Wiley Trading Series

TRADE MINDFULLY

ACHIEVE YOUR OPTIMUM TRADING PERFORMANCE WITH MINDFULNESS AND CUTTING EDGE PSYCHOLOGY

GARY DAYTON, PSY.D.

WILEY

Additional Praise for Trade Mindfully: Achieve Your Optimum Trading Performance with Mindfulness and Cutting-Edge Psychology

"I have had the good fortune to work with Dr. Gary Dayton over the last 10 years and I have recommended his work to thousands of our TradeGuider customers. The importance of mindfulness when taking a position in the markets is little understood by many retail traders and investors. Dr. Gary's ground breaking book will be an inspiration to anyone that studies it. The most important thing to understand about Dr. Gary is that not only is he an expert in the field of trading psychology, he is also a real trader who has been through the journey required to finally master the markets and understand the game on Wall Street. I highly recommend you read this book and use the extensive knowledge conveyed brilliantly by Dr. Gary to take your trading and investing to a higher level."

—Gavin Holmes, Chief Executive Officer, TradeGuider Systems International; author of *Trading in the Shadow of the Smart Money*

"Regardless of the chosen methodology, as traders struggle with anxiety and fear, their actions undermine their trade plans and best interests. In *Trade Mindfully: Achieve Your Optimum Trading Performance with Mindfulness and Cutting-Edge Psychology*, Dr. Gary Dayton thoroughly explains why attempts at correcting erratic trading behavior by controlling thoughts and emotions do not work. He recommends practicing mindfulness combined with the latest performance psychology to resolve these complex issues. Dr. Gary Dayton states that mindfulness is one of the most powerful skills all traders would be wise to acquire. I found this innovative book to be a well-researched, invaluable resource for developing the mental skills necessary to achieve trade mastery."

—Ron Rossway, President, Denver Trading Group

"In *Trade Mindfully*, Dr. Gary Dayton uses real-world examples to explain how mental traps sabotage traders from achieving the results they desire. Using forms and practical checklists, he then develops the foundation to build your own structured process for success. *Trade Mindfully* serves as an effective handbook for changing your thinking about the importance of emotions and how to work with them—not against them."

—Corey Rosenbloom, CMT, President of AfraidToTrade.com; author of *The Complete Trading Course*

Trade Mindfully

The Wiley Trading series features books by traders who have survived the market's ever changing temperament and have prospered—some by reinventing systems, others by getting back to basics. Whether a novice trader, professional or somewhere in-between, these books will provide the advice and strategies needed to prosper today and well into the future. For more on this series, visit our website at www.WileyTrading.com.

Founded in 1807, John Wiley & Sons is the oldest independent publishing company in the United States. With offices in North America, Europe, Australia, and Asia, Wiley is globally committed to developing and marketing print and electronic products and services for our customers' professional and personal knowledge and understanding.

Trade Mindfully

Achieve Your Optimum Trading Performance with Mindfulness and Cutting-Edge Psychology

Gary Dayton, Psy.D.

WILEY

Design Credit: Wiley
Cover Image: top: © istock.com/Mak_Art;
bottom: © istock.com/agsandrew

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

For general information on our other products and services or for technical support, please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at http://booksupport.wiley.com. For more information about Wiley products, visit www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

ISBN 978-1-118-44561-7 (Paperback)
ISBN 978-1-118-99097-1 (ePDF)
ISBN 978-1-118-99103-9 (ePub)

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

To Ning, with all my love,
To my parents, with gratitude,
and
To all traders who have struggled with trading's mental challenges—
which is to say, all of us

CONTENTS

Acknowledgments ix

About the Author xi

Introduction 1

PART I Understanding Your Mind 7

CHAPTER 1 **Traders' Mental Blind Spots** **9**

CHAPTER 2 **Strong Emotions in Trading** **35**

CHAPTER 3 **The Struggle to Control and Eliminate Emotions** **59**

CHAPTER 4 **The Necessity of Emotions in Trading** **79**

PART II Using Cutting-Edge Psychology 95

CHAPTER 5 **The Traders' Psychological Edge Lies in a Different Kind of Thinking** **97**

CHAPTER 6 **Practice Mindfulness, Trade Mindfully** **121**

CHAPTER 7 **Defusion: An Advanced Mindfulness Skill** **145**

CHAPTER 8 **Acceptance and Committed Trading** **171**

PART III Maximizing Your Trading Performance 203

CHAPTER 9 The Trading Psychology Process: High-Quality Preparation 205

CHAPTER 10 The Trading Psychology Process: Effective Execution 231

CHAPTER 11 The Trading Psychology Process: Constructive Self-Assessment 251

CHAPTER 12 Final Thoughts 273

References 277

Index 285

ACKNOWLEDGMENTS

Much appreciation goes to my wife and partner, Ning. She is known to traders by her American name, Helen. She read every word of this book when it was a draft and offered superlative editorial suggestions. For this and all her support during the lengthy period during which this was written, I am truly grateful.

To David Weis, Professional Trader and Market Analyst, for coaching me in trading. David taught me to read the markets through his interpretation of the Wyckoff Method. His careful and masterful tutoring helped me become technically proficient so that I could focus more on the psychological aspects of trading.

To Gavin Holmes, CEO of TradeGuider Ltd., for inviting me to speak on trading psychology at a seminar he produced in San Francisco. That experience taught me that not only did I have something of value to say to traders, but traders understood the importance of trading psychology and were eager to learn about the mental side of trading. Gavin had the foresight that psychology was a necessary part of trading and our continuing work together has brought psychology before many traders across the globe.

A special note of thanks to Dr. Charlie Maher, sport psychologist for the Cleveland Indians Major League Baseball Team and Professor Emeritus at Rutgers University, for generously teaching me his model for sport and human performance psychology which formed the foundation for the book's trading psychology process.

To Kevin Commins, formerly of John Wiley & Sons. Kevin made the initial contact and encouraged me to write this book and document my approach to trading psychology.

To all the psychologists and researchers whose work is referenced herein and upon whose shoulders I stood to write this book. I'm deeply indebted to their insightful research and their work on mindfulness, acceptance, and commitment. They

deserve much credit for advancing the science of psychology and providing their work to other psychologists like me, who in turn distill it and provide it to you.

To the publishing team at John Wiley & Sons, including Meg Freeborn, Senior Development Editor; Claire New, Senior Production Editor; Tula Batanchiev and Tiffany Charbonier, Program Coordinators; and Evan Burton, Editor, for championing the book and for making what still seems like a daunting project a reality.

Thanks to Lane Mendelsohn, publisher of TraderPlanet.com, for the use of some of the graphics in the book.

And finally, I'd like to express my sincere appreciation to the many traders whom I have met, taught, and with whom I have worked. I have learned more from those seeking to better understand and improve their trading psychology than any other source.

ABOUT THE AUTHOR

Gary Dayton, Psy.D., brings together psychology and trading in his work as a trading psychologist, trading educator, and active trader in the S&P e-mini and currency markets. He teaches traders advanced trading skills through his Deep Practice program—a unique online weekly training in which traders face stimulating chart reading and psychological situations that take them to new levels of trading insight and learning. Gary is a popular international speaker who has presented to traders in England, Singapore, Malaysia, Australia, and the United States. A licensed psychologist, he earned his doctorate at the Graduate School of Applied and Professional Psychology, Rutgers University. He is president of Peak Psychology, Inc., a consulting firm that specializes in developing peak performance in traders.

Connect with Gary online at his website: www.TradingPsychologyEdge.com and Twitter: @DrGaryDayton.

INTRODUCTION

If you have picked up this book and are reading it, chances are you have had some trading difficulties or have tried but have not yet been able to take your trading to the level you desire. You may have experienced one or more of the following in your trading:

- Cut winning trades short even though you know your trade setup is solid.
- Failed to pull the trigger on a perfectly good trade because of fear of loss.
- Let losing trades run hoping for a return to breakeven.
- Added to a losing position in the hope that the market would turn around.
- Made profits in the morning but gave them back in the afternoon.
- Became more aggressive after losing money.
- Took unplanned trades when the market suddenly moved.
- Stopped trading or reduced position size after a loss.
- Traded greater position size than prudent money management practice would advise.
- Held trades longer than they should have been held looking for a "home run."
- Failed to take a perfectly sound setup because the last two trades were losers.
- After a day of big profits, your confidence soared and your trading suffered.
- Consistently made small money but have been unable to elevate your trading performance.

These trading difficulties hurt. They not only hurt your account, but they also cause mental and emotional suffering. No other profession tests your psychology as does trading. These difficulties and unskilled trading behaviors arise from the underlying mental and emotional challenges traders face. Most likely you have made considerable effort to overcome these difficulties but the methods you tried have probably failed you. After a while, you may question whether anything will ever work, or worse, you may question your suitability for trading.

This book is different from the methods you have tried. It offers mindfulness, a state-of-the-art method backed by scientific proof, and a specific trading psychology process: together they can unlock the door to managing your mental and emotional challenges and to excellence in trading performance. If you are determined and are willing to commit to the effort, this book will definitely help you.

I am trained as a clinical psychologist. I became involved in trading and trading psychology more than 15 years ago. Like other traders coming into the market, I have experienced most of the difficulties listed above. Personal experience and the experience of working with other traders taught me that the conventional trading wisdom of controlling and eliminating one's emotions from trading does not work. Quite the contrary, the more we struggle to try and control our feelings, the more our attention is distracted away from our trading, and the more erratic our trading becomes. Not only does the conventional wisdom not work, it is wrong. Countless traders have traded poorly and failed to learn the trading skills following conventional wisdom because trying to get rid of our thoughts and feelings in the usual problem solving way actually is the cause of our problems. We become stuck in a rigid and intractable mental pattern and our trading suffers.

Albert Einstein once said, "You cannot solve a problem from the same consciousness that created it. You must learn to see the world anew." Einstein could have been talking about trading when he made this remark. We have to think differently to overcome the universal mental challenges of trading. This book will show you how.

I began to think differently about trading psychology when I saw something wonderfully mind-blowing at a psychology conference. A video presentation showed a psychologist treating a person who was depressed and suicidal. Within a single therapy session, however, the person had changed markedly. She was no longer depressed and no longer suicidal. She no longer needed psychological treatment. I couldn't quite grasp what the psychologist was doing because it was very different from what I had learned and practiced as a psychologist—it even seemed counterintuitive, but I knew deep in my bones that whatever it was, it was damned powerful.

The different way of thinking about psychology is called Acceptance and Commitment Therapy, or ACT. When I first saw that presentation, ACT was new. There wasn't much written about it and only a few had experience with it. That has all changed. Now there is an explosion of books, scientific papers, and conferences and more psychologists are adopting it because it is so effective. Settings outside the therapy room are also beginning to embrace it. Susan David and Christina Congleton, for example, have written about the *mental agility* that ACT promotes specifically for corporate executives and industry leaders in *Harvard Business Review Online*. Wouldn't you like some mental agility in your trading instead of mental struggle?

One of the core components of ACT is mindfulness. Mindfulness, as you will learn in this book, is incredibly important for traders. Although it has its roots in Eastern traditions, modern scientific research shows that it has powerful ability to positively impact us psychologically and even enhance the structure of our brains (as seen through neuroimaging studies). ACT's approach to mindfulness, along with its other advanced psychological techniques such as defusion and commitment to actions that bring high value to our trading, can dramatically change your trading psychology for the better. Instead of struggling to try and control your unwanted thoughts and feelings, mindfulness and other techniques allow you to be a sort of mental aikido master where you can sidestep them and redirect your focus onto what's really important, your trade.

It's not sufficient, however, just to develop mental agility if you want to achieve excellence in trading. At its core, trading is a performance-based activity. We develop trading knowledge, skills, and abilities and then apply what we know and can do by performing in the markets. The best performers in any field are guided by coaches, mentors, and specialized training. The structured guidance affords opportunities to learn skills and overcome mental challenges. Most traders do not have structured guidance. They are left on their own. This book sets out to change this.

What matters most in any performance activity is having and adhering to a process. A process is a well-defined series of actions or steps taken to achieve a desirable result. The more consistent we become in a sound process, the better we can apply our knowledge, skills, and abilities and the better our trading results will be, all other things being equal. My ideas about a trading psychology process were born in a graduate course on sport and human performance psychology taught by Charlie Maher, an accomplished sport psychologist. Charlie's course helped me shift my ideas of trading psychology. This shift involved moving away from traditional psychological methods and techniques of trying to change one's thoughts and emotions to applying psychology directly to the process of trading: how we prepare to trade, how we execute our trading, and how we evaluate our trading performance.

This is the first book about a trading psychology based on the power of mindfulness and the bedrock of process. The combination of a robust trading psychology process with mindfulness and other cutting-edge mental skills can help you excel in your development of both the psychological aspects and the technical aspects of trading.

How This Book Is Organized

This book is divided into three parts. Part I (Chapters 1 through 4) discusses the unique challenges traders face, both mental and emotional. In a very real sense, in order to succeed at trading, traders need to know how they fail. Part II (Chapters 5 through 8) introduces mindfulness, what it is, how it can help traders meet the mental and emotional challenges of trading, and how to do it. Part III (Chapters 9 through 11) presents a robust trading psychology process, made up of three distinctive time frames and the associated high-value mental skills traders can develop that can take them on a continuous improvement path to excellence and mastery of the trading game.

Part I

There are many psychologically influenced challenges to overcome on the path to trading success. The unaware trader can very easily be blindsided by cognitive biases and heuristics—mental rules of thumb we use effectively and routinely in our daily lives, but are inappropriate for trading. Emotions, too, can be a significant challenge for traders. Cognitive biases and emotions can cause you to hold onto losers, take trades at the wrong time and in the wrong direction, jump into unplanned trades, and other erratic trading. The chapters in Part I show you the root cause of erratic trading behaviors. Real-life examples of traders[1] in actual trading situations make the concepts clear and comprehensible. Practical exercises and forms are provided so you can begin to identify and constructively address the mental and emotional difficulties and erratic trading behaviors that you experience in your trading. All exercises in this book are available in larger, PDF format for download at the author's website (www.tradingpsychologyedge.com).

In Part I we also look closely at fear and its various forms, along with stress, other strong emotions such as anger and boredom, and emotional hijackings—those emotion-dominant states that cause us to act imprudently and can ruin a trader's account. We introduce Emotional Intelligence, an important psychological ability, which helps you identify your emotions, understand what they mean, and the patterns they generally follow. This alone can give you a significant advantage in your trading.

We review traders' default methods to cope with unwanted emotions, especially fear, and show exactly why many of these methods do not work. We review the psychological experience of loss aversion, why it is actually natural for us to cut winning trades short and what we can do to address this behavior. As we conclude Part I, we also show that trying to eliminate emotions from trading—what conventional trading wisdom advocates—is the exact wrong thing to do. After reading this section, you will never again think the same way about emotions.

Part II

Part II introduces mindfulness. Mindfulness is one of the most powerful skills all traders would be wise to develop. Robust research has shown that mindfulness has profound value to traders through its many benefits. With the enhanced focus and concentration afforded by mindfulness, you can see the market and the trading opportunities it presents more clearly. Mindfulness directly helps tame the fear response, strengthens internal emotional regulation, and significantly reduces stress. Mindfulness teaches that you can trade well even though you may have unwanted emotions. The practice of mindfulness along with the advanced psychological skills of defusion, acceptance, and commitment help you keep your focus on the high-value actions that best serve your trades so that you can execute them rather than be disrupted by anxiety, fear, and other unwanted emotions. Mindfulness also helps you reduce common trading errors caused by applying mental shortcuts (cognitive heuristics). It allows you to engage your deliberative mind and strengthens your decision making. Mindfulness also promotes learning and, together with deliberate practice (discussed in Part III), you can develop mastery in trading.

Several mindfulness practice scripts along with alternate suggestions of how to do mindfulness for you to use and develop your mindfulness skills are presented in Part II. Many of the mindfulness scripts have been recorded and are available on the author's website (www.tradingpsychologyedge.com) for download. There are examples to show you how to apply mindfulness in trading and how to use it along with other important techniques in overcoming psychologically difficult trading situations. When we are challenged by a trading situation that causes an emotional reaction, our attention automatically turns inward to our thoughts and feelings. We lose focus and our contact with the market and trade poorly. Mindfulness can correct this strong tendency. It helps us keep our focus where it should be: on the market. We also show you how to address both minor and major trading challenges with mindfulness and other state-of-the-art methods. You are given an explicit protocol for overcoming your specific, challenging trading situations along with the details of how two traders used this method to successfully resolve problematic trading behaviors of cutting winning trades short and oversizing trades after a loss, respectively.

Part III

To achieve excellence and optimum success in trading, in addition to mindfulness and other mental skills, you will need a sound trading psychology process that helps you continuously develop both your mental and technical skills. The trading psychology process we present here is a psychologically informed framework for your development into a successful trader. The framework is adapted from Charlie Maher's sport and human performance model. This trading psychology framework consists of three core psychological principles of the trading process: High-Quality Preparation, Effective Execution and Constructive Self-Assessment. Within each principle are four high-value mental skills every trader will find beneficial. The process of personal growth and self-development is made explicit by identifying your personal developmental needs, creating SMART goals to address your needs, implementing the goals, evaluating them, and adjusting them until you transform a limitation in your trading into a new skill and ability you can rely on. There are case examples from traders to help illustrate and clarify these concepts. Specific techniques, skills, and procedures such as mental parking, the mental STOP, the Trader's Performance Assessment, and other beneficial practices are explained.

Although this is a book, it has been set up as a manual or handbook for trading psychology. There are charts and forms you can use to apply the information you learn to your personal situation. I encourage you to not only read the book, but also do the exercises, practice and develop mindfulness skills, and apply what you have learned to your trading. Let this book be your coach, mentor, and guide in your journey to take command of the mental and technical sides of trading. Trade mindfully and achieve your optimum trading performance with mindfulness and cutting-edge trading psychology!

Note

1. Case examples of traders may be actual case examples or a combination of experiences from different traders presented as an individual trader to help better highlight concepts and techniques. All names have been changed and any potentially identifying information has been altered to ensure privacy.

PART I

Understanding Your Mind

Traders' Mental Blind Spots

Colin had been watching the S&P e-mini futures all morning, waiting patiently for a trade. Finally, he saw one setup. He looked carefully at both the price action and the indicators he used to qualify his trades. Everything met his criteria. Price had turned bullish and all indicators were signaling long. "There's no flaw in the setup," he thought.

The trade started working almost immediately. The market moved up smartly, breaking a nearby resistance level and then moved into "clear air" where no other resistance was located. The S&Ps rallied for twelve points from the trade entry—an excellent intraday run for this market. But, Colin was not on board.

He didn't take the trade. When discussing this later, he said, "The same setup occurred yesterday. I guess I was thinking of that trade, which I took, but it didn't work out. I had a loss. There was even a slight difference in favor of today's trade. One of the indicators did not confirm yesterday. Today's setup was picture-perfect. I kicked myself for not taking the trade. I don't really understand why I didn't take it. I wasn't feeling any big emotions; I certainly wasn't fearful. I just thought that since yesterday's trade failed, this one would, too. I was wrong. Why didn't I take the trade?"

What failed Colin was not his emotions or misreading the market. What failed Colin was his thinking. Colin's mind entered a natural mental blind spot psychologists call the *recency effect*. The recency effect is a cognitive bias where our mind weighs the latest information with greater importance than other data when making decisions. In Colin's mind, yesterday's outcome weighed more heavily than today's "picture-perfect" criteria, leading him to shun the trade.

Many traders believe emotions are the most important aspect of trading psychology. This is only partially true. Feelings and emotions are certainly important. Traders cannot make reliable decisions without them. Strong emotions such as greed, anger, and especially fear can significantly influence trading and cause erratic trading behavior. However, emotions are not the only thing that can influence trading. Thoughts and the way we think also play a significant role. Sometimes, thoughts ignite strong emotions and thinking almost always amplifies them. At other times, as we see in Colin's case, emotions play little part in poor trading decisions. Less familiar to many traders is the role that our mind and our thinking plays in trading and the way we make trading decisions.

Our thinking can create mental blind spots that can shackle us, as the example with Colin shows, rendering technical skills useless at that moment. In fact, how we think and how we treat our thoughts are the most important aspects of trading psychology. A main objective of this book is to help you become more aware of your thoughts and how they directly influence your trading actions. Learning and applying skills related to cognitions described in this book may have the most decisive impact on our trading—they can be far more potent than some of the common things we try in dealing with emotions. Of course, this does not mean that emotions are unimportant and should be ignored. We discuss emotions starting in the next chapter. To begin, however, we focus on the natural constraints that arise from our thinking as one of the key aspects of trading psychology that traders need to become aware of and understand in order to trade well.

Thinking is integral to being human. It is so much a part of us that we usually don't think much about thinking. If we pause for a moment and observe our thoughts, however, we begin to become aware of the activity of our mind. This is a fascinating study. We soon realize that we have a near-constant, never-ending stream of thoughts. The mind is tirelessly commenting and telling us things. Unless you practice, you will find it impossible to quiet your mind and stop the flow of thoughts for all but a few seconds. Even with practice, quieting the mind for more than a few minutes before another thought involuntarily arises is elusive for most people. Two important characteristics of our minds thus emerge: thoughts are always with us and we do not have much control over them. This is essential data for traders.

Because we have experienced our mind's chatter every day for as long as we can remember, we are accustomed to it and rely on it heavily. We tend to accept whatever our mind tells us as an accurate reflection of reality. We rarely question or objectively evaluate our thoughts. Because thoughts are a natural part of us, accepting them seems natural, too, but in trading, this can be dangerous.

Part of the danger comes from natural limitations in our cognitive capabilities. There are certain mental boundaries that often constrain the way we think, distort the way we process information, and impact the way we make decisions that cause predictable errors in trading. These are our mental blind spots commonly referred to as cognitive biases and heuristics. The most important mental blind spots for traders include:

- The representativeness heuristic
- The recency effect
- Loss aversion
- Confirmation bias
- Base rate neglect
- The affect heuristic
- Hindsight bias
- The endowment effect
- Optimism bias

We discuss most of these mental blind spots in this chapter. Some—notably loss aversion and optimism bias—are covered in later chapters. Understanding these mental blind spots and becoming aware of them in one's own trading are crucial for the trader as they can directly affect trading performance and results.

Heuristics and Cognitive Biases

The term *heuristic* is just another word for mental shortcut. When faced with a complex or difficult decision, people often simplify their task by applying an abbreviated rule set to help problem-solve and make the decision. This streamlines the thinking chore into a more straightforward and manageable job. Heuristics shorten the decision-making time and reduce the mental load. Their use allows people to function efficiently and quickly without having to mentally process and make sense out of a large amount of data. These mental shortcuts are handy in many situations and produce reasonably accurate results much of the time. For an example, let's say we are planning a trip and need to budget gasoline expense for driving. To do this, we need to know how many miles can be driven on a tank of gas. One way to do this is to keep detailed records on gallons and mileage for each fill of the gas tank for the next six months and then calculate the average. It would produce an accurate figure of miles per tank of gas across many different driving conditions, which we can then use to calculate fuel costs. Alternatively, we can use a simple shortcut of setting the odometer to zero when the tank is next filled and apply the mileage gotten from that one tank of gas for our fuel cost projection. Will the shortcut be as accurate as gathering six month's worth of data? Probably not, but the simple approach produces a good enough result for our trip planning purposes. That's using a heuristic.

Heuristics are used all the time. When deciding to go into an unfamiliar restaurant, for example, we might use the restaurant's overall appearance in making our judgment. Rather than taking a survey of patrons' dining experiences as they exit, if the restaurant looks clean and inviting, and there are cars in the parking lot, we are apt to dine there. Note that an easier mental task is substituted for a harder one. This is a hallmark characteristic of heuristics. It's easier to assess the appearance of the restaurant than interview its patrons. Likewise, it is easier to calculate mileage from one tank of gas than to record and process mileage data over a six-month period for estimating driving expenses. Heuristics have value; they help us manage our world efficiently. Because they are effective and do have such value, we normally apply them as our default mode of thinking.

There are times, however, when heuristics and other abridged mental processes lead to significant errors and inconsistencies in our judgments. In their pioneering work on how we think and how we produce thinking errors, two psychologists—Nobel laureate Daniel Kahneman and Amos Tversky—found that when people make decisions under conditions of risk and uncertainty, they have a strong tendency to abandon careful rational analysis and, instead, apply heuristics and other cognitive short cuts. This often produces predictable errors and poor outcomes. Their research was in striking contrast to the conventional wisdom at the time it was published. This and subsequent work spawned a new discipline emphasizing psychology's influence on economic decision making now known as behavioral finance.

Kahneman and Tversky's research was followed by a long line of studies that demonstrate how natural limitations in our information processing—that is, how we observe, think, and problem-solve—automatically emerge in situations that involve the assessment of complex and often incomplete data and also entail risk and uncertainty in outcomes. The research is clear, robust, and their findings are significant for the trading world: in uncertain, risky conditions the application of heuristics and other cognitive biases in making decisions often results in significant errors and costly mistakes. Trading always involves risk. Trade outcomes are never certain, and traders confront complex and incomplete data in every trading judgment. When traders favor mentally efficient thinking shortcuts known to produce errors, they end up making poor trading decisions and these lead directly to poor trading results.

We saw this with Colin and his weighing of a recent trade outcome, which caused him to miss a sound trade. What makes it difficult for traders is that what works well in everyday life can lead to costly errors in our trading lives. Consider Jackie who has just moved into the city and now walks to work. Over the past two weeks she has enjoyed her walk in the warm, early morning sun. But yesterday, a cloud-burst drenched her and she arrived at the office sopping wet. Today, she carries an umbrella. This is an adaptive use of a recent experience. Contrast this with Colin's missed trade. Like Jackie, Colin also had an unpleasant experience in the form of a trading loss. The next day with the same type of trade setting up, Colin weighed yesterday's failed trade outcome—which has no bearing on today's trade and was irrelevant to his decision—as more significant than today's textbook trade setup because what happened yesterday was fresh in his mind. Jackie stays dry; Colin misses a good trade. Afterward, Colin could not understand why he didn't take a sound trade. This is the poignancy of using heuristics and cognitive biases in trading. Because we do use them so frequently in day-to-day decisions, it's natural that we readily bring heuristics and other cognitive biases into our trading. Because we also trust what our mind is telling us unquestioningly, we can be mentally blind to the serious trading mistakes we are making as we make them. It is crucial for all traders—from novice to the more experienced—to understand and become aware of these blind spots. We start with what is likely the most common trading heuristic called representativeness.

Representativeness

The *representativeness heuristic* means that we use a mental shortcut that looks for similarity between the current situation or event and its overall class as a way to judge probability. If an event is similar to our model or prototype, then we assume that the event has the same probabilities as the model. Representativeness occurs when something appears (or represents itself) to be likely, when, in fact, it may not be likely. An example from outside of trading will help clarify representativeness.

When buying a used car a buyer may look for dents, lift the hood, and kick the tires. If the engine looks clean, the car is shiny, and the tires look new, he may think, "This car has been maintained well." That's using the representativeness heuristic; however, mere appearance can be misleading. It is only by reviewing maintenance records and having the car checked out by a mechanic will the buyer be able to accurately assess the probability that this is, indeed, a well-maintained vehicle worth buying. Simply relying on appearance does not mean it is a sound car, even though it looks good. In our mind, the car represents itself as a well-maintained vehicle. Substituting the car's appearance for a thorough mechanical assessment is the cognitive error. In trading, representativeness is often seen in traders who scan the market action to see if it matches a prototypical chart pattern. For example, current market action might look to a trader like it is forming a bull flag, and he goes long. But that is like assessing only the car's appearance for its actual condition. If the chart formation is occurring after a lengthy trend, what appears to be a bull flag could instead be distribution. Simply matching market action to a chart pattern speaks only to pattern recognition. It does not speak at all to the probabilities of the next market direction.

It is very difficult for our minds to assess probabilities. Mentally, it is far easier to make a judgment that price action looks like a bull flag than it is to assess the probability that the market will act in a certain way or have a specific outcome. As we saw when evaluating the appeal of an unfamiliar restaurant or the condition of a used car, heuristics involve the substitution of an easier mental task for a more difficult one. We ask a question that is easy to answer: Does this look like a bull flag? The correct question is: What is the likely next move of the market? The easy answer to the easy question has us taking a long position. The correct question was never asked because it requires more involved thinking. The correct question may lead us to the conclusion that the market is overbought, has stalled at a higher time frame resistance level, and what initially looked like a bull flag is now seen as a market unable to rally farther and about to fall. We will use the following case example involving Zoe, a swing trader, to illustrate representativeness further.

Case Example: Zoe

Zoe was trading EZU, the Exchange Traded Fund for the MSCI European Monetary Union Index. She saw the weekly Bullish Engulfing Candle pattern in late June and went long. You can see what she had seen in Figure 1.1. She anticipated a continuation of the weekly uptrend, which looked strong to her. Zoe noted that every bullish engulfing pattern in this uptrend worked well. Thus, she expected a winning trade

FIGURE 1.1 Zoe's Weekly Chart Depicting an Uptrend
Source: TradeStation Technologies, Inc.