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## الأكاديمية العربية الدولية المقررات الجامعية

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# *Introduction to Managerial Decision Making*

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**T**he human mind packs spectacular power into its modest three-pound mass. With little effort, we can accomplish sophisticated tasks, such as recognizing faces or catching a ball, that are far beyond the abilities of even the most powerful computers and sophisticated robots.

Yet most people remain largely unaware of how their minds accomplish complex tasks, and self-insight and experience offer little guidance. The fact that we lack an “operating manual” for our minds might not seem important. In fact, however, our lack of understanding of how our minds work has profound consequences. Without an understanding of our thoughts and behaviors, we cannot anticipate when the cognitive processes that usually serve us so well are likely to lead us astray.

Fortunately, psychological research has uncovered many of the clever and sophisticated shortcuts on which our brains rely to help us get through the day—as well as common errors that even bright people make on a regular basis. These errors can lead to minor problems, such as choosing the wrong product or the wrong investment. They also can contribute to big problems, such as bankruptcy, government inefficiency, and social injustice.

This book will introduce you to a number of cognitive biases that are likely to affect the judgment of all types of professionals, from auditors to politicians to salespeople. You are likely to recognize your own tendencies in the research results that we’ll cover. The strategies that we suggest for overcoming them will give you the skills you need to become a better decision maker and to protect yourself, your family, and your organization from avoidable mistakes.

### **THE ANATOMY OF DECISIONS**

The term *judgment* refers to the cognitive aspects of the decision-making process. To fully understand judgment, we must first identify the components of the decision-making process that require it. To get started, consider the following decision situations:

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- You are finishing your MBA at a well-known school. Your credentials are quite good, and you expect to obtain job offers from a number of consulting firms. How are you going to select the right job?
- You are the director of the marketing division of a rapidly expanding consumer company. You need to hire a product manager for a new “secret” product that the company plans to introduce to the market in fifteen months. How will you go about hiring the appropriate individual?
- As the owner of a venture capital firm, you have a number of proposals that meet your preliminary considerations but only a limited budget with which to fund new projects. Which projects will you fund?
- You are on the corporate acquisition staff of a large conglomerate that is interested in acquiring a small-to-moderate-sized firm in the oil industry. What firm, if any, will you advise the company to acquire?

What do these scenarios have in common? Each one proposes a problem, and each problem has a number of alternative solutions. Let’s look at six steps you should take, either implicitly or explicitly, when applying a “rational” decision-making process to each scenario.

1. **Define the problem.** The problem has been fairly well specified in each of the four scenarios. However, managers often act without a thorough understanding of the problem to be solved, leading them to solve the wrong problem. Accurate judgment is required to identify and define the problem. Managers often err by (a) defining the problem in terms of a proposed solution, (b) missing a bigger problem, or (c) diagnosing the problem in terms of its symptoms. Your goal should be to solve the problem, not just eliminate its temporary symptoms.
2. **Identify the criteria.** Most decisions require you to accomplish more than one objective. When buying a car, you may want to maximize fuel economy, minimize cost, maximize comfort, and so on. The rational decision maker will identify all relevant criteria in the decision-making process.
3. **Weight the criteria.** Different criteria will vary in importance to a decision maker. Rational decision makers will know the relative value they place on each of the criteria identified (for example, the relative importance of fuel economy versus cost versus comfort). The value may be specified in dollars, points, or whatever scoring system makes sense.
4. **Generate alternatives.** The fourth step in the decision-making process requires identification of possible courses of action. Decision makers often spend an inappropriate amount of search time seeking alternatives, thus creating a barrier to effective decision making. An optimal search continues only until the cost of the search outweighs the value of the added information.
5. **Rate each alternative on each criterion.** How well will each of the alternative solutions achieve each of the defined criteria? This is often the most

difficult stage of the decision-making process, as it typically requires us to forecast future events. The rational decision maker carefully assesses the potential consequences on each of the identified criteria of selecting each of the alternative solutions.

6. **Compute the optimal decision.** Ideally, after all of the first five steps have been completed, the process of computing the optimal decision consists of (a) multiplying the ratings in step 5 by the weight of each criterion, (b) adding up the weighted ratings across all of the criteria for each alternative, and (c) choosing the solution with the highest sum of the weighted ratings.

This model of decision making assumes that people follow these six steps in a fully rational manner. That is, it assumes that decision makers (1) perfectly define the problem, (2) identify all criteria, (3) accurately weigh all of the criteria according to their preferences, (4) know all relevant alternatives, (5) accurately assess each alternative based on each criterion, and (6) accurately calculate and choose the alternative with the highest perceived value.

There is nothing special about these six steps. Different researchers specify different steps—which typically overlap a great deal. For example, in a wonderful book on rational decision making, Hammond, Keeney, and Raiffa (1999) suggest eight steps: (1) work on the right problem, (2) specify your objectives, (3) create imaginative alternatives, (4) understand the consequences, (5) grapple with your tradeoffs, (6) clarify your uncertainties, (7) think hard about your risk tolerance, and (8) consider linked decisions. Both of these lists provide a useful order for thinking about what an optimal decision-making process might look like.

## **SYSTEM 1 AND SYSTEM 2 THINKING**

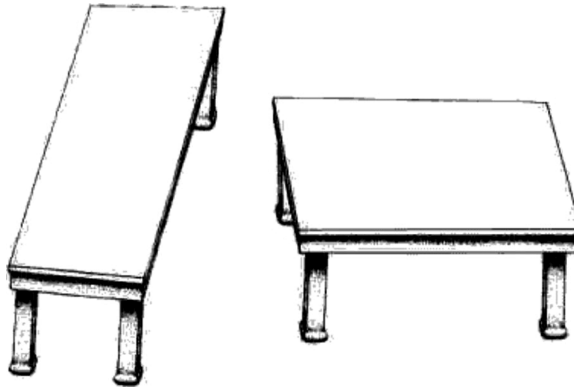
Do people actually reason in the logical manner described above? Sometimes they do, but not most of the time. Stanovich and West (2000) make a useful distinction between System 1 and System 2 cognitive functioning. System 1 thinking refers to our intuitive system, which is typically fast, automatic, effortless, implicit, and emotional. We make most decisions in life using System 1 thinking. For instance, we usually decide how to interpret verbal language or visual information automatically and unconsciously. By contrast, System 2 refers to reasoning that is slower, conscious, effortful, explicit, and logical (Kahneman, 2003). Hammond, Keeney, and Raiffa's (1999) logical steps above provide a prototype of System 2 thinking.

In most situations, our System 1 thinking is quite sufficient; it would be impractical, for example, to logically reason through every choice we make while shopping for groceries. But System 2 logic should preferably influence our most important decisions.

The busier and more rushed people are, the more they have on their minds, and the more likely they are to rely on System 1 thinking. In fact, the frantic pace of managerial life suggests that executives often rely on System 1 thinking (Chugh, 2004). Although a complete System 2 process is not required for every managerial decision, a key goal for managers should be to identify situations in which they should move from the intuitively compelling System 1 thinking to the more logical System 2.

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Many people have a great deal of trust in their intuitions—their System 1 thinking. To prepare for the rest of the book, which is designed to challenge this confidence, consider the following diagram from Shepard (1990):



Like most people, you probably saw the table on the right as more of a square than the one on the left, which appears to be longer and skinnier. Well, your System 1 processing is failing you, as it fails most people in this instance. Don't believe it? Try this System 2 strategy: put a sheet of paper over the drawing and trace the top of either table. Now line up your tracing over the other table, and see how your intuition has failed you!

Throughout this book, we will provide you with plenty of other reasons to question your intuition. Even the brightest people make judgmental errors on a regular basis. These errors, or biases, are much more likely to occur in System 1 thinking than in System 2 thinking. At the same time, any methodical System 2 process will use some intuitive System 1 shortcuts. In fact, the two systems frequently work in tandem, with modification of the quick, initial response of System 1 thinking after more in-depth consideration by the System 2 mind.

Sometimes, however, System 2 thinking does not fully adjust. For example, most people have a sensible aversion to eating from a container labeled as containing the poison cyanide. However, they have trouble overcoming this impulse even when they themselves were the ones to write "cyanide" on an otherwise clean container (Rozin, Markwith, & Ross, 1990). System 1 leads people to feel an aversion to eating from the container. Even after their System 2 thinking tells them that this aversion is utterly illogical, people still cannot bring themselves to eat.

### THE BOUNDS OF HUMAN RATIONALITY

In this book, the term *rationality* refers to the decision-making process that is logically expected to lead to the optimal result, given an accurate assessment of the decision maker's values and risk preferences.

The rational model is based on a set of assumptions that prescribe how a decision *should* be made rather than describing how a decision *is* made. In his Nobel Prize-winning work, Herbert Simon (March & Simon, 1958; Simon, 1957) suggested that individual judgment is bounded in its rationality and that we can better understand decision making by describing and explaining actual decisions, rather than by focusing solely on prescriptive (“what would rationally be done”) decision analysis.

**Two schools of thought.** As Simon’s work implies, the field of decision making can be roughly divided into two parts: the study of prescriptive models and the study of descriptive models. Prescriptive decision scientists develop methods for making optimal decisions. For example, they might suggest a mathematical model to help a decision maker act more rationally. By contrast, descriptive decision researchers consider how decisions are actually made.

This book takes a descriptive approach. Why, when a prescriptive approach should lead to an optimal decision? First, understanding our own decision-making processes helps clarify where we are likely to make mistakes and therefore when better decision strategies are needed. Second, the optimal decision in a given situation often depends on the behavior of others. Understanding how others will act or react to your behavior is critical to making the right choice. Third, plenty of good advice about making decisions is available, but most people do not follow it. Why not? Because they do not understand how they actually make decisions, they do not appreciate the need to improve their decision making. Indeed, some of the intuitions that lead us astray also undermine our willingness to implement good advice. An understanding of this fact is needed to motivate people to adopt better decision-making strategies.

**Why we “satisfice.”** While Simon’s bounded-rationality framework views individuals as attempting to make rational decisions, it acknowledges that they often lack important information that would help define the problem, the relevant criteria, and so on. Time and cost constraints limit the quantity and quality of available information. Furthermore, decision makers retain only a relatively small amount of information in their usable memory. Finally, intelligence limitations and perceptual errors constrain the ability of decision makers to accurately “calculate” the optimal choice from the universe of available alternatives.

Together, these limitations prevent decision makers from making the optimal decisions assumed by the rational model. The decisions that result typically overlook the full range of possible consequences. Decision makers will forgo the best solution in favor of one that is acceptable or reasonable. That is, we *satisfice*: rather than examining all possible alternatives, we simply search until we find a *satisfactory* solution that will *suffice* because it achieves an acceptable level of performance.

**A broader look at bias.** The concepts of bounded rationality and satisficing show us that human judgment deviates from rationality. Specifically, these concepts help us identify situations in which we may be acting on the basis of limited information. However, these concepts do not tell us *how* our judgment will be biased—they do not help diagnose the specific systematic, directional biases that affect our judgment.

Fifteen years after the publication of Simon’s work, Tversky and Kahneman (1974) continued what he had begun. They provided critical information about specific

systematic biases that influence judgment. Their work, and the work that followed, led to our modern understanding of judgment.

Specifically, researchers have found that people rely on a number of simplifying strategies, or rules of thumb, when making decisions. These simplifying strategies are called *heuristics*. As the standard rules that implicitly direct our judgment, heuristics serve as a mechanism for coping with the complex environment surrounding our decisions.

In general, heuristics are helpful, but their use can sometimes lead to severe errors. A central goal of this book is to identify and illustrate these heuristics and the biases that can result from them in the managerial setting. We will use examples of a variety of heuristics and biases to explain how people deviate from a fully rational decision-making process in individual and competitive situations.

**New findings.** Between 1957 and 2000, bounded rationality served as the integrating concept of the field of behavioral decision research. With time, we have refined and clarified this thinking. In 2000, Richard Thaler suggested that decision making is bounded in two ways not precisely captured by the concept of bounded rationality. First, our willpower is bounded, such that we tend to give greater weight to present concerns than to future concerns. As a result, our temporary motivations are often inconsistent with our long-term interests in a variety of ways, such as the common failure to save adequately for retirement (we discuss this issue in Chapters 5 and 8). Second, Thaler suggests that our self-interest is bounded; unlike the stereotypic economic actor, we care about the outcomes of others (Chapter 7 explores this topic).

Furthermore, we will explore two other bounds on human judgment. First, Chapter 3 explores the concept of *bounded awareness*, including the broad category of focusing failures, or the common tendency to overlook obvious, important, and readily available information that lies beyond our immediate attention. Second, Chapter 7 discusses *bounded ethicality*, a term that refers to the notion that our ethics are limited in ways of which we are unaware.

Overall, this book develops a systematic structure for understanding the bounds to our decision making, including bounded rationality, bounded willpower, bounded self-interest, bounded awareness, and bounded ethicality.

## INTRODUCTION TO JUDGMENTAL HEURISTICS

Consider the following example:

While finishing an advanced degree in computer science, Marla Bannon put together a Web-based retailing concept that many of her colleagues consider to be one of the best ever developed. While the product is great, Marla has far less skill in marketing her ideas. She decides to hire a marketing MBA with experience in Web-based environments to formalize the business plan she will use to approach venture capitalists. Marla follows the heuristic of limiting her search to new MBAs from the top six management schools. How would you evaluate her strategy?

If we evaluate this strategy in terms of the degree to which it follows the rational model outlined earlier, Marla's heuristic of limiting her search to six schools will be



deficient, because her search will not be complete. Her heuristic may eliminate the best possible candidates from consideration if they do not attend one of the top schools. However, the heuristic also has some benefits. While it could eliminate the best choice, the expected time savings of focusing on only six schools may outweigh any potential loss resulting from Marla's limited search strategy. For this reason, this job search heuristic could produce more good decisions than bad ones. In fact, economists would argue that individuals use heuristics such as this because the benefit of time saved often outweighs the costs of any potential reduction in the quality of the decision.

Heuristics provide time-pressured managers and other professionals with a simple way of dealing with a complex world. Usually, heuristics produce correct or partially correct judgments. In addition, it may be inevitable that people will adopt some way of simplifying decisions. But reliance on heuristics creates problems, primarily because people are typically unaware that they rely on them. Unfortunately, the misapplication of heuristics to inappropriate situations leads people astray. When managers become aware of the potential adverse impact of using heuristics, they become capable of deciding when and where to use them and, if it is to their advantage, eliminating certain heuristics from their decision-making repertoire.

People use a variety of types of heuristics. The poker player follows the heuristic "never play for an inside straight." The mortgage banker follows the heuristic "spend only 35 percent of your income on housing." Although an understanding of these specific heuristics is important to these professionals, our concern in this book is with more general cognitive heuristics that affect virtually everyone. The heuristics described next are not specific to particular individuals; rather, research has shown that they can be applied across the population. The four general heuristics that we focus on here are (1) the availability heuristic, (2) the representativeness heuristic, (3) positive hypothesis testing, and (4) the affect heuristic.

## **The Availability Heuristic**

People assess the frequency, probability, or likely causes of an event by the degree to which instances or occurrences of that event are readily "available" in memory (Tversky & Kahneman, 1973). An event that evokes emotions and is vivid, easily imagined, and specific will be more available than an event that is unemotional in nature, bland, difficult to imagine, or vague.

For example, a subordinate who works in close proximity to the manager's office is likely to receive a more critical performance evaluation at year-end than a worker who sits down the hall, because the manager will be more aware of the nearby subordinate's errors. Similarly, a product manager will base her assessment of the probability of a new product's success on her recollection of the successes and failures of similar products in the recent past.

The availability heuristic can be a very useful managerial decision-making strategy, since our minds generally recall instances of events of greater frequency more easily than rare events. Consequently, this heuristic will often lead to accurate judgment. This heuristic is fallible, however, because the availability of information is also affected by factors unrelated to the objective frequency of the judged event. These irrelevant



factors (such as vividness) can inappropriately influence an event's immediate perceptual salience, the vividness with which it is revealed, or the ease with which it is imagined. Peter Lynch, the former director of Fidelity's Magellan Fund (one of the two largest mutual funds), argues in favor of buying stock in firms that are unavailable in the minds of most investors (for example, due to their blandness); the more available the stock is, he notes, the more overvalued it will be.

### **The Representativeness Heuristic**

When making a judgment about an individual (or object or event), people tend to look for traits an individual may have that correspond with previously formed stereotypes. "A botanist assigns a plant to one species rather than another by using this judgment strategy," wrote Nisbett and Ross (1980, p. 7). "The plant is categorized as belonging to the species that its principal features most nearly resemble."

Managers also use the representativeness heuristic. They may predict a person's performance based on an established category of people that the individual represents for them. If a manager thinks that the best salespeople are likely to be extroverts, or ex-athletes, or white men, for instance, then the manager will favor those sorts of people for their sales jobs. Similarly, bankers and venture capitalists will predict the success of a new business based on the similarity of that venture to past successful and unsuccessful ventures. If an entrepreneur pitching an idea reminds a venture capitalist of Amazon.com founder Jeff Bezos, the entrepreneur may be more likely to obtain funding than an entrepreneur who reminds the venture capitalist of the founder of a less successful company.

In some cases, use of the representativeness heuristic offers a good first-cut approximation, drawing our attention to the best options. At other times, this heuristic can lead to serious errors. For instance, the germ theory of disease took a long time to catch on because people had a hard time accepting the notion that something as minuscule as viruses and bacteria could produce such powerful consequences as tuberculosis and the plague. Instead, because they relied on the representativeness heuristic, people believed for centuries that disease was caused by malevolent agents, such as evil spirits or magic spells. In the meantime, innumerable people died unnecessary deaths from easily preventable diseases, as in the case of physicians who routinely carried infections from one patient to another, or even from cadavers to surgery patients, by not washing their hands.

The representativeness heuristic can also work on an unconscious level, causing a person to engage in race discrimination or other behavior that he or she would consider morally reprehensible on a conscious level. Unfortunately, people tend to rely on representative information even when that information is insufficient for them to make an accurate judgment, or when better, less obviously representative information is available.

### **Positive Hypothesis Testing**

Consider your response to the following questions:

1. Is marijuana use related to delinquency?

2. Are couples who marry under the age of twenty-five more likely to have bigger families than couples who marry at an older age?

In assessing the marijuana question, most people typically try to remember several marijuana users and recall whether these individuals were delinquents. However, a proper analysis would require you to recall four groups of people: marijuana users who are delinquents, marijuana users who are not delinquents, delinquents who do not use marijuana, and non-delinquents who do not use marijuana.

The same analysis applies to the marriage question. A rational assessment of whether those who marry young are more likely to have large families than those who marry later would include four groups: couples who married young and have large families, couples who married young and have small families, couples who married older and have large families, and couples who married older and have small families.

Indeed, there are always at least four separate situations to consider when assessing the association between two events, assuming that each one has just two possible outcomes. However, our everyday decision making commonly neglects this fact. Instead, we intuitively use selective data when testing hypotheses, such as instances in which the variable of interest (e.g., marijuana use or early marriage) is present. Klayman and Ha (1987) call this phenomenon *positive hypothesis testing*; Baron, Beattie, and Hershey (1988) call it the *congruence heuristic*.

This simple search heuristic turns out to have profound consequences, inspiring a whole host of related biases, as we will explore in Chapter 2. In the absence of evidence to the contrary, people tend to behave as if they assumed that a given statement or hypothesis is true (Gilbert, 1991; Trabasso, Rollins, & Shaughnessy, 1971). This tendency in turn can lead to the *confirmation bias*, in which we search for and interpret evidence in a way that supports the conclusions we favored at the outset (Nickerson, 1998). It can also explain the power of *anchoring*, in which some irrelevant initial hypothesis or starting point holds undue sway over our judgments. In addition, positive hypothesis testing can inspire *overconfidence*, leading us to believe too strongly in the accuracy of our own beliefs. Finally, positive hypothesis testing can trigger the *hindsight bias*, in which we too quickly dismiss, in retrospect, the possibility that things could have turned out differently.

## The Affect Heuristic

Most of our judgments are evoked by an affective, or emotional, evaluation that occurs even before any higher-level reasoning takes place (Kahneman, 2003). While these affective evaluations often are not conscious, Slovic, Finucane, Peters, and MacGregor (2002) provide evidence that people nonetheless use them as the basis of their decisions rather than engaging in a more complete analysis and reasoning process.

A manifestation of System 1 thinking, the *affect heuristic* is all the more likely to be used when people are busy or under time constraints (Gilbert, 2002). For example, appraisals of potential employees can be affected by a wide variety of variables that influence the manager's affect, independent of applicant quality. These variables could include how a candidate compares to the previous applicant, the mood of the manager, or the degree to which the applicant reminds the manager of a recently divorced

spouse. Environmental conditions that change affect can also influence decision making. It has been shown that stock prices go up on sunny days, presumably due to the good mood and optimism induced by the weather. While affect can be a good guide, when it replaces more reflective decision making, it can prevent you from making optimal choices.

In a related vein, Kahneman, Schkade, and Sunstein (1998) use the term *outrage heuristic* to describe the fact that legal awards are highly predicted by the jury's affective outrage at the defendant's behavior, rather than simply by logical reasoning about the harm created by the defendant. Like Kahneman and Frederick (2002), we see significant overlap between the affect heuristic and the outrage heuristic; in this book, we will focus on the more general affect heuristic. Chapters 4, 5, and 7 will develop the affect heuristic in more detail.

## AN OUTLINE OF THINGS TO COME

The main objective of this book is to improve your judgment. As a preview of what you will learn, let's consider how we might improve Marla Bannon's judgment. First, we must identify the errors in her intuitive judgment, making her aware of biases that are likely to affect her decision. This awareness will improve her current decision-making process and lead to a more beneficial outcome.

Yet Lewin (1947) suggests that for change to occur and last over time, an individual must do more than simply be aware of imperfections. For change to be successful, Lewin argues, it is necessary to (1) get the individual to "unfreeze" existing decision-making processes, (2) provide the content necessary for change, and (3) create the conditions that "refreeze" new processes, thus making the change part of the individual's standard repertoire.

This book will attempt to unfreeze your present decision-making processes by demonstrating how your judgment systematically deviates from rationality. You will also be given tools to allow you to change your decision-making processes. Finally, the book will discuss methods that you can use to refreeze your thinking to ensure that the changes will last.

Nisbett and Ross (1980, pp. xi–xii) write:

One of philosophy's oldest paradoxes is the apparent contradiction between the greatest triumphs and the dramatic failures of the human mind. The same organism that routinely solves inferential problems too subtle and complex for the mightiest computers often makes errors in the simplest of judgments about everyday events. The errors, moreover, often seem traceable to violations of the same inferential rules that underlie people's most impressive successes. . . . How can any creature skilled enough to build and maintain complex organizations, or sophisticated enough to appreciate the nuances of social intercourse, be foolish enough to mouth racist clichés or spill its lifeblood in pointless wars?

While Nisbett and Ross refer to the general population, the essence of their question defines a fascinating issue concerning managerial effectiveness. In this book, we approach managers as intelligent people who have been generally successful, but

whose decisions are biased in ways that seriously compromise their potential. We will show how habit leads people to rely on heuristics that limit the quality of their decisions.

Chapters 2 through 8 focus on individual decision making. In these chapters, we give little attention to the fact that many managerial decisions are made in conjunction with other individuals. Instead, these chapters focus on how individuals approach decisions. Chapters 9 and 10 reexamine judgment in the interpersonal context of negotiation. Chapter 11 summarizes the book's arguments and focuses on how to incorporate the changes suggested throughout into your own decision-making processes.

Specifically, the remaining chapters will focus on the following:

**Chapter 2: Common biases.** This chapter identifies and illustrates a series of specific biases that affect the judgment of virtually all managers. These biases are caused by the four heuristics described in this chapter. Quiz items and short scenarios demonstrate these biases and emphasize their prevalence.

**Chapter 3: Bounded awareness.** This chapter examines how the amazing ability of the human mind to focus can prevent us from seeing information that is readily available and important. We will review new research on bounded awareness that shows systematic ways in which sharp focus degrades the quality of decisions.

**Chapter 4: Framing, perceptions of change, and reversals of preference.** Among the most striking biases in the decision literature are problems that lead managers to reverse their preferences based on information that they would agree should not affect their behavior. This chapter will examine how the framing of information affects decisions.

**Chapter 5: Motivation and emotion.** Some biases are created by emotions and by the self-serving motivations of individuals, rather than by purely cognitive mistakes. This chapter complements the presentation of cognitive biases in Chapters 2, 3, 4, and 6 with an overview of *motivated biases*.

**Chapter 6: Escalation of commitment.** Managerial decision makers who commit themselves to a particular course of action may make subsequent suboptimal decisions in order to justify their previous commitment. This chapter examines the research evidence and psychological explanations for this behavior. *Escalation of commitment* has a significant effect in a variety of managerial domains, including new product development, bank loans, and performance appraisal.

**Chapter 7: Fairness and ethics in decision making.** When do people care about fairness? When will individuals accept suboptimal outcomes in order to maintain fairness? This chapter examines how we think about fairness and explores inconsistencies in our assessments of fairness.

**Chapter 8: Common investment mistakes.** Perhaps the domain that has been most influenced by decision research has been behavioral finance. In the last decade, we have learned a great deal about the mistakes that investors commonly make. This chapter will explore these mistakes and apply the messages of this book to help readers become wiser investors.

**Chapter 9: Making rational decisions in negotiation.** This chapter outlines a framework to help the reader think about two-party negotiations. The focus is on how you can make decisions to maximize the joint gain available to both sides, while simultaneously thinking about how to obtain as much of that joint gain as possible for yourself.

**Chapter 10: Negotiator cognition.** This chapter looks at the judgmental mistakes we make in negotiations. The resulting framework shows how consumers, managers, salespeople, and society as a whole can benefit simultaneously from less biased negotiations.

**Chapter 11: Six strategies for improved decision making.** The final chapter evaluates six explicit strategies for improving judgment: (1) use prescriptive decision-making procedures, (2) acquire expertise, (3) debias your judgment, (4) reason analogically, (5) take an outsider's view, and (6) understand biases in others. This chapter will teach you how to use the information in the book to permanently improve your decisions.