NEW YORK TIMES BESTSELLER

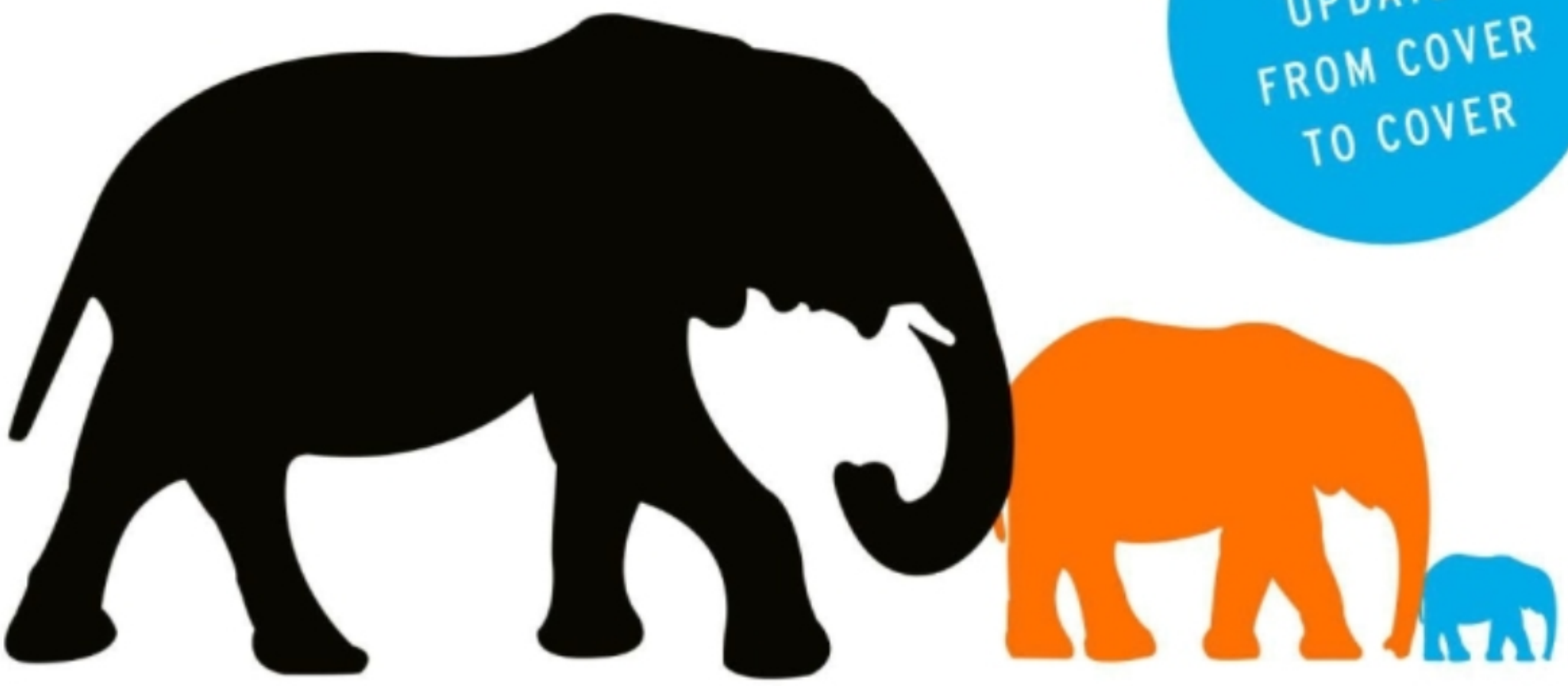
"Few books can be said to have changed the world, but *Nudge* did. *The Final Edition* is marvelous: funny, useful, and wise."

—DANIEL KAHNEMAN

NUDGE

THE FINAL EDITION

REVISED AND UPDATED FROM COVER TO COVER



RICHARD H. THALER

WINNER OF THE NOBEL PRIZE IN ECONOMICS

and

CASS R. SUNSTEIN

WINNER OF THE HOLBERG PRIZE

PENGUIN BOOKS

An imprint of Penguin Random House LLC
penguinrandomhouse.com

First published in the United States of America by Yale University Press 2008
First published in Penguin Books 2009
This updated edition published in Penguin Books 2021

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA
Names: Thaler, Richard H., 1945– author. | Sunstein, Cass R., author.
Title: Nudge : the final edition / Richard H. Thaler and Cass R. Sunstein.
Description: Final edition. | [New York] : Penguin Books, an imprint of Penguin Random House LLC, 2021. | "First published in the United States of America by Yale University Press, 2008"—Title page. |
Includes bibliographical references and index. |
Identifiers: LCCN 2021008635 (print) | LCCN 2021008636 (ebook) |
ISBN 9780143137009 (trade paperback) | ISBN 9780525508526 (ebook)
Subjects: LCSH: Economics—Psychological aspects. |
Choice (Psychology)—Economic aspects. |
Decision making—Psychological aspects. | Consumer behavior.
Classification: LCC HB74.P8 T53 2021 (print) |
LCC HB74.P8 (ebook) | DDC 330.01/9—dc23
LC record available at https://lccn.loc.gov/2021008635
LC ebook record available at https://lccn.loc.gov/2021008636

Printed in the United States of America
ScoutAutomatedPrintCode

Set in Iowan Old Style BT Pro
Designed by Sabrina Bowers

Contents

Preface to the Final Edition

The original version of *Nudge* was published in the spring of 2008. While we were writing it, Thaler got his first iPhone and Sunstein his first BlackBerry. In his first term as a United States senator, our former University of Chicago colleague Barack Obama had decided to challenge Hillary Clinton for the Democratic nomination for president. Senator Joe Biden was also doing that, without a whole lot of success. Real estate developer and reality television star Donald Trump was proclaiming that Clinton was "fantastic" and would "make a great president."[1] A financial crisis was emerging. Taylor Swift was nineteen years old (and had not yet won a Grammy), and Greta Thunberg was just five.

To say the least, a few things have happened in the intervening years. But *Nudge* continues to attract interest, and we have not been much inclined to tinker with it. Why a revision now? As we discuss in the book, status quo bias is a strong force.

Very much in keeping with the book's spirit, we were induced to emerge from our slumber by a seemingly small matter. The contracts for the American and British paperback editions had expired, and new ones had to be agreed upon. Editors asked whether we might want to add a new chapter or possibly make other changes. Our immediate reaction was to say no. After all, Thaler is famously

lazy and Sunstein could have written an entirely new book in the time it would take to get the slow-fingered Thaler to agree to anything. Besides, we were proud of the book, and why mess with a good thing?

But then we started thumbing through copies we managed to find in our home offices, where we found ourselves during the year of COVID-19. The first chapter mentions the then-snazzy but now-obsolete iPod. Jeez, that seems a bit dated. And an entire chapter is devoted to what we still think was an excellent solution to the problem of making it possible for same-sex couples to marry. Since then, many countries somehow managed to solve that very problem in a way we had not imagined was politically possible. They just passed laws making such marriages legal. So, yeah, maybe some parts of the book could use a bit of tidying up.

So, it came to pass that in the summer of 2020, a summer like no other in our lifetimes, we decided to poke around the manuscript and see if we wanted to make some changes. It helped that Thaler managed to find a set of Microsoft Word files that had been used for what we called the international edition, and those files were (barely) usable. Without those files, this edition would not exist, because we would never have wanted to start over from scratch. We admit to then falling into a bit of a trap. We are supposedly experts on biases in human decision making, but that definitely does *not* mean we are immune to them! Just the opposite.

We are not sure that this particular trap has a name, but it is familiar to everyone. Let's call it the "while we are at it" bias. Home improvement projects are often settings where this bias is observed. A family decides that after twenty years of neglect, the kitchen really needs to be upgraded. The initial to-do list includes new appliances and cabinets, but of course, the floor will be ruined during the construction, so we'd better replace that, and

gosh, if we just pushed that wall out a bit, we could add a new window, which looks out on the patio, but oh dear, who wants to look at that patio . . . In the military this is called mission creep. Here we plead guilty to book revision creep. The revision that we planned to knock off during the summer was not given to the publisher until late November.

However, to continue the home remodeling analogy, in spite of our slow pace, what we have here is definitely *not* a gut rehab. The book feels very much like the old one. All the walls remain, and we have not expanded the footprint. But we have gotten rid of a bunch of old pieces of electronics that have been collecting dust and replaced them with newer gadgets.

More specifically, the first four chapters of the book have not much changed. They set out the basic framework of our approach, including the term *libertarian paternalism*, which only its authors love. Examples and references are updated, but the songs remain the same. If it were a record album, we would call this section "remastered," whatever that means. If you have read the original edition, you can probably skim those chapters pretty quickly. After that, however, even previous readers will find many new themes, and perhaps some surprises.

Two important topics are given new chapters early on. The first is what we call *Smart Disclosure*. The idea is that governments should consider the radical thought of moving at least into the twentieth century in the way they disclose important information. Sure, listing ingredients on the side of food packages is useful, especially for those with very good eyesight, but shouldn't Sunstein be able to search online for foods that contain shellfish, given that they can make him very sick? The Internet is not exactly a cutting-edge technology. Widespread use of Smart Disclosure would make it possible to create online decision-making tools that we call *choice engines*, which can make many tasks as

easy as it has become to find the best route to get to a new restaurant.

We have also added a new chapter on what we call *sludge*, which is nasty stuff that makes it more difficult to make wise choices. (Sludge is everywhere; you'll see.) The use of Smart Disclosure is one way to reduce sludge. So is sending everyone a tax return that has already been completed and can be filed with one click. So is reducing the length of those forms you have to fill out to get licenses, permits, visas, health care, or financial aid, or to get reimbursed for a trip you take for your employer. Every organization should create a seek-and-destroy mission for unnecessary sludge.

The rest of the book also has numerous substantive changes and what we hope is fresh thinking. We introduce several choice architecture concepts, in addition to "sludge," that are new to this edition. These include personalized defaults; make it fun; and curation. These concepts play a large role in the chapters about financial decision making. We have increased the space we devote to climate change and the environment. We highlight both the limits of choice architecture (preview: we can't solve the problem just with nudges) and the many ways in which nudges can help us succeed on a project that demands the deployment of every possible tool. And, oh, we do have a few things to say about the COVID-19 pandemic.

Some topics that we originally covered get a fresh look. The passage of years has created the chance to evaluate how policies work over time. A good example is the Swedish launch (in 2000) of a national retirement savings program, which allowed investors to create their own portfolios. In the original edition, we discussed the initial design of that plan. Now, two decades after the launch, we can provide some insights about how long nudges last. (Preview: some of them can last almost forever.) We have also rewritten the chapter on organ donation, because everyone thought

we supported a policy we actually oppose. We did state our policy in what we thought was plain language in the first version of the book, and we tried to make it a bit clearer in the paperback editions. But still our message wasn't getting through, so we are trying once again. In case this is as far as you get in the book, please take note: *we do not support the policy called presumed consent.* Feel free to skip ahead to see why. We really do believe in freedom of choice.

Other topics with fresh looks are devoted to helping consumers make better choices with their money. People have amassed staggering amounts of credit card debt, and then fail to take some simple steps to reduce the costs of maintaining those large balances. Consumers also make demonstrably bad choices in picking mortgages, insurance, and health care plans. You may well be one of the people who could save a lot of money in these domains. But more importantly, we hope that our discussion of these issues will provoke others to make behaviorally informed policy changes in an assortment of domains that we have not explored. We emphasize that the concepts and approaches discussed here are fully applicable to the private sector. Firms should explicitly recognize that their employees and customers and competitors are human beings, and design policies and strategies accordingly. We will offer many specific ideas for how to do this.

It is important to stress what we have not done. We make no attempt to bring readers up to date on the remarkable nudge-related activity, reform, and research that have come about in recent years. Governments all over the world have been nudging, often for good, and the private sector has also been exceptionally inventive. Academic research has grown by leaps and bounds. To explore these developments would take an entirely new book, and in fact many such books have been written, some even by Sunstein. Indeed, Sunstein has coedited a four-volume collection of

papers on this topic. (Sunstein thinks editing a four-volume collection of papers on the topic of nudging is fun; Thaler would rather be counting backward from ten million.)

We have some things to say about objections to nudges, and in fact we devote a whole chapter to that topic, but we do not respond systematically to critics. What we hope to offer is a book that will feel fresher, more fun, and less dusty to those reading it for the first time, or even to those returning for another look, as we have spent the past months doing ourselves.

Finally, a word about our decision to call this version of the book the Final Edition. One of the earliest topics to be studied by behavioral economists was self-control problems. Why do people continue to do things they think are dumb (both in foresight and in hindsight)? These include acts such as running up credit card bills, getting more than a bit chubby, and continuing to smoke. One strategy people use to deal with such problems is to adopt *commitment strategies*, in which some tempting (but ill-advised) options are made unavailable. For example, some people with a gambling problem volunteer to put their name on a list of people who will not be allowed into a casino. Using this title is our commitment strategy to prevent us from ever tinkering with this book again. We have loved working on it, and we might even have gotten addicted to it, but we pledge, right here and right now, that there will be no "post-final" edition of *Nudge*. And one of us actually believes that pledge.

RICHARD H. THALER

CASS R. SUNSTEIN

January 2021

Introduction

The Cafeteria

Imagine that a friend of yours, Carolyn, is the director of food services for a large city school system. She is in charge of hundreds of schools, and hundreds of thousands of kids eat in her cafeterias every day. Carolyn has formal training in nutrition (a master's degree from the state university), and she is a creative type who likes to think about things in nontraditional ways.

One evening, over a good bottle of wine, she and her friend Adam, a statistically oriented management consultant who has worked with supermarket chains, hatched an interesting idea. Without changing any menus, they would run some experiments in her schools to determine whether the way the food is displayed and arranged might influence the choices kids make. Carolyn gave the directors of dozens of school cafeterias specific instructions on how to display the food choices. In some schools the desserts were placed first, in others last, and in still others in a separate line. The locations of various food items varied from one school to another. In some schools the french fries were at eye level, but in other schools it was the carrot sticks that were made more salient.

From his experience in designing supermarket floor plans, Adam

suspected that the results would be significant. He was right. Simply by rearranging the cafeteria, Carolyn was able to noticeably increase or decrease the consumption of many food items. From this experience she learned a big lesson: small changes in context can greatly influence schoolchildren, just as they can greatly influence adults. The influence can be exercised for better or for worse. For example, Carolyn knows that she can increase consumption of healthy foods and decrease consumption of unhealthy ones.

With hundreds of schools to work with, and a team of graduate-student volunteers recruited to collect and analyze the data, Carolyn now understands that she has considerable power to influence what kids eat. She is pondering what to do with her newfound power. Here are some suggestions she has received from her usually sincere but occasionally mischievous friends and coworkers:

1. Arrange the food to make the students best off, all things considered.
2. Choose the food order at random.
3. Try to arrange the food to get the kids to pick the same foods they would choose on their own.
4. Maximize the sales of the items from the suppliers who are willing to offer the largest bribes.
5. Maximize profits, period.

Option 1 has obvious appeal, yet it does seem a bit intrusive, even paternalistic. But the alternatives are worse! Option 2, arranging the food at random, could be considered fair-minded and principled, and it is in one sense neutral. But a random order makes no sense in a cafeteria. On efficiency grounds, the salad dressing should be placed next to the salad, not with the desserts. Also, if the orders are randomized across schools, then the chil-

dren at some schools will have less healthy diets than those at other schools. Is this desirable? Should Carolyn choose that kind of neutrality, if she can easily make most students better off, in part by improving their health?

Option 3 might seem to be an honorable attempt to avoid intrusion: try to mimic what the children would choose for themselves. Maybe that is really the neutral choice, and maybe Carolyn should neutrally follow people's wishes (at least where she is dealing with older students). But a little thought reveals that this is a difficult option to implement. Carolyn's experiment with Adam proves that what kids choose depends on the order in which the items are displayed. What, then, are the "true preferences" of the children? What does it mean to say that Carolyn should try to figure out what the students would choose "on their own"? In a cafeteria, it is impossible to avoid some way of organizing food. And many of the same considerations would apply if she were serving adults rather than children.

Option 4 might appeal to a corrupt person in Carolyn's job, and manipulating the order of the food items would put yet another weapon in the arsenal of available methods to exploit power. But Carolyn is honorable and honest, so she does not give this option any thought. (Not everyone would be this principled, alas.) Like Options 2 and 3, Option 5 has some appeal, especially if Carolyn thinks the best cafeteria is the one that makes the most money. But should she really try to maximize profits if the result is to make children less healthy, especially when she works for the school district?

Carolyn is what we call a *choice architect*. A choice architect has the responsibility for organizing the context in which people make decisions. Although Carolyn is a figment of our imagination, many real people turn out to be choice architects, most without realizing it. Some of them even run cafeterias. If you are a doctor and describe the alternative treatments available to a patient, you

are a choice architect. If you create the forms or the website that new employees use to choose among various employee benefits, you are a choice architect. If you design the ballot voters use to choose candidates, you are a choice architect. If you organize a drugstore or a grocery, you are a choice architect (and you confront many of the questions that Carolyn did). If you are a parent describing possible educational options to your son or daughter, you are a choice architect. If you are a salesperson, you are a choice architect (but you already knew that).

There are many parallels between choice architecture and more traditional forms of architecture. A crucial parallel is that there is no such thing as a "neutral" design. Consider the job of designing a new office building. The architect is given some requirements. There must be room for a lobby, 120 offices, thirteen conference rooms of various sizes, a room large enough to have everyone meet together, and so forth. The building must sit on a specified site. Hundreds of other constraints will be imposed—some legal, some aesthetic, some practical. In the end, the architect must come up with an actual building with doors, stairs, windows, and hallways. As good architects know, seemingly arbitrary decisions, such as where to locate the bathrooms, will have subtle influences on how the people who use the building interact. Every trip to the bathroom creates an opportunity to run into colleagues (for better or for worse). A good building is not merely attractive; it also "works."

As we shall see, small and apparently insignificant details can have major impacts on people's behavior. A good rule of thumb is to assume that everything matters. In many cases, the power of these small details comes from focusing people's attention in a particular direction. A wonderful example of this principle comes from, of all places, the men's toilets at Schiphol Airport in Amsterdam. At one point, the authorities etched the image of a black housefly into each urinal. It seems that men often do not pay

much attention to where they aim, which can create a bit of a mess, but if they see a target, attention and therefore accuracy are much increased. According to the man who came up with the idea, it works wonders. "It improves the aim," says Aad Kieboom. "If a man sees a fly, he aims at it." Kieboom, an economist, directed Schiphol's building expansion. He reports that etchings reduced "spillage" by 80 percent, a number we are unable to verify. However, we can report that after this example appeared in the first edition of this book, we began seeing those flies in other airports around the world. And yes, we are aware of the availability heuristic, to be discussed later.

The insight that everything matters can be both paralyzing and empowering. Good architects realize that although they can't build the perfect building, they can make some design choices that will have beneficial effects. The location of the coffee machines, for example, may influence workplace interaction. Policymakers can often do the equivalent of painting a fly—for example, by telling people clearly and conspicuously, on their credit card bills, that they might be subject to late fees and overuse fees. If you paint lines on the sidewalk where people wait to enter a supermarket during a pandemic, you can promote social distancing. And just as a building architect must eventually produce the plans for an building, a choice architect like Carolyn must choose a particular arrangement of the food options at lunch, and by so doing she can influence what people eat. She can nudge.*

* Please do not confuse *nudge* with *noodge*. As William Safire explained in his "On Language" column in the *New York Times Magazine* (October 8, 2000), the "Yiddishism *noodge*" is "a noun meaning 'pest, annoying nag, persistent complainer.' . . . To *nudge* is 'to push mildly or poke gently in the ribs, especially with the elbow.' One who *nudges* in that manner—'to alert, remind, or mildly warn another'—is a far *geshrei* from a *noodge* with his incessant, bothersome whining." *Nudge* rhymes with *judge*, while the *oo* sound in *noodge* is pronounced as in *book*.

Libertarian Paternalism

If, all things considered, you think that Carolyn should take the opportunity to nudge the kids toward food that is better for them, Option 1, then we welcome you to our movement: *libertarian paternalism*. We are keenly aware that this term is not one that many readers will find immediately endearing. Both words are somewhat off-putting, weighed down by stereotypes from popular culture and politics that make them unappealing to many. Even worse, the concepts seem to be contradictory! Why combine two reviled and contradictory concepts? We argue that if the terms are properly understood, both concepts show a lot of good sense—and they are far more attractive together than alone. The problem with the terms is that they have been captured by dogmatists.

The libertarian aspect of our strategies lies in the straightforward insistence that much of the time, and so long as they are not harming others, people should be free to do what they like—and to opt out of arrangements they deem undesirable if that is what they want to do. To borrow a phrase from the late Milton Friedman, libertarian paternalists urge that people should be "free to choose." We strive to design policies that maintain or increase freedom of choice. When we use the term *libertarian* to modify the word *paternalism*, we simply mean liberty-preserving. And when we say liberty-preserving, we really mean it. Libertarian paternalists want to make it easy for people to go their own way; they do not want to burden those who want to exercise their freedom. (We emphasize that when people are inflicting harm on others, freedom of choice is not the best idea—but even in such cases, nudges can play an important role. We'll get to that. We also acknowledge that if people are making really terrible choices and harming their future selves, nudges might not be enough. We'll get to that, too.)

The paternalistic aspect lies in the claim that it is legitimate for choice architects to try to influence people's behavior in order to make their lives longer, healthier, and better. In other words, we argue for self-conscious efforts, by institutions in the private sector and by government, to steer people's choices in directions that will improve their lives. We are aware that many people, including many philosophers, have devoted a lot of effort to defining the term *paternalism*, and to exploring what might be right or wrong with it. The paternalistic policies that we favor aim to influence choices in a way that will make choosers better off, *as judged by the choosers themselves*. This is a paternalism of means, not of ends; those policies help people reach their own preferred destination.

We know from decades of behavioral science research that people often make poor decisions in laboratory experiments. People also make plenty of mistakes in real life, which reinforces the view well stated by the Beatles: "we get by with a little help from our friends." Our goal, in short, is to help people make the choices that they would have made if they had paid full attention and possessed complete information, unlimited cognitive ability, and complete self-control. (That doesn't mean people shouldn't sometimes stay out late, overeat, and have fun. As they say, "enjoy life now; this is not a rehearsal.")

Libertarian paternalism is a relatively weak, soft, and nonintrusive type of paternalism, because choices are not blocked, fenced off, or significantly burdened. If people want to smoke cigarettes, eat a lot of candy, choose an unsuitable health care plan, or fail to save for retirement, libertarian paternalists will not force them to do otherwise—or even make things hard for them. Still, the approach we recommend does count as paternalistic, because in important contexts, private and public choice architects should not merely track or implement people's anticipated choices. Rather,

they should attempt to move people in directions that will make their lives better. They should nudge.

A *nudge*, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not taxes, fines, subsidies, bans, or mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not.

Many of the policies we recommend can be and have been implemented by the private sector (with or without a nudge from the government). Employers, for example, are important choice architects in many of the examples we discuss in this book. In areas involving health care and retirement plans, we think that employers can give employees far more helpful nudges (for example, through sensible default rules, clear presentation of information, and helpful hints). Private companies that want to make money and to do good can benefit by creating environmentally friendly nudges, helping to reduce air pollution and the emission of greenhouse gases. But, of course, companies can also use the concepts we discuss to increase sales in unsavory ways. They might impose sludge. We strive to reduce the sludge produced in both the public and private sectors. See Chapter 8.

Econs and Humans: Why Nudges Can Help

Those who reject paternalism often claim that human beings do a terrific job of making choices, or if not terrific, certainly better than anyone else would do (especially if that someone else works for the government). Whether or not they have ever studied eco-

nomics, many people seem at least implicitly committed to the idea of *Homo economicus*, or economic man—the notion that each of us thinks and chooses unfailingly well, and thus fits within the usual depiction of human beings that is offered by economists.

If you look at economics textbooks, you will learn that *Homo economicus* can think like Albert Einstein, store as much memory as Google does in the cloud, and exercise the willpower of Mahatma Gandhi. Really. But the folks we know are not like that. Real people have trouble with long division if they don't have a calculator, sometimes forget their spouse's birthday, and have a hangover on New Year's Day. They are not *Homo economicus*; they are *Homo sapiens*. To keep our Latin usage to a minimum, we will hereafter refer to these imaginary and real species as Econs and Humans.

Consider the issue of obesity. Rates of adult obesity in the United States are over 40 percent,[1] and more than 70 percent of American adults are considered either obese or overweight.[2] Worldwide, there are some 1 billion overweight adults, 300 million of whom are obese. Rates of obesity range from below 6 percent in Japan, South Korea, and some African nations to more than 75 percent in American Samoa.[3] According to the World Health Organization, obesity rates have risen threefold since 1980 in some areas of North America, the United Kingdom, Eastern Europe, the Middle East, the Pacific Islands, Australia, and China. There is overwhelming evidence that obesity increases the risk of heart disease and diabetes, frequently leading to premature death. It would be quite fantastic to suggest that everyone is choosing their best possible diet, or a diet that is preferable to what might be produced with a few nudges.

Of course, sensible people care about the taste of food, not simply about health, and eating is a source of pleasure in and of itself. We do not claim that everyone who is overweight is necessarily failing to act rationally, but we do reject the proposition that all or

almost all people are choosing their diet optimally. What is true for diets is true for other risk-related behavior, including smoking and drinking, which produce hundreds of thousands of premature deaths each year in the United States alone. With respect to diet, smoking, and drinking, people's current choices cannot always be said to be the best means of promoting their own well-being (to put it lightly). Indeed, many smokers, drinkers, and overeaters are willing to pay third parties to help them make better decisions.

These findings complement those of the emerging science of choice, consisting of an extensive body of research over the past half-century. Much of the initial research in this field was conducted with laboratory experiments, but a substantial and rapidly growing amount comes from studies of real-world behavior, including archival studies of choices made in natural settings and randomized controlled trials. This research has raised serious questions about the soundness and wisdom of many judgments and decisions that people make. To qualify as Econs, people are not required to make perfect forecasts (that would require omniscience), but they are required to make *unbiased* forecasts. That is, forecasts can be wrong, but they can't repeatedly err in a predictable direction. Unlike Econs, Humans make predictable mistakes. Take, for example, the planning fallacy—the systematic tendency toward unrealistic optimism about the time it takes to complete projects. It will come as no surprise to anyone who has ever hired a contractor to learn that everything takes longer than you think, even if you know about the planning fallacy.*

Thousands of studies confirm that human forecasts are flawed and biased. Human decision making is not so great either. Again, to take just one example, consider what is called the status quo

---

* Knowing about the planning fallacy does not prevent you from making the mistake. This revision took far longer than we anticipated.

bias, a fancy name for inertia. For a host of reasons, which we shall explore, people have a strong tendency to go along with the status quo or default option. When you get a new smartphone, for example, you have a series of choices to make, from the background on the screen to the ringtone to the number of times the phone rings before the caller is sent to voice mail. The manufacturer has picked one option as the default for each of these choices. Research shows that whatever the default choices are, many people stick with them, even when the stakes are much higher than choosing the sound your phone makes when it rings.

We provide many examples of the use of default options, and we will see that defaults are often quite powerful. If private companies or public officials favor one set of outcomes, they can greatly influence people by choosing it as the default. You can often increase participation rates by 25 percent, and sometimes by a lot more than that, simply by shifting from an opt-in to an opt-out design. As we will show, setting default options, and adopting other similar, seemingly trivial menu-changing strategies, can have huge effects on outcomes, from increasing savings to combating climate change to improving health care to reducing poverty. At the same time, we show that there are important situations in which people exercise their freedom and reject defaults. When they feel strongly about something, for example, they might overcome the strength of inertia and the power of suggestion (defaults are often perceived to be hints that they are the recommended option). Changing the default can be an effective nudge, but it is decidedly not the answer to every problem.

The usually large effects of well-chosen default options provide just one illustration of the gentle power of nudges. In accordance with our definition, nudges include interventions that significantly alter the behavior of Humans, even though they would be ignored by Econs. Econs respond primarily to incentives. If the

government taxes candy, Econs will buy less candy, but they are not influenced by such "irrelevant" factors as the order in which options are displayed. Humans respond to incentives too, but they are also influenced by nudges.* By properly deploying both incentives and nudges, we can improve our ability to improve people's lives, and help solve many of society's major problems. And we can do so while still insisting on everyone's freedom to choose.

A False Assumption and Two Misconceptions

Many people who favor freedom of choice reject any kind of paternalism. They want the government to let citizens choose for themselves. The standard policy advice that stems from this way of thinking is to give people as many choices as possible, and then let them choose the one they like best (with as little government intervention or nudging as possible). The beauty of this way of thinking is that it offers a simple solution to many complex problems: Just Maximize Choices—full stop!

This policy has been pushed in many domains, from education to health care to retirement savings programs. In some circles, Just Maximize Choices has become a policy mantra. Sometimes the only alternative to this mantra is thought to be a government mandate that is derided as one-size-fits-all. Those who favor Just Maximize Choices don't realize there is plenty of room between

---

* Alert readers will notice that incentives can come in different forms. If steps are taken to increase people's cognitive effort—as by placing fruit at eye level and candy in a more obscure place—it might be said that the "cost" of choosing candy is increased. Some of our nudges do, in a sense, impose cognitive or emotional (rather than material) costs, and in that sense alter incentives. Nudges count as such, and qualify as libertarian paternalism, only if any costs are low. (How low? We leave that judgment to you.)

their preferred policy and a single mandate. They oppose paternalism, or think they do, and they are skeptical about nudges. We believe that their skepticism is based on a false assumption and two misconceptions.

The false assumption is that almost all people, almost all the time, make choices that are in their best interest or at the very least are better than the choices that would be made by someone else. We claim that this assumption is false—indeed, obviously false. In fact, we do not think that anyone actually believes it on reflection.

Suppose a chess novice were to play against an experienced player. Predictably, the novice would lose precisely because he made inferior choices—choices that could easily be improved by some helpful hints. In many areas, ordinary consumers are novices, interacting in a world inhabited by experienced professionals trying to sell them things. More broadly, how well people choose is an empirical question, one whose answer is likely to vary across domains. Generally, people make good choices in contexts in which they have lots of experience, good information, and prompt feedback—say, choosing among familiar ice cream flavors. People know whether they like chocolate, vanilla, coffee, or something else.

They do less well in contexts in which they are inexperienced and poorly informed, and in which feedback is slow or infrequent—say, in saving for retirement or in choosing among medical treatments or investment options. If you are given fifty different insurance policies from which to choose, with multiple and varying features, you might benefit from a little help. So long as people are not choosing perfectly, some changes in the choice architecture could make their lives go better (as judged by them, not by some bureaucrat). As we will try to show, it is not only possible to design choice architecture to make people better off; in many cases, it is easy to do so.

The first misconception is that it is possible to avoid influencing people's choices. In countless situations, some organization or agent *must* make a choice that will affect the behavior of some other people. There is, in those situations, no way of avoiding nudging in some direction, and these nudges will affect what people choose. Choice architecture is inevitable. As illustrated by the example of Carolyn's cafeterias, people's choices are pervasively influenced by the design elements selected by choice architects. No website, and no grocery store, lacks a design. It is true, of course, that some nudges are unintentional; employers may decide (say) whether to pay employees monthly or biweekly without intending to create any kind of nudge, but they might be surprised to discover that people save more if they get paid biweekly, because twice a year they get three paychecks in one month, and many bills come monthly.

It is also true that private and public institutions can strive for one or another kind of neutrality—by, for example, choosing randomly, or by trying to figure out what most people want. But unintentional nudges can have major effects, and in some contexts, these forms of neutrality are unattractive; we shall encounter many examples. It is true as well that choice architects can insist on active choosing—by, for example, saying that if you want to work for the government, you have to specify the health care plan you prefer. But active choosing is itself a form of choice architecture, and it is not one that everyone will prefer, especially when options are numerous and decisions are difficult. In a French restaurant where customers are presented with a cart loaded with what seems like hundreds of varieties of cheese, it can be a blessing to have the option of asking the server to suggest a selection. People do not always like to be told to choose, and if they are forced to do that, they might not be at all happy.

Some people will gladly accept these points for private institu-

tions but strenuously object to government efforts to influence choice with the goal of improving people's lives. They worry that governments cannot be trusted to be competent or benign. They fear that elected officials and bureaucrats will be ignorant, will place their own interests first, or will pay excessive attention to the narrow goals of self-interested private groups. We share these concerns. In particular, we emphatically agree that for government, the risks of mistake, bias, and overreaching are real and sometimes serious. That is why we generally favor nudges over commands, requirements, and prohibitions (except when people are harming others). But governments, no less than cafeterias (which governments frequently run), have to provide starting points of one or another kind. This is not avoidable. As we shall emphasize, they do so every day through the policies they establish, in ways that inevitably affect some choices and outcomes. In this respect, the anti-nudge position is a logical impossibility—a literal nonstarter.

The second misconception is that paternalism always involves coercion. In the cafeteria example, the choice of the order in which to present food items does not force a particular diet on anyone, yet Carolyn, and others in her position, might select some arrangement of food on grounds that are paternalistic in the sense that we use the term. Would anyone object to putting the fruit and salad before the desserts at an elementary school cafeteria if the result were to induce kids to eat more apples and fewer brownies? Is this question fundamentally different if the customers are teenagers, or even adults? Is a GPS device an intrusion on freedom, even if it is paternalistic, in the sense that it tries to tell you how to get to your preferred destination? When no coercion is involved, we think that some types of paternalism should be acceptable even to those who most embrace freedom of choice.

In domains as varied as savings, health, consumer protection, organ donation, climate change, and insurance, we will offer

specific suggestions in keeping with our general approach. And by insisting that choices remain unrestricted, we think that the risks of inept or even corrupt designs are reduced. Freedom to choose is the best safeguard against bad choice architecture.

Choice Architecture in Action

Choice architects can make major improvements to the lives of others by designing user-friendly environments. Many of the most successful companies have succeeded in the marketplace for exactly that reason. Sometimes the choice architecture is highly visible, and consumers and employees appreciate the value it provides. Apple's iPhone became an enormous economic success in part because of its elegant style, but mostly because users found it easy to get the device to do what they want. Sometimes the choice architecture is neglected and could benefit from some careful attention.

Consider an illustration from the American workplace. (If you live elsewhere, please take pity on our plight.) Most large employers offer a range of benefits, including such things as life and health insurance and retirement savings plans. Once a year in late fall, there is an open enrollment period when employees are allowed to revise the selections that they made the previous year. Employees are required to make their choices online. They typically receive, by mail, a package of materials explaining the choices they have and instructions on how to log on to make these choices. They also receive various reminders.

Because employees are human, some neglect to log on, so it is crucial to decide what the default options are for these busy, absentminded, and perhaps even overwhelmed employees. Usually, the default is one of two options: employees can be given the

same option they chose the previous year, or their choice can be set back to "zero." Call these the "status quo" and "back-to-zero" options. How should the choice architect choose between these defaults?

Libertarian paternalists would like to set the default by asking what thoughtful and well-informed employees would actually want. Although this principle may not always lead to a clear choice, it is certainly better than choosing the default at random, or making either status quo or back to zero the default for everything. For example, it is a good guess that most employees would not want to cancel their heavily subsidized health insurance. So, for health insurance the status quo default (same plan as last year) seems strongly preferable to the back-to-zero default (which would mean going without health insurance).

Compare this to an employee's flexible spending account, a peculiarly cruel "benefit" that we believe exists only in the United States. An employee can contribute money into this account each month that can then be used to pay for certain expenditures (such as uninsured medical or childcare expenses). The cruel feature is that money put into this account has to be spent by March 31 of the following year or it is lost, and the predicted expenditures might vary greatly from one year to the next (for example, medical expenses might go up in a year in which a family welcomes a newborn, or childcare expenses might go down when a child enters school). In this case, the back-to-zero default probably makes more sense than the status quo.

This problem is not hypothetical. Some time ago, Thaler had a meeting with three of the top administrative officers of his employer, the University of Chicago, to discuss similar issues, and the meeting happened to take place on the final day of the open enrollment period. He mentioned this coincidence and teasingly asked whether the administrators had remembered to log on and

numerous public health issues, including pandemics, vaccination uptake, and risk-taking by young people.

Although the world seems to be becoming increasingly polarized, we continue to believe that libertarian paternalism can be a promising foundation for bipartisanship and for simple problem-solving. Better governance often requires less in the way of government coercion and more in the way of freedom to choose. Mandates and prohibitions have their place (and behavioral science can help to identify them), but when incentives and nudges replace requirements and bans, government will be both smaller and more modest. So, to be clear: this book is not a call for more bureaucracy, or even for an increased role of government. We just strive for better governance. In short, libertarian paternalism is neither left nor right. For all their differences, we hope that people with very different political convictions might be willing to converge in support of gentle nudges.

PART I

HUMANS AND ECONS

1

Biases and Blunders

Have a look, if you would, at the two tables shown in the figure below:

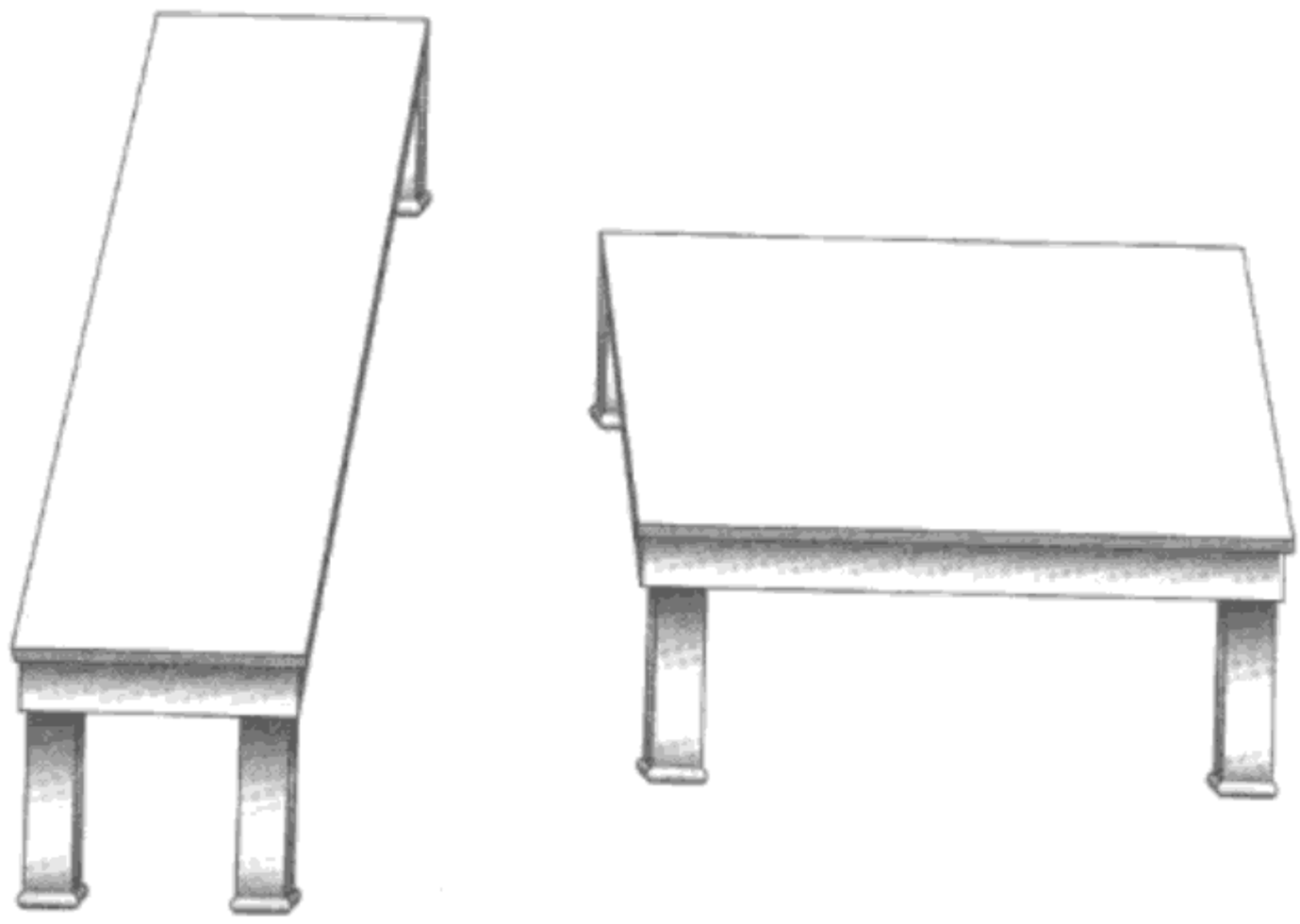


Figure 1.1. Two tables (Adapted from Shepard [1990])

Suppose that you are thinking about which one would work better as a coffee table in your living room. What would you say are the shapes of the two tables? Take a guess at the ratio of the length to the width of each. Just eyeball it.

If you are like most people, you think that the table on the left is much longer and narrower than the one on the right. Typical

guesses are that the ratio of the length to the width is 3:1 for the left table and 1.5:1 for the right table. Now take out a ruler and measure each table. You will find that the shapes of the two tabletops are identical. Measure them until you are convinced, because this is a case where seeing is not believing. (When Thaler showed this example to Sunstein at their usual lunch haunt, Sunstein grabbed his chopstick to check.)

What should we conclude from this example? If you see the left table as longer and thinner than the right one, you are certifiably human. There is nothing wrong with you (well, at least not that we can detect from this test). Still, your judgment in this task was biased, and predictably so. No one thinks that the right table is narrower! Not only were you wrong; you were probably confident that you were right. If you like, you can put this visual to good use when you encounter others who are equally human and who are disposed to gamble away their money, say, at a bar.

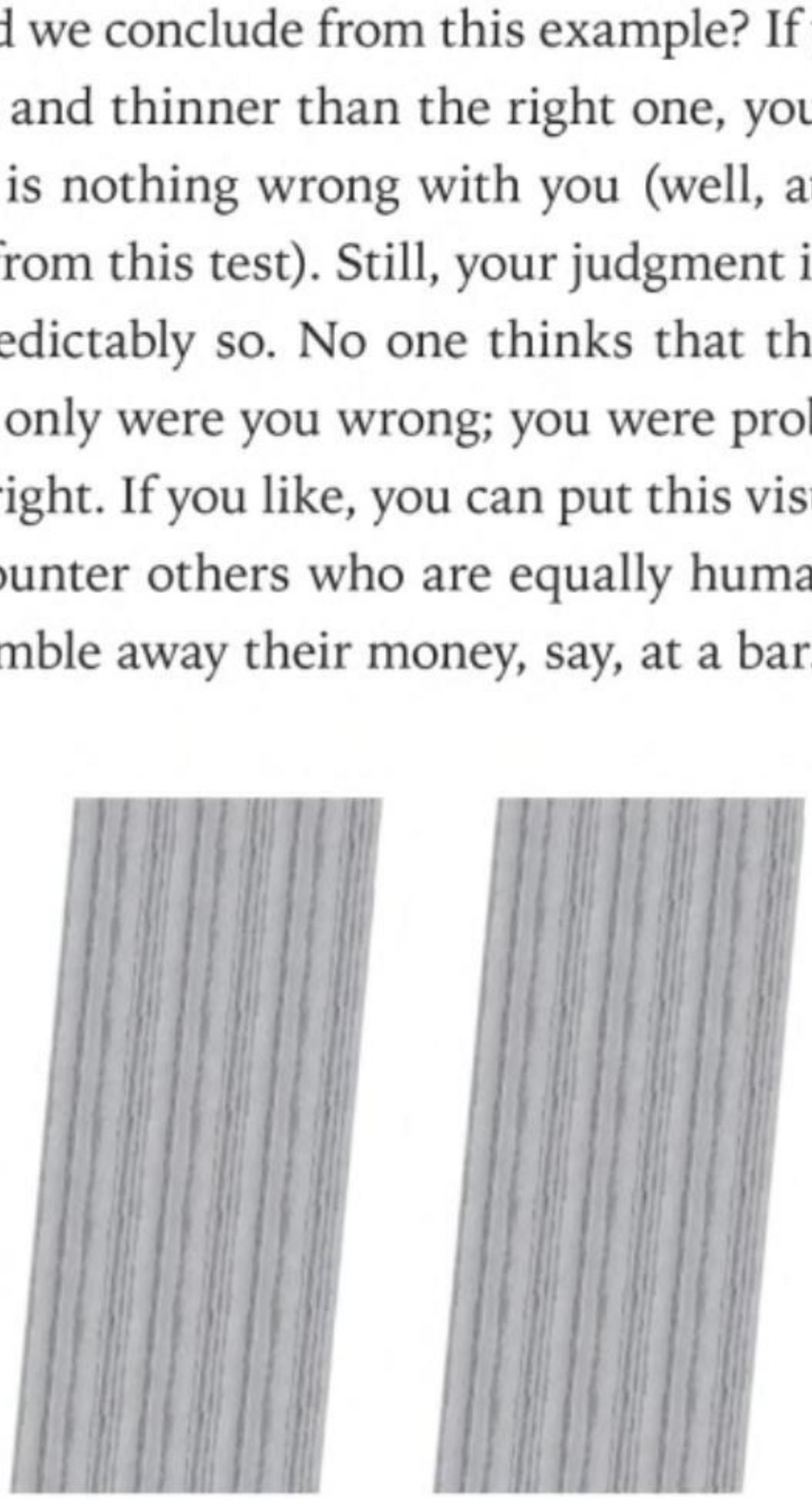


Figure 1.2. Tabletops (Adapted from Shepard [1990])

Now consider Figure 1.2. Do these two shapes look the same or different? Again, if you are human and have decent vision, you probably see these shapes as being identical, as they are. But these

when we wrote the first edition of this book. Neither of us knows much about Milwaukee, but we believe it is the biggest city in Wisconsin. How should we go about guessing? Well, a good thing to do is to start with something we do know, such as the population of Chicago, which is roughly three million. And we know that Milwaukee is a big enough city to have professional baseball and basketball teams, but clearly not as big as Chicago, so, hmmm, maybe it is one-third the size, say one million. Now consider someone from Green Bay, Wisconsin, who is asked the same question. She also doesn't know the answer, but she does know that Green Bay has about one hundred thousand people and that Milwaukee is larger, so she guesses, say, three times larger—three hundred thousand.

This process is called "anchoring and adjustment." You start with some anchor, a number you know, and adjust in the direction you think is appropriate. So far, so good. The bias occurs because the adjustments are typically insufficient. Experiments repeatedly show that in problems similar to our example, people from Chicago are likely to make a high guess (based on their high anchor), while those from Green Bay guess low (based on their low anchor). As it happens, Milwaukee has about 590,000 people.

Even obviously irrelevant anchors creep into the decision-making process. Try this one yourself. Think about the last three digits of your phone number. Write the number down if you can. Now, when do you think Attila the Hun sacked Europe? Was it before or after that year? What is your best guess? Even if you do not know much about European history, you do know enough to know that whenever Attila did whatever he did, the date has nothing to do with your phone number. Still, when we conduct this experiment with our students, we get answers that are more than three hundred years later from students who start with high anchors rather than low ones. (The right answer is 452.)

Anchors can even influence how you think your life is going. In one experiment, college students were asked two questions: (a) How happy are you? (b) How often are you dating? When the two questions were asked in this order, the correlation between the two questions was quite low (.11). But when the question order was reversed, so that the dating question was asked first, the correlation jumped to .62. Apparently, when prompted by the dating question, the students use what might be called the "dating heuristic" to answer the question about how happy they are. "Gee, I can't remember when I last had a date! I must be miserable." Similar results can be obtained from married couples if the dating question is replaced by a lovemaking question.[2]

In the language of this book, anchors serve as nudges. One example comes from tipping behavior in taxicabs. Taxi drivers were initially reluctant to adopt the technology to accept credit cards in their cabs, because the credit card companies take a cut of roughly 3 percent. But those who did install the technology were pleasantly surprised to learn that their tips increased! This was partly due to some anchoring. When customers elected to use their card to pay, they would often be confronted with tip options that looked something like this:

15%
20%
25%
Choose your own amount.

Notice this screen is nudging people toward higher tips by offering precalculated amounts that start at these percentages. (And when in doubt, people often choose the middle option—in this case 20 percent, which is higher than the 15 percent many customers previously chose without this intervention.) Also, the option to choose your own tip is a bit of an illusion. The screen appears

only when the trip is over; the customer is ready to leave, others may be waiting to get into the cab, and entering one's own amount requires some calculations and a couple extra steps. By contrast, just clicking one of the buttons is easy!

Nevertheless, it is tricky to figure out what the best defaults would be from the perspective of the driver. This is shown in a careful study by behavioral economist Kareem Haggag. Haggag was able to compare the tips from two cab companies, one of which offered 15, 20, and 25 percent tip suggestions, whereas the other had defaults of 20, 25, and 30 percent. On balance, the screen with the relatively higher default tips significantly increased drivers' earnings, because they increased the average tip. But interestingly, they also provoked an increase in the number of riders who offered no tip at all. Some people were evidently put off by the aggressive defaults, and they refused to give anything.[3] This is connected with the behavioral phenomenon of *reactance*: when people feel ordered around, they might get mad and do the opposite of what is being ordered (or even suggested).

Still, the evidence shows that, within reason, the more you ask for, the more you tend to get. Haggag's headline is that because of the higher on-screen default tips, taxi drivers ended up with a decent increase in their annual earnings. Lawyers who sue companies sometimes win astronomical amounts, in part because they have successfully induced juries to anchor on multimillion-dollar figures (such as a company's annual earnings). Clever negotiators often get amazing deals for their clients by producing an opening offer that makes their adversary thrilled to pay half that very high amount. But keep that notion of reactance in mind. If you get greedy, you might end up with nothing.

Availability

A quick quiz: In the United States, are more gun deaths caused by homicides or suicides?

In answering questions of this kind, most people use what is called the *availability heuristic*. They assess the likelihood of risks by asking how readily examples come to mind. Because homicides are much more heavily reported in the news media, they are more available than suicides, and so people tend to believe, wrongly, that guns cause more deaths from homicide than from suicide. (There are about twice as many gun-inflicted suicides as homicides.) An important lesson can be found here: people often buy a gun thinking they want to protect their family, but it is much more likely that they will increase the chance that a family member successfully commits suicide.

Accessibility and salience are closely related to availability, and they are important as well. If you have personally experienced a serious earthquake, you're more likely to believe that a flood or an earthquake is likely than if you read about it in a weekly magazine. Thus, vivid and easily imagined causes of death (for example, tornadoes) often receive inflated estimates of probability, and less-vivid causes (for example, asthma attacks) receive low estimates, even if they occur with a far greater frequency (here a factor of twenty). So, too, recent events have a greater impact on our behavior, and on our fears, than earlier ones.

The availability heuristic helps to explain much risk-related behavior, including both public and private decisions to take precautions. Whether people buy insurance for natural disasters is greatly affected by recent experiences.[4] In the aftermath of a flood, purchases of new flood insurance policies rise sharply—but purchases decline steadily from that point, as vivid memories recede. And people who know someone who has experienced a flood are

more likely to buy flood insurance for themselves, regardless of the flood risk they actually face.[5]

Biased assessments of risk can perversely influence how we prepare for and respond to crises, business choices, and the political process. When technology stocks have done very well, people might well buy technology stocks, even if by that point they've become a bad investment. People might overestimate some risks, such as a nuclear power accident, because of well-publicized incidents such as Chernobyl and Fukushima. They might underestimate others, such as strokes, because they do not get much attention in the media. Such misperceptions can affect policy, because some governments will allocate their resources in a way that fits with people's fears rather than in response to the most likely dangers.

When availability bias is at work, both private and public decisions may be improved if judgments can be nudged back in the direction of true probabilities. A good way to get people to take more precautions about a potential hazard is to remind them of a related incident in which things went wrong; a good way to increase people's confidence is to remind them of a similar situation in which everything worked out for the best.

Representativeness

The third of the original three heuristics bears an unwieldy name: representativeness. Think of it as the similarity heuristic. The idea is that when asked to judge how likely it is that A belongs to category B, people answer by asking themselves how similar A is to their image or stereotype of B (that is, how "representative" A is of B). Like the other two heuristics we have discussed, this one is used because it often works. Stereotypes are sometimes right!

Again, biases can creep in when similarity and frequency diverge. The most famous demonstration of such biases involves

(Second marriage, Samuel Johnson once quipped, "is the triumph of hope over experience.") A similar point applies to entrepreneurs starting new businesses, in which the failure rate is at least 50 percent. In one survey of people starting new businesses (typically small businesses, such as contracting firms, restaurants, or salons), respondents were asked two questions: (a) What do you think is the chance of success for a typical business like yours? (b) What is your chance of success? The most common answers to these questions were 50 percent and 90 percent, respectively, and many said 100 percent in response to the second question.[10]

Unrealistic optimism can explain a lot of individual risk-taking, especially in the domain of risks to life and health. Asked to envision their future, students typically say that they are far less likely than their classmates to be fired from a job, to have a heart attack or get cancer, to be divorced after a few years of marriage, or to have a drinking problem. Older people underestimate the likelihood that they will be in a car accident or suffer major diseases. Smokers are aware of the statistical risks and often even exaggerate them, but most believe that they are less likely to be diagnosed with lung cancer and heart disease than most nonsmokers. Lotteries are successful partly because of unrealistic optimism.[11]

Unrealistic optimism is a pervasive feature of human life; it characterizes most people in most social categories. When they overestimate their personal immunity to harm, people may fail to take sensible preventive steps. During the pandemic of 2020 and 2021, some people failed to take precautions, including mask-wearing, because of optimism about their personal risks. If people are running risks because of unrealistic optimism, they might be able to benefit from a nudge. In fact, we have already mentioned one possibility: if people are reminded of a bad event, they may not continue to be so optimistic.

Gains and Losses

People hate losses. In more technical language, people are "loss averse." Roughly speaking, the prospect of losing something makes you twice as miserable as the prospect of gaining the same thing makes you happy. How do we know this?

Consider a simple experiment.[12] Half the students in a class are given a coffee mug with the insignia of their home university embossed on it. The students who do not get a mug are asked to examine their neighbors' mugs. Then mug owners are invited to sell their mugs and nonowners are invited to buy them. They do so by answering this question: "At each of the following prices, indicate whether you would be willing to (give up your mug/buy a mug)." The results show that those with mugs demand roughly twice as much to give them up as others are willing to pay to get one. Thousands of mugs have been used in dozens of replications of this experiment, but the results are nearly always the same. Once you have a mug, you don't want to give it up. But if you don't have one, you don't feel an urgent need to buy one. What this means is that people do not assign specific values to objects; it often matters whether they are selling or buying.

It is also possible to measure loss aversion with gambles. Suppose I ask you whether you want to make a bet. Heads you win $X, tails you lose $100. How much does X have to be for you to take the bet? For many people, the answer to this question is somewhere around $200. This implies that the prospect of winning $200 just offsets the prospect of losing $100.

Loss aversion helps produce inertia, meaning a strong desire to stick with your current holdings. If you are reluctant to give up what you have because you do not want to incur losses, then you will turn down trades you might have otherwise made. In another

experiment, half the students in a class received coffee mugs (of course) and half got large chocolate bars. The mugs and the chocolate cost about the same, and in pretests students were as likely to choose one as the other. Yet when offered the opportunity to switch from a mug to a candy bar or vice versa, only one in ten switched.

Loss aversion has a lot of relevance to public policy. If you want to discourage the use of plastic bags, should you give people a small amount of money for bringing their own reusable bag, or should you ask them to pay the same small amount for a plastic bag? The evidence suggests that the former approach has no effect at all, but that the latter works; it significantly decreases use of plastic bags. People don't want to lose money, even if the amount is trivial.[13] (Environmentalists, please remember this point.)

Status Quo Bias

For lots of reasons, people have a general tendency to stick with their current situation. One reason is loss aversion; giving up what we have is painful. But the phenomenon has multiple causes. William Samuelson and Richard Zeckhauser have dubbed this behavior *status quo bias*, and it has been demonstrated in numerous situations.[14] Most teachers know that students tend to sit in the same seats in class, even without a seating chart. But status quo bias can occur even when the stakes are much larger, and it can cost people a lot of money.

For example, in retirement savings plans most participants pick an asset allocation when they join the plan and then forget about it. A study conducted in the late 1980s looked at the deci-

sions of participants in a pension plan that covered many college professors in the United States. The median number of changes in the asset allocation over a lifetime was, believe it or not, zero.[15] In other words, over the course of their careers, more than half of the participants made exactly no changes to the way their contributions were being allocated. Perhaps even more telling, many married participants who were single when they joined the plan still had their mothers listed as their beneficiaries! As we will see, inertia in investing behavior is alive and well in Sweden. (See Chapter 10.)

Status quo bias is easily exploited. A true story: Many years ago, American Express wrote Sunstein a cheerful letter telling him that he could receive, for free, three-month subscriptions to five magazines of his choice.* What a great deal! Free subscriptions seem like a bargain, even if the magazines rarely got read, so Sunstein happily made his choices. What he didn't realize was that unless he took some action to cancel his subscription, he would automatically keep receiving the magazines after the three-month period, automatically paying for them at the normal rate. For more than a decade, he continued to subscribe to magazines that he hardly ever read and that he mostly despised. They tended to pile up around the house. He kept intending to cancel those subscriptions, but somehow never got around to it. It was not until he started working on the original edition of this book that he canceled them.

One of the causes of status quo bias is a lack of attention. Many people often adopt what we call the "yeah, whatever" heuristic. A good illustration is the carryover effect that occurs when people

---

* For young readers, magazines were weekly printed documments that arrived in the mail and featured stale news and nice photographs.