had relinquished his dreams for a Wall Street salary, for a chance to stop feeling "poor." Is it any wonder that family practice physicians, who make an average of $160,000 a year, are in short supply?*

CAN WE DO anything about this problem of relativity?

The good news is that we can sometimes control the "circles" around us, moving toward smaller circles that boost our relative happiness. If we are at our class reunion, and there's a "big circle" in the middle of the room with a drink in his hand, boasting of his big salary, we can consciously take several steps away and talk with someone else. If we are thinking of buying a new house, we can be selective about the open houses we go to, skipping the houses that are above our means. If we are thinking about buying a new car, we can focus on the models that we can afford, and so on.

We can also change our focus from narrow to broad. Let me explain with an example from a study conducted by two brilliant researchers, Amos Tversky and Daniel Kahneman. Suppose you have two errands to run today. The first is to buy a new pen, and the second is to buy a suit for work. At an office supply store, you find a nice pen for $25. You are set to buy it, when you remember that the same pen is on sale for $18 at another store 15 minutes away. What would you do? Do you decide to take the 15-minute trip to save the $7? Most people faced with this dilemma say that they would take the trip to save the $7.

Now you are on your second task: you're shopping for your suit. You find a luxurious gray pinstripe suit for $455 and decide to buy it, but then another customer whispers in your ear that the exact same suit is on sale for only $448 at another store, just 15 minutes away. Do you make this second 15-minute trip? In this case, most people say that they would not.

But what is going on here? Is 15 minutes of your time worth $7, or isn't it? In reality, of course, $7 is $7—no matter how you count it. The only question you should ask yourself in these cases is whether the trip across town, and the 15 extra minutes it would take, is worth the extra $7 you would save. Whether the amount from which this $7 will be saved is $10 or $10,000 should be irrelevant.

This is the problem of relativity—we look at our decisions in a relative way and compare them locally to the available alternative. We compare the relative advantage of the cheap pen with the expensive one, and this contrast makes it obvious to us that we should spend the extra time to save the $7. At the same time, the relative advantage of the cheaper suit is very small, so we spend the extra $7.

This is also why it is so easy for a person to add $200 to a $5,000 catering bill for a soup entrée, when the same person will clip coupons to save 25 cents on a one-dollar can of condensed soup. Similarly, we find it easy to spend $3,000 to upgrade to leather seats when we buy a new $25,000 car, but difficult to spend the same amount on a new leather sofa (even though we know we will spend more time at home on the sofa than in the car). Yet if we just thought about this in a broader perspective, we could better assess what we could do with the $3,000 that we are considering spending on upgrading the car seats. Would we perhaps be better off spending it on books, clothes, or a vacation? Thinking broadly like this is not easy, because making relative judgments is the natural way we think. Can you get a handle on it? I know someone who can.

He is James Hong, cofounder of the Hotornot.com rating and dating site. (James, his business partner Jim Young, Leonard Lee, George Loewenstein, and I recently worked on a research project examining how one's own "attractiveness" affects one's view of the "attractiveness" of others.)

For sure, James has made a lot of money, and he sees even more money all around him. One of his good friends, in fact, is a founder of PayPal and is worth tens of millions. But Hong knows how to make the circles of comparison in his life smaller, not larger. In his case, he started by selling his Porsche Boxster and buying a Toyota Prius in its place.[4]

"I don't want to live the life of a Boxster," he told the New York Times, "because when you get a Boxster you wish you had a 911, and you know what people who have 911s wish they had? They wish they had a Ferrari."

That's a lesson we can all learn: the more we have, the more we want. And the only cure is to break the cycle of relativity.

Reflections on Dating and Relativity

In Chapter 1, on relativity, I offered some dating advice. I proposed that if you want to go bar-hopping, you should consider taking along someone who looks similar to you but who is slightly less attractive than you are. Because of the relative nature of evaluations, others would perceive you not only as cuter than your decoy, but also as better-looking than other people in the bar. By the same logic, I also pointed out that the flip side of this coin is that if someone invites you to be his or her wingman (or wingwoman), you can easily figure out what your friend really thinks of you. As it turns out, I forgot to include one important warning that came courtesy of the daughter of a colleague of mine from MIT.

"Susan" was an undergraduate at Cornell who wrote to me, saying she was delighted with my trick and that it had worked wonderfully for her. Once she found the ideal decoy, her social life improved. But a few weeks later she wrote again, telling me that she'd been at a party where she'd had a few drinks. For some odd reason, she decided to tell her friend why she invited her to accompany her everywhere. The friend was understandably upset, and the story did not end well.

The moral of this story? Never, ever tell your friend why you're asking him or her to come with you. Your friend might have suspicions, but for the love of God, don't eliminate all doubt.

Reflections on Traveling and Relativity

When Predictably Irrational came out, I went on a book tour that lasted six straight weeks. I traveled from airport to airport, city to city, radio station to radio station, talking to reporters and readers for what seemed like days on end, without engaging in any type of personal discussion. Every conversation was short, "all business," and focused on my research. There was no time to enjoy a cup of coffee or a beer with any of the wonderful people I encountered.

Toward the end of the tour I found myself in Barcelona. There I met Jon, an American tourist who, like me, did not speak any Spanish. We felt an immediate camaraderie. I imagine this kind of bonding happens often with travelers from the same country who are far from home and find themselves sharing observations about how they differ from the locals around them. Jon and I ended up having a wonderful dinner and a deeply personal discussion. He told me things that he seemed not to have shared before, and I did the same. There was an unusual closeness between us, as if we were long-lost brothers. After staying up very late talking, we both needed to sleep. We would not have a chance to meet again before parting ways the following morning, so we exchanged e-mail addresses. This was a mistake.

About six months later, Jon and I met again for lunch in New York. This time, it was hard for me to figure out why I'd felt such a connection with him, and no doubt he felt the same. We had a perfectly amicable and interesting lunch, but it lacked the intensity of our first meeting, and I was left wondering why.

In retrospect, I think it was because I'd fallen victim to the effects of relativity. When Jon and I first met, everyone around us was Spanish, and as cultural outsiders we were each other's best alternative for companionship. But once we returned home to our beloved American families and friends, the basis for comparison switched back to "normal" mode. Given this situation, it was hard to understand why Jon or I would want to spend another evening in each other's company rather than with those we love.

My advice? Understand that relativity is everywhere, and that we view everything through its lens—rose-colored or otherwise. When you meet someone in a different country or city and it seems that you have a magical connection, realize that the enchantment might be limited to the surrounding circumstances. This realization might prevent you from subsequent disenchantment.

CHAPTER 2

The Fallacy of Supply and Demand

Why the Price of Pearls—and Everything Else—
Is Up in the Air

At the onset of World War II, an Italian diamond dealer, James Assael, fled Europe for Cuba. There, he found a new livelihood: the American army needed waterproof watches, and Assael, through his contacts in Switzerland, was able to fill the demand.

When the war ended, Assael's deal with the U.S. government dried up, and he was left with thousands of Swiss watches. The Japanese needed watches, of course. But they didn't have any money. They did have pearls, though—many thousands of them. Before long, Assael had taught his son how to barter Swiss watches for Japanese pearls. The business blossomed, and shortly thereafter, the son, Salvador Assael, became known as the "pearl king."

The pearl king had moored his yacht at Saint-Tropez one day in 1973, when a dashing young Frenchman, Jean-Claude Brouillet, came aboard from an adjacent yacht. Brouillet had just sold his air-freight business and with the proceeds had purchased an atoll in French Polynesia—a blue-lagooned paradise for himself and his young Tahitian wife. Brouillet explained that its turquoise waters abounded with black-lipped oysters, Pinctada margaritifera. And from the black lips of those oysters came something of note: black pearls.

At the time there was no market for Tahitian black pearls, and little demand. But Brouillet persuaded Assael to go into business with him. Together they would harvest black pearls and sell them to the world. At first, Assael's marketing efforts failed. The pearls were gunmetal gray, about the size of musket balls, and he returned to Polynesia without having made a single sale. Assael could have dropped the black pearls altogether or sold them at a low price to a discount store. He could have tried to push them to consumers by bundling them together with a few white pearls. But instead Assael waited a year, until the operation had produced some better specimens, and then brought them to an old friend, Harry Winston, the legendary gemstone dealer. Winston agreed to put them in the window of his store on Fifth Avenue, with an outrageously high price tag attached. Assael, meanwhile, commissioned a full-page advertisement that ran in the glossiest of magazines. There, a string of Tahitian black pearls glowed, set among a spray of diamonds, rubies, and emeralds.

The pearls, which had shortly before been the private business of a cluster of black-lipped oysters, hanging on a rope in the Polynesian sea, were soon parading through Manhattan on the arched necks of the city's most prosperous divas. Assael had taken something of dubious worth and made it fabulously fine. Or, as Mark Twain once noted about Tom Sawyer, "Tom had discovered a great law of human action, namely, that in order to make a man covet a thing, it is only necessary to make the thing difficult to attain."

HOW DID THE pearl king do it? How did he persuade the cream of society to become passionate about Tahitian black pearls—and pay him royally for them? In order to answer this question, I need to explain something about baby geese.

A few decades ago, the naturalist Konrad Lorenz discovered that goslings, upon breaking out of their eggs, become attached to the first moving object they encounter (which is generally their mother). Lorenz knew this because in one experiment he became the first thing they saw, and they followed him loyally from then on through adolescence. With that, Lorenz demonstrated not only that goslings make initial decisions based on what's available in their environment, but that they stick with a decision once it has been made. Lorenz called this natural phenomenon imprinting.

Is the human brain, then, wired like that of a gosling? Do our first impressions and decisions become imprinted? And if so, how does this imprinting play out in our lives? When we encounter a new product, for instance, do we accept the first price that comes before our eyes? And more importantly, does that price (which in academic lingo we call an anchor) have a long-term effect on our willingness to pay for the product from then on?

It seems that what's good for the goose is good for humans as well. And this includes anchoring. From the beginning, for instance, Assael "anchored" his pearls to the finest gems in the world—and the prices followed forever after. Similarly, once we buy a new product at a particular price, we become anchored to that price. But how exactly does this work? Why do we accept anchors?

Consider this: if I asked you for the last two digits of your social security number (mine are 79), then asked you whether you would pay this number in dollars (for me this would be $79) for a particular bottle of Côtes du Rhône 1998, would the mere suggestion of that number influence how much you would be willing to spend on wine? Sounds preposterous, doesn't it? Well, wait until you see what happened to a group of MBA students at MIT a few years ago.

"NOW HERE WE have a nice Côtes du Rhône Jaboulet Parallel," said Drazen Prelec, a professor at MIT's Sloan School of Management, as he lifted a bottle admiringly. "It's a 1998."

At the time, sitting before him were the 55 students from his marketing research class. On this day, Drazen, George Loewenstein (a professor at Carnegie Mellon University), and I would have an unusual request for this group of future marketing pros. We would ask them to jot down the last two digits of their social security numbers and tell us whether they would pay this amount for a number of products, including the bottle of wine. Then, we would ask them to actually bid on these items in an auction.

What were we trying to prove? The existence of what we called arbitrary coherence. The basic idea of arbitrary coherence is this: although initial prices (such as the price of Assael's pearls) are "arbitrary," once those prices are established in our minds they will shape not only present prices but also future prices (this makes them "coherent"). So, would thinking about one's social security number be enough to create an anchor? And would that initial anchor have a long-term influence? That's what we wanted to see.

"For those of you who don't know much about wines," Drazen continued, "this bottle received eighty-six points from Wine Spectator. It has the flavor of red berry, mocha, and black chocolate; it's a medium-bodied, medium-intensity, nicely balanced red, and it makes for delightful drinking."

Drazen held up another bottle. This was a Hermitage Jaboulet La Chapelle, 1996, with a 92-point rating from the Wine Advocate magazine. "The finest La Chapelle since 1990," Drazen intoned, while the students looked up curiously. "Only 8,100 cases made . . ."

In turn, Drazen held up four other items: a cordless trackball (TrackMan Marble FX by Logitech); a cordless keyboard and mouse (iTouch by Logitech); a design book (The Perfect Package: How to Add Value through Graphic Design); and a one-pound box of Belgian chocolates by Neuhaus.

Drazen passed out forms that listed all the items. "Now I want you to write the last two digits of your social security number at the top of the page," he instructed. "And then write them again next to each of the items in the form of a price. In other words, if the last two digits are twenty-three, write twenty-three dollars."

"Now when you're finished with that," he added, "I want you to indicate on your sheets—with a simple yes or no—whether you would pay that amount for each of the products."

When the students had finished answering yes or no to each item, Drazen asked them to write down the maximum amount they were willing to pay for each of the products (their bids). Once they had written down their bids, the students passed the sheets up to me and I entered their responses into my laptop and announced the winners. One by one the student who had made the highest bid for each of the products would step up to the front of the class, pay for the product,* and take it with them.

The students enjoyed this class exercise, but when I asked them if they felt that writing down the last two digits of their social security numbers had influenced their final bids, they quickly dismissed my suggestion. No way!

When I got back to my office, I analyzed the data. Did the digits from the social security numbers serve as anchors? Remarkably, they did: the students with the highest-ending social security digits (from 80 to 99) bid highest, while those with the lowest-ending numbers (1 to 20) bid lowest. The top 20 percent, for instance, bid an average of $56 for the cordless keyboard; the bottom 20 percent bid an average of $16. In the end, we could see that students with social security numbers ending in the upper 20 percent placed bids that were 216 to 346 percent higher than those of the students with social security numbers ending in the lowest 20 percent (see table on the facing page).

Now if the last two digits of your social security number are a high number I know what you must be thinking: "I've been paying too much for everything my entire life!" This is not the case, however. Social security numbers were the anchor in this experiment only because we requested them. We could have just as well asked for the current temperature or the manufacturer's suggested retail price (MSRP). Any question, in fact, would have created the anchor. Does that seem rational? Of course not. But that's the way we are—goslings, after all.*

Average prices paid for the various products for each of the five groups of final digits in social security numbers, and the correlations between these digits and the bids submitted in the auction.

	Range of last two digits of SS number					
Products	**00–19**	**20–39**	**40–59**	**60–79**	**80–99**	**Correlations***
Cordless trackball	**$8.64**	**$11.82**	**$13.45**	**$21.18**	**$26.18**	**0.42**
Cordless keyboard	**$16.09**	**$26.82**	**$29.27**	**$34.55**	**$55.64**	**0.52**
Design book	**$12.82**	**$16.18**	**$15.82**	**$19.27**	**$30.00**	**0.32**
Neuhaus chocolates	**$9.55**	**$10.64**	**$12.45**	**$13.27**	**$20.64**	**0.42**
1998 Côtes du Rhône	**$8.64**	**$14.45**	**$12.55**	**$15.45**	**$27.91**	**0.33**
1996 Hermitage	**$11.73**	**$22.45**	**$18.09**	**$24.55**	**$37.55**	**0.33**

*Correlation is a statistical measure of how much the movement of two variables is related. The range of possible correlations is between –1 and +1, where a correlation of 0 means that the change in value of one variable has no bearing on the change in value of the other variable.

The data had one more interesting aspect. Although the willingness to pay for these items was arbitrary, there was also a logical, coherent aspect to it. When we looked at the bids for the two pairs of related items (the two wines and the two computer components), their relative prices seemed incredibly logical. Everyone was willing to pay more for the keyboard than for the trackball—and also pay more for the 1996 Hermitage than for the 1998 Côtes du Rhône. The significance of this is that once the participants were willing to pay a certain price for one product, their willingness to pay for other items in the same product category was judged relative to that first price (the anchor).

This, then, is what we call arbitrary coherence. Initial prices are largely "arbitrary" and can be influenced by responses to random questions; but once those prices are established in our minds, they shape not only what we are willing to pay for an item, but also how much we are willing to pay for related products (this makes them coherent).

Now I need to add one important clarification to the story I've just told. In life we are bombarded by prices. We see the manufacturer's suggested retail price (MSRP) for cars, lawn mowers, and coffeemakers. We get the real estate agent's spiel on local housing prices. But price tags by themselves are not necessarily anchors. They become anchors when we contemplate buying a product or service at that particular price. That's when the imprint is set. From then on, we are willing to accept a range of prices—but as with the pull of a bungee cord, we always refer back to the original anchor. Thus the first anchor influences not only the immediate buying decision but many others that follow.

We might see a 57-inch LCD high-definition television on sale for $3,000, for instance. The price tag is not the anchor. But if we decide to buy it (or seriously contemplate buying it) at that price, then the decision becomes our anchor henceforth in terms of LCD television sets. That's our peg in the ground, and from then on—whether we shop for another set or merely have a conversation at a backyard cookout—all other high-definition televisions are judged relative to that price.

Anchoring influences all kinds of purchases. Uri Simonsohn (a professor at the University of Pennsylvania) and George Loewenstein, for example, found that people who move to a new city generally remain anchored to the prices they paid for housing in their former city. In their study they found that people who move from inexpensive markets (say, Lubbock, Texas) to moderately priced cities (say, Pittsburgh) don't increase their spending to fit the new market.* Rather, these people spend an amount similar to what they were used to in the previous market, even if this means having to squeeze themselves and their families into smaller or less comfortable homes. Likewise, transplants from more expensive cities sink the same dollars into their new housing situation as they did in the past. People who move from Los Angeles to Pittsburgh, in other words, don't generally downsize their spending much once they hit Pennsylvania: they spend an amount similar to what they used to spend in Los Angeles.

It seems that we get used to the particularities of our housing markets and don't readily change. The only way out of this box, in fact, is to rent a home in the new location for a year or so. That way, we adjust to the new environment—and, after a while, we are able to make a purchase that aligns with the local market.

SO WE ANCHOR ourselves to initial prices. But do we hop from one anchor price to another (flip-flopping, if you will), continually changing our willingness to pay? Or does the first anchor we encounter become our anchor for a long time and for many decisions? To answer this question, we decided to conduct another experiment—one in which we attempted to lure our participants from old anchors to new ones.

For this experiment we enlisted some undergraduate students, some graduate students, and some investment bankers who had come to the campus to recruit new employees for their firms. Once the experiment started we presented our participants with three different sounds, and following each, asked them if they would be willing to get paid a particular amount of money (which served as the price anchor) for hearing those sounds again. One sound was a 30-second high-pitched 3,000-hertz sound, somewhat like someone screaming in a high-pitched voice. Another was a 30-second full-spectrum noise (also called white noise), which is similar to the noise a television set makes when there is no reception. The third was a 30-second oscillation between high-pitched and low-pitched sounds. (I am not sure if the bankers understood exactly what they were about to experience, but maybe even our annoying sounds were less annoying than talking about investment banking.)

We used sounds because there is no existing market for annoying sounds (so the participants couldn't use a market price as a way to think about the value of these sounds). We also used annoying sounds, specifically, because no one likes such sounds (if we had used classical music, some would have liked it better than others). As for the sounds themselves, I selected them after creating hundreds of sounds, choosing these three because they were, in my opinion, equally annoying.

We placed our participants in front of computer screens at the lab, and had them clamp headphones over their ears.

As the room quieted down, the first group saw this message appear in front of them: "In a few moments we are going to play a new unpleasant tone over your headset. We are interested in how annoying you find it. Immediately after you hear the tone, we will ask you whether, hypothetically, you would be willing to repeat the same experience in exchange for a payment of 10 cents." The second group got the same message, only with an offer of 90 cents rather than 10 cents.

Would the anchor prices make a difference? To find out, we turned on the sound—in this case the irritating 30-second, 3,000-hertz squeal. Some of our participants grimaced. Others rolled their eyes.

When the screeching ended, each participant was presented with the anchoring question, phrased as a hypothetical choice: Would the participant be willing, hypothetically, to repeat the experience for a cash payment (which was 10 cents for the first group and 90 cents for the second group)? After answering this anchoring question, the participants were asked to indicate on the computer screen the lowest price they would demand to listen to the sound again. This decision was real, by the way, as it would determine whether they would hear the sound again—and get paid for doing so.*

Soon after the participants entered their prices, they learned the outcome. Participants whose price was sufficiently low "won" the sound, had the (unpleasant) opportunity to hear it again, and got paid for doing so. The participants whose price was too high did not listen to the sound and were not paid for this part of the experiment.

What was the point of all this? We wanted to find out whether the first prices that we suggested (10 cents and 90 cents) had served as an anchor. And indeed they had. Those who first faced the hypothetical decision about whether to listen to the sound for 10 cents needed much less money to be willing to listen to this sound again (33 cents on average) relative to those who first faced the hypothetical decision about whether to listen to the sound for 90 cents—this second group demanded more than twice the compensation (73 cents on average) for the same annoying experience. Do you see the difference that the suggested price had?

BUT THIS WAS only the start of our exploration. We also wanted to know how influential the anchor would be in future decisions. Suppose we gave the participants an opportunity to drop this anchor and run for another? Would they do it? To put it in terms of goslings, would they swim across the pond after their original imprint and then, midway, swing their allegiance to a new mother goose? In terms of goslings, I think you know that they would stick with the original mom. But what about humans? The next two phases of the experiment would enable us to answer these questions.

In the second phase of the experiment, we took participants from the previous 10-cents and 90-cents groups and treated them to 30 seconds of a white, wooshing noise. "Hypothetically, would you listen to this sound again for 50 cents?" we asked them at the end. The respondents pressed a button on their computers to indicate yes or no.

"OK, how much would you need to be paid for this?" we asked. Our participants typed in their lowest price; the computer did its thing; and, depending on their bids, some participants listened to the sound again and got paid and some did not. When we compared the prices, the 10-cents group offered much lower bids than the 90-cents group. This means that although both groups had been equally exposed to the suggested 50 cents, as their focal anchoring response (to "Hypothetically, would you listen to this sound again for 50 cents?"), the first anchor in this annoying sound category (which was 10 cents for some and 90 cents for others) predominated.

Why? Perhaps the participants in the 10-cents group said something like the following to themselves: "Well, I listened previously to that annoying sound for a low amount. This sound is not much different. So if I said a low amount for the previous one, I guess I could bear this sound for about the same price." Those who were in the 90-cents group used the same type of logic, but because their starting point was different, so was their ending point. These individuals told themselves, "Well, I listened previously to that annoying sound for a high amount. This sound is not much different. So since I said a high amount for the previous one, I guess I could bear this sound for about the same price." Indeed, the effect of the first anchor held—indicating that anchors have an enduring effect for present prices as well as for future prices.

There was one more step to this experiment. This time we had our participants listen to the oscillating sound that rose and fell in pitch for 30 seconds. We asked our 10-cents group, "Hypothetically, would you listen to this sound again for 90 cents?" Then we asked our 90-cents group, "Would you listen to this sound again for 10 cents?" Having flipped our anchors, we would now see which one, the local anchor or the first anchor, exerted the greatest influence.

Once again, the participants typed in yes or no. Then we asked them for real bids: "How much would it take for you to listen to this again?" At this point, they had a history with three anchors: the first one they encountered in the experiment (either 10 cents or 90 cents), the second one (50 cents), and the most recent one (either 90 cents or 10 cents). Which one of these would have the largest influence on the price they demanded to listen to the sound?

Again, it was as if our participants' minds told them, "If I listened to the first sound for x cents, and listened to the second sound for x cents as well, then I can surely do this one for x cents, too!"

And that's what they did. Those who had first encountered the 10-cent anchor accepted low prices, even after 90 cents was suggested as the anchor. On the other hand, those who had first encountered the 90-cent anchor kept on demanding much higher prices, regardless of the anchors that followed.

What did we show? That our first decisions resonate over a long sequence of decisions. First impressions are important, whether they involve remembering that our first DVD player cost much more than such players cost today (and realizing that, in comparison, the current prices are a steal) or remembering that gas was once a dollar a gallon, which makes every trip to the gas station a painful experience. In all these cases the random, and not so random, anchors that we encountered along the way and were swayed by remain with us long after the initial decision itself.

NOW THAT WE know we behave like goslings, it is important to understand the process by which our first decisions translate into long-term habits. To illustrate this process, consider this example. You're walking past a restaurant, and you see two people standing in line, waiting to get in. "This must be a good restaurant," you think to yourself. "People are standing in line." So you stand behind these people. Another person walks by. He sees three people standing in line and thinks, "This must be a fantastic restaurant," and joins the line. Others join. We call this type of behavior herding. It happens when we assume that something is good (or bad) on the basis of other people's previous behavior, and our own actions follow suit.

But there's also another kind of herding, one that we call self-herding. This happens when we believe something is good (or bad) on the basis of our own previous behavior. Essentially, once we become the first person in line at the restaurant, we begin to line up behind ourself in subsequent experiences. Does that make sense? Let me explain.

Recall your first introduction to Starbucks, perhaps several years ago. (I assume that nearly everyone has had this experience, since Starbucks sits on every corner in America.) You are sleepy and in desperate need of a liquid energy boost as you embark on an errand one afternoon. You glance through the windows at Starbucks and walk in. The prices of the coffee are a shock—you've been blissfully drinking the brew at Dunkin' Donuts for years. But since you have walked in and are now curious about what coffee at this price might taste like, you surprise yourself: you buy a small coffee, enjoy its taste and its effect on you, and walk out.

The following week you walk by Starbucks again. Should you go in? The ideal decision-making process should take into account the quality of the coffee (Starbucks versus Dunkin' Donuts); the prices at the two places; and, of course, the cost (or value) of walking a few more blocks to get to Dunkin' Donuts. This is a complex computation—so instead, you resort to the simple approach: "I went to Starbucks before, and I enjoyed myself and the coffee, so this must be a good decision for me." So you walk in and get another small cup of coffee.

In doing so, you just became the second person in line, standing behind yourself. A few days later, you again walk by Starbucks and this time, you vividly remember your past decisions and act on them again—voilà! You become the third person in line, standing behind yourself. As the weeks pass, you enter again and again and every time, you feel more strongly that you are acting on the basis of your preferences. Buying coffee at Starbucks has become a habit with you.

BUT THE STORY doesn't end there. Now that you have gotten used to paying more for coffee, and have bumped yourself up onto a new curve of consumption, other changes also become simpler. Perhaps you will now move up from the small cup for $2.20 to the medium size for $3.50 or to the Venti for $4.15. Even though you don't know how you got into this price bracket in the first place, moving to a larger coffee at a relatively greater price seems pretty logical. So is a lateral move to other offerings at Starbucks: Caffè Americano, Caffè Misto, Macchiato, and Frappuccino, for instance.

If you stopped to think about this, it would not be clear whether you should be spending all this money on coffee at Starbucks instead of getting cheaper coffee at Dunkin' Donuts or even free coffee at the office. But you don't think about these trade-offs anymore. You've already made this decision many times in the past, so you now assume that this is the way you want to spend your money. You've herded yourself—lining up behind your initial experience at Starbucks—and now you're part of the crowd.

HOWEVER, THERE IS something odd in this story. If anchoring is based on our initial decisions, how did Starbucks manage to become an initial decision in the first place? In other words, if we were previously anchored to the prices at Dunkin' Donuts, how did we move our anchor to Starbucks? This is where it gets really interesting.

When Howard Shultz created Starbucks, he was as intuitive a businessman as Salvador Assael. He worked diligently to separate Starbucks from other coffee shops, not through price but through ambience. Accordingly, he designed Starbucks from the very beginning to feel like a continental coffeehouse.

The early shops were fragrant with the smell of roasted beans (and better-quality roasted beans than those at Dunkin' Donuts). They sold fancy French coffee presses. The showcases presented alluring snacks—almond croissants, biscotti, raspberry custard pastries, and others. Whereas Dunkin' Donuts had small, medium, and large coffees, Starbucks offered Short, Tall, Grande, and Venti, as well as drinks with high-pedigree names like Caffè Americano, Caffè Misto, Macchiato, and Frappuccino. Starbucks did everything in its power, in other words, to make the experience feel different—so different that we would not use the prices at Dunkin' Donuts as an anchor, but instead would be open to the new anchor that Starbucks was preparing for us. And that, to a great extent, is how Starbucks succeeded.

GEORGE, DRAZEN, AND I were so excited with the experiments on coherent arbitrariness that we decided to push the idea one step farther. This time, we had a different twist to explore.

Do you remember the famous episode in The Adventures of Tom Sawyer, the one in which Tom turned the whitewashing of Aunt Polly's fence into an exercise in manipulating his friends? As I'm sure you recall, Tom applied the paint with gusto, pretending to enjoy the job. "Do you call this work?" Tom told his friends. "Does a boy get a chance to whitewash a fence every day?" Armed with this new "information," his friends discovered the joys of whitewashing a fence. Before long, Tom's friends were not only paying him for the privilege, but deriving real pleasure from the task—a win-win outcome if there ever was one.

From our perspective, Tom transformed a negative experience to a positive one—he transformed a situation in which compensation was required to one in which people (Tom's friends) would pay to get in on the fun. Could we do the same? We thought we'd give it a try.

One day, to the surprise of my students, I opened the day's lecture on managerial psychology with a poetry selection, a few lines of "Whoever you are holding me now in hand" from Walt Whitman's Leaves of Grass:

Whoever you are holding me now in hand,
Without one thing all will be useless,
I give you fair warning before you attempt me further,
I am not what you supposed, but far different.
Who is he that would become my follower?
Who would sign himself a candidate for my affections?
The way is suspicious, the result uncertain, perhaps destructive,
You would have to give up all else, I alone would expect to be your sole and exclusive standard,
Your novitiate would even then be long and exhausting,
The whole past theory of your life and all conformity to the lives around you would have to be abandon'd,
Therefore release me now before troubling yourself any further, let go your hand from my shoulders,
Put me down and depart on your way.

After closing the book, I told the students that I would be conducting three readings from Walt Whitman's Leaves of Grass that Friday evening: one short, one medium, and one long. Owing to limited space, I told them, I had decided to hold an auction to determine who could attend. I passed out sheets of paper so that they could bid for a space; but before they did so, I had a question to ask them.

I asked half the students to write down whether, hypothetically, they would be willing to pay me $10 for a 10-minute poetry recitation. I asked the other half to write down whether, hypothetically, they would be willing to listen to me recite poetry for ten minutes if I paid them $10.

This, of course, served as the anchor. Now I asked the students to bid for a spot at my poetry reading. Do you think the initial anchor influenced the ensuing bids?

Before I tell you, consider two things. First, my skills at reading poetry are not of the first order. So asking someone to pay me for 10 minutes of it could be considered a stretch. Second, even though I asked half of the students if they would pay me for the privilege of attending the recitation, they didn't have to bid that way. They could have turned the tables completely and demanded that I pay them.

And now to the results (drumroll, please). Those who answered the hypothetical question about paying me were indeed willing to pay me for the privilege. They offered, on average, to pay me about a dollar for the short poetry reading, about two dollars for the medium poetry reading, and a bit more than three dollars for the long poetry reading. (Maybe I could make a living outside academe after all.)

But, what about those who were anchored to the thought of being paid (rather than paying me)? As you might expect, they demanded payment: on average, they wanted $1.30 to listen to the short poetry reading, $2.70 to listen to the medium poetry reading, and $4.80 to endure the long poetry reading.

Much like Tom Sawyer, then, I was able to take an ambiguous experience (and if you could hear me recite poetry, you would understand just how ambiguous this experience is) and arbitrarily make it into a pleasurable or painful experience. Neither group of students knew whether my poetry reading was of the quality that is worth paying for or of the quality that is worth listening to only if one is being financially compensated for the experience (they did not know if it is pleasurable or painful). But once the first impression had been formed (that they would pay me or that I would pay them), the die was cast and the anchor set. Moreover, once the first decision had been made, other decisions followed in what seemed to be a logical and coherent manner. The students did not know whether listening to me recite poetry was a good or bad experience, but whatever their first decision was, they used it as input for their subsequent decisions and provided a coherent pattern of responses across the three poetry readings.

Of course, Mark Twain came to the same conclusions: "If Tom had been a great and wise philosopher, like the writer of this book, he would now have comprehended that work consists of whatever a body is obliged to do, and that play consists of whatever a body is not obliged to do." Mark Twain further observed: "There are wealthy gentlemen in England who drive four-horse passenger-coaches twenty or thirty miles on a daily line in the summer because the privilege costs them considerable money; but if they were offered wages for the service, that would turn it into work, and then they would resign."*

WHERE DO THESE thoughts lead us? For one, they illustrate the many choices we make, from the trivial to the profound, in which anchoring plays a role. We decide whether or not to purchase Big Macs, smoke, run red lights, take vacations in Patagonia, listen to Tchaikovsky, slave away at doctoral dissertations, marry, have children, live in the suburbs, vote Republican, and so on. According to economic theory, we base these decisions on our fundamental values—our likes and dislikes.

But what are the main lessons from these experiments about our lives in general? Could it be that the lives we have so carefully crafted are largely just a product of arbitrary coherence? Could it be that we made arbitrary decisions at some point in the past (like the goslings that adopted Lorenz as their parent) and have built our lives on them ever since, assuming that the original decisions were wise? Is that how we chose our careers, our spouses, the clothes we wear, and the way we style our hair? Were they smart decisions in the first place? Or were they partially random first imprints that have run wild?

Descartes said, Cogito ergo sum—"I think, therefore I am." But suppose we are nothing more than the sum of our first, naive, random behaviors. What then?

These questions may be tough nuts to crack, but in terms of our personal lives, we can actively improve on our irrational behaviors. We can start by becoming aware of our vulnerabilities. Suppose you're planning to buy a cutting-edge cell phone (the one with the three-megapixel, 8× zoom digital camera), or even a daily $4 cup of gourmet coffee. You might begin by questioning that habit. How did it begin? Second, ask yourself what amount of pleasure you will be getting out of it. Is the pleasure as much as you thought you would get? Could you cut back a little and better spend the remaining money on something else? With everything you do, in fact, you should train yourself to question your repeated behaviors. In the case of the cell phone, could you take a step back from the cutting edge, reduce your outlay, and use some of the money for something else? And as for the coffee—rather than asking which blend of coffee you will have today, ask yourself whether you should even be having that habitual cup of expensive coffee at all.*

We should also pay particular attention to the first decision we make in what is going to be a long stream of decisions (about clothing, food, etc.). When we face such a decision, it might seem to us that this is just one decision, without large consequences; but in fact the power of the first decision can have such a long-lasting effect that it will percolate into our future decisions for years to come. Given this effect, the first decision is crucial, and we should give it an appropriate amount of attention.

Socrates said that the unexamined life is not worth living. Perhaps it's time to inventory the imprints and anchors in our own life. Even if they once were completely reasonable, are they still reasonable? Once the old choices are reconsidered, we can open ourselves to new decisions—and the new opportunities of a new day. That seems to make sense.

ALL THIS TALK about anchors and goslings has larger implications than consumer preferences, however. Traditional economics assumes that prices of products in the market are determined by a balance between two forces: production at each price (supply) and the desires of those with purchasing power at each price (demand). The price at which these two forces meet determines the prices in the marketplace.

This is an elegant idea, but it depends centrally on the assumption that the two forces are independent and that together they produce the market price. The results of all the experiments presented in this chapter (and the basic idea of arbitrary coherence itself) challenge these assumptions. First, according to the standard economic framework, consumers' willingness to pay is one of the two inputs that determine market prices (this is the demand). But as our experiments demonstrate, what consumers are willing to pay can easily be manipulated, and this means that consumers don't in fact have a good handle on their own preferences and the prices they are willing to pay for different goods and experiences.

Second, whereas the standard economic framework assumes that the forces of supply and demand are independent, the type of anchoring manipulations we have shown here suggest that they are, in fact, dependent. In the real world, anchoring comes from manufacturer's suggested retail prices (MSRPs), advertised prices, promotions, product introductions, etc.—all of which are supply-side variables. It seems then that instead of consumers' willingness to pay influencing market prices, the causality is somewhat reversed and it is market prices themselves that influence consumers' willingness to pay. What this means is that demand is not, in fact, a completely separate force from supply.

AND THIS IS not the end of the story. In the framework of arbitrary coherence, the relationships we see in the marketplace between demand and supply (for example, buying more yogurt when it is discounted) are based not on preferences but on memory. Here is an illustration of this idea. Consider your current consumption of milk and wine. Now imagine that two new taxes will be introduced tomorrow. One will cut the price of wine by 50 percent, and the other will increase the price of milk by 100 percent. What do you think will happen? These price changes will surely affect consumption, and many people will walk around slightly happier and with less calcium. But now imagine this. What if the new taxes are accompanied by induced amnesia for the previous prices of wine and milk? What if the prices change in the same way, but you do not remember what you paid for these two products in the past?

I suspect that the price changes would make a huge impact on demand if people remembered the previous prices and noticed the price increases; but I also suspect that without a memory for past prices, these price changes would have a trivial effect, if any, on demand. If people had no memory of past prices, the consumption of milk and wine would remain essentially the same, as if the prices had not changed. In other words, the sensitivity we show to price changes might in fact be largely a result of our memory for the prices we have paid in the past and our desire for coherence with our past decisions—not at all a reflection of our true preferences or our level of demand.

The same basic principle would also apply if the government one day decided to impose a tax that doubled the price of gasoline. Under conventional economic theory, this should cut demand. But would it? Certainly, people would initially compare the new prices with their anchor, would be flabbergasted by the new prices, and so might pull back on their gasoline consumption and maybe even get a hybrid car. But over the long run, and once consumers readjusted to the new price and the new anchors (just as we adjust to the price of Nike sneakers, bottled water, and everything else), our gasoline consumption, at the new price, might in fact get close to the pretax level. Moreover, much as in the example of Starbucks, this process of readjustment could be accelerated if the price change were to also be accompanied by other changes, such as a new grade of gas, or a new type of fuel (such as corn-based ethanol fuel).

I am not suggesting that doubling the price of gasoline would have no effect on consumers' demand. But I do believe that in the long term, it would have a much smaller influence on demand than would be assumed from just observing the short-term market reactions to price increases.

ANOTHER IMPLICATION OF arbitrary coherence has to do with the claimed benefits of the free market and free trade. The basic idea of the free market is that if I have something that you value more than I do—let's say a sofa—trading this item will benefit both of us. This means that the mutual benefit of trading rests on the assumption that all the players in the market know the value of what they have and the value of the things they are considering getting from the trade.

But if our choices are often affected by random initial anchors, as we observed in our experiments, the choices and trades we make are not necessarily going to be an accurate reflection of the real pleasure or utility we derive from those products. In other words, in many cases we make decisions in the marketplace that may not reflect how much pleasure we can get from different items. Now, if we can't accurately compute these pleasure values, but frequently follow arbitrary anchors instead, then it is not clear that the opportunity to trade is necessarily going to make us better off. For example, because of some unfortunate initial anchors we might mistakenly trade something that truly gives us a lot of pleasure (but regrettably had a low initial anchor) for something that gives us less pleasure (but owing to some random circumstances had a high initial anchor). If anchors and memories of these anchors—but not preferences—determine our behavior, why would trading be hailed as the key to maximizing personal happiness (utility)?

SO, WHERE DOES this leave us? If we can't rely on the market forces of supply and demand to set optimal market prices, and we can't count on free-market mechanisms to help us maximize our utility, then we may need to look elsewhere. This is especially the case with society's essentials, such as health care, medicine, water, electricity, education, and other critical resources. If you accept the premise that market forces and free markets will not always regulate the market for the best, then you may find yourself among those who believe that the government (we hope a reasonable and thoughtful government) must play a larger role in regulating some market activities, even if this limits free enterprise. Yes, a free market based on supply, demand, and no friction would be the ideal if we were truly rational. Yet when we are not rational but irrational, policies should take this important factor into account.

Reflections on the Existence of Well-Defined Preferences

One of the lessons from Chapter 2 was that we generally believe we have precise and well-articulated preferences, but in reality, we only think that we know what we want. Here's an example of an experience where I went into a situation with one set of ideas about what I wanted and emerged with a very different understanding.

When I turned 30, I decided it was time to trade in my motorcycle for a car, but I could not decide which car was right for me. The Web was just taking off, and to my delight, I found a site that provided advice on purchasing cars. The Web site, which is now defunct, asked a series of questions ranging from my preferred safety rating to my desired braking distance, my ideal turning radius, the number of passengers I'd like to be able to bring along, and, of course, my price range.

I spent fifteen minutes answering these questions. At the top of each page, I watched the progress bar inch closer to my result. It was exciting—I was really interested in seeing what kind of recommendation the site would come up with. The final screen displayed all the answers I had provided in the last fifteen minutes; all I had to do was click on "Submit" to receive my tailored recommendation. The second I did, I learned that my perfect car was (drum roll, please) a Ford Taurus.

What?

Now, I might not know much about cars (in truth, I know very little about them), but I knew that I did not want a Ford Taurus (and I don't mean any disrespect to what I am sure is generally a fine automobile). The problem was that, having just surrendered my motorcycle, I couldn't see myself driving such a sedate sedan. I was now facing a dilemma: I had tried a deliberative and thoughtful process for my car selection, and I didn't like the answer I got. So, I did what I think anyone in my position would do. I hit the back button a few times, backtracked to earlier stages of the interview process, and changed many of my original answers to what I convinced myself were more accurate and appropriate responses. I lowered my interest in safety and the number of passengers I wanted to take with me, and changed many of my answers to fit what I deemed a more appropriate motorcycle replacement. From time to time, I checked to see how the different responses translated into different recommendations.

I kept this up until the car-advising Web site suggested a Mazda Miata. The moment the program was kind enough to recommend a small convertible, I felt grateful for the fantastic software and decided to follow its advice. A few weeks later, I became the proud owner of a Miata, which served me loyally for many years.

WHAT HAPPENED HERE? On one hand, I knew that buying a car was no trivial matter, and I wanted to approach such a large decision by carefully weighing the cost and benefits in a cold, calculated, and sensible way. At the same time, I knew I was making an important and symbolic move into adulthood, and I understood that kids and the inevitable minivan (which I drive these days) were awaiting me. Nevertheless, my brain and my heart were engaged in a practical tug-of-war. Deep down, what I really wanted was a car that felt closer to a motorcycle—something that was fun to drive.

Taking the systematic and calculated approach to solving this problem did not yield the "correct" answer, so I went back and fudged around with my responses, letting the computerized method rationalize my choice for me. This way, I ended up with a decision that made me happy, and at the same time, it was a decision that I could easily explain to myself. With a neat and programmed computerized process, it was now obvious why the small convertible was, in fact, the right choice for me.

This elaborate computerized justification process might seem artificial and extreme, but I suspect that the same basic elements end up playing out in many of our important decisions. This experience taught me that sometimes we want our decisions to have a rational veneer when, in fact, they stem from a gut feeling—what we crave deep down. I suspect that in our attempts to make sure that we end up with decisions that seem well-reasoned and thoughtful, we commonly undergo a lot of unnecessary mental gymnastics and justifications, particularly when the choices are large and significant. Sometimes these rationalizations are complex and time-consuming, and sometimes we have the benefit of a software program to help us with more efficient rationalization. Perhaps this was the real function of the Web site I used—it was not necessarily designed to help me make a better decision, but to help me justify my choice and feel confident about it.

In the end, following our gut feelings and rationalizing them after the fact is not always bad. It can sometimes lead us to pick a satisfactory outcome or, at the very least, prevent us from ending up with a car we really don't want.

CHAPTER 3

The Cost of Zero Cost

Why We Often Pay Too Much When We Pay Nothing

Have you ever grabbed for a coupon offering a FREE! package of coffee beans—even though you don't drink coffee and don't even have a machine with which to brew it? What about all those FREE! extra helpings you piled on your plate at a buffet, even though your stomach had already started to ache from all the food you had consumed? And what about the worthless FREE! stuff you've accumulated—the promotional T-shirt from the radio station, the teddy bear that came with the box of Valentine chocolates, the magnetic calendar your insurance agent sends you each year?

It's no secret that getting something free feels very good. Zero is not just another price, it turns out. Zero is an emotional hot button—a source of irrational excitement. Would you buy something if it were discounted from 50 cents to 20 cents? Maybe. Would you buy it if it were discounted from 50 cents to two cents? Maybe. Would you grab it if it were discounted from 50 cents to zero? You bet!

What is it about zero cost that we find so irresistible? Why does FREE! make us so happy? After all, FREE! can lead us into trouble: things that we would never consider purchasing become incredibly appealing as soon as they are FREE! For instance, have you ever gathered up free pencils, key chains, and notepads at a conference, even though you'd have to carry them home and would only throw most of them away? Have you ever stood in line for a very long time (too long), just to get a free cone of Ben and Jerry's ice cream? Or have you bought two of a product that you wouldn't have chosen in the first place, just to get the third one for free?

ZERO HAS HAD a long history. The Babylonians invented the concept of zero; the ancient Greeks debated it in lofty terms (how could something be nothing?); the ancient Indian scholar Pingala paired zero with the numeral 1 to get double digits; and both the Mayans and the Romans made zero part of their numeral systems. But zero really found its place about AD 498, when the Indian astronomer Aryabhata sat up in bed one morning and exclaimed, "Sthanam sthanam dasa gunam"—which translates, roughly, as "Place to place in 10 times in value." With that, the idea of decimal-based place-value notation was born. Now zero was on a roll: It spread to the Arab world, where it flourished; crossed the Iberian Peninsula to Europe (thanks to the Spanish Moors); got some tweaking from the Italians; and eventually sailed the Atlantic to the New World, where zero ultimately found plenty of employment (together with the digit 1) in a place called Silicon Valley.

So much for a brief recounting of the history of zero. But the concept of zero applied to money is less clearly understood. In fact, I don't think it even has a history. Nonetheless, FREE! has huge implications, extending not only to discount prices and promotions, but also to how FREE! can be used to help us make decisions that would benefit ourselves and society.

If FREE! were a virus or a subatomic particle, I might use an electron microscope to probe the object under the lens, stain it with different compounds to reveal its nature, or somehow slice it apart to reveal its inner composition. In behavioral economics we use a different instrument, however, one that allows us to slow down human behavior and examine it frame by frame, as it unfolds. As you have undoubtedly guessed by now, this procedure is called an experiment.

IN ONE EXPERIMENT, Kristina Shampanier (a PhD student at MIT), Nina Mazar (a professor at the University of Toronto), and I went into the chocolate business. Well, sort of. We set up a table at a large public building and offered two kinds of chocolates—Lindt truffles and Hershey's Kisses. There was a large sign above our table that read, "One chocolate per customer." Once the potential customers stepped closer, they could see the two types of chocolate and their prices.*

For those of you who are not chocolate connoisseurs, Lindt is produced by a Swiss firm that has been blending fine cocoas for 160 years. Lindt's chocolate truffles are particularly prized—exquisitely creamy and just about irresistible. They cost about 30 cents each when we buy them in bulk. Hershey's Kisses, on the other hand, are good little chocolates, but let's face it, they are rather ordinary: Hershey cranks out 80 million Kisses a day. In Hershey, Pennsylvania, even the streetlamps are made in the shape of the ubiquitous Hershey's Kiss.

So what happened when the "customers" flocked to our table? When we set the price of a Lindt truffle at 15 cents and a Kiss at one cent, we were not surprised to find that our customers acted with a good deal of rationality: they compared the price and quality of the Kiss with the price and quality of the truffle, and then made their choice. About 73 percent of them chose the truffle and 27 percent chose a Kiss.

Now we decided to see how FREE! might change the situation. So we offered the Lindt truffle for 14 cents and the Kisses free. Would there be a difference? Should there be? After all, we had merely lowered the price of both kinds of chocolate by one cent.

But what a difference FREE! made. The humble Hershey's Kiss became a big favorite. Some 69 percent of our customers (up from 27 percent before) chose the FREE! Kiss, giving up the opportunity to get the Lindt truffle for a very good price. Meanwhile, the Lindt truffle took a tumble; customers choosing it decreased from 73 to 31 percent.

What was going on here? First of all, let me say that there are many times when getting FREE! items can make perfect sense. If you find a bin of free athletic socks at a department store, for instance, there's no downside to grabbing all the socks you can. The critical issue arises when FREE! becomes a struggle between a free item and another item—a struggle in which the presence of FREE! leads us to make a bad decision. For instance, imagine going to a sports store to buy a pair of white socks, the kind with a nicely padded heel and a gold toe. Fifteen minutes later you're leaving the store, not with the socks you came in for, but with a cheaper pair that you don't like at all (without a padded heel and gold toe) but that came in a package with a FREE! second pair. This is a case in which you gave up a better deal and settled for something that was not what you wanted, just because you were lured by the FREE!

To replicate this experience in our chocolate experiment, we told our customers that they could choose only a single sweet—the Kiss or the truffle. It was an either-or decision, like choosing one kind of athletic sock over another. That's what made the customers' reaction to the FREE! Kiss so dramatic: Both chocolates were discounted by the same amount of money. The relative price difference between the two was unchanged—and so was the expected pleasure from both.

According to standard economic theory (simple cost-benefit analysis), then, the price reduction should not lead to any change in the behavior of our customers. Before, about 27 percent chose the Kiss and 73 percent chose the truffle. And since nothing had changed in relative terms, the response to the price reduction should have been exactly the same. A passing economist, twirling his cane and espousing conventional economic theory, in fact, would have said that since everything in the situation was the same, our customers should have chosen the truffles by the same margin of preference.*

And yet here we were, with people pressing up to the table to grab our Hershey's Kisses, not because they had made a reasoned cost-benefit analysis before elbowing their way in, but simply because the Kisses were FREE! How strange (but predictable) we humans are!

THIS CONCLUSION, INCIDENTALLY, remained the same in other experiments as well. In one case we priced the Hershey's Kiss at two cents, one cent, and zero cents, while pricing the truffle correspondingly at 27 cents, 26 cents, and 25 cents. We did this to see if discounting the Kiss from two cents to one cent and the truffle from 27 cents to 26 cents would make a difference in the proportion of buyers for each. It didn't. But, once again, when we lowered the price of the Kiss to free, the reaction was dramatic. The shoppers overwhelmingly demanded the Kisses.

We decided that perhaps the experiment had been tainted, since shoppers may not feel like searching for change in a purse or backpack, or they may not have any money on them. Such an effect would artificially make the free offer seem more attractive. To address this possibility, we ran other experiments at one of MIT's cafeterias. In this setup, the chocolates were displayed next to the cashier as one of the cafeteria's regular promotions and the students who were interested in the chocolates simply added them to the lunch purchase, and paid for them while going through the cashier's line. What happened? The students still went overwhelmingly for the FREE! option.

WHAT IS IT about FREE! that's so enticing? Why do we have an irrational urge to jump for a FREE! item, even when it's not what we really want?

I believe the answer is this. Most transactions have an upside and a downside, but when something is FREE! we forget the downside. FREE! gives us such an emotional charge that we perceive what is being offered as immensely more valuable than it really is. Why? I think it's because humans are intrinsically afraid of loss. The real allure of FREE! is tied to this fear. There's no visible possibility of loss when we choose a FREE! item (it's free). But suppose we choose the item that's not free. Uh-oh, now there's a risk of having made a poor decision—the possibility of a loss. And so, given the choice, we go for what is free.

For this reason, in the land of pricing, zero is not just another price. Sure, 10 cents can make a huge difference in demand (suppose you were selling millions of barrels of oil), but nothing beats the emotional surge of FREE! This, the zero price effect, is in a category all its own.

To be sure, "buying something for nothing" is a bit of an oxymoron. But let me give you an example of how we often fall into the trap of buying something we may not want, simply because of that sticky substance, FREE!

In 2007, I saw a newspaper ad from a major electronics maker, offering me seven FREE! DVD titles if I purchased the maker's new high-definition DVD player. First of all, did I need a high-definition player at that time? Probably not. But even if I had, wouldn't it have been wiser to wait for prices to descend? They always do—and today's $600 high-definition DVD player will very quickly be tomorrow's $200 machine. Second, the DVD maker had a clear agenda behind its offer. This company's high-definition DVD system was in cutthroat competition with Blu-Ray, a system backed by many other manufacturers. At the time, Blu-Ray was ahead and has since gone on to dominate the market. So how much is FREE! when the machine being offered will find its way into obsolescence (like Betamax VCRs)? Those are two rational thoughts that might prevent us from falling under the spell of FREE! But, gee, those FREE! DVDs certainly look good!

GETTING SOMETHING FREE! is certainly a draw when we talk about prices. But what would happen if the offer was not a free price, but a free exchange? Are we as susceptible to free products as we are to getting products for free? A few years ago, with Halloween drawing near, I had an idea for an experiment to probe that question. This time I wouldn't even have to leave my home to get my answers.

Early in the evening, Joey, a nine-year-old kid dressed as Spider-Man and carrying a large yellow bag, climbed the stairs of our front porch. His mother accompanied him, to ensure that no one gave her kid an apple with a razor blade inside. (By the way, there never was a case of razor blades being distributed in apples on Halloween; it is just an urban myth.) She stayed on the sidewalk, however, to give Joey the feeling that he was trick-or-treating by himself.

After the traditional query, “Trick or treat?” I asked Joey to hold open his right hand. I placed three Hershey’s Kisses in his palm and asked him to hold them there for a moment. “You can also get one of these two Snickers bars,” I said, showing him a small one and a large one. “In fact, if you give me one of those Hershey’s Kisses I will give you this smaller Snickers bar. And if you give me two of your Hershey’s Kisses, I will give you this larger Snickers bar.”

Now a kid may dress up like a giant spider, but that doesn’t mean he’s stupid. The small Snickers bar weighed one ounce, and the large Snickers bar weighed two ounces. All Joey had to do was give me one additional Hershey’s Kiss (about 0.16 ounce) and he would get an extra ounce of Snickers. This deal might have stumped a rocket scientist, but for a nine-year-old boy, the computation was easy: he’d get more than six times the return on investment (in the net weight of chocolate) if he went for the larger Snickers bar. In a flash Joey put two of his Kisses into my hand, took the two-ounce Snickers bar, and dropped it into his bag.

Joey wasn’t alone in making this snap decision. All but one of the kids to whom I presented this offer traded in two Kisses for the bigger candy bars.

Zoe was the next kid to walk down the street. She was dressed as a princess, in a long white dress, with a magic wand in one hand and an orange Halloween pumpkin bucket in the other. Her younger sister was resting comfortably in their father’s arms, looking cute and cuddly in her bunny outfit. As they approached, Zoe called out, in a high, cute voice, “Trick or treat!” In the past I admit that I have sometimes devilishly replied, “Trick!” Most kids stand there, baffled, having never thought through their question to see that it allowed an alternative answer.

In this case I gave Zoe her treat—three Hershey’s Kisses. But I did have a trick up my sleeve. I offered little Zoe a deal: a choice between getting a large Snickers bar in exchange for one of her Hershey’s Kisses, or getting the small Snickers bar for FREE! without giving up any Hershey’s Kisses.

Now, a bit of rational calculation (which in Joey’s case was amply demonstrated) would show that the best deal is to forgo the free small Snickers bar, pay the cost of one additional Hershey’s Kiss, and go for the large Snickers bar. On an ounce-for-ounce comparison, it was far better to give up one additional Hershey’s Kiss and get the larger Snickers bar (two ounces) instead of a smaller Snickers bar (one ounce). This logic was perfectly clear to Joe and the kids who encountered the condition in which both Snickers bars had a cost. But what would Zoe do? Would her clever kid’s mind make that rational choice—or would the fact that the small Snickers bar was FREE! blind her to the rationally correct answer?

As you might have guessed by now, Zoe, and the other kids to whom I offered the same deal, was completely blinded by FREE! About 70 percent of them gave up the better deal, and took the worse deal just because it was FREE!

Just in case you think Kristina, Nina, and I make a habit of picking on kids, I’ll mention that we repeated the experiment with bigger kids, in fact students at the MIT student center. The results replicated the pattern we saw on Halloween. Indeed, the draw of zero cost is not limited to monetary transactions. Whether it’s products or money, we just can’t resist the gravitational pull of FREE!

SO DO YOU think you have a handle on FREE!?

OK. Here’s a quiz. Suppose I offered you a choice between a free $10 Amazon gift certificate and a $20 gift certificate for seven dollars. Think quickly. Which would you take?

If you jumped for the FREE! certificate, you would have been like most of the people we tested at one of the malls in Boston. But look again: a $20 gift certificate for seven dollars delivers a $13 profit. That’s clearly better than getting a $10 certificate free (earning $10). Can you see the irrational behavior in action?*

LET ME TELL you a story that describes the real influence of FREE! on our behavior. A few years ago, Amazon.com started offering free shipping of orders over a certain amount. Someone who purchased a single book for $16.95 might pay an additional $3.95 for shipping, for instance. But if the customer bought another book, for a total of $31.90, they would get their shipping FREE!

Some of the purchasers probably didn't want the second book (and I am talking here from personal experience) but the FREE! shipping was so tempting that to get it, they were willing to pay the cost of the extra book. The people at Amazon were very happy with this offer, but they noticed that in one place—France—there was no increase in sales. Is the French consumer more rational than the rest of us? Unlikely. Rather, it turned out, the French customers were reacting to a different deal.

Here's what happened. Instead of offering FREE! shipping on orders over a certain amount, the French division priced the shipping for those orders at one franc. Just one franc—about 20 cents. This doesn't seem very different from FREE! but it was. In fact, when Amazon changed the promotion in France to include free shipping, France joined all the other countries in a dramatic sales increase. In other words, whereas shipping for one franc—a real bargain—was virtually ignored by the French, FREE! shipping caused an enthusiastic response.

America Online (AOL) had a similar experience several years ago when it switched from pay-per-hour service to a monthly payment schedule (in which you could log in as many hours as you wanted for a fixed $19.95 per month). In preparation for the new price structure, AOL geared up for what it estimated would be a small increase in demand. What did it get? An overnight increase from 140,000 to 236,000 customers logging into the system, and a doubling of the average time online. That may seem good—but it wasn't good. AOL's customers encountered busy phone lines, and soon AOL was forced to lease services from other online providers (who were only too happy to sell bandwidth to AOL—at the premium of snow shovels in a snowstorm). What Bob Pittman (the president of AOL at the time) didn't realize was that consumers would respond to the allure of FREE! like starving people at a buffet.

WHEN CHOOSING BETWEEN two products, then, we often overreact to the free one. We might opt for a FREE! checking account (with no benefits attached) rather than one that costs five dollars a month. But if the five-dollar checking account includes free traveler's checks, online billing, etc., and the FREE! one doesn't, we may end up spending more for this package of services with the FREE! account than with the five-dollar account. Similarly, we might choose a mortgage with no closing costs, but with interest rates and fees that are off the wall; and we might get a product we don't really want simply because it comes with a free gift.

My most recent personal encounter with this involved a car. When I was looking for a new car a few years ago, I knew that I really should buy a minivan. In fact, I had read up on Honda minivans and knew all about them. But then an Audi caught my eye, at first through an appealing offer—FREE! oil changes for the next three years. How could I resist?

To be perfectly honest, the Audi was sporty and red, and I was still resisting the idea of being a mature and responsible father to two young kids. It wasn't as if the free oil change completely swayed me, but its influence on me was, from a rational perspective, unjustifiably large. Just because it was FREE! it served as an additional allure that I could cling to.

So I bought the Audi—and the FREE! oil. (A few months later, while I was driving on a highway, the transmission broke—but that is a different story.) Of course, with a cooler head I might have made a more rational calculation. I drive about 7,000 miles a year; the oil needs to be changed every 10,000 miles; and the cost per change is about $75. Over three years, then, I would save about $150, or about 0.5 percent of the purchase price of the car—not a good reason to base my decision on. It gets worse, though: now I have an Audi that is packed to the ceiling with action figures, a stroller, a bike, and other kids' paraphernalia. Oh, for a minivan.

THE CONCEPT OF zero also applies to time. Time spent on one activity, after all, is time taken away from another. So if we spend 45 minutes in a line waiting for our turn to get a FREE! taste of ice cream, or if we spend half an hour filling out a long form for a tiny rebate, there is something else that we are not doing with our time.

My favorite personal example is free-entrance day at a museum. Despite the fact that most museums are not very expensive, I find it much more appealing to satisfy my desire for art when the price is zero. Of course I am not alone in this desire. So on these days I usually find that the museum is overcrowded, the line is long, it is hard to see anything, and fighting the crowds around the museum and in the cafeteria is unpleasant. Do I realize that it is a mistake to go to a museum when it is free? You bet I do—but I go nevertheless.

ZERO MAY ALSO affect food purchases. Food manufacturers have to convey all kinds of information on the side of the box. They have to tell us about the calories, fat content, fiber, etc. Is it possible that the same attraction we have to zero price could also apply to zero calories, zero trans fats, zero carbs, etc.? If the same general rules apply, Pepsi will sell more cans if the label says "zero calories" than if it says "one calorie."

Suppose you are at a bar, enjoying a conversation with some friends. With one brand you get a calorie-free beer, and with another you get a three-calorie beer. Which brand will make you feel that you are drinking a really light beer? Even though the difference between the two beers is negligible, the zero-calorie beer will increase the feeling that you're doing the right thing, healthwise. You might even feel so good that you go ahead and order a plate of fries.

SO YOU CAN maintain the status quo with a 20-cent fee (as in the case of Amazon's shipping in France), or you can start a stampede by offering something FREE! Think how powerful that idea is! Zero is not just another discount. Zero is a different place. The difference between two cents and one cent is small. But the difference between one cent and zero is huge!

If you are in business, and understand that, you can do some marvelous things. Want to draw a crowd? Make something FREE! Want to sell more products? Make part of the purchase FREE!

Similarly, we can use FREE! to drive social policy. Want people to drive electric cars? Don't just lower the registration and inspection fees—eliminate them, so that you have created FREE! In the same way, if health is your concern, focus on early detection as a way to eliminate the progression of severe illnesses. Want people to do the right thing—in terms of getting regular colonoscopies, mammograms, cholesterol checks, diabetes checks, and such? Don't just decrease the cost (by decreasing the co-pay). Make these critical procedures FREE!

I don't think most policy strategists realize that FREE! is an ace in their hand, let alone know how to play it. It's certainly counterintuitive, in these times of budget cutbacks, to make something FREE! But when we stop to think about it, FREE! can have a great deal of power, and it makes a lot of sense.

Reflections on the Price of FREE!

We learned from our experiments that we all get a bit too excited when something is FREE! and that consequently, we can make decisions that are not in our best interest.

For example, imagine that you were choosing between two credit cards: one that offers you a 12 percent APR but has no yearly fee (FREE!), and one that offers you a lower interest rate of 9 percent APR but charges you a $100 annual fee. Which one would you take? Most people would overemphasize the yearly fee and in pursuit of the FREE! offer would end up getting the card that costs them much more in the long run—when they inevitably miss a payment or carry a balance.*

Although identifying and fighting the allure of FREE! is important in order to avoid traps while we are making decisions, there are also some cases in which we can use FREE! to our advantage. Take, for example, the common experience of going to a restaurant with friends. When the server drops off the check at the end of a meal, people often scramble to figure out the norms for payment. Do we each pay for what we ordered? Do we split the bill evenly, even if John had that extra glass of wine and the crème brûlée? FREE! can help us solve this problem, and in the process help us get more joy from dining out with our friends.

The answer, as it turns out, is that one person should pay the entire bill, and that the people involved should take turns paying over time. Here is the logic: When we pay—regardless of the amount of money—we feel some psychological pain, which social scientists call the "pain of paying." This is the unpleasantness associated with giving up our hard-earned cash, regardless of the circumstances. It turns out that the pain of paying has two interesting features. First, and most obviously, when we pay nothing (for example, when someone else foots the bill) we don't feel any pain of paying. Second, and less obviously, the pain of paying is relatively insensitive to the amount that we pay. This means that we feel more pain of paying as the bill increases, but every additional dollar on the bill pains us less. (We call this "diminishing sensitivity." Analogously, if you add one pound to an empty backpack, it feels like a substantial increase in weight. But adding a pound to a backpack that's already laden with a laptop and some books does not feel like a big difference.) This diminishing sensitivity to the pain of paying means that the first dollar we pay will cause us the highest pain, the second dollar will cause us less, and so on, until we feel just a tiny twinge for, say, the forty-seventh dollar.

So if we are dining with others, we are happiest when we pay nothing (FREE!); we are less happy when we have to pay something; and the additional dollars we fork over cause us a smaller and smaller additional amount of pain as the size of the bill increases. The logical conclusion is that one person should pay the whole bill.

If you're still unconvinced, consider the following example: Imagine that four people share a meal and the bill comes to $100. Now, if everyone at the table pays $25, every person would feel some pain of paying. In order to make this less abstract, let's assign "units" as a measure of this pain. We'll assume that paying $25 translates into 10 units of pain for a total of 40 units of pain for the whole table when it comes time to split the bill. But what if one person pays the entire bill? Since the pain of paying does not increase linearly with the amount of payment, the person who is paying will feel 10 units of pain for the first $25 that he or she pays; maybe 7 units for the next $25; 5 units for the next $25; and 4 units for the last $25. The total of 26 units of pain lowers the amount of pain for the entire table by 14 units. The general point is this: we all love getting our meals for nothing, and as long as we can alternate payers, we can enjoy many FREE! dinners and derive greater overall benefit from our friendships in the process.

"Aha," you might say, "but what about times when I eat only a green salad while my friend's husband orders a green salad, a filet mignon dinner, two glasses of the most expensive cabernet sauvignon, and a crème brûlée for dessert? Or when the number of people changes the next time we gather? Or when some people in the group leave town altogether? All of this leaves me holding the bag."

Certainly, there is no question that all these considerations make the "I'll buy this time, you buy next time" approach less economically efficient. Nevertheless, given the huge benefits in terms of the pain of paying that this method delivers, I personally would be willing to sacrifice a few bucks here and there to reduce the pain of paying for my friends and myself.

Appendix: Chapter 3

Let me explain how the logic of standard economic theory would apply to our setting. When a person can select one and only one of two chocolates, he needs to consider not the absolute value of each chocolate but its relative value—what he gets and what he gives up. As a first step the rational consumer needs to compute the relative net benefits of the two chocolates (the value of the expected taste minus the cost), and make a decision based on which chocolate has the larger net benefit. How would this look when the cost of the Lindt truffle was 15 cents and the cost of the Hershey's Kiss was one cent? The rational consumer would estimate the amount of pleasure he expects to get from the truffle and the Kiss (let's say this is 50 pleasure units and five pleasure units, respectively) and subtract the displeasure he would get from paying 15 cents and one cent (let's say this is 15 displeasure units and one displeasure unit, respectively). This would give him a total expected pleasure of 35 pleasure units (50 – 15) for the truffle, and a total expected pleasure of four pleasure units (5 - 1) for the Kiss. The truffle leads by 31 points, so it's an easy choice—the truffle wins hands down.

What about the case when the cost is reduced by the same amount for both products? (Truffles cost 14 cents and the Kiss is free.) The same logic applies. The taste of the chocolates has not changed, so the rational consumer would estimate the pleasure to be 50 and five pleasure units, respectively. What has changed is the displeasure. In this setting the rational consumer would have a lower level of displeasure for both chocolates because the prices have been reduced by one cent (and one displeasure unit). Here is the main point: because both products were discounted by the same amount, their relative difference would be unchanged. The total expected pleasure for the truffle would now be 36 pleasure units (50 - 14), and the total expected pleasure for the Kiss would now be five pleasure units (5 - 0). The truffle leads by the same 31 points, so it should be the same easy choice. The truffle wins hands down.

This is how the pattern of choice should look, if the only forces at play were those of a rational cost-benefit analysis. The fact that the results from our experiments are so different tells us loud and clear that something else is going on, and that the price of zero plays a unique role in our decisions.

CHAPTER 4

The Cost of Social Norms

Why We Are Happy to Do Things, but Not When We Are Paid to Do Them

You are at your mother-in-law's house for Thanksgiving dinner, and what a sumptuous spread she has put on the table for you! The turkey is roasted to a golden brown; the stuffing is homemade and exactly the way you like it. Your kids are delighted: the sweet potatoes are crowned with marshmallows. And your wife is flattered: her favorite recipe for pumpkin pie has been chosen for dessert.

The festivities continue into the late afternoon. You loosen your belt and sip a glass of wine. Gazing fondly across the table at your mother-in-law, you rise to your feet and pull out your wallet. "Mom, for all the love you've put into this, how much do I owe you?" you say sincerely. As silence descends on the gathering, you wave a handful of bills. "Do you think three hundred dollars will do it? No, wait, I should give you four hundred!"

This is not a picture that Norman Rockwell would have painted. A glass of wine falls over; your mother-in-law stands up red-faced; your sister-in-law shoots you an angry look; and your niece bursts into tears. Next year's Thanksgiving celebration, it seems, may be a frozen dinner in front of the television set.

WHAT'S GOING ON here? Why does an offer for direct payment put such a damper on the party? As Margaret Clark, Judson Mills, and Alan Fiske suggested a long time ago, the answer is that we live simultaneously in two different worlds—one where social norms prevail, and the other where market norms make the rules. The social norms include the friendly requests that people make of one another. Could you help me move this couch? Could you help me change this tire? Social norms are wrapped up in our social nature and our need for community. They are usually warm and fuzzy. Instant paybacks are not required: you may help move your neighbor's couch, but this doesn't mean he has to come right over and move yours. It's like opening a door for someone: it provides pleasure for both of you, and reciprocity is not immediately required.

The second world, the one governed by market norms, is very different. There's nothing warm and fuzzy about it. The exchanges are sharp-edged: wages, prices, rents, interest, and costs-and-benefits. Such market relationships are not necessarily evil or mean—in fact, they also include self-reliance, inventiveness, and individualism—but they do imply comparable benefits and prompt payments. When you are in the domain of market norms, you get what you pay for—that's just the way it is.

When we keep social norms and market norms on their separate paths, life hums along pretty well. Take sex, for instance. We may have it free in the social context, where it is, we hope, warm and emotionally nourishing. But there's also market sex, sex that is on demand and that costs money.

This seems pretty straightforward. We don't have husbands (or wives) coming home asking for a $50 trick; nor do we have prostitutes hoping for everlasting love.

When social and market norms collide, trouble sets in. Take sex again. A guy takes a girl out for dinner and a movie, and he pays the bills. They go out again, and he pays the bills once more. They go out a third time, and he's still springing for the meal and the entertainment. At this point, he's hoping for at least a passionate kiss at the front door. His wallet is getting perilously thin, but worse is what's going on in his head: he's having trouble reconciling the social norm (courtship) with the market norm (money for sex). On the fourth date he casually mentions how much this romance is costing him. Now he's crossed the line. Violation! She calls him a beast and storms off. He should have known that one can't mix social and market norms—especially in this case—without implying that the lady is a tramp. He should also have remembered the immortal words of Woody Allen: "The most expensive sex is free sex."

A FEW YEARS ago, James Heyman (a professor at the University of St. Thomas) and I decided to explore the effects of social and market norms. Simulating the Thanksgiving incident would have been wonderful, but considering the damage we might have done to our participants' family relationships, we chose something more mundane. In fact, it was one of the most boring tasks we could find (there is a tradition in social science of using very boring tasks).

In this experiment, a circle was presented on the left side of a computer screen and a box was presented on the right. The task was to drag the circle, using the computer mouse, onto the square. Once the circle was successfully dragged to the square, it disappeared from the screen and a new circle appeared at the starting point. We asked the participants to drag as many circles as they could, and we measured how many circles they dragged within five minutes. This was our measure of their labor output—the effort that they would put into this task.

How could this setup shed light on social and market exchanges? Some of the participants received five dollars for participating in the short experiment. They were given the money as they walked into the lab; and they were told that at the end of the five minutes, the computer would alert them that the task was done, at which point they were to leave the lab. Because we paid them for their efforts, we expected them to apply market norms to this situation and act accordingly.

Participants in a second group were presented with the same basic instructions and task; but for them the reward was much lower (50 cents in one experiment and 10 cents in the other). Again we expected the participants to apply market norms to this situation and act accordingly.

Finally, we had a third group, to whom we introduced the tasks as a social request. We didn't offer the participants in this group anything concrete in return for their effort; nor did we mention money. It was merely a favor that we asked of them. We expected these participants to apply social norms to the situation and act accordingly.

How hard did the different groups work? In line with the ethos of market norms, those who received five dollars dragged on average 159 circles, and those who received 50 cents dragged on average 101 circles. As expected, more money caused our participants to be more motivated and work harder (by about 50 percent).

What about the condition with no money? Did these participants work less than the ones who got the low monetary payment—or, in the absence of money, did they apply social norms to the situation and work harder? The results showed that on average they dragged 168 circles, much more than those who were paid 50 cents, and just slightly more than those who were paid five dollars. In other words, our participants worked harder under the nonmonetary social norms than for the almighty buck (OK, 50 cents).

Perhaps we should have anticipated this. There are many examples to show that people will work more for a cause than for cash. A few years ago, for instance, the AARP asked some lawyers if they would offer less expensive services to needy retirees, at something like $30 an hour. The lawyers said no. Then the program manager from AARP had a brilliant idea: he asked the lawyers if they would offer free services to needy retirees. Overwhelmingly, the lawyers said yes.

What was going on here? How could zero dollars be more attractive than $30? When money was mentioned, the lawyers used market norms and found the offer lacking, relative to their market salary. When no money was mentioned they used social norms and were willing to volunteer their time. Why didn't they just accept the $30, thinking of themselves as volunteers who received $30? Because once market norms enter our considerations, the social norms depart.

A similar lesson was learned by Nachum Sicherman, an economics professor at Columbia, who was taking martial arts lessons in Japan. The sensei (the master teacher) was not charging the group for the training. The students, feeling that this was unfair, approached the master one day and suggested that they pay him for his time and effort. Setting down his bamboo shinai, the master calmly replied that if he charged them, they would not be able to afford him.

IN THE PREVIOUS experiment, then, those who got paid 50 cents didn't say to themselves, "Good for me; I get to do this favor for these researchers, and I am getting some money out of this," and continue to work harder than those who were paid nothing. Instead they switched themselves over to the market norms, decided that 50 cents wasn't much, and worked halfheartedly. In other words, when the market norms entered the lab, the social norms were pushed out.

But what would happen if we replaced the payments with a gift? Surely your mother-in-law would accept a good bottle of wine at dinner. Or how about a housewarming present (such as an eco-friendly plant) for a friend? Are gifts methods of exchange that keep us within the social exchange norms? Would participants receiving such gifts switch out of the social norms and into market norms, or would offering gifts as rewards maintain the participants in the social world?

To find out just where gifts fall on the line between social and market norms, James and I decided on a new experiment. This time, we didn't offer our participants money for dragging circles across a computer screen; we offered them gifts instead. We replaced the 50-cent reward with a Snickers bar (worth about 50 cents), and the five-dollar incentive with a box of Godiva chocolates (worth about five dollars).

The participants came to the lab, got their reward, worked as much as they liked, and left. Then we looked at the results. As it turned out, all three experimental groups worked about equally hard during the task, regardless of whether they got a small Snickers bar (these participants dragged on average 162 circles), the Godiva chocolates (these participants dragged on average 169 circles), or nothing at all (these participants dragged on average 168 circles). The conclusion: no one is offended by a small gift, because even small gifts keep us in the social exchange world and away from market norms.

BUT WHAT WOULD HAPPEN if we mixed the signals for the two types of norms? What would happen if we blended the market norm with the social norm? In other words, if we said that we would give them a "50-cent Snickers bar" or a "five-dollar box of Godiva chocolates," what would the participants do? Would a "50-cent Snickers bar" make our participants work as hard as a "Snickers bar" made them work; or would it make them work halfheartedly, as the 50-cents made them work? Or would it be somewhere in the middle? The next experiment tested these ideas.

As it turned out, the participants were not motivated to work at all when they got the 50-cent Snickers bar, and in fact the effort they invested was the same as when they got a payment of 50 cents. They reacted to the explicitly priced gift in exactly the way they reacted to cash, and the gift no longer invoked social norms—by the mention of its cost, the gift had passed into the realm of market norms.

By the way, we replicated the setup later when we asked passersby whether they would help us unload a sofa from a truck. We found the same results. People are willing to work free, and they are willing to work for a reasonable wage; but offer them just a small payment and they will walk away. Gifts are also effective for sofas, and offering people a gift, even a small one, is sufficient to get them to help; but mention what the gift cost you, and you will see the back of them faster than you can say market norms.

THESE RESULTS SHOW that for market norms to emerge, it is sufficient to mention money (even when no money changes hands). But, of course, market norms are not just about effort—they relate to a broad range of behaviors, including self-reliance, helping, and individualism. Would simply getting people to think about money influence them to behave differently in these respects? This premise was explored in a set of fantastic experiments by Kathleen Vohs (a professor at the University of Minnesota), Nicole Mead (a graduate student at Florida State University), and Miranda Goode (a graduate student at the University of British Columbia).

They asked the participants in their experiments to complete a "scrambled-sentence task," that is, to rearrange sets of words to form sentences. For the participants in one group, the task was based on neutral sentences (for example, "It's cold outside"); for the other group, the task was based on sentences or phrases related to money (for example, "High-paying salary"*). Would thinking about money in this manner be sufficient to change the way participants behave?

In one of the experiments, the participants finished the unscrambling task and were then given a difficult puzzle, in which they had to arrange 12 disks into a square. As the experimenter left the room, he told them that they could come to him if they needed any help. Who do you think asked for help sooner—those who had worked on the "salary" sentences, with their implicit suggestion of money; or those who had worked on the "neutral" sentences, about the weather and other such topics? As it turned out, the students who had first worked on the "salary" task struggled with the puzzle for about five and a half minutes before asking for help, whereas those who had first worked on the neutral task asked for help after about three minutes. Thinking about money, then, made the participants in the "salary" group more self-reliant and less willing to ask for help.

But these participants were also less willing to help others. In fact, after thinking about money these participants were less willing to help an experimenter enter data, less likely to assist another participant who seemed confused, and less likely to help a "stranger" (an experimenter in disguise) who "accidentally" spilled a box of pencils.

Overall, the participants in the "salary" group showed many of the characteristics of the market: they were more selfish and self-reliant; they wanted to spend more time alone; they were more likely to select tasks that required individual input rather than teamwork; and when they were deciding where they wanted to sit, they chose seats farther away from whomever they were told to work with. Indeed, just thinking about money makes us behave as most economists believe we behave—and less like the social animals we are in our daily lives.

This leads me to a final thought: when you're in a restaurant with a date, for heaven's sake don't mention the price of the selections. Yes, they're printed clearly on the menu. Yes, this might be an opportunity to impress your date with the caliber of the restaurant. But if you rub it in, you'll be likely to shift your relationship from the social to the market norm. Yes, your date may fail to recognize how much this meal is setting you back. Yes, your mother-in-law may assume that the bottle of wine you've presented is a $10 blend, when it's a $60 special reserve merlot. That's the price you have to pay, though, to keep your relationships in the social domain and away from market norms.

SO WE LIVE in two worlds: one characterized by social exchanges and the other characterized by market exchanges. And we apply different norms to these two kinds of relationships. Moreover, introducing market norms into social exchanges, as we have seen, violates the social norms and hurts the relationships. Once this type of mistake has been committed, recovering a social relationship is difficult. Once you've offered to pay for the delightful Thanksgiving dinner, your mother-in-law will remember the incident for years to come. And if you've ever offered a potential romantic partner the chance to cut to the chase, split the cost of the courting process, and simply go to bed, the odds are that you will have wrecked the romance forever.

My good friends Uri Gneezy (a professor at the University of California at San Diego) and Aldo Rustichini (a professor at the University of Minnesota) provided a very clever test of the long-term effects of a switch from social to market norms.

A few years ago, they studied a day care center in Israel to determine whether imposing a fine on parents who arrived late to pick up their children was a useful deterrent. Uri and Aldo concluded that the fine didn't work well, and in fact it had long-term negative effects. Why? Before the fine was introduced, the teachers and parents had a social contract, with social norms about being late. Thus, if parents were late—as they occasionally were—they felt guilty about it—and their guilt compelled them to be more prompt in picking up their kids in the future. (In Israel, guilt seems to be an effective way to get compliance.) But once the fine was imposed, the day care center had inadvertently replaced the social norms with market norms. Now that the parents were paying for their tardiness, they interpreted the situation in terms of market norms. In other words, since they were being fined, they could decide for themselves whether to be late or not, and they frequently chose to be late. Needless to say, this was not what the day care center intended.

BUT THE REAL story only started here. The most interesting part occurred a few weeks later, when the day care center removed the fine. Now the center was back to the social norm. Would the parents also return to the social norm? Would their guilt return as well? Not at all. Once the fine was removed, the behavior of the parents didn't change. They continued to pick up their kids late. In fact, when the fine was removed, there was a slight increase in the number of tardy pickups (after all, both the social norms and the fine had been removed).

This experiment illustrates an unfortunate fact: when a social norm collides with a market norm, the social norm goes away for a long time. In other words, social relationships are not easy to reestablish. Once the bloom is off the rose—once a social norm is trumped by a market norm—it will rarely return.

THE FACT THAT we live in both the social world and the market world has many implications for our personal lives. From time to time, we all need someone to help us move something, or to watch our kids for a few hours, or to take in our mail when we're out of town. What's the best way to motivate our friends and neighbors to help us? Would cash do it—a gift, perhaps? How much? Or nothing at all? This social dance, as I'm sure you know, isn't easy to figure out—especially when there's a risk of pushing a relationship into the realm of a market exchange.

Here are some answers. Asking a friend to help move a large piece of furniture or a few boxes is fine. But asking a friend to help move a lot of boxes or furniture is not—especially if the friend is working side by side with movers who are getting paid for the same task. In this case, your friend might begin to feel that he's being used. Similarly, asking your neighbor (who happens to be a lawyer) to bring in your mail while you're on vacation is fine. But asking him to spend the same amount of time preparing a rental contract for you—free—is not.

THE DELICATE BALANCE between social and market norms is also evident in the business world. In the last few decades companies have tried to market themselves as social companions—that is, they'd like us to think that they and we are family, or at least are friends who live on the same cul-de-sac. "Like a good neighbor, State Farm is there" is one familiar slogan. Another is Home Depot's gentle urging: "You can do it. We can help."

Whoever started the movement to treat customers socially had a great idea. If customers and a company are family, then the company gets several benefits. Loyalty is paramount. Minor infractions—screwing up your bill and even imposing a modest hike in your insurance rates—are accommodated. Relationships of course have ups and downs, but overall they're a pretty good thing.

But here's what I find strange: although companies have poured billions of dollars into marketing and advertising to create social relationships—or at least an impression of social relationships—they don't seem to understand the nature of a social relationship, and in particular its risks.

For example, what happens when a customer's check bounces? If the relationship is based on market norms, the bank charges a fee, and the customer shakes it off. Business is business. While the fee is annoying, it's nonetheless acceptable. In a social relationship, however, a hefty late fee—rather than a friendly call from the manager or an automatic fee waiver—is not only a relationship-killer; it's a stab in the back. Consumers will take personal offense. They'll leave the bank angry and spend hours complaining to their friends about this awful bank. After all, this was a relationship framed as a social exchange. No matter how many cookies, slogans, and tokens of friendship a bank provides, one violation of the social exchange means that the consumer is back to the market exchange. It can happen that quickly.

What's the upshot? If you're a company, my advice is to remember that you can't have it both ways. You can't treat your customers like family one moment and then treat them impersonally—or, even worse, as a nuisance or a competitor—a moment later when this becomes more convenient or profitable. This is not how social relationships work. If you want a social relationship, go for it, but remember that you have to maintain it under all circumstances.

On the other hand, if you think you may have to play tough from time to time—charging extra for additional services or rapping knuckles swiftly to keep the consumers in line—you might not want to waste money in the first place on making your company the fuzzy feel-good choice. In that case, stick to a simple value proposition: state what you give and what you expect in return. Since you're not setting up any social norms or expectations, you also can't violate any—after all, it's just business.

COMPANIES HAVE ALSO tried to establish social norms with their employees. It wasn't always this way. Years ago, the workforce of America was more of an industrial, market-driven exchange. Back then it was often a nine-to-five, time-clock kind of mentality. You put in your 40 hours and you got your paycheck on Friday. Since workers were paid by the hour, they knew exactly when they were working for the man, and when they weren't. The factory whistle blew (or the corporate equivalent took place), and the transaction was finished. This was a clear market exchange, and it worked adequately for both sides.

Today companies see an advantage in creating a social exchange. After all, in today's market we're the makers of intangibles. Creativity counts more than industrial machines. The partition between work and leisure has likewise blurred. The people who run the workplace want us to think about work while we're driving home and while we're in the shower. They've given us laptops, cell phones, and BlackBerries to bridge the gap between the workplace and home.

Further blurring the nine-to-five workday is the trend in many companies to move away from hourly rates to monthly pay. In this 24/7 work environment social norms have a great advantage: they tend to make employees passionate, hardworking, flexible, and concerned. In a market where employees' loyalty to their employers is often wilting, social norms are one of the best ways to make workers loyal, as well as motivated.

Open-source software shows the potential of social norms. In the case of Linux and other collaborative projects, you can post a problem about a bug on one of the bulletin boards and see how fast someone, or often many people, will react to your request and fix the software—using their own leisure time. Could you pay for this level of service? Most likely. But if you had to hire people of the same caliber they would cost you an arm and a leg. Rather, people in these communities are happy to give their time to society at large (for which they get the same social benefits we all get from helping a friend paint a room). What can we learn from this that is applicable to the business world? There are social rewards that strongly motivate behavior—and one of the least used in corporate life is the encouragement of social rewards and reputation.

IN TREATING THEIR EMPLOYEES—much as in treating their customers—companies must understand their implied long-term commitment. If employees promise to work harder to achieve an important deadline (even canceling family obligations for it), if they are asked to get on an airplane at a moment's notice to attend a meeting, then they must get something similar in return

—something like support when they are sick, or a chance to hold on to their jobs when the market threatens to take their jobs away.

Although some companies have been successful in creating social norms with their workers, the current obsession with short-term profits, outsourcing, and draconian cost cutting threatens to undermine it all. In a social exchange, after all, people believe that if something goes awry the other party will be there for them, to protect and help them. These beliefs are not spelled out in a contract, but they are general obligations to provide care and help in times of need.

Again, companies cannot have it both ways. In particular, I am worried that the recent cuts we see in employees' benefits—child care, pensions, flextime, exercise rooms, the cafeteria, family picnics, etc.—are likely to come at the expense of the social exchange and thus affect workers' productivity. I am particularly worried that cuts and changes in medical benefits are likely to transform much of the employer-employee social relationship to a market relationship.

If companies want to benefit from the advantages of social norms, they need to do a better job of cultivating those norms. Medical benefits, and in particular comprehensive medical coverage, are among the best ways a company can express its side of the social exchange. But what are many companies doing? They are demanding high deductibles in their insurance plans, and at the same time are reducing the scope of benefits. Simply put, they are undermining the social contract between the company and the employees and replacing it with market norms. As companies tilt the board, and employees slide from social norms to the realm of market norms, can we blame them for jumping ship when a better offer appears? It's really no surprise that "corporate loyalty," in terms of the loyalty of employees to their companies, has become an oxymoron.

Organizations can also think consciously about how people react to social and market norms. Should you give an employee a gift worth $1,000 or pay him or her an extra $1,000 in cash? Which is better? If you ask the employees, the majority will most likely prefer cash over the gift. But the gift has its value, though this is sometimes ill understood—it can provide a boost to the social relationship between the employer and the employee, and by doing so provide long-term benefits to everyone. Think of it this way: who do you suppose is likely to work harder, show more loyalty, and truly love his work more—someone who is getting $1,000 in cash or someone who is getting a personal gift?

Of course, a gift is a symbolic gesture. And to be sure, no one is going to work for gifts rather than a salary. For that matter, no one is going to work for nothing. But if you look at companies like Google, which offers a wide variety of benefits for employees (including free gourmet lunches), you can see how much goodwill is created by emphasizing the social side of the company-worker relationship. It's remarkable how much work companies (particularly start-ups) can get out of people when social norms (such as the excitement of building something together) are stronger than market norms (such as salaries stepping up with each promotion).

If corporations started thinking in terms of social norms, they would realize that these norms build loyalty and—more important—make people want to extend themselves to the degree that corporations need today: to be flexible, concerned, and willing to pitch in. That's what a social relationship delivers.

THIS QUESTION OF social norms in the workplace is one we should be thinking about frequently. America's productivity depends increasingly on the talent and efforts of its workers. Could it be that we are driving business from the realm of social norms into market norms? Are workers thinking in terms of money, rather than the social values of loyalty and trust? What will that do to American productivity in the long run, in terms of creativity and commitment? And what of the "social contract" between government and the citizen? Is that at risk as well?

At some level we all know the answers. We understand, for instance, that a salary alone will not motivate people to risk their lives. Police officers, firefighters, soldiers—they don't die for their weekly pay. It's the social norms—pride in their profession and a sense of duty—that will motivate them to give up their lives and health. A friend of mine in Miami once accompanied a U.S. customs agent on a patrol of the offshore waters. The agent carried an assault rifle and could certainly have pounded several holes into a fleeing drug boat. But had he ever done so? No way, he replied. He wasn't about to get himself killed for the government salary he received. In fact, he confided, his group had an unspoken agreement with the drug couriers: the feds wouldn't fire if the drug dealers didn't fire. Perhaps that's why we rarely (if ever) hear about gun battles on the edges of America's "war on drugs."

How could we change this situation? First, we could make the federal salary so good that the customs agent would be willing to risk his life for it. But how much money is that? Compensation equal to what the typical drug trafficker gets for racing a boat from the Bahamas to Miami? Alternatively, we could elevate the social norm, making the officer feel that his mission is worth more than his base pay—that we honor him (as we honor our police and firefighters) for a job which not only stabilizes the structure of society but also saves our kids from all kinds of dangers. That would take some inspirational leadership, of course, but it could be done.

Let me describe how that same thought applies to the world of education. I recently joined a federal committee on incentives and accountability in public education. This is one aspect of social and market norms that I would like to explore in the years to come. Our task is to reexamine the "No Child Left Behind" policy, and to help find ways to motivate students, teachers, administrators, and parents.

My feeling so far is that standardized testing and performance-based salaries are likely to push education from social norms to market norms. The United States already spends more money per student than any other Western society. Would it be wise to add more money? The same consideration applies to testing: we are already testing very frequently, and more testing is unlikely to improve the quality of education.

I suspect that one answer lies in the realm of social norms. As we learned in our experiments, cash will take you only so far—social norms are the forces that can make a difference in the long run. Instead of focusing the attention of the teachers, parents, and kids on test scores, salaries, and competition, it might be better to instill in all of us a sense of purpose, mission, and pride in education. To do this we certainly can't take the path of market norms. The Beatles proclaimed some time ago that you "Can't Buy Me Love" and this also applies to the love of learning—you can't buy it; and if you try, you might chase it away.

So how can we improve the educational system? We should probably first rethink school curricula, and link them in more obvious ways to social goals (elimination of poverty and crime, elevation of human rights, etc.), technological goals (boosting energy conservation, space exploration, nanotechnology, etc.), and medical goals (cures for cancer, diabetes, obesity, etc.) that we care about as a society. This way the students, teachers, and parents might see the larger point in education and become more enthusiastic and motivated about it. We should also work hard on making education a goal in itself, and stop confusing the number of hours students spend in school with the quality of the education they get. Kids can get excited about many things (baseball, for example), and it is our challenge as a society to make them want to know as much about Nobel laureates as they now know about baseball players. I am not suggesting that igniting a social passion for education is simple; but if we succeed in doing so, the value could be immense.

MONEY, AS IT turns out, is very often the most expensive way to motivate people. Social norms are not only cheaper, but often more effective as well.

So what good is money? In ancient times, money made trading easier: you didn't have to sling a goose over your back when you went to market, or decide what section of the goose was equivalent to a head of lettuce. In modern times money has even more benefits, as it allows us to specialize, borrow, and save.

But money has also taken on a life of its own. As we have seen, it can remove the best in human interactions. So do we need money? Of course we do. But could there be some aspects of our life that would be, in some ways, better without it?

That's a radical idea, and not an easy one to imagine. But a few years ago I had a taste of it. At that time, I got a phone call from John Perry Barlow, a former lyricist for the Grateful Dead, inviting me to an event that proved to be both an important personal experience and an interesting exercise in creating a moneyless society. Barlow told me that I had to come to Burning Man with him, and that if I did, I would feel as if I had come home. Burning Man is an annual week-long event of self-expression and self-reliance held in Black Rock Desert, Nevada, regularly attended by more than 40,000 people. Burning Man started in 1986 on Baker Beach in San Francisco, when a small crowd designed, built, and eventually set fire to an eight-foot wooden statue of a man and a smaller wooden dog. Since then the size of the man being burned and the number of people who attend the festivities has grown considerably, and the event is now one of the largest art festivals, and an ongoing experiment in temporary community.

Burning Man has many extraordinary aspects, but for me one of the most remarkable is its rejection of market norms. Money is not accepted at Burning Man. Rather, the whole place works as a gift exchange economy—you give things to other people, with the understanding that they will give something back to you (or to someone else) at some point in the future. Thus, people who can cook might fix a meal. Psychologists offer free counseling sessions. Masseuses massage those lying on tables before them. Those who have water offer showers. People give away drinks, homemade jewelry, and hugs. (I made some puzzles at the hobby shop at MIT, and gave them to people. Mostly, people enjoyed trying to solve them.)

At first this was all very strange, but before long I found myself adopting the norms of Burning Man. I was surprised, in fact, to find that Burning Man was the most accepting, social, and caring place I had ever been. I'm not sure I could easily survive in Burning Man for all 52 weeks of the year. But this experience has convinced me that life with fewer market norms and more social norms would be more satisfying, creative, fulfilling, and fun.

The answer, I believe, is not to re-create society as Burning Man, but to remember that social norms can play a far greater role in society than we have been giving them credit for. If we contemplate how market norms have gradually taken over our lives in the past few decades—with their emphasis on higher salaries, more income, and more spending—we may recognize that a return to some of the old social norms might not be so bad after all. In fact, it might bring quite a bit of the old civility back to our lives.

Reflections on Social Norms: Lessons on Gifts

When we mix social and monetary norms, strange and undesirable things can happen. For example, if you walk your date home after a wonderful evening together, don't mention how much the evening set you back. That is not a good strategy for getting a passionate good-night kiss. (I certainly do not recommend this as an experiment, but if you do try it, let me know how it turns out.) Dating, of course, is just one arena in which we can mess up a social relationship by introducing financial norms, and this danger lurks around many corners.

On some level we all know this, and therefore we sometimes deliberately make decisions that do not fall into line with rational economic theory. Think of gifts, for example. From a standard economic perspective, they are a waste of money. Imagine that you invite me to your home for dinner one evening, and I decide to spend $50 on a nice bottle of Bordeaux as a token of gratitude. There are some problems with this decision: You might not like Bordeaux. You might have preferred something else: a copy of Predictably Irrational, a DVD of Citizen Kane, or a blender. This means that the bottle of wine that cost me $50 might be worth, at most, $25 to you in terms of its utility. That is, for $25 you could get something else that would make you just as happy as my $50 bottle of wine.

Now, if giving gifts was a rational activity, I would come to dinner and say, "Thank you for inviting me for dinner. I was going to spend $50 on a bottle of Bordeaux, but I realize that this might provide you with far less happiness than $50 in cash." I peel off five $10 bills, hand them to you, and add, "Here you go. You can decide how best to spend it." Or maybe I would give you $40 in cash and make us both better off—not to mention saving myself the trouble of shopping for wine.

Although we all realize that offering cash instead of gifts is more economically efficient, I don't expect that many people will follow this rational advice, because we all know that doing so will in no way endear us to our hosts. If you want to demonstrate affection, or strengthen your relationship, then giving a gift—even at the risk that it won't be appreciated as much as you hoped—is the only way to go.

So imagine two scenarios. Let's say it's the holidays, and two different neighbors invite you to their parties in the same week. You accept both invitations. In one case, you do the irrational thing and give Neighbor X a bottle of Bordeaux; for the second party you adopt the rational approach and give Neighbor Z $50 in cash. The following week, you need some help moving a sofa. How comfortable would you be approaching each of your neighbors, and how do you think each would react to your request for a favor? The odds are that Neighbor X will step in to help. And Neighbor Z? Since you have already paid him once (to make and share dinner with you), his logical response to your request for help might be, "Fine. How much will you pay me this time?" Again, the prospect of acting rationally, financially speaking, sounds deeply irrational in terms of social norms.

The point is that while gifts are financially inefficient, they are an important social lubricant. They help us make friends and create long-term relationships that can sustain us through the ups and downs of life. Sometimes, it turns out, a waste of money can be worth a lot.

Reflections on Social Norms: Benefits in the Workplace

The same general principles regarding social norms also apply to the workplace. In general, people work for a paycheck, but there are other, intangible benefits we get from our jobs. These are also very real and very important, yet much less understood.

Often, when I'm on a flight and the people sharing the row with me don't immediately put their headphones on, I enter into an interesting discussion with one of them. Invariably, I learn a lot about my neighbor's work, work history, and future projects. On the other hand, I discover very little about the person's family, favorite music, movies, or hobbies. Unless my neighbor gives me a business card, I almost never learn his or her name until the moment we are both about to leave the plane. There are probably many reasons for this, but I suspect that one of them is that most people take a lot of pride in their work. Of course this may not be true of everyone, but I think that for many people the workplace is not just a source of money but also a source of motivation and self-definition.

Such feelings benefit both the workplace and the employee. Employers who can foster these feelings gain dedicated, motivated employees who think about solving job-related problems even after the workday is over. And employees who take pride in their work feel a sense of happiness and purpose. But in the same way that market norms may undermine social norms, it may be that market norms also erode the pride and meaning people get from the workplace (for example, when we pay schoolteachers according to their students' performance on standardized tests).

Imagine that you work for me, and that I want to give you a year-end bonus. I offer you a choice: $1,000 in cash or an all-expenses-paid weekend in the Bahamas, which would cost me $1,000. Which option would you choose? If you are like most people who have answered this question, you would take the cash. After all, you may have already been to the Bahamas and may not have enjoyed being there very much, or maybe you'd prefer to spend a weekend at a resort closer to home and use the remainder of the bonus money to buy a new iPod. In either case, you think that you can best decide for yourself how to spend the money.

This arrangement seems to be financially efficient, but would it increase your happiness with your work, or your loyalty to the company? Would it make me a better boss? Would it improve the employer-employee relationship in any way? I suspect that both your and my best interests would be better served if I simply didn't offer you a choice and just sent you on the Bahamas vacation. Consider how much more relaxed and refreshed you would feel, and how well you would perform, after a relaxing weekend of sun and sand, compared with how you would feel and behave after you got the $1,000 bonus. Which would help you feel more committed to your job, more enjoyment in your work, more dedication to your boss? Which gift would make you more likely to stay long hours one night to meet an important deadline? On all of these, the vacation beats the cash hands down.

This principle doesn't apply only to gifts. Many employers, in an effort to show their employees how well they are treating them, add different line items to their paycheck stubs, describing exactly how much money the employer is spending on health care, retirement plans, the gym at work, and the cafeteria. These items are all legitimate, and they reflect real costs to the employer, but overtly stating the prices of these items changes the workplace from a social environment in which the employer and employee have a deep commitment to each other to a transactional relationship. Explicitly stating the financial value of these benefits can also diminish enjoyment, motivation, and loyalty to the workplace —negatively affecting both the employer-employee relationship and our own pride and happiness at work.

Gifts and employee benefits seem, at first glance, to be an odd and inefficient way of allocating resources. But with the understanding that they fulfill an important role in creating long-term relationships, reciprocity, and positive feelings, companies should try to keep benefits and gifts in the social realm.

Reflections on Market Norms and Romance

One of the great philosophers of our time, Jerry Seinfeld, unintentionally demonstrated that social and market norms—much like an acid and a base in chemistry—clash if we try to mix them. In one episode of Seinfeld, Jerry hires a maid. This is not all that unusual in itself, except that in this case, the maid happens to be very attractive and naturally (for New York City) she is waiting to be "discovered." Elaine predicts the inevitable, that Jerry will eventually start dating the maid. Later, after celebrating being right about her prediction, she comments sarcastically on what a prudent undertaking it is to date one's maid. Here Elaine sagely points out the inherent difficulties in uniting the market norm (maid) and social norm (girlfriend). Jerry, expecting as much, gives a haphazard defense, arguing that he would never trip lightly into such a fraught situation and claiming that their personal and work relationships are completely separate. When the next inevitable evolution of their "relationship" occurs—that is, the maid/girlfriend stops cleaning entirely (but takes the money anyway)—Kramer is horrified and calls Jerry a john, picking up on the fact that it's not exactly normal to pay one's significant other for services rendered. Both relationships (girlfriend and maid) end when Jerry claims that they're through and, in the same breath, that she's fired. What happened is that Jerry mixed two competing norms—social and market—before realizing that they cannot comfortably coexist.

Romantic relationships, in both fiction and real life, can provide useful insights into a lot of areas in behavioral economics. But as we've already seen, they are particularly useful in helping us think about the strange combinations of social and market norms. One wonderfully sad example of a person who did not understand this complexity is a woman in New York who, in 2007, posted a personal ad on Craigslist. In her ad, she said that she was seeking a husband who earned more than $500,000 a year. She described herself as "spectacularly beautiful," "articulate," and "superficial." She also said that while she had no problems dating businessmen who made $250,000, she was unable to break the $250,000 barrier and find someone above this income level. She hoped to date someone who could get her what she really wanted: a nice apartment on Central Park West.

Let's assume, for the sake of argument, that this woman really was spectacularly beautiful, articulate, and wonderful in every way. What would happen if she walked into a bar filled with stockbrokers, found her guy, and explicitly stated her goal as she did in the ad, and he accepted her offer? The terms of the relationship would certainly be established, putting them firmly in the market norm, rather than the social norm, domain.

Now, say that this "happy" couple eventually gets married. What would happen the first time she didn't want to have sex with her stockbroker husband or refused to spend the holidays with his mother? My guess is that the give-and-take that is so common and acceptable in regular romantic relationships (and in every social exchange) would not be part of this relationship . . . and that the explicit exchange of beauty for money would ensure that the relationship would break down.

I don't actually know what became of this woman, but the responses to her ad make me suspect that this approach to finding a husband did not have a good ending. Because she bluntly introduced market norms into the relationship she was looking for, many respondents compared her offer to a business transaction. In fact, one anonymous respondent took her market norms framing to the next level. He assured the woman that he met her criteria but explained that the proposal was a "crappy business deal" because his assets (money) were likely to appreciate over time, while her assets (looks) would certainly depreciate as she aged. He also added, correctly, that in this situation, the economically rational thing to do would be to lease rather than buy.

CHAPTER 5

The Power of a Free Cookie

How free Can Make Us Less Selfish

Some time ago, I decided to go watch firsthand one of the most infamous acts of raw, unabashed, supply-and-demand capitalism in action. I am talking, of course, about Filene's Basement's "Running of the Brides"—an event that has been held annually since 1947 and is the department store's answer to the famous "Running of the Bulls" in Pamplona, Spain. Instead of watching thousand-pound bulls trampling and goring foolhardy humans, I observed about a thousand blushing brides-to-be (and their minions) trampling one another in a mass grab for discount-priced designer wedding dresses. According to the store's Web site,[5] gowns originally priced at thousands of dollars are on this day offered for a pittance, from $249 to $699.

Early on the morning of the sale, the brides, each with a small army of moms and friends, line up outside the store (some even camp out the night before). The minute the doors open, they turn into a frantic, screaming, pushing mob, running to the racks to tear off as many dresses as they can carry. (One piece of particularly useful advice for brides: put all your friends in brightly colored uniforms or silly headgear so you can identify them in the melee as they grab armfuls of dresses.) It takes just a minute or so for the racks to be stripped to bare metal. As soon as they have their piles of dresses, the women strip off their clothes and begin trying them on. Dresses that don't fit are tossed aside, and the poor, bedraggled store assistants try to pick them off the floor and re-rack them.

Although I'd heard horror stories of injuries and scuffles, I personally didn't see a lot of violence. But I did witness rampant selfishness, to say nothing of the air turning blue from the terrible language. (I suspect that if their fiancés were to witness this event, it might have led to a serious rethinking of marriage proposals.)

NOW, TRADITIONAL ECONOMICS takes a very simple and straightforward view of the scene at Filene's Basement when prices on wedding gowns are so dramatically reduced. When a Vera Wang gown is reduced from $10,000 to $249, the excitement ("demand," in economic-speak) over the gown dramatically increases. More precisely, demand increases for two reasons. According to the first law of demand, it increases because more women are now in the market for designer gowns (they can now afford them). And according to the second law of demand, it increases because at these prices women might buy multiple units. This second law is less relevant for wedding gowns, where women presumably need just one, but central in cases where we need multiple units (cookies, sweaters, etc.). Still, even in the case of wedding dresses, multiple women have been sighted leaving Filene's Basement with more than one gown. These two laws are the nuts and bolts of the standard economic rule of demand. (Admittedly, the Filene's event isn't just any occurrence of "increased demand." It's more like an all-out bridal battlefield.)

THESE TWO ECONOMIC laws of demand seem perfectly reasonable, but as we learned in Chapter 4, "The Cost of Social Norms," market rules are just some of the forces that operate on us. As social animals, we also have social forces to contend with—and when economic and social forces mix, the outcome is sometimes different from what we would expect. When we explored the interactions between social and market norms, we basically found that when we add money to a situation that operates on social norms, motivation can decrease rather than increase. For example, if I asked you to help me change my tire, you'll probably think to yourself: "Okay, Dan's a nice enough guy most of the time, so I will be happy to help him out." But if I asked you: "Would you help me change the tire of my car—how about [checking my wallet] $3 for your help?" Now you'll think: "Man, no way, what a jerk! Does he really think my time is worth that little?" What this means is that when I ask you for a favor and add $3 to the mix, you don't think to yourself: "How wonderful! I get to help Dan and I get to earn $3." Instead, you change your perspective on the situation, look at it as work, and conclude that it is not worth your time (of course, if I offered you $175, you would most likely take on this job).

The basic lesson, then, is that when we offer people a financial payment in a situation that is governed by social norms, the added payment could actually reduce their motivation to engage and help out.

But what if the situation was reversed and we asked people to pay us for something? Would the effect of social norms work in the same way? This was the question that Uri Gneezy (a professor at the University of California at San Diego), Ernan Haruvy (a professor at the University of Texas at Dallas), and I wanted to explore: the effect of mixing social and market norms on demand.

To think more concretely about this effect, imagine that one of your coworkers—let's call her Susan—also happens to be a rather talented baker. One weekend, in a fit of boredom, Susan bakes a hundred chewy chocolate-chip-oatmeal cookies using her grandmother's famous recipe, and it just so happens that there are about a hundred people in the

office. Since your desk is adjacent to hers, Susan comes

to your office first and places before you the box with all those delicious-smelling confections. How many would you take, and how would you decide this? Chances are you would quickly consider, among other things, your level of hunger, your waistline, and your love of chocolate-chip-oatmeal cookies. You might also think about how your

co-workers would feel if the cookies ran out, and if they learned that you took a lot of them. With all this in mind, including the importance of social norms, you decide to take one or two.

Now, consider a variation of this situation. This time, Susan comes by your desk asking you if you want to buy cookies for a nickel a piece. Now how many would you take, and what would dictate your decision? Most likely, you would again take into account your level of hunger, your waistline, and your love of chocolate-chip-oatmeal cookies. But unlike the previous case, this time you will have no compunction about buying a bunch to eat and take home (knowing how much your kids would love them), and you would not even think about the fact that by getting so many of Susan's cookies you are depriving your coworkers from that same joy.

Why would your decision change so much once Susan asks for a nickel apiece? Because, very simply, by asking for money, she has introduced market norms into the equation, and these have chased away the social norms that governed the case of the free cookies. More interesting, it's clear in both cases that if you take multiple cookies, there will be fewer for the other people in your office. But if Susan offers her cookies for free, I am willing to bet that you will think about social justice, the consequences of appearing greedy, and the welfare of your coworkers. Once money is introduced into the exchange, you stop thinking about what's socially right and wrong, and you simply want to maximize your cookie intake.

In the same way, if you go to Filene's Basement and discover a fantastic deal on wedding gowns, you don't naturally think about all the other women who would also like to score a similar deal on their Vera Wangs—and therefore you grab as many dresses as you can. In economic exchanges, we are perfectly selfish and unfair. And we think that following our wallets is the right thing to do.

URI, ERNAN, AND I decided to find out what would actually happen in the two Susan cookie scenarios. To that end, we set up one of our makeshift candy stands at the MIT student center and watched for the outcome of two experimental scenarios:

Scenario 1: Pretend you're a college student hurrying through the student center on your way to a late afternoon class. You see a booth up ahead with a sign that reads "Starburst Fruit Chews for 1¢ each." Let's say that, thinking quickly, you recall that you haven't eaten lunch, that the last time you bought Starburst was in the movie theater, and, hey, they're only one cent each. So you go over and buy ten Starbursts. Lunch is served!

Scenario 2: The setting is the same, but this time the sign reads "Starburst Fruit Chews for free." You reminisce over the memory of popping these candies in your mouth when you went to the movies as a kid, happily recalling that it was one of the few times your parents allowed you to eat lots of sugar. Now what would you do? How many Starbursts would you take? According to the two laws of demand, with this new, irresistibly reduced price of zero, more people will go for the Starburst, and those who do will take more of the colorful square candy.

We set up our candy booth in the afternoon hours when the stream of students was more or less steady, and from time to time, we switched the conditions by alternating the free and the 1¢ signs (the penny price represented what we called the "monetary condition"). We counted the number of students who stopped by our booth and how many Starbursts they either bought or picked up. We found that during an average hour in the monetary condition, about 58 students stopped by and purchased candy, while in an average hour in the free condition, 207 students stopped by to take candy. Altogether, nearly three times the number of students stopped at the booth when Starbursts were free. Just as the theory of demand predicts, the decrease in price resulted in a greater number of people consuming the product. So far so good for the first law of demand.

Now, given the second law of demand, you'd assume that once the price drops from 1¢ to zero, each of the students who took candy would take more units. And since the number of students who stopped by was almost three times as large, you might expect that together these two forces of demand will make the total demand in our free condition much larger than the demand in the monetary condition.

So how many more Starbursts did our students pick up

when they were free? Trick question: They picked up fewer Starbursts!

When the Starbursts cost a cent apiece, the average number of candies per customer was 3.5, but when the price went down to zero, the average went down to 1.1 per customer. The students limited themselves to a large degree when the candy was free. In fact, almost all the students applied a very simple social-norm rule in this situation—they politely took one and only one Starburst. This, of course, is the opposite of the second law of demand. And how did these two forces of demand work together? In total, the increase due to the greater number of people that stopped by and the decrease due to the reduction in the number of candies that each person took resulted in students collectively taking fewer Starbursts as the price decreased from 1¢ to free.

What these results mean is that when price is not a part of the exchange, we become less selfish maximizers and start caring more about the welfare of others. We saw this demonstrated by the fact that when the price decreased to zero, customers restrained themselves and took far fewer units. So while the product (candy, in our case) was more attractive to more people, it also made people think more about others, care about them, and sacrifice their own desires for the benefit of others. As it turns out, we are caring social animals, but when the rules of the game involve money, this tendency is muted.

THE RESULTS FROM our experiment also help explain one of the great mysteries in life: why, when we are dining out with friends, taking the last olive feels like such a big deal.

Imagine you go to a friend's birthday party. The appetizers are luscious: there's a lovely spread of cheese and fruit; dishes of gherkins, kalamata olives, and tapenades; and lots of tiny little crostini. You walk around the room talking to old friends, and the wine is flowing. At some point, you wander into the kitchen and notice the delicious-looking four-decker Red Velvet cake (your personal favorite). As you chitchat with the other guests, you can't stop thinking about that mouthwatering cake. All you really want to do is abscond with the entire thing, eat as much as you can in the laundry room without anyone knowing, and blame the dog if anyone asks. But what do you do? You balance your own desire with the desires of your friends, and you end up with only a medium-sized slice.

Recently, I was in an analogous situation with two of my colleagues and friends, Jiwoong Shin and Nina Mazar. If you've ever been to a sushi restaurant with friends, you know that as the California rolls and sashimi pieces on the plate in the middle of the table start to dwindle, the people sitting around it gradually become shyer about popping them into their mouths. At the end of our meal, there was one lonely spicy tuna left, and none of us seemed to be willing to put it out of its misery. When the waitress came to bring us the check and take away the plate with the lone sushi, I asked her how often people leave a single piece at the end of the meal. "Oh," she said, "I find one extra piece left almost every time. I think it is even more common than people finishing all their sushi."

Now I have eaten a lot of sushi in my life, and I can't remember a time either when I was dining alone or when I got my own personal portion of sushi when I left anything on the plate. Somehow, when it's just me who's eating, I always manage to finish it all. But when the sushi is served in a large plate in the middle of the table, it just feels like taking the last one would be, well, a bit déclassé. "I really can't eat any more," I might say to my friends. "Go ahead. You take it."

What is this sushi magic? Simply put, the communal plate transforms the food into a shared resource, and once something is part of the social good, it leads us into the realm of social norms, and with that the rules for sharing with others.

BACK TO OUR experiments, the next question we wanted to examine was whether the pattern of demand that we observed in the experiments was really due to the change from some payment to no payment. Or would it also happen when we discount prices of candies to anything above zero? According to the theory of social norms, this odd behavior of demand should manifest itself only when the price drops to zero—because only when price is not a part of an exchange do we start thinking about social consequences of our actions. Uri, Ernan, and I decided to take a closer look at this hypothesis in our next experiment.

This experiment worked much like the previous one, except we returned to the trusty and super-delicious Lindt chocolate truffles (which were by now an experimental staple for us). We offered the chocolates to passing students at a broader range of prices. We'd already seen what economists call a "backward sloping demand curve" when the price was reduced from 1¢ to free (meaning demand went down instead of up when the price decreased). What would happen to demand when we decreased the price from 10¢ to 5¢? From 5¢ to 1¢? Or, as in the first experiment, when we decreased the price from 1¢ to free?

When we dropped the chocolate prices from 10¢ to 5¢, the predictions of both laws of demand were verified, and in total we saw an increase in demand of about 240 percent. Similarly, when the price went from 5¢ to 1¢, the predictions of both laws of demand were verified, and in total we saw an increase in demand of about 400 percent. But, as we saw in our first experiment when we reduced the price from 1¢ to free, the first law of demand was verified (more people stopped for chocolate) but the second law of demand was disconfirmed (the people who took chocolate took less not more), and in total, with more people taking less, we saw a decrease in demand of about 50 percent.

What these results mean is that the theory of demand is a solid one—except when we're dealing with the price of zero. Whenever the price is not part of the exchange, social norms become entangled.

These social norms get people to consider the welfare of others and, therefore, limit consumption to a level that does not place too much of a burden on the available resource. In essence, when prices are zero and social norms are a part of the equation, people look at the world as a communal good. The important lesson from all of this? Not mentioning prices ushers in social norms, and with those social norms, we start caring more about others.

ANOTHER IMPORTANT LESSON from Chapter 4 was about the ability to obfuscate exchanges in nonfinancial terms and, by doing so, avoid squashing ("crowding out," in economic terms) the benefits of social norms. (Giving your mother-in-law a gift is a good idea, but paying her for a wonderful Thanksgiving dinner is not recommended, even if both gestures would cost you the same amount of money.)

If obfuscation can provide an important wedge that keeps us humming along the social norm track, and if gifts are one mechanism for obfuscating, what about other such mechanisms? What about effort? Over the years, I have been a beta tester for many software products, and in retrospect, it is amazing to realize how much time and effort and how many computer crashes I have endured from this activity. Could it be that because these software companies asked me for my time and effort without offering money, I was eager and happy to help them, even at substantial cost to myself?

Now, effort is clearly not the same as a gift, but could it be that it is also different from money? Perhaps there's a range with strict financial exchange norms at one extreme, pure social norms at the other, and effort somewhere along this spectrum? What, we wondered, might happen in a nonmonetary exchange involving only effort? Would effort undermine social norms in the same way that financial transactions do? Does an exchange of effort keep the social norms intact, similar to the effect of not mentioning money at all? Or might it fall somewhere in the middle of this spectrum?

To explore this notion, we set up a new experiment. This time, we had a research assistant roam around the MIT Media Laboratory with a tray that was always stacked with fifty Lindt truffles. In the "free" condition, she simply asked people, "Would you like some chocolates?" (Note the plural, which indicates that it would be acceptable to take more than one.) In the "monetary" condition, she asked, "Would you like some chocolates? The cost is one cent each." Finally, in the "effort" condition, she handed people a stack of pages with random arrangements of printed letters. For every pair of s's they found, she said, they could have a Lindt truffle (but they did not have to take one). They could work as long as they wanted, putting in as much or as little effort as they wished. (There were well over fifty pairs of s's among all the sheets of letters, and it was very easy to spot them.)

The apparently voracious people in the monetary condition took an average of 30 truffles each. Those in the free condition took a polite average of 1.5. And how do you think effort-as-payment for truffles went over? This group fell somewhere in the middle, but closer to the free condition: our participants took an average of 8.6 truffles each in exchange for finding pairs of s's (or an average of about 21 fewer than those in the monetary condition).

These results suggest that effort falls somewhere in the middle of the range. It does not produce the same level of social self-consciousness that free does, but participants did seem to consider the implications of their actions on others when they decided how many truffles to take. We found that when effort is part of the equation, it manages to keep a large part of the social norms, though by no means all of it. As it turns out, the old maxim "Time is money"—or, in our case, "Effort is money"—is not exactly correct. Perhaps a more accurate reframing of our findings would be that effort is somewhere on the spectrum between market and social norms.

The main lesson here is that because exchanges involving effort can maintain social norms to a larger degree relative to financial exchanges, we might want to think about how to get people to switch from paying for services to investing more of their own efforts. As we go about our daily lives, we are often asked to invest effort in recycling, spending time on a neighborhood watch, helping in our kids' schools, volunteering in a soup kitchen, and much more. In each of these cases, one could argue that taking part in these activities makes little economic sense. Why not pay someone to recycle for us, watch our neighborhood, help in our kids' schools, or hand out food in the soup kitchen? Sure, it might be economically inefficient, but investing effort rather than cash might help keep us in the domain of social norms and consequently take into account the welfare of others.

FOR THE MOST part in this chapter, I've discussed instances where prices change from something to nothing. Of course, some things that are generally free or are considered a common resource can be relocated into the realm of market forces. For instance, carbon emissions trading is an area where we ought to consider the intersection between social and market norms.* "Cap and Trade" is a program of economic incentives designed to encourage industries and companies to pollute less; the less they pollute, the fewer pollution allowances they have to buy. Moreover, if companies don't use all their allowances, they can profit from their cleanliness by selling their extra allowances to companies that pollute more. It's virtue that pays!

However, in light of the experiments described in this chapter (as well as those in Chapter 4), we might want to consider the dark side of putting a price on pollution. If a company can be charged for spewing poisons into the environment, it might well decide, after a cost-benefit analysis, that it can go ahead and pollute a lot more. Once pollution is a market and companies pay for their right to pollute, morality and concern for the environment are nonissues. On the other hand, if pollution is something that cannot be purchased or traded, it would more naturally fall into the domain of social norms.

To be sure, if we want to place pollution under the control of social norms, we can't stand back and hope that people will start caring. We need to make pollution into an easily measurable and observable quantity and get people to pay attention to it and understand its importance. We could, for example, publically post the pollutant amounts of different countries, states, and companies together with their environmental impact. We could include this information on companies' financial statements to their shareholders or maybe force companies to post it on their products, much as we do for nutritional information on packaged food.

I'm not saying that Cap and Trade is necessarily a bad idea, but I do think that when public policy or environmental issues are at stake, our task is to figure out which of the two—social or market norms—will produce the most desirable outcome. In particular, policy makers should be careful not to add market norms that could undermine the social ones.

NOW THAT WE'VE learned how social norms get people to care less about their own selfish goals and pay more attention to the welfare of others, you might expect me to propose a brilliant idea for injecting more social norms and civility into the Filene's Basement "Running of the Brides." I wish I had a solution for getting these women to behave in a more considerate or at least less violent way. But the haunting memories of watching the live event suggest to me that getting a future bride to concentrate on an abstract idea like "other people" as opposed to the concrete reality of a discounted wedding gown might be nearly impossible. (For weeks afterward, I would look into the faces of my female friends and wonder whether they, too, were capable of trampling each other in an abject act of retail lust.)

And why, you might ask, am I so easily giving up on this social science challenge? Because I suspect that for social norms to operate, people cannot be at their most emotionally piqued state. When you're focused, mind and body, on one highly emotional objective—grabbing that wedding dress—it's hard to factor in others' well-being. As we will see in the next chapter, when emotions run high, social norms inevitably get trampled like so many Vera Wang veils.

CHAPTER 6

The Influence of Arousal

Why Hot Is Much Hotter Than We Realize

Ask most twentysomething male college students whether they would ever attempt unprotected sex and they will quickly recite chapter and verse about the risk of dreaded diseases and pregnancy. Ask them in any dispassionate circumstances—while they are doing homework or listening to a lecture—whether they'd enjoy being spanked, or enjoy sex in a threesome with another man, and they'll wince. No way, they'd tell you. Furthermore, they'd narrow their eyes at you and think, What kind of sicko are you anyhow, asking these questions in the first place?

In 2001, while I was visiting Berkeley for the year, my friend, academic hero, and longtime collaborator George Loewenstein and I invited a few bright students to help us understand the degree to which rational, intelligent people can predict how their attitudes will change when they are in an impassioned state. In order to make this study realistic, we needed to measure the participants' responses while they were smack in the midst of such an emotional state. We could have made our participants feel angry or hungry, frustrated or annoyed. But we preferred to have them experience a pleasurable emotion.

We chose to study decision making under sexual arousal—not because we had kinky predilections ourselves, but because understanding the impact of arousal on behavior might help society grapple with some of its most difficult problems, such as teen pregnancy and the spread of HIV-AIDS. There are sexual motivations everywhere we look, and yet we understand very little about how these influence our decision making.

Moreover, since we wanted to understand whether participants would be able to predict how they would behave in a particular emotional state, the emotion needed to be one that was already quite familiar to them. That made our decision easy. If there's anything predictable and familiar about twentysomething male college students, it's the regularity with which they experience sexual arousal.

ROY, AN AFFABLE, studious biology major at Berkeley, is in a sweat—and not over finals. Propped up in the single bed of his darkened dorm room, he's masturbating rapidly with his right hand. With his left, he's using a one-handed keyboard to manipulate a Saran-wrapped laptop computer. As he idles through pictures of buxom naked women lolling around in various erotic poses, his heart pounds ever more loudly in his chest.

As he becomes increasingly excited, Roy adjusts the "arousal meter" on the computer screen upward. As he reaches the bright red "high" zone, a question pops up on the screen:

Could you enjoy sex with someone you hated?

Roy moves his left hand to a scale that ranges from "no" to "yes" and taps his answer. The next question appears: "Would you slip a woman a drug to increase the chance that she would have sex with you?"

Again, Roy selects his answer, and a new question pops up. "Would you always use a condom?"

BERKELEY ITSELF IS a dichotomous place. It was a site of antiestablishment riots in the 1960s, and people in the Bay Area snarkily refer to the famously left-of-center city as the "People's Republic of Berkeley." But the large campus itself draws a surprisingly conformist population of top-level students. In a survey of incoming freshmen in 2004, only 51.2 percent of the respondents thought of themselves as liberal. More than one-third (36 percent) deemed their views middle-of-the-road, and 12 percent claimed to be conservatives. To my surprise, when I arrived at Berkeley, I found that the students were in general not very wild, rebellious, or likely to take risks.

The ads we posted around Sproul Plaza read as follows: "Wanted: Male research participants, heterosexual, 18 years-plus, for a study on decision making and arousal." The ad noted that the experimental sessions would demand about an hour of the participants' time, that the participants would be paid $10 per session, and that the experiments could involve sexually arousing material. Those interested in applying could respond to Mike, the research assistant, by e-mail.

For this study, we decided to seek out only men. In terms of sex, their wiring is a lot simpler than that of women (as we concluded after much discussion among ourselves and our assistants, both male and female). A copy of Playboy and a darkened room were about all we'd need for a high degree of success.

Another concern was getting the project approved at MIT's Sloan School of Management (where I had my primary appointment). This was an ordeal in itself. Before allowing the research to begin, Dean Richard Schmalensee assigned a committee, consisting mostly of women, to examine the project. This committee had several concerns. What if a participant uncovered repressed memories of sexual abuse as a result of the research? Suppose a participant found that he or she was a sex addict? Their questions seemed unwarranted to me, since any college student with a computer and an Internet connection can get hold of the most graphic pornography imaginable.

Although the business school was stymied by this project, I was fortunate to have a position at MIT's Media Lab as well, and Walter Bender, who was the head of the lab, happily approved the project. I was on my way. But my experience with MIT's Sloan School made it clear that even half a century after Kinsey, and despite its substantial importance, sex is still largely a taboo subject for a study—at least at some institutions.

IN ANY CASE, our ads went out; and, college men being what they are, we soon had a long list of hearty fellows awaiting the chance to participate—including Roy.

Roy, in fact, was typical of most of the 25 participants in our study. Born and raised in San Francisco, he was accomplished, intelligent, and kind—the type of kid every prospective mother-in-law dreams of. Roy played Chopin études on the piano and liked to dance to techno music. He had earned straight A's throughout high school, where he was captain of the varsity volleyball team. He sympathized with libertarians and tended to vote Republican. Friendly and amiable, he had a steady girlfriend who he'd been dating for a year. He planned to go to medical school and had a weakness for spicy California-roll sushi and for the salads at Cafe Intermezzo.

Roy met with our student research assistant, Mike, at Strada coffee shop—Berkeley's patio-style percolator for many an intellectual thought, including the idea for the solution to Fermat's last theorem. Mike was slender and tall, with short hair, an artistic air, and an engaging smile.

Mike shook hands with Roy, and they sat down. "Thanks for answering our ad, Roy," Mike said, pulling out a few sheets of paper and placing them on the table. "First, let's go over the consent forms."

Mike intoned the ritual decree: The study was about decision making and sexual arousal. Participation was voluntary. Data would be confidential. Participants had the right to contact the committee in charge of protecting the rights of those participating in experiments, and so on.

Roy nodded and nodded. You couldn't find a more agreeable participant.

"You can stop the experiment at any time," Mike concluded. "Everything understood?"

"Yes," Roy said. He grabbed a pen and signed. Mike shook his hand.

"Great!" Mike took a cloth bag out of his knapsack. "Here's what's going to happen." He unwrapped an Apple iBook computer and opened it up. In addition to the standard keyboard, Roy saw a 12-key multicolored keypad.

"It's a specially equipped computer," Mike explained. "Please use only this keypad to respond." He touched the keys on the colored pad. "We'll give you a code to enter, and this code will let you start the experiment. During the session, you'll be asked a series of questions to which you can answer on a scale ranging between 'no' and 'yes.' If you think you would like the activity described in the question, answer 'yes,' and if you think you would not, answer 'no.' Remember that you're being asked to predict how you would behave and what kind of activities you would like when aroused."

Roy nodded.

"We'll ask you to sit in your bed, and set the computer up on a chair on the left side of your bed, in clear sight and reach of your bed," Mike went on. "Place the keypad next to you so that you can use it without any difficulty, and be sure you're alone."

Roy's eyes twinkled a little.

"When you finish with the session, e-mail me and we will meet again, and you'll get your ten bucks."

Mike didn't tell Roy about the questions themselves. The session started by asking Roy to imagine that he was sexually aroused, and to answer all the questions as he would if he were aroused. One set of questions asked about sexual preferences. Would he, for example, find women's shoes erotic? Could he imagine being attracted to a 50-year-old woman? Could it be fun to have sex with someone who was extremely fat? Could having sex with someone he hated be enjoyable? Would it be fun to get tied up or to tie someone else up? Could "just kissing" be frustrating?

A second set of questions asked about the likelihood of engaging in immoral behaviors such as date rape. Would Roy tell a woman that he loved her to increase the chance that she would have sex with him? Would he encourage a date to drink to increase the chance that she would have sex with him? Would he keep trying to have sex after a date had said "no"?

A third set of questions asked about Roy's likelihood of engaging in behaviors related to unsafe sex. Does a condom decrease sexual pleasure? Would he always use a condom if he didn't know the sexual history of a new sexual partner? Would he use a condom even if he was afraid that a woman might change her mind while he went to get it?*

A few days later, having answered the questions in his "cold," rational state, Roy met again with Mike.

"Those were some interesting questions," Roy noted.

"Yes, I know," Mike said coolly. "Kinsey had nothing on us. By the way, we have another set of experimental sessions. Would you be interested in participating again?"

Roy smiled a little, shrugged, and nodded.

Mike shoved a few pages toward him. "This time we're asking you to sign the same consent form, but the next task will be slightly different. The next session will be very much the same as the last one, but this time we want you to get yourself into an excited state by viewing a set of arousing pictures and masturbating. What we want you to do is arouse yourself to a high level, but not to ejaculate. In case you do, though, the computer will be protected."

Mike pulled out the Apple iBook. This time the keyboard and the screen were covered with a thin layer of Saran wrap.

Roy made a face. "I didn't know computers could get pregnant."

"Not a chance," Mike laughed. "This one had its tubes tied. But we like to keep them clean."

Mike explained that Roy would browse through a series of erotic pictures on the computer to help him get to the right level of arousal; then he would answer the same questions as before.

WITHIN THREE MONTHS, some fine Berkeley undergraduate students had undergone a variety of sessions in different orders. In the set of sessions conducted when they were in a cold, dispassionate state, they predicted what their sexual and moral decisions would be if they were aroused. In the set of sessions conducted when they were in a hot, aroused state, they also predicted their decisions—but this time, since they were actually in the grip of passion, they were presumably more aware of their preferences in that state. When the study was completed, the conclusions were consistent and clear—overwhelmingly clear, frighteningly clear.

In every case, our bright young participants answered the questions very differently when they were aroused from when they were in a "cold" state. Across the 19 questions about sexual preferences, when Roy and all the other participants were aroused they predicted that their desire to engage in a variety of somewhat odd sexual activities would be nearly twice as high as (72 percent higher than) they had predicted when they were cold. For example, the idea of enjoying contact with animals was more than twice as appealing when they were in a state of arousal as when they were in a cold state. In the five questions about their propensity to engage in immoral activities, when they were aroused they predicted their propensity to be more than twice as high as (136 percent higher than) they had predicted in the cold state. Similarly, in the set of questions about using condoms, and despite the warnings that had been hammered into them over the years about the importance of condoms, they were 25 percent more likely in the aroused state than in the cold state to predict that they would forego condoms. In all these cases they failed to predict the influence of arousal on their sexual preferences, morality, and approach to safe sex.

The results showed that when Roy and the other participants were in a cold, rational, superego-driven state, they respected women; they were not particularly attracted to the odd sexual activities we asked them about; they always took the moral high ground; and they expected that they would always use a condom. They thought that they understood themselves, their preferences, and what actions they were capable of. But as it turned out, they completely underestimated their reactions.

No matter how we looked at the numbers, it was clear that the magnitude of underprediction by the participants was substantial. Across the board, they revealed in their unaroused state that they themselves did not know what they were like once aroused. Prevention, protection, conservatism, and morality disappeared completely from the radar screen. They were simply unable to predict the degree to which passion would change them.*

IMAGINE WAKING UP one morning, looking in the mirror, and discovering that someone else—something alien but human—has taken over your body. You're uglier, shorter, hairier; your lips are thinner, your incisors are longer, your nails are filthy, your face is flatter. Two cold, reptilian eyes gaze back at you. You long to smash something, rape someone. You are not you. You are a monster.

Beset by this nightmarish vision, Robert Louis Stevenson screamed in his sleep in the early hours of an autumn morning in 1885. Immediately after his wife awoke him, he set to work on what he called a "fine bogey tale"—Dr. Jekyll and Mr. Hyde—in which he said, "Man is not truly one, but truly two." The book was an overnight success, and no wonder. The story captivated the imagination of Victorians, who were fascinated with the dichotomy between repressive propriety—represented by the mild-mannered scientist Dr. Jekyll—and uncontrollable passion, embodied in the murderous Mr. Hyde. Dr. Jekyll thought he understood how to control himself. But when Mr. Hyde took over, look out.

The story was frightening and imaginative, but it wasn't new. Long before Sophocles's Oedipus Rex and Shakespeare's Macbeth, the war between interior good and evil had been the stuff of myth, religion, and literature. In Freudian terms, each of us houses a dark self, an id, a brute that can unpredictably wrest control away from the superego. Thus a pleasant, friendly neighbor, seized by road rage, crashes his car into a semi. A teenager grabs a gun and shoots his friends. A priest rapes a boy. All these otherwise good people assume that they understand themselves. But in the heat of passion, suddenly, with the flip of some interior switch, everything changes.

Our experiment at Berkeley revealed not just the old story that we are all like Jekyll and Hyde, but also something new—that every one of us, regardless of how "good" we are, underpredicts the effect of passion on our behavior. In every case, the participants in our experiment got it wrong. Even the most brilliant and rational person, in the heat of passion, seems to be absolutely and completely divorced from the person he thought he was. Moreover, it is not just that people make wrong predictions about themselves—their predictions are wrong by a large margin.

Most of the time, according to the results of the study, Roy is smart, decent, reasonable, kind, and trustworthy. His frontal lobes are fully functioning, and he is in control of his behavior. But when he's in a state of sexual arousal and the reptilian brain takes over, he becomes unrecognizable to himself.

Roy thinks he knows how he will behave in an aroused state, but his understanding is limited. He doesn't truly understand that as his sexual motivation becomes more intense, he may throw caution to the wind. He may risk sexually transmitted diseases and unwanted pregnancies in order to achieve sexual gratification. When he is gripped by passion, his emotions may blur the boundary between what is right and what is wrong. In fact, he doesn't have a clue to how consistently wild he really is, for when he is in one state and tries to predict his behavior in another state, he gets it wrong.

Moreover, the study suggested that our inability to understand ourselves in a different emotional state does not seem to improve with experience; we get it wrong even if we spend as much time in this state as our Berkeley students spend sexually aroused. Sexual arousal is familiar, personal, very human, and utterly commonplace. Even so, we all systematically underpredict the degree to which arousal completely negates our superego, and the way emotions can take control of our behavior.

WHAT HAPPENS, THEN, when our irrational self comes alive in an emotional place that we think is familiar but in fact is unfamiliar? If we fail to really understand ourselves, is it possible to somehow predict how we or others will behave when "out of our heads"—when we're really angry, hungry, frightened, or sexually aroused? Is it possible to do something about this?

The answers to these questions are profound, for they indicate that we must be wary of situations in which our Mr. Hyde may take over. When the boss criticizes us publicly, we might be tempted to respond with a vehement e-mail. But wouldn't we be better off putting our reply in the "draft" folder for a few days? When we are smitten by a sports car after a test-drive with the wind in our hair, shouldn't we take a break—and discuss our spouse's plan to buy a minivan—before signing a contract to buy the car?

Here are a few more examples of ways to protect ourselves from ourselves:

Safe Sex

Many parents and teenagers, while in a cold, rational, Dr. Jekyll state, tend to believe that the mere promise of abstinence—commonly known as "Just say no"—is sufficient protection against sexually transmitted diseases and unwanted pregnancies. Assuming that this levelheaded thought will prevail even when emotions reach the boiling point, the advocates of "just saying no" see no reason to carry a condom with them. But as our study shows, in the heat of passion, we are all in danger of switching from "Just say no" to "Yes!" in a heartbeat; and if no condom is available, we are likely to say yes, regardless of the dangers.

What does this suggest? First, widespread availability of condoms is essential. We should not decide in a cool state whether or not to bring condoms; they must be there just in case. Second, unless we understand how we might react in an emotional state, we will not be able to predict this transformation. For teenagers, this problem is most likely exacerbated, and thus sex education should focus less on the physiology and biology of the reproductive system, and more on strategies to deal with the emotions that accompany sexual arousal. Third, we must admit that carrying condoms and even vaguely understanding the emotional firestorm of sexual arousal may not be enough.

There are most likely many situations where teenagers simply won't be able to cope with their emotions. A better strategy, for those who want to guarantee that teenagers avoid sex, is to teach teenagers that they must walk away from the fire of passion before they are close enough to be drawn in. Accepting this advice might not be easy, but our results suggest that it is easier for them to fight temptation before it arises than after it has started to lure them in. In other words, avoiding temptation altogether is easier than overcoming it.

To be sure, this sounds a lot like the "Just say no" campaign, which urges teenagers to walk away from sex when tempted. But the difference is that "Just say no" assumes we can turn off passion at will, at any point, whereas our study shows this assumption to be false. If we put aside the debate on the pros and cons of teenage sex, what is clear is that if we want to help teenagers avoid sex, sexually transmitted diseases, and unwanted pregnancies, we have two strategies. Either we can teach them how to say no before any temptation takes hold, and before a situation becomes impossible to resist; or alternatively, we can get them prepared to deal with the consequences of saying yes in the heat of passion (by carrying a condom, for example). One thing is sure: if we don't teach our young people how to deal with sex when they are half out of their minds, we are not only fooling them; we're fooling ourselves as well. Whatever lessons we teach them, we need to help them understand that they will react differently when they are calm and cool from when their hormones are raging at fever pitch (and of course the same also applies to our own behavior).

Safe Driving

Similarly, we need to teach teenagers (and everyone else) not to drive when their emotions are at a boil. It's not just inexperience and hormones that make so many teenagers crash their own or their parents' cars. It's also the car full of laughing friends, with the CD player blaring at an adrenaline-pumping decibel level, and the driver's right hand searching for the french fries or his girlfriend's knee. Who's thinking about risk in that situation? Probably no one. A recent study found that a teenager driving alone was 40 percent more likely to get into an accident than an adult. But with one other teenager in the car, the percentage was twice that—and with a third teenager along for the ride, the percentage doubled again.[6]

To react to this, we need an intervention that does not rely on the premise that teenagers will remember how they wanted to behave while in a cold state (or how their parents wanted them to behave) and follow these guidelines even when they are in a hot state. Why not build into cars precautionary devices to foil teenagers' behavior? Such cars might be equipped with a modified OnStar system that the teenager and the parents configure in a cold state. If a car exceeds 65 miles per hour on the highway, or more than 40 miles per hour in a residential zone, for example, there will be consequences. If the car exceeds the speed limit or begins to make erratic turns, the radio might switch from 2Pac to Schumann's Second Symphony (this would slow most teenagers). Or the car might blast the air conditioning in winter, switch on the heat in summer, or automatically call Mom (a real downer if the driver's friends are present). With these substantial and immediate consequences in mind, then, the driver and his or her friends would realize that it's time for Mr. Hyde to move over and let Dr. Jekyll drive.

This is not at all far-fetched. Modern cars are already full of computers that control the fuel injection, the climate system, and the sound system. Cars equipped with OnStar are already linked to a wireless network. With today's technology, it would be a simple matter for a car to automatically call Mom.

Better Life Decisions

Not uncommonly, women who are pregnant for the first time tell their doctors, before the onset of labor, that they will refuse any kind of painkiller. The decision made in their cold state is admirable, but they make this decision when they can't imagine the pain that can come with childbirth (let alone the challenges of child rearing). After all is said and done, they may wish they'd gone for the epidural.

With this in mind, Sumi (my lovely wife) and I, readying ourselves for the birth of our first child, Amit, decided to test our mettle before making any decisions about using an epidural. To do this, Sumi plunged her hands into a bucket of ice for two minutes (we did this on the advice of our birth coach, who swore to us that the resulting pain would be similar to the pain of childbirth), while I coached her breathing. If Sumi was unable to bear the pain of this experience, we figured, she'd probably want painkillers when she was going through the actual birth. After two minutes of holding her hands in the ice bucket, Sumi clearly understood the appeal of an epidural. During the birth itself, any ounce of love Sumi ever had for her husband was completely transferred to the anesthesiologist, who produced the epidural at the critical point. (With our second child, we made it to the hospital about two minutes before Neta was born, so Sumi did end up experiencing an analgesic-free birth after all.)

LOOKING FROM ONE emotional state to another is difficult. It's not always possible; and as Sumi learned it can be painful. But to make informed decisions we need to somehow experience and understand the emotional state we will be in at the other side of the experience. Learning how to bridge this gap is essential to making some of the important decisions of our lives.

It is unlikely that we would move to a different city without asking friends who live there how they like it, or even choose to see a film without reading some reviews. Isn't it strange that we invest so little in learning about both sides of ourselves? Why should we reserve this subject for psychology classes when failure to understand it can bring about repeated failures in so many aspects of our lives? We need to explore the two sides of ourselves; we need to understand the cold state and the hot state; we need to see how the gap between the hot and cold states benefits our lives, and where it leads us astray.

What did our experiments suggest? It may be that our models of human behavior need to be rethought. Perhaps there is no such thing as a fully integrated human being. We may, in fact, be an agglomeration of multiple selves. Although there is nothing much we can do to get our Dr. Jekyll to fully appreciate the strength of our Mr. Hyde, perhaps just being aware that we are prone to making the wrong decisions when gripped by intense emotion may help us, in some way, to apply our knowledge of our "Hyde" selves to our daily activities.

How can we try to force our "Hyde" self to behave better? This is what Chapter 7 is about.

APPENDIX: CHAPTER 5

A complete list of the questions we asked, with the mean response and percentage differences. Each question was presented on a visual-analog scale that stretched between "no" on the left (zero) to "possibly" in the middle (50) to "yes" on the right (100).

TABLE 1

RATE THE ATTRACTIVENESS OF DIFFERENT ACTIVITIES

Question	**Nonaroused**	**Aroused**	**Difference, percent**
Are women's shoes erotic?	42	65	55
Can you imagine being attracted to a 12-year-old girl?	23	46	100
Can you imagine having sex with a 40-year-old woman?	58	77	33
Can you imagine having sex with a 50-year-old woman?	28	55	96
Can you imagine having sex with a 60-year-old woman?	7	23	229
Can you imagine having sex with a man?	8	14	75
Could it be fun to have sex with someone who was extremely fat?	13	24	85
Could you enjoy having sex with someone you hated?	53	77	45
If you were attracted to a woman and she proposed a threesome with a man, would you do it?	19	34	79
Is a woman sexy when she's sweating?	56	72	29
Is the smell of cigarette smoke arousing?	13	22	69

Would it be fun to get tied up by your sexual partner?	63	81	29
Would it be fun to tie up your sexual partner?	47	75	60
Would it be fun to watch an attractive woman urinating?	25	32	28
Would you find it exciting to spank your sexual partner?	61	72	18
Would you find it exciting to get spanked by an attractive woman?	50	68	36
Would you find it exciting to have anal sex?	46	77	67
Can you imagine getting sexually excited by contact with an animal?	6	16	167
Is just kissing frustrating?	41	69	68

TABLE 2

RATE THE LIKELIHOOD OF ENGAGING IN IMMORAL BEHAVIORS LIKE DATE RAPE (A STRICT ORDER OF SEVERITY IS NOT IMPLIED)

Question	**Nonaroused**	**Aroused**	**Difference, percent**
Would you take a date to a fancy restaurant to increase your chance of having sex with her?	55	70	27
Would you tell a woman that you loved her to increase the chance that she would have sex with you?	30	51	70
Would you encourage your date to drink to increase the chance that she would have sex with you?	46	63	37
Would you keep trying to have sex after your date says “no”?	20	45	125

Would you slip a woman a drug to increase the chance that she would have sex with you?	5	26	420

TABLE 3

RATE YOUR TENDENCY TO USE, AND OUTCOMES OF NOT USING, BIRTH CONTROL

Question	**Nonaroused**	**Aroused**	**Difference, percent**
Birth control is the woman's responsibility.	34	44	29
A condom decreases sexual pleasure.	66	78	18
A condom interferes with sexual spontaneity.	58	73	26
Would you always use a condom if you didn't know the sexual history of a new sexual partner?	88	69	22
Would you use a condom even if you were afraid that a woman might change her mind while you went to get it?	86	60	30

CHAPTER 7

The Problem of Procrastination and Self-Control

Why We Can't Make Ourselves Do What We Want to Do

Onto the American scene, populated by big homes, big cars, and big-screen plasma televisions, comes another big phenomenon: the biggest decline in the personal savings rate since the Great Depression.

Go back 25 years, and double-digit savings rates were the norm. As recently as 1994 the savings rate was nearly five percent. But by 2006 the savings rate had fallen below zero—to negative one percent. Americans were not only not saving; they were spending more than they earned. Europeans do a lot better—they save an average of 20 percent. Japan's rate is 25 percent. China's is 50 percent. So what's up with America?

I suppose one answer is that Americans have succumbed to rampant consumerism. Go back to a home built before we had to have everything, for instance, and check out the size of the closets. Our house in Cambridge, Massachusetts, for example, was built in 1890. It has no closets whatsoever. Houses in the 1940s had closets barely big enough to stand in. The closet of the 1970s was a bit larger, perhaps deep enough for a fondue pot, a box of eight-track tapes, and a few disco dresses. But the closet of today is a different breed. "Walk-in closet" means that you can literally walk in for quite a distance. And no matter how deep these closets are, Americans have found ways to fill them right up to the closet door.

Another answer—the other half of the problem—is the recent explosion in consumer credit. The average American family now has six credit cards (in 2005 alone, Americans received 6 billion direct-mail solicitations for credit cards). Frighteningly, the average family debt on these cards is about $9,000; and seven in 10 households borrow on credit cards to cover such basic living expenses as food, utilities, and clothing.

So wouldn't it just be wiser if Americans learned to save, as in the old days, and as the rest of the world does, by diverting some cash to the cookie jar, and delaying some purchases until we can really afford them? Why can't we save part of our paychecks, as we know we should? Why can't we resist those new purchases? Why can't we exert some good old-fashioned self-control?

The road to hell, they say, is paved with good intentions. And most of us know what that's all about. We promise to save for retirement, but we spend the money on a vacation. We vow to diet, but we surrender to the allure of the dessert cart. We promise to have our cholesterol checked regularly, and then we cancel our appointment.

How much do we lose when our fleeting impulses deflect us from our long-term goals? How much is our health affected by those missed appointments and our lack of exercise? How much is our wealth reduced when we forget our vow to save more and consume less? Why do we lose the fight against procrastination so frequently?

IN CHAPTER 6 we discussed how emotions grab hold of us and make us view the world from a different perspective. Procrastination (from the Latin pro, meaning for; and cras, meaning tomorrow) is rooted in the same kind of problem. When we promise to save our money, we are in a cool state. When we promise to exercise and watch our diet, again we're cool. But then the lava flow of hot emotion comes rushing in: just when we promise to save, we see a new car, a mountain bike, or a pair of shoes that we must have. Just when we plan to exercise regularly, we find a reason to sit all day in front of the television. And as for the diet? I'll take that slice of chocolate cake and begin the diet in earnest tomorrow. Giving up on our long-term goals for immediate gratification, my friends, is procrastination.

As a university professor, I'm all too familiar with procrastination. At the beginning of every semester my students make heroic promises to themselves—vowing to read their assignments on time, submit their papers on time, and in general, stay on top of things. And every semester I've watched as temptation takes them out on a date, over to the student union for a meeting, and off on a ski trip in the mountains—while their workload falls farther and farther behind. In the end, they wind up impressing me, not with their punctuality, but with their creativity—inventing stories, excuses, and family tragedies to explain their tardiness. (Why do family tragedies generally occur during the last two weeks of the semester?)

After I'd been teaching at MIT for a few years, my colleague Klaus Wertenbroch (a professor at INSEAD, a business school with campuses in France and Singapore) and I decided to work up a few studies that might get to the root of the problem, and just maybe offer a fix for this common human weakness. Our guinea pigs this time would be the delightful students in my class on consumer behavior.

As they settled into their chairs that first morning, full of anticipation (and, no doubt, with resolutions to stay on top of their class assignments), the students listened to me review the syllabus for the course. There would be three main papers over the 12-week semester, I explained. Together, these papers would constitute much of their final grade.

"And what are the deadlines?" asked one of them, waving his hand from the back. I smiled. "You can hand in the papers at any time before the end of the semester," I replied. "It's entirely up to you." The students looked back blankly.

"Here's the deal," I explained. "By the end of the week, you must commit to a deadline date for each paper. Once you set your deadlines, they can't be changed." Late papers, I added, would be penalized at the rate of one percent off the grade for each day late. The students could always turn in their papers before their deadlines without penalty, of course, but since I wouldn't be reading any of them until the end of the semester, there would be no particular advantage in terms of grades for doing so.

In other words, the ball was in their court. Would they have the self-control to play the game?

"But Professor Ariely," asked Gaurav, a clever master's student with a charming Indian accent, "given these instructions and incentives, wouldn't it make sense for us to select the last date possible?"

"You can do that," I replied. "If you find that it makes sense, by all means do it."

Under these conditions, what would you have done?

I promise to submit paper 1 on week ———

I promise to submit paper 2 on week ———

I promise to submit paper 3 on week ———

What deadlines did the students pick for themselves? A perfectly rational student would follow Gaurav's advice and set all the deadlines for the last day of class—after all, it was always possible to submit papers earlier without a penalty, so why take a chance and select an earlier deadline than needed? Delaying the deadlines to the end was clearly the best decision if students were perfectly rational. But what if the students are not rational? What if they succumb to temptation and are prone to procrastination? What if they realize their weakness? If the students are not rational, and they know it, they could use the deadlines to force themselves to behave better. They could set early deadlines and by doing so force themselves to start working on the projects earlier in the semester.

What did my students do? They used the scheduling tool I provided them with and spaced the timing of their papers across the whole semester. This is fine and good, as it suggests that the students realize their problems with procrastination and that if given the right opportunities they try to control themselves—but the main question is whether the tool was indeed helpful in improving their grades. To find out about this, we had to conduct other variations of the same experiments in other classes and compare the quality of papers across the different conditions (classes).

NOW THAT I had Gaurav and his classmates choosing their individual deadlines, I went to my other two classes—with markedly different deals. In the second class, I told the students that they would have no deadlines at all during the semester. They merely needed to submit their papers by the end of the last class. They could turn the papers in early, of course, but there was no grade benefit to doing so. I suppose they should have been happy: I had given them complete flexibility and freedom of choice. Not only that, but they also had the lowest risk of being penalized for missing an intermediate deadline.

The third class received what might be called a dictatorial treatment: I dictated three deadlines for the three papers, set at the fourth, eighth, and twelfth weeks. These were my marching orders, and they left no room for choice or flexibility.

Of these three classes, which do you think achieved the best final grades? Was it Gaurav and his classmates, who had some flexibility? Or the second class, which had a single deadline at the end, and thus complete flexibility? Or the third class, which had its deadlines dictated from above, and therefore had no flexibility? Which class do you predict did worst?

When the semester was over, Jose Silva, the teaching assistant for the classes (himself an expert on procrastination and currently a professor at the University of California at Berkeley), returned the papers to the students. We could at last compare the grades across the three different deadline conditions. We found that the students in the class with the three firm deadlines got the best grades; the class in which I set no deadlines at all (except for the final deadline) had the worst grades; and the class in which Gaurav and his classmates were allowed to choose their own three deadlines (but with penalties for failing to meet them) finished in the middle, in terms of their grades for the three papers and their final grade.

What do these results suggest? First, that students do procrastinate (big news); and second, that tightly restricting their freedom (equally spaced deadlines, imposed from above) is the best cure for procrastination. But the biggest revelation is that simply offering the students a tool by which they could precommit to deadlines helped them achieve better grades.

What this finding implies is that the students generally understood their problem with procrastination and took action to fight it when they were given the opportunity to do so, achieving relative success in improving their grades. But why were the grades in the self-imposed deadlines condition not as good as the grades in the dictatorial (externally imposed) deadlines condition? My feeling is this: not everyone understands their tendency to procrastinate, and even those who do recognize their tendency to procrastinate may not understand their problem completely. Yes, people may set deadlines for themselves, but not necessarily the deadlines that are best for getting the best performance.

When I looked at the deadlines set by the students in Gaurav's class, this was indeed the case. Although the vast majority of the students in this class spaced their deadlines substantially (and got grades that were as good as those earned by students in the dictatorial condition), some did not space their deadlines much, and a few did not space their deadlines at all. These students who did not space their deadlines sufficiently pulled the average grades of this class down. Without properly spaced deadlines—deadlines that would have forced the students to start working on their papers earlier in the semester—the final work was generally rushed and poorly written (even without the extra penalty of one percent off the grade for each day of delay).

Interestingly, these results suggest that although almost everyone has problems with procrastination, those who recognize and admit their weakness are in a better position to utilize available tools for precommitment and by doing so, help themselves overcome it.

SO THAT WAS my experience with my students. What does it have to do with everyday life? A lot, I think. Resisting temptation and instilling self-control are general human goals, and repeatedly failing to achieve them is a source of much of our misery. When I look around, I see people trying their best to do the right thing, whether they are dieters vowing to avoid a tempting dessert tray or families vowing to spend less and save more. The struggle for control is all around us. We see it in books and magazines. Radio and television airwaves are choked with messages of self-improvement and help.

And yet, for all this electronic chatter and focus in print, we find ourselves again and again in the same predicament as my students—failing over and over to reach our long-term goals. Why? Because without precommitments, we keep on falling for temptation.

What's the alternative? From the experiments that I have described above, the most obvious conclusion is that when an authoritative "external voice" gives the orders, most of us will jump to attention. After all, the students for whom I set the deadlines—for whom I provided the "parental" voice—did best. Of course, barking orders, while very effective, may not always be feasible or desirable. What's a good compromise? It seems that the best course might be to give people an opportunity to commit up front to their preferred path of action. This approach might not be as effective as the dictatorial treatment, but it can help push us in the right direction (perhaps even more so if we train people to do it, and give them experience in setting their own deadlines).

What's the bottom line? We have problems with self-control, related to immediate and delayed gratification—no doubt there. But each of the problems we face has potential self-control mechanisms, as well. If we can't save from our paycheck, we can take advantage of our employer's automatic deduction option; if we don't have the will to exercise regularly alone, we can make an appointment to exercise in the company of our friends. These are the tools that we can commit to in advance, and they may help us be the kind of people we want to be.

WHAT OTHER PROCRASTINATION problems might precommitment mechanisms solve? Consider health care and consumer debt.

Health Care

Everyone knows that preventive medicine is generally more cost-effective—for both individuals and society—than our current remedial approach. Prevention means getting health exams on a regular basis, before problems develop. But having a colonoscopy or mammogram is an ordeal. Even a cholesterol check, which requires blood to be drawn, is unpleasant. So while our long-term health and longevity depend on undergoing such tests, in the short term we procrastinate and procrastinate and procrastinate.

But can you imagine if we all got the required health exams on time? Think how many serious health problems could be caught if they were diagnosed early. Think how much cost could be cut from health-care spending, and how much misery would be saved in the process.

So how do we fix this problem? Well, we could have a dictatorial solution, in which the state (in the Orwellian sense) would dictate our regular checkups. That approach worked well with my students, who were given a deadline and performed well. In society, no doubt, we would all be healthier if the health police arrived in a van and took procrastinators to the ministry of cholesterol control for blood tests.

This may seem extreme, but think of the other dictates that society imposes on us for our own good. We may receive tickets for jaywalking, and for having our seat belts unsecured. No one thought 20 years ago that smoking would be banned in most public buildings across America, as well as in restaurants and bars, but today it is—with a hefty fine incurred for lighting up. And now we have the movement against trans fats. Should people be deprived of heart-clogging french fries?

Sometimes we strongly support regulations that restrain our self-destructive behaviors, and at other times we have equally strong feelings about our personal freedom. Either way, it's always a trade-off.

But if mandatory health checkups won't be accepted by the public, what about a middle ground, like the self-imposed deadlines I gave to Gaurav and his classmates (the deadlines that offered personal choice, but also had penalties attached for the procrastinators)? This might be the perfect compromise between authoritarianism, on the one hand, and what we have too often in preventive health today—complete freedom to fail.

Suppose your doctor tells you that you need to get your cholesterol checked. That means fasting the night before the blood test, driving to the lab the next morning without breakfast, sitting in a crowded reception room for what seems like hours, and finally, having the nurse come and get you so that she can stick a needle into your arm. Facing those prospects, you immediately begin to procrastinate. But suppose the doctor charged you an up-front $100 deposit for the test, refundable only if you showed up promptly at the appointed time. Would you be more likely to show up for the test?

What if the doctor asked you if you would like to pay this $100 deposit for the test? Would you accept this self-imposed challenge? And if you did, would it make you more likely to show up for the procedure? Suppose the procedure was more complicated: a colonoscopy, for instance. Would you be willing to commit to a $200 deposit, refundable only if you arrived at the appointment on time? If so, you will have replicated the condition that I offered Gaurav's class, a condition that certainly motivated the students to be responsible for their own decisions.

HOW ELSE COULD we defeat procrastination in health care? Suppose we could repackage most of our medical and dental procedures so that they were predictable and easily done. Let me tell you a story that illustrates this idea.

Several years ago, Ford Motor Company struggled to find the best way to get car owners back into the dealerships for routine automobile maintenance. The problem was that the standard Ford automobile had something like 18,000 parts that might need servicing, and unfortunately they didn't all need servicing at the same time (one Ford engineer determined that a particular axle bolt needed inspection every 3,602 miles). And this was just part of the problem: since Ford had more than 20 vehicle types, plus various model years, the servicing of them all was nearly impossible to ponder.

All that consumers, as well as service advisers, could do was page through volumes of thick manuals in order to determine what services were needed.

But Ford began to notice something over at the Honda dealerships. Even though the 18,000 or so parts in Honda cars had the same ideal maintenance schedules as the Ford cars, Honda had lumped them all into three "engineering intervals" (for instance, every six months or 5,000 miles, every year or 10,000 miles, and every two years or 25,000 miles). This list was displayed on the wall of the reception room in the service department. All the hundreds of service activities were boiled down to simple, mileage-based service events that were common across all vehicles and model years. The board had every maintenance service activity bundled, sequenced, and priced. Anyone could see when service was due and how much it would cost.

But the bundle board was more than convenient information: It was a true procrastination-buster, as it instructed customers to get their service done at specific times and mileages. It guided them along. And it was so simple that any customer could understand it. Customers were no longer confused. They no longer procrastinated. Servicing their Hondas on time was easy.

Some people at Ford thought this was a great idea, but at first the Ford engineers fought it. They had to be convinced that, yes, drivers could go 9,000 miles without an oil change—but that 5,000 miles would align the oil change with everything else that needed to be done. They had to be convinced that a Mustang and a F-250 Super Duty truck, despite their technological differences, could be put on the same maintenance schedule. They had to be convinced that rebundling their 18,000 maintenance options into three easily scheduled service events—making maintenance as easy as ordering a Value Meal at McDonald's—was not bad engineering, but good customer service (not to mention good business). The winning argument, in fact, was that it is better to have consumers service their vehicles at somewhat compromised intervals than not to service them at all!

In the end, it happened: Ford joined Honda in bundling its services. Procrastination stopped. Ford's service bay, which had been 40 percent vacant, filled up. The dealers made money, and in just three years Ford matched Honda's success in the service bay.

So couldn't we make comprehensive physicals and tests as simple—and, with the addition of self-imposed financial penalties (or better, a "parental" voice), bring the quality of our health way up and at the same time make the overall costs significantly less? The lesson to learn from Ford's experience is that bundling our medical tests (and procedures) so that people remember to do them is far smarter than adhering to an erratic series of health commands that people are unwilling to follow. And so the big question: can we shape America's medical morass and make it as easy as ordering a Happy Meal? Thoreau wrote, "Simplify! Simplify!" And, indeed, simplification is one mark of real genius.

Savings

We could order people to stop spending, as an Orwellian edict. This would be similar to the case of my third group of students, for whom the deadline was dictated by me. But are there cleverer ways to get people to monitor their own spending? A few years ago, for instance, I heard about the "ice glass" method for reducing credit card spending. It's a home remedy for impulsive spending. You put your credit card into a glass of water and put the glass in the freezer. Then, when you impulsively decide to make a purchase, you must first wait for the ice to thaw before extracting the card. By then, your compulsion to purchase has subsided. (You can't just put the card in the microwave, of course, because then you'd destroy the magnetic strip.)

But here's another approach that is arguably better, and certainly more up-to-date. John Leland wrote a very interesting article in the New York Times in which he described a growing trend of self-shame: "When a woman who calls herself Tricia discovered last week that she owed $22,302 on her credit cards, she could not wait to spread the news. Tricia, 29, does not talk to her family or friends about her finances, and says she is ashamed of her personal debt. Yet from the laundry room of her home in northern Michigan, Tricia does something that would have been unthinkable

—and impossible—a generation ago: She goes online and posts intimate details of her financial life, including her net worth (now a negative $38,691), the balance and finance charges on her credit cards, and the amount of debt she has paid down ($15,312) since starting the blog about her debt last year."

It is also clear that Tricia's blog is part of a larger trend. Apparently, there are dozens of Web sites (maybe there are thousands by now) devoted to the same kind of debt blogging (from "Poorer than You" poorerthanyou.com and "We're in Debt" wereindebt.com to "Make Love Not Debt" makelovenotdebt.com and Tricia's Web page: bloggingawaydebt.com). Leland noted, "Consumers are asking others to help themselves develop self-control because so many companies are not showing any restraint."[7]

Blogging about overspending is important and useful, but as we saw in the last chapter, on emotions, what we truly need is a method to curb our consumption at the moment of temptation, rather than a way to complain about it after the fact.

What could we do? Could we create something that replicated the conditions of Gaurav's class, with some freedom of choice but built-in boundaries as well? I began to imagine a credit card of a different kind—a self-control credit card that would let people restrict their own spending behavior. The users could decide in advance how much money they wanted to spend in each category, in every store, and in every time frame. For instance, users could limit their spending on coffee to $20 every week, and their spending on clothing to $600 every six months. Cardholders could fix their limit for groceries at $200 a week and their entertainment spending at $60 a month, and not allow any spending on candy between two and five PM. What would happen if they surpassed the limit? The cardholders would select their penalties. For instance, they could make the card get rejected; or they could tax themselves and transfer the tax to Habitat for Humanity, a friend, or long-term savings. This system could also implement the "ice glass" method as a cooling-off period for large items; and it could even automatically trigger an e-mail to your spouse, your mother, or a friend:

Dear Sumi,

This e-mail is to draw your attention to the fact that your husband, Dan Ariely, who is generally an upright citizen, has exceeded his spending limit on chocolate of $50 per month by $73.25.

With best wishes,

The self-control credit card team

Now this may sound like a pipe dream, but it isn't. Think about the potential of Smart Cards (thin, palm-size cards that carry impressive computational powers), which are beginning to fill the market. These cards offer the possibility of being customized to each individual's credit needs and helping people manage their credit wisely. Why couldn't a card, for instance, have a spending "governor" (like the governors that limit the top speed on engines) to limit monetary transactions in particular conditions? Why couldn't they have the financial equivalent of a time-release pill, so that consumers could program their cards to dispense their credit to help them behave as they hope they would?

A FEW YEARS ago I was so convinced that a "self-control" credit card was a good idea that I asked for a meeting with one of the major banks. To my delight, this venerable bank responded, and suggested that I come to its corporate headquarters in New York.

I arrived in New York a few weeks later, and after a brief delay at the reception desk, was led into a modern conference room. Peering through the plate glass from on high, I could look down on Manhattan's financial district and a stream of yellow cabs pushing through the rain. Within a few minutes the room had filled with half a dozen high-powered banking executives, including the head of the bank's credit card division.

I began by describing how procrastination causes everyone problems. In the realm of personal finance, I said, it causes us to neglect our savings—while the temptation of easy credit fills our closets with goods that we really don't need. It didn't take long before I saw that I was striking a very personal chord with each of them.

Then I began to describe how Americans have fallen into a terrible dependence on credit cards, how the debt is eating them alive, and how they are struggling to find their way out of this predicament. America's seniors are one of the hardest-hit groups. In fact, from 1992 to 2004 the rate of debt of Americans age 55 and over rose faster than that of any other group. Some of them were even using credit cards to fill the gaps in their Medicare. Others were at risk of losing their homes.

I began to feel like George Bailey begging for loan forgiveness in It's a Wonderful Life. The executives began to speak up. Most of them had stories of relatives, spouses, and friends (not themselves, of course) who had had problems with credit debt. We talked it over.

Now the ground was ready and I started describing the self-control credit card idea as a way to help consumers spend less and save more. At first I think the bankers were a bit stunned. I was suggesting that they help consumers control their spending. Did I realize that the bankers and credit card companies made $17 billion a year in interest from these cards? Hello? They should give that up?

Well, I wasn't that naive. I explained to the bankers that there was a great business proposition behind the idea of a self-control card. "Look," I said, "the credit card business is cutthroat. You send out six billion direct-mail pieces a year, and all the card offers are about the same." Reluctantly, they agreed. "But suppose one credit card company stepped out of the pack," I continued, "and identified itself as a good guy—as an advocate for the credit-crunched consumer? Suppose one company had the guts to offer a card that would actually help consumers control their credit, and better still, divert some of their money into long-term savings?" I glanced around the room. "My bet is that thousands of consumers would cut up their other credit cards—and sign up with you!"

A wave of excitement crossed the room. The bankers nodded their heads and chatted to one another. It was revolutionary! Soon thereafter we all departed. They shook my hand warmly and assured me that we would be talking again, soon.

Well, they never called me back. (It might have been that they were worried about losing the $17 billion in interest charges, or maybe it was just good old procrastination.) But the idea is still there—a self-control credit card—and maybe one day someone will take the next step.

Reflections on Immediate Gratification and
Self-Control

Oscar Wilde once said, "I never put off till tomorrow what I can do the day after." He seemed to accept and even embrace the role of procrastination in his life, but most of us find the allure of immediate gratification so strong that it wrecks our best-laid plans for dieting, saving money, cleaning the house—the list is endless.

When we have problems with self-control, sometimes we delay tasks that we should do immediately. But we also exhibit problems with self-control when we attend too frequently to tasks that we should put off—such as obsessively checking our e-mail.

The danger of continually checking e-mail was crucial in the plotline of the movie Seven Pounds: Will Smith's character checks his phone for e-mail while driving and veers head-on into an oncoming van, killing his wife and six other people. This is just a movie, of course, but compulsively checking e-mail while driving is more common than most of us would care to admit (go ahead, raise your hand*).

I hope that you're not that addicted to e-mail, but too many of us suffer from an unhealthy attachment to it. A recent Australian report found that workers spent an average of 14.5 hours, or more than two working days a week, checking, reading, arranging, deleting, and responding to e-mail.[8] Add to this the rise of social networks and news groups, and you can most likely double the time we spend in virtual interaction and message management.

I, for one, have very mixed feelings about e-mail. On one hand, it lets me communicate with colleagues and friends all over the world without the delays of snail mail or the constraints of talking on the phone. (Is it too late to call? What time is it in Auckland anyway?) On the other hand, I receive hundreds of messages a day, including many involving things I don't really care about (announcements, minutes of meetings, and so on). Regardless of whether I care, the ongoing stream of e-mail is a constant distraction.

I once tried to overcome this distraction by resolving to check e-mail only at night, but I quickly discovered that this would not do. Other people expected me to do as they do—check e-mail constantly and rely on it as a sole means of communication. As a result of not checking my e-mail regularly, I ended up going to meetings that had been canceled, or arriving at the wrong time or place. So I gave in, and now I check e-mail way too often, and as I do I constantly sort the messages into categories: spam and unimportant e-mail that I delete right away; messages I might care about or need to respond to at some point in the future; messages I need to respond to immediately; and so on.

In bygone days the mail cart came around the office once or twice a day with a few letters and memos—not so with e-mail, which never takes a break. For me, the day goes like this: I start working on something and get deeply into it. Eventually I get stuck on some difficult point, and decide to take a quick break—obviously, to check e-mail. Twenty minutes later I get back to the task, with little recollection of where I was and what I was thinking. By the time I'm back on track, I've lost both time and some of my focus, and this outcome assuredly does not help me solve whatever problem caused me to take five in the first place.

Sadly, this is not where the story ends. Enter smart phones—an even greater time sink. A while ago I got one of these lovely, distracting gadgets in the form of an iPhone, which meant that I could also check e-mail while waiting in a checkout line, walking into the office, riding in the elevator, while listening to other people's lectures (I haven't yet figured out how to do this during my own lectures), and even while sitting at traffic lights. In truth, the iPhone has made the level of my addiction very clear. I check it almost ceaselessly. (Businesspeople recognize the addictive properties of these devices: this is why they often call their BlackBerries "CrackBerries.")

I THINK E-MAIL addiction has something to do with what the behavioral psychologist B. F. Skinner called "schedules of reinforcement." Skinner used this phrase to describe the relationship between actions (in his case, a hungry rat pressing a lever in a so-called Skinner box) and their associated rewards (pellets of food). In particular, Skinner distinguished between fixed-ratio schedules of reinforcement and variable-ratio schedules of reinforcement. Under a fixed schedule, a rat received a reward of food after it pressed the lever a fixed number of times—say 100 times. (To make a human comparison, a used-car dealer might get a $1,000 bonus for every 10 cars sold.) Under the variable schedule, the rat earned the food pellet after it pressed the lever a random number of times. Sometimes it would receive the food after pressing 10 times, and sometimes after pressing 200 times. (Analogously, our used-car dealer would earn a $1,000 bonus after selling an unknown number of cars.)

Thus, under the variable schedule of reinforcement, the arrival of the reward is unpredictable. On the face of it, one might expect that the fixed schedules of reinforcement would be more motivating and rewarding because the rat (or the used-car dealer) can learn to predict the outcome of his work. Instead, Skinner found that the variable schedules were actually more motivating. The most telling result was that when the rewards ceased, the rats who were under the fixed schedules stopped working almost immediately, but those under the variable schedules kept working for a very long time.

This variable schedule of reinforcement also works wonders for motivating people. It is the magic (or, more accurately, dark magic) that underlies gambling and playing the lottery. How much fun would it be to play a slot machine if you knew in advance that you would always lose nine times before winning once, and that this sequence would continue for as long as you played? It would probably be no fun at all! In fact, the joy of gambling comes from the inability to predict when rewards are coming, so we keep playing.

So, what do food pellets and slot machines have to do with e-mail? If you think about it, e-mail is very much like gambling. Most of it is junk and the equivalent to pulling the lever of a slot machine and losing, but every so often we receive a message that we really want. Maybe it contains good news about a job, a bit of gossip, a note from someone we haven't heard from in a long time, or some important piece of information. We are so happy to receive the unexpected e-mail (pellet) that we become addicted to checking, hoping for more such surprises. We just keep pressing that lever, over and over again, until we get our reward.

This explanation gives me a better understanding of my e-mail addiction, and more important, it might suggest a few means of escape from this Skinner box and its variable schedule of reinforcement. One helpful approach I've discovered is to turn off the automatic e-mail-checking feature. This action doesn't eliminate my checking, but it reduces the frequency with which my computer notifies me that I have new e-mail waiting (some of it, I would think to myself, must be interesting or relevant). Additionally, many applications allow users to link different colors and sounds to different incoming e-mail. For example, I assign every e-mail on which I'm cc'd to the color gray, and send it directly to a folder labeled "Later." Similarly, I set my application to play a particularly cheerful sound when I receive a message from a source I've marked as urgent and important (these include messages from my wife, students, or members of my department). Sure, it takes some time to set up such filters, but having once gone to the trouble of doing so, I've reduced the randomness of the reward, made the schedule of reinforcement more fixed, and ultimately improved my life. As for overcoming the temptations of checking my iPhone too frequently—I am still working on that one.

Further Reflection on Self-Control:

The Lesson of Interferon

Several years ago I heard an interview on NPR with the Delany sisters, who lived to be 102 and 104. There was one particular part of the interview that remained with me. The sisters said that one of their secrets for a long life was never marrying, because they never had husbands to "worry them to death." This sounds reasonable enough, but it isn't something to which I can personally attest (and it also turns out that men benefit more from marriage anyway).[28] One of the sisters said that another secret was to avoid hospitals, which seemed sensible for two reasons—if you're healthy in the first place, you don't need to go, and you're also less likely to catch an illness from being in the hospital.

I certainly understood what she was talking about. When I was first hospitalized for my burns, I acquired hepatitis from a blood transfusion. Obviously, there's no good time to get hepatitis, but the timing could not have been worse for me. The disease increased the risks of my operations, delayed my treatment, and caused my body to reject many of the skin transplants. After a while the hepatitis subsided, but it still slowed my recovery by flaring up from time to time and wreaking havoc on my system.

This was in 1985, before my type of hepatitis had been isolated; the doctors knew it wasn't hepatitis A or B, but it remained a mystery, so they just called it non-A-non-B hepatitis. In 1993, when I was in graduate school, I had a flare-up; I checked into the student health center and the doctor told me I had hepatitis C, which had recently been isolated and identified. This was good news for two reasons. First, I now knew what I had, and second, a new experimental treatment, interferon, looked promising. Given the threat of liver fibrosis, cirrhosis, and the possibility of early death from hepatitis C, it seemed to me that being part of an experimental study was clearly the lesser of two evils.

Interferon was initially approved by the FDA for treatment of hairy cell leukemia (which has no other real treatment) and, as is often the case with cancer therapy, the treatment regimen was particularly distasteful. The initial protocol called for self-injections of interferon three times a week. I was warned that after each injection I would experience fever, nausea, headaches, and vomiting, and this warning was accurate. So, for six months on Mondays, Wednesdays, and Fridays I would arrive home from school, take the needle from the medicine cabinet, open the refrigerator, load the

syringe with the right dosage of interferon, and plunge the needle into my thigh. Then I would lie down in the big hammock—the only interesting piece of furniture in my loftlike student apartment—from which I had a perfect view of the television. I kept a bucket within reach to catch the vomit that would inevitably come up, after which the fever, shivering, and headache would begin. At some point I would fall asleep and wake up aching with flulike symptoms. By noon I would be more or less OK and would go back to work.

The difficulty that I, and the rest of the patients, had with the interferon was the basic problem of delayed gratification and self-control. On every injection day I was faced with a trade-off between giving myself an injection and feeling sick for the next 16 hours (a negative immediate effect), and the hope that the treatment would cure me in the long term (a positive long-term effect). At the end of the six-month trial the doctors told me that I was the only patient in the protocol who had followed the regimen in the way they designed it. Everyone else in the study skipped the medication numerous times, which was hardly surprising, given the challenges. (Lack of medical compliance is, in fact, a very pervasive problem.)

So how did I do it? Did I simply have nerves of steel? No. Like anyone else, I have plenty of problems with self-control. But I did have a trick. I basically tried to harness my other desires in an effort to make the prospect of the terrible injection more bearable. For me, the key was movies.

I love movies. If I had the time, I would watch one every day. When the doctors told me what to expect, I decided that I would not watch any movies until after I injected myself, and then I could watch as many as I wanted until I fell asleep.

On every injection day, I would stop at the video store on the way to school and pick up a few films that I wanted to see. I would have these in my bag and would eagerly anticipate watching them later that day. Then, immediately after I took the injection, but before the shivering and headache set in, I jumped into my hammock, got comfortable, made sure the bucket was in position, and started my mini–film fest. This way, I learned to associate the initial injection with the rewarding experience of watching a wonderful movie. Only an hour later, after the negative side effects kicked in, did I have a less than wonderful feeling about it.

Planning my evenings in this way helped my brain associate the injection more closely with the movie than with the fever, chills, and vomiting, and thus, I was able to continue the treatment.

DURING THE SIX-MONTH treatment, it looked as though the interferon was working, and my liver function improved dramatically. Unfortunately, a few weeks after the trial was over, the hepatitis returned, so I started a more aggressive treatment. This one lasted a year and involved not only interferon but also a drug called ribavirin. To compel myself to follow this treatment, I again tried the injection-movie-hammock procedure as before. (Thanks to my somewhat faulty memory, I was even able to enjoy some of the same movies I had watched during the first treatment with interferon.)

This time, however, I was also interviewing at various universities for a job as an assistant professor. I had to travel to 14 cities, stay overnight in hotels, give a talk to groups of academics, and then submit to one-on-one interviews with professors and deans. To avoid telling my prospective colleagues about my adventures with interferon and ribavirin, I would insist on a rather strange schedule of interviews. I routinely had to make some excuse about why I arrived early the day before the interview but could not go out for dinner that evening with my hosts. Instead, I would check into the hotel, take out the injection from a little icebox that I carried with me, inject myself, and watch a few movies on the hotel television. The following day I would also try to delay the interviews for a few hours, but once I felt better I would go through the interview as best I could. (Sometimes my procedure worked; sometimes I had to meet people while I still felt wretched.) Fortunately, after I finished my interviews I received excellent news. Not only had I been offered a job, but the combination treatment had eliminated the hepatitis from my liver. I've been hepatitis-free ever since.

THE LESSON I took away from my interferon treatment is a general one: if a particular desired behavior results in an immediate negative outcome (punishment), this behavior will be very difficult to promote, even if the ultimate outcome (in my case, improved health) is highly desirable. After all, that's what the problem of delayed gratification is all about. Certainly, we know that exercising regularly and eating more vegetables will help us be healthier, even if we don't live to be as old as the Delany sisters; but because it is very hard to hold a vivid image of our future health in our mind's eye, we can't keep from reaching for the doughnuts.

In order to overcome many types of human fallibility, I believe it's useful to look for tricks that match immediate, powerful, and positive reinforcements with the not-so-pleasant steps we have to take toward our long-term objectives. For me, beginning a movie—before I felt any side effects—helped me to sustain the unpleasantness of the treatment. As a matter of fact, I timed everything perfectly. The moment I finished injecting myself, I pressed the Play button. I suspect that had I hit Play after the side effects kicked in, I would not have been as successful in winning the tug-of-war. And who knows? Maybe if I had waited for the side effects to kick in before I started the movies, I would have created a negative association and would now enjoy movies less as a consequence.*

ONE OF MY colleagues at Duke University, Ralph Keeney, recently noted that America's top killer isn't cancer or heart disease, nor is it smoking or obesity. It's our inability to make smart choices and overcome our own self-destructive behaviors.[10] Ralph estimates that about half of us will make a lifestyle decision that will ultimately lead us to an early grave. And as if this were not bad enough, it seems that the rate at which we make these deadly decisions is increasing at an alarming pace.

I suspect that over the next few decades, real improvements in life expectancy and quality are less likely to be driven by medical technology than by improved decision making. Since focusing on long-term benefits is not our natural tendency, we need to more carefully examine the cases in which we repeatedly fail, and try to come up with some remedies for these situations. (For an overweight movie lover, the key might be to enjoy watching a film while walking on the treadmill.) The trick is to find the right behavioral antidote for each problem. By pairing something that we love with something that we dislike but that is good for us, we might be able to harness desire with outcome—and thus overcome some of the problems with self-control we face every day.

Chapter 8

The High Price of Ownership

Why We Overvalue What We Have

At Duke University, basketball is somewhere between a passionate hobby and a religious experience. The basketball stadium is small and old and has bad acoustics—the kind that turn the cheers of the crowd into thunder and pump everyone's adrenaline level right through the roof. The small size of the stadium creates intimacy but also means there are not enough seats to contain all the fans who want to attend the games. This, by the way, is how Duke likes it, and the university has expressed little interest in exchanging the small, intimate stadium for a larger one. To ration the tickets, an intricate selection process has been developed over the years, to separate the truly devoted fans from all the rest.

Even before the start of the spring semester, students who want to attend the games pitch tents in the open grassy area outside the stadium. Each tent holds up to 10 students. The campers who arrive first take the spots closest to the stadium's entrance, and the ones who come later line up farther back. The evolving community is called Krzyzewskiville, reflecting the respect the students have for Coach K—Mike Krzyzewski—as well as their aspirations for victory in the coming season.

So that the serious basketball fans are separated from those without "Duke blue" running through their veins, an air horn is sounded at random times. At the sound, a countdown begins, and within the next five minutes at least one person from each tent must check in with the basketball authorities. If a tent fails to register within these five minutes, the whole tent gets bumped to the end of the line. This procedure continues for most of the spring semester, and intensifies in the last 48 hours before a game.

At that point, 48 hours before a game, the checks become "personal checks." From then on, the tents are merely a social structure: when the air horn is sounded, every student has to check in personally with the basketball authorities. Missing an "occupancy check" in these final two days can mean being bumped to the end of the line. Although the air horn sounds occasionally before routine games, it can be heard at all hours of night and day before the really big contests (such as games against the University of North Carolina-Chapel Hill and during the national championships).

But that's not the oddest part of the ritual. The oddest part is that for the really important games, such as the national titles, the students at the front of the line still don't get a ticket. Rather, each of them gets a lottery number. Only later, as they crowd around a list of winners posted at the student center, do they find out if they have really, truly won a ticket to the coveted game.

AS ZIV CARMON (a professor at INSEAD) and I listened to the air horn during the campout at Duke in the spring of 1994, we were intrigued by the real-life experiment going on before our eyes. All the students who were camping out wanted passionately to go to the basketball game. They had all camped out for a long time for the privilege. But when the lottery was over, some of them would become ticket owners, while others would not.

The question was this: would the students who had won tickets—who had ownership of tickets—value those tickets more than the students who had not won them even though they all "worked" equally hard to obtain them? On the basis of Jack Knetsch, Dick Thaler, and Daniel Kahneman's research on the "endowment effect," we predicted that when we own something—whether it's a car or a violin, a cat or a basketball ticket—we begin to value it more than other people do.

Think about this for a minute. Why does the seller of a house usually value that property more than the potential buyer? Why does the seller of an automobile envision a higher price than the buyer? In many transactions why does the owner believe that his possession is worth more money than the potential owner is willing to pay? There's an old saying, "One man's ceiling is another man's floor." Well, when you're the owner, you're at the ceiling; and when you're the buyer, you're at the floor.

To be sure, that is not always the case. I have a friend who contributed a full box of record albums to a garage sale, for instance, simply because he couldn't stand hauling them around any longer. The first person who came along offered him $25 for the whole box (without even looking at the titles), and my friend accepted it. The buyer probably sold them for 10 times that price the following day. Indeed, if we always overvalued what we had, there would be no such thing as Antiques Roadshow. ("How much did you pay for this powder horn? Five dollars? Well, let me tell you, you have a national treasure here.")

But this caveat aside, we still believed that in general the ownership of something increases its value in the owner's eyes. Were we right? Did the students at Duke who had won the tickets—who could now anticipate experiencing the packed stands and the players racing across the court—value them more than the students who had not won them? There was only one good way to find out: get them to tell us how much they valued the tickets.

In this case, Ziv and I would try to buy tickets from some of the students who had won them—and sell them to those who didn't. That's right; we were about to become ticket scalpers.

THAT NIGHT WE got a list of the students who had won the lottery and those who hadn't, and we started telephoning. Our first call was to William, a senior majoring in chemistry. William was rather busy. After camping for the previous week, he had a lot of homework and e-mail to catch up on. He was not too happy, either, because after reaching the front of the line, he was still not one of the lucky ones who had won a ticket in the lottery.

"Hi, William," I said. "I understand you didn't get one of the tickets for the final four."

"That's right."

"We may be able to sell you a ticket."

"Cool."

"How much would you be willing to pay for one?"

"How about a hundred dollars?" he replied.

"Too low," I laughed. "You'll have to go higher."

"A hundred fifty?" he offered.

"You have to do better," I insisted. "What's the highest price you'll pay?"

William thought for a moment. "A hundred seventy-five."

"That's it?"

"That's it. Not a penny more."

"OK, you're on the list. I'll let you know," I said. "By the way, how'd you come up with that hundred seventy-five?"

William said he figured that for $175 he could also watch the game at a sports bar, free, spend some money on beer and food, and still have a lot left over for a few CDs or even some shoes. The game would no doubt be exciting, he said, but at the same time $175 is a lot of money.

Our next call was to Joseph. After camping out for a week Joseph was also behind on his schoolwork. But he didn't care—he had won a ticket in the lottery and now, in a few days, he would be watching the Duke players fight for the national title.

"Hi, Joseph," I said. "We may have an opportunity for you—to sell your ticket. What's your minimum price?"

"I don't have one."

"Everyone has a price," I replied, giving the comment my best Al Pacino tone.

His first answer was $3,000.

"Come on," I said, "That's way too much. Be reasonable; you have to offer a lower price."

"All right," he said, "twenty-four hundred."

"Are you sure?" I asked.

"That's as low as I'll go."

"OK. If I can find a buyer at that price, I'll give you a call. By the way," I added, "how did you come up with that price?"

"Duke basketball is a huge part of my life here," he said passionately. He then went on to explain that the game would be a defining memory of his time at Duke, an experience that he would pass on to his children and grandchildren. "So how can you put a price on that?" he asked. "Can you put a price on memories?"

William and Joseph were just two of more than 100 students whom we called. In general, the students who did not own a ticket were willing to pay around $170 for one. The price they were willing to pay, as in William's case, was tempered by alternative uses for the money (such as spending it in a sports bar for drinks and food). Those who owned a ticket, on the other hand, demanded about $2,400 for it. Like Joseph, they justified their price in terms of the importance of the experience and the lifelong memories it would create.

What was really surprising, though, was that in all our phone calls, not a single person was willing to sell a ticket at a price that someone else was willing to pay. What did we have? We had a group of students all hungry for a basketball ticket before the lottery drawing; and then, bang—in an instant after the drawing, they were divided into two groups—ticket owners and non–ticket owners. It was an emotional chasm that was formed, between those who now imagined the glory of the game, and those who imagined what else they could buy with the price of the ticket. And it was an empirical chasm as well—the average selling price (about $2,400) was separated by a factor of about 14 from the average buyer's offer (about $175).

From a rational perspective, both the ticket holders and the non–ticket holders should have thought of the game in exactly the same way. After all, the anticipated atmosphere at the game and the enjoyment one could expect from the experience should not depend on winning a lottery. Then how could a random lottery drawing have changed the students' view of the game—and the value of the tickets—so dramatically?

OWNERSHIP PERVADES OUR lives and, in a strange way, shapes many of the things we do. Adam Smith wrote, "Every man [and woman] . . . lives by exchanging, or becomes in some measure a merchant, and the society itself grows to be what is properly a commercial society." That's an awesome thought. Much of our life story can be told by describing the ebb and flow of our particular possessions—what we get and what we give up. We buy clothes and food, automobiles and homes, for instance. And we sell things as well—homes and cars, and in the course of our careers, our time.

Since so much of our lives is dedicated to ownership, wouldn't it be nice to make the best decisions about this? Wouldn't it be nice, for instance, to know exactly how much we would enjoy a new home, a new car, a different sofa, and an Armani suit, so that we could make accurate decisions about owning them? Unfortunately, this is rarely the case. We are mostly fumbling around in the dark. Why? Because of three irrational quirks in our human nature.

The first quirk, as we saw in the case of the basketball tickets, is that we fall in love with what we already have. Suppose you decide to sell your old VW bus. What do you start doing? Even before you've put a FOR SALE sign in the window, you begin to recall trips you took. You were much younger, of course; the kids hadn't sprouted into teenagers. A warm glow of remembrance washes over you and the car. This applies not only to VW buses, of course, but to everything else. And it can happen fast.

For instance, two of my friends adopted a child from China and told me this remarkable story. They went to China with 12 other couples. When they reached the orphanage, the director took each of the couples separately into a room and presented them with a daughter. When the couples reconvened the following morning, they all commented on the director's wisdom: Somehow she knew exactly which little girl to give to each couple. The matches were perfect. My friends felt the same way, but they also realized that the matches had been random. What made each match seem perfect was not the Chinese woman's talent, but nature's ability to make us instantly attached to what we have.

The second quirk is that we focus on what we may lose, rather than what we may gain. When we price our beloved VW, therefore, we think more about what we will lose (the use of the bus) than what we will gain (money to buy something else). Likewise, the ticket holder focuses on losing the basketball experience, rather than imagining the enjoyment of obtaining money or on what can be purchased with it. Our aversion to loss is a strong emotion, and as I will explain later in the book, one that sometimes causes us to make bad decisions. Do you wonder why we often refuse to sell some of our cherished clutter, and if somebody offers to buy it, we attach an exorbitant price tag to it? As soon as we begin thinking about giving up our valued possessions, we are already mourning the loss.

The third quirk is that we assume other people will see the transaction from the same perspective as we do. We somehow expect the buyer of our VW to share our feelings, emotions, and memories. Or we expect the buyer of our house to appreciate how the sunlight filters through the kitchen windows. Unfortunately, the buyer of the VW is more likely to notice the puff of smoke that is emitted as you shift from first into second; and the buyer of your house is more likely to notice the strip of black mold in the corner. It is just difficult for us to imagine that the person on the other side of the transaction, buyer or seller, is not seeing the world as we see it.

OWNERSHIP ALSO HAS what I'd call "peculiarities." For one, the more work you put into something, the more ownership you begin to feel for it. Think about the last time you assembled some furniture. Figuring out which piece goes where and which screw fits into which hole boosts the feeling of ownership.

In fact, I can say with a fair amount of certainty that pride of ownership is inversely proportional to the ease with which one assembles the furniture; wires the high-definition

television to the surround-sound system; installs software;

or gets the baby into the bath, dried, powdered, diapered, and tucked away in the crib. My friend and colleague Mike Norton (a professor at Harvard) and I have a term for this phenomenon: the "Ikea effect."

Another peculiarity is that we can begin to feel ownership even before we own something. Think about the last time you entered an online auction. Suppose you make your first bid on Monday morning, for a wristwatch, and at this point you are the highest bidder. That night you log on, and you're still the top dog. Ditto for the next night. You start thinking about that elegant watch. You imagine it on your wrist; you imagine the compliments you'll get. And then you go online again one hour before the end of the auction. Some dog has topped your bid! Someone else will take your watch! So you increase your bid beyond what you had originally planned.

Is the feeling of partial ownership causing the upward spiral we often see in online auctions? Is it the case that the longer an auction continues, the greater grip virtual ownership will have on the various bidders and the more money they will spend? A few years ago, James Heyman, Yesim Orhun (a professor at the University of Chicago), and I set up an experiment to explore how the duration of an auction gradually affects the auction's participants and encourages them to bid to the bitter end. As we suspected, the participants who were the highest bidders, for the longest periods of time, ended up with the strongest feelings of virtual ownership. Of course, they were in a vulnerable position: once they thought of themselves as owners, they were compelled to prevent losing their position by bidding higher and higher.

"Virtual ownership," of course, is one mainspring of the advertising industry. We see a happy couple driving down the California coastline in a BMW convertible, and we imagine ourselves there. We get a catalog of hiking clothing from Patagonia, see a polyester fleece pullover, and—poof—we start thinking of it as ours. The trap is set, and we willingly walk in. We become partial owners even before we own anything.

There's another way that we can get drawn into ownership. Often, companies will have "trial" promotions. If we have a basic cable television package, for instance, we are lured into a "digital gold package" by a special "trial" rate (only $59 a month instead of the usual $89). After all, we tell ourselves, we can always go back to basic cable or downgrade to the "silver package."

But once we try the gold package, of course, we claim ownership of it. Will we really have the strength to downgrade back to basic or even to "digital silver"? Doubtful. At the onset, we may think that we can easily return to the basic service, but once we are comfortable with the digital picture, we begin to incorporate our ownership of it into our view of the world and ourselves, and quickly rationalize away the additional price. More than that, our aversion to loss—the loss of that nice crisp "gold package" picture and the extra channels—is too much for us to bear. In other words, before we make the switch we may not be certain that the cost of the digital gold package is worth the full price; but once we have it, the emotions of ownership come welling up, to tell us that the loss of "digital gold" is more painful than spending a few more dollars a month. We may think we can turn back, but that is actually much harder than we expected.

Another example of the same hook is the "30-day money-back guarantee." If we are not sure whether or not we should get a new sofa, the guarantee of being able to change our mind later may push us over the hump so that we end up getting it. We fail to appreciate how our perspective will shift once we have it at home, and how we will start viewing the sofa—as ours—and consequently start viewing returning it as a loss. We might think we are taking it home only to try it out for a few days, but in fact we are becoming owners of it and are unaware of the emotions the sofa can ignite in us.

OWNERSHIP IS NOT limited to material things. It can also apply to points of view. Once we take ownership of an idea—whether it's about politics or sports—what do we do? We love it perhaps more than we should. We prize it more than it is worth. And most frequently, we have trouble letting go of it because we can't stand the idea of its loss. What are we left with then? An ideology—rigid and unyielding.

THERE IS NO known cure for the ills of ownership. As Adam Smith said, it is woven into our lives. But being aware of it might help. Everywhere around us we see the temptation to improve the quality of our lives by buying a larger home, a second car, a new dishwasher, a lawn mower, and so on. But, once we change our possessions we have a very hard time going back down. As I noted earlier, ownership simply changes our perspective. Suddenly, moving backward to our pre-ownership state is a loss, one that we cannot abide. And so, while moving up in life, we indulge ourselves with the fantasy that we can always ratchet ourselves back if need be; but in reality, we can't. Downgrading to a smaller home, for instance, is experienced as a loss, it is psychologically painful, and we are willing to make all kinds of sacrifices in order to avoid such losses—even if, in this case, the monthly mortgage sinks our ship.

My own approach is to try to view all transactions (particularly large ones) as if I were a nonowner, putting some distance between myself and the item of interest. In this attempt, I'm not certain if I have achieved the uninterest in material things that is espoused by the Hindu sannyasi, but at least I try to be as Zen as I can about it.

Reflections on the Challenges of Ownership

In 2007 and 2008, home values across America plummeted as fast as George W. Bush's approval ratings. Each month brought with it more bad news: more foreclosures, more new homes for sale in a stagnant real estate market, and more stories of people who couldn't get mortgages. Results from a study by Zillow.com (a Web site that facilitates home searches and price estimations) illustrated just how strongly this news affected home owners: in the second quarter of 2008, nine out of ten home owners (92 percent) said there had been foreclosures in their local real estate market, and they were concerned that these foreclosures had lowered home values in their neighborhoods. Moreover, four in five home owners (82 percent) did not see much hope for improvement in the real estate market in the near future.

On the face of it, Zillow's research suggested that homeowners had been paying attention to the media, had an idea of what was happening in the economy, and understood that the housing crunch was a reality. But this study also found that these seemingly well-informed people believed that the values of their own homes had not decreased as much. Two out of three home owners (62 percent) believed that the value of their own home had increased or stayed the same, and about half (56 percent) planned to invest in home improvements, even as they watched the housing market collapse around them. What explained the wide gap between their inflated perception of their homes' values and the gloomy market reality?

As we discussed in Chapter 8, ownership fundamentally changes our perspective. In the same way that we think our own kids are more wonderful and special than our friends' and neighbors' children (regardless of whether our children deserve such esteem), we overvalue everything that we own, whether it's a pair of basketball tickets or our domiciles.

But home ownership is even more interesting and complex than, say, the regular case of owning a coffee mug or a pair of baseball tickets—because we invest so much in our houses. Think, for example, about all the changes and tinkering we do to our homes once we move into them. We replace laminate countertops with granite. We take out a wall and install a new window that lets the light shine just so on the dining room table. We paint the living room walls a deep earthy clay color. We change the bathroom tile. We add a porch and install a koi pond in the backyard. Little by little, we make changes here and there until the house feels perfectly tailored to our unique individual tastes, until it expresses our elegant or eclectic sense of style to everyone else. When the neighbors come over, they admire our countertops and light fixtures. But in the end, do other people value the changes we have so lovingly made as much as we do? Do they value these changes at all?

Consider a home owner who compares her own beautifully remodeled house with a similar one down the street that has been languishing on the market for months, or with another that has recently sold for much less than the asking price. In so doing, she understands why the owners of these other homes had such a hard time selling them. They had the laminate and not the granite countertops, no earthy clay paint or light that fell just so on the dining room table. "No wonder those houses didn't sell," she thinks to herself, "they simply are not as nice as mine."

MY WIFE, SUMI, and I also fell victim to this bias. When we worked at MIT, we bought a new house in Cambridge, Massachusetts (the house was originally built in 1890, but it felt new to us). We promptly went about fixing it up. We took down some walls to give the house an open feel, which we loved. We renovated the bathrooms and set up a sauna in the basement. We also converted the carriage house in the garden into a small combination office-apartment. Sometimes we would pack our laundry basket with some wine, food, and clothing, and escape to the carriage house for a "weekend away."

Then, in 2007, we took jobs at Duke University and moved to Durham, North Carolina. We assumed that the housing market would continue to decline, and that it would be in our best interest to sell the Cambridge house as quickly as possible. We also wanted to avoid having to pay for heating, taxes, and a mortgage on two homes.

Many people came to see our beautifully remodeled Cambridge home. They all seemed to appreciate the structure and the feel of the place, but no one put in an offer. People told

us that the house was beautiful, but somehow they could not fully appreciate the benefit of the open floor plan. Instead, they wanted something with more privacy. We heard what they said, but it didn't fully register. "Clearly," we said to each other after each set of prospective buyers had come and gone, "those people are just dull and unimaginative, and have no taste. Surely our beautiful, open, airy home will be just right for the perfect someone."

Time passed. We paid double mortgages, double heating bills, and double taxes while the housing market continued to slow down. Many more people came to see the house and left without extending an offer. Eventually Jean, our real estate agent, delivered the bad news to us the way a doctor tells a patient there's something funny looking on his X-ray. "I think," she said slowly, "that if you want to sell the house, you will have to rebuild some walls and reverse some of the changes you have made." Until she said those words, we had not accepted this truth. Despite our disbelief, and still fully convinced of our superior taste, we took the plunge and paid a contractor to re-erect some walls. A few weeks later the house was sold.

In the end, the buyers didn't want our home. They wanted theirs. This was a very expensive lesson, and I certainly wish we had had a better sense of the effect of our modifications on potential buyers.

OUR PROPENSITY TO overvalue what we own is a basic human bias, and it reflects a more general tendency to fall in love with, and be overly optimistic about, anything that has to do with ourselves. Think about it—don't you feel that you are a better-than-average driver, are more likely to be able to afford retirement, and are less likely to suffer from high cholesterol, get a divorce, or get a parking ticket if you overstay your meter by a few minutes? This positivity bias, as psychologists call it, has another name: "The Lake Wobegone Effect," named after the fictional town in Garrison Keillor's popular radio series A Prairie Home Companion. In Lake Wobegone, according to Keillor, "all the women are strong, all the men are good-looking, and all the children are above average."

I don't think we can become more accurate and objective in the way we think about our children and houses, but maybe we can realize that we have such biases and listen more carefully to the advice and feedback we get from others.

Chapter 9

Keeping Doors Open

Why Options Distract Us from Our Main Objective

In 210 BC, a Chinese commander named Xiang Yu led his troops across the Yangtze River to attack the army of the Qin (Ch'in) dynasty. Pausing on the banks of the river for the night, his troops awakened in the morning to find, to their horror, that their ships were burning. They hurried to their feet to fight off their attackers, but soon discovered that it was Xiang Yu himself who had set their ships on fire, and that he had also ordered all the cooking pots crushed.

Xiang Yu explained to his troops that without the pots and the ships, they had no other choice but to fight their way to victory or perish. That did not earn Xiang Yu a place on the Chinese army's list of favorite commanders, but it did have a tremendous focusing effect on his troops: grabbing their lances and bows, they charged ferociously against the enemy and won nine consecutive battles, completely obliterating the main-force units of the Qin dynasty.

Xiang Yu's story is remarkable because it is completely antithetical to normal human behavior. Normally, we cannot stand the idea of closing the doors on our alternatives. Had most of us been in Xiang Yu's armor, in other words, we would have sent out part of our army to tend to the ships, just in case we needed them for retreat; and we would have asked others to cook meals, just in case the army needed to stay put for a few weeks. Still others would have been instructed to pound rice out into paper scrolls, just in case we needed parchment on which to sign the terms of the surrender of the mighty Qin (which was highly unlikely in the first place).

In the context of today's world, we work just as feverishly to keep all our options open. We buy the expandable computer system, just in case we need all those high-tech bells and whistles. We buy the insurance policies that are offered with the plasma high-definition television, just in case the big screen goes blank. We keep our children in every activity we can imagine—just in case one sparks their interest in gymnastics, piano, French, organic gardening, or tae kwon do. And we buy a luxury SUV, not because we really expect to drive off the highway, but because just in case we do, we want to have some clearance beneath our axles.

We might not always be aware of it, but in every case we give something up for those options. We end up with a computer that has more functions than we need, or a stereo with an unnecessarily expensive warranty. And in the case of our kids, we give up their time and ours—and the chance that they could become really good at one activity—in trying to give them some experience in a large range of activities. In running back and forth among the things that might be important, we forget to spend enough time on what really is important. It's a fool's game, and one that we are remarkably adept at playing.

I saw this precise problem in one of my undergraduate students, an extremely talented young man named Joe. As an incoming junior, Joe had just completed his required courses, and now he had to choose a major. But which one? He had a passion for architecture—he spent his weekends studying the eclectically designed buildings around Boston. He could see himself as a designer of such proud structures one day. At the same time he liked computer science, particularly the freedom and flexibility that the field offered. He could see himself with a good-paying job at an exciting company like Google. His parents wanted him to become a computer scientist—and besides, who goes to MIT to be an architect anyway?* Still, his love of architecture was strong.

As Joe spoke, he wrung his hands in frustration. The classes he needed for majors in computer science and architecture were incompatible. For computer science, he needed Algorithms, Artificial Intelligence, Computer Systems Engineering, Circuits and Electronics, Signals and Systems, Computational Structures, and a laboratory in Software Engineering. For architecture, he needed different courses: Experiencing Architecture Studio, Foundations in the Visual Arts, Introduction to Building Technology, Introduction to Design Computing, Introduction to the History and Theory of Architecture, and a further set of architecture studios.

How could he shut the door on one career or the other? If he started taking classes in computer science, he would have a hard time switching over to architecture; and if he started in architecture, he would have an equally difficult time switching to computer science. On the other hand, if he signed up for classes in both disciplines, he would most likely end up without a degree in either field at the end of his four years at MIT, and he would require another year (paid for by his parents) to complete his degree. (He eventually graduated with a degree in computer science, but he found the perfect blend in his first job—designing nuclear subs for the Navy.)

Dana, another student of mine, had a similar problem—but hers centered on two boyfriends. She could dedicate her energy and passion to a person she had met recently and, she hoped, build an enduring relationship with him. Or she could continue to put time and effort into a previous relationship that was dying. She clearly liked the new boyfriend better than the former one—yet she couldn't let the earlier relationship go. Meanwhile, her new boyfriend was getting restless. "Do you really want to risk losing the boy you love," I asked her, "for the remote possibility that you may discover—at some later date—that you love your former boyfriend more?" She shook her head "no," and broke into tears.*

What is it about options that is so difficult for us? Why do we feel compelled to keep as many doors open as possible, even at great expense? Why can't we simply commit ourselves?*

To try to answer these questions, Jiwoong Shin (a professor at Yale) and I devised a series of experiments that we hoped would capture the dilemma represented by Joe and Dana. In our case, the experiment would be based on a computer game that we hoped would eliminate some of the complexities of life and would give us a straightforward answer about whether people have a tendency to keep doors open for too long. We called it the "door game." For a location, we chose a dark, dismal place—a cavern that even Xiang Yu's army would have been reluctant to enter.

MIT'S EAST CAMPUS dormitory is a daunting place. It is home to the hackers, hardware enthusiasts, oddballs, and general misfits (and believe me—it takes a serious misfit to be a misfit at MIT). One hall allows loud music, wild parties, and even public nudity. Another is a magnet for engineering students, whose models of everything from bridges to roller coasters can be found everywhere. (If you ever visit this hall, press the "emergency pizza" button, and a short time later a pizza will be delivered to you.) A third hall is painted completely black. A fourth has bathrooms adorned with murals of various kinds: press the palm tree or the samba dancer, and music, piped in from the hall's music server (all downloaded legally, of course), comes on.

One afternoon a few years ago, Kim, one of my research assistants, roamed the hallways of East Campus with a laptop tucked under her arm. At each door she asked the students whether they'd like to make some money participating in a quick experiment. When the reply was in the affirmative, Kim entered the room and found (sometimes only with difficulty) an empty spot to place the laptop.

As the program booted up, three doors appeared on the computer screen: one red, the second blue, and the third green. Kim explained that the participants could enter any of the three rooms (red, blue, or green) simply by clicking on the corresponding door. Once they were in a room, each subsequent click would earn them a certain amount of money. If a particular room offered between one cent and 10 cents, for instance, they would make something in that range each time they clicked their mouse in that room. The screen tallied their earnings as they went along.

Getting the most money out of this experiment involved finding the room with the biggest payoff and clicking in it as many times as possible. But this wasn't trivial. Each time you moved from one room to another, you used up one click (you had a total of 100 clicks). On one hand, switching from one room to another might be a good strategy for finding the biggest payout. On the other hand, running madly from door to door (and room to room) meant that you were burning up clicks which could otherwise have made you money.

Albert, a violin player (and a resident of the Dark Lord Krotus worshippers' hall), was one of the first participants. He was a competitive type, and determined to make more money than anyone else playing the game. For his first move, he chose the red door and entered the cube-shaped room.

Once inside, he clicked the mouse. It registered 3.5 cents. He clicked again; 4.1 cents; a third click registered one cent. After he sampled a few more of the rewards in this room, his interest shifted to the green door. He clicked the mouse eagerly and went in.

Here he was rewarded with 3.7 cents for his first click; he clicked again and received 5.8 cents; he received 6.5 cents the third time. At the bottom of the screen his earnings began to grow. The green room seemed better than the red room—but what about the blue room? He clicked to go through that last unexplored door. Three clicks fell in the range of four cents. Forget it. He hurried back to the green door (the room paying about five cents a click) and spent the remainder of his 100 clicks there, increasing his payoff. At the end, Albert inquired about his score. Kim smiled as she told him it was one of the best so far.

ALBERT HAD CONFIRMED something that we suspected about human behavior: given a simple setup and a clear goal (in this case, to make money), all of us are quite adept at pursuing the source of our satisfaction. If you were to express this experiment in terms of dating, Albert had essentially sampled one date, tried another, and even had a fling with a third. But after he had tried the rest, he went back to the best—and that's where he stayed for the remainder of the game.

But to be frank, Albert had it pretty easy. Even while he was running around with other "dates," the previous ones waited patiently for him to return to their arms. But suppose that the other dates, after a period of neglect, began to turn their backs on him? Suppose that his options began to close down? Would Albert let them go? Or would he try to hang on to all his options for as long as possible? In fact, would he sacrifice some of his guaranteed payoffs for the privilege of keeping these other options alive?

To find out, we changed the game. This time, any door left unvisited for 12 clicks would disappear forever.

SAM, A RESIDENT of the hackers' hall, was our first participant in the "disappearing" condition. He chose the blue door to begin with; and after entering it, he clicked three times. His earnings began building at the bottom of the screen, but this wasn't the only activity that caught his eye. With each additional click, the other doors diminished by one-twelfth, signifying that if not attended to, they would vanish. Eight more clicks and they would disappear forever.

Sam wasn't about to let that happen. Swinging his cursor around, he clicked on the red door, brought it up to its full size, and clicked three times inside the red room. But now he noticed the green door—it was four clicks from disappearing. Once again, he moved his cursor, this time restoring the green door to its full size.

The green door appeared to be delivering the highest payout. So should he stay there? (Remember that each room had a range of payouts. So Sam could not be completely convinced that the green door was actually the best. The blue might have been better, or perhaps the red, or maybe neither.) With a frenzied look in his eye, Sam swung his cursor across the screen. He clicked the red door and watched the blue door continue to shrink. After a few clicks in the red, he jumped over to the blue. But by now the green was beginning to get dangerously small—and so he was back there next.

Before long, Sam was racing from one option to another, his body leaning tensely into the game. In my mind I pictured a typically harried parent, rushing kids from one activity to the next.

Is this an efficient way to live our lives—especially when another door or two is added every week? I can't tell you the answer for certain in terms of your personal life, but in our experiments we saw clearly that running from pillar to post was not only stressful but uneconomical. In fact, in their frenzy to keep doors from shutting, our participants ended up making substantially less money (about 15 percent less) than the participants who didn't have to deal with closing doors. The truth is that they could have made more money by picking a room—any room—and merely staying there for the whole experiment! (Think about that in terms of your life or career.)

When Jiwoong and I tilted the experiments against keeping options open, the results were still the same. For instance, we made each click opening a door cost three cents, so that the cost was not just the loss of a click (an opportunity cost) but also a direct financial loss. There was no difference in response from our participants. They still had the same irrational excitement about keeping their options open.

Then we told the participants the exact monetary outcomes they could expect from each room. The results were still the same. They still could not stand to see a door close. Also, we allowed some participants to experience hundreds of practice trials before the actual experiment. Certainly, we thought, they would see the wisdom of not pursuing the closing doors. But we were wrong. Once they saw their options shrinking, our MIT students—supposedly among the best and brightest of young people—could not stay focused. Pecking like barnyard hens at every door, they sought to make more money, and ended up making far less.

In the end, we tried another sort of experiment, one that smacked of reincarnation. In this condition, a door would still disappear if it was not visited within 12 clicks. But it wasn't gone forever. Rather, a single click could bring it back to life. In other words, you could neglect a door without any loss. Would this keep our participants from clicking on it anyhow? No. To our surprise, they continued to waste their clicks on the "reincarnating" door, even though its disappearance had no real consequences and could always be easily reversed. They just couldn't tolerate the idea of the loss, and so they did whatever was necessary to prevent their doors from closing.

HOW CAN WE unshackle ourselves from this irrational impulse to chase worthless options? In 1941 the philosopher Erich Fromm wrote a book called Escape from Freedom. In a modern democracy, he said, people are beset not by a lack of opportunity, but by a dizzying abundance of it. In our modern society this is emphatically so. We are continually reminded that we can do anything and be anything we want to be. The problem is in living up to this dream. We must develop ourselves in every way possible; must taste every aspect of life; must make sure that of the 1,000 things to see before dying, we have not stopped at number 999. But then comes a problem—are we spreading ourselves too thin? The temptation Fromm was describing, I believe, is what we saw as we watched our participants racing from one door to another.

Running from door to door is a strange enough human activity. But even stranger is our compulsion to chase after doors of little worth—opportunities that are nearly dead, or that hold little interest for us. My student Dana, for instance, had already concluded that one of her suitors was most likely a lost cause. Then why did she jeopardize her relationship with the other man by continuing to nourish the wilting relationship with the less appealing romantic partner? Similarly, how many times have we bought something on sale not because we really needed it but because by the end of the sale all of those items would be gone, and we could never have it at that price again?

THE OTHER SIDE of this tragedy develops when we fail to realize that some things really are disappearing doors, and need our immediate attention. We may work more hours at our jobs, for instance, without realizing that the childhood of our sons and daughters is slipping away. Sometimes these doors close too slowly for us to see them vanishing. One of my friends told me, for instance, that the single best year of his marriage was when he was living in New York, his wife was living in Boston, and they met only on weekends. Before they had this arrangement—when they lived together in Boston—they would spend their weekends catching up on work rather than enjoying each other. But once the arrangement changed, and they knew that they had only the weekends together, their shared time became limited and had a clear end (the time of the return train). Since it was clear that the clock was ticking, they dedicated the weekends to enjoying each other rather than doing their work.

I'm not advocating giving up work and staying home for the sake of spending all your time with your children, or moving to a different city just to improve your weekends with your spouse (although it might provide some benefits). But wouldn't it be nice to have a built-in alarm, to warn us when the doors are closing on our most important options?

SO WHAT CAN we do? In our experiments, we proved that running helter-skelter to keep doors from closing is a fool's game. It will not only wear out our emotions but also wear out our wallets. What we need is to consciously start closing some of our doors. Small doors, of course, are rather easy to close. We can easily strike names off our holiday card lists or omit the tae kwon do from our daughter's string of activities.

But the bigger doors (or those that seem bigger) are harder to close. Doors that just might lead to a new career or to a better job might be hard to close. Doors that are tied to our dreams are also hard to close. So are relationships with certain people—even if they seem to be going nowhere.

We have an irrational compulsion to keep doors open. It's just the way we're wired. But that doesn't mean we shouldn't try to close them. Think about a fictional episode: Rhett Butler leaving Scarlett O'Hara in Gone with the Wind, in the scene when Scarlett clings to him and begs him, "Where shall I go? What shall I do?" Rhett, after enduring too much from Scarlett, and finally having his fill of it, says, "Frankly, my dear, I don't give a damn." It's not by chance that this line has been voted the most memorable in cinematographic history. It's the emphatic closing of a door that gives it widespread appeal. And it should be a reminder to all of us that we have doors—little and big ones—which we ought to shut.

We need to drop out of committees that are a waste of our time and stop sending holiday cards to people who have moved on to other lives and friends. We need to determine whether we really have time to watch basketball and play both golf and squash and keep our family together; perhaps we should put some of these sports behind us. We ought to shut them because they draw energy and commitment away from the doors that should be left open—and because they drive us crazy.

SUPPOSE YOU'VE CLOSED so many of your doors that you have just two left. I wish I could say that your choices are easier now, but often they are not. In fact, choosing between two things that are similarly attractive is one of the most difficult decisions we can make. This is a situation not just of keeping options open for too long, but of being indecisive to the point of paying for our indecision in the end. Let me use the following story to explain.

A hungry donkey approaches a barn one day looking for hay and discovers two haystacks of identical size at the two opposite sides of the barn. The donkey stands in the middle of the barn between the two haystacks, not knowing which to select. Hours go by, but he still can't make up his mind. Unable to decide, the donkey eventually dies of starvation.*

This story is hypothetical, of course, and casts unfair aspersions on the intelligence of donkeys. A better example might be the U.S. Congress. Congress frequently gridlocks itself, not necessarily with regard to the big picture of particular legislation—the restoration of the nation's aging highways, immigration, improving federal protection of endangered species, etc.—but with regard to the details. Often, to a reasonable person, the party lines on these issues are the equivalent of the two bales of hay. Despite this, or because of it, Congress is frequently left stuck in the middle. Wouldn't a quick decision have been better for everybody?

Here's another example. One of my friends spent three months selecting a digital camera from two nearly identical models. When he finally made his selection, I asked him how many photo opportunities had he missed, how much of his valuable time he had spent making the selection, and how much he would have paid to have digital pictures of his family and friends documenting the last three months. More than the price of the camera, he said. Has something like this ever happened to you?

What my friend (and also the donkey and Congress) failed to do when focusing on the similarities and minor differences between two things was to take into account the consequences of not deciding. The donkey failed to consider starving, Congress failed to consider the lives lost while it debated highway legislation, and my friend failed to consider all the great pictures he was missing, not to mention the time he was spending at Best Buy. More important, they all failed to take into consideration the relatively minor differences that would have come with either one of the decisions.

My friend would have been equally happy with either camera; the donkey could have eaten either bale of hay; and the members of Congress could have gone home crowing over their accomplishments, regardless of the slight difference in bills. In other words, they all should have considered the decision an easy one. They could have even flipped a coin (figuratively, in the case of the donkey) and gotten on with their lives. But we don't act that way, because we just can't close those doors.

ALTHOUGH CHOOSING BETWEEN two very similar options should be simple, in fact it is not. I fell victim to this very same problem a few years ago, when I was considering whether to stay at MIT or move to Stanford (I chose MIT in the end). Confronted with these two options, I spent several weeks comparing the two schools closely and found that they were about the same in their overall attractiveness to me. So what did I do? At this stage of my problem, I decided I needed some more information and research on the ground. So I carefully examined both schools. I met people at each place and asked them how they liked it. I checked out neighborhoods and possible schools for our kids. Sumi and I pondered how the two options would fit in with the kind of life we wanted for ourselves. Before long, I was getting so engrossed in this decision that my academic research and productivity began to suffer. Ironically, as I searched for the best place to do my work, my research was being neglected.

Since you have probably invested some money to purchase my wisdom in this book (not to mention time, and the other activities you have given up in the process), I should probably not readily admit that I wound up like the donkey, trying to discriminate between two very similar bales of hay. But I did.

In the end, and with all my foreknowledge of the difficulty in this decision-making process, I was just as predictably irrational as everyone else.

Chapter 10

The Effect of Expectations

Why the Mind Gets What It Expects

Suppose you're a fan of the Philadelphia Eagles and you're watching a football game with a friend who, sadly, grew up in New York City and is a rabid fan of the Giants. You don't really understand why you ever became friends, but after spending a semester in the same dorm room you start liking him, even though you think he's football-challenged.

The Eagles have possession and are down by five points with no time-outs left. It's the fourth quarter, and six seconds are left on the clock. The ball is on the 12-yard line. Four wide receivers line up for the final play. The center hikes the ball to the quarterback who drops back in the pocket. As the receivers sprint toward the end zone, the quarterback throws a high pass just as the time runs out. An Eagles wide receiver near the corner of the end zone dives for the ball and makes a spectacular catch.

The referee signals a touchdown and all the Eagles players run onto the field in celebration. But wait. Did the receiver get both of his feet in? It looks close on the Jumbotron; so the booth calls down for a review. You turn to your friend: "Look at that! What a great catch! He was totally in. Why are they even reviewing it?" Your friend scowls. "That was completely out! I can't believe the ref didn't see it! You must be crazy to think that was in!"

What just happened? Was your friend the Giants fan just experiencing wishful thinking? Was he deceiving himself? Worse, was he lying? Or had his loyalty to his team—and his anticipation of its win—completely, truly, and deeply clouded his judgment?

I was thinking about that one evening, as I strolled through Cambridge and over to MIT's Walker Memorial Building. How could two friends—two honest guys—see one soaring pass in two different ways? In fact, how could any two parties look at precisely the same event and interpret it as supporting their opposing points of view? How could Democrats and Republicans look at a single schoolchild who is unable to read, and take such bitterly different positions on the same issue? How could a couple embroiled in a fight see the causes of their argument so differently?

A friend of mine who had spent time in Belfast, Ireland, as a foreign correspondent, once described a meeting he had arranged with members of the IRA. During the interview, news came that the governor of the Maze prison, a winding row of cell blocks that held many IRA operatives, had been assassinated. The IRA members standing around my friend, quite understandably, received the news with satisfaction—as a victory for their cause. The British, of course, didn't see it in those terms at all. The headlines in London the next day boiled with anger and calls for retribution. In fact, the British saw the event as proof that discussions with the IRA would lead nowhere and that the IRA should be crushed. I am an Israeli, and no stranger to such cycles of violence. Violence is not rare. It happens so frequently that we rarely stop to ask ourselves why. Why does it happen? Is it an outcome of history, or race, or politics—or is there something fundamentally irrational in us that encourages conflict, that causes us to look at the same event and, depending on our point of view, see it in totally different terms?

Leonard Lee (a professor at Columbia), Shane Frederick (a professor at MIT), and I didn't have any answers to these profound questions. But in a search for the root of this human condition, we decided to set up a series of simple experiments to explore how previously held impressions can cloud our point of view. We came up with a simple test—one in which we would not use religion, politics, or even sports as the indicator. We would use glasses of beer.

YOU REACH THE entrance to Walker by climbing a set of broad steps between towering Greek columns. Once inside (and after turning right), you enter two rooms with carpeting that predates the advent of electric light, furniture to match, and a smell that has the unmistaken promise of alcohol, packs of peanuts, and good company. Welcome to the Muddy Charles—one of MIT's two pubs, and the location for a set of studies that Leonard, Shane, and I would be conducting over the following weeks. The purpose of our experiments would be to determine whether people's expectations influence their views of subsequent events—more specifically, whether bar patrons' expectations for a certain kind of beer would shape their perception of its taste.

Let me explain this further. One of the beers that would be served to the patrons of the Muddy Charles would be Budweiser. The second would be what we fondly called MIT Brew. What's MIT Brew? Basically Budweiser, plus a "secret ingredient"—two drops of balsamic vinegar for each ounce of beer. (Some of the MIT students objected to our calling Budweiser "beer," so in subsequent studies, we used Sam Adams—a substance more readily acknowledged by Bostonians as "beer.")

At about seven that evening, Jeffrey, a second-year PhD student in computer science, was lucky enough to drop by the Muddy Charles. "Can I offer you two small, free samples of beer?" asked Leonard, approaching him. Without much hesitation, Jeffrey agreed, and Leonard led him over to a table that held two pitchers of the foamy stuff, one labeled A and the other B. Jeffrey sampled a mouthful of one of them, swishing it around thoughtfully, and then sampled the other. "Which one would you like a large glass of?" asked Leonard. Jeffrey thought it over. With a free glass in the offing, he wanted to be sure he would be spending his near future with the right malty friend.

Jeffrey chose beer B as the clear winner, and joined his friends (who were in deep conversation over the cannon that a group of MIT students had recently "borrowed" from the Caltech campus). Unbeknownst to Jeffrey, the two beers he had previewed were Budweiser and the MIT Brew—and the one he selected was the vinegar-laced MIT Brew.

A few minutes later, Mina, a visiting student from Estonia, dropped in. "Like a free beer?" asked Leonard. Her reply was a smile and a nod of the head. This time, Leonard offered more information. Beer A, he explained, was a standard commercial beer, whereas beer B had been doctored with a few drops of balsamic vinegar. Mina tasted the two beers. After finishing the samples (and wrinkling her nose at the vinegar-laced brew B) she gave the nod to beer A. Leonard poured her a large glass of the commercial brew and Mina happily joined her friends at the pub.

Mina and Jeffrey were only two of hundreds of students who participated in this experiment. But their reaction was typical: without foreknowledge about the vinegar, most of them chose the vinegary MIT Brew. But when they knew in advance that the MIT Brew had been laced with balsamic vinegar, their reaction was completely different. At the first taste of the adulterated suds, they wrinkled their noses and requested the standard beer instead. The moral, as you might expect, is that if you tell people up front that something might be distasteful, the odds are good that they will end up agreeing with you—not because their experience tells them so but because of their expectations.

If, at this point in the book, you are considering the establishment of a new brewing company, especially one that specializes in adding some balsamic vinegar to beer, consider the following points: (1) If people read the label, or knew about the ingredient, they would most likely hate your beer. (2) Balsamic vinegar is actually pretty expensive—so even if it makes beer taste better, it may not be worth the investment. Just brew a better beer instead.

BEER WAS JUST the start of our experiments. The MBA students at MIT's Sloan School also drink a lot of coffee. So one week, Elie Ofek (a professor at the Harvard Business School), Marco Bertini (a professor at the London Business School), and I opened an impromptu coffee shop, at which we offered students a free cup of coffee if they would answer a few questions about our brew. A line quickly formed. We handed our participants their cups of coffee and then pointed them to a table set with coffee additives—milk, cream, half-and-half, white sugar, and brown sugar. We also set out some unusual condiments—cloves, nutmeg, orange peel, anise, sweet paprika, and cardamom—for our coffee drinkers to add to their cups as they pleased.

After adding what they wanted (and none of our odd condiments were ever used) and tasting the coffee, the participants filled out a survey form. They indicated how much they liked the coffee, whether they would like it served in the cafeteria in the future, and the maximum price they would be willing to pay for this particular brew.

We kept handing out coffee for the next few days, but from time to time we changed the containers in which the odd condiments were displayed. Sometimes we placed them in beautiful glass-and-metal containers, set on a brushed metal tray with small silver spoons and nicely printed labels. At other times we placed the same odd condiments in white Styrofoam cups. The labels were handwritten in a red felt-tip pen. We went further and not only cut the Styrofoam cups shorter, but gave them jagged, hand-cut edges.

What were the results? No, the fancy containers didn't persuade any of the coffee drinkers to add the odd condiments (I guess we won't be seeing sweet paprika in coffee anytime soon). But the interesting thing was that when the odd condiments were offered in the fancy containers, the coffee drinkers were much more likely to tell us that they liked the coffee a lot, that they would be willing to pay well for it, and that they would recommend that we should start serving this new blend in the cafeteria. When the coffee ambience looked upscale, in other words, the coffee tasted upscale as well.

WHEN WE BELIEVE beforehand that something will be good, therefore, it generally will be good—and when we think it will be bad, it will bad. But how deep are these influences? Do they just change our beliefs, or do they also change the physiology of the experience itself? In other words, can previous knowledge actually modify the neural activity underlying the taste itself, so that when we expect something to taste good (or bad), it will actually taste that way?

To test this possibility, Leonard, Shane, and I conducted the beer experiments again, but with an important twist. We had already tested our MIT Brew in two ways—by telling our participants about the presence of vinegar in the beer before they tasted the brew, and by not telling them anything at all about it. But suppose we initially didn't tell them about the vinegar, then had them taste the beer, then revealed the presence of the vinegar, and then asked for their reactions. Would the placement of the knowledge—coming just after the experience—evoke a different response from what we received when the participants got the knowledge before the experience?

For a moment, let's switch from beer to another example. Suppose you heard that a particular sports car was fantastically exciting to drive, took one for a test drive, and then gave your impressions of the car. Would your impressions be different from those of people who didn't know anything about the sports car, took the test drive, then heard the car was hot, and then wrote down their impressions? In other words, does it matter if knowledge comes before or after the experience? And if so, which type of input is more important—knowledge before the experience, or an input of information after an experience has taken place?

The significance of this question is that if knowledge merely informs us of a state of affairs, then it shouldn't matter whether our participants received the information before or after tasting the beer: in other words, if we told them up front that there was vinegar in the beer, this should affect their review of the beer. And if we told them afterward, that should similarly affect their review. After all, they both got the same bad news about the vinegar-laced beer. This is what we should expect if knowledge merely informs us.

On the other hand, if telling our participants about the vinegar at the outset actually reshapes their sensory perceptions to align with this knowledge, then the participants who know about the vinegar up front should have a markedly different opinion of the beer from those who swigged a glass of it, and then were told. Think of it this way. If knowledge actually modifies the taste, then the participants who consumed the beer before they got the news about the vinegar, tasted the beer in the same way as those in the "blind" condition (who knew nothing about the vinegar). They learned about the vinegar only after their taste was established, at which point, if expectations change our experience, it was too late for the knowledge to affect the sensory perceptions.

So, did the students who were told about the vinegar after tasting the beer like it as little as the students who learned about the vinegar before tasting the beer? Or did they like it as much as the students who never learned about the vinegar? What do you think?

As it turned out, the students who found out about the vinegar after drinking the beer liked the beer much better than those who were told about the vinegar up front. In fact, those who were told afterward about the vinegar liked the beer just as much as those who weren't aware that there was any vinegar in the beer at all.

What does this suggest? Let me give you another example. Suppose Aunt Darcy is having a garage sale, trying to get rid of many things she collected during her long life. A car pulls up, some people get out, and before long they are gathered around one of the oil paintings propped up against the wall. Yes, you agree with them, it does look like a fine example of early American primitivism. But do you tell them that Aunt Darcy copied it from a photograph just a few years earlier?

My inclination, since I am an honest, upright person, would be to tell them. But should you tell them before or after they finish admiring the painting? According to our beer studies, you and Aunt Darcy would be better off keeping the information under wraps until after the examination. I'm not saying that this would entice the visitors to pay thousands of dollars for the painting (even though our beer drinkers preferred our vinegar-laced beer as much when they were told after drinking it as when they were not told at all), but it might get you a higher price for Aunt Darcy's work.

By the way, we also tried a more extreme version of this experiment. We told one of two groups in advance about the vinegar (the "before" condition) and told the second group about the vinegar after they had finished the sampling (the "after" condition). Once the tasting was done, rather than offer them a large glass of their choice, we instead gave them a large cup of unadulterated beer, some vinegar, a dropper, and the recipe for the MIT Brew (two drops of balsamic vinegar per ounce of beer). We wanted to see if people would freely add balsamic vinegar to their beer; if so, how much they would use; and how these outcomes would depend on whether the participants tasted the beer before or after knowing about the vinegar.

What happened? Telling the participants about the vinegar after rather than before they tasted the beer doubled the number of participants who decided to add vinegar to their beer. For the participants in the "after" condition, the beer with vinegar didn't taste too bad the first time around (they apparently reasoned), and so they didn't mind giving it another try.*

AS YOU SEE, expectations can influence nearly every aspect of our life. Imagine that you need to hire a caterer for your daughter's wedding. Josephine's Catering boasts about its "delicious Asian-style ginger chicken" and its "flavorful Greek salad with kalamata olives and feta cheese." Another caterer, Culinary Sensations, offers a "succulent organic breast of chicken roasted to perfection and drizzled with a merlot demi-glace, resting in a bed of herbed Israeli couscous" and a "mélange of the freshest roma cherry tomatoes and crisp field greens, paired with a warm circle of chèvre in a fruity raspberry vinagrette."

Although there is no way to know whether Culinary Sensations' food is any better than Josephine's, the sheer depth of the description may lead us to expect greater things from the simple tomato and goat cheese salad. This, accordingly, increases the chance that we (and our guests, if we give them the description of the dish) will rave over it.

This principle, so useful to caterers, is available to everyone. We can add small things that sound exotic and fashionable to our cooking (chipotle-mango sauces seem all the rage right now, or try buffalo instead of beef). These ingredients might not make the dish any better in a blind taste test; but by changing our expectations, they can effectively influence the taste when we have this pre-knowledge.

These techniques are especially useful when you are inviting people for dinner—or persuading children to try new dishes. By the same token, it might help the taste of the meal if you omit the fact that a certain cake is made from a commercial mix or that you used generic rather than brand-name orange juice in a cocktail, or, especially for children, that Jell-O comes from cow hooves. I am not endorsing the morality of such actions, just pointing to the expected outcomes.

Finally, don't underestimate the power of presentation. There's a reason that learning to present food artfully on the plate is as important in culinary school as learning to grill and fry. Even when you buy take-out, try removing the Styrofoam packaging and placing the food on some nice dishes and garnishing it (especially if you have company); this can make all the difference.

One more piece of advice: If you want to enhance the experience of your guests, invest in a nice set of wineglasses.

Moreover, if you're really serious about your wine, you may want to go all out and purchase the glasses that are specific to burgundies, chardonnays, champagne, etc. Each type of glass is supposed to provide the appropriate environment, which should bring out the best in these wines (even though controlled studies find that the shape of the glass makes no difference at all in an objective blind taste test, that doesn't stop people from perceiving a significant difference when they are handed the "correct glass"). Moreover, if you forget that the shape of the glass really has no effect on the taste of the wine, you yourself may be able to better enjoy the wine you consume in the appropriately shaped fancy glasses.

Expectations, of course, are not limited to food. When you invite people to a movie, you can increase their enjoyment by mentioning that it got great reviews. This is also essential for building the reputation of a brand or product. That's what marketing is all about—providing information that will heighten someone's anticipated and real pleasure. But do expectations created by marketing really change our enjoyment?

I'm sure you remember the famous "Pepsi Challenge" ads on television (or at least you may have heard of them). The ads consisted of people chosen at random, tasting Coke and Pepsi and remarking about which they liked better. These ads, created by Pepsi, announced that people preferred Pepsi to Coke. At the same time, the ads for Coke proclaimed that people preferred Coke to Pepsi. How could that be? Were the two companies fudging their statistics?

The answer is in the different ways the two companies evaluated their products. Coke's market research was said to be based on consumers' preferences when they could see what they were drinking, including the famous red trademark, while Pepsi ran its challenge using blind tasting and standard plastic cups marked M and Q. Could it be that Pepsi tasted better in a blind taste test but that Coke tasted better in a non-blind (sighted) test?

To better understand the puzzle of Coke versus Pepsi, a terrific group of neuroscientists—Sam McClure, Jian Li, Damon Tomlin, Kim Cypert, Latané Montague, and Read Montague—conducted their own blind and non-blind taste test of Coke and Pepsi. The modern twist on this test was supplied by a functional magnetic resonance imaging (fMRI) machine. With this machine, the researchers could monitor the activity of the participants' brains while they consumed the drinks.

Tasting drinks while one is in an fMRI is not simple, by the way, because a person whose brain is being scanned must lie perfectly still. To overcome this problem, Sam and his colleagues put a long plastic tube into the mouth of each participant, and from a distance injected the appropriate drink (Pepsi or Coke) through the tube into their mouths. As the participants received a drink, they were also presented with visual information indicating either that Coke was coming, that Pepsi was coming, or that an unknown drink was coming. This way the researchers could observe the brain activation of the participants while they consumed Coke and Pepsi, both when they knew which beverage they were drinking and when they did not.

What were the results? In line with the Coke and Pepsi "challenges," it turned out that the brain activation of the participants was different depending on whether the name of the drink was revealed or not. This is what happened: Whenever a person received a squirt of Coke or Pepsi, the center of the brain associated with strong feelings of emotional connection—called the ventromedial prefrontal cortex, VMPFC—was stimulated. But when the participants knew they were going to get a squirt of Coke, something additional happened. This time, the frontal area of the brain—the dorsolateral aspect of the prefrontal cortex, DLPFC, an area involved in higher human brain functions like working memory, associations, and higher-order cognitions and ideas—was also activated. It happened with Pepsi—but even more so with Coke (and, naturally, the response was stronger in people who had a stronger preference for Coke).

The reaction of the brain to the basic hedonic value of the drinks (essentially sugar) turned out to be similar for the two drinks. But the advantage of Coke over Pepsi was due to Cokes's brand—which activated the higher-order brain mechanisms. These associations, then, and not the chemical properties of the drink, gave Coke an advantage in the marketplace.

It is also interesting to consider the ways in which the frontal part of the brain is connected to the pleasure center. There is a dopamine link by which the front part of the brain projects and activates the pleasure centers. This is probably why Coke was liked more when the brand was known—the associations were more powerful, allowing the part of the brain that represents these associations to enhance activity in the brain's pleasure center. This should be good news to any ad agency, of course, because it means that the bright red can, swirling script, and the myriad messages that have come down to consumers over the years (such as "Things go better with . . .") are as much responsible for our love of Coke as the brown bubbly stuff itself.

EXPECTATIONS ALSO SHAPE stereotypes. A stereotype, after all, is a way of categorizing information, in the hope of predicting experiences. The brain cannot start from scratch at every new situation. It must build on what it has seen before. For that reason, stereotypes are not intrinsically malevolent. They provide shortcuts in our never-ending attempt to make sense of complicated surroundings. This is why we have the expectation that an elderly person will need help using a computer or that a student at Harvard will be intelligent.* But because a stereotype provides us with specific expectations about members of a group, it can also unfavorably influence both our perceptions and our behavior.

Research on stereotypes shows not only that we react differently when we have a stereotype of a certain group of people, but also that stereotyped people themselves react differently when they are aware of the label that they are forced to wear (in psychological parlance, they are "primed" with this label). One stereotype of Asian-Americans, for instance, is that they are especially gifted in mathematics and science. A common stereotype of females is that they are weak in mathematics. This means that Asian-American women could be influenced by both notions.

In fact, they are. In a remarkable experiment, Margaret Shin, Todd Pittinsky, and Nalini Ambady asked Asian-American women to take an objective math exam. But first they divided the women into two groups. The women in one group were asked questions related to their gender. For example, they were asked about their opinions and preferences regarding coed dorms, thereby priming their thoughts for gender-related issues. The women in the second group were asked questions related to their race. These questions referred to the languages they knew, the languages they spoke at home, and their family's history in the United States, thereby priming the women's thoughts for race-related issues.

The performance of the two groups differed in a way that matched the stereotypes of both women and Asian-Americans. Those who had been reminded that they were women performed worse than those who had been reminded that they were Asian-American. These results show that even our own behavior can be influenced by our stereotypes, and that activation of stereotypes can depend on our current state of mind and how we view ourselves at the moment.

Perhaps even more astoundingly, stereotypes can also affect the behavior of people who are not even part of a stereotyped group. In one notable study, John Bargh, Mark Chen, and Lara Burrows had participants complete a scrambled-sentence task, rearranging the order of words to form sentences (we discussed this type of task in Chapter 4). For some of the participants, the task was based on words such as aggressive, rude, annoying, and intrude. For others, the task was based on words such as honor, considerate, polite, and sensitive. The goal of these two lists was to prime the participants to think about politeness or rudeness as a result of constructing sentences from these words (this is a very common technique in social psychology, and it works amazingly well).

After the participants completed the scrambled-sentence task, they went to another laboratory to participate in what was purportedly a second task. When they arrived at the second laboratory, they found the experimenter apparently in the midst of trying to explain the task to an uncomprehending participant who was just not getting it (this supposed participant was in fact not a real participant but a confederate working for the experimenter). How long do you think it took the real participants to interrupt the conversation and ask what they should do next?

The amount of waiting depended on what type of words had been involved in the scrambled-sentence task. Those who had worked with the set of polite words patiently waited for about 9.3 minutes before they interrupted, whereas those who had worked with the set of rude words waited only about 5.5 minutes before interrupting.

A second experiment tested the same general idea by priming the concept of the elderly, using words such as Florida, bingo, and ancient. After the participants in this experiment completed the scrambled-sentence task, they left the room, thinking that they had finished the experiment—but in fact the crux of the study was just beginning. What truly interested the researchers was how long it would take the participants to walk down the hallway as they left the building. Sure enough, the participants in the experimental group were affected by the "elderly" words: their walking speed was considerably slower than that of a control group who had not been primed. And remember, the primed participants were not themselves elderly people being reminded of their frailty—they were undergraduate students at NYU.

ALL THESE EXPERIMENTS teach us that expectations are more than the mere anticipation of a boost from a fizzy Coke. Expectations enable us to make sense of a conversation in a noisy room, despite the loss of a word here and there, and likewise, to be able to read text messages on our cell phones, despite the fact that some of the words are scrambled. And although expectations can make us look foolish from time to time, they are also very powerful and useful.

So what about our football fans and the game-winning pass? Although both friends were watching the same game, they were doing so through markedly different lenses. One saw the pass as in bounds. The other saw it as out. In sports, such arguments are not particularly damaging—in fact, they can be fun. The problem is that these same biased processes can influence how we experience other aspects of our world. These biased processes are in fact a major source of escalation in almost every conflict, whether Israeli-Palestinian, American-Iraqi, Serbian-Croatian, or Indian-Pakistani.

In all these conflicts, individuals from both sides can read similar history books and even have the same facts taught to them, yet it is very unusual to find individuals who would agree about who started the conflict, who is to blame, who should make the next concession, etc. In such matters, our investment in our beliefs is much stronger than any affiliation to sport teams, and so we hold on to these beliefs tenaciously. Thus the likelihood of agreement about "the facts" becomes smaller and smaller as personal investment in the problem grows. This is clearly disturbing. We like to think that sitting at the same table together will help us hammer out our differences and that concessions will soon follow. But history has shown us that this is an unlikely outcome; and now we know the reason for this catastrophic failure.

But there's reason for hope. In our experiments, tasting beer without knowing about the vinegar, or learning about the vinegar after the beer was tasted, allowed the true flavor to come out. The same approach should be used to settle arguments: The perspective of each side is presented without the affiliation—the facts are revealed, but not which party took which actions. This type of "blind" condition might help us better recognize the truth.

When stripping away our preconceptions and our previous knowledge is not possible, perhaps we can at least acknowledge that we are all biased. If we acknowledge that we are trapped within our perspective, which partially blinds us to the truth, we may be able to accept the idea that conflicts generally require a neutral third party—who has not been tainted with our expectations—to set down the rules and regulations. Of course, accepting the word of a third party is not easy and not always possible; but when it is possible, it can yield substantial benefits. And for that reason alone, we must continue to try.

Reflections on Expectations: Music and Food

Imagine walking into a truck stop off a deserted stretch of Interstate 95 at nine o'clock in the evening. You've been driving for six hours. You are tired and still have a long drive ahead of you. You need a bite to eat and want to be out of the car for a bit, so you walk into what appears to be a restaurant of sorts. It has the usual cracked-vinyl-covered booths and fluorescent lighting. The coffee-stained tabletops leave you a bit wary. Still, you think, "Fine, no one can screw up a hamburger that badly." You reach for the menu, conveniently stashed behind an empty napkin dispenser, only to discover this is no ordinary greasy spoon. Instead of hamburgers and chicken sandwiches, you're astonished to see that the menu offers foie gras au torchon, truffle pâté with frisée and fennel marmalade, gougères with duck confit, quail à la crapaudine, and so on.

Items like this would be no surprise in even a small Manhattan restaurant, of course. And it is possible that the chef got tired of Manhattan, moved to the middle of nowhere, and now cooks for whoever happens through. So is there a key difference between ordering gougères with duck confit in Manhattan and ordering it at an isolated truck stop on I-95? If you encountered such French delicacies at the truck stop, would you be brave enough to try them? Suppose the prices were not listed on the menu. What would you be willing to pay for an appetizer or an entrée? And if you ate it, would you enjoy it as much as you might if you were eating the same food in Manhattan?

On the basis of what we learned from Chapter 10, the answers are simple. Ambience and expectations do add a great deal to our enjoyment. You would expect less in such an environment, and as a consequence you would enjoy the experience at the truck stop less, even if you had the identical foie gras au torchon in both places. Likewise, if you knew that pâté is largely made of run-of-the-mill goose liver and butter* rather than super special ingredients, you would enjoy it much less.

A FEW YEARS ago the folks at the Washington Post were curious about the same basic topic and decided to run an experiment.[11] Instead of food, they used music. The experimental question was this: can outstanding art shine through a filter of mundane and dingy expectation?

Journalist Gene Weingarten asked Joshua Bell, generally considered one of the best violinists in the world, to pose as a street performer and play some of the finest music ever composed* at a Metro station in Washington, D.C., during the morning rush hour. Would people notice that this guy was better than most buskers? Would they stop to listen? Would they throw a dollar or two his way? Would you?

Конец ознакомительного фрагмента.