

THE
SMART *but*
SCATTERED
Guide to Success

HOW TO
USE YOUR BRAIN'S
EXECUTIVE SKILLS
TO KEEP UP, STAY CALM, AND
GET ORGANIZED AT
WORK AND AT HOME

Peg Dawson, EdD | Richard Guare, PhD



ebook

THE GUILFORD PRESS

Praise for The Smart but Scattered Guide to Success

“Dawson and Guare, masters of executive skills, have provided a user-friendly, practical, and immensely valuable guide. This book is an instant classic.”

—Edward Hallowell, MD, *coauthor of Delivered from Distraction*

“This book addresses the exact issues I struggle with when I’m feeling scattered and not accomplishing my goals. It helped me evaluate my areas of weakness and gave me clear, simple suggestions to help me get past some of the frustrating challenges I’ve experienced my whole life. The authors’ personal, accessible, supportive writing style kept me engaged and focused.”

—Sue V., *Rochester, New York*

“This isn’t just a good book, it’s a great book! Chock full of highly useful recommendations and guided by science and practice, this book is rich with methods to help any adult overcome problems with time management, organization, self-control, and related skills.”

—Russell A. Barkley, PhD, ABPP, ABCN,
author of Taking Charge of Adult ADHD

“As someone who consistently struggles with time management and organization, I was so glad to come across this book. Between the step-by-step breakdown of issues and the real-life stories, I found it both helpful and entertaining. The interactive worksheets were really enlightening.”

—Cheryl T., *Parsippany, New Jersey*

“Wow, am I glad to have this in my toolbox! The authors deftly unfold a plan to lead with your strengths, manage your weaknesses, and improve the areas that matter most. It will help me work with clients to break down their major career moves into smaller, attainable goals. The Action Plan alone is a life changer.”

—DeAnne Pearson, MEd, ACC, *owner and career coach, Deliberate Careers, LLC*

“Drs. Dawson and Guare provide adults of all ages with practical, well-grounded advice for staying on top of today’s busy lives. Each chapter combines just-right background material with ready-to-use tips and tools to put into practice immediately.”

—Joel T. Nigg, PhD, *Professor and Director, Division of Psychology
and ADHD Program, Department of Psychiatry, Oregon Health and Science University*

“This is a terrific self-help book—one of the best I’ve seen—for helping individuals develop their executive skills. Chapters offer sound solutions and strategies, with lots of everyday examples. The authors have an impressive grasp of current brain science, and have translated it into language that is meaningful and easy to understand.”

—Mary V. Solanto, PhD, *Department of Psychiatry,
New York University School of Medicine*

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The SMART but SCATTERED *Guide to Success*

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EXECUTIVE SKILLS
TO KEEP UP, STAY CALM, AND
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Richard Guare, PhD



THE GUILFORD PRESS
NEW YORK LONDON

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A Division of Guilford Publications, Inc.
370 Seventh Avenue, Suite 1200, New York, NY 10001
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Printed in the United States of America

This book is printed on acid-free paper.

Last digit is print number: 9 8 7 6 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data is available from the publisher.

ISBN 978-1-4625-1696-4 (pbk.) — ISBN 978-1-4625-2279-8 (hardcover)

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Authors' Note

Where plural pronouns are not used, we mostly alternate between feminine and masculine personal pronouns in this book.

All illustrations and anecdotes—except those involving us (and Peg's son, who has agreed to be named in illustrations in this book)—are composites or representative of situations involving executive skill strengths and weaknesses we have seen in clients over the years.

Part I

UNDERSTANDING THE EXECUTIVE IN YOUR BRAIN

1

Are You Smart, Scattered, and Stressed?

*G*inger was behind the eight ball once again. She hadn't built in enough time to put the finishing touches on the presentation she was due to deliver tomorrow to an important potential marketing client, and now it was 4:45, and she had to pick up her son from soccer practice in 15 minutes. She was supposed to run the PowerPoint by her supervisor before she left work, and she probably still had 45 minutes of work to do on it. She dropped by her supervisor's office to deliver the bad news. "Kerry, I know you wanted to see what I came up with before I left, but Kevin's soccer practice ends at 5, and I can't leave him hanging. Can I get you something by 9 tonight?" Kerry didn't even try to hide her displeasure. "Ginger, this happens all the time. You need to figure out how to manage your time better—it not only is affecting your work, but it affects mine as well. I'm a morning person. By 9 o'clock, I'm getting ready for bed!"

Ginger apologized as best she could, gathered her things in a hurry, and dashed out of the office, already calling Kevin on her cell phone to tell him she would be a few minutes late. As she made the drive across town to her son's school, she frantically tried to think what else she had to do that evening. What were they doing for dinner? Then she remembered that she hadn't taken the casserole out of the freezer to thaw and wondered if her family would tolerate another night of fast food instead.

She pulled into the school, and there was Kevin looking forlorn, the last one waiting for a ride home. He threw his backpack in the back seat and climbed in front. "How come I'm always the last one to get picked up?" he stewed.

Ginger apologized to him and then tried to change the subject. "How

much homework do you have?" she asked. Kevin shrugged. "I got most of it done in school," he said. "And Mrs. Clark gave us an extra week to finish our social studies paper." Ginger wondered if that was the case. The last time Kevin told her about an extended deadline, it turned out he'd made it up because he'd gotten behind on the assignment and didn't want to admit it. Ginger grimaced, remembering that incident, and then thought, not for the first time, *the apple does not fall far from the tree*.

Ginger pulled into the KFC and ordered dinner. This would just have to do, she thought, noting with relief that Kevin wasn't complaining. When they got home, she handed the dinner bag to Kevin and asked him to take it in while she grabbed her computer bag. As she lifted it off the floor of the back seat, it occurred to her it felt awfully light. She swore quietly to herself as she unzipped the bag and peered inside. Sure enough, the two files she needed for her night's work were there, but her laptop was not. Now what was she going to do?

By the time she got inside, there were tears in her eyes. Her husband, who'd barely beaten her home and was just taking off his coat, looked at her. "Now what?" he asked, and Ginger suspected his day at the office had been as stressful as hers.

She told him what had happened. "So now you have to drive back to the office to get the computer?" he asked. "Haven't you been forgetting a lot of stuff lately?"

"Oh, and like you're Mr. Perfect?" she seethed. "As I recall, we just had to cancel our credit card because you lost it on your last business trip. And you probably didn't even lose it," she added. "It's probably somewhere in the bottom of your briefcase that you never clean out."

Their daughter, Kim, had come downstairs while this conversation was going on and caught the drift. "Mom! Did you forget you were going to help me with the project I'm doing for my civics class? You promised me that I could tape an interview with you tonight—and the project's due on Friday! If I don't tape it tonight, I'll never be able to finish on time."

Ginger groaned. "Okay, folks. Let's get dinner on the table and we'll try to sort this out." She opened the cupboard doors and pulled down dishes. Her husband was heading to the television to turn on ESPN to catch up on yesterday's sports news. "Would it kill you to help set the table?" she thought to herself. As she gathered silverware and napkins it occurred to her that her life had been going like this for some time now. Either there weren't enough hours in the day for her to do everything that needed doing

or she had no idea how to use the time she had. All her nerve endings stood on end, and she felt like she would bite the head off the next person who criticized her. Something had to change.

Does any of this sound familiar? We've all had days like this. You could undoubtedly personalize this scenario and add to the list of stressors. And maybe we've concluded that this is life in the 21st century, and there's nothing we can do about it. Just suck it up, grin and bear it, hang in there, take a deep breath, count to 10—give ourselves or others little pieces of advice meant to make us all feel better. But somehow it never does.

There is, of course, some justification for our frayed nerves. Life is more complex and demanding than it was a generation ago. The jobs people hold today pressure them to work ever faster and harder, and increasing numbers of jobs involve working nonstandard hours and telecommuting. This may make it easier to be there when the kids get home from school, but it also blurs the distinction between home life and work life in a way that makes us feel that there's no downtime to be had, and we're constantly trying to multitask despite convincing evidence that our brains really can't do that. And technology and social media present additional intrusions on family life, so even when the whole family is together, we feel fragmented by smartphones and Facebook, texts and Twitter.

What does this leave us with? How many of the following apply to you or to people you live or work with?

- Too many job responsibilities to fit into an 8-hour work day.
- Home–work life conflicts as the demands in one sphere bleed into the other.
- Dissatisfaction with our work because to do it right eats into our home lives and then we feel guilty that we're not handling either arena the way we should.
- The lure of technology and a 24/7 wired world where we can't disconnect—and then we use the same technology to try to escape.
- Conflicts between spouses because the work–home pressures they're both experiencing leads them to blame each other for not doing their part to keep things running smoothly at home.

- Conflicts between parents and kids because kids don't seem to realize that there's a future out there that they're completely unprepared for.
- A daily schedule that requires us to juggle multiple home, work, and family demands that to do well would require a 36-hour day to complete and a three-dimensional spreadsheet to keep track of.

All these things challenge us because we're maxing out that part of our brain that is designed to manage complexity. Wrapped inside the prefrontal cortex (the part of the brain just behind the forehead) is a set of skills called executive skills—skills that are designed to help you manage tasks of daily living. Maybe you've heard of them. Possibly you've seen our other books, like *Smart but Scattered*, where we describe executive skills in children, or you've seen stories in the popular press and your curiosity has been piqued.

They're called executive skills because they're the skills required to *execute* tasks. They're a disparate group that includes things like task initiation,

THE ESSENTIAL 12

- Response inhibition
- Working memory
- Emotional control
- Task initiation
- Sustained attention
- Planning/prioritizing
- Organization
- Time management
- Flexibility
- Metacognition
- Goal-directed persistence
- Stress tolerance

sustained attention, planning, organization, time management, emotional regulation, and impulse control, among others (see the box)—but what they have in common is that the better these skills work, the better able we are both to carry out tasks of everyday living and to develop a plan to achieve life goals that are satisfying to us. Conversely, the weaker these skills are, the more we're likely to struggle with the kinds of demands routinely placed on us by work, home, and family life.

Ginger is clearly struggling with several executive skill weaknesses, including working memory, time management, and emotional control. And it looks like her husband may have a set of weaknesses of his own, such as organization and metacognition (the skill that allows you to see the big picture—such as the possibility that you might help out by setting the table for dinner). And Kevin, like his mother, seems to have poor time management skills—and possibly weak planning skills. On the other hand, his sister may be good at many of those skills but feels frustrated because those around her struggle with some of the skills that seem to come naturally to her.

What the 21st century has done is to place demands on our executive functions like never before—the complexity we're asked to process, the things we need to remember just to get through the day, the tasks and obligations we have that are pulling us in many directions at once exceed what our frontal lobes can comfortably manage. We laugh and say we can multitask and that's how we get through our day, yet research shows that the brain cannot in fact multitask, and our attempts to do so degrade work efficiency and increase the likelihood of mistakes and omissions. Unfortunately, then, this is not the answer.

What is the answer? We think understanding executive skills, knowing how to use them and how to improve them, is the key to surviving life today—and maybe even thriving in it.

What This Book Offers

Once you understand executive skills, both the array of skills encompassed by this term and how both strengths and weaknesses impact our ability to make it through the day, you will begin to understand better both how you operate and why you manage some tasks and responsibilities way better than others. And if you stop to consider the executive skills profiles of those you live and work with, their behavior will suddenly make a whole lot more sense to you as well.

Our hope for the readers of this book is that you will carry away two things in particular. First of all, we hope to give you tools and strategies for improving

whatever executive skill weaknesses you want to work on. Recent brain research assures us that neuroplasticity (the idea that the brain can change over time and with targeted practice) continues throughout our lives, rather than ending sometime in childhood, as was initially believed. The bad news is that it takes more effort and sustained practice to change the brains of adults than is required to achieve the same result in children and teenagers. The good news is that if you want to tackle executive skill improvement, psychologists and other researchers have developed proven strategies to do this. Some of this research is complicated and dense (and makes for boring reading, to be honest). Our plan is to distill the research into practical procedures that you can take and apply to your own lives.

Second, we hope you will become more forgiving of yourselves and others for the evident executive skill weaknesses as well as more appreciative of your strengths and those of the people you live and work with—such as spouses or partners, children, and coworkers—and how those strengths can be used to compensate for weaknesses. Ideally, after reading this book, you will not only be able to use your own strengths to get around your weaknesses, but you may even be able to figure out how to tap into the strengths of others to make up for your weaknesses. (Admittedly, this works best when you can offer up your strengths to help those around you work around *their* weaknesses, because it feels more like a two-way street than a one-way “mooch.”)

So What Can Be Done?

Let's go back to Ginger. How might her life change after reading this book? In taking the Executive Skills Questionnaire in Chapter 2, Ginger might learn that while she has three particular weaknesses, time management tops them all, and because of poor time management, she stresses working memory, which then leads to frustration made worse by poor emotional control. This might lead her to decide that if she can put in place some strategies to improve her time management, her other weaknesses won't be taxed quite so much. Ginger will be able to improve her time management skills—maybe not completely, but where it counts the most—through a combination of environmental cues and supports (such as reminders on her smartphone and check-ins by her supervisor at key times when deadlines are looming), and by learning to attach time estimates to her work plans, so that she can make better use of her strength in planning to shore up her weakness in time management.

Our goal in writing this book is to help readers understand how executive

skills are our best defense against the pressures we face at home, in the workplace, and in our relationships. Here's how we do this:

- We first describe executive skills in some detail and pin them to brain development so that you understand what role they play in cognitive functioning across the lifespan.
- We give a quiz you can take to identify your own executive skills profile. This will enable you to begin to think about how you can use your strengths and other resources to combat or diminish the negative impact of your weaknesses.
- We describe ways you can modify your environment to reduce the impact of your executive skill weaknesses.
- We lay out a variety of strategies you might employ to improve your executive skill weaknesses.
- We help you identify which strategies might be best for you, given your learning and behavior change preferences.
- We detail how you can use your knowledge of executive functioning in three key life domains: work, home, and relationships.
- In a chapter on the workplace, we talk about how you can assess the match between your executive skills profile and job demands, and we describe how you can use your understanding of executive skills to function better with coworkers whose executive skills profile may be very different from your own.
- In a chapter on the home, we talk about how even though your executive skills profile is the same in both settings, your strengths and weaknesses may manifest themselves differently. We discuss ways to harness your strengths and work around your weaknesses (and those of other family members) so that your home can run smoothly.
- In a chapter on relationships, we explain why the more you understand your own profile and those of others you're in a relationship with (particularly relationships with spouses and partners, children, and your own parents), the more likely you are to be able to manage conflict and tensions.
- We take each executive skill separately and identify common problems

that arise when the skill is a weakness and propose some strategies you can use to tweak it, improve it, or work around it.

- Finally, we leave you with a description of what happens to executive skills—and cognitive capacity in general—as we age. It turns out there are things you can begin doing now, no matter what your current age is, to preserve your cognitive functioning in your later years. You'll want to read this chapter before you set the book aside.

IS THIS BOOK FOR YOU?

If you tend to . . .

- procrastinate
- jump from one activity to another without finishing any
- have trouble keeping workspaces or homes neat and organized
- forget to do things you've promised
- find yourself chronically running late
- lose your cool when people don't behave the way you think they should
- struggle to come up with Plan B when things don't go the way you thought they would
- fritter away your time when you know there's work to be done

. . . then yes, this book is for you.

We tell you how to identify your weak skills, the areas of your life most affected by them, and give you the strategies you need to change them and feel more in control of your life. We also tell you how to beef up all your executive skills and in the process feel less stressed.

For example, if you tend to procrastinate, we tell you how to pick one task, pick a specific starting time, and plan to work at the task for only a few minutes to avoid the dread of doing the task.

Or if you have trouble with sustaining attention to a task or job, we show you how to shorten the task so at the beginning the end is already in sight and how to decide on an activity at the end of the task that you can look forward to.

If you struggle with working memory (can't remember where you left your keys or cell phone?), we teach you how to "off-load" this task so that your brain doesn't have to do so much work. That way, once you practice it, you don't have to think hard to remember where your keys are anymore.

That's just a glimpse of what's ahead. But the first step is to understand the full array of executive skills and how they govern so much of what we do—or try to do. And the second step is to identify your own executive skills profile so you'll know what strengths you can draw on and what weaknesses you may want to tackle.

Let's get started.

2

Your Executive Skills Profile

You may be champing at the bit to start down the path toward self-improvement we alluded to in Chapter 1, but first we want to help you understand the process of change. In this chapter, we outline the course of brain development that enables executive skills to emerge and strengthen. You'll see that although the optimal time for developing these skills is when we're young, the brain is an adaptive organ throughout our lives, and all of us have the potential to grow and strengthen these skills. In the second half of the chapter you'll have the opportunity to assess your own executive skill strengths and weaknesses, which will give you the information you need to pursue a path to improvement. Since behavior change can be challenging, we also give you lots of ideas for how you can structure your life and environment to make this process of change and adaptation easier. In either event, you will be in control of a process we think will help improve the quality of your life and reduce your stress level.

How Executive Skills Develop in the Brain: Biology and Experience

As is the case with many of your abilities, there are two main contributors to the development of executive skills: biology and experience. In terms of the biological or neurological contribution, the potential for executive skills is essentially innate, already a part of the brain's wiring at birth. This is similar to the manner in which we develop language. Of course at birth, executive skills, like language, exist only as potential. That means your brain had within it the basic neurological equipment for these skills to develop. But then a number of factors entered the picture, influencing how these skills actually developed.

For example, any type of major trauma or physical insult to the brain, particularly one involving the frontal lobes, would adversely affect executive skill development. Genes also play a major role, and therefore the genes that you inherited from your parents probably impacted these skills. If you didn't have good organizational, time management, attention, or other skills when growing up, there's a good chance that you've carried these problems into adulthood.

As for the environment, anything that was biologically or physically toxic during your childhood could also affect the development of your executive skills.

Environmental toxins could include anything from lead exposure to child abuse. Low family income and disadvantaged economic circumstances have been shown in repeated studies to adversely impact brain development and executive skills in children. For example, these economic circumstances can lead to less parental interaction with children, decreased responsivity to children's distress, and harsher parenting, resulting in increased stress for the child. Stress is known to impede the development of executive skills as well as degrade the availability and use of executive skills that a child (or adult) already possesses. Maternal depression further contributes to these interaction problems and is an additive stress factor for both mother and child. The third element in this triad of disadvantage is low educational attainment. While any one of these factors can adversely impact brain development in children, taken together they can result in a condition of sustained stress for child and mother as well as a stimulation-deprived environment for the child. Both of these conditions are correlated with weaknesses in the development of executive skills.

With reasonably normal neurological equipment and minimal negative environmental factors, brain development should proceed as designed. Here's how it would go:

Neurology: Growth and Development + Experience = Executive Skills

NEUROSCIENCE RESEARCH AND EXECUTIVE SKILLS

Throughout this book, where relevant, we have tried to review and incorporate information from the neuroscience research as it applies to executive skills. When it comes to applying this research to intervention strategies, the science is in its infancy. Very significant gaps remain between

what neuroscience research tells us about the brain and the implications that research has for improving executive skills. In our efforts to summarize the research and suggest what it might mean for real-world application, we have simplified what is a vastly more complex story. We hope that in our effort to extrapolate from neuroscience we have remained faithful to the apparent trends in that research.

At birth, your brain weighed about 13 ounces. By adulthood, brain weight increased to nearly 3 pounds. A number of changes account for this increase in size and weight. First, at birth, you have about 90% of the nerve cells that you'll need as an adult. However, over time and with experience, these nerve cells grow in size. In addition, these nerve cells must communicate if you're to be able to think, feel, and act. To "talk" to each other, the nerve cells develop branches that allow them to send and receive information from other cells. These branches, called axons and dendrites, grow particularly quickly during the infant and toddler years. Axons and dendrites connect with one another through synapses. These synapses, along with their accompanying axons and dendrites, are the wiring that allows our brains to send and receive information. When you were a newborn baby, each neuron would send electrical signals through about 2,500 synapses. Over the next 3 years or so, that number increased to around 15,000 synapses. Another key component in these earliest stages of growth is the formation of a substance known as myelin. Myelin is a fatty sheath that surrounds the axon, the fiber that transmits a signal from one nerve cell to another. Myelin insulates the branches that carry the nerve impulses, making the "conversations" between nerve cells increasingly faster and more efficient.

The process of myelination continues well into the early stages of adulthood and is responsible for the development of what is often called the white matter of the brain. This white matter consists of bundles of axons that connect to different brain regions and allow them to communicate with one another.

Then there is the gray matter. This is a term often used as a metaphor for the learning, thinking part of the brain itself. It's called gray matter because it actually looks pink-gray in color, but the important distinction between gray and white matter is that gray matter is made up of nerve cells, or neurons, as well as the connections between them discussed above, the synapses. The development of this type of brain matter is a bit more complex.

In about the fifth month of pregnancy, the brain of the unborn child is estimated to have about 100 billion neurons. This is nearly comparable to what the average adult brain has. However, early in childhood, after birth, the total number of synapses in the brain (about a quadrillion), greatly exceeds the number that the adult brain will contain. If the development of neurons and brain matter continued at this pace, as an adult your brain would be enormous. Instead, a different phenomenon occurs. The increase in gray matter, neurons and particularly synapses, peaks before the age of 5 and is followed by a gradual reduction or “pruning” of the neuron connections. The initial increase in these connecting fibers, particularly synapses, happens during a period of rapid learning and experience in early childhood. Recent brain research suggests that as this learning and skill development becomes more efficient, any additional increase in gray matter could actually undermine learning.

With pruning, as a child, you consolidated your mental skills, and the gray matter connections that were not needed or used dropped away. There was another major surge in the number of synapses just before adolescence. This was followed again by a process of pruning that extended throughout adolescence and into young adulthood, ending at about age 25. A good part of this growth spurt took place primarily in the frontal lobes. Scientists now generally agree that the frontal brain systems play a key, though not exclusive, role in the development of your executive skills. Therefore, we can say that these areas, which include the frontal and prefrontal cortex, along with connections to adjacent areas, in good part make up the brain base for executive skills.

The important point to remember in all of this information is that throughout childhood and adolescence into your young adult years, your brain was primed for learning, and as you practiced and acquired new skills, the neural pathways that underlie these skills were established. From this description, you are also probably realizing that the optimal time for learning new skills extended from early childhood through young adulthood.

This does not mean that as adults we lose our capacity to learn new skills. Quite the contrary, throughout adulthood we have the ability to continue learning and changing. With regard to executive skills, however, brain development and change occurs through our mid-20s. For most of us, significant changes in new skills do not occur after this period. The end result of this learning will come to light for you when you complete the Executive Skills Questionnaire later in this chapter and identify your strengths and weaknesses.

Based on our clinical experience, after adults have completed the questionnaire, if we ask them how long this has been their executive skills pattern, they

typically reply with responses such as “As long as I can remember,” “Always,” or “It seems like forever.” Based on what we know about brain development, this makes sense, because after about age 25 those areas of the brain most associated with executive skills are no longer undergoing significant change.

But suppose as an adult you want to try to change one or more of your executive skills, improve an area that you’ve identified as weak and that is an impediment in your work or personal life. Since the areas of the brain that underlie executive skills are no longer undergoing significant change, is it really possible for you to change one of your executive skills? The answer is an emphatic yes. In Chapter 4 we explain how your ongoing facility to learn can make it happen. Not only is it possible to change the behaviors associated with that executive skill, but underlying changes in the brain will also occur as a result of your efforts. Namely, myelination along axonal pathways will increase with the learning of new skills. So, in the world of executive skills, an old dog *can* learn new tricks.

However, as the saying implies, changing a skill as an adult will require more effort. If you’re prepared for that, the good news is that when you put in the initial effort and continue with the practice, as time goes on not only does the skill increase in strength, but there is a corresponding decrease in the effort required to accomplish this. The reduction in the effort needed happens at both a neurological level—the underlying brain changes result in more efficient transmission of nerve impulses—and a behavioral level. In the next chapter, after you’ve completed the executive skills profile for yourself, we take you through the steps of this change process. We tell you where the potential pitfalls are in this process, and we give you some strategies to make the change process easier, as well as activities to help you maintain the required effort and energy.

Executive Skills: The Smart but Scattered Scheme

It’s been over 20 years since we first started writing about executive skills. As child psychologists with an emphasis on how children function in schools, we approached these skills first from a learning perspective. We wrote a book for school psychologists and educators to help them understand how critically important executive skills are for school success. Shortly after that we followed with books for parents (*Smart but Scattered* and *Smart but Scattered Teens*), making the same case. We surveyed the literature at that time and quickly realized that every neuropsychologist, neuroscientist, and creator of behavior checklists had a different way of labeling and organizing executive skills. Over the years

we've found that people who write or lecture on executive skills tend to take one of two paths: they either combine a number of executive skills into a few broad categories (as few as three) or, more recently, they split them off into increasingly finite categories (as many as 40).

We took a middle path. Since we were in the business of arguing that kids learn these skills best when they are taught them explicitly and given lots of opportunity to practice them, the more skills we identified the less likely it would be that anyone would take on the burden of teaching them. We weren't sure that a parent or teacher has the time to teach 40 skills. On the other hand, we didn't think it would be helpful to lump a number of executive skills into broad categories, because we felt that the labels and definitions should link to interventions. As an example, many people who write about executive skills combine planning and organization into a single skill. Well, we are both fond of saying that each of us is great at planning and lousy at organization. Have you met people like this, good at planning and lousy at organization, or vice versa? We're guessing yes, so we're pretty confident that these are two separate skills!

We settled on 11 skills that we thought were critical for school success, and we've now had lots of experience explaining them to parents and teachers and helping them figure out ways to work with kids to strengthen these 11 skills. We feel our focus and our definitions have stood the test of time.

Although our initial focus was executive skill development in children, fairly early on in the process we realized that the more parents and teachers understood about their *own* executive skills, the better they would be able to understand why these skills are so important. So we developed a questionnaire that adults could use to determine their own executive skills profile. And then we incorporated it into our workshops. Not only were we gratified to see that adults benefited from this self-knowledge, but we also began to learn more about what these skills look like once the developmental period is behind us. We then realized that, in the same way that children bring executive skills to school, adults bring executive skills to the workplace. As we realized that, we decided there was a place for a 12th executive skill. It was then that we added *stress tolerance* to our list. It overlaps with other skills in our scheme, particularly flexibility and emotional control, but we also felt that by making it a separate skill we would be able to highlight the unique role that stress tolerance appears to play in helping adults understand the kinds of work environments where they thrive or struggle. If this intrigues you (perhaps because this skill is either a strength or a weakness for you), then you'll want to read Chapter 19 on stress tolerance to learn more about this.

EXECUTIVE SKILL WEAKNESSES VERSUS IMPAIRMENTS

This book focuses on helping you understand your pattern of executive skill strengths and weaknesses. We view each skill as consisting along a continuum from strong to weak, but we need to distinguish between weaknesses and impairments since this book will be most helpful to people whose executive skills profile does not place them at the extreme end of the continuum.

Can an executive skill weakness be so pronounced that it actually becomes a *disability*? Most psychological disorders impact executive skills, so the answer is *yes*. Let's look at some examples. People who suffer from anxiety typically have weak emotional control. Working memory also tends to be impacted by anxiety. People who suffer from depression often struggle with task initiation—and weak task initiation often impacts other executive skills such as sustained attention, planning, and time management. People for whom response inhibition is weak, if the problem is extreme, may be diagnosed with one of a number of impulse control disorders or addictive disorders. We should also add that some disabilities involve executive skill strengths that may be carried to an extreme. We can imagine people whose need for organization is so pronounced that they have difficulty tolerating anything being out of place. Some people with obsessive-compulsive disorder might be like this. There may also be people who feel a need to plan for every possible contingency. These people may be carrying a strength in planning to such lengths that they become anxious anticipating things going wrong. Again, this characteristic is sometimes associated with an obsessive-compulsive disorder.

Perhaps the most straightforward way to distinguish between a weakness in executive functioning and an impairment is to use the Americans with Disabilities Act (ADA) definition of disability to assist in making the distinction. The ADA defines a disability as “a physical or mental impairment that substantially limits one or more major life activities.” In this book we talk about the impact of weak executive skills in the workplace, in the home, and in interpersonal relationships. A person who can't function adequately in any of those situations—can't hold a job for long, falls in and out of relationships, or can't do the tasks necessary to maintain a home—is unlikely to gain answers or solutions from this book alone. More intensive medical or psychological intervention might be needed before a self-help book like this one could be of good use.

Your Executive Skills Profile

From years of working with executive skills and how they impact our ability to carry out activities of daily living, we've learned that while it would be wonderful if we functioned in top form across an array of executive skills, in fact adults tend to be better at some skills than others. And we have found that when people can identify their individual profile of strengths and weaknesses, they can use this information to function better in relationships and in home and work settings. On the next two pages is the self-assessment that will allow you to determine your own unique profile. Fill it in here, or you can download and print a copy at www.guilford.com/dawson7-forms.

What Does It Mean?

Unless all your scores cluster close together (which may happen, but if so, we at least encourage you to go back and review your answers for honesty), you now have a list of two or three strong skills and two or three weak skills. To flesh out each of these executive skills, we define each skill below and provide a brief description of what someone who is *strong* in that skill might look like, followed by a description of how someone who is *weak* in that skill may present himself.

Response inhibition: The capacity to think before you act—this ability to resist the urge to say or do something allows us the time to evaluate a situation and how our behavior might impact it.

- People who are *strong* in response inhibition know how to hold their fire. They are the voice of reason in an argument, and before they say something they stop to consider whether what they have to say will improve the situation or make it worse.

- People who are *weak* in response inhibition are frequently guilty of putting their foot in their proverbial mouth. They blurt out things without thinking, make decisions without considering all the ramifications, and make snap judgments that may lead them down the wrong path.

Executive Skills Questionnaire

Read each item below and then rate that item based on the extent to which you agree or disagree with how well it describes you. Use the rating scale below to choose the appropriate score. Then add the three scores in each section. Use the key at the end of the questionnaire to determine your executive skill strengths (two to three highest scores) and weaknesses (two to three lowest scores).

1	2	3	4	5	6
Strongly disagree	Disagree	Tend to disagree	Tend to agree	Agree	Strongly agree

<u>Item</u>	<u>Your score</u>
1. I don't jump to conclusions.	_____
2. I think before I speak.	_____
3. I make sure I have all the facts before I take action.	_____
TOTAL	_____
4. I have a good memory for facts, dates, and details.	_____
5. I am very good at remembering the things I have committed to do.	_____
6. I seldom need reminders to complete tasks.	_____
TOTAL	_____
7. My emotions seldom get in the way of my job performance.	_____
8. Little things do not affect me emotionally or distract me from the task at hand.	_____
9. When frustrated or angry, I keep my cool.	_____
TOTAL	_____
10. No matter what the task, I believe in getting started as soon as possible.	_____
11. Procrastination is usually not a problem for me.	_____
12. I seldom leave tasks to the last minute.	_____
TOTAL	_____
13. I find it easy to stay focused on my work.	_____
14. Once I start an assignment, I work diligently until it's completed.	_____
15. Even when interrupted, I find it easy to get back and complete the job at hand.	_____
TOTAL	_____
16. When I start my day, I have a clear plan in mind for what I hope to accomplish.	_____
17. When I have a lot to do, I can easily focus on the most important things.	_____
18. I typically break big tasks down into subtasks and timelines.	_____
TOTAL	_____

(continued)

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Executive Skills Questionnaire *(continued)*

19. I am an organized person. _____
20. It is natural for me to keep my work area neat and organized. _____
21. I am good at maintaining systems for organizing my work. _____
- TOTAL** _____
22. At the end of the day, I've usually finished what I set out to do. _____
23. I am good at estimating how long it takes to do something. _____
24. I am usually on time for appointments and activities. _____
- TOTAL** _____
25. I take unexpected events in stride. _____
26. I easily adjust to changes in plans and priorities. _____
27. I consider myself to be flexible and adaptive to change. _____
- TOTAL** _____
28. I routinely evaluate my performance and devise methods for personal improvement. _____
29. I am able to step back from a situation to make objective decisions. _____
30. I am a "big-picture" thinker and enjoy the problem solving that goes with that. _____
- TOTAL** _____
31. I think of myself as being driven to meet my goals. _____
32. I easily give up immediate pleasures to work on long-term goals. _____
33. I believe in setting and achieving high levels of performance. _____
- TOTAL** _____
34. I enjoy working in a highly demanding, fast-paced environment. _____
35. A certain amount of pressure helps me perform at my best. _____
36. Jobs that include a fair degree of unpredictability appeal to me. _____
- TOTAL** _____

KEY					
Items	Executive skill	Items	Executive skill	Items	Executive skill
1-3	Response inhibition	13-15	Sustained attention	25-27	Flexibility
4-6	Working memory	16-18	Planning/prioritizing	28-30	Metacognition
7-9	Emotional control	19-21	Organization	31-33	Goal-directed persistence
10-12	Task initiation	22-24	Time management	34-36	Stress tolerance

Strongest skills (highest scores)

Weakest skills (lowest scores)

Working memory: The ability to hold information in memory while performing complex tasks. It incorporates the ability to draw on past learning or experience to apply to the situation at hand or to project into the future.

- People who have *strong* working memories have no trouble keeping track of things they have to do, promises they have made, or appointments they have to keep. They remember details from conversations and important information about the people they live or work with.

- People who have *weak* working memories are forgetful. When they're focused on a particular thing, they may lose track of critical competing information (for example, forgetting a dentist appointment because an emergency arose at work), or they may lose track of details or minor obligations (like forgetting to pick up milk on your way home from work, something your spouse or partner asked you to do when you left home that morning).

Emotional control: The ability to manage emotions to achieve goals, complete tasks, or control and direct behavior.

- People who are *strong* in emotional control are able to keep their emotions in check, even in stressful situations. They react calmly in the face of confrontation or in the midst of an emergency. They are not easily "baited" (either by an irate boss or by an angry teenage son or daughter).

- People who are *weak* in emotional control tend to fly off the handle at minor provocations. They are easily stressed and find it hard to manage their feelings, particularly in emotionally charged situations.

Task initiation: The ability to begin projects without undue procrastination, in an efficient or timely fashion.

- People who have *strong* task initiation skills get started right away on projects and obligations. If someone asks them to do something, they're most comfortable if they can jump up and do it right then. They don't need deadlines as a motivator.

- People who are *weak* in task initiation put things off. They think to themselves, "I'll do it later" or "I'll get to it tomorrow," and when the deadline looms

they find themselves backed up and forced to ask for extensions. Sometimes they delay starting because their perfectionism leads them to doubt they'll be able to produce to their own high standards, and sometimes they delay because the task appears too daunting or to require too much effort. The end result is the same: procrastination.

Sustained attention: The capacity to keep attention on a situation or task in spite of distractibility, fatigue, or boredom.

- Individuals with a *strength* in sustained attention have no trouble persisting long enough to complete the task—even if it's something they find tedious, effortful, or boring. They're able to screen out distractions and defer gratification in their drive to get tasks done.

- Individuals with a *weakness* in sustained attention may be able to start tasks quickly, but they struggle to finish them. They are susceptible to interruptions and find it hard to get back to work after them. They often run out of steam before they finish the task. Sometimes people with weak sustained attention jump back and forth between multiple tasks because they can't tolerate spending too much time on any one task. This approach may work for some—but it's also fraught with pitfalls.

Planning/prioritizing: The ability to create a road map to reach a goal or to complete a task. It also involves being able to make decisions about what's important to focus on and what's not important.

- People with *strong* planning and prioritizing skills excel at multistep tasks. They can visualize what the final outcome should be, and they can easily sequence the steps they need to follow to achieve the outcome. In the face of a complex task or too much information, they can zero in on the critical information and discard the rest.

- People with *weak* planning and prioritizing skills, when confronted with complex or multistep tasks, have a difficult time sifting through all the information and identifying where to start. They may become bogged down in minor details and forget where they are heading. They are particularly challenged when the planning involved requires them to manage others' work as well as their own.

Organization: The ability to create and maintain systems to keep track of information or materials.

- It's not hard to identify people who have a *strength* in organization. Their work and living spaces are neat and tidy. They have a place where things should go, and they dislike clutter. When they return from a trip, they unpack their suitcases right away.

- It's just as easy to identify people with *weak* organizational skills. Clutter seems to accumulate effortlessly, and cleaning it up is painful. When someone asks them to find something (whether it's on their desk, their laptop, or in their cupboards or garage), their answer is often "I know it's here someplace; I just can't find it right now."

Time management: The capacity to estimate how much time one has, how to allocate it, and how to stay within time limits and deadlines. It also involves a sense that time is important.

- People with *strong* time management skills meet deadlines, arrive on time for appointments or meetings, and can judge how long it takes to do any task thrown at them. They can make adjustments as well, speeding up to complete something quickly if time is at a premium.

- People with *weak* time management skills tend to have a particularly hard time with time estimation. They routinely underestimate how long it takes to do something, and so they are sure they have time to "just do one more thing" before leaving work at the end of the day or heading off to an appointment. Their lives have improved measurably since the advent of cell phones because now they can call ahead and explain that they're "running late."

Flexibility: The ability to revise plans in the face of obstacles, setbacks, new information, or mistakes. It relates to an adaptability to changing conditions.

- *Flexible* people make easy adjustments when something unexpected happens. In addition to being able to "go with the flow," they are often creative, nonlinear thinkers.

- People who are *inflexible* are easily thrown for a loop when plans change or something unexpected happens. The need for backup plans seems to surprise them no matter how many times they've been in situations in which they had to come up with Plan B.

Metacognition: The ability to stand back and take a bird's-eye view of oneself in a situation. It is an ability to observe how you problem solve. It also includes self-monitoring and self-evaluative skills (for example, asking yourself, "How am I doing?" or "How did I do?").

- People who are *strong* in metacognition are able to see the forest rather than just focusing on individual trees. They see how the pieces of the puzzle fit together. It's hard to describe this skill without using metaphors—and understanding metaphors is something metacognitive thinkers do well. They are good at *making connections* between disparate concepts and experiences.

- People who are *weak* in metacognition tend to focus on isolated details. They revel in the immediate and the concrete and are not likely to spend a lot of time in introspection. Sometimes they have trouble "connecting the dots," and this may be a source of frustration to those around them who do that easily.

Goal-directed persistence: The capacity to have a goal, follow through to the completion of the goal, and not be put off by or distracted by competing interests.

- People with a *strength* in goal-directed persistence are people who set long-term goals for themselves and pursue them, pulling themselves back on track and working around obstacles when they arise. The goals may be lofty (writing the Great American Novel) or mundane (walking 30 minutes a day 5 days a week), but once they establish a goal they work to accomplish it, "come hell or high water."

- People for whom goal-directed persistence is not a strength tend to be less future oriented. They're happy with how things are unfolding and may not be driven to "take it to the next level." This *weakness* may not be particularly troubling to them—unless they are dissatisfied with the status quo or they live or work with someone who is.

Stress tolerance: The ability to thrive in stressful situations and to cope with uncertainty, change, and performance demands.

- People who are *high* in stress tolerance usually prefer a lifestyle that builds in some variety and unpredictability. They like jobs where every day is different and opportunities to develop new skills or explore new options present themselves. At the extreme end of the continuum, these people may be called “adrenaline junkies.”
- People who are *low* in stress tolerance like to know what’s coming next, and preferably, it’s familiar and they’ve had lots of practice with it. They prefer jobs they can perform competently without undue pressure being placed on them.

How to Use This Information

First of all, now that you’ve read the definitions and descriptions associated with strong and weak skills, decide whether the profile of strengths and weaknesses you generated fits what you know about yourself. Although the rating scale consists of only three questions per skill, people report that the results are generally pretty accurate, in terms of matching the assumptions they’ve made about themselves. If you think the results “aren’t you,” you may want to talk with someone who knows you well to see if that person agrees with how you’ve answered the items.

Assuming the results ring true, the next step is to look at the individual strengths and weaknesses. You may find, for instance, that these patterns tell you something about the kinds of job demands you’re most comfortable with, or they may explain why you’re drawn to some aspects of managing a home more than others. If you’re great at planning and lousy at organization, for instance, then making the arrangements for a family vacation may appeal to you, while cleaning up your study feels like wading through a swamp. In fact, we would guess that your strengths and weaknesses say a lot about the kinds of situations and events you prefer and the ones you find particularly frustrating. The table on the facing page lays out what this might look like.

It’s possible that your scores on individual executive skills don’t vary significantly from one another. That’s not unusual. If your scores are high across the board, then you may have a smug smile on your face as you read this. We might even ask *why* you’re reading this! We’ve met people like you, although

THE IMPACT OF YOUR STRENGTHS AND WEAKNESSES

Executive skill	If this is a strength for you, you probably prefer . . .	If this is a weakness for you, you may get frustrated by . . .
Response inhibition	Taking your time before making a decision, carefully weighing options and considering the impact of your choices.	Saying whatever pops into your head and then having to deal with the fallout.
Working memory	Keeping track of things, holding on to details, making sure nothing's left out when the job is done.	Making careless mistakes, forgetting important things, losing things, being teased for being "scatterbrained."
Emotional control	Being someone people turn to in emergencies because they know you can be counted on to stay calm and make good decisions.	Being accused of being "hot under the collar" or watching your feelings get out of control when those around you remain composed.
Task initiation	Feeling efficient and productive because you can jump right into tasks.	How hard it is for you to get started on things, even when you know the delays will come back to bite you later.
Sustained attention	The feeling of intense focus or concentration that allows you to screen out distractions when something needs to get done.	How hard it is to stick with things long enough to see them to completion, especially when you say to yourself, " <i>This time I'm not going to stop until it's finished.</i> "
Planning/prioritizing	Taking a complex task and figuring out how to do it, from start to finish.	Someone asking you to give him or her a plan for completing a task or project.
Organization	The sense of order you feel when you are able to control your home or workspace.	How quickly the clutter piles up—unopened mail, files that need to be sorted, e-mail demanding decisions.

(continued)

THE IMPACT OF YOUR STRENGTHS AND WEAKNESSES (continued)		
Executive skill	If this is a strength for you, you probably prefer . . .	If this is a weakness for you, you may get frustrated by . . .
Time management	Knowing that you’ve allowed yourself enough time to complete whatever needs to get done.	Feeling that no matter how hard you try to anticipate everything that could happen, you’re <i>always</i> running late.
Flexibility	Knowing that you can handle whatever monkey wrench gets thrown at you. In fact, you may see the obstacles as an opportunity to try something new.	Never knowing when you’ll have to make an adjustment because your plans didn’t go the way you thought they would.
Metacognition	Looking at a situation from multiple perspectives before acting and reflecting afterward on how things went.	Hearing others say, “I can’t believe you missed that!”
Goal-directed persistence	Setting goals, making plans, and watching your dreams come to fruition because you kept your eye on the prize.	Getting sidetracked on the way to carrying out your goals. You have the best of intentions, but something always gets in the way.
Stress tolerance	The unexpected.	The unexpected.

when we’ve pushed them a bit, even they can usually distinguish between skills they are *really* strong in and skills that are just well developed. And since there’s always room for improvement, you may be able to find a skill or two you want to tweak.

It’s also possible that you’re reading this because you work or live with people with weaker skills. And they may irritate you to no end. We’re fond of saying that people who are naturally *good* at any particular executive skill find it really hard to understand people who are naturally *bad* at the same skill. Reading this book may help you empathize with those people more than you do now. You may even find ways to help them improve their executive skill weakness—although caution is urged here, since resentment often arises when people with

strong skills try to “help” people with weak skills. Too often the weaker-skilled individual hears that help as “Why can’t you be more like me?”

Patterns of Strengths and Weaknesses

Understanding individual strengths and weaknesses may lead you to a few “aha” moments:

- “Oh, that weakness in flexibility explains why I *hate* it when my husband comes home from work on Friday and suggests we take a spontaneous trip to the mountains for the weekend!”
- “Wow. That strength in stress tolerance totally explains why my best days at work come when an emergency arises that requires quick thinking and creative problem solving.”
- “I get it. My strength in metacognition is what drives me to ask for feedback from others so I can evaluate my own performance and figure out how to do things differently the next time.”

But there’s more work you can do with your profile by looking at the *interaction* among various skills. Here are some of the more common patterns we’ve encountered:

Strong Time Management/Weak Flexibility and Vice Versa

These are very frequently complementary skills. (This is Peg speaking:) As it happens, time management is one of my strengths and flexibility is one of my weaknesses. This makes perfect sense to me: I am so oriented to time that I have an internal schedule and even a calendar in my head so that I know exactly what is supposed to happen when, not just for today but for this week, this month, and, in some cases, several months out. When something unexpected happens, more often than not, it has the effect of disrupting my schedule. That hole that suddenly appeared in my muffler? If I have to take it into the shop, that will throw off my whole week! My inflexibility arises because invariably a surprise requires me to rework time. It would be like making one change on a spreadsheet that affects multiple other elements on the spreadsheet, all of which have to be reconfigured by hand.

On the other hand, if flexibility is a strength for you, there’s a good chance

that time management is a struggle for you. Having things happen at a predetermined time is just not the way you think.

By the way, we've had some people who have particular strengths in organization report to us that flexibility is a weakness for them. (This is Peg speaking:) They have the same relationship with *space* that I have with time. Introduce clutter into their space, and they feel like something's closing off their ability to breathe.

Strong Working Memory/Weak Organization and Vice Versa

We've found that a typical pattern is that whichever of these two skills is stronger, people rely on that skill to compensate for the relative weakness of the other. For example, people who are strong in working memory may lay down their car keys any place when they get home from work, and because their memory is good, they have no trouble finding the keys the next morning. Similarly, people for whom organization is the stronger skill also remember where they put their car keys—*because they always put them in the same place* so they don't have to use their memory to retrieve them. Since research shows that working memory declines with age, those of you for whom working memory is stronger than organization may want to find organizational strategies you can build to support you as your memory declines.

Weak Flexibility/Weak Emotional Control

We have found that people who are weak in flexibility often have a weakness in emotional control as well. Their inflexibility often leads them to become angry or anxious when they are confronted with an event they weren't anticipating. It's helpful to understand the connection between these two executive skills, because if you realize that you're most likely to "lose it" emotionally when something taps into your inflexibility, you can use strategies for combating inflexibility as a way to help you manage your emotions as well.

Response Inhibition/Emotional Control/Metacognition

It's not always inflexibility that triggers an emotional response—sometimes it's a problem with impulse control. Something happens, and you react without thinking. Impulsivity doesn't involve just words and actions (saying or doing something without thinking)—it can also involve feelings. Anger, anxiety, shame, embarrassment—even joy. If there's no filter or way station, those feelings come

on strong. If response inhibition is a strength but emotional control is a weakness, the feelings arise quickly, but you're able to sit on those feelings and figure out how to handle them later. If you're weak in both skills, your emotions—and your emotional response—are likely to be transparent to those around you.

If you're weak in both response inhibition and emotional control, your saving grace may be a strength in metacognition. Because this means you can step back and survey the situation, weigh your options, and hold your fire. And if metacognition is not strong enough to enable you to control your emotions and impulses in the moment, it will allow you to reflect on your actions later and come up with a way to repair the damage or recover your equanimity—and maybe do things differently the next time.

Task Initiation/Sustained Attention/Goal-Directed Persistence

Having a strength in goal-directed persistence may drive you to start tasks promptly and stick with them long enough to get them done even if task initiation and sustained attention are not strengths for you.

(This is Peg speaking:) Several years ago I taught an undergraduate educational psychology class at our state university. As part of the class, students took the Executive Skills Questionnaire and I calculated their profiles. I didn't do anything with the results until the end of the marking period, when I got curious to see if anything in their profiles might predict course performance. One of the pieces of data I collected was whether students handed in their weekly writing assignments on the date they were due. Since they weren't penalized for handing them in late, there was no reward associated with on-time performance.

At the end of the term, I looked to see if there were any differences between those who handed their papers in on time and those who tended to hand them in late. Here's what I found: *all* the students who handed in papers late were low on task initiation. But only some of the students who handed in their assignments on time were high in task initiation. There was a subset of students who were weak in task initiation but who handed in their work on time. What defined them? They were all high in goal-directed persistence. What that told me was that they were able to use their strength in goal-directed persistence to overcome their inclination to procrastinate.

We suspect that people who are high in goal-directed persistence are able to take advantage of that particular strength to help them combat or avoid pitfalls associated with whatever their executive skill weaknesses are. If you are bound and determined to create an Internet start-up, then you will find a way to

do that despite the fact that planning is not one of your strengths. If you want to master Spanish so that you can get a job in the foreign service in some South American country, then you will figure out how to work around your weakness in working memory.

We would guess that if you're reading this book (not just *bought* the book but are actually *reading* it), goal-directed persistence is not your weakest skill. If it's one of your strengths, we can show you how you can harness this particular skill to tackle some of the other skills you're weak at. If goal-directed persistence happens not to be a strength, then at some point you may want to jump ahead to the chapter that deals with this skill in particular, because that may be your gateway to self-improvement.

But let's take this one step at a time. In the next chapter, we outline the three strategies that we've found for managing executive skill weaknesses. One of those strategies focuses on how to manipulate your environment to enable you to function with a skill that's weak but that you aren't particularly motivated to improve. The other two strategies can help you actually *improve* the skill. If you choose to focus on changing yourself rather than changing the environment, an understanding of the role that *effort* plays in this process will be helpful. But that's food for the next chapter, so let's move on.

3

Managing Executive Skills by Modifying the Environment

Okay, assuming you've done your work in Chapter 2, you now know your executive skills profile. And the fact that you're still reading suggests you're game to learn ways to manage your executive skill weaknesses. Because we're big believers in exerting no more effort than is necessary, the place to start in grappling with your executive skill weaknesses is to look for ways to *work around them*. This can be done by modifying your environment either to support your weak executive skill or to reduce the negative impact of that weak skill.

We'll describe three broad domains of environmental modifications you can draw on, although you will see our divisions are somewhat artificial and there is overlap among the categories. Nonetheless, we think it helpful to identify the categories because this can act as a cue or mnemonic device as you think about how to make adjustments for your weak executive skills. When you bump up against a problem that arises from a weak executive skill, start by asking yourself three questions:

1. "Can I alter the physical or social environment in which the problem arises to lessen the problem?"
2. "Can I modify the task I'm trying to accomplish that is impeded by my weak skill?"
3. "Is there some way I can use people around me (friends, family, coworkers) to help me manage my weak skill more effectively?"

Let's take these one at a time.

Look to Modify Your Physical or Social Environment

Picture your living and working spaces (each room in your house, the design of your office, what your car looks like) and ask yourself, “If I change some aspect of these physical spaces, would my executive skill weakness be less of an impediment?” Or look at your social world and see if there are conflicts and tensions inherent in that world that are likely to bring your executive skill weaknesses to the fore. Can you redesign your physical environment or reengineer your social environment to improve the situation?

(This is Peg speaking:) Here are a few disparate examples from my personal experiences:

1. One of my weak executive skills is emotional control. I had a close relative who knew how to say things in just the right way to upset me, and my visits to this relative always left me feeling terrible. When I got married, we discovered that as long as my husband was in the room, this relative refrained from her biting comments. Once we understood this, I avoided visiting her when my husband was unable to accompany me (and I’d steel myself whenever he had to go to the bathroom!).

2. When I leave work at the end of the day, I’ve already figured out what I need to do first thing the next morning when I arrive back at my office. I realized a while back that if I made a to-do list, I might just push it aside or maybe not even notice it, thanks to my weak organizational skills. But if I leave the actual materials I need to work with (insurance forms to be filled out, reports to be mailed) on the middle of my desk, that cues me the next day for the first few things I need to do. The physical reminder actually helps me jump-start my day.

3. My son struggled with a short attention span and a susceptibility to distractions all through high school. Shortly after he went to college, he decided that he needed to be thoughtful about his study environment. He realized he could not study in his dorm because there were too many interesting conversations going on (or video games to be played). He earned the nickname “Library Boy,” because he was in the library five nights a week from 6 o’clock until 10 o’clock. Not only was the library quiet and therefore conducive to studying, but whenever he looked up from his studies, he would see that he was surrounded by other serious students, and that would cue him to get back to work.

4. I met a mother recently who solved the problem of a family full of children with weak organizational skills by making the entryway of her house look

like her son's kindergarten classroom—she constructed individual cubbies, one for each child, right inside the door so that when the children came home from school, the environment cued them to hang up their coats and stow their backpacks (for easy retrieval when it was time to do homework or get ready for school).

The table on the next two pages lists each of the executive skills and provides an example of how the physical or social environment might be altered to make the executive skill weakness less of an intrusion.

The suggestions in this table are not meant to be comprehensive, but as you look at your own particular weaknesses, they may help you think of things that would work for you.

Look to Modify the Tasks You Have to Do

We've already explained that executive skills are the skills required to *execute tasks*, so an obvious focus for environmental modifications is the tasks themselves. In our work with children, we've learned that task modification is a great way to help children with weak or immature executive skills accomplish things that might seem to require more proficient executive functioning. And we know from personal experience that task modification works with adults as well.

(This is Peg speaking:) Here are some task modifications that work for me:

1. Organization is my weakest executive skill. I've now reached a stage where I'm not happy with clutter, but I haven't yet learned how to avoid accumulating it. When my study gets too messy for me to live with, I do a couple of things. I unfold a card table and put it in the middle of the room. I pile all the clutter onto the card table so that my desk and countertops are completely clear and represent my end goal. I then set aside a very small amount of time each day to tackle the stuff on the card table—usually no more than 5 or 10 minutes, although sometimes I can build up a head of steam and exceed my self-imposed time limit. The task modifications? I shorten the task, build in breaks, and have a model in advance of what I want the final product to look like.

2. Flexibility is another of my weaknesses. Whenever possible I build in safeguards or protections against the need to be flexible. I bought my own LCD projector to avoid running the risk of a borrowed LCD projector not communicating with my Mac laptop whenever I did presentations. I've created travel

ALTERING THE PHYSICAL OR SOCIAL ENVIRONMENT

Executive skill weakness	Examples of modification to the physical or social environment; if this executive skill is a weakness for you, you might . . .
Response inhibition	Stay away from settings where your impulses get you in trouble (for example, casinos, shopping malls, bars, the staff kitchen or break room during the holidays).
Working memory	Place things you have to take with you in front of the door so you'll trip over them if you don't pick them up when you leave in the morning.
Emotional control	Avoid socializing with someone who you know pushes your buttons.
Task initiation	Put in the center of your desk before you leave work in the afternoon the first task you need to get done in the morning so that it's visible when you walk into your office the next day.
Sustained attention	Set up a work environment with a minimum of tempting distractions.
Planning/prioritizing	Put a large white board on your office wall with the project title written at the top to remind you to list the steps needed to complete the project.
Organization	Spend some time thinking about the way you can design your environment to make organization easier (for example, bins, inboxes, wall pockets, all labeled with the materials that belong in each).
Time management	Set all your clocks (and your watch) ahead by 10 minutes to give yourself an extra time cushion to get ready for something.
Flexibility	Build in redundancy to address the possibility of something going wrong (for example, when traveling to a new place, print out Google map directions in case you lose coverage with your cell phone Global Positioning System [GPS]).

Executive skill weakness	Examples of modification to the physical or social environment; if this executive skill is a weakness for you, you might . . .
Metacognition	Identify two characteristics that enable you to work well in your work or home environment and then list two that get in the way of doing those jobs. Post them in that setting to remind you to use your strengths and not let your weaknesses interfere.
Goal-directed persistence	Place signs or other visual reminders of the goal that you're working toward in prominent places in your environment (for example, using words or pictures representing the goal as the screen saver on your computer).
Stress tolerance	Think about ways to make your environment feel less stressful—soothing music, candles, reduced clutter; get to work early before your coworkers so you can spend more of your working hours in a reduced-stress environment.

checklists to ensure I have everything I need for a business trip or a vacation, eliminating the possibility that I will have to cope with the unpleasant discovery that I left at home something essential (like a power cord or a passport). And I develop redundant systems in case the first one fails. When my travel plans require me to drive between cities, I take along my own GPS system, but I also use Google maps and print out all the routes I have to travel. And if those both fail, I have Waze on my smartphone to fall back on.

3. Although sustained attention is a strength for me, there are still some tasks I have to force myself to do. Writing psychological reports is one of them. I've worked out a fairly elaborate reinforcement paradigm to get me through this. After I complete each section of the report, I allow myself to play two games of FreeCell on my computer. And then, to make it a little more interesting, I deal one more hand, and if two aces appear in the first row, I allow myself to play an additional game.

The point to understand with the examples above is that none of my task modifications are aimed at improving the executive skill itself. Rather, they're

designed to help me cope more successfully with the fallout from that weakness. I still haven't learned to keep my study consistently neat and organized. But with task modifications, I can repair the damage more quickly and successfully. And I still have a sense of panic when I'm hit with something that doesn't work the way I thought it would. But I've put backup systems in place to avoid the unhappy surprises as much as possible and to make the recovery less stressful when they can't be avoided.

The table on pages 39–40 lists a variety of task modifications. This table, unlike the table that lists ways to modify the environment itself, does not break down by executive skill because many of these modifications work across skills. As you scan the suggestions, you will probably be able to identify similar strategies that you could apply to your problem area—or it may even help you recognize that already you're making task modifications to make your life go more smoothly (if this is the case, then pat yourself on the back for being so resourceful!).

Look for Ways to Get Others to Help You

This might be considered just another way to engineer your social environment to support weak executive skills, but we think it merits its own category because some of the options can be pretty powerful. They also come with the potential for misuse, which we'll spell out as we go along.

There are ways that our family, friends, and coworkers can provide supports to help us work around or compensate for weak executive skills (there are also things they can do to support our efforts to *improve* our executive skills, but that will be taken up in later chapters). (This is Peg speaking:) Let me give a few examples and then try to categorize the ways others can help.

1. My brother is a high school history and government teacher who knows that task initiation is a weakness for him. When seniors ask him to write college recommendation letters, he tells them, "I'd be happy to do this for you, but your job is to nag me to make sure I get it done by your deadline."

2. The same brother—who, by the way, is an outstanding teacher, both very dynamic and engaging in the classroom—for many years team taught with another teacher. She brought organization and planning to the classroom, and he brought excitement. By pooling their executive skill strengths, they were able to handle combining their students into larger classes than either would have comfortably taught alone.

WAYS TO MODIFY TASKS

Task modification	Explanation
Make the task shorter or build in breaks.	A key reason we avoid tasks that take a lot of effort is that we think <i>they will take forever!</i> Ask yourself how much time you can tolerate spending on the unpleasant task and then either spend only that amount of time per day or divide the task into small, manageable portions by building in breaks.
Use a 1-10 scale to find ways to make the task feel like it requires less effort.	Ask yourself how much effort the task feels like it takes on a scale from 1 (it's a snap, requires no effort, and you may actually enjoy doing it) to 10 (you hate it, put it off as long as possible, put it on someone else's chore list, pay someone to do it—or it just never gets done). Then ask yourself how you can turn the 8-9-10 task into a 2-3-4 task (it's unlikely you can turn a 10 task into a 1, so don't even try). The other suggestions in this table may give you ideas for how to do this.
Pair the unpleasant task with something that's pleasant.	Examples: Listen to music or books on tape while exercising; watch a movie while sorting laundry; find someone to do the task with you—or to keep you company while you do it.
Pair the unpleasant task with an obligation so that you can "kill two birds with one stone."	Examples: Make your daily phone call to your elderly parent while loading the dishwasher; rehearse that difficult conversation you need to have with your boss while you're stuck in traffic.
Give yourself something to look forward to doing when the effortful task is done.	With children, we use the refrain <i>First work, then play.</i> The same principle can work with adults. First spend 30 minutes working on your taxes, then watch the recorded episode of whatever the hot new show of the moment is. And if you can't tolerate 30 minutes on your taxes, cut down the time to a manageable level.
Break the task into very small pieces, list the pieces out, and turn them into a to-do checklist.	If necessary, include a column that reads "Start Time" and build in a reminder such as a smartphone alarm to help you remember to start the task.

(continued)

WAYS TO MODIFY TASKS (continued)

Task modification	Explanation
Use technology such as tablets and smartphones to build in cues and reminders.	Calendars on the computer can be programmed to remind you of an obligation at set times (for example, 24 hours before, 10 minutes before); reminder programs can not only be used to create to-do lists but also be programmed to cue you to complete the item either at a specific time or at a specific location (for example, when you walk in the door to your house after work). Post-it programs are useful, too—especially if you program them to appear on your desktop as soon as you turn on your computer.
Turn open-ended tasks into closed-ended tasks.	Sometimes tasks are daunting because we don’t know where to start or how to proceed. Spending time before beginning the task listing the steps you need to do in the order in which you need to do them can make the task feel less overwhelming.
Build in variety or choice.	Sometimes what makes things feel like drudgery is the sheer invariant routine of it all. Think about ways to “mix it up” with respect to chores that require effort. Could you change the <i>order</i> in which you do a set of tasks, or could you do it a different way? Could you build in surprise (for example, put each task on a separate slip of paper and put them all in a jar; do the first one you pull out—and add in some fun things to do, too, so there’s always a chance that the next slip you draw out won’t be work at all!).

3. Our colleague (someone with whom we coauthored a couple of books) Chuck Martin taught a marketing class at our state university several years ago in which he had all his students take the Executive Skills Questionnaire (see Chapter 2) at the beginning of the marking period, and he had them share their profile of strengths and weaknesses with each other. He divided the class into groups by ensuring that there was a diversity of strengths in each group (for example, by assigning the five students who were strong in planning to five different groups). As the groups carried out their class projects, they would assign tasks to each other based on their knowledge of each person’s strengths and weaknesses. They might say to a group member, for instance, “We know

planning is not your strength, so we won't put you in charge of breaking down our project into individual steps. However, you are *great* at flexibility, so you'd be the perfect person to interview customers as they leave Best Buy to find out why they bought or didn't buy a particular product."

4. My son, when he was a student studying at Goldsmith's College in London, knew that task initiation was a weakness for him. So on days when he had to begin writing a major paper, he made it a point to announce to close friends who happened to be eating breakfast with him in his residence hall that his plan was to begin writing the paper at 7 o'clock that night. In so doing, he knew that if he were socializing around that time, someone would invariably say to him, "Hey, Aaron, didn't you say you were going to start writing your sociology paper about now?"

All of the preceding are ways of taking advantage of people around us to help us minimize the negative impact of our weak executive skills. As you can see from the examples, it also helps if you know the executive skills profile of those people, so you can draw on their strengths and not rely on them for something they're not good at. The important thing to keep in mind is avoiding imposing on others without offering something in return, or asking others to understand or forgive your weaknesses (repeatedly) without making an effort to improve those weaknesses.

The table on page 42 identifies ways you can use people around you to help you manage your weak executive skills.

A Word about "Off-Loading"

Many of the environmental modifications we've described above fit a process that the brain science literature calls off-loading. Off-loading refers to giving over some of our cognitive functions to technology. When we use the term *technology* here we mean it in the broadest sense. That is, as a tool that exists outside of ourselves that relieves us of having to carry a certain mental function, including information within our own brains. For example, at its simplest level, a list can be a piece of cognitive technology. Rather than, for example, carrying within our own working memories the items that we will need to buy at the supermarket, we can "off-load" this information using pen and paper and then need only to remember to take the list and look at it when we arrive at the store.

You can immediately see and are likely familiar with considerably more

LOOKING TO OTHERS TO HELP YOU MANAGE YOUR
 EXECUTIVE SKILL WEAKNESSES

What others can do	Explanation
Agree to cue or remind you.	If you know you will have trouble remembering something, it may help if you ask someone with strong working memory to remind you. While this is particularly helpful when working memory or task initiation is the weak area, it can also be useful when you don't know when the cue will be necessary—for example, if you have trouble reading people and you miss cues that you're talking too much (that is, weak metacognition), having a friend who can give you a little sign when it's time to stop talking can be helpful.
Hold you accountable for your commitments—or just be there to accept your verbal promises.	Research shows that if you make a public commitment to doing something, you're more likely to do it. Often, the act of making the commitment alone increases the likelihood that you will engage in the behavior you promised to do—but if that's not enough, a gentle reminder may do the trick.
Provide encouragement and positive feedback.	Research shows that a ratio of three positives for every piece of corrective feedback can change behavior all by itself. We give this advice to parents for shaping behavior in their children, but as an adult, you may have to solicit positive feedback from others. Be honest: tell them, "This is hard for me and I'm working on it. If you notice me actually pulling it off—or even coming close—could you give me some positive feedback about that? It might really help."
Be willing to trade off tasks and responsibilities to better match your strengths and weaknesses (and theirs).	Look at your executive skill strengths and weaknesses and see how they make some tasks easier to do than others. Then identify the strengths and weaknesses of others who you work (or live) with. Suggest a trade—you'll do something that's easy for you but hard for your colleague if she will take on a task that you find effortful but that coincides with her strengths.

sophisticated opportunities and applications for off-loading. For those of you who carry a smartphone, the built-in capacities of that instrument along with the enormous range of applications that can be downloaded represent a virtually limitless supply of tools that allow us to off-load information and plans. In addition, this technology supplies us with the means to activate our attention to particular situations or events. We have cars that prompt our attention when we've drifted into a lane of passing or oncoming traffic. We have cars that tell us when we are about to back up that there are cars approaching. And we have cars that, should we forget to brake in time, activate braking systems for us. There are many other examples of off-loading. When we alphabetize a set of books on our bookshelf or practice putting our keys and cell phones in a particular location, we have in a sense utilized the principle of off-loading. In Part III of this book, we recommend more specific tools to help you off-load and thus compensate for weaknesses in specific executive functions.

So another question to ask yourself as you're figuring out ways to manage an executive skill weakness is this: Is there some way I can off-load aspects of the task that make it effortful and therefore likely to be avoided?

The point of this chapter was to give you ideas for how you could minimize the negative impact of your weak executive skill. If you've used this information successfully, you may have seen or felt a noticeable improvement in the quality of your life. There's a good chance, though, that this is not enough for you. If your goal is not just to make your executive skill weakness less annoying but actually to make it less of a *weakness*, then delve into the next chapter. Now the real work begins.

4

Improving Your Executive Skills

Let's begin by returning to a discussion of what's going on in the brain that facilitates skill development. Because behavior change in adulthood is not particularly easy, we think it will be helpful to provide a brain-based rationale for the strategies we recommend. We also want to stress that for our strategies to work, you need to follow the process step by step, even if you're tempted to cut corners or skip steps.

As we explained in Chapter 2, the areas of the brain associated with executive functions undergo a significant degree of development and change beginning in infancy and extending well into young adulthood. By acquiring skills gradually and practicing them over time, we reach young adulthood with the potential to live independently, handling the demands of everyday life: getting and holding jobs, finding secure places to live and maintaining living quarters, budgeting time and money to ensure the refrigerator is stocked, food gets on the table according to reasonably consistent schedules, bills are paid on time, and close relationships are satisfying and function smoothly. All this happens because we've had years to learn the executive skills that make them possible—and to practice them, gradually increasing the difficulty level of the practice.

The brain is primed for this type of learning through the age of 25 or so. After that, the brain will not again experience the degree of changes that have occurred up to this point. Ideally, then, the period stretching from infancy to young adulthood is the best time to learn and practice executive skills.

That said, as we stated in Chapter 2, old dogs can learn new tricks. As adults, throughout our lives, we can learn and become proficient in new skills. It's true that if we had our childhood or adolescent brain it would be easier to acquire or strengthen a weak skill. But as adults we are equipped with capabilities we did not have in childhood and adolescence. We have the assurance that we have acquired skills before now, and we can draw on practice strategies we

have used in the past to help us in this new endeavor. We also know what it feels like to engage in difficult activities, and this experience is key to strengthening executive skills in adulthood. Because our brain has already completed much of its development, training a weak skill will require increased effort.

How do we know that our efforts will be fruitful? Because, as we said before, there is reliable scientific evidence in the brain research literature that the adult brain has *plasticity*. This means that in adulthood, when we acquire a new skill or when we strengthen a previously weak skill, the underlying brain structures that support that skill undergo change that helps lock in the more proficient skill.

Equally, if not more importantly, when we practice a skill, more effort is required in the early stages of such practice. In the early stages of practice, energy utilization and consumption in the brain is at its highest point. However, as we continue to practice, the amount of energy used by the brain to support this practice steadily decreases even as we become more proficient in the skill. Keep this in mind, because it means that when you're able to push through the earlier, more difficult part of the practice and persist with it, not only will practice become easier over time, but the use of the skill will also be easier as it becomes more automatic. For those of you for whom getting started on any kind of habit change is the hardest part, we give you a set of strategies that will enable you to reduce the amount of initial effort needed to engage in practice. Following these suggestions will enable you to reduce the likelihood of fatigue or burnout. Keep in mind, though, that behavior change takes time, and if this is something you really want to work on, patience will be required.

Is It Worth It?

If you're reading this book and you've gotten as far as this chapter, chances are some aspect of your life has already led you to at least investigate what it would take to manage your life more effectively. Perhaps you yourself recognize there are some issues in your day-to-day functioning that you want to change and you're hopeful this book will give you a road map to accomplish that change.

Some of you, however, may be reading this book because someone who knows you well thinks you might benefit from learning to do things differently. This person could be a spouse, a partner, a colleague or supervisor at work, or maybe a good friend who stumbled on this book, found it personally helpful, and thought it might help you as well. If you fall into this category, you may ask yourself, "Why would I want to strengthen one of my weaker executive skills in the first place? I seem to be doing okay with things the way they are right now."

We can think of a number of possible reasons. First of all, who among us hasn't had an experience depicted in the scenario in Chapter 1? The world is becoming undeniably more complex. If we're at all connected to day-to-day living through television and radio, computers, and smartphones, then we realize that the sheer volume of information with which we're confronted and the speed with which that information comes at us place unprecedented demands on our executive skills.

We recognize that by the time we reach adulthood, we will have lived with our own executive skill patterns of strengths and weaknesses for some time and will have developed work and home environments that are a reasonably good fit for our skills. (This is Dick speaking:) For example, with executive skill weaknesses in the areas of organization and time management, I have shied away from work environments that put a high priority on these skills and toward those that favor flexibility and stress tolerance (two of my areas of strength). And I find that in my personal environment, I try to confine my disorganization to my own personal spaces and not those that I share with my wife.

But the fact that we have found some degree of "good fit" with our work and/or home environments based on the executive skills that we bring to the situation does not automatically insulate us from the possibility of needing to change. Changes in life circumstances may lead you to want to improve executive functioning. Perhaps you've entered into a new relationship, or started a family, or begun a new job. Or perhaps the circumstances of your current job have changed, placing new demands on skills you didn't need to rely on before. Or increased financial responsibilities necessitate some type of life change. The truth is, we're living in a world that increasingly values, and in some cases demands, adaptability to change—and adaptability to change is fundamentally dependent on good executive skills. Unlike our predecessors and past generations, we can no longer rely on the stability and longevity of jobs or some institutions or our financial situations.

Here are several examples of how a change in circumstances or a dissatisfaction with some aspect of their lives led people to address executive skill weaknesses:

Padma, age 35, was an independent career woman who had decided she was unlikely to marry and accepted the fact that she would never have children. She had settled into a daily routine that was comfortable and worked for her. She went to the gym after work three afternoons a week, met with her book club on Thursday evenings, volunteered at the local animal shelter on Saturdays, and always stopped for lunch afterward at her favorite

coffee shop. Given that she tended toward inflexibility, these routines were a comfort to her. She could count on them, and they satisfied her needs for social interaction and the feeling that there was a meaningful life beyond her job. And then she met Marcus and fell head over heels in love. One of the things she liked about Marcus was that he was a free spirit, but she recognized that might take some getting used to. On top of that, though, Marcus had two sons by a previous marriage, and he shared custody with his ex-wife. When she and Marcus moved in together, Padma suddenly found her world upended. At first she found herself dreading the weekends when the house was full of kids, and she began to feel herself tense up whenever Marcus began a conversation with “Hey, I have an idea . . . ” because it always meant that she would be confronted with something unexpected or unknown, and she really didn’t adjust easily to change.

Over the first few weeks that she and Marcus lived together, she found herself becoming increasingly anxious. All her routines were in jeopardy, and she hadn’t realized how complacent she’d become. She realized she’d reached a crossroads—she could either give up Marcus and all the enrichment he’d brought to her life, or she could go to work on her inflexibility. At first she thought she needed to become a free spirit, too, but she soon realized not only was that not likely to happen, but Marcus was drawn to her in part because of her stability, and he really wasn’t looking to share his life with another free spirit. She found what worked best for her was to divide her week into weekdays and weekends. During the week, she held on to her routine of going to the gym—and she enticed Marcus to join the same gym so they could go together. Since they had that shared experience, she kept the book club too. But she decided to reframe weekends in her own mind as a way of reducing her dependence on routines. She put Marcus in charge of planning weekends, and she found herself looking forward to whatever surprises he hit her with on Friday. Eventually both she and Marcus realized that his two sons benefited from having a little more structure with the time they spent with their dad, so she was able to persuade them that home-cooked family meals and regular bedtimes might be a good idea. After several months, she realized that her efforts to increase her flexibility had actually introduced a “sparkle” into her life that she hadn’t thought was possible.

Rick was a biochemist, and he loved his work doing applied research for the pharmaceutical company he worked for. But he was stuck at a certain pay grade and the project managers he worked under sometimes got under his skin, so when he was offered a promotion to project management himself,

he jumped at the chance. As he began to contemplate what his new job would look like, though, he realized he was going to bump up against some areas of weakness that he'd been able to work around in the past but that now might seriously get in the way of success. Doing research, he was very methodical and careful, but research involved following step-by-step protocols that were pretty contained and sequential. Rick's organizational and working memory skills had been adequate for that work, but now, in the position of project manager, he suddenly found himself having to keep track of more information, including multiple timelines and multiple threads pursued by the various people assigned to the projects he was managing.

Rick stressed about it for a while and even thought about asking to be returned to his old position, but he hated the idea of throwing in the towel (and giving up the pay raise would be hard too), so he decided to see if he could improve his organizational skills. He went to one of the upper-level managers whom he trusted and asked him if there was an experienced project manager who he could approach to serve as a mentor to him. He got a recommendation and asked to meet with him. He explained he was new at the job and was looking for someone to guide him in the early stages. The person was not only flattered to be asked but recognized that if he wanted to move higher in the company, becoming an effective mentor was a way to add to his skill set. He and Rick scheduled regular meetings, he shared his strategies and tools (such as a Gantt chart app that he particularly liked), and Rick grew into his new job. He realized that straight lab work had begun to feel a bit tedious to him, and this was the perfect next step. He was pleased he hadn't let his initial misgivings get in the way.

Carlos was one of those people who loved to stay busy. He always had several home improvement projects going on at once, and he had so many great ideas that he had trouble deciding which ones to pursue. He loved the problem-solving element involved in these projects, and given that he lived in a house that had been built in the early 1900s, there was always something that either needed to be done or that could add to the comfort and quality of his home. The problem was this: Carlos started projects with gusto, but he found that the longer the project took to complete, the less likely it was to get done. He also found that if he started a project (and he tended to jump in without thinking it through clearly) and he ran into an obstacle (for example, he was missing a critical tool or he hadn't anticipated a design flaw), that was it—everything came to a sudden halt and he found it very hard to summon the energy to pick back up and get it done.

If you analyzed Carlos in terms of executive skills, you'd see he's great at metacognition and task initiation, but he's a little weak in terms of response inhibition (jumping into things without thinking them through) and even weaker at sustained attention (running out of steam before finishing projects).

Since Carlos's house was littered with unfinished projects, a day didn't go by that he didn't kick himself for his shortcomings. And if he wasn't kicking himself, his wife was, since in bursts of generosity he would offer to do things for her, and he was no more likely to finish the work he'd promised her than the things he wanted to do for himself. With an understanding of his executive skills profile (for example, his strength in planning), Carlos was able to take on this challenge and to work on his weak skills.

He decided to start with the unfinished projects. He picked out one to start with and took the time to write down the steps he needed to follow to complete it. Next to each step he listed any materials he would need as well as an estimate of the amount of time it would take to finish that step. Since he knew he was better at completing short tasks than long tasks, he decided to think of each step as a separate project. And he set aside 2 hours on Saturday afternoons to devote to the project until he finished it. Even then, before he started, he made sure he had all the materials he needed for that phase of the project so he wouldn't be derailed by discovering he was missing a vital ingredient. His wife was thrilled because the first project he chose to finish involved building a cabinet for her craft materials that she could keep in the spare bedroom.

This worked so well that Carlos made a commitment to use the same process with three more unfinished projects. And he decided that when he had brilliant ideas for new projects, he would do two things: make a detailed plan and list of materials he would need, and wait 2 weeks after he first came up with the idea before taking the first step (to give himself time to decide whether this was really something he would have the energy to complete when the initial exuberance wore off).

Underlying Assumptions about the Process of Executive Skill Development

The intervention strategies that we describe are based on the following assumptions (paraphrased from Russell Barkley's 2012 book *Executive Functions*).

- The use of executive skills requires significant effort, particularly if those skills are weak.
- Because of this, the “pool” of effort available as a resource can be depleted rapidly, although temporarily.
- Immediately following practice that requires effort, you’ll find your ability to deploy that skill is reduced for a period of time. For example, if you were attempting to lose weight (which requires response inhibition) and you carefully limited your caloric intake at breakfast and lunch, you might be particularly susceptible to temptation in the middle of the afternoon when someone offered you a Milky Way. Or if your task initiation skills were weak, and you threw yourself into doing the first five items on your to-do list for the day and then took a break, you might find it particularly difficult to get back to work and tackle item 6.

This information simply confirms what we’ve discussed already—that is, changing a skill will require effort, and in the early stages this effort may be depleted quickly. Fortunately, Barkley has also identified a set of activities that can help us replenish the pool of energy needed to exert effort. Those factors include the following:

- Physical exercise.
- Relaxation or meditation for a few minutes after executive skill exertion.
- Visualizing the good outcome/reward as a result of successful practice.
- Periodic small rewards throughout an executive skill practice task.
- Self-efficacy statements prior to and during the task.
- Self-talk to generate positive emotions.
- Daily *short* practice of tasks requiring executive skills during the first 2–4 weeks of the behavior change regimen.

Ten Steps to Executive Skill Development

We give you this information in two ways. Following is a step-by-step narrative that walks you through the process. To help you keep it clear and to enable you to personalize the procedure to meet your own needs, we also include an Action Plan form that is basically a template to follow for skill development.

• **Step 1. Identify a specific activity that is a challenge for you in your everyday life.** This should be an activity associated with one of your executive skill weaknesses (which you've identified by taking the Executive Skills Questionnaire in Chapter 2). We start here to underscore the fact that although ultimately you may want to improve a weak executive skill more globally, we know that you have to start small. If you think you can take a genuinely weak skill and transform it all at once, you need to disabuse yourself of this idea right now. When you learned to ride a bike, you didn't immediately climb on a two-wheeler and expect to be able to ride it without falling down. No, you started with training wheels, and when those came off, you had someone (a parent or an older sibling) standing behind you to steady the bike as you climbed on and got ready to ride. And then you fell down—not once, but in most cases many times (and there probably were some skinned knees or elbows involved too). And you certainly didn't enter a BMX race or try riding on a half-pipe for a very long time after your first success at riding without falling down. Bottom line: Start small and gain confidence from experiencing success. You can then build on that at a pace that feels right for you.

(This is Dick speaking:) As I have said, two of my weakest executive skills are organization and time management. I enjoy the flexibility of the clinical work that I do in my job. But my job also has a significant paperwork/record-keeping component. And if I were going to tackle my organization or time management weakness, the activity I would choose to begin with would be paperwork, specifically the writing of clinical notes.

In thinking about what activity you want to begin with, choosing something that occurs daily would be ideal because that means you can build in the opportunity to practice the skill every day. Daily practice will shorten the length of time it will take for you to hone your skill, both because you can get in more hours of practice more quickly and because if it happens every day, you're unlikely to forget about it between practice sessions.

If you're having trouble thinking of an activity to start with, consider what aspect of daily living is most affected by your weak executive skill. It may be something that drives you crazy, or it may be something that drives a spouse, partner, or coworker crazy. If you're game, you may want to talk with a spouse, partner, or coworker, describe the skill you want to work on, and ask for ideas about where a good place to start might be.

• **Step 2. Describe your current level of performance.** Understanding where you're starting from is important both to help you set a goal that is grounded in reality and to develop a plan that builds gradually toward that goal from a starting point that is accurate and honest. If you've decided to tackle

arriving at work on time and you're late, on average, 15 minutes a day, then you may need to work quite gradually toward that goal. The more precise you can be with respect to your current performance, the easier it will be to identify a realistic goal. When we work with kids, we actually count behaviors to establish a baseline. The behavior you're concerned about may not lend itself to this, so you may have to estimate. On the other hand, if the behavior you want to work on doesn't occur *at all* at the present time, then that tells you something about what a realistic goal for you is.

- **Step 3. Set your goal.** What do you want to achieve? Keep in mind that the goal you set is in reference to a specific activity or situation that reflects the executive skill weakness and not the broad executive skill itself. (This is Dick speaking:) In my case, my goal now is not to improve the broad skills of organization and time management but rather *to improve the on-time completion of paperwork* that is impacted by my weakness in these skills. Once you've accomplished and maintained your goal in one activity you can move on to the second one, but working on only one activity at a time is key.

Although we're big believers in setting precise goals that are written in such a way that you will easily know whether the goal has been achieved, don't worry about that right now. I could have written my goal as *completing 90% of my notes within 24 hours of the time the clinical session took place*. But if you haven't had years of practice writing goal statements, then making broader statements such as *improving the on-time completion of paperwork* should work fine.

- **Step 4. Set a deadline.** Decide on a date by which you will reach the goal you've set. Although the deadline set may depend on the complexity of the goal, we urge you, again, to set small goals with short deadlines. And keep in mind that reaching the goal is not defined by having successfully accomplished your goal just *once*. Success should be defined as your ability to demonstrate your proposed level of performance on a day-in, day-out basis.

- **Step 5. Make a plan.** This step is critical to the achievement of the goal because all skills are either acquired or changed, and established as habits, through practice. Your plan should specify the following:

- ♦ What activity specifically you are going to practice.
- ♦ When during the day you are going to practice, which means, if possible, designating a specific time of day.
- ♦ How long the practice session will be.

Here's our biggest piece of advice to keep in mind when making your plan: Practice sessions need to be brief. Remember, this is hard work. Think of it as building muscle—good personal trainers start people off very slowly, with short practice sessions, a limited number of reps, and exercises that don't strain muscles. In the case of building new executive skills, we are talking about practicing for only minutes at a time. Keeping the sessions short will help ensure you are focused on the practice and have sufficient energy to make the practice successful. When you are able to do this, with each successful practice session the effort involved in the practice, and hence the energy necessary, will decrease. This is a sign that the skill is developing.

Making a plan is based on a technique known as correspondence training. Correspondence training is based on the idea (well-documented research) that when individuals make a verbal, or in this case written, commitment to engage in a behavior at some specific point, this increases the likelihood that they will actually carry out that behavior.

Hence, in addition to making a plan, if you make a public commitment to that plan—for example, with your significant other if it's a home issue, or your manager or team leader if it's a work issue—by doing so you increase the likelihood that you will activate the plan. This is not always a comfortable step because in doing this we understand that it creates an expectation in the mind of the other person to whom you've made the commitment. That puts some added pressure on you to follow through with the plan—but that's why public commitments increase the likelihood that people will follow through with what they've committed to do!

Finally, as part of the plan, make sure your practice of the skill takes place in the same context where you will be using the skill. This increases the likelihood that you will actually carry out the behavior. Furthermore, it bypasses one of the problems often associated with practicing a skill in isolation or out of context—the problem of *generalization*. As an example, there are a number of well-advertised computer-based programs to help people improve attention and working memory. The accumulated research on the efficacy of those programs show that people who practice those skills using computer games often get better at the games they are playing. But those gains may not carry over to real life. A mom once told us her son had participated in one of those training programs, and when we asked her how it had worked, she answered, "Let me put it this way: my son is at school today, and his assignment book is at home."

Our general advice: Beware of "off-the-shelf" intervention packages—they rarely work as well as the ones designed to fit your personal and unique circumstance.

- **Step 6. Pick a starting date.** And don't just identify the date, but actually specify *when* on that day you will begin the practice session. And when you do this, also choose an alternative date and time in case something comes along that precludes you from starting your plan on the original planned date. And at the risk of repeating ourselves, *make the practice times short*. As we've said, you have a limited supply of energy necessary to exert the effort, and this pool of energy will be depleted rapidly. Better to have a series of brief but successful practice sessions as opposed to one longer session during which you lose focus or feel a sense of drudgery with the task.

- **Step 7. Create visible (or audible) reminders of your plan.** As Barkley points out, internalized or mental representations of goals and plans are quite weak in their ability to initiate sustained and effortful behavior. The reason for that, in good part, comes from the fact that when our effort has been depleted we become distracted by the external aspects of our immediate environment (for example, smartphones, computer, and television). If our goal and our plan to achieve that goal is to be effective, it needs to be present in our environment as a salient visual and perhaps auditory cue that we see regularly. We talked about this in the last chapter—put signs up where you can see them, use Post-its or the Post-it program on your computer desktop, or build alarms and reminders into your smartphone.

This has two effects: It helps us remember in a concrete way what it is that we want to achieve, and it competes with other salient aspects of the environment so that at times when we are potentially distracted by other influences, the external representation of our goal reminds us to resist that temptation.

- **Step 8. Stick to your plan.** You've designated the start time, and you've limited the practice time, and this has reduced the amount of effort you have to expend. So now, when it's time to practice, it's time to practice. Don't make excuses or tell yourself that you'll do it later. If you feel you have only a little energy, then shorten the practice period, but do some element of the practice, because in so doing you'll strengthen the habit and reduce the effort needed to engage in the skill.

- **Step 9. Be positive and confident.** To make this salient, compose three or four statements that summarize what you're working on, why you're working on it, and what the benefits of improvement will be, along with a brief description of the positive feelings you'll have as a result. As part of this strategy, create an image for yourself of what you'll be able to do when you've improved the skill and describe in writing what that image is.

• **Finally, Step 10. Find a motivator.** It's possible that simply identifying how great you'll feel when you accomplish your goal is motivator enough. Sometimes that's enough to get you started on behavior change, but it may not be sufficient by itself to get you to the end zone. You may want to incorporate a more concrete and tangible reward—that is, some kind of positive reinforcement that is associated with your practice sessions.

Positive reinforcement is defined as any event, activity, or object that follows the behavior that makes it more likely that the behavior will occur again in the future. We understand and apply this principle throughout our lives. We tell ourselves, for example, that as soon as we complete this particular task or job we will do some preferred activity. In the case of practicing an executive skill, we want to associate that practice with the opportunity to have some type of reward that immediately follows the practice. It doesn't have to be an expensive object or a very special activity. The reward just needs to be something we enjoy doing or having and that can be available in this situation as soon as we are finished with our practice. By doing this we will begin to associate the practice with the reward, which again reduces the perceived effort required by the practice. See the box below for a simple list of possible rewards.

REWARD MENU

Below is a menu of possible rewards, arranged according to category along with some specific examples.

Category	Examples	Your own ideas
Food/snacks	Popcorn, chips, fruit, nuts, ice cream, pretzels, candy, gum	
Beverages	Coffee, tea, sparkling water, juices, soda, specialty coffee drinks, lemonade, smoothies, beer, wine	

Category	Examples	Your own ideas
Entertainment	Video games, movies, television shows, reading books or magazines, surfing the Net, playing or listening to music, crossword puzzles, Sudoku, jigsaw puzzles	
Hobbies	Cooking, sewing, knitting, needlework, painting, dancing, building things, working with electronics, collecting things	
Exercise	Walking, hiking, mountain climbing, swimming, cycling, working out, skiing, tennis, badminton, going to the gym, playing team sports	
Social	Hanging out with friends; going to or putting on parties; using social media; being praised, touched, or hugged	
Shopping	Grocery shopping, running errands, clothes shopping, buying gifts for others, window shopping, browsing bookstores, online shopping	
Sightseeing	Driving in the car, visiting nearby points of attraction, taking long road trips	
Travel	Camping; weekend getaways; vacations; day trips; visiting relatives, friends, or family	
Helping out around the house	Tidying up, dusting, vacuuming, doing yard work, sorting laundry, doing recycling	

What If the Pressure to Change Does Not Come from You?

We stated earlier that you may have come to this book because someone else wants you to change. Perhaps you feel content with the way you manage your life, but others are asking you to do things differently. If you feel that insistence on your changing is being foisted on you, it will be more difficult for you to take the steps necessary to change. We raise this issue because in our experience people are confronted about their executive skill weaknesses with pressure to improve these skills. For example, it might be in a job that you mostly enjoy and that you depend on since it is your source of financial support. But perhaps you have a manager or team leader or CEO who wants a performance from you that relates to an executive skill weakness. How do you manage that situation? Some people might give up the job. But if you need the job or like most aspects of the job, you can satisfy the demand for change by approaching it in an incremental fashion.

There are a series of steps to accomplish this. The first and probably most difficult is to acknowledge the weakness to the person who is insisting on the change. Acknowledging the weakness has two immediate effects. By acknowledging the weakness you also acknowledge that the person who has pointed out the weakness is correct, which reinforces the person. In addition, that acknowledgment creates a certain degree of understanding or empathy for you, assuming that you have some value to the organization. We should note here that if flexibility is your weakness, then this step will be more difficult for you because you'll likely have a fixed view of yourself—if you've reached this point in the book and you've been honest in your self-appraisal, then you already know what the other person is telling you.

The second step is to indicate to yourself and to the other person that you want to make a change.

The third step is key. At this step you ask the person for one action or example that, if you are able to accomplish it, will say that you have made a small step in the right direction. If the suggested action feels overwhelming to you, you either break it down for yourself and decide on a series of substeps to work on, or you can also ask the person for one specific action within the larger action that the person has identified. At this point you tell the other person that you're going to make a plan to accomplish this step and you will present the plan in a designated number of days.

We've introduced this notion to assure you that even when change is not

your idea, if you have some motivation to stay in the situation, there is a way to move forward and strengthen a weaker skill even when the need for change feels like it is imposed externally.

Now Make the Plan

You've come to the end of the chapter and you think you understand the task ahead of you. Maybe you read each step in the process and pictured how you would carry out that step. If you haven't done so already, *make a written plan*. An Action Plan form you can use appears on the next two pages and is available to download and print for multiple uses at www.guilford.com/dawson7-forms. Putting it in writing begins the commitment process. Then post the plan in a prominent place where it will remind you of what you're working on. If you want to up the ante, post it where others will see the plan, too, and may ask you how it's going—if you do that, ask them to cheer you on and avoid nagging you (unless that's part of the plan!). So get going, and good luck!

Action Plan

What specific activity or situation will you work on?

What is your current level of performance (that is, how well or how often are you able to handle the situation successfully at the present time)?

What is your goal (the outcome you want to achieve)?

By what date do you want to accomplish that goal?

What is your plan?

- What will you practice?
- When will you practice? (Be specific: What days in the week and what time in the day? Use the space below if that will help.)

Sunday time:	Monday time:	Tuesday time:	Wednesday time:	Thursday time:	Friday time:	Saturday time:
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- How long will the practice session last? (**Remember:** Keep the session brief in the beginning.)

(continued)

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Action Plan *(continued)*

What is your start time? Date: _____ Time: _____

Back-up date: Time:

What cues will you use to remind yourself to follow your plan?

Positive self-statements to support your plan. Briefly describe the following:

- What are you working on?
- Why are you working on it?
- What benefits will you get?
- What will your feelings be if the plan is successful?

What can you use as a motivator to reward yourself for following your plan?

Part II

UNDERSTANDING THE IMPACT OF EXECUTIVE SKILLS IN YOUR DAILY LIFE

5

Executive Skills in the Workplace

In the next three chapters we give you the opportunity to apply what you've learned about executive skills to the three contexts in which most of us conduct our lives: the work environment, the home, and interpersonal relationships. These chapters should help you deepen your understanding of how your executive skills profile—and the profiles of those around you—affects how you function and how you get along with others.

In this chapter you are asked to look closely at what your job requires and whether the job requirements are a good match or a poor fit for your executive skill strengths, and we give you suggestions for managing the mismatches where they occur. We also give you a blueprint for looking at those with whom you work closely to see how their executive skills profile impacts the work you do and your relationships with them.

Your Current Job: Good Fit or Poor Fit for Your Executive Skills?

People don't choose jobs based on their executive skills profile—at least in an overt way. But we've found that how happy people are with their jobs or how satisfied they are with the quality of their work relates in no small measure to the goodness of fit between their executive skills strengths and weaknesses and job demands. (This is Peg speaking:) It's been more than 20 years since I stopped working in the public schools, and at the time I left I had not yet begun to study executive skills. Once we created the Executive Skills Questionnaire (see Chapter 2) and I realized that I was weak in flexibility, emotional control,

and stress tolerance, I suddenly understood much better why I no longer worked in the public schools! The job of school psychologist (maybe any job in education!) is easiest to do if those particular skills are not weaknesses.

We're not here to persuade you to leave your current job. On the contrary, the more you understand about that job and how your executive skills map onto it, the better able you will be to understand what's satisfying about the work you do as well as what might be frustrating. And then you can look at those sore spots and try to figure out ways to make them less frustrating.

Beginning on the facing page is a set of worksheets you can use to analyze your job requirements through an executive skills prism. Each represents a different activity to perform that will build toward a full understanding of your strengths and weaknesses and how they impact your work. You may want to make additional copies of these forms for different jobs you end up holding; you'll find forms to download and print at www.guilford.com/dawson7-forms.

On page 66 you'll see an example of Worksheet 1 completed by the manager of a customer service department for a fair trade coffee company.

This manager has strengths in metacognition and goal-directed persistence, and the parts of his job he finds easiest—and most engaging—are those where he can tap into these strengths. In contrast, he's weak in task initiation and sustained attention, and these weaknesses make things such as writing performance reviews stressful for him. Interestingly, another strength this manager has is time management—but when he's dealing with short staffing and trying to juggle too many things, he has trouble taking advantage of this strength. In fact, he reports it adds to the pressure he feels because he knows he doesn't have enough time to manage what needs to get done.

Using Your Strengths More Effectively

Now go back and look at your executive skill strengths. Are they being utilized well? If not, is there any way you could change your job to increase your ability to draw on those strengths more often or more effectively? Enter your strengths into Worksheet 2 and then answer the questions about each.

Here are some examples of how to make better use of your strengths on the job:

- You have a strength in time management, and it drives you crazy that your weekly staff meetings meander all over the place despite having an agenda to follow. You might suggest to the person leading the meeting that time limits

WORKSHEET 1

Executive Skills in the Workplace

Step 1. Using the Executive Skills Questionnaire you completed in Chapter 2, check off your three executive skill strengths and your three executive skill weaknesses. If you had a lot of “tie scores,” make a decision about which three skills you most want to focus on as strengths and weaknesses.

Executive skill strengths		Executive skill weaknesses	
<input type="checkbox"/>	Response inhibition	<input type="checkbox"/>	
<input type="checkbox"/>	Working memory	<input type="checkbox"/>	
<input type="checkbox"/>	Emotional control	<input type="checkbox"/>	
<input type="checkbox"/>	Task initiation	<input type="checkbox"/>	
<input type="checkbox"/>	Sustained attention	<input type="checkbox"/>	
<input type="checkbox"/>	Planning/prioritizing	<input type="checkbox"/>	
<input type="checkbox"/>	Organization	<input type="checkbox"/>	
<input type="checkbox"/>	Time management	<input type="checkbox"/>	
<input type="checkbox"/>	Flexibility	<input type="checkbox"/>	
<input type="checkbox"/>	Metacognition	<input type="checkbox"/>	
<input type="checkbox"/>	Goal-directed persistence	<input type="checkbox"/>	
<input type="checkbox"/>	Stress tolerance	<input type="checkbox"/>	

Step 2. Think about your job requirements. What aspects of your job do you find easiest or most pleasurable and what do you find hardest or most aversive?

What aspects of your job do you find easiest to do (that is, least likely to put off or most efficient at)?

- 1.
- 2.
- 3.

What aspects of your job do you find require the most effort (that is, most likely to procrastinate on or least efficient at)?

- 1.
- 2.
- 3.

Step 3. Look at the easy and hard parts of your work. Do they align with your executive skill strengths and weaknesses? We’ve found this is often the case. You may use this information with subsequent worksheets, or this knowledge may simply serve to produce an *aha* moment (for example, *That’s why I hate returning phone calls—because I’m weak in emotional control and flexibility and I’m afraid the person I will be calling will be mad at me for something I didn’t do well*).

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EXAMPLE FOR WORKSHEET 1: CUSTOMER SERVICE MANAGER

What aspects of your job do you find easiest to do (that is, least likely to put off or most efficient at)?

1. *Meeting with team members to do work plans*
2. *Talking to engaged customers*
3. *Figuring out new systems to make work easier*

What aspects of your job do you find require the most effort (that is, most likely to procrastinate on or least efficient at)?

1. *Writing performance reviews*
 2. *Juggling too many things (too much to do, too little time)*
 3. *Dealing with short staffing*
-

be attached to each item on the agenda and that you could serve as the monitor, cueing the group when the time limit for any given item is looming.

- If your strength is planning, you could volunteer to create task lists for projects for which you are a team member, running the lists by other group members for their input and feedback.

- Your strength is stress tolerance, and you feel stuck in a job that's too predictable and routine. You might volunteer to spearhead or participate in a new project that may be somewhat outside your comfort zone as a way to make the job more stimulating for you.

Here are some ways you may be able to use a strength to compensate for a weakness:

- You are strong in planning but weak in task initiation. You might use your planning skills to break a lengthy task down into very small steps, each of which takes very little time to accomplish. Keeping the steps small makes it easier to get started on them, because they don't look or feel overwhelming.

- You have a strength in flexibility but a weakness in sustained attention. This means you are able to jump back and forth between tasks, spending relatively little sustained time on any given task but getting through all of them

WORKSHEET 2

Effective Use of Strengths

How do you use this skill in your work?	How important is this skill to your work? (1, "Not at all," to 5, "Very important")	Are there ways you can adjust your job to enable you to use this skill more?
1.		
2.		
3.		

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perhaps faster than you would if you felt compelled to finish a task before going on to something else.

- You're strong in goal-directed persistence but weak in organization. Your workspace is cluttered and makes work inefficient. Setting a goal to get your workspace cleaned up helps you persist in a task that might otherwise be neglected.

By the way, we may have said this before, but if you have a strength in goal-directed persistence, you can draw on that skill to overcome any number of executive skill weaknesses. Just decide that you want to work hard on addressing an executive skill weakness, and the commitment to do that will drive you forward.

Managing Your Weaknesses

Now look at your weaknesses. If your job requires you to bump up against those weaknesses on a daily basis, this may be a source of frustration or discomfort for you. If that is not the case, then chances are you've already found coping or compensating strategies to help you minimize the negative effect. Enter your weaknesses into Worksheet 3 and then answer the questions about each to identify strategies you are either already using or could use to manage your skill weaknesses. This worksheet will also begin to move you toward identifying strategies to improve your executive skill weakness.

Action Plan

From Worksheet 3, choose one task or situation associated with one of your weak executive skills that you want to start working on. At this point, you need to build an action plan, as described in Chapter 4. If you didn't fill out the plan in the last chapter, you can do it now. Worksheet 4 on page 70 can be used for this purpose.

Tips for Action Planning (and Following the Plan)

Here are some things we've learned from using this kind of planning with people in the workplace:

WORKSHEET 3

Executive Skill Weaknesses

Executive skill weakness	How do you use this skill in your work?	Are there ways you can adjust your job to allow you to minimize your need to use this skill?	If you were going to focus on one task or one situation in which you need to use this skill and would like to get better at it, what would you choose?	What might you do?
1.				
2.				
3.				

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WORKSHEET 4

Action Plan for the Workplace

What executive skill will you start with?

What specific activity or situation that involves that executive skill will you work on?

What is your current level of performance (that is, how well or how often are you able to handle the situation successfully at the present time)?

What is your goal (the outcome you want to achieve)?

By what date do you want to accomplish that goal?

What is your plan?

- What will you practice?
- When will you practice? (Be specific: What days in the week and what time in the day? Use the space below if that will help.)

Sunday time:	Monday time:	Tuesday time:	Wednesday time:	Thursday time:	Friday time:	Saturday time:
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- How long will the practice session last? (**Remember:** Keep the session brief in the beginning.)

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Action Plan for the Workplace *(continued)*

What is your start time? Date: Time:

Back-up date: Time:

What cues will you use to remind yourself to follow your plan?

Positive self-statements to support your plan. Briefly describe the following:

- What are you working on?
- Why are you working on it?
- What benefits will you get?
- What will your feelings be if the plan is successful?

What can you use as a motivator to reward yourself for following your plan?

- **Keep it simple.** Do *not* create an elaborate, multistep plan. (This is Peg speaking:) When I decided to become more organized about my paperwork, I decided to complete three forms per day of the past-due paperwork for the electronic medical records in the mental health center where I work.

- **Keep it short.** Chances are, your workday is already crowded with too many things to do. Your plan will likely add to that burden, but it's probably worth it because this is something you really want to change. Your time commitment still needs to stay realistic, however. Going back to the example above, each form I needed to complete would take no more than 3–4 minutes, so that the entire plan could be followed in 10 minutes or less.

- **Don't worry about bigger goals during the early stages.** If you've followed the first two tips, you may be thinking that it will be impossible or take forever to get to your bigger goals. Don't even think about that now, because that will discourage you and may tempt you to give up before you even start. If you take small steps to start with, they will quickly feel easier, and then you can build on that success and add in more pieces to your plan.

- **Evaluate and adjust as you go along.** Here's a general guideline: A plan is successful if you can carry it out at least 80% of the time (or 4 days out of 5). If you're not achieving that success rate, DO NOT abandon everything. Readjust, taking smaller steps. (This is Peg speaking:) If I can't complete three forms per day, maybe I can do two. That's preferable to stopping altogether and letting the forms pile up till someone in my office starts nagging me about my missing paperwork. To help you track your progress, we'll give you one more worksheet to complete.

First, however, here are some examples of a few strategies tried by customer service staff with whom we recently used this process:

- One staff member decided his workspace was too cluttered for efficient work. He decided to spend 15 minutes at the end of every day (while waiting for his shared ride home) to declutter it. Within 4–5 days, he had reduced the stacks and piles enough to enable him to find things more quickly when he was on the phone with a customer.

- Another staff member felt she had trouble with planning/prioritizing, which made it feel like she jumped from one immediate crisis or issue to another without moving forward on things she knew needed to get done. She purchased a small white board and neon markers, and at the end of every workday she

spent 5 minutes identifying two or three small tasks she wanted to accomplish the next day, noting when she was going to do each one. After a few days, when she realized she kept getting pulled away by incoming e-mails, she built in a specific time to answer e-mails in the early afternoon. That made her morning feel much more productive.

- Another staff member who found planning and prioritizing difficult set as a goal making calls to potential new customers (called “up-sells”) on a daily basis. After the first week, she rated her success at this as a 3 on a 1–5 scale. The next week she decided that making those calls first thing in the morning was more effective than making them in the afternoon, and she rated her success the next week as a 4. She used the Weekly Plan form (Worksheet 5, on page 74) to help her track her performance and felt that was helpful.

- The head of the department had a whole list of projects and ideas he wanted to pursue when he had some downtime. Since task initiation was his weakness, he realized he was never getting to them. So he set as a goal spending a few minutes each week on at least three of those ideas. He also made it a goal to do this during the first half of the week whenever possible. His intent was not to finish any particular task (in part because he wouldn’t know how worthwhile they were until he started them), but, in his words, “My plan is just to move the ball down the field.” For people with problems with either task initiation or sustained attention, this metaphor of *moving the ball down the field* may be particularly stress reducing.

When we met with this department after 6 weeks to find out how things were going, they shared what had worked best. Here are some of the points they made:

- **DON’T commit to spending too much time.** Nearly all of the staff felt that committing 5–15 minutes at a time to pursuing any goal was both more realistic and more effective than setting a daily goal that took longer. One woman had initially made a goal of spending an hour once a week on a task. She found that when she did that she either postponed getting started or allowed herself to be interrupted (telling herself, “I have a whole hour; this interruption won’t take long”). She cut back to 15 minutes and found she safeguarded the time, got started more promptly, and accomplished more in the long run.

- **Some times of the day or week seem to work better than others.** If it’s a weekly goal, people found it helped to target the first part of the week as the

WORKSHEET 5

Weekly Plan

Day	Plan (what will you do?)	What time will you start?	How much time will you spend?	Done!
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				

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time to complete the goal. If it was a daily goal, early in the morning was better than the middle of the day. Just before going home was another good time to accomplish a task—going home was the reward for getting it done. Doing the planning for the next day just before the end of the current day seemed to be a particularly effective strategy.

- **KEEP IT SHORT OR SMALL.** We have found that setting ridiculously small goals may be the best way to achieve change. Surprisingly, small goals quickly add up, leading to more substantial change faster than if you try to tackle big changes all at once. If you want to learn more about this approach, take a look at the book *One Small Step Can Change Your Life* by Robert Maurer. The author makes a very compelling case for the power of “baby steps.”

Self-assessment: How did your week go? You might use this scale: 5, “Great! Met all my goals”; 4, “Pretty good, 80% successful”; 3, “Not bad, 60% successful”; 2, “Some problems, 40% successful”; 1, “Ran into trouble, met only a small portion of my goals.” Circle your choice:

5 4 3 2 1

What might you do differently next week? (Suggestion: If you found it hard to follow through, **scale back**—make a plan that involves less time or work.)

[illegible]

Working with People Whose Profiles Differ from Yours

Another challenge people encounter in the workplace is having to work closely with individuals with a very different set of executive skill strengths and weaknesses. A coworker's weakness in a skill that's one of your strengths is likely a source of irritation to you. If you're great at time management and your department head isn't, it grates on you every time she's late for an appointment with you or every time the meetings she's leading go on longer than they need to. If you're highly organized, and the person at the next desk in your office is not, viewing all of his piles every time you walk past his desk likely irritates you—and it goes beyond irritation when you ask for a piece of paperwork and he can't find it in the piles. And if the same skills are weaknesses for you and strengths for your supervisor, imagine how annoyed that person gets when your weaknesses rise to the surface.

So let's say you want to try to improve your ability to get along with a coworker whose profile differs from yours. It's quite likely that you don't have to fill out a questionnaire to identify that person's strengths and weaknesses. It's also not necessary to know that person's exact profile, because unless you're that person's supervisor, you have little ability to get him to try to change, nor do you have the ability to change his job to reduce the stress on that person's weakness. All you can control is your own reaction to that person.

Fortunately, we have cognitive-behavioral theory as a construct for understanding behavior. Albert Ellis and Aaron Beck are probably the best-known developers of this theory, although it now has many years of research behind it, and cognitive-behavioral therapy has become recognized as a highly effective treatment approach for helping people deal with psychological stress. In fact, there is good evidence to show that cognitive-behavioral therapy is as effective as medication for treating anxiety and depression.

This approach is built on the premise that our feelings arise not from any given situation or event but from what we *tell ourselves* about that situation or event. Bad things happen every day. But our response to those bad things is controlled by what we tell ourselves about them.

How does it apply in this situation? When we work alongside people with weak executive skills, we may say things like:

- “I *hate* having to sit next to Maddy. Her desk is so cluttered that it makes *me* feel disorganized, too!”
- “Once again Joe shows up 15 minutes late for a 1-hour meeting. Then

everybody has to fill him in on what he's missed, and it slows down the whole meeting. What a waste of time!"

- "Sam has gone off half-cocked again, shooting from the hip. Now the rest of the team is going to have to pick up the pieces. The last time he did this, we lost a potential customer."
- "Whenever things get too busy around her, Joanne falls apart. Her emotions boil over and she stops working efficiently. This makes everyone else's job harder."

How many times in a day or a week do you find yourself thinking these kinds of thoughts? Using cognitive-behavioral theory, there's a two-step response you can take to help you manage your frustration. First, ask yourself, "Is there anything *I* can do to improve the situation?" If so, do it—but be careful. For instance, you could offer to clean Maddy's desk for her, but first of all, she would be offended, and second, your organizational methods may not be a good match for her. A more likely way to improve the situation is to move your desk (or turn it so that Maddy's desk is no longer in view), but there may be limits to this as well.

If your coworker is someone with whom you have shared responsibilities, there may be some other steps you can take. These include:

- Suggesting you divide up the job tasks based on each of your executive skill strengths. If you're both good at planning, for instance, you may create a joint plan. Maybe you're good at task initiation, so you could offer to start each step, while your coworker, for whom sustained attention and time management are strengths, could finish the steps and make sure you stick to the timeline. Or if you're great at flexibility but not so good at task initiation and sustained attention, your colleague could take on the bulk of the task completion but meet with you on a daily basis to talk about whatever roadblocks arise, because your strength involves coming up with Plan B.

- Using "I" messages. If your coworker has a weakness that gets in the way, you might say to him, "I understand this is my issue; I'm just having trouble dealing with it. I wonder if we can talk this through." This might be helpful, for instance, if time management is your strength and it drives you crazy when your coworker leaves something to the last minute, even though he always produces high-quality work.

- Consider talking to your supervisor or HR person to get suggestions from them about how to handle the situation. If you take this approach, it will be

important to lay out the issue as *your* problem that you're seeking help with. Otherwise you might be seen as simply complaining or ratting out a colleague.

Unless you're a supervisor and the problem employee is under your supervision (we'll talk about that in a bit), there's likely little you can do to change the situation on your own. So all you can do is work on changing your reaction to that situation. Which means changing what you're telling yourself about it. This will take practice, but it may be worth doing if the irritant is pronounced or frequent. Using the examples above, you might say to yourself:

- “Ah, Maddy! Not sure how she manages with such a messy desk—but she's the *best* person to be on the phone with an angry customer!”
- “Here's Joe, late again. But at least when we catch him up it gives us a chance to recap the discussion so far—and since I sometimes have trouble paying attention, I may learn something I missed.”
- “Sam did it again. I'm going to watch him more carefully and try to figure out what the triggers are for him. If I can do that, then maybe I can head him off at the pass and avoid the fallout from his impulsivity.”
- “Joanne is so predictable. I'm just going to have to take that into account and figure out how to work around her so it affects my job as little as possible.”

This solution—changing what you say to yourself about the situation—may not be completely satisfying to you, but if you have no control over the other person or the job she is doing, it may be the only tool you have available.

Supervising Someone with Executive Skill Weaknesses That Interfere with Job Performance

If you happen to be in a position of supervising someone with weak executive skills, you have a few options. These include:

- Looking for a different job within the company or organization that's a better match for the employee's executive skills profile. We've been told that Henry Ford never fired employees but shifted them around until he found the niche that was right for them. A similar approach might be one way to address the problem employee.

- Identifying environmental supports that might minimize the impact of the weak skills. Chapter 3 gives you ideas for this approach.
- Incorporating executive skills into annual performance reviews. Have the employee complete the Executive Skills Questionnaire and include a discussion of strengths and weaknesses. Then complete the three worksheets in the first part of this chapter to begin the process of creating an improvement plan. Identify monthly progress benchmarks connected to the long-term goal and meet once a month to look at benchmark measures and discuss progress. Chapter 4 can provide a guide to help you and your employee come up with a game plan for executive skill development.

If you decide to tackle executive skill weaknesses in a supervisee head-on, you may find it helpful to complete your own assessment of the employee's executive skills to compare with the employee's self-assessment. At the end of this chapter we include a questionnaire, adapted from the one in Chapter 2, that allows you to do this (you can download and print out extra copies for other supervisees from www.guilford.com/dawson7-forms).

Executive Skills Questionnaire for Supervisees

Read each item below and then rate that item based on the extent to which you agree or disagree with how well the item describes your supervisee. Use the rating scale below to choose the appropriate score. Then add the three scores in each section. Use the key at the end of the questionnaire to determine your executive skill strengths (two to three highest scores) and weaknesses (two to three lowest scores).

1	2	3	4	5	6
Strongly disagree	Disagree	Tend to disagree	Tend to agree	Agree	Strongly agree

<u>Item</u>	<u>Your score</u>
1. Doesn't jump to conclusions.	_____
2. Thinks before speaking.	_____
3. Makes sure he or she has all the facts before taking action.	_____
TOTAL	_____
4. Has a good memory for facts, dates, and details.	_____
5. Very good at remembering the things he or she has committed to do.	_____
6. Seldom needs reminders to complete tasks.	_____
TOTAL	_____
7. Emotions seldom get in the way when performing on the job.	_____
8. Little things don't affect him or her emotionally or distract from the task at hand.	_____
9. Keeps cool when frustrated or angry.	_____
TOTAL	_____
10. No matter what the task, believes in getting started as soon as possible.	_____
11. Procrastination is usually not a problem for him or her.	_____
12. Seldom leaves tasks for the last minute.	_____
TOTAL	_____
13. Finds it easy to stay focused on work.	_____
14. Once an assignment is started, works diligently until it's completed.	_____
15. Even when interrupted, finds it easy to get back and complete the job at hand.	_____
TOTAL	_____
16. Has a clear plan in mind for what he or she hopes to accomplish each day.	_____
17. When confronted with a lot of work, can easily focus on the most important things.	_____
18. Typically breaks big tasks down into subtasks and timelines.	_____
TOTAL	_____

(continued)

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Executive Skills Questionnaire for Supervisees *(continued)*

19. Is an organized person. _____
20. Is naturally good at keeping work area neat and organized. _____
21. Is good at maintaining systems for organizing his or her work. _____
- TOTAL** _____
22. At the end of the day, has usually finished what he or she set out to do. _____
23. Good at estimating how long it takes to do something. _____
24. Usually on time for appointments and activities. _____
- TOTAL** _____
25. Takes unexpected events in stride. _____
26. Easily adjusts to changes in plans and priorities. _____
27. Appears to be flexible and adaptive to change. _____
- TOTAL** _____
28. Routinely evaluates his or her performance and devises methods for personal improvement. _____
29. Is able to step back from a situation in order to make objective decisions. _____
30. Is a “big-picture” thinker and enjoys the problem solving that goes with that. _____
- TOTAL** _____
31. Appears to be driven to meet his or her goals. _____
32. Easily gives up immediate pleasures to work on long-term goals. _____
33. Sets and achieves high levels of performance. _____
- TOTAL** _____
34. Enjoys working in a highly demanding, fast-paced environment. _____
35. A certain amount of pressure helps him or her achieve top performance. _____
36. Is drawn to jobs that include a fair degree of unpredictability. _____
- TOTAL** _____

KEY					
Items	Executive skill	Items	Executive skill	Items	Executive skill
1-3	Response inhibition	13-15	Sustained attention	25-27	Flexibility
4-6	Working memory	16-18	Planning/prioritizing	28-30	Metacognition
7-9	Emotional control	19-21	Organization	31-33	Goal-directed persistence
10-12	Task initiation	22-24	Time management	34-36	Stress tolerance

Strongest skills (highest scores)

Weakest skills (lowest scores)

6

Executive Skills in the Home

When we ask participants in our workshops to fill out the Executive Skills Questionnaire (see Chapter 2), someone in the group invariably asks, “Do we fill it out based on how we are at work or at home?” People often believe that they would have distinctly different profiles in each setting. To the extent to which this is the case, we have an explanation. Our behavior—all kinds of behavior—is heavily influenced by the environment we’re in. We present ourselves differently to people we know well than to people who are passing strangers—or even work colleagues. We tend to be more polite to people at work than we are to our children at home. Our emotions are often closer to the surface at home.

Nonetheless, to the extent that people have what feel like *natural* executive skill strengths and weaknesses, these patterns are likely to hold up relatively well in both home and work settings. And if there’s any advantage of one setting over the other, our executive skills tend to be stronger at work than at home.

We recently put this to the test, by asking an audience of about 80 to complete the Executive Skills Questionnaire twice: once based on how they perform at work and again based on how they are at home (we actually waited about 12 hours between ratings to reduce the likelihood that one set of responses would influence the other). Here’s what we found: The *average* rating for each skill set was 14.57 at home (out of a maximum of 21 points) and 14.95 at work. And the average gap between their highest score and their lowest score was 9.9 points at home and 10.55 points at work. We also looked at the average score for individual executive skills to see if any changed significantly between the two settings. Of the 12 executive skills, only two differed by more than a point on average in the two settings. Response inhibition and stress tolerance tended to

be higher in the work setting than in the home—the remaining skills differed by less than a point on average.

That's not to say that for individual respondents skills remained identical in both settings. But we looked at those data as well. We looked at how often there was a significant shift in executive functioning between home and work. By significant, we mean where the average rating varied by 5 points or more between the two settings (which would mean an individual skill might go from being a comparative strength to a comparative weakness). We found that on average fewer than two skills varied that much between settings—and when they did vary, the difference tended to favor the workplace. In other words, when skills shifted from comparatively weak to comparatively strong, the stronger skill showed up in the workplace about 65% of the time.

So what's going on here? Why do scores tend to be lower at home than at work? We have a couple of answers to that question. First of all, the work setting provides more structure—more environmental supports, if you will—that help us prop up our executive skills. Jobs tend to involve set hours, there are specific work expectations with deadlines imposed by someone, we often have supervisors or bosses peering over our shoulders to make sure we're staying on track, and there's a paycheck involved. At home, few of those structures exist. No one's paying us to perform chores or evaluating our performance, and the only time constraint we're under is the 24-hour day. We do occasionally bump up against deadlines—April 15, for instance, mortgage closings, and bill and credit card payments—but compared with work, those tend to be fewer and farther between (although if we're lousy at time management or task initiation, they can certainly get us in trouble).

Second, there's some interesting research about willpower that offers an additional explanation for why our executive skills tend to be weaker at home than at work. We bring our A-game to the work setting. We drive ourselves harder and we push ourselves more, especially in those skill areas where we are weakest. And there's lots of research to show that the more we have to rely on willpower to drive behavior, the more that energy becomes depleted.

One example of the kinds of studies that have illustrated this phenomenon was conducted by Roy Baumeister (and colleagues), a research psychologist and the author of the book *Willpower*. He asked a group of college students to fast and then, in two groups, brought them into a room filled with the aroma of freshly baked chocolate chip cookies. The room contained the cookies, some chocolate, and a bowl of radishes. One group was invited to eat the cookies and candy, while the second group was invited to eat the radishes but not the sweets. Both groups were left alone with the temptations, but the experimenters

kept an eye on them through a hidden window. The radish group clearly found the cookies tempting (they looked at them longingly and in some cases picked them up and smelled them), though none of them actually ate the cookies. Then the researchers asked both groups to solve some geometry puzzles. The students thought they were being tested on their problem-solving skills, but in fact the puzzles had no solution, and the true test was to see how long each group worked before it gave up. Those who ate the cookies worked for 20 minutes, as did another group that had also fasted but had not been offered any food. The radish group, however, gave up in 8 minutes. Baumeister and his colleagues concluded that the effort they had put into resisting the chocolate chip cookies depleted their energy for solving puzzles.

This suggests that the harder you have to exert yourself to use weak executive skills in the work setting, the less energy you have to employ the same skills at home. Your executive skill strengths are less likely to take a hit, because they are strong enough not to require a great deal of effort in either setting.

But we don't want to ignore those of you who might have stronger executive skills at home than at work. Why would that be? Again, there may be any number of reasons, but contextual variables are the most likely explanation. Perhaps your job is so demanding and stressful that you can't perform at a high level in that setting. You may have more time at home to organize that setting and manage how you spend your time more effectively.

Where you are in the life cycle may particularly influence your executive skills at home. Are you the parent of young children who is also caring for an aging parent and trying to hold down a full-time job, or are you someone approaching retirement who is living on your own or with a spouse or partner, with more time at your disposal? This could affect your executive functioning at home. Recently in one of our audiences, two persons sitting right next to each other fit the descriptions above. Both claimed their executive skills were better at home than at work but for very different reasons. The young parent said that the demands on her time at home were so significant that she found the only way she could survive was to be highly organized and efficient and do a lot of planning. The older woman sitting next to her said that because her children were grown and she was now living on her own, she had few time pressures at home and she found it easy to operate at a high level as a result.

But whatever your comparative skill level is, there are aspects of home management that can stress weak executive skills. In the remainder of this chapter we elaborate on this and suggest ways to capitalize on your strengths and butress (or avoid) your weaknesses.

The Concept of Effortful Work

Another factor that influences our ability to bring our executive skills to bear on home-related tasks is the concept of effortful work. Some tasks clearly demand more effort from us than others. Although all *difficult* tasks are effortful, this term does not just apply to those tasks. And as it applies to managing a home, most of the things we have to do are not particularly difficult, and yet many take a lot of effort. And more often than not, the task itself does not determine whether it's perceived as requiring effort: It's our subjective reaction to the task that makes that determination.

We first observed this in children. We see kids who are great at math who absolutely *hate* doing math homework. There's something about the assignment that they find aversive—they see it as tedious or boring, or they think it will take *forever*. On the other hand, we see other kids who are great at math who breeze right through their math worksheets—and may even take some pleasure in doing them. The homework's the same for those two kids, the skill level's the same, and yet one kid fights doing the homework tooth and nail, and the other sits down and does it easily without prompting.

We then wondered if the same applied to adults, and the way we tested this in our workshops was to ask participants to think about household chores. We asked them to think about chores on a scale from 1 to 10, the approach we described in Chapter 3 (in the “Ways to Modify Tasks” table). A 1–2–3 chore was one the participant found very easy to do and in some cases pleasurable. An 8–9–10 chore was one the participant dreaded doing and put off as long as possible. Then we asked people to volunteer examples of 1–2–3 chores and 8–9–10 chores. And what we found was that very frequently an effortful chore for one person ended up being an easy chore for another. Doing the laundry, loading the dishwasher, cooking, mowing the lawn—these are just some of the examples where we saw wide variations in how much effort people thought they took.

While there may be no “rhyme or reason” to what makes a chore easy or effortful to any given person, we do believe that if a chore requires us to use a weak executive skill, it tends to fall on the high-effort list. (This is Peg speaking:) For example, since cleaning my study taps into my weakness in organization, that's probably a chore I dread more than any other (well, I'm not thrilled about emptying my suitcase when I get back from a trip either, but at least that doesn't take so much time!). On the other hand, I don't mind mopping the floor. I often use floor mopping as a break from writing psychological reports on the weekend since it allows me to shift from mental to physical exercise.

So how can you use this knowledge to get through chores? In our workshops, we ask people this question: “How can you turn an 8–9–10 chore into a 1–2–3 chore?” And we get all kinds of creative answers. Many combine the high-effort chore with listening to music or watching television. Some break the task down into very small pieces. A man we met recently told us that his wife leaves him a chore list, and she breaks each chore down into tiny steps. After he completes each small step, he has the satisfaction of crossing it out on his checklist before going on to the next step. Some hold out as a reward some fun activity they can do when the chore is completed. (See the Reward Menu in Chapter 4 for ideas.) One woman once told us she cuts up strawberries and whips cream before doing the chore and then thinks about the snack awaiting her as soon as she finishes the high-effort task. Another one told us he drinks his favorite coffee drink *before* beginning the chore. We generally don’t recommend giving yourself the reward before completing the effortful task, but it seemed to work for him (maybe the hit of caffeine helped him get started).

Go back to the “Ways to Modify Tasks” table in Chapter 3 for other ideas on how to get through chores that take a lot of effort for you.

The Relationship between Your Executive Skills Profile and Household Tasks

So let’s dig a little deeper into understanding the relationship between your executive skill strengths and weaknesses and the household tasks and activities we find easy or hard to do. The table on pages 87–89 lists each executive skill and its application to household tasks. Take a look at your particular strengths and weaknesses and see if the descriptions hold true for how you approach home responsibilities.

So Now What Do You Do?

Now you have a better understanding of why some aspects of home management are more challenging for you than others. But is there any way you can use either your knowledge of your strengths and weaknesses or your understanding of environmental supports or behavior change to improve your home management?

Let’s zero in on how your strengths and weaknesses play out in daily or

**IMPACT OF EXECUTIVE SKILL STRENGTHS
AND WEAKNESSES ON HOME MANAGEMENT**

Executive skill	If this is your weakness . . .	If this is your strength . . .
Response inhibition	You may jump from chore to chore as new tasks come to your mind—or you may abandon work altogether to pursue an idea that comes into your head.	It's easy for you to follow a plan. If something you'd rather be doing comes into your head, you say to yourself, "Later. I need to finish this now."
Working memory	You lose track of the tasks you're supposed to accomplish unless you find ways to remind yourself (for example, lists).	You can easily keep in mind the things you need to accomplish in any given time period.
Emotional control	If you encounter an obstacle in the middle of trying to complete a chore, you get irritated or frustrated and may have trouble overcoming the obstacle or returning to the task.	When obstacles arise or disruptions occur, you say to yourself, "Well, that's inconvenient," and then make new plans or figure out how to get around the obstacle.
Task initiation	You find it exceedingly difficult to get started on tasks or chores. Even though procrastination makes you feel terrible, you still can't work up the energy to initiate a tedious task.	You begin tasks, both the easy ones and the hard ones, without difficulty. If it needs to get done, your goal is to start promptly so the end will come fast.
Sustained attention	You may begin tasks or chores but become quickly bored or fatigued and quit before the task is done, promising yourself you'll get back to it later. That may or may not happen.	You have no trouble seeing tasks through to completion. Once you start something, you keep the end easily in sight.

(continued)

**IMPACT OF EXECUTIVE SKILL STRENGTHS AND WEAKNESSES
ON HOME MANAGEMENT** *(continued)*

Executive skill	If this is your weakness . . .	If this is your strength . . .
Planning/ prioritizing	You may jump into a task without planning ahead, increasing the likelihood that things you didn't plan for (like missing equipment) will disrupt the process. You also may have trouble prioritizing tasks—they all look equally important to you, so you may choose the easiest, least aversive tasks to focus on.	Multistep tasks are a specialty for you. You take pleasure in coming up with plans and figuring out the order in which things need to be done. You can also easily prioritize, so your efforts go into the most important tasks at any given point in time.
Organization	Tidiness is extremely effortful for you. In a burst of energy you may create an organizational scheme, but you find it impossible to maintain for any length of time.	Keeping your home neat is easy for you. You like a sense of order, but on top of that, you just naturally put things where they belong, clean up after yourself, and avoid clutter.
Time management	Because of your difficulties with time estimation, you either put things off because you think you can do them quickly or try to cram into a small period of time more tasks than you are capable of doing.	You're good at allocating the right amount of time for any given task, and you're realistic about how much can be accomplished within a given time period.
Flexibility	You're set in your ways about how things should be done or where things should be. You also tend to create an agenda in your head and become irritated if things don't go according to plan.	You adjust easily when things don't go as planned—if you made plans to begin with! You're just as likely to decide on the spur of the moment what you want to do next.

Executive skill	If this is your weakness . . .	If this is your strength . . .
Metacognition	You may struggle with the problem-solving demands that sometimes arise in home management—what to do when the pipes freeze or the car won’t start. You’re happier when tasks are routine and flow smoothly.	Routine tasks may bore you, but if there’s problem solving required, you’re in your element. You may also find it easy to divide chores or tasks among family members, negotiating with them and taking advantage of their strengths and weaknesses.
Goal-directed persistence	This can undermine everything because sticking with a chore, a plan, an organizational scheme, or a schedule just doesn’t feel important to you—and there are other things you’d rather be doing.	You’re able to use this strength to combat whatever executive skill weaknesses you may have. If managing your home is a priority for you, it gets done.
Stress tolerance	When things pile up and too much needs to be done at once—watch out. This is where you tend to fall apart.	You’re at your best when a lot needs to be done in a short period of time, and you love the challenge of figuring out how to get around obstacles to accomplish tasks.

weekly chores. Make a list of the things you do easily and the ones you struggle with. We’ve given you an example in the table on page 90 and a blank worksheet following that to create your own list (you can download and print copies of the blank worksheet from www.guilford.com/dawson7-forms).

Be aware, as you compile your list of easy and hard chores, that not all of them may connect with your executive skill strengths or weaknesses. Some chores don’t have much to do with executive skills. (This is Peg speaking:) I’ll return to this below in discussing my own lists of preferred and nonpreferred chores.

PEG’S LIST OF LOW- AND HIGH-EFFORT CHORES

Low-effort chores, tasks, activities	High-effort chores, tasks, activities
<i>Making the bed</i> <i>Preparing meals</i> <i>Sweeping and mopping floors</i> <i>Cleaning out the cat box</i> <i>Cleaning the bathroom</i> <i>Mowing the lawn</i> <i>Mopping the floor</i> <i>Doing/sorting laundry</i> <i>Paying bills</i> <i>Making appointments</i> <i>Planning trips/vacations</i>	<i>Cleaning up after meals</i> <i>Loading the dishwasher</i> <i>Unloading the dishwasher</i> <i>Sorting the mail</i> <i>Tidying the study</i> <i>Dusting</i> <i>Cleaning windows</i> <i>Gardening (planting, weeding, harvesting)</i> <i>Raking leaves in the fall or spring</i>

Your List of Low- and High-Effort Chores

Low-effort chores, tasks, activities	High-effort chores, tasks, activities

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Now look at the two lists. Do you find any common themes? (This is Peg speaking:) As I look at my lists, I notice a couple of things. The chores I find easy are ones that involve my strengths in planning and task initiation. The bulk of the chores I find take a lot of effort involve my weakness in organization.

But there are other factors besides executive skills that influence whether I find the tasks low or high effort. I like tasks I can do quickly. I think this has to do with another dimension of cognitive functioning called processing speed. I operate in general with a fast cognitive tempo, so my preference is to complete tasks quickly. It takes me no more than 10 or 15 minutes to clean my bathroom, so I don't mind doing this. Dusting my big old house often overwhelms me (especially since we heat with wood, and that creates a lot of dust, at least in the winter). Weeding my garden also feels like it will take forever, so I tend to put that off, too.

Some tasks I find easy involve physical exercise (mowing the lawn, mopping the floor), and these are nice diversions from all the mental work that occupies me on weekends (for example, writing psychological reports or book chapters). But there are also some activities that involve physical exertion rather than just exercise (cleaning windows, raking leaves)—they also involve my doing something with my arms, and I've never had particularly strong arm muscles.

As you look down your list, you may be able to identify additional factors that influence whether you find them low or high effort. Keep them in mind when you go about designing an intervention strategy, because you may be able to use that information to help you get through chores you find take a lot of effort.

Now start thinking about coping strategies to get through the high-effort chores. The "Ways to Modify Tasks" table in Chapter 3 is a place to start. Are any of the environmental modifications listed there applicable to your high-effort chores? Here are some other suggestions:

- If you're fortunate enough to live with someone, you should both complete the chores table and compare notes. Are any of the tasks you find high effort on your partner's "easy" list? As much as possible, divide up the list to reduce the number of high-effort chores each of you has to do. If it turns out you share a lot of high-effort chores, think about ways they might be divided equally. Could you trade off, so one week you do the aversive chore and the next week your partner does? A more whimsical suggestion would be to write each high-effort chore that you have in common on a separate slip of paper, fold it in half, put all the slips of paper in a hat or a large jar, and take turns selecting the slips until the work for the week or weekend has been divvied up.

- Consider hiring someone to do the chores you'd rather not do. Maybe a housekeeper seems like an extravagance, but how about hiring someone *just* to wash windows or mow the lawn? Thinking about it that way may make it more economically feasible.

- Create a daily schedule—but keep it very reasonable and take advantage of behavioral momentum. Although you may feel that when you get home from work you're exhausted and have no energy to do anything, in fact, you are likely to have a little residual energy left over from work that you can take advantage of. Don't even sit down until you've done those one, two, or three items on your to-do list—just make sure that no one item takes too long or feels too overwhelming. Plow on through, cross each off your list, and *then* collapse in your chair and take a well-earned rest.

- Look to see if you can begin anything on your list before you leave for work in the morning. If you can get the task *started* first thing in the morning when you're fresh, it may feel less overwhelming if all you have to do after work is finish the task.

- Make a plan—daily, weekly, monthly—and make sure that no day is too burdensome. There are smartphone or tablet apps that can facilitate this. Home Routines is one that includes tasks for every room in the house attached to a to-do list that enables you to check off each one as you accomplish it.

A Word about Children and Chores

This is not a book about parenting (if you want that, take a look at *Smart but Scattered* and *Smart but Scattered Teens*). However, we can't write a chapter on home management without spending a little time talking about chores and children.

When we evaluate children to determine whether they have executive skill weaknesses, one of the questions we always ask parents is about chores. To be honest, that question has changed over the years. We used to ask, "What kind of chores does your child have to do?" More recently, we've been wording it differently. Now we ask, "Are there any chores your child has to do?" And we have found that it's not just chaotic, dysfunctional families that don't require children to complete chores on any consistent basis. We also see many middle- and upper-middle-class families with two professional parents working 40–50 hours a week that tell us that they find it easier to do the work themselves than to ask

their children to help out or to provide the supervision necessary to make sure they start and finish tasks. We admit we see some families where the children are so challenging (for example, due to mood disorders or an autism spectrum disorder) that it would put everybody over the top if the child were asked to do much other than manage emotions and try to do some homework. And there are some kids with such tremendous learning challenges that asking them to do much at home after a long day at school may be unreasonable. But the majority of children we see don't fall into those categories.

When we encounter families where children are given a pass on chores, we ask parents to take the long view. If children grow up with a habit of helping out, cleaning their bedrooms, picking up after themselves, and doing other small tasks to keep the home running smoothly, they develop habits that will make home management much easier when they reach adulthood. And on top of that, asking children to do chores helps them grow their own executive skills: task initiation, sustained attention, planning/prioritizing, goal-directed persistence, even emotional control and response inhibition. And if you're lucky, you could get one of your kids to tackle one of your 8–9–10 chores!

We don't take a stand on whether parents should give children an allowance for doing chores or whether they should be given a set chore list or expected to help out as needed. There are pros and cons for each side of those issues. But we do strongly urge parents to ask their kids to help out around the home at a level that's developmentally appropriate. Not only will it relieve a little of the parents' burden, but it will also be an investment in the child's future.

And Now Back to That Chore List

Look at what you wrote in the chores table and now list some possible coping strategies. (This is Peg speaking:) I've done this with my list, and it looks like the table on page 94.

Now you take a stab at it; fill in the table on page 94 (or download and print the form from www.guilford.com/dawson7-forms).

Complications

So will this solve all your home management problems? Sure, if they're not extreme and most of your executive skills function fairly well. The approaches we've suggested are unlikely to be sufficient in the following situations:

PEG'S COPING STRATEGIES

Effortful chores, tasks, activities	Possible coping strategy
<i>Cleaning up after meals Loading the dishwasher Unloading the dishwasher</i>	<i>Division of labor: in exchange for my doing the grocery shopping and cooking, my husband cleans up after meals and loads/unloads the dishwasher.</i>
<i>Sorting the mail Tidying the study</i>	<i>Spend 10 minutes a day on each of these activities. That may not be enough time to solve the problem completely, but at least the two "messes" won't get out of hand.</i>
<i>Dusting</i>	<i>Build it into my weekend routine (another task to alternate with mental activity).</i>
<i>Cleaning windows</i>	<i>Make it a family project; ask my husband to share this task with me so I have company and it goes faster.</i>
<i>Gardening (planting, weeding, harvesting) Raking leaves in the fall or spring</i>	<i>Download books from www.audible.com so I have something pleasurable to do while I'm doing these activities.</i>

Your Coping Strategies

Effortful chores, tasks, activities	Possible coping strategy

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- **If you have physical disabilities that interfere with your ability to do all the things you would like to be able to do around the house.** Hiring help or prevailing on other family members to increase their participation in home management may be the most feasible way of dealing with physical disabilities.

- **If there are mental health issues that impact home management.** Severe depression, for instance, can degrade a number of executive skills, including task initiation, sustained attention, and goal-directed persistence. The American Psychiatric Association considers hoarding a disability (related to obsessive-compulsive disorder), and it's a challenging problem to treat. Seeking counseling, therapy, or, in some cases, medication as a first step may be in order if a mental health issue is interfering with home management.

- **If your executive skill weaknesses are profound enough to interfere with your ability to follow through on plans and goals.** Skills such as response inhibition, organization, and planning/prioritizing are more critical to home management than other skills on the list, so if these are problems for you, you may want to go back to Chapter 4 to see if there are steps you can take to improve your functioning in these domains.

- **If, in addition to trying to manage your home, you're dealing with conflicts in your relationships with others in the home.** If those conflicts arise because of mismatches in executive skill profiles, read on. The next chapter is for you!

7

Executive Skills and Relationships

Jasmine was fuming. Her husband had assured her he would be home by 6 o'clock at the latest. She knew he wasn't good at judging time, so she'd built in an extra 15 minutes, but now the dinner was done and ready to be eaten, and Randall was nowhere to be seen. Nor had he called to explain. She knew better, but she started going into panic mode. He must have gotten into a car accident on the way home. Even now, an ambulance was tearing to the hospital with the battered body of her husband. Maybe he'd suffered a head injury or paralysis. And would anyone know how to reach her to give her the bad news? Jasmine thought of picking up the phone and calling Randall's cell, but what if he didn't answer? That would make everything worse! And she remembered the last time she'd made that kind of phone call. He'd thought she was an idiot for worrying. He hadn't said that to her, but she'd known that's what he was thinking. With these thoughts running through her head, she didn't hear the door from the garage to the kitchen open, but she caught something out of the corner of her eye. There was Randall, calmly putting his briefcase on the floor and saying, "You wouldn't believe the traffic! I'd forgotten how crazy Friday commutes in the summer can be." He looked at his wife, and her strong emotions registered. "Jasmine," he said, "chill out. I forgot to factor in Friday night traffic when I made plans to leave work. What's the big deal!?"

Calvin had to admit he was something of a neat freak. His study, his woodshop, the garage—all his personal spaces were spotless and clutter free. The rest of his family was a different story. His wife seemed to manufacture "piles" out of thin air—Calvin avoided going into her study unless he

absolutely had to. And his kids had an annoying habit of dropping their belongings wherever they were when they stopped using them. His daughter, Sydney, would get an urge to bake chocolate chip cookies, and by the time she was done the kitchen would look like it had barely survived a hurricane. She'd proudly bring her baked goods into the living room, pass them out to everybody watching television, and sit down to join the group. Calvin would go to the kitchen to get a drink with which to wash down the cookies, and he'd see the remnants of the storm. From past experience, Sydney knew an eruption was coming. "Dad, Dad!" she cried out in an attempt to avert the explosion. "I'll pick it up as soon as the program ends. Trust me!" But Calvin was already swearing as he rinsed out cooking utensils and started putting them in the dishwasher.

These scenarios describe typical family events, right? Over a week or a month in a family these scenes or others like them might play out 10 to 20 times. It's what happens when people with different personalities try to coexist in close quarters. Fairly early on in our process of working with executive skills, though, we realized an important truth about these skills. People tend to have their own unique patterns of strengths and weaknesses, and it's rare that two people in a relationship have identical profiles. Furthermore, when one person's strengths align with the weaknesses of his or her partner, there's a high likelihood that tensions will brew. In fact, this outcome is so common that we say mismatches in executive skills profiles are strong predictors of tension points in relationships.

In the first scenario above, Jasmine is obviously strong in time management while Randall is not. Jasmine's emotional control is weak. For Randall, it's a strength. He's not prone to upset himself, and he has trouble understanding why Jasmine gets so worked up about small things like his being 20 minutes late for dinner. In the second scenario, Calvin is an outlier in his family—he has very strong organizational skills, while this is a weakness for everybody else. There are rooms in his house he avoids going into when he can, but the rest of the family has no clue about how uncomfortable their clutter makes him feel.

Although the preceding scenarios are ones we've encountered, we hasten to add that not all relationship "issues" can be characterized as executive skill mismatches between couples. And even when they are, the differences may be subtle or confusing. Maybe Randall's time management skills are pretty strong, for instance, but Jasmine is hypersensitive about his being even 5 minutes late for something. Or maybe what one partner views as a personality trait ("That's

who I am—just live with it”), the other may see as a skill deficit that needs to be corrected.

And then there may be times where life circumstances accentuate problems or limit solutions. If you’ve had to move in with your in-laws to save money to buy a house, you can’t really ask them to be less messy or cluttered if that’s the way they keep their home. Your recourse in situations like this may be to come to terms with what can’t be changed and work hard to achieve what can.

Having acknowledged that relationships and realities are complicated, in this chapter you get to turn the lens on how your own executive skills profile compares with someone with whom you have a close relationship. We focus primarily on intimate partnerships, but you may also want to apply what you learn to other relationships, such as those you have with friends, coworkers, your own parents, or your own children.

To begin with, we’ve created a tool that will lay out fairly clearly the similarities and differences between your executive skills profile and that of your significant other. You will find it, along with instructions for completing it, on pages 99–104 and also at www.guilford.com/dawson7-forms for downloading and printing.

Now that you’ve completed the questionnaire for you and your significant other, go back and look at where your patterns align and diverge. A rule of thumb for doing this: Similarities would be where you and your partner’s ratings are on the same side of the questionnaire for at least two of the three questions for each skill. Differences would be where your ratings differ on at least two questions. For example, if under stress tolerance you selected the *first* description for each pair for yourself for all three items and for your partner you selected the *second* description for at least two items, then you would conclude that you differ from each other on the executive skill of stress tolerance, with it being a strength for you and a weakness for your partner. How might this difference between you manifest itself in real life? You are likely to have different ideas for how you like to spend your leisure time: you would be drawn to more “risky” or exciting pursuits, while your partner would find these unnerving. On the other hand, when an unexpected event requires quick action or adjustment (that rental car breaking down in the middle of nowhere, for instance), your partner will be glad that you’re there to figure out how to get you out of the mess.

In the spaces on page 105, write down your executive skill similarities and differences. For the similarities column, you may want to note whether the skill is a strength for both of you (place a plus sign next to those) or a weakness (denoted by a minus sign).

Relationships Executive Skills Questionnaire

Directions: Read each pair of descriptions and decide which of the two options best describes you. Then decide *how often* the statement is true for you (sometimes, often, most of the time). When you have completed all the items for yourself, go back and follow the same process for the person you're in a relationship with. Decide which of the two statements best describes him or her and then choose how often the description applies. Then look for patterns of similarities and differences between self and other.

RESPONSE INHIBITION

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Carefully deliberates before making a decision	OR	Jumps to conclusions	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thinks before responding; doesn't interrupt	OR	Blurts out without thinking; may interrupt	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gathers all the facts before acting	OR	Acts before getting all the facts ("gut instinct")	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>

WORKING MEMORY

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has a head for details (memory like an elephant)	OR	Has difficulty remembering details	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Remembers what has to be done	OR	Forgets what he or she has promised to do	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Follows through on obligations without reminders	OR	Needs reminders to get things done	Self	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>

(continued)

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Relationships Executive Skills Questionnaire (p. 2 of 6)

EMOTIONAL CONTROL

	Sometimes	Often	Most of the time					Sometimes	Often	Most of the time
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Handles negative feedback easily	OR	Reacts strongly to criticism	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is cool as a cucumber	OR	Becomes upset by "little things"	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Keeps emotions in check	OR	Gets sidetracked by strong emotions	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TASK INITIATION

	Sometimes	Often	Most of the time					Sometimes	Often	Most of the time
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Follows through on obligations without reminders	OR	Needs reminders to get things done	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gets started right away on chores or other tasks	OR	Puts off starting things	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completes tasks well before deadlines	OR	Leaves things until the last minute	Self	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(continued)

Relationships Executive Skills Questionnaire (p. 3 of 6)

SUSTAINED ATTENTION

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Stays focused on the task at hand	OR	Jumps from one task to another	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Once started, keeps working until the task is done	OR	Is slow to finish tasks (or they don't get done)—runs out of steam	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Gets right back to work after an interruption	OR	Gets derailed by interruptions; easily distracted	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

PLANNING/PRIORITIZING

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Starts the day with a plan	OR	Doesn't plan out the day	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Can prioritize when there's a lot to do	OR	Has trouble prioritizing when time is limited	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Breaks tasks down into subtasks with timelines	OR	Is not good at project planning	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

(continued)

Relationships Executive Skills Questionnaire (p. 4 of 6)

ORGANIZATION

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Puts things away shortly after use	OR	Slow to pick up after self	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Keeps personal spaces neat	OR	Finds it hard to keep personal spaces neat	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Easily maintains organizational systems	OR	Has difficulty maintaining organizational systems over time	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

TIME MANAGEMENT

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Is good at estimating how long it takes to do something	OR	Is not good at time estimation	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Completes tasks in the time allotted	OR	Has difficulty finishing tasks within time constraints	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Arrives on time for things (for example, appointments, family events)	OR	Has trouble getting places on time	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

(continued)

Relationships Executive Skills Questionnaire (p. 5 of 6)

FLEXIBILITY

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	“Goes with the flow” when the unexpected happens	OR	Is thrown for a loop by unexpected events	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Adjusts easily to changes in plans	OR	Is upset by changes in plans	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Changes course easily	OR	Resists changing course	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

METACOGNITION

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Can evaluate a situation and figure out what to do next	OR	Waits to be told what to do	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	“Reads” a situation well to understand the dynamics involved	OR	May be unaware of underlying conflicts, issues, and so on	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Is a good problem solver	OR	Looks to others to solve problems	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

(continued)

Relationships Executive Skills Questionnaire (p. 6 of 6)

GOAL-DIRECTED PERSISTENCE

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Sets and achieves personal goals	OR	Is not particularly goal driven	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Sets aside immediate pleasures for long-term gains	OR	Lives “in the moment”—takes one day at a time	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Sets high standards for self	OR	Is not highly motivated to set high standards	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

STRESS TOLERANCE

	Sometimes	Often	Most of the time				Sometimes	Often	Most of the time
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Enjoys the unexpected/unpredictable	OR	Prefers routine and knowing what’s coming next	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Is at his or her best when the pressure is on	OR	Finds pressure anxiety provoking	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Prefers action-oriented or exciting leisure activities	OR	Prefers laid-back leisure activities	Self Other	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Executive skill similarities	Executive skill differences

Now let’s look at what these patterns mean.

Similarities

• **You and your partner share executive skill strengths.** Let’s start with the good news. When you and your partner share executive skill strengths, these areas likely are the glue that helps hold your relationship together. Maybe you both have strengths in metacognition—that means you’re both good problem solvers and you both value seeing nuances in relationships, or you appreciate the ability to understand patterns and the deeper meanings of things. Or if you’re both high in stress tolerance, you’re both drawn to high-excitement activities. Maybe your idea of a fun Saturday is to spend the day rock climbing or riding a roller coaster. If you’re both high in task initiation, you can relax when your partner promises to complete a task or chore: you know it will get done in a timely fashion. If you’re both high in response inhibition, you know you don’t have to worry that your partner might interrupt or say something rude at a party—and he or she won’t commit you to a spur-of-the-moment decision that upon further reflection is probably not a good idea. If you look at all your shared strengths, you can probably identify how those commonalities make your relationship run smoothly.

We would venture to say that the more executive skill strengths you and your significant other share, the more compatible you are. We're not saying that when you're seeking a partner you should look only for someone whose profile is identical to yours—after all, opposites attract, and probably for a good reason. That's what often brings the “sparkle” to the relationship. But if you're in it for the long haul, if you have a hefty number of executive skill strengths in common, you probably won't have to work quite so hard at the relationship as you would if you have few strengths in common.

- **You and your partner share executive skill weaknesses.** This is a little trickier. On the one hand, sharing a weakness means you likely understand your partner's shortcomings—because you have them too. But it's not uncommon for blind spots to get in the way here. People seem to find another person's shortcomings much more irritating than their own shortcomings—and this is true even when they share the same weaknesses. You may be a terrible procrastinator, but that doesn't stop you from flaring up when you find your partner (or son or daughter!) has missed an important deadline. And if you and your partner are both disorganized, why is it way more annoying when he or she has misplaced something important than when you did? And poor planning skills may look spontaneous in yourself, but they may drive you nuts when your partner forgot to pack the pump for the air mattresses for that camping trip you'd been looking forward to for months.

One executive skill in particular deserves special mention here. In our experience, people who are inflexible often don't view themselves that way—but they have no problem seeing their partner's inflexibility. For this skill in particular, two people who know each other well may fill out this portion on themselves quite differently from the way their partner filled it out. Because one or both of you are inflexible, you could find a discussion about your different perceptions becoming heated. At this point, it might be helpful to walk away from the argument—or crack a joke to relieve the tension. Inflexible people can often see things more clearly after they've had the opportunity to sit with the information for a while.

Ultimately, though, there is much to be gained when couples can acknowledge that they share the same executive skill weaknesses. The knowledge alone can help them be more tolerant when the impact of the weakness affects daily life. And although it involves more work, you and your partner may decide that together you want to tackle situations where the weakness is disruptive. If this is the case, then you have a natural ally in your efforts at self-improvement.

Differences

As with similarities, there are two kinds of differences: when your strengths are your partner's weaknesses and when your partner's strengths are your weaknesses. In either case, here's the number-one lesson we've learned from working with this. We've found that if you are naturally *good* at something, it's very hard to understand people who are naturally *bad* at it. If you automatically

- begin a task as soon as it's assigned;
- arrive on time for any appointment, date, or scheduled event;
- pick up after yourself;
- stop and think before you say or do something;
- see a situation in all its layers or from multiple perspectives; or
- stick with any task without getting sidetracked before it's done . . .

then there's a good chance you have a hard time understanding why someone would struggle with any of those things. And we may go one step further. While we may be perfectly comfortable saying about ourselves, "You know, that's just something I'm not very good at," when we see a weakness in another person we may attribute it to something he could control if he wanted to. You might find yourself saying, "I'm not good at estimating how long it takes to do something," and then you say to your partner, "but you're just a slob." Or "I admit I fly off the handle—that's just how I'm 'wired,' but your inability to get started or complete tasks—that's pure laziness."

So now that you understand how executive skills can impact relationships, how can you use this knowledge to improve those relationships?

Tips for Managing Profile Differences in Relationships

• **Don't assume a skill that feels "natural" to you feels that way to your partner.** If you have an internal clock that runs all the time and calibrates accurately so you're never late and never overscheduled, don't assume your partner has the same hardware or software. Maybe your clock measures time to the minute and his measures time in 30-minute increments. Or maybe his clock

varies, so that 30 minutes feels like 15 minutes one day and 45 minutes the next. Or maybe your partner has a “close enough” way of viewing time, while you’re a minute-by-minute person. Neither one is right or wrong—but they certainly are different!

- **Take advantage of your partner’s strengths where you can.** If you have problems with emotional control and it’s a strength of your partner’s, maybe your partner should call the credit card company to contest a charge. If organization comes naturally to your partner and it’s your weakest skill, then maybe your partner should be the one to maintain the records needed to complete your income taxes every year. If you’re great at planning and your partner isn’t, then perhaps you should offer to create the checklist that will make packing less stressful for that dream vacation you’ve been looking forward to all year.

Go back to the chore list you drew up in Chapter 6 (page 90). If your partner hasn’t done this exercise yet, invite him or her to do it. See if there are any chores you’ve identified as 1–2–3 chores for you that your partner has rated as 8–9–10 chores. And then look for chores you’ve rated as 8–9–10 that are easy for your partner and see if you can make a trade.

- **At the same time, don’t use your weaknesses to burden your partner unfairly.** If you find yourself saying, “I’m lousy at organization—you pick up the bedroom” or “You know time management is not a strength for me, so just get used to my being late for everything,” you’re misusing this knowledge. (This is Peg speaking:) When my son was diagnosed with an attention deficit disorder (ADD) at age 14, he came home from school one day and said, “I don’t have to do homework. I have my ADD membership card!” I immediately answered, “Aaron, ADD is an *explanation*; it’s not an *excuse*.” The same applies to executive skills. Being weak in time management explains why you’re usually late—it doesn’t mean you shouldn’t try to get better at it (see Chapter 4).

- **Work on communication skills so that you can talk with your partner in a way that shows understanding of your different executive skill profiles.** (This is Peg speaking:) My husband knows that flexibility is a weakness for me, so he has taken to saying to me, “Peg, you don’t have to decide right now, but you may [for example] want to think about changing our plans on Saturday when we drive home from our vacation.” As another example, if your partner has weak working memory, you might say, “Would you like a reminder to stop at the dry cleaner’s on your way home from work tomorrow? Want me to text you at the end of the work day?”

- **Prepare in advance when an activity involves an executive skill weakness.** This is related to the suggestion above about communication skills. If you can't—or don't want to—take on the task that uses your executive skill strength and taps into your partner's weakness, come up with a plan for handling the situation. If your partner has poor organizational skills and you're putting your house on the market, it makes sense to come up with a plan for getting the house ready to show that involves small steps over a longer period of time rather than trying to do a massive cleaning the day before the open house. Create a checklist and allocate responsibilities, keeping in mind that your partner does better with small, very specific tasks (wash the surfaces in the kitchen) than with larger, more general tasks (clean out the garage).

- **Use humor judiciously.** If you're going to tease your partner about his or her weaknesses, be prepared to laugh at your own. Humor can defuse tension, but not if it's laced with resentment, which is often the case when you're joking about a skill that you excel at and your partner sucks at.

- **Consider a joint self-improvement project.** Maybe your partner has a weakness that just gets under your skin. You've tried not to let it bother you, but it keeps coming up. Perhaps you keep thinking, *If she'd only get better at this one thing, our whole relationship would improve.* Rather than just handing her Chapter 4 and asking her to work on it, try suggesting that you *both* work on self-improvement. If you decide to try this approach, we recommend that you start *very small*. For instance, your partner might shoot for getting home for dinner within 10 minutes of the ETA 3 days out of 5, while you could decide to keep the island in the middle of the kitchen clear of clutter (no more than three extraneous items) 3 days out of 5.

By the way, when we suggest starting very small, what that means depends on a person's *current level of performance*. If your partner is typically 20–30 minutes late for dinner, shooting initially for a consistent 20 minutes daily or *maybe* 15 minutes two or three times per week might work. Otherwise, what seems like a baby step to the person who is frustrated by the partner's lateness may be more than the offender can reliably succeed at. And then it looks like a motivational issue. The behavioral data suggest that if people can consistently get to the low end of their baseline as a starting point, they are making progress. We're usually more motivated to keep working toward a long-term goal by the good feeling from making a small improvement than the bad feeling from not reaching a larger interim goal.

Tips for New Relationships

If you are in the early stages of a relationship, you may not know your partner well enough to complete the questionnaire according to the instructions, and you may not be able to make use of any of the suggestions either. There *is* a way to get some benefit from this chapter, however. Try the following:

- You and your new partner, at that point in the emerging relationship when it feels right, should each complete the Relationships Executive Skills Questionnaire, but only on yourself, not on your partner.
- When you've both finished, combine the two into one questionnaire by adding your partner's ratings to the "Other" line. This will give you a quick read on those executive skills you have in common and where you differ. The similarities may be a fast track for understanding your compatibilities. The differences, in turn, can serve as an early warning system for where the tension points may arise down the road.
- Spend some time talking about your profiles. Give examples of how your strengths play out at home or in the workplace or in the context of leisure activities. Talk about your weaknesses, too, and give examples of how they impact your life in different contexts and settings.
- Give some thought to how your profiles differ. Can you foresee significant conflict at some point because of this? Or maybe it's just these differences that drew you together in the first place. Although we argue that the more your profiles resemble each other, the more smooth sailing you will have as you meld your two lives together, we don't advocate for identical profiles to hook up (we recommend the book *The Rosie Project* by Graeme Simsion for a comic fictional account of a guy who tried to use a checklist to find the perfect partner—needless to say, the approach didn't work well). It's possible that two people with identical profiles would be bored to tears with each other. On the other hand, if your profiles differ markedly on a majority of the skills, this could suggest you and your partner will have a tough row to hoe. But we see no harm—and quite possibly some advantage—in proceeding with the relationship with your eyes open.

Using the Relationship Executive Skills Questionnaire with More Fragile Relationships

What if completing the Relationship Executive Skills Questionnaire appears to add tension to the relationship where it didn't seem to be before? It's possible

that upon completing the questionnaire you and your partner not only seem to have very different profiles but also differ markedly in your perceptions of yourselves and each other. The questionnaire might actually bring to the surface some underlying stress fractures that either weren't visible or weren't acknowledged before.

We met with a middle-age couple once after the husband came in for an evaluation to determine whether he had an attention disorder. He didn't, but it became clear during the initial clinical interview that he and his wife likely had very different sets of executive skill strengths and weaknesses. To test our hypothesis, we had both partners complete an Executive Skills Questionnaire (this was before we had developed the Relationship Executive Skills Questionnaire) on themselves and mail them back to us. We then compared the results. Our hypothesis was confirmed just about perfectly: The husband's three strengths were his wife's three weaknesses and vice versa.

When we met with the two of them for a feedback session in which we made a case for our determination that the husband did not have an attention disorder, his wife became increasingly agitated over the course of the session. It became clear when we shared the questionnaire results that, in her mind, whatever weaknesses she had paled in comparison to her husband's weaknesses. Prior to our evaluation, in clinical terms, the husband had been the "identified patient" in the family (that is, the one with problems). We reframed the situation by arguing that it was not a question of one having a disorder and the other not, but of two people with contrasting profiles of strengths and weaknesses trying to live together. Sadly, this did not go over real well with the wife. The husband, in contrast, appeared a bit relieved to learn that there was another explanation for his problems than an undiagnosed attention disorder.

If you find yourself in a similar situation—that is, having difficulty reconciling your different executive skills profiles—it may be appropriate to seek out couples counseling to develop strategies for accepting and forgiving the differences you see in each other as a result of reading this chapter and completing the Relationship Executive Skills Questionnaire. Take the questionnaire with you to see if the therapist can help you make sense of your newfound knowledge.

Part III

STRATEGIES FOR INDIVIDUAL EXECUTIVE SKILLS

This part of the book focuses on each of the 12 executive skills separately in greater depth than in the prior chapters. You may decide that you want to read only about your particular executive skill weaknesses, since these are the ones you're most interested in trying to improve. Doing this will allow you to cut to the chase, but you may lose something in the process, such as ways to use your strengths to compensate for some of your weaknesses.

The executive skills chapters appear in the same order as on the questionnaire, and each chapter follows the same format:

- We define the skill and give you some background information about the specific brain processes that govern each skill.
- We describe where there may be some overlap with other executive skills so that you can decide where to put your change efforts.
- We then offer some suggestions regarding how you might modify your environment to reduce the impact of your weak skill, followed by a step-by-step procedure for how you might improve the skill through targeted practice.
- We make some suggestions in terms of technological supports, either to compensate for the weak skill or to help you improve it.
- And finally, we offer a vignette that shows how a person might go about designing a self-improvement program. We conclude the chapter by

highlighting the elements of the self-improvement program that contributed to its success.

You will see that the interventions we incorporate into our scenarios are tailored to fit the individual personalities of those trying to change. It is unlikely that any of the interventions we describe will be perfect for you in their present form. What we will do, however, is offer a variety of suggestions in the hopes that you can pull bits and pieces to fashion your own personalized self-improvement plan.

For this reason, we suggest that you at least skim all the chapters, even if you're planning on zeroing in on only one or two executive skill weaknesses. There will be some common threads and some redundancies that will serve to emphasize the key features of an effective intervention. Reading through all 12 chapters may help you internalize the process. Furthermore, there's enough overlap in the strategies we lay out that you may be able to pick up some useful tips or ideas from chapters on skills that are not the ones you want to focus on.

By the time you finish reading them, who knows, you may have internalized our thought process, which means you will be thinking methodically about environmental supports and ways to gradually improve your executive skills through targeted practice. If this happens, you should feel pretty confident that the path you've set is the one most likely to lead to successful behavior change.

8

Controlling Impulses

Response Inhibition

What It Is

The capacity to think before you act. This ability to resist the urge to say or do something allows us the time to evaluate a situation and how our behavior might impact it.

What We Know about It

This is the first executive skill to emerge, shortly after birth (around 7 months of age). It develops slowly, however, and it's actually one of the last executive skills to reach full maturation. Teenagers get in trouble because of this (and the fact that during the teen years kids are drawn to taking risks more than any other time either before or after adolescence). We also know that people who are strong in this skill from an early age tend to find it easier to regulate their behavior as adults than people who are weaker in this skill. Adults who are weak in response inhibition vary in how pronounced the problem is. When it falls toward the mild end of the continuum, they may make impulse purchases for things they don't necessarily need, "put their foot in their mouth," so to speak, when talking with coworkers or family members, or decide to do something fun when the opportunity arises, forgetting that there are other, less fun obligations they're committed to. When it's a significant problem, impulsivity can lead to problems with social and family relationships, adversely impact jobs

and careers, and lead to behavioral excesses that adversely impact health. Fortunately, impulsivity declines with age, so once most of us get past adolescence, our response inhibition improves.

What We Can Do about It

We are assuming that your response inhibition is a weakness without reaching the level of an impairment (if it's an impairment, as defined in the sidebar in Chapter 2, you likely will need help from a professional). If your impulse control problems are accompanied by difficulty managing your emotions (as is often the case with people who struggle with anger management), you should probably decide which executive skill weakness you want to tackle first: response inhibition or emotional control. Be aware that people who struggle with response inhibition often have weaknesses in other executive skill domains that require longer-term thinking, such as planning/prioritizing, time management, and goal-directed persistence. Since being able to resist impulses more successfully may improve your ability to tackle other executive skill weaknesses, this may be a good place to start.

How to Modify the Environment to Make Response Inhibition Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** The best way to do this is to remove as many temptations as you can from your physical or social environment. If you're prone to bingeing on junk food, you make sure your house is stocked with only healthy foods. If you're an impulse shopper, you cut up credit cards so you can't accumulate debt. If hanging out with certain friends leads you to drink too much, you avoid them or spend time with them only in settings where drinking is not an option (for example, during a pickup basketball game). If you tend to fritter away time on social media, you take advantage of an app that allows you to limit how much time per day you will spend surfing the Net or visiting certain websites.

- **Modify the task.** For response inhibition, task modification might mean creating a cueing system to remind yourself to use self-control. If you're trying

to watch your weight, you might place a reminder on the door of your refrigerator, or if other people in your house want foods you shouldn't eat, place a bright neon sticky note on all the foods you consider to be off-limits for you. Another possible task modification: build in "wait time." If you can't bring yourself to skip dessert altogether, make yourself wait at least half an hour after dinner before indulging. Don't set a timer, though, since that will cue you to eat dessert. You may be able to forget all about dessert once the mealtime cues are removed. And if you have trouble waiting the full half hour, do something to distract yourself (go for a walk, pay some bills). Alternatively, give yourself a smaller reward in exchange for giving up a larger one. (This is Peg speaking:) I've been able to give up high-calorie desserts by allowing myself two 20-calorie pieces of hard candy after dinner instead (okay, I admit it, I love Werther's Originals because they remind me of *crème brûlée*, my favorite dessert). It actually takes me longer to finish the candies than it would to scarf down the dessert, and I remind myself of that when I have one in my mouth.

- **Solicit help from others.** This has to be done carefully in the case of response inhibition. If you ask a drinking buddy to help you control alcohol intake, he may have a vested interest in seeing you fail, since he's looking for companionship when he drinks. On the other hand, if you ask a friend who's a teetotaler to remind you of your goal, you may resent his superior tone when he holds you to something you promised to work on when your resolve was at its peak. Rather than asking someone to remind you of your goal, you may want to arrange it so you announce your goal to a friend, family member, or coworker. This is another example of correspondence training (described in Chapters 4 and 11). If you make a public commitment to engage in a certain behavior or meet a certain goal, you're more likely to do it than if you don't.

How to Improve Your Response Inhibition through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity that reflects your response inhibition weakness.** Regular practice, particularly in the early stages, leads to faster skill acquisition, so choose a situation that occurs or could occur daily in which to practice self-control. Your immediate goal is *improvement*. This may mean you're still exhibiting some impulse control difficulties but you're getting better at resisting temptation. If you don't know where to start, ask someone you trust

who knows you well. You might explain that you're trying to work on improving self-control and you're looking for some ideas for when the lack of self-control is most likely to get you in trouble.

- **Set your goal.** Assuming the situation you've selected is one you encounter frequently, your initial goal is to practice *improved* self-restraint. This might mean setting a goal of *delaying* the response or replacing the *bad* choice with a *better* choice. If your goal is to curb your use of profanity when irritated, this might mean replacing the swears either with words that are more socially acceptable (e.g., *Darn it!*) or with nonsense words (e.g., *Puffball!*). If you're trying to cut back on junk food and you can't bring yourself to eat an apple for a midafternoon snack, then replace a large bag of potato chips with a smaller one or take a few chips out of the large bag and put the bag out of sight and out of reach.

Research tells us that as the day goes along and we work hard at self-control, our ability to maintain this control diminishes. So in the early stages of practicing self-control, choose a time when your resources are least likely to be depleted. If your goal is to avoid unhealthy food, start with breakfast and work your way to dinner. And when you get to dinner, be aware that you're most likely to be vulnerable to temptation late in the day, so you may want to proceed very gradually here. If that dinner roll along with the salmon is too enticing to give up altogether, break the roll in half and put the other half out of sight (or toss it in the wastebasket).

- **Set a deadline.** With this particular executive skill, rather than setting a deadline by which you want to exhibit perfect self-restraint, you may want to do a daily or weekly "check-in" with yourself to assess progress or improvement. If you've involved someone else in helping you with this (as is the case with the scenario described below), you may want to check in with that person to see how she thinks the week has gone. If you're doing this on your own, you may want to reflect back on the day or the week and identify instances where you exhibited good self-control and instances where you didn't. You may be able to refine your understanding of the external "triggers" that cause you to lose control; if so, you can put systems in place to deal with them (for example, by figuring out how you can remove the trigger or by identifying a replacement behavior that you can do instead of the behavior that signals you've lost control). You may find, for instance, that it's only when you're in the company of certain people or when you're in particular work situations that you become impulsive. In that case, when you find yourself with those people or in that situation, you might immediately remind yourself "This is where I'm likely to lose it, so watch out!"

- **Make a specific plan.** For this particular executive skill, the plan might be very simple. It could fit the formula of *If . . . , then . . .*, or *When . . . happens, I will. . .* But *write it down*. That turns it into a kind of contract with yourself and makes it more likely that you'll follow through.

- **Externalize the behavior you're working on.** Create visible and/or audible cues to remind yourself what you're working on. Ask a colleague to check in with you to see how you're doing or to give you signals (for example, thumbs up, thumbs down).

- **Whatever it takes, stick to some part of the plan.** On those occasions when you feel your willpower has been depleted, if you can't wait 5 minutes, can you wait 1 minute? If your urge is to grab the whole bag of potato chips, can you empty a few into the trash before eating your snack? You might consider rating yourself daily on a 1–5 scale on how well you were able to follow your plan (5: "I made it all the way!"; 1: "I tanked").

- **Select a reward.** This might be a preferred activity or some type of treat that you'll give yourself when you complete the practice. Include the reward in your visual so you see that first you do this, then you get this. We recommend making the reward something unrelated to the behavior you're trying to inhibit (for example, don't celebrate successfully controlling your drinking by spending an evening in a bar). See the Reward Menu in Chapter 4 for ideas.

- **Write down two to three encouraging statements.** These should communicate what task you're working on, what the specific benefit will be, and that you've followed through on your plan when the practice is completed. Once you have these, create a specific mental picture of you starting the task at the chosen location and time, working on the task, and finishing the practice. Use the first two statements just before you bring up the image, bring up the image, and when you see yourself finish, tell yourself that you followed the plan and earned the reward.

Technological Supports

Here are a few ideas:

- **StayFocusd.** This is an app that works on Google Chrome that allows you to limit the amount of time you spend on "time-wasting websites." You determine how much time per day you'll allow yourself to go to those websites, and when the time is up, your access to them is denied.

- **Goal Streaks—Daily Goals and Habits Tracker.** This app, available for the iPad, allows you to set goals and then track how long you can keep it going (that is, create a “streak”). It allows you to set daily goals, but you can also set a goal of doing something several times a week (for example, “eat at home at least 4 nights a week”) and track how long you can keep the streak going. It lends itself to any number of response inhibition goals.

- **stickK.com.** If you want to raise the stakes a little on your impulse control goal, check out *www.stickK.com*. This website, created by Yale economist Ian Ayres, is built around the notion of “commitment contracts,” which is a variation on correspondence training. There are four steps to the process, clearly outlined on the stickK website:

1. Set a goal: “What do you want to achieve and what time frame will you give yourself to achieve it?”
2. Set the stakes: (This part is optional.) “As an added incentive to succeed, do you want to lay money on the line? If so, how much? If you fail, where do you want that money to go?” People often choose to make a donation to a cause they strongly dislike.
3. Choose a referee: “Who do you want to designate to monitor your progress and confirm the truth of your reports to stickK?” This, too, can be optional, but finding a referee increases the likelihood that you’re honest in your self-assessments.
4. Enlist supporters: “Who do you want to have cheering you on?”

- It costs nothing to create a commitment contract. Check out the website to see the wide variety of goals people have set—it may give you some ideas!

What It Looks Like in Practice: Watching What You Say

Gordon has a problem. His response inhibition is lousy. He blurts things out without thinking, and then the look on the face of the person he’s talking to tells him he’s said something rude or hurtful or inappropriate. His family has gotten used to this (although his daughter, now that she’s a teenager and surprisingly thin-skinned, seems to be spending more time angry at him than when she was younger), but it’s getting him in trouble at work. He’s a sales rep,

and he spends a lot of time on the phone talking with customers. It's trickier on the phone because he can't see facial expressions to give him the feedback he needs to shut up or apologize. He works in a large room with semiopen cubicles, so his coworkers can hear his conversations, and because they actually like Gordon (some of the things he blurts out can be incredibly funny), they will shout out to him, "Cut it off, Gordie," or "Close the sale," or even just "Gordon!" (said sternly as a warning) to prompt him to pull back. Some of his regular customers love him and look forward to his phone calls, but he loses clients, too, and his supervisor is beginning to think something needs to be done.

Gordon chooses two situations: one home and one work. At home he decides he'll work on what he says when his daughter has a friend over. At work, since the phone contacts with customers are key to his job and he doesn't have visual cues to "read" the person's response, he'll work on inhibiting his conversation.

He realizes he needs to start small. Since he is a social individual and enjoys people, he knows it's unrealistic to just not talk. But it's "off-the-cuff" comments that can get him into trouble. He decides it's best if he plans beforehand what he will say. For home, he tells his daughter that he doesn't want to embarrass her or her friends and asks if it would be okay if he says hello to them and then asks if they have any plans for the afternoon/evening, and after that excuses himself to work on a project. She's skeptical, but they agree that if he starts to say anything else, she will prompt him by saying they don't want to keep him from his project.

Work is a little trickier since his objective is to accomplish a sale. But he knows what he has to cover in a sales conversation, and he writes out a script that covers the steps he usually follows, without the extras. He tells his boss and one of the other salespeople who is a friend what he is working on and asks them to review his script. He incorporates the few suggestions they have and decides he'll try the script out when he makes a sales call each day to a new potential client. With new clients, there is no history and no expectations, positive or negative. He asks his friend to listen to his first few calls, give him feedback about the conversation, and then listen to a few more if there were improvements to be made. He also decides to record his side of at least three calls per day besides the first call since he has never really listened to himself.

Gordon selects Tuesday as his start day so he can go over the script and the plan with his boss and friend. He starts his plan Tuesday morning, the call goes according to the script, and he makes a good contact with the customer. Gordon feels that the call seems "formal," but his friend reassures him that the call went well. He does tape his other calls and listens to one with a regular

customer and realizes he does make some off-color comments. He resolves to at least work on these. At the end of the first week he invites his friend to lunch, on him, as a mutual reward for the work they've done.

Saturday afternoon at home, his daughter's best friend, whom Gordon knows well, comes into the house to make a plan with his daughter for the afternoon. Gordon greets her in a friendly manner but nothing over the top, asks what they're doing, and hears they're undecided and starts to make a comment, but his daughter just has to look at him, and he stops and excuses himself to do some work with the comment "Enjoy yourselves." When he asks his daughter later, she acknowledges that he did okay, but she feels like the jury is definitely still out. Gordon resolves to keep at it and says that if he does well for a week at home he'll take his daughter to the mall for a "small" purchase. He looks forward to this for a little "quality time" with his daughter, something that has been in short supply.

Why It Worked

- **Gordon narrowed his focus.** Although blurting things out can get Gordon in trouble in all kinds of situations, he selected only two to focus on, one at home and one at work.

- **He was willing to enlist the help of others.** People with impulse control problems are often self-conscious about their weakness and are afraid to talk with others about it because they don't like to admit to the problem and may be worried that they will receive negative feedback that will only make them feel worse. Gordon understood that those around him were already aware of the problem (how could they not be?!), and he took a risk. Because he approached his coworker, boss, and daughter with a plan and a genuine desire to work on self-improvement, they were willing to join the plan (well, his daughter may still need a little convincing to be positive with her dad, but Gordon expected that—after all, she's a teenager!).

- **He created a script and rehearsed it.** Not all interventions around executive skills lend themselves to this approach, but when one does, it can be a great way to ease yourself gradually into the intervention.

- **He selected a precise start point.** In Gordon's case, he chose this carefully, building in time to consult with others and practice before putting the plan in place. But once Tuesday morning came, he followed the plan. Gordon did one other thing that helped him: he carefully chose his audience to begin

the plan. By starting with potential new customers, he didn't have to deal with his habitual way of responding to people he already had a relationship with—and their habitual way of responding to him.

- **He chose rewards that were attractive to him.** Gordon's an extrovert, so his rewards involved social contact. Plus, the reward with his daughter had the added benefit of building in some quality alone time doing something fun together—something teenagers often value and don't get enough of with busy parents—and Gordon recognized that would be good for both of them.

ABOUT DELAYED GRATIFICATION

Delayed gratification is a technical term for a concept that bears a strong resemblance to response inhibition. It refers to the ability to wait over a period of time to receive a desired outcome, and it's been the focus of tremendous amounts of research, perhaps in proportion to how profound the simple act of waiting is. Typing “delayed gratification” into an academic search engine (EBSCO Information Services, www.ebsco.com) yields well over a million and a half citations for delayed gratification, which suggests that being able to wait may actually be even harder than getting started promptly! Here's a glimpse into what we know:

- The most famous study of delayed gratification is “The Marshmallow Test.” This was an experiment conducted by a psychologist at Stanford University named Walter Mischel many years ago, using 4-year-olds as subjects. He found that when he gave 4-year-olds the choice of eating one marshmallow now or two marshmallows if the child could wait until the experimenter returned to the room in a few minutes (actually, 15 minutes), only a small portion of the children were able to wait. Mischel looked at the same kids when they were in high school and found that those who were able to wait at age 4 had significantly better grade point averages, fewer discipline referrals, and scored close to 200 points higher on their SATs. More recently he looked at the same group as adults and found that those who could delay gratification at age 4 had higher educational attainment, were more likely to be in professional jobs, and had lower body mass indexes. Mischel has recently written a book about these experiments, and he maintains that the lesson from them is that delayed gratification is a skill that can be taught—to very young children. If you go

to YouTube and type in “Sesame Street executive functions,” you can see how this popular television show teaches preschoolers this skill (as you might guess, Cookie Monster plays a key role).

- Roy Baumeister and his colleagues have conducted many studies looking at what he calls “willpower” (he’s the one who did the study involving chocolate chip cookies and radishes described in Chapter 6). He found that willpower can be strengthened through practice. What kind of practice? Their research shows that changing a habitual behavior—*any* habitual behavior as long as it involves willpower—will increase self-control. He had students practice sitting up straighter for 2 weeks, and other students kept a food diary for the same amount of time. In the lab, he measured self-control by having the students squeeze a spring-loaded handgrip. This exercise can be used to measure both power and stamina. After the students had worked on changing habits, their initial scores didn’t change. That is, they couldn’t squeeze the handgrip for any longer than they could in the beginning. But Baumeister then had them go through some mental energy exercises that have been shown to deplete willpower, and then had them squeeze the grip again. He found that they could squeeze the grip longer the second time around. Thus he found that the practice group’s stamina was significantly better than that of a group of students who hadn’t engaged in the habit change. If you want to try this, Baumeister suggests some activities to practice with: if you’re right-handed, try doing everything with your left hand for a period of time every day or work on changing your speech patterns (speak only in complete sentences, or don’t use contractions in your speech, or try to get rid of verbal tics like “You know what I mean?” or even just the word *like*).

- A lot of studies on response inhibition look at weight loss, weight control, and the ability to resist eating too much. These studies find that two effective strategies for encouraging self-control around eating are weighing yourself every day and keeping a food diary. That makes sense: doing both of those activities arms you with information you can use to make good decisions and remind you of the goal you’re working on. But here’s an interesting additional strategy: telling yourself you can have a desired food *later* is more effective than telling yourself you shouldn’t eat that food *ever*. Baumeister describes a study in which researchers asked people (one at a time) to watch a short film while sitting next to a bowl of M&M’s. He gave different people different instructions. Some people were told to imagine that they had decided to eat as much of the candy as they

wanted while watching the movie. A second group was told to imagine that they'd decided not to eat any of the M&M's, and a third group was told to imagine that they had decided they could eat the M&M's later. When the film ended, the experimenter gave participants a questionnaire to fill out and left the room, but before he left, he mentioned that this was the last experiment of the day and they could help themselves to as much of the candy as they wanted. The findings surprised the researchers: participants in the postponement condition actually ate significantly fewer M&M's than those in the denial condition. The researchers concluded that just telling oneself one can have something later actually satisfies some of the cravings, so it's easier to resist temptation later when the opportunity arises.

- Research has shown that one strategy to improve self-control is to remind people that they have resisted temptation in specific situations in the past. Individuals who have been reminded of past success (for example, success at resisting tempting but unhealthy foods) are more likely to engage in self-control in that same situation in the future than those who have not been reminded. However, there appears to be a different dynamic involved with highly impulsive people. Here, reminding them that they resisted the unhealthy food in the past may actually *increase* the likelihood that they will eat the unhealthy food in the future. Researchers speculate that for impulsive individuals, the reminder of prior goal attainment leads them to decide that since they've already fulfilled that goal, they don't have to the next time around! How to combat that? Scientists have found that with impulsive individuals, it works best not only to remind them of previous successes but to ask them to remember *why* that previous goal was important in the first place. Reviewing the reasons for resisting temptation increases the likelihood that they will resist temptation in a similar situation in the future.

- Finally, studies have compared having people make goal intentions (for example, *I need to spend less money*) with "implementation intentions" (for example, *If my friends ask me to go to an expensive restaurant with them, I will say no*). As expected, people who establish clear rules for how they will handle specific situations are more likely to meet their goals than people who only make broad goal statements. While implementation intentions can take many forms, one way that has been shown to be effective is by making *if-then plans* using this formula: *If I encounter situation X, then I will perform behavior Y*. While this research shows that this approach works with normal adults, even more encouraging is the

fact that it works with kids with attention-deficit/hyperactivity disorder (ADHD), who are notoriously impulsive. One study put these children in a situation where if they were able to resist impulsive responding during a computer game, they would earn more money than if they didn't. In this game, red pictures, worth less money, appeared on the computer screen 30 seconds before blue pictures, worth more money, appeared. Children were given the choice of pressing the computer key for the red picture or waiting for the blue picture. Simply having these children set a goal of "earning more money" did not produce better results than just giving them the task instructions (how to play the game without any reference to how much more money they could earn if they were able to delay responding). But when children were asked to repeat aloud three times an if-then plan (*If a red picture appears, then I will wait for the blue one*), children with ADHD were much more likely to wait for the blue pictures and thus earn more money. Teaching children with ADHD to resist impulsive responding is famously difficult, but this study showed it can be done.

9

Keeping Track of It All *Working Memory*

What It Is

The ability to hold information in memory while performing complex tasks. It incorporates the ability to draw on past learning or experience to apply to the situation at hand or to project into the future.

What We Know about It

If you took a psychology course in college, you probably learned that there were two kinds of memory: long term and short term. Long-term memory consists of all the knowledge you've acquired in your life combined with a record of personal experiences. Short-term memory is memory "in the moment." It arose as a construct when neuroscientists recognized that, unless you act on immediate memory to preserve it, such as through rehearsal or repeating the information aloud, the information may never make it to long-term memory storage. Working memory is a more recent construct. Researchers disagree on the particulars but generally see it as overlapping with short-term memory. The difference between the two is that working memory involves *acting on* or manipulating the information in some way. So working memory is seen as the short-term memory store plus the processes required to use that information. If we gave you a multi-step math problem, for instance, as you solved it you would need to remember the numbers in the problem, the procedure required to solve the problem (for example, addition, subtraction), and where you are in the process (have you just solved the first step, or are you finished?).

Some researchers suggest that *attention* is a key process in working memory, while others note that you not only have to *pay attention* to what you're doing but are also making decisions about the best strategy to use to solve the problem at hand, and you have to coordinate all those actions so they proceed smoothly and ultimately lead to the right answer. All of that work involves executive skills, managed by the brain's frontal lobes. Different brain regions are recruited depending on what strategy you've decided to employ (for example, visual imagery versus verbal rehearsal or self-talk).

Another aspect of our definition of working memory is that a key function of working memory is the ability to access past experiences and to use those memories to guide our behavior in the present. If you're on your way to visit your elderly mother in the nursing home, for instance, you may remember that the last time you visited her she drifted in and out of recognizing you as her son or daughter. This was the first time you had observed this slippage, and it disturbed you. So now as you're driving, you prepare yourself for how you will react if this behavior arises again. For an entertaining description of how we use working memory to make sense of the world and get through the day, check out Peter Doolittle's TED talk on the subject. (Go to www.ted.com and type Peter Doolittle into the search engine.)

What We Can Do about It

We know that working memory skills decline with age. Executive skills in general tend to diminish with age (see Chapter 20 for a discussion on supporting executive skills as we age), but the decline is most noticeable with respect to working memory. While declining working memory is common, we should also note that working memory weaknesses accompany the early stages of Alzheimer's disease. There are distinctions between the natural aging process and the declines associated with Alzheimer's. It's normal to forget people's names and even to forget words that are not part of our everyday vocabulary. It is not common to forget what an object is used for, nor is it normal for people to become lost in their own neighborhood or in places that are very familiar to them. And while one occasionally may forget to turn off a burner on a stove or mistakenly put something in the refrigerator or freezer that doesn't belong there, if this begins to happen frequently, that may be a warning sign. Of the "Seven Warning Signs of Alzheimer's Disease" posted by WebMD (www.webmd.com), four are directly related to working memory, including asking the same question repeatedly, repeating the same story word for word many times, forgetting how

to do activities such as cooking that were common everyday activities in the past, and getting lost in familiar surroundings or losing common household objects.

For non-impaired adults with working memory weaknesses, we tend to emphasize environmental modifications as a strategy for coping with weak working memory, although we do think that practice within a specific context can be helpful.

People fret about their inability to remember everything they want to remember and their need to rely on lists or written reminders. When we work with teenagers, we find they routinely overestimate how good they are at remembering things. “I don’t need to write down the details of my homework assignment,” they say. “I know I’ll remember them.” And then they don’t. We are sometimes successful in making the argument that writing something down is a way of *off-loading* a task so that the brain doesn’t have to work as hard or can use its power to do something else instead. The environmental modifications we describe below are all examples of off-loading.

How to Modify the Environment to Manage Weak Working Memory

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Structure your environment to build in as many cues as you can. (This is Peg speaking:) Here are some strategies I use to remember things I have to take to work:

- ♦ I place the object in front of the door so I can’t open the door without picking it up, or, if I have a little more energy when I think of it, I put it in my car the night before.
- ♦ I place a small white board next to my purse with “Microwave lunches” written in large letters so that I remember to take them out of the freezer.
- ♦ I put my iPhone in my purse connected to the cable I’m recharging it with, so that all I have to remember is to disconnect the phone from the cable in the morning.
- ♦ I also keep a second set of materials (for example, computer power cords) at my office in case I forget to pack something on any given day.

- **Modify the task.** The best task modification for working memory weaknesses is a checklist. Find the system that works best for you—a white board (there are varying styles, sizes, and shapes to choose from), to-do list pads, a notebook so you can refer back to the list in the future or keep running lists, or electronic to-do lists (Wunderlist, described on page 133, is my personal favorite). If you doubt the value of checklists—or even their necessity in some cases—read *The Checklist Manifesto* by Atul Gawande. My appreciation for checklists completely changed after reading this book. Gawande, who’s a surgeon at Brigham and Women’s Hospital in Boston, described a study in which they tracked how often surgeons followed all five steps in a safety procedure for ensuring that central lines were inserted safely prior to surgery. The study’s author, a critical care specialist at Johns Hopkins Hospital in Baltimore named Peter Pronovost, tasked head nurses to spend a month keeping data on surgeons’ practices. At the end of the month, they found that 30% of the time surgeons had skipped at least one step in the procedure—this despite the fact that the risk of infection is a major concern in surgery. At the end of the month, Pronovost asked the head nurses to use a checklist to make sure all five steps were completed. When a follow-up was done, the infection rate had dropped from 11% to 0.

Another task modification strategy is to mentally rehearse whatever it is you need to remember. The best time to engage in this mental rehearsal may be just before you fall asleep, since research shows that sleep consolidates memory. Picture what you have to remember the next day or tell yourself, *Don’t forget*. . . . Whether you’re using words or pictures to rehearse, spend time to construct a detailed image or description. Research shows that it’s easier to retain information when you think *elaboratively* about it. In other words, make connections between what you’re trying to remember and other things you know well.

Another way to minimize the impact of weak working memory is to build in routines. Not to belabor the example of forgetting things you have to take to work, but if you build into your daily routine a specific time in the evening to gather everything you need to take to work the next day, you’re not only more likely to remember everything, but the routine will become automatic—and whenever something’s automatic, less brain power is required to carry it out.

And finally, see if you can draw on another executive skill strength to counteract your weak working memory. We gave you this example in Chapter 2, but we find that people with weak working memory who have a strength in organization can use that strength to minimize their working memory weakness. If you *always* put your car keys (or wallet or cell phone) in the same place when you get home from work, then you don’t have to remember where it is.

- **Solicit help from others.** Everyone with weak working memory knows someone with good working memory. Classroom teachers will tell you which kids in their classrooms they can rely on to remind them what the schedule is or something the class is supposed to be doing at any given time. You may have someone you can ask to remind you of something important. Just don't blame that person if he or she forgets to remind you!

How to Improve Your Working Memory through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity affected by your working memory weakness.** It's best to choose a situation that occurs on a fairly regular basis. Maybe you forget to take your vitamins or other pills in the morning, or maybe there's something your spouse or partner expects you to do on a daily basis. Or maybe there's not *one thing* your significant other expects you to remember but every day he or she asks you to remember something and more often than not you forget. Or maybe there's a task that you're routinely expected to do at work and you routinely forget to do it. All of these would be reasonable targets for intervention.

- **Set your goal.** This may be an easy one to set a goal for since it can easily be stated as a percentage: "I will remember to do X 90% of the time," or "I will remember to do Y 9 times out of 10 on time and without reminders from anyone."

- **Set a deadline.** In setting a deadline, it helps to have a sense of your baseline performance. If you want to remember to do what your spouse or partner asked you to do 90% of the time but your typical performance now is that you remember only 10% of the time, be generous in establishing your deadline. If you structure the plan right (in particular by building in environmental supports and cues), you may be able to beat your deadline, but don't overpromise.

- **Make a specific plan.** For working memory, we recommend building into your plan as many environmental supports and cues as you can. Include checklists, routines, and visual prompts. People sometimes feel irrationally that they shouldn't have to rely on a checklist—that the goal of a checklist is to internalize everything they have to remember so they can throw away the checklist. But

the lesson from Atul Gawande's story about surgeons described above is this: No surgeon graduates from med school without knowing that five-step safety procedure forward and backward—and yet experienced surgeons still forgot to follow all five steps almost a third of the time.

And to reinforce this point, another group of professionals that routinely use safety checklists are airline pilots. When pilots prepare for takeoff, they actually review the checklist twice: the pilot reads the list to the copilot, and then they reverse roles and the copilot reads the list to the pilot, and they manually check off each item on the checklist. Someone in one of our workshops once told us that when her husband trained to be a pilot, one thing they were told in no uncertain terms: *Do NOT memorize the checklist*. Why? What if you thought you had memorized it, but forgot to close the cargo door? The plane would take off but wouldn't achieve lift, and it would crash.

- **Externalize the behavior you are working on.** If you've created your plan well, this step takes care of itself. But if you're afraid you'll lose or forget about the cues and prompts, put them in a prominent place so you can't miss them.

- **Whatever it takes, stick to your plan.** If you find that you're not making consistent progress toward your goal, though, you may want to revisit your plan and decide whether you need to build in more cues and supports. When we start a new intervention, we're more likely to remember it because we're excited to see if it works and it's novel (and the brain loves novelty). As time goes on, the newness wears off—and this can be a particular problem if you're trying to improve working memory because it's harder to remember the mundane than the novel. So mix it up—add or change your cues and reminders, build in a somewhat larger reward, and tell someone you care about what you are working on, so he or she will ask you how it's going.

- **Select a reward.** And don't be afraid to celebrate small victories here. If your long-term goal is to remember to do whatever your spouse or partner has asked you to do 90% of the time and your current level of performance is 10%, then give yourself a reward when you hit 20%. It doesn't have to be a huge reward, but even if it seems silly or inconsequential, it's a way to acknowledge your success and your progress. See the Reward Menu in Chapter 4 for ideas.

- **Write down two or three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

As you'll see when you read about the planning/prioritizing skill (see Chapter 13), there are a million to-do list and checklist apps out there. Find the one that appeals to you. Our favorite is Wunderlist. It's a free app available for both iPhone and Android that allows you to create lists and access them across platforms. ([This is Peg speaking:] I make a shopping list on my computer because the keyboard is easier to use than my iPhone, but when I get to the grocery store, I call up the list on my iPhone.) Your list can also be shared with someone else who has the app. On our vacation last summer, I went back to work before my husband did, and I was afraid he would forget to pack up everything at the rental cottage, so I created a shared list—and when I got home I remembered the detergent from the laundry room, so I was able to add that to his list remotely. You can also program reminders if needed.

(This is Peg speaking:) Another technological application I could not live without is Instapaper. This program, which also works across platforms, is a way to store and manage all those interesting websites or articles you run into on the Internet. When you find something you want to save, you just Save to Instapaper (one of the items in my bookmarks bar), and it automatically saves it in your Instapaper account. You can then organize everything you've saved in separate files. I have files for professional information (one labeled ADHD, for instance, and another labeled Mindfulness) as well as personal files (I have a Recipes file and a Shopping file). Each item has a hyperlink attached that gets you to the original website instantly and is listed by name as well as a brief description to remind you what it is and why you saved it.

How about apps that help you find things you've misplaced? (This is Peg speaking:) I don't have to use it often, but the Find My iPhone app has saved me lots of time and grief. All my technological equipment is linked through Bluetooth, so that if I lose any one item (iPhone, iPad, or laptop), I can track it down just by going to the Find My iPhone app on whichever device is available. You can instruct the app to play a sound on the missing device, and as long as your device is connected to the Internet, you will be able to locate it.

Another piece of technology that falls into the "find lost items" category is The Tile app (www.thetileapp.com). Tiles are 1-inch-square devices that can be attached to a key ring or glued to a device (for example, television remote) or just placed in a purse or suitcase. Each tile is labeled and programmed separately, and if you can't find the item, you can locate it using your smartphone. It will either show you on a map where it is or make a sound so that if it's nearby,

you can locate it that way). I find it useful when I'm in baggage claim and my suitcase hasn't appeared yet—I can at least reassure myself the luggage made it to my airport.

What It Looks Like in Practice: Taming the Devil in the Details

Meg was just plain forgetful. No, scratch that. She had a remarkable memory for tiny, inconsequential details, and she could recount experiences she'd had with amazing specificity. The problem was that on a day-to-day basis she lost track of things. She forgot appointments, she left stuff at home that she needed to take to work, and she left stuff at work that she needed to take home. She made notes to herself and then lost them or wrote stuff in her calendar and then forgot to check her calendar. How many times had her office mate poked her head around her cubicle wall and said, "You *do* remember we have a lunch meeting today, right?"

And she had a terrible habit of double-booking herself. She'd agree to see a client at 3 o'clock, totally forgetting that she was supposed to meet with her son's teacher at that time to talk about what could be done about missing homework assignments ("The apple does not fall far from the tree," Meg remembered thinking when she discovered that mistake!). And sometimes double-booking wasn't the issue. She'd just get so caught up in what she was doing at the moment that she'd forget that she promised to take her mother to a doctor's appointment. There were times when she realized she'd forgotten something so important that she just wanted to cry. And there were other times when she did cry.

As she thought about this problem, Meg realized that she had always approached remembering these day-to-day events as if she should just naturally remember them, as it appeared that other people did. But when she started to ask people how they seemed to remember appointments and so on, so much more easily than she did, colleagues and friends looked at her as if she had two heads. "Duh, we write things down!" Her office mate, for example, told Meg that she used a planner/calendar on her phone for all meetings and appointments (recurring and one time) and couldn't double-book because her planner wouldn't accept it. As she heard others talk about this, Meg realized that the word *work* is part of "working memory." Because her life felt so hectic, when she needed to manage some task or event, like what she needed to take home or when she would see a client, in that moment the intention to remember fit with

the context she was in, and since it seemed clear or vivid enough, she figured she'd remember it. What she began to realize is that the fleeting thought to remember something was easily interrupted by whatever next needed her attention. Other people paid attention to the memory long enough to take the next step to prompt the memory *later*. Maybe they put it in a planner or placed the item for home in a bag or on the corner of the desk. But Meg thought, "I *do* do that—I make notes! But how am I going to remember to check them?"

As she thought about this issue, Meg realized that there were three components to address. First, when an action or event came up that she needed to remember, she had to make some record of it right then and there. Second, she needed to have, as much as possible, one place and one place only where information to be remembered was to be recorded or where items she needed regularly (for example, phone, keys) were kept. The strategy of sometimes using a calendar, sometimes using notes, sometimes just relying on "I'll remember it" was not working. The third component was that she needed to have a reminder to look at her reminder.

She decided to first address the items she needed regularly. Meg remembered that somewhere (she wasn't sure where!) she had read about a strategy called off-loading. The idea was simple enough: decide on one place to leave items and practice daily putting those items (phone, keys, work folders) in that one place until it became a habit. The idea was to "off-load" having to actively remember where an item was and instead let the regular location take over. For work and home, Meg bought two neon pink trays, one for the corner of her desk at work and one for the table next to the door at home. Her phone, keys, and anything to go to her office the next day went in the home tray, and any material (for example, files) to go home went in the work tray. For a week, when she got home she practiced by going into the house, putting her keys in the tray, then picking them up, going out to the car, coming back in, and doing the same thing again. She also wrote the word *tray* on the bathroom mirror just in case.

At work Meg set a repeating "reminder" prompt on her phone near the end of the day to put materials to go home in the tray. To establish the *one place* for appointments and so on, she selected a calendar/planner app for her phone that also synced with the same on her computer. To get started, she put in all the current appointments and meetings she had coming up as well as recurring events that she had forgotten in the past.

To remember both to record appointments and to look at her calendar, she set up morning, noon, and evening prompts to check her calendar and to record any event to be remembered that came up during the day. When the phone reminders came up, Meg repeated the phrase "Write it down, do it now!"

and whenever she had a meeting or appointment, she used the same phrase. Over the first 2 weeks, she missed one meeting and misplaced her keys twice, but this was a big improvement. She decided that if she kept this up for 2 more weeks, she would treat herself to a new smartphone that she had been eyeing for a while. Meg also noticed an interesting twist. Her memories for actions she needed to carry out and events she needed to attend were better, as if writing things down improved her memory of those things. Whatever it was, she would take it!

Why It Worked

- **Meg questioned her assumptions.** Meg assumed that she *should* be able to remember things as they arose. Furthermore, she assumed that that's how other people remembered things. When she actually talked to people, she found that they used systems to help them remember. She may also have realized that people with good working memory can live with some slippage in their systems (if they didn't write something down on a given occasion, they could still remember it), but since her working memory was porous, she would have to be more careful when she designed her own systems.

- **She task analyzed the problem.** Meg went beyond saying, "I have a lousy working memory" to saying, "Wait, where are the breakdowns occurring, and what can be done about each one?" In this process, she realized there were three aspects to her working memory difficulties, and she needed a separate strategy for each one.

- **She created a variety of reminders: visual, auditory, and verbal.** The neon trays, the sign on the bathroom mirror, the prompts on her cell phone—all helped her to remember. The verbal prompt to herself—*Write it down, do it now*—at "the point of performance" (technical term for when you're in the actual situation where you need to use the skill) was particularly helpful.

- **She practiced her strategies!** It seems kind of silly, doesn't it, to come home from work, put your keys in their special place, then pick them back up again, go back out to your car, and redo the routine? But that's how we build working memory. By engaging in the same action repeatedly until it becomes automatic. Make sure your strategies don't have glitches, though. (This is Peg speaking:) I had a friend back in grad school who was notoriously absent-minded and kept losing his car keys. He finally attached them to a long string and tied one end of the string to his belt loop. I'm sure it helped, but the only story I

remember was the time he drove someplace, got out of his car, automatically locked the door, and then tried to walk away from the car, only to discover that he'd left the key in the ignition and he was now tethered to a locked car with no way to retrieve the key!

- **She created routines.** This may be only a slightly different way of saying that she practiced her strategies, but we'll add this in for emphasis. When we create routines and practice them long enough for them to become routines, we really do tax the brain less—that's the essence of the concept of off-loading.

- **She gave herself a reward.** Although in this case I suspect that not forgetting things so much was reward enough, and she was just using the whole process to give her an excuse to buy a new cell phone.

One other thought: Many people with weak working memory have an unrealistic expectation that they will eventually be able to rely on their own memory to remember everything they have to do. We believe life in the 21st century is so complex that using lists, checklists, and external reminders may be the only way to survive. Remember, pilots go through safety checklists before takeoff. Also recall that one of the strongest messages they get in flight training is *Do NOT memorize the checklist!* There's a good reason for that.

DO BRAIN GAMES REALLY WORK?

The ads are ubiquitous. They appear as pop-ups on many of the websites you visit, and they have preceded news summaries on public radio since one of the more well-known brain-training companies became a sponsor. And if you visit the websites of these companies, they will overwhelm you with data. One links you to a bibliography of 46 studies purportedly containing evidence of the program's effectiveness. Another lists 70, with links that read "Improves memory and hippocampus size," "Can reverse age-related declines in processing speed," and "Facilitates neural plasticity and increases cognitive reserve in aging." A third program that focuses on working memory claims that "Improvements in WM . . . have generalized to reduced cognitive failures in daily life."

Since these programs emerged, scientists periodically conduct meta-analyses to study the efficacy of brain-training programs. We have seen several of these, and they generally draw the same conclusions: *People*

who do these exercises get better at the computer games they are training on, but there is limited if any generalization to real-world problems and settings.

Most recently (October 2014), the Stanford Center on Longevity, in conjunction with the Max Planck Institute for Human Development, issued a report titled “A Consensus on the Brain Training Industry from the Scientific Community” (read the full report at <http://longevity3.stanford.edu/blog/2014/10/15/the-consensus-on-the-brain-training-industry-from-the-scientific-community-2/>). To compile the report, these institutions gathered “many of the world’s cognitive psychologists and neuroscientists” to share their views on the brain-training industry and to give the public a consensus report. Here’s part of what they concluded:

The consensus of the group is that claims promoting brain games are frequently exaggerated and at times misleading. Cognitive training produces statistically significant improvement in practiced skills that sometimes extends to improvement on other cognitive tasks administered in the lab. In some studies, such gains endure, while other reports document dissipation over time. In commercial promotion, these small, narrow, and fleeting advances are often billed as general and lasting improvements of mind and brain. The aggressive advertising entices consumers to spend money on products and to take up new behaviors, such as gaming, based on these exaggerated claims.

The authors of this report also make a point about “opportunity costs.” In other words, “Time spent playing the games is time not spent reading, socializing, gardening, or engaging in many other activities that may benefit cognitive and physical health of older adults.” They also worry that the emphasis on computer games may detract from publicizing prevention efforts, which, over the long run, may be much more effective.

As this book goes to publication, this represents the consensus of the scientific community—at least those who have no vested interest in claiming that brain games “work.” For a discussion of the kinds of activities you might engage in instead of playing brain games, see Chapter 20.

10

Being Cool *Emotional Control*

What It Is

The ability to manage emotions to achieve goals, complete tasks, or control and direct behavior.

What We Know about It

The more technical term for this executive skill is *self-regulation of affect*. In our earlier writing, we used this term but altered it in favor of *emotional control* because this very clearly captures this important executive skill.

In terms of brain processes and functions, emotions begin in the amygdala. This is the part of the brain that takes sensory input and determines whether there are threats to our survival in our immediate environment. The amygdala serves as the alarm system, communicating to the rest of the brain that danger lurks and we need to react—usually by *fight* or *flight*. The amygdala also connects to the hippocampus, the part of the brain where experiential memories are stored. The hippocampus provides a context whereby incoming stimuli can be understood. Perhaps we are home alone and hear a creaking in the upstairs bedroom that sounds a little scary. The amygdala sends out a warning, but the hippocampus reminds us that we have a cat that has likely just jumped off the bed and is padding across the floor on its way downstairs to the food dish.

Another important communication channel in the brain is between the

amygdala and the prefrontal cortex. This is where emotional control resides, and it is this part of the brain that acts as a brake on the fight-or-flight response. It serves as a feedback loop for the amygdala, so that if the situation is not life threatening, the amygdala can turn off the sirens and we can calm down (and feed the cat).

How we manage emotions is shaped in part by past experience. We know that children who grow up with parents who are not good at managing their own emotions are likely to struggle with emotional control themselves. But learning to control emotions is also part of the developmental process, and we know that teenagers process emotions differently than adults. With the onset of puberty, there are major changes in the limbic system, of which the amygdala is a part, and suddenly emotions are felt more intensely than at any time before or after this time period. Over the course of adolescence the limbic system slowly comes under the control of the prefrontal cortex, and teens gradually learn to control their emotions more successfully. In the early stages, though, it can be a rough ride for both teens and their parents. But while adults in general are better at managing their emotions than children or teens, some are better at this than others.

Here's one more thing we know about how the brain works. An effective strategy for helping you get control over your emotions is *self-talk*. Self-talk means giving yourself instructions, self-affirmations, or positive appraisals—saying things like “Deep breaths!” or “You can handle this,” or “Don’t let him get to you,” or “Wow, you kept your cool!” Research shows that self-talk results in decreased activity in the amygdala and increased activity in the frontal lobes. Basically, self-talk helps you achieve emotional control both at a behavioral level and at a brain level.

What We Can Do about It

As with other executive skills, our assumption is that emotional control is a weakness for you rather than an impairment. Signs that a weakness in emotional control has become an impairment include:

- Anger that is so out of control that it leads to more than an isolated incident of property destruction or people getting hurt.
- Anxiety that is so profound that it limits your ability to engage successfully

in common everyday activities (for example, severe panic attacks, agoraphobia, or extreme social anxiety).

- Unhappiness that leaves you feeling depleted of energy enough of the time that you miss work or have trouble completing daily household chores or maintenance a good deal of the time.

If you fall into any of these categories, you should seek professional assistance from a mental health counselor.

If you see emotional control as a weakness, you may:

- Fly off the handle at little grievances or inconveniences.
- Lack assertiveness because you're afraid that if you speak up to make a point or defend yourself, someone will get mad at you.
- View things in an unnecessarily negative light (someone may have described you as a "cup-is-half-empty" kind of person).

The other executive skill this overlaps with the most is response inhibition. If both of these skills are weak for you, you should read about response inhibition in Chapter 8 and make a decision about which skill deficit you want to tackle first.

How to Modify the Environment to Minimize the Impact of Weak Emotional Control

(For detailed information about environmental modifications, see Chapter 3.)

- **Modify the physical or social environment.** This boils down to figuring out what triggers your poor emotional control and seeing if you can avoid situations where the triggers arise. If commotion, loud music, or large groups make you anxious, avoid them when you can. Or if too much quiet or too much time alone makes you edgy, find ways to get out of the house. If you are prone to seasonal affective disorder and are impacted by reduced daylight during the fall and winter, take walks on your lunch breaks, when sunlight is most abundant. If you feel worse when you spend a day on the couch watching television, then even if you can't bring yourself to turn off the television, get up during every commercial break and move (walk in place, jump rope, run up

and down stairs). Physical exercise increases both endorphins and dopamine, two neurotransmitters that impact energy level and feelings of well-being. If you can't bring yourself to pursue a regimen of rigorous physical exercise, start with walking in place or walking up and down stairs for a minute at a time and build from there.

- **Modify the task.** This is a little different from the other executive skills we've talked about so far because the stimulus that triggers our problems with emotional control may feel like something we have no control over and therefore we can't really modify it. But if you are avoiding situations to keep your emotions in check, you may want to ask yourself if there are ways you could make the aversive situation more palatable and therefore approachable. If you don't feel you can confront a coworker in person about a sticky incident, could you write him an e-mail? If you know you lose your temper immediately and don't think you can just walk away from the aggravating situation, could you stop and count to 10, or take five deep breaths, or even say to the aggravating person "I'm too angry to talk right now—I'll get back to you when I've calmed down so I don't bite your head off"? If you're that "cup-is-half-empty" person whose automatic response to a bad experience is *I knew that would happen* or whose automatic response to a good experience is *Yes but . . .*, just stop yourself from that self-talk. Replace those negative self-statements with comments such as "Wow, that went better than I thought it would" or "That was a downer, but what if x had happened? That would have been much worse!" Learning to turn self-talk around, of course, takes practice, especially if you've spent years practicing negative self-talk to the point where it's almost reflexive. The easiest way to practice is whenever you find yourself making a negative comment about yourself, immediately replace it with something positive. Another way to practice this new habit of mind is to reflect at the end of the day, perhaps as a bedtime ritual, on what went well that day, focusing specifically on those troublesome situations where you've tended to get down on yourself in the past.

- **Solicit help from others.** There are several ways you can get others to help you manage your emotions. You could let a partner know that you recognize you have trouble controlling your feelings in certain situations and ask him or her to let you know when you're handling the situation well (or maybe just better than usual!). You could ask your partner to give you a nonverbal signal: thumbs up if you're managing well, thumbs down if you look like you're about to lose it. Or you could ask your partner to cue you in advance to help you prepare for a difficult situation. This might sound like "I have something to tell you that might upset you. So just listen and then don't answer right away."

How to Improve Your Emotional Control through Practice

(For detailed information about executive skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity where you struggle with emotional control.** Since, as we've stated before, regular practice, particularly in the early stages, leads to faster skill acquisition, we recommend that you choose a situation that occurs or could occur daily in which to practice emotional control. Your immediate goal is *improvement*. This may mean you're still having trouble managing your emotions, but you either recover faster or it doesn't feel quite so extreme. We recommend starting with a situation that's relatively benign. Maybe you get irritated when your husband leaves food out rather than putting it in the refrigerator after he's made himself lunch. Or maybe your daughter knows how to push your buttons when you ask her to do something and she talks about how unfair you are. If you can learn to keep your emotions in check in small situations, you can grow from there.

- **Set your goal.** Assuming that the situation you have selected is one that you encounter frequently, your initial goal is to practice *improved* emotional control. One way to assess progress is to create a 5- or 10-point rating scale that you can use to judge your emotions each time the problem situation arises. A 5-point scale for handling an anger-provoking situation might look like this:

1. Cool as a cucumber (it didn't bother me at all).
2. Acted calm on the outside, but inside it kind of grated.
3. Gritted my teeth; tone of voice betrayed my anger.
4. Raised my voice; said some things I wish I hadn't.
5. I lost it—the volcano erupted.

- If you need a finer-grained analysis, you could give yourself partial ratings (for example, 1.5, 2.5). Before you set your goal, take a baseline for 2–3 days. Each time the target situation arises, score your response using your 5-point scale. Consider your average score the baseline level and create an initial goal that would require some improvement on your part. For instance, if your baseline rating is 4, set a goal of 3.

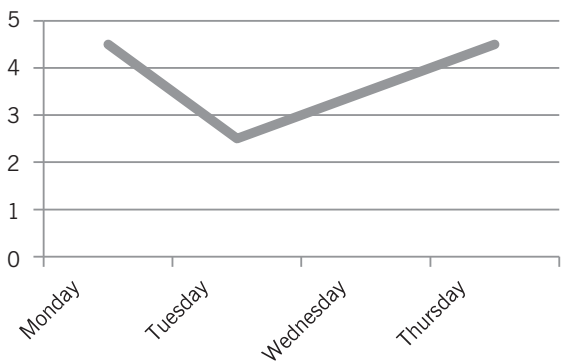
- **Set a deadline.** Rather than setting a hard-and-fast deadline for when you want to be able to manage your emotions perfectly, you may want to work

toward improvement on a weekly basis until you reach a level where you’re satisfied with the results. The key to this may be to pause and do a self-assessment each time your target situation occurs. We do recommend that you write down your rating rather than trust your memory. If you use a 5-point scale, you could easily graph the results. An example is shown below.

• **Make a specific plan.** As with response inhibition, the easiest emotional control plan could fit the formula of *If . . . , then . . . , or When . . . happens, I will. . .* Using the examples above, *When my husband leaves food on the counter, I will remind him gently that food will spoil if left out. When my daughter explodes when I ask her to set the table for dinner, I will calmly remind her that she’s part of a community and we all need to help out to make it run smoothly.* The plan could also involve coping strategies, however: for instance, counting to 10, taking deep breaths, just walking away (to avoid an explosion). See the scenario below for other ideas.

• **Externalize the behavior you’re working on.** This might be a situation where the way to externalize the behavior would be to keep a running tally of successes or a graph of your 5-point ratings that could be posted in a prominent place. Use a white board to do this and ask family members to write encouraging comments around the perimeter.

• **Whatever it takes, stick to some part of the plan.** Don’t look at the meltdowns as failures but as learning experiences. Why did you fall apart now but the last time it happened it was smooth sailing? Does that give you ideas for how to be successful in the future? Maybe this time your daughter swore at you and that triggered the stronger response. You may need to revise your



Graph of anger management.

plan if you see a trend. By the way, just because you're working on managing your emotions doesn't mean you let people walk all over you. You may need to impose a penalty for swearing (or a reward for not swearing) if this is a problem your daughter has (this suggests your daughter has problems with emotional control too, which wouldn't be surprising given the common heredity and that children learn about how to manage emotions from watching how their parents deal with their feelings).

- **Select a reward.** This might be a preferred activity or some type of treat that you'll give to yourself when you complete the practice or show progress toward your goal. For ideas, look at the Reward Menu in Chapter 4.

- **Write down two to three encouraging statements.** These should answer these questions:

- ♦ "What are you working on?"
- ♦ "What do I gain from this?"
- ♦ "How will I know when I'm successful?"

Mindfulness Meditation as an Intervention Strategy

You may have already recognized that we favor a fairly straightforward behavioral or cognitive-behavioral approach to improving executive skills: Define the problem and come up with a precise step-by-step plan for tackling it. We describe this approach in more detail in Chapter 5, but this methodology underlies many, if not most, of the strategies we recommend. The basic premise is that we can change both our emotions and our behavior using cognition—what we tell ourselves about events or what we tell ourselves to do in specific situations.

You may want to think about a different approach that can produce benefits that may generalize to a number of different contexts, behaviors, and executive skills. That approach is *mindfulness meditation*. This is an age-old practice, arising out of the Buddhist tradition. The Wikipedia explanation is as good as any we've seen:

Mindfulness meditation is often practiced sitting with eyes closed, cross-legged on a cushion, or on a chair, with the back straight. Attention may be put on the movement of the abdomen when breathing in and out, or on the awareness of the breath as it goes in and out the nostrils. As thoughts come up, one returns to focusing on the object of meditation, such as the breathing. One passively notices one's mind has wandered, but in an accepting, non-judgmental way. Meditators often start with short periods of 10 minutes or so a day. As one practices regularly,

it becomes easier to keep the attention focused on breathing. With practice, awareness of the breath can be extended into mindful awareness of thoughts, feelings and actions.

Just in the last year or so, there has been an explosion of research articles exploring the benefits of mindfulness meditation for treating a wide variety of psychological and medical conditions. Type “mindfulness” into the Medscape search engine, for instance, and you will find references to the use of this practice in treating depression, symptoms of rheumatoid arthritis, migraine, menopausal depression, sleep in cancer patients, posttraumatic stress disorder, anxiety, substance use disorders, bipolar disorder, chronic pain, asthma, cigarette consumption, and stress in medical school. It can even be used, apparently, to curb chocolate cravings!

If this is something you want to pursue, search for mindfulness meditation centers on the Internet and you can probably locate classes in your area. There is also research to show that training in mindfulness via the Internet can be effective as well. A Google search will take you to a number of options.

Technological Supports

Here are a few ideas:

- **There are many apps for meditation.** (This is Peg speaking:) My favorite is Headspace, which can be accessed either online (www.headspace.com) or through your app store. This site features a former Buddhist monk named Andy Puddicombe, who leads daily guided meditation sessions. It is a subscription service, but the first 10 days are free, so the listener can decide whether it is worth purchasing a year's subscription. I came across this app about 16 months ago and have been practicing meditation on almost a daily basis (well, at least several times a week) ever since. In the moment, meditation is incredibly relaxing (at least it was for me—mindfulness can take on many forms). It offers a brief respite from the busy, multitasking world I live in. But after about 6 months, I began to see benefits beyond the daily dose. I've found it particularly helpful in decreasing the stress associated with traveling (for example, canceled flights, mistakes in scheduling, waiting in line to deplane). Emotional control is one of my executive skill weaknesses, and I've found the benefits of mindfulness meditation particularly applicable to this executive skill. There is also evidence, however, that mindfulness can improve sustained attention, response inhibition, and flexibility.

- **Chillax** (<https://itunes.apple.com/us/app/chillax/id494538881?mt=8>). This is a free app that, as the iTunes preview says, “uses a combination of soothing music, relaxing sounds, and binaural beats to ease you into a state of relaxation and calm.” If you develop a coping strategy that involves taking a “time-out” to calm down or recover from a stressful experience, this might help you do that.

- **Balanced** (<https://itunes.apple.com/us/app/balanced-goals-habits-motivation/id630868758?mt=8>). This is a pretty straightforward app for setting goals and keeping track of personal improvement efforts. Many of the categories and choices relate to improving emotional control or personal well-being.

- **Use social media judiciously.** Research shows that people who spend a lot of time on social media report more depressive symptoms than those who don’t. In particular, avoid going on social media for the hour or two before bedtime, since it can reduce sleep time and quality—and insufficient or poor-quality sleep has the effect of decreasing emotional control.

What It Looks Like in Practice: Dealing with Perfectionism

Marta knew she had a problem with emotional control, although it looked different at home than it did at work. At home, she flew off the handle instantly when someone said or did something that upset her: her 15-year-old son reporting that he had failed a test because he’d forgotten about it and didn’t study, her 12-year-old daughter refusing to pick up her bedroom because “It’s my space and I can do what I want with it,” her husband teasing her about her excessive need for order (“Marta, give me a chance—I’ll put my empty beer bottle in recycling, but can I wait to the end of the quarter?”). Her husband and kids had taken to rolling their eyes conspiratorially when they saw her emotions mounting. Here she goes again, they seemed to say (well, actually, they *did* say that).

None of Marta’s coworkers knew she was like that at home. At work, she held it all in. But it didn’t mean her emotions weren’t getting the better of her there, too. She was afraid to speak up in meetings because if her ideas got shot down, she knew she’d feel terrible for the rest of the day. And if her boss looked at her cross-eyed, she’d worry for an hour about what she’d said or done to make him mad. And she found herself staying late at the office checking and rechecking her work before she handed it in, lest she miss some mistake. And don’t even mention those annual performance reviews. No matter how many

good things her boss might write about her, if there was one little criticism, that was all she saw. If she could have gotten away with throwing away the review without reading it, she would, but unfortunately, those reviews always included a face-to-face meeting.

Over the years Marta has heard enough comments from family members and coworkers about her high expectations to acknowledge that she has a perfectionistic streak that she applies to expectations for herself and for family members. And from here she can make the connection to her emotional reactions when she or family members don't achieve the expected standard. She knows other people don't think or react as she does, but she's not sure how or whether she can change. For the heck of it, she Googles "perfectionism" and finds all kinds of information about what are called cognitive-behavioral strategies as well as "mindfulness," which she's heard of but doesn't really know anything about. On one of the websites, she finds what seem to be practical strategies to change her way of thinking by learning to tolerate, in small doses, little daily imperfections. On another, she reads about being upset by even little corrective comments, and the example matches almost exactly what her reaction is to evaluations at work. Just finding this information makes her feel better because there are a lot of people dealing with this issue.

She decides that she will try one strategy for home and one for work. For home, she settles on increasing her tolerance for imperfection. She wants to work on this with family members, but she knows that she needs to start small. Marta talks with her husband about her plan and asks if he would help by leaving things "out of place" at home (like a beer bottle) and telling her when he will take care of it. The reassurance that he'll do it is important because she knows at this point she can't leave it indefinitely. They agree he will do this once each weekday and twice each weekend day and nothing will be said to the children. Initially she has to "bite her tongue," but over a week or so she finds it bothers her less and less.

For her son Marta creates a script for herself such that if he gets a poor grade, she will discuss with him how he will take care of the problem and, as long as he does all right on the next test, no other discussion will be needed. She also lets him know that if it happens again during the term, she or her husband will go with their son to discuss a strategy with the guidance counselor.

Marta can't be *laissez-faire* about her daughter's room, so she asks her husband for help. They agree on a minimum standard for cleaning, and he agrees that he will deal with their daughter on this.

At work, Marta isn't scheduled for a performance review for another 4 months. But, per a suggestion she has read, she takes her last performance

review and creates two columns, one for positive comments and one for corrective comments. When she does this, she realizes 85–90% of the comments are positive. She decides that unless the positive comments drop below 75–80%, she'll accept that she is a strong employee. For her next performance review, she'll do the same two columns before she meets with her boss so she can go into the discussion feeling good about her work. She also decides that if she feels the need to stay late, this will happen only 1 day a week for 20 minutes.

Marta adopts two statements to say to herself whenever she begins to think that she or a family member didn't do well enough: "All I can do is my best" and "Making a mistake does not mean a person is a failure; everyone makes mistakes."

At first Marta does not think about rewarding herself for making these changes, even though they will be difficult. But then she realizes that not thinking she deserves a reward is part of the same problem. So she decides that she'll keep track daily of how she does and at the end of each week, if she is successful, on average, 75–80% of the time, she will go to her favorite store at the mall after work and either buy an item for \$10 or, if nothing appeals to her that week, put the \$10 toward a bigger-ticket item in the future.

Following her plan, Marta could see that she was getting better—and her husband's commenting on this acted as an additional reward. But in her Internet search Marta also learned about mindfulness meditation and became intrigued by it. She decided to give that a go, too. Although her life was pretty busy, she decided she could devote 20 minutes a day to meditation practice. She was an early bird at work, often arriving at the office before anybody else, and she found if she meditated as soon as she got there, it put her in good spirits after that. Over time, she could begin to feel a difference in how she reacted to workplace stressors. She also found herself being able to call up the calm she felt at the end of her daily meditation and re-create that feeling quickly when she felt her heartbeat beginning to quicken or when she found herself thinking negative thoughts.

Why It Worked

- **Marta researched her problem to understand it better.** By doing an Internet search as a jumping-off point, Marta learned that she was not alone in having trouble managing her emotions. That gave her both comfort and some confidence that she could address the problem. She also was able to learn about a wide variety of coping strategies and could select and adapt those that she thought might work for her.

- **She figured out ways to start small.** By asking her husband to leave small things out of place, she could work on the discomfort she felt in a controlled way.

- **She negotiated a role for her husband to play in helping her.** Family systems theorists will tell you that when one member of a family decides to try to change, it can change the whole dynamics of the family. It would seem that Marta's husband could only be thrilled that his wife is trying to get better control over her emotions. But we have learned that for many family members "the devil you know is better than the devil you don't know." By enlisting her husband's explicit help, he is likely to adjust to her change more easily because he is now changing, too.

- **She came up with a script for handling a difficult situation.** This is an example of an *If-then* plan. *If* her son gets a bad grade on a test, *then* she will talk with him about how he will handle the problem. *If* he fails a second test, *then* his parents and their son will meet with the guidance counselor.

- **She finds a way to challenge her negative self-evaluation.** To handle her workplace perfectionism, Marta creates a chart to compare positive to negative feedback about her performance. This has the effect of moving her off her negative self-evaluation and onto a more positive view of her work attributes. She also created a rule for when she would allow herself to fret (that is, when positive comments fall below 75%). As she looks down her list and finds herself beginning to feel bad, she can compute the ratio and remind herself that success is 75%, not 100%.

- **She built in a system of rewards that reinforced what she was trying to work on.** Recognizing that not feeling worthy of rewards was part of her perfectionism, Marta decided to go against her instinct and create a reward for herself. Whenever she cashes in her reward she not only gets the tangible reward but also reminds herself that she deserves to feel positively about herself.

- **She was willing to invest in a long-term strategy in addition to her shorter-term intervention.** Too often, if behavior change doesn't come right away, we get discouraged and give up. Marta was willing to try mindfulness meditation to see if that might produce results. What she found was some short-term gain (starting her workday feeling good) as well as longer-term benefits down the road (being able to access feelings of calm at will throughout the day when she needed to).

LET'S TALK ABOUT SELF-TALK

One strategy that has been shown to be particularly effective in helping individuals achieve a greater sense of well-being, higher self-esteem, better control over emotions, and improved performance in anxiety-provoking situations is self-talk. Here's a glimpse at what the research says about this powerful strategy:

- A lot of research has involved training athletes to talk to themselves as a way to improve athletic performance. Some of this research has looked at different kinds of self-talk and finds benefits to each. For instance, one study focused on getting rugby players to jump as high as they could in practice sessions and compared the use of *motivational self-talk* ("I can jump higher") with use of *instructional self-talk* ("Bend and drive"). Compared with a non-self-talk control group, both groups jumped with greater force, and the motivational self-talk group also jumped higher than the control group.
- Another study using athletes explored the benefits of having novice teen volleyball players give themselves detailed instructions during practice sessions (for example, "When I throw the ball, the arm goes back, over the head, look at the target and hit the ball"). Volleyball coaches viewed videotapes of both groups at the end of 4 weeks of practice and rated players on a variety of volleyball skills. The self-talk group averaged 44 of 50 quality points, while the non-self-talk group averaged only 35.
- A third study that employed athletes compared self-talk with self-feedback (self-appraising performance after the fact). This study found that adult tennis players who engaged in instructional self-talk or instructional self-talk plus self-feedback performed better than a control group that used neither. Furthermore, the group that used self-instruction plus self-feedback rated the efficacy of the intervention higher than the self-instruction-only group did.
- A number of studies teach individuals to change what they say to themselves, either by contradicting negative self-talk and replacing it with positive self-talk (for example, change the self-talk from "Today is going terribly; nothing has gone right" to "Wasn't that sunrise this morning amazing? I'm happy I was up in time to see it") or by changing a negative

feeling with a more positive term. For example, people who were experiencing anticipatory anxiety in advance of a public speaking engagement or a difficult meeting with a boss were instructed to think of the anxiety as *excitement* and to say out loud “I’m excited” or to instruct themselves to “get excited.” Compared with a group that was taught to “calm down,” the reappraisal group were seen as more excited and performed better. This reappraisal moved them from a *threat* mind-set to an *opportunity* mind-set.

- Recently, some research has focused on *how* people engage in self-talk—that is, the language they use to talk to themselves. This research has found that when people either talk to themselves by name (*Peg, take five deep breaths before you make that phone call*) or talk to themselves in the second person (*You can do this!*), people with social anxiety handle the situation better than if they use first-person pronouns. They are also more likely to view similar stressors in the future as less threatening.

- There is some evidence to suggest that some people are more likely to naturally engage in self-talk than others. If you’re one of those people for whom self-talk does not feel natural, you may want to try imagery instead. A number of studies have found using mental imagery to picture oneself handling a situation well works as well as self-talk in improving outcomes. You can find instructions for using imagery online.

11

Avoiding Procrastination *Task Initiation*

What It Is

The ability to begin projects or activities without procrastinating, in an efficient or timely manner. In other words, it's the opposite of procrastination.

What We Know about It

This is a *very challenging* skill to acquire. Even those of us who are good at starting tasks can identify certain things we hate to do, and we invariably put those tasks off as long as possible. And a fair number of adults are not particularly good at task initiation. We recently had a group of 80 professionals complete our Executive Skills Questionnaire (see Chapter 2), and here's what we found: The average score for every skill except task initiation ranged between 14 and 16. The score for task initiation: between 11 and 12—and that was true both at home *and* at work. Think about this the next time you rail against your teenager for leaving his English paper to the night before it's due!

What We Can Do about It

We can all identify with the urge to put off tasks we like least, and we all do it. So we're not talking here to those of you who occasionally put off tasks you don't like. We're also not talking about people who have trouble initiating

because they are chronically overbooked and have too much to do and too little time to do it—those issues reflect problems with planning/prioritizing or time management. If you feel this is the issue you're grappling with, you may want to look at Chapter 13 or 15. If you're reading this chapter, we assume you have recognized task initiation as a longstanding weakness and find that it gets in your way on a regular basis.

Let's start with some assumptions:

- You have the skill set to do the task in a fashion that is good enough to meet your standard and/or the standard of the person who will judge the outcome. Keep in mind that we're talking here about *improving* task initiation, the ability to get started on a task, and not task perfection. (This is Peg speaking:) My motto—"Done is better than perfect"—is critical here, because perfect is never done. If you're concerned about the judgment of others, start with tasks that only you will see. Once you've improved on those, we'll tell you how to be timely with tasks that need to meet others' expectations.
- You're working on task initiation, not task completion, at this point. People who are weak in task initiation are also often weak in sustained attention (that is, task completion), but this chapter deals only with task initiation. And frankly, that's often the biggest stumbling block in reaching task completion.
- If you don't think you have the resources or skill set and still want/need to do the task, then the way to start practicing initiation is to make acquiring the resources or learning the skill the first step in the plan. For instance, if your goal is to complete your income taxes on time this year, then step one in your task initiation plan may be to track down the tax forms you need. If your goal is to put together that desk you bought for your son for his birthday, then step one might be making sure you have the written instructions and the tools you'll need.

How to Modify the Environment to Make Task Initiation Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Because task initiation is the objective, if it's a sit-down task and does not have to be started in a specific area (as, for example, cleaning would), choose a location where you won't be distracted by television, friends, children, significant other, and so on, and choose

a time that doesn't conflict with regular routines or preferences such as exercise or favorite television shows that you don't want to record. Suspend access to electronics—texts, Twitter, e-mail, social media. For example, if you're working on getting your taxes done, put all the tax materials in that space where you've chosen to work. Another approach is to place the task to be done in a location that you frequent regularly, and the presence of the task materials will prompt you to get started. For example, if you have thank-you notes to write and your plan is to do them first thing in the morning, place the notes, pens, envelopes, and stamps at your place setting at the breakfast table the night before.

- **Modify the task.** Here the key is to keep the degree of required effort low. The simplest way to do this is to limit the time to a minimum of 5 minutes and a maximum of 10 minutes at a sitting. This is important for two reasons. First of all, limiting the amount of time ensures that you're really focusing on task initiation and not sustained attention. Second, it's easier to initiate something if you know you can get through it quickly than if you feel it's just the beginning of a long, drawn-out process. If the task is open-ended, such as writing, spend 2–3 minutes thinking and then get some words on the page. This can be as an outline, elements of a graphic organizer, or stream of consciousness. If it's a task with a deadline, work backward from the deadline and generate a series of 5- to 10-minute blocks over the period of time you have. This strategy is important because the effort and energy demanded by a weak executive skill is rapidly depleted and breaks are restorative.

- **Solicit help from others.** Here are some ways you might ask others to help. You might ask someone to check in with you to make sure you've completed the task in the time frame you selected. This “check-in” feature is basically informal coaching. Another way is to ask someone to help you select or even brainstorm a starting point. This is helpful for writing tasks, and (This is Dick speaking:) if I'm stuck, I call my coauthor, Peg, to talk through a possible start, and I write these ideas down. A third option is to talk with a coworker or friend who is familiar with the task and can provide some guidance for you. You might say, “Do you have any tips for making this job go more smoothly? Does it help to write the intro first or to gather all the information you need before you start writing?”

How to Improve Your Task Initiation through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

• **Identify a task or specific activity that reflects your task initiation weakness.** Because the more frequently and consistently you practice a skill in the early stages the faster that skill improves, we recommend that you choose a task that occurs or could occur daily. If you have trouble coming up with something, we’ve listed some ideas in the box below.

We also recommend not starting with the most aversive task. If you can barely tolerate even *thinking* about the task (let alone actually doing it), this is not the task to tackle first. Choose a task that, when you find yourself thinking about it, you think “I don’t know why I put this off the way I do; it’s really not all that hard.” Keep in mind that your immediate goal is to improve your ability to start a task—*any* task—in an efficient or timely fashion. Once you begin to see an improvement in two or three tasks that you’ve practiced, you can begin to extend your skill to other tasks, always keeping in mind that the most effective

EVERYDAY TASKS THAT ARE OFTEN HARD TO INITIATE	
Flossing	Sweeping or vacuuming
Emptying the dishwasher	Walking the dog
Loading the dishwasher	Making beds
Putting away laundry	Cleaning litter box
Answering e-mails (or the e-mails that require some thought)	Sorting recyclables
Tidying up a room (living room, study)	Paying bills
Sorting mail	Reviewing children’s homework
Watering plants	Preparing meals
Making appointments (for example, car, dental, medical)	Exercising
Running errands (bank, post office, drugstore)	Filing paperwork
Contacting people (aging parents, friends one wants to stay in touch with, child’s teacher)	Managing finances (for example, balancing checkbook, entering expenditures into budget)

way to improve task initiation with a nonpreferred task is to start with the same, very gradual approach that you began this endeavor with.

- **Set your goal.** Assuming the task you've chosen is one that requires regular attention, your initial goal is to consistently maintain the task initiation schedule you've set. The key here is to achieve consistency, and we strongly suggest that you resist the urge to significantly increase either the time spent or the portion of the task. Stay with the gradual plan. In other words, keep practicing with a single task until that feels comfortable, then add in a second or a third. Alternatively, increase the amount of time spent at a single task in small increments (1–2 minutes more at each stage, as described in the exercise scenario below).

The fact that you can run a mile does not, by any stretch, mean you're ready for a marathon. It is reasonable to set a longer-term goal for a task. (This is Dick speaking:) For example, doing clinic notes is a task I avoid. My immediate goal is to do at least two notes a day, and my eventual goal is to average 16 notes per week spread across 4 days.

- **Set a deadline.** We're defining success as being able to demonstrate your desired level of performance on a day-in, day-out basis. Given that, your initial deadline should relate to the consistent performance of the small task initiation expectation you set—for example, 10 minutes of task work on a daily basis. This doesn't mean that on a given day you might not do more, but it does mean that you don't reset the bar higher across the board unless you're consistent at a more modest level. Since we are always faced with tasks to complete, there is no *final* deadline.

- **Make a specific plan.** What activity that you currently struggle with starting will you practice? When during the day will you practice—that is, what specific time? How long will the practice session last—that is, how many minutes? How many days per week will you practice? What is your specific starting date? Use the Action Plan form provided in Chapter 4 to make your plan or devise one of your own. But *write it down*. If your life is such that you can't anticipate too far in advance when you'll be able to practice, then begin every day by planning *when during that day* you will practice. If necessary, create a visual cue (for example, an index card with the question *When will you practice today?* written on it) and place it somewhere you can't miss it (such as on top of the coffeemaker on your kitchen counter). You may also want to think about creating an auditory cue, such as a smartphone reminder, since visual cues have a way of becoming “part of the woodwork” after a while.

- **Externalize the task initiation behavior you're working on.** What does this mean? It means get the task you're working on outside of your head where you can see or hear reminders. We know that just using mental representations of plans and goals is not conducive to remembering them. You need to have external reminders in the form of visual (signs, Post-it Notes, computer Post-its) and auditory prompts to help you remember what task you're working on and why. Smartphone reminders can be especially effective, as can scheduling apps that you activate at the beginning of the task and put in the "Done" column at the end.

- **Whatever it takes, stick to some part of the plan.** If you don't have the energy for 10 minutes, do 5. Both the effort and the small amount of practice will enhance the skill.

- **Select a reward.** This might be a preferred activity or some type of treat that you'll give to yourself when you complete the practice. (See the suggestions in the Reward Menu in Chapter 4.) Include the reward in your visual so you see that first you do this, then you get this. We've come to know this as Grandma's law (first dinner, then dessert), and it is effective and important.

- **Write down two or three encouraging statements.** These should communicate what task you're working on, what the specific benefit will be, and that you've followed through on your plan when the practice is completed. Once you have these, create a specific mental picture of you starting the task in the location and at the time you chose, working on the task, and finishing the practice. Use the first two statements just before you bring up the image, bring up the image, and, when you see yourself finish, telling yourself that you followed the plan and earned the reward.

Technological Supports

We refer to apps and smartphone use above, but we want to emphasize using technology both as an environmental support and as a vehicle for ensuring we practice the skill. Here are some options (of the hundreds available in the productivity section of your app store):

- **iSecretary.** This is an app for iPhone and iPad that allows you to record a voice memo and have it play back at a designated time. It could remind you, for instance, to start your task initiation practice session at the designated time.

- **The Habit Factor.** This is an iPhone app that allows you to set goals

related to building habits, remind yourself of those goals, and track progress. You can select start and end dates (or keep it open-ended), and you can designate which days you intend to practice the habit. There is a free version as well as one that costs a nominal amount.

- **The alarm on your smartphone.** This is the easiest to use, and it comes with your phone. Just program your phone to remind you to start the task. You can set a recurring reminder or program it for a different time every day if you need to. One person we know uses the “snooze” function in a clever way. When the alarm goes off, if he can’t get to it right then, he doesn’t turn off the alarm; he hits snooze instead, which means every 10 minutes or so the alarm will go off again until he actually begins the task as intended. Better than a nagging spouse, partner, or parent, but the cues keep coming until you actually begin the task.

What It Looks Like in Practice: Beginning an Exercise Program

Ellyn has always found it difficult to get started on tasks that take effort—and by this she means unpleasant stuff or things she doesn’t see as fun. The fun stuff she has no problem with—like updating her Facebook page or trying out a new gourmet dessert recipe. But maybe because she’s made too many gourmet desserts, her weight has crept up to a point where she knows she needs to do something to change her habits. Her inability to get an exercise program going, for instance, is particularly irritating to her. She always seems to find some excuse—she doesn’t have the right equipment or she’ll choose ineffective (or worse—damaging!) exercises and all her work will be for naught. Her husband has tried to be supportive, but he’s a health nut himself, and she knows he’s silently critical. *This is it*, she thinks. *This time I’ll make it work!* But how?

Identify a task or specific activity that reflects your task initiation weakness. Having been down this road before, Ellyn knows that her weakness has been starting and sticking with an exercise plan. She has had in mind the goal of exercising for 30 minutes a day, but just that goal seems overwhelming, considering that she currently does not exercise at all. While she doesn’t want to give up on her goal, she realizes that job one is getting started and sticking with a daily plan. Because finding the time to exercise is a challenge, she decides that her choice must be simple and efficient. That means that for now a trip to the

health club or setting up a home gym is out. But she has a decent pair of walking shoes, and after a brief Internet search she discovers that walking is one of the safest and most effective exercises available.

Ellyn makes a plan to walk every week day for 10 minutes right after she arrives home from work and on weekends in the morning after she has her cup of coffee but before she has breakfast. Ellyn uses the iSecretary app on her iPhone as a daily visual and auditory reminder. Included in this reminder is her recorded statement, “It’s 10 minutes! Just do it!” which she includes to overcome any urge she has to skip a day. Ellyn decides to start in 2 days. She updates her Facebook page to let people know of her new plan with the start date and is pleasantly surprised by the encouraging comments she receives from her friends on Facebook. As her reward for following her plan for 15 days, she picks out a new pair of running shoes, and with each successful period of 15 days she selects another inexpensive apparel item for exercise.

Ellyn starts her plan on the selected day and completes each day for the first week. During that first week some of her Facebook friends inquire about how she is doing. She decides to keep a daily chart on Facebook to track her progress. After a month she has missed only 1 day due to flu symptoms and has increased her time to an average of 18 minutes per day just because the perceived effort of walking for 10 minutes has decreased and adding a few minutes a week seemed just as easy as 10 minutes was at first. She also has new running shoes and a blinking safety light for dusk/early evening walks.

Why It Worked

Ellyn drew on a number of strategies that behavioral psychologists know can be effective. In case you missed them as you read the vignette, here they are:

- **Ellyn started *very small*.** Ten minutes a day was something she could manage without having to drastically change her daily schedule. Once this was built in, it became easier to increase the amount of time. And the increased time was reasonable, too. She might have been tempted, after that initial burst of success, to jump to 30 minutes a day, but it was wise to make the increase incremental.

- **She kept it as convenient as possible.** Any extra steps (such as having to drive to the gym) are likely to impede success, especially for people who are weak in task initiation, since they often look for excuses not to continue with a program.

- **She made a public announcement of her goal.** As noted first in Chapter 4, there's a whole body of research in the behavioral literature called *correspondence training* that says that if you make a public commitment to doing something, you're more likely to follow through than if you don't (the *correspondence* in that label refers to the correspondence between saying and doing). Ellyn used Facebook as a vehicle for making her goal public. And look at the benefit she got: people wrote back both to comment and encourage her and to check in with her to see how she was doing.

- **She built in cues and reminders using a smartphone app.** Until habits become ingrained, we may actually forget our plans, and when that happens we slow down the process of making it a routine. The more anything becomes routine, the less we have to think about it and the less energy our brain uses up engaging in the behavior.

- **She built in rewards that were attainable** based on a reasonable amount of time and effort. Ten minutes a day for 15 days is achievable and worthy of rewarding with a small incentive. Buying a new wardrobe when you lose 30 pounds is much less effective. Although the reward is attractive, the distance Ellyn would have had to travel (both in time and in miles!) to achieve the reward makes it far less likely that she would attain her goal.

- **She charted her progress.** For some people, the chart alone can be motivating. Sharing the chart on Facebook increases the likelihood that friends will continue to comment and encourage her and increases the chances Ellyn will continue the program because it would prove a bit embarrassing if she let it slide. Plus, since she goes on Facebook every day, seeing the chart sitting there acts as an additional reminder to follow her plan.

ABOUT PROCRASTINATION

When we went to an academic search engine (EBSCO) and typed “procrastination” into the subject line, almost 9,000 citations came up, so if you think you’re alone in your problem with task initiation, think again. Here’s some of what we learned from scanning the research and the popular press for information about procrastination:

- Studies show that 20% of adults consider themselves chronic procrastinators. A good 87% of college students describe themselves as procrastinators, and 48% of them believe that procrastination hurts their grades.

- About half of the 20% of chronic adult procrastinators appear to be what has become labeled *active procrastinators*. This means they use deadlines as a positive motivator and seem to get a “high” or an adrenaline rush from working up against a deadline to complete tasks. *Passive procrastinators*, in contrast, feel pressured about their ability to complete tasks, become pessimistic about their ability to follow through, and in fact are more likely both to give up and to fail to complete tasks but also to have negative feelings associated with the experience of procrastinating. Which kind are you? You may think you’re an active procrastinator, but does your spouse or boss agree with you on that?

- Lots of studies have looked at procrastination among college students. No surprise here—they’re a captive audience and are often undergraduate psychology majors who earn bonus points for participating in these kinds of studies (trust us, we speak from experience). It’s not clear how well these studies generalize to the population at large, nor is it clear how helpful these studies are. For instance, many studies have shown that students who don’t procrastinate have a greater sense of self-efficacy than those who do. But does the self-efficacy lead them to avoid procrastination, or does being able to avoid procrastination increase self-efficacy?

- If you’re not one of the lucky ones who happen to be active procrastinators, there may be hope for you yet. You could employ what John Perry, a philosopher at Stanford, calls “structured procrastination” (described in more detail in a book entitled *The Art of Procrastination*). He maintains that if you have a task that you’re avoiding, you can use that time to advantage to complete other, less aversive tasks on your to-do list. Thus the time is not wasted because you’re accomplishing a great deal while you’re procrastinating.

- Some studies have looked at procrastination in different life domains (for example, work, health, chores at home) and found that, although people who procrastinate tend to do so across domains, there may be some variation. Since work builds in deadlines, many people find they procrastinate more at home than at work, where there are fewer fixed deadlines.

- Recently, *bedtime procrastination* has been identified as a chal-

lenge for some people. Teenagers are notorious for this, but a fair number of adults put off bedtime longer than they should as well. They stay on the computer or watch television in bed, or just try to squeeze in one or two more chores before turning in for the night. Given that people function more poorly on insufficient sleep (and lack of sleep particularly undermines executive skills), this is a particularly insidious form of procrastination. Sticking to a reasonable bedtime may be a good first step if you decide you want to tackle procrastination in your life.

- One of the dynamics involved in procrastination is mood regulation. We remove negative feelings associated with having to do an aversive task by not doing it. Supposedly, once we banish the task from our minds we banish the negative feelings as well. We often use the excuse that we're "tired" or "in a bad mood," and we are convinced that if we tackle the task when we have more energy or are in a better mood, the task will be easier to do. Essentially, though, in so doing we trust that some "future self" will be able to perform a task that our present self dreads doing. Although giving in to short-term mood repair seems like a good way to restore good feelings, in fact we often feel worse.

- For a light-hearted illustration of this, check out Tim Urban's website and his postings about procrastination (<http://waitbutwhy.com/2013/10/why-procrastinators-procrastinate.html>). He maintains that the brains of procrastinators and nonprocrastinators are identical except that embedded in the procrastinator's brain is an "instant gratification monkey" that urges the procrastinator to do the fun stuff and avoid the work. It seems like a great idea, except that, as Urban notes, "with the monkey in charge, the procrastinator finds himself spending a lot of time in a place called the Dark Playground." What is the Dark Playground? "It's a place where leisure activities happen at times when leisure activities are not supposed to be happening. The fun you have in the Dark Playground isn't actually fun because it's completely unearned and the air is filled with guilt, anxiety, self-hatred, and dread." Sound familiar? If so, you're probably also familiar with the panic monster . . .

12

Staying Focused *Sustained Attention*

What It Is

The capacity to keep paying attention to a situation or task in spite of distractibility, fatigue, or boredom.

What We Know about It

In terms of brain functioning, sustained attention is complicated. To simplify it, neuroscientists make a distinction between two kinds of attention systems: “bottom-up” and “top-down.” The “bottom-up” system is diffuse, involving multiple, widely separated brain regions, and it is “always on.” This system has come to be termed the *default mode network* because it is most active when the brain is at rest (or in default mode). In brain imaging studies first conducted in the early 1990s, it was originally seen as “background noise” because it was unrelated to the brain activity being studied. Over time, however, scientists came to realize that this background noise represents how the brain spends its time when it is not focused on a particular activity. It incorporates both “mind wandering” and low-level awareness of all the sensory stimuli around us at any given time. Essentially, the default mode network quietly monitors both the internal and external environments so that when something important happens the brain can respond quickly.

Scientific American published an article about the default mode network in

2010 titled “The Brain’s Dark Energy.” Borrowing terminology from astrophysicists, this article referred to the work of the default mode network as “neural dark energy.” It turns out that 60 to 80% of all the energy consumed by the brain occurs in circuits that are not linked directly to any external event.

By studying the default mode network, scientists have learned that when the brain begins to engage in a purposeful behavior, the activity in this network dies down, replaced by focused attention. To engage in goal-directed behavior, we have to be able to sustain that focused attention over time. And we know that a wide variety of factors can make that difficult, including both task demands (such as how vigilant we need to be, how hard the task is, how fast we have to respond, or how unpredictable the task is) as well as cognitive variables such as stress, low motivation, or lack of sleep. In other words, to return to our definition, sustained attention is the ability to keep paying attention to a task or situation in spite of distractibility, fatigue, or boredom.

When people attempt to sustain attention over a long period of time or in the face of adverse circumstances, the brain may revert to the default mode network, disrupting our ability to focus. In fact, in a multinational study conducted in 2008, researchers found they could predict 30 seconds in advance when a subject was about to make a mistake on a computer test just by watching the activity of the default mode network. When the default mode network took over, errors occurred. As research on this network has continued, it has been found that altered connections among brain cells in the default mode network are associated with a number of disorders, including Alzheimer’s disease, depression, autism, and schizophrenia. And in 2011, *Science Daily* summarized a study on the default mode network in an ADHD population with the headline “Brain Scan Shows Children with ADHD Have Faulty Off-Switch for Mind Wandering.”

But you don’t have to have a disorder to have difficulty sustaining attention. From our work on executive skills we’ve found that there is normal variation in people’s ability to sustain attention: some do it well, others struggle. This chapter is geared toward people who struggle.

By the way, not all mind wandering is bad. See the sidebar on pages 174–176 for the upside.

What We Can Do about It

Task initiation and sustained attention often go hand in hand. If you have problems with both executive skills you should probably begin by working on task

initiation, because if you can't start the task, you won't have to deal with being unable to stick with it long enough to get it done. Sustained attention is also associated with goal-directed persistence. In a sense, goal-directed persistence involves being able to sustain attention over a long period of time to achieve larger goals. For the purposes of this chapter, though, we're talking about the ability to sustain attention over relatively short periods of time to complete more time-limited tasks.

How to Modify the Environment to Make Sustained Attention Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Since people who have difficulty sustaining attention are highly susceptible to distractions, the most obvious way to modify the physical or social environment is to remove as many distractions as possible. This may mean carefully choosing where you will work (if you have that option), or if you are tied to a specific place, surveying that environment to see if distractions can be removed.

One aspect of the physical environment where we've seen tremendous individual variation is background noise. We've had people tell us they cannot work in environments that are absolutely quiet, while others have told us they can't work *unless* the environment is absolutely quiet. A common scenario we encounter in our clinical practice with teenagers is disputes between parents and teenagers regarding listening to music while doing homework. Parents often believe that listening to music on an iPod gets in the way, but we've had enough teenagers tell us that it actually helps them focus that we believe that in some cases music acts as "white noise," screening out sounds (such as the cartoons on television in the next room or siblings squabbling) that are way more distracting than music. Some kids have told us it depends on the kind of music they're listening to—if the music has lyrics, they start paying attention to the words, but instrumental music just stays in the background.

The social environment may also lend itself to modification to improve sustained attention. You may be able to get through tedious tasks more quickly if you do them with someone. That garage looks like it will take an eon to clean out, but the combination of your spouse or child helping you, along with lively music amped up in the background, may give you the energy to get the

job done—though you may have to make a trade to get someone to help you, especially if the mess is mostly of your doing.

- **Modify the task.** As with task initiation, the key is to keep the degree of effort required low. Who says the only way to do a task is to begin it and end it all in one sitting? Ten minutes a day may feel like a ridiculously long, drawn-out process, but if the task gets done (that's the point here, right?), who cares how long it took? If you're up against a deadline and don't have the luxury of stretching a task out, then break it into smaller segments and build in frequent breaks. Or switch off between multiple tasks, spending a short amount of time on each one and rotating among them until they all get done. Look at the "Ways to Modify Tasks" table in Chapter 3 for other ways to make tasks easier to get through. Every suggestion in that table works for problems with sustained attention.

- **Solicit help from others.** Just telling someone else your plan increases the likelihood that you'll follow through. But if you're worried that's not enough, ask the person to check back with you at a specific time (or times) to see how you're doing.

How to Improve Your Sustained Attention through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity that reflects your sustained attention weakness.** As with all the other executive skills, choose something that you can practice daily. Although you may choose the same task every day, you might practice sustained attention with a different task every day as long as the task you choose falls into the broader category of "Tasks I have trouble sticking with long enough to complete." If household chores are aversive to you, for instance, you might practice increasing your ability to sustain attention on a different chore every day, but at least you're practicing increasing your attention span for nonpreferred tasks. Keep in mind that your immediate goal is to improve your ability to persist with a task longer than you're doing at the moment. Increase the time you spend at that task incrementally. It helps to keep a record (in the same way tracking reps and weight levels helps you see progress in your exercise program). A blank chart to help you is shown on page 168 and also available to download and print at www.guilford.com/dawson7-forms.

Attention Practice

Date	Task	Time spent	Next day's goal

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- **Set your goal.** Your initial goal is to consistently maintain the practice schedule you've set. We also recommend that you increase the amount of time you spend at the task slowly. If you get a burst of energy one day and work much longer than you had intended, don't try to top that time tomorrow; just work a little longer tomorrow than you'd intended to work today. Setting a new benchmark based on your surprising burst of energy would fall under the category *No good deed goes unpunished*. Pat yourself on the back for exceeding your goal today, but don't push yourself too hard tomorrow.

- **Set a deadline.** Here's where knowing yourself is important. If you're one of those people who works in short bursts of energy, or who seems to do best by switching among multiple tasks, is it really realistic to set a deadline to achieve a goal of working for 2 hours straight on a single task or project? Here's what a reasonable goal and deadline might be for improving task initiation: After practicing for 2 months, I will be able to work for at least 30 minutes at a time on a single task, and I will be able to allot 2 hours per day to working on nonpreferred tasks (that is, tasks that I would rather not be doing and find it hard to stick with long enough to complete). There are three numbers/time spans in that goal statement—you may need to revise one or all of them to fit your needs.

- **Make a specific plan.** Use the Action Plan form in Chapter 4 to make your plan. What will you practice? Your practice material may be the same task every day, or you could choose to focus on a "nonpreferred task" that might vary from day-to-day. If you choose to vary the task, then it will be particularly important to identify *when* during the day you will practice and how long the practice session will last. Be sure to spell out how many days a week you will practice and when your specific start date is.

- **Externalize the behavior you're working on.** In addition to programming an alarm on your smartphone to remind you to start the practice session, set the timer on your phone to signal when the practice session is over. Place a visual cue in the environment to remind you as well, in a spot where you're likely to see it. And because the brain is programmed to ignore familiar visual cues, make a new sign every day—even if your target task remains the same. Use different-colored paper or markers or write with different scripts (even better: create a visual cue using a different font on your computer each day).

- **Whatever it takes, stick to some part of the plan.** As with task initiation, if you don't have the energy for 10 minutes, do 5. Both the effort and the

small amount of practice with task persistence (particularly in the face of an obstacle such as thinking to yourself *I really don't want to be doing this today!*) will pay off, we promise you.

- **Select a reward.** Our favorite reward, one we use in many permutations, is this: *Give yourself something to look forward to doing when the hard task is done.* (This is Peg speaking:) I put in long hours at my office on the days I'm there, and I generally give myself the night off at the end of those long days. But sometimes there's a small amount of additional work that absolutely has to be done that evening (for example, answering a couple of e-mails or creating a description for a workshop I'm scheduled to do). To find the energy to do the work, I tell myself that as soon as I finish I can have my favorite frozen almond milk bar. This works doubly well because I generally skip dessert in an effort to maintain my weight, so the special treat is particularly enticing. For reward ideas, see the Reward Menu in Chapter 4.

- **Write down two or three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

In addition to smartphone alarms and timers, here are some apps you may want to look at (selected from the hundreds available in the productivity section of your app store):

- **Pomodoro.** (<http://pomodorotechnique.com>) This is an iPhone or iPad app that can be used to implement the time management technique called "Pomodoro." The technique (explained at pomodorotechnique.com) is built on breaking work down into 25-minute segments, followed by 5-minute breaks. When you've completed four time segments, called pomodoros, you give yourself a longer break (for example, 20 or 30 minutes). The term *pomodoro* is Italian for tomato, and if you visit the website, you can learn more about the technique, order the book that describes it in more detail, and purchase a timer that looks like a tomato!

- **Interval Minder.** This is an app that enables the user to set electronic tones to sound at random intervals. When the tone sounds, the user can ask, "Was I paying attention?" Through periodic self-prompting, focus can improve.

As the user becomes better at sustaining attention, the intervals can be lengthened.

What It Looks Like in Practice: Sustaining Attention When You're Self-Employed

Antonio is a freelance writer. Writing comes easily to him, and he loves the freedom the job gives him to make his own hours and choose his own writing projects. He's set up a morning ritual that makes it easy to get started every day. He wakes up at 6 o'clock, spends an hour drinking coffee and reading the newspaper, and then spends half an hour getting dressed and eating breakfast. Then he goes to his study, shuts the door, and turns on the computer. He's programmed his computer so it automatically opens the last file he was working on the day before, and he always makes sure he stops writing at a point where it will be easy to pick up the next day.

Here's the problem. He rarely works for more than 20 minutes before he finds himself feeling antsy. When that happens, he may do one of several things: stop and make another pot of coffee, answer a few e-mails that came in overnight, rearrange the books on his bookshelf, make sure his wife has gotten the kids off to school on schedule, or decide he needs to do some more Internet research before he can finish what he's writing. That last distraction is particularly pernicious because he's very good at persuading himself that he needs to learn just a little more about the topic, and then one hyperlink leads to another, and before he knows it, he's blown a good chunk of the morning and he's going to have to contact his editor and let her know he'll need an extension.

He has the same problem with home projects. He'll decide today is the day to clean out all the gutters on his roof, but after working for 25 minutes he stops to get a drink, and then he sees his son watching a football game, and before he knows it, it's half-time and he's squandered a ton of time he meant to put into not only cleaning the gutters but also stacking the firewood that was delivered 2 weeks ago. And it gets dark early in late November, so what was he thinking anyway?

Antonio knows that he needs to address the writing issue. His editor has become increasingly annoyed with his requests for extensions, which cause downstream effects for the editor and for other staff working on the publication. Although he is a talented writer, Antonio finds it takes tons of effort to write, and he struggles to sustain attention in the face of that effort. He wonders if he

should approach his problem as a kind of writer's block since the effect of his inattention is failure of timely production.

Being unsure how to address the issue, he Googles "writer's block" on one of his weekend, nonwriting days, realizing this could be an endless source of distractions. He is surprised at the number of resources he finds to address this issue. He dismisses some of them as silly or unappealing, but he finds a couple that seem like they offer strategies that could directly address his distractibility.

The strategies fall into two categories: production and scheduling. For the production piece, Antonio decides on three actions. He's discovered that when he stops writing at the end of the day, although it seems at that point he can easily pick it up the next day, it rarely works out that way. He realizes that he leaves off with a version that has been revised and edited up to that point. So before ending for the day, he brainstorms some ideas that he might use tomorrow in the piece in a free-association fashion. This helps him pick up the threads of his thinking without needing to re-create the exact thought he left off at.

The second action is a commitment, when he starts in the morning, to get an outline for the next section on paper before he takes any type of break. The third is this: if he gets stuck, he writes any word or phrase he can think of that relates to the topic because the strategy most writers agree on to address writer's block is *write*—get something on paper.

The schedule piece is designed to address time across the day. Antonio is quite good about following his schedule to get started. His breakdown in attention comes with open-ended and unstructured distractions. Antonio develops a schedule of 20 minutes on (writing), 20 minutes off. During the "on" time, he has to write at least four sentences. If he doesn't, he has to use some of his break time to meet this commitment. He creates a five-item menu of specific activities that he can do during his breaks to ensure that none of the activities are highly preferred and any of them can be interrupted midstream. The interruption comes in the form of an alarm on his phone that he activates at the beginning of every break so he comes back on time and writes. He gets an hour for lunch and one 30-minute break midmorning that he can use for topic research if necessary.

Antonio has read that exercise and being outdoors are both restorative for attention, so he commits at least one morning and one afternoon break to walking outdoors. As a payoff for completing his writing and sending it in on time or early, he creates a list of highly preferred activities that he can choose from, depending on how much time he has available. On his computer, he has the phrase "First get it down, then make it good."

Antonio adopts a somewhat similar strategy for jobs at home, with one

major difference. In his home projects he tends to bite off more than he can chew (think all of the gutters in one day). For the job list, he enlists his wife's help because she seems more realistic in her appraisals of what can be done in a day. Once a job is selected, they map out the steps and fit this into a schedule that has built-in, timed breaks. Antonio asks his wife and the kids to stop interacting with him when the break-is-over alarm starts. Except for rare jobs, projects chosen are scheduled to be finished by early afternoon so there is time for family activities or for Antonio and his wife to go out together.

Why It Worked

- **Antonio researched the problem.** In his case, he looked for ideas to address “writer’s block” because that seemed the closest to the struggle he was having, and it gave him some good ideas. If that’s not your problem (and it likely isn’t), Google something related to what you’re dealing with. If you research *avoiding distractions*, for instance, you can then narrow your search given your options (for example, when studying, in the workplace).

- **He analyzed what got in the way.** With his writing, Antonio recognized there were two different disruptions he had to deal with, and he came up with strategies to address each. On the production side he realized that by brainstorming the night before and coming up with an outline first thing in the morning before writing, he’s able to generate enough content, along with a plan, and this gives him a path forward so that he can sustain attention to the task when otherwise he might start to flag. On the scheduling side, Antonio realized he worked best in relatively short intervals, with regular breaks built in to refresh him.

With regard to home projects, Antonio realized that he was not always realistic about what could reasonably be accomplished in a given period of time. He then used this information to design his intervention, which included consulting his wife, who he knew was better at making those kinds of judgments. The more precise you can be in both defining what the breakdowns are and determining when and why they happen, the more likely you are to design an intervention that works.

- **He created clear rules to follow and then committed to following them.** Antonio recognized that the fact that he was writing didn’t mean he was using his time productively. So to earn his break, he decided he had to do a minimum amount of work (write four sentences). This rule forced him to monitor his performance, but it was also a lenient enough rule so that when break time came,

if he hadn't met his goal, he could buckle down and finish the four sentences and still have time left in his 20-minute break.

- **He handled his break time carefully.** On the one hand, he was generous with himself—giving himself 20 minutes of free time for every 20 minutes worked. On the other hand, he thought about the best way to spend that break time, and he sequestered some activities because he knew he'd have trouble breaking away from them to return to his work.

- **He built in strategies that have been shown to enhance attention.** Twice a day he spent time outdoors walking in the fresh air. We know that using weak executive skills takes effort and burns energy. We also know that there are activities that replenish the fuel—fresh air and exercise are two of the best.

- **He built in rewards.** You'll see that we emphasize this with almost every intervention we design. It may seem silly, since as adults we can decide how we want to spend our time and money without following anybody's "rules," but we've found that creating rules to follow to gain access to rewards can make a big difference on a daily basis. In Antonio's case, it's easier for him to keep sitting at the keyboard when it starts getting difficult if he knows that if he meets or exceeds his deadline, there's an added bonus waiting for him.

LET'S FOCUS ON MIND WANDERING (AND THE TIE-IN WITH TECHNOLOGY)

It turns out that mind wandering is perfectly normal, and not just a symptom of ADHD or aging. In fact, estimates are that mind wandering may take up as much as 50% of our waking hours. And the assumption has been that all that mind wandering is, at best, time wasted and, at worst, life threatening (for example, when it happens while you're behind the wheel of a car).

Researchers, in studying the relationship between the default mode network (the part of the brain that's active when the mind is "at rest") and the executive control system (that is, our executive skills) have come to a more nuanced understanding, both of the relationship between these two systems and of the role that mind wandering may play in some key cognitive processes.

Two researchers at the University of California at Santa Barbara, Mooneyham and Schooler, traced the progression of research on mind wandering. Initially the focus was on the negative impact of this cognitive state on any number of processes and behaviors—for example, reading comprehension (how annoying that is when you’re trying to read a text and find yourself thinking about something else!), test taking (and we’re talking big tests like the Graduate Record Exam, the test required by many graduate schools), and impulse control (that is, choosing a later, bigger reward instead of a smaller, immediate one)—and everyday activities such as driving.

This research spans the first decade of this century, but at the beginning of the second decade the focus began to shift. Now it appears there may be some benefit to mind wandering after all. Actually, Mooneyham and Schooler reported that this idea was first raised back in the 1950s by a researcher named Jerome Singer, who conducted a slew of studies on daydreaming. Singer proposed that there were benefits to this pesky human behavior, which has been coined *positive constructive daydreaming*. Singer maintained that daydreaming is essential to a satisfying mental life, and a satisfying mental life is essential to healthy living. In fact, his research correlated daydreaming with imagination, curiosity, creativity, planning, problem solving, attention, and even the ability in young children to delay gratification—in other words, mind wandering actually supports executive functioning in many cases rather than impeding it. In “down times” or when the default mode network is activated, researchers believe that this kind of thinking continues to go on “in the background.” Have you ever had the experience of trying to solve a challenging mental problem, giving up in despair and going for a run or engaging in some mindless physical activity, and finding in the midst of that activity that the solution to the problem comes to you? It turns out it’s not magic after all—it’s the default mode network doing its thing.

But just as we’ve recognized the benefits to mind wandering, we’re now becoming aware of threats to our ability to engage in this activity that is critical to cognitive and mental health. Our devotion to technology, in all its myriad forms, may be undermining our ability to daydream and reap its benefits. Researchers at the University of Southern California and MIT (Immordino-Yang, Christodoulou, & Singh) published a provocative essay in 2012 in which they hypothesized that being tethered to cell phones and social media might disrupt the ability of the default mode network to engage in its work. In addition to contributing to problem-solving skills,

these researchers note that this network is also involved in introspection and social-emotional learning. They describe the executive control system as governing activities that involve “looking out” to the outside world and the default mode network as associated with “looking in.” To fully understand what’s happening in the outside world, humans need time for reflection and introspection—and in the absence of that, not only our “inner life” suffers, but also our ability to connect with others and understand experiences on a deeper level.

The essay by Immordino-Yang and her colleagues is particularly directed at the impact of technology use on young people: “If youths overuse social media and spend very little waking time free from the possibility that texts will interrupt them, we would expect that these conditions might predispose youths toward focusing on the concrete, physical, and immediate aspects of situations and self, with less inclination toward considering the abstract, longer-term, moral, and emotional implications of their and others’ actions.” They make the point that the brains of young people are still developing, and that may make them particularly vulnerable to this cognitive shift. But aren’t adults at risk for the same negative impact of overuse of technology?

The bottom line is this: If we are paying attention to technology, what are we *not* paying attention to? And is it something important?

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Defining a Path *Planning/Prioritizing*

What It Is

The ability to create a road map to reach a goal or complete a task. It also involves being able to make decisions about what's important to focus on and what's not important.

What We Know about It

This executive skill domain encompasses two somewhat separate but linked skills: planning and prioritizing. In a sense, the ability to set priorities is an essential part of the planning process, but we believe it's so important that we've incorporated it into our label so that the concept does not get lost. If the metaphor of creating a road map works to help us understand planning, then prioritizing helps us decide on the most efficient and direct route. Without prioritizing, to continue the metaphor, we'd be likely to go off on side spurs just because they look interesting.

Research on brain functioning has shown that primates and humans share some aspects of frontal lobe functioning, but scientists at Oxford University recently reported in the journal *Neuron* a study in which they compared the human prefrontal cortex to that of one of our relatives, the macaque monkey. They identified 12 distinct regions in the prefrontal cortex and found that humans and this monkey species had 11 regions in common. The part that is unique to humans (technically the "lateral frontal pole prefrontal cortex") is

associated with strategic planning, decision making, and multitasking. Thus one might argue that these aspects of executive functioning may be the most evolved.

In terms of our executive skill domains, planning overlaps with metacognition more than any other, although there are elements of organization, time management, and goal-directed persistence as well. The key steps involved in planning are threefold: (1) identify the end point or the purpose for the plan, (2) determine the critical elements that must be included in the plan, and (3) list the sequence of steps that need to be followed to carry out the plan. But for planning to be successful, there are additional issues to be considered, such as:

- What materials need to be gathered to carry out the plan. This may include tangible materials as well as information (for example, data, facts, evidence, background material, or even a list of ideas).
- What skill sets are needed by those implementing the plan.
- Reasonable timelines for carrying out each step.
- If the plan is to be implemented by multiple people, the most effective way for them to coordinate activities (this gets into project management).
- Whether this plan can be improved. This last step involves reviewing each step of the plan and looking at the answers to all the questions above and determining whether they are accurate and complete.

Given all that goes into planning, we now understand why it's not a skill possessed by monkeys.

What We Can Do about It

Because of the overlap with other executive skills, we will focus on three critical aspects of planning: defining the desired outcome, identifying the key elements for the plan, and determining the sequence of steps that will bring you to the desired outcome.

How to Modify the Environment to Make Planning and Prioritizing Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Think about what tools or materials might make planning easier for you. Some possibilities:

- ♦ Putting up a large white board that can be used both to develop the plan and to track your progress following the plan. Some people need lots of space to work with, and a large white board may serve this purpose.
- ♦ Using Post-it Notes to develop your plan. This is particularly useful if you have trouble sequencing the steps. Put each step on a separate Post-it as it occurs to you and then rearrange the Post-its until the order seems accurate.
- ♦ Using technology, such as Gantt charts, to help with the planning process. See the suggestions below in the “Technological Supports” section (page 184).

- **Modify the task.** Some people do planning effortlessly. Whether it’s a household project or a work task, they seem to conceive of the idea and then begin working on it in a logical order, never leaving out a step or running into obstacles. If that’s not you, then the best way to modify the task is to break it down into basic elements using a template to guide you through the process. A Planning Template you may find helpful appears below and is available for downloading and printing at www.guilford.com/dawson7-forms. It’s followed by a completed example.

- **Solicit help from others.** If the Planning Template is not enough to guide you through the planning process, then ask someone else to help you. You may be tempted to choose someone who is pretty adept at planning, but bear in mind that people who are exceptionally strong at this skill may not even know how they do it. There’s some research to show that the best teachers are not necessarily those with the highest level of expertise, since they don’t remember how they got to be that good. Just having someone to bounce ideas off, even if they’re not perfect planners themselves, could be a useful way to develop this skill.

How to Improve Your Planning/Prioritizing through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity that is a good starting point for developing your planning skill.** Since this is a complicated skill, we suggest you

Planning Template

Step	Component	
1	What is your desired outcome or goal?	
2	Brainstorm below everything you need to think about in carrying out your plan.	
3	What materials do you need to gather to complete your plan? These should include materials you already have as well as things you may need to purchase or requisition.	
	Materials already available	Materials to purchase

(continued)

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Planning Template *(continued)*

4	What steps will you follow to carry out the plan?		
	Steps (in order)	How long will it take?	End date (interim deadline)
5	Do you have the necessary skill set to carry out the plan? If not, how will you handle this?		
6	If others are involved, who will oversee the project? Who will do what?		
	Who	Task	Completion date
7	<p>Review: Revisit each section above and ask yourself, “Is it accurate? Is it complete?” Check (✓) when done.</p> <p> <input type="checkbox"/> Step 1 <input type="checkbox"/> Step 2 <input type="checkbox"/> Step 3 <input type="checkbox"/> Step 4 <input type="checkbox"/> Step 5 <input type="checkbox"/> Step 6 </p>		

PLANNING TEMPLATE EXAMPLE

Step	Component	
1	<p>What is your desired outcome or goal?</p> <p><i>Plant a vegetable garden.</i></p>	
2	<p>Brainstorm below everything you need to think about in carrying out your plan.</p> <p><i>Figure out how large the garden should be, decide what kinds of vegetables I want to plant, research what grows well in our area, figure out what materials I might need (garden tools, raised beds, soil, seeds), research where to buy the things I don't have, decide where to put the garden (hours of sunlight, away from woodchuck, deer), collect seed catalogues or visit farm stores, buy or order seeds, create a timeline for planting seeds, figure out which vegetables I want to plant from seeds and which I want to purchase seedlings for (for example, onion sets).</i></p>	
3	<p>What materials do you need to gather to complete your plan? These should include materials you already have as well as things you may need to purchase or requisition.</p>	
	Materials already available	Materials to purchase
	<p><i>Rake</i></p> <p><i>Hoe</i></p> <p><i>Trowel</i></p> <p><i>Garden hose</i></p>	<p><i>Raised beds</i></p> <p><i>Soil</i></p> <p><i>Manure</i></p> <p><i>Fertilizer</i></p> <p><i>Seeds and seedlings</i></p> <p><i>Sprinkler and timer</i></p> <p><i>Tomato stakes</i></p>

PLANNING TEMPLATE EXAMPLE (continued)

4	What steps will you follow to carry out the plan?		
	Steps (in order)	How long will it take?	End date (interim deadline)
	Decide on size and location of garden	1 hour	September 1
	Order materials for raised beds from garden catalogue	30 minutes	September 2
	Order soil from garden store, buy manure	15 minutes	September 10
	Construct the raised beds (hardware, soil, and manure)	3 hours	September 15
	Order seed catalogues online	1 hour	December 30
	Order seeds	1 hour	February 15
	Prepare soil and plant early seeds	1 hour	April 30
	Plant seeds at appropriate times and intervals (for example, lettuce every 2 weeks for a continuous crop)	15 minutes for each planting	April 30–August 1
	Set sprinkler and timer (to water crops on a regular schedule)	30 minutes	June 1
	Weed/harvest crops	15 minutes daily	May 15–September 30
	Prepare beds for winter (clean out beds, add fresh manure)	1.5 hours	October 15
5	Do you have the necessary skill set to carry out the plan? If not, how will you handle this? <i>I'm not good at construction—I'll get my husband to help me with putting up the raised beds.</i>		
6	If others are involved, who will oversee the project? Who will do what?		
	Who	Task	Completion date
	Husband	Help construct the raised beds	September 15
7	Review: Revisit each section above and ask yourself, “Is it accurate? Is it complete?” Check (✓) when done. <input checked="" type="checkbox"/> Step 1 <input checked="" type="checkbox"/> Step 2 <input checked="" type="checkbox"/> Step 3 <input checked="" type="checkbox"/> Step 4 <input checked="" type="checkbox"/> Step 5 <input checked="" type="checkbox"/> Step 6		

choose something you *really want to do* (like planning a vacation) rather than something you feel you *have to do* (like planning a yard sale to get rid of stuff you no longer use). If you can practice planning elements in the context of a highly desired outcome, you can apply the skills you learn in the process to less desired activities down the road. You may also want to start with an activity that has few steps and is not very complicated. In fact, if you feel like you're not very good at this at all, start with something you already do fairly well (such as doing the laundry or going to visit your parents in the next state), just so you can get some practice with breaking down the planning process into its component parts.

- **Set your goal.** Although we suggest you start with planning a desired activity that's easy, your goal may be learning how to plan a more complicated activity that falls into the "have to" category rather than the "want to" category.

- **Set a deadline.** We suggest the deadline you identify be connected to the "have to" goal. Be realistic—you may decide you need several weeks of practice carrying out simple planning projects for desired goals before you tackle the "have to" goal.

- **Make a specific plan.** We've given you a template for doing this. It may need to be modified to fit the project you have in mind, but we think we've included the basic questions you need to ask yourself.

- **Externalize the behavior you're working on.** That white board might come in handy here. You could also reproduce your plan using a Post-it Note on your computer and program it to be on the desktop when you turn on your computer every day.

- **Select a reward.** This is easy during the practice phase, because you're using "want to's" for practice—following the plan gets you to the reward automatically. When you finally tackle the "have to," you should look for an extra-fun reward at the end. We also recommend building in interim rewards for carrying out the various steps in both the planning process and the planning implementation process. See the Reward Menu in Chapter 4 for ideas.

- **Write down two or three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

There are more apps for planning for smartphones, tablets, and laptops than can easily be counted. Some are free, while others, especially those targeting

a business clientele, can cost \$100 or more. There are many geared to specific kinds of planning, such as wedding planning, meal planning, financial planning, travel planning (routes and checklists), and home decorating, just to name a few. If you think you might like to go the electronic route for planning, we recommend that you start by downloading one of the free apps (or the free versions of apps) to try them out before spending any money. Some are complicated, and many assume you have good planning skills to start with—these, for example, begin with identifying the sequence of steps that need to be followed. This is different from the Planning Template we've given you in this chapter, which has you begin the planning process by brainstorming and writing down everything you need to think about before you begin the sequencing process. You may want to use our Planning Template and then transfer the steps to whatever app you choose to use. The advantage of an electronic app is that you can program alarms and reminders.

If, after trying a free version, you decide an app is the way to go, read the reviews for any app you're considering. Look at how much technical support the app provides you and whether reviewers describe the app using terms such as *intuitive* or *user-friendly*. You may want to take a look at apps developed by Omni Group (www.omnigroup.com). Of the ones we looked at, this one offers more detailed explanations and videos to help the purchaser understand how to use the various apps offered. Although Omni Group has project management apps aimed at businesses that are fairly complicated, the OmniFocus app seems to be geared more to general use, applicable to both home and work projects.

As an alternative to OmniFocus, you may want to look at David Allen's materials. David Allen is a time efficiency expert who developed an approach called "getting things done." He has an enthusiastic following, and if you visit his website you can learn about training opportunities, podcasts, services, and products that explain and support his system. If you want a more objective appraisal of how well his system works, we recommend you go to Amazon.com and check the reader reviews for his book, *Getting Things Done: The Art of Stress-Free Productivity*. There are almost 1,400 reader reviews, over half of whom gave the book a five-star rating. One five-star reviewer wrote, "This book has changed my approach to my work life." But if you're skeptical that a book could do that, look at the more critical reviews. One wrote, "I never finished reading this book. I am a failure at getting things done."

What struck us as we checked out apps and looked at technology options is that there is no system out there that works perfectly for everybody. And keep in mind that most systems and apps were probably developed by people who were naturally good at planning or naturally good at navigating fairly complicated

technology. If you do not fall into one or both of these categories, spend your money carefully.

What It Looks Like in Practice: Learning to Plan at Work and at Home

Zach's job as a midlevel manager for a small specialty import/export company was pretty straightforward. He had to carry out a fixed set of activities according to a procedure that was well established. Since his planning skills were weak, the job suited him, but he really wanted to move up in the company, and the only way that was likely to happen was if he initiated new projects. He found he had no trouble coming up with great ideas that, if developed, would either offer enhanced service for customers or increased revenues for the company. When he shared those ideas with higher-ups, they agreed that they had potential and encouraged Zach to move forward on them.

Unfortunately, his few efforts at bringing his ideas to fruition had failed terribly. When he tried to plan out the process, he either found himself unable to identify a logical first step or got bogged down in details and contingencies that led to incredibly complex plans that were impossible to carry out. For example, he'd noticed that the local university sponsored a craft fair every few months featuring local craftspeople. Zach's company was a fair trade company that benefited similar craftspeople in Third World countries, and he thought his company's purpose was a good match for the mission of the craft fair organizers. He also thought that the goods they imported would appeal to the same customer base if only someone could convince the fair organizers to expand beyond local craftspeople. His supervisor encouraged him to pursue the idea, but he couldn't figure out what to do first or how to go about finding out who at the fair would be best to talk with. So he let it slide.

Similar issues arose at home. Zach was pretty handy with tools, and he had great ideas for woodworking projects he'd like to pursue. They had a room in his house that they called a "den" (it was small and cozy with a couple of comfortable chairs and a fireplace) that just cried out for built-in bookcases. Zach had made freestanding bookcases before that came out really well. But he'd never tried to build them into the wall, and he couldn't figure out how to go about it. He'd made the mistake of sharing his idea with his wife, who loved it, and she kept asking him when he was going to get started. Whenever she brought it up, he mentally kicked himself for sharing the idea with her in the first place.

At work, a few weeks after he'd told his supervisor about his craft fair suggestion, Zach's supervisor asked him whether he had moved ahead or done any more thinking about it. Zach had been hoping against hope that no one at work would remember, so he felt some panic at this minute. But, nothing ventured. . . .

The dialogue went like this:

ZACH: Honestly Brian, I have thought about it, and I'd like to pursue it, but I don't quite know where to start. I'm sure you know, the last couple of times I tried to map out what seemed like a good project, I basically got lost in the weeds—way too much detail.

BRIAN: I've got some time at the end of the day today. If you want to take some time to talk it through, I'd be happy to. I think the idea might have some legs.

ZACH: Jeez, thanks Brian, that would be great! I'll be by at 4:30.

BRIAN: No problem; see you then.

Zach approached the meeting with a combination of anxiety and hope. The anxiety came from knowing he was going to expose, to his boss, a real weakness and that there was a risk that this could close the door on advancement with the company. On the other hand, just maybe this was a step toward improving a skill that was definitely an impediment to advancement.

He sat down with Brian and restated the goal of his plan: creating a new outlet for the crafts of their clients. Brian got right to the issue. "So, where are you stuck, Zach?"

Wow, Zach thought, he's not going to beat around the bush. "I don't know who to approach at the craft fair about my idea."

Brian asked, "How much do you know about the fair, about who runs it, who the sponsors are, who organizes it?"

"Not a lot really," Zach said. "I saw it advertised on the university community events website, and it said for more information, go to a link provided."

Brian took some notes on a couple of Post-its, *market for crafts*, *website link*, and *person(s) in charge*. Then he said, "When I'm working on a plan, Zach, I start with the goal and then all the steps I can think of. I stick them on a blank board like the one in back of me. It's my planning board. I use Post-its because I can move them around and try out an order of events with the goal at the top. If I'm not sure that I have everything, I have someone from the department most relevant to the idea look at it and tell me if I need anything else. I try to

focus on the main steps to keep it moving forward, which helps to keep me out of what you call the ‘weeds.’”

Brian was good at his job, and Zach was a little surprised that Brian used what seemed like a pretty concrete and fairly simple process. He assumed that people who were good at planning did it all in their heads and didn’t need tools.

“This is great, Brian! I think I have a place to start,” Zach said.

Brian encouraged him. “Give it a shot, and let’s say we meet again in a week and you can show me what you’ve got. Is that enough time?”

Zach thought about his upcoming week. “Yeah, I can set up a schedule in my calendar to get some information, and that should be plenty of time.”

Over a 4-week period with weekly meetings, Zach, with Brian’s coaching, was able to flesh out a plan and weed out what threatened to bog him down. As it turned out, the university’s Office of Community Relations was responsible for the fair. Zach talked with one of the marketing people in his company and came up with a proposal. Zach met with the community relations director, who was intrigued by the idea of establishing a relationship with a fair trade company with Third World relationships. Her only concern was the threat that the new goods might pose to the local craftspeople.

Zach, too, had wondered about this. The marketing person had suggested framing the advertising that their company could offer as a way to increase traffic to the fair. Since the company also had an interest in good community relations, Zach suggested they offer to advertise, as part of the craft fair promotion, both their own crafts and those of the local craftspeople, along with contact information. The university director saw this as a win for all parties, and a few months later the plan was in place and resulted in a positive response and increased interest from the community. Zach and his supervisor couldn’t have been more pleased with the outcome, considering that the idea had nearly died on the vine.

Excited that he might have an approach, Zach brought up the bookcases with his wife, whose initial response was to smile and roll her eyes.

“No, I have a plan, really, kinda,” Zach said with a smile. “We both like the idea, but I haven’t moved on it because I didn’t know how to approach it. So, if you’ll give me a hand, we can plan it out.” She was still skeptical.

“Listen,” Zach insisted, “We watch HGTV and *This Old House*. I can’t believe I never thought of it before, but *This Old House* has home improvement ideas and plans—tools, materials, everything!”

They discovered a ton of information about bookcases on the Internet. They selected a design that looked manageable, listed the steps, and Zach mapped out a timeline. With both of them involved, it turned into a fun project, and they

thought about it as a model for other home improvement ideas. The process also helped Zach realize that there are any number of tools out there, depending on the goal of the project, that can provide help with the road map to get to the goal.

Why It Worked

- **Zach admitted he needed help.** He may have been ready to do this because he'd already experienced a number of failures, but planning was clearly a skill he didn't have, and he knew it. Of all the executive skills, this may be one of the more challenging ones to attempt to improve on your own, because how do you develop a plan to improve your planning skills if the very act of planning is the part you're missing?! In Zach's case, he had a sympathetic supervisor who was willing to help him out. If you're in a position where you suspect that your supervisor will hold your requests for help against you, then maybe there's someone else in your workplace who you can turn to. This is also the kind of thing that job coaches help with, so you may be able to hire someone outside of the workplace to teach you this skill.

- **Zach was willing to take a risk.** This may be another way of reiterating what we just said, but we want to emphasize it by giving the thought its own bullet. Zach could continue to pretend that he had no skill deficits that interfered with his ability to do his job at the level his supervisor wanted him to, but where would that have gotten him? He would have felt less and less competent and more and more dissatisfied with his work, knowing that he was letting himself down as well as the company. Or he could acknowledge his weakness and ask for help. By the way, when we've done presentations in the workplace about executive skills, what we've been told is that it is such a relief to people to be able to acknowledge that they're not good at everything. Not only does it become easier for them to say, "Hey, I've got a problem with this," but they also suddenly realize that the *norm* is for people to have both strengths *and* weaknesses when it comes to executive skills.

- **Zach was able to take what he learned at work and apply it at home.** He understood that part of what worked for his job was the collaborative relationship he now had with his supervisor. He still needed his supervisor to help him create the plan and stick to a timeline, but he noticed that it improved his relationship with his supervisor. It occurred to him that his wife might help him with planning for home projects, and not only would it mean they could get things done, but it would be a way for them to spend time together and strengthen their own relationship.

14

Clearing Clutter *Organization*

What It Is

The ability to create and maintain systems to keep track of information and materials.

What We Know about It

When we looked at how researchers define executive skills, we found that they often combined organization with planning. (This is Peg speaking:) As I wrote earlier, in my presentations I often joke that I am *great* at planning and *lousy* at organization, so I know they are two separate skills. But when you actually start thinking about what organization is, you realize that it's probably more accurately depicted as a unique constellation of a number of executive skills, pulled together for the purpose—and here's our definition—of creating and maintaining systems to keep track of information or materials. Some of the skills that go into good organization include attention to detail, decision making, analytical thinking, problem solving, and planning/prioritizing.

If these skills are strengths for you, then you're probably great at creating organizational systems. But the key word in our definition is actually *maintain*. It turns out that maintaining organizational systems involves other executive skills, most prominently working memory, task initiation, and sustained attention.

Not surprisingly, given the complexity of organization, it's hard to localize

this skill in any particular brain region. Certainly frontal lobe functioning is key, but frontal lobes access other brain regions as needed. If the organizational scheme focuses on *spatial* organization (for example, how you organize your study), then there's a good chance the parietal lobe is recruited. But if the organizational scheme is associated with putting together a sequence of steps to follow (for example, the plan you follow to get your study organized), then the temporal lobe is likely to be accessed. But it's the frontal lobe that orchestrates this whole process and helps you make decisions about how to get and stay organized.

What We Can Do about It

Because this skill overlaps with so many others, for our purposes we focus on the organization of materials and information in space. People who are disorganized live and work in cluttered environments. This begins with the physical working space around them, but it also extends to how they organize information on whatever technology they rely on. In the following descriptions, we focus on two components of our definition: *creating* organizational systems and *maintaining* organizational systems.

How to Modify the Environment to Make Organization Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Since the physical environment is at the heart of organization, the act of modifying that environment falls more under how we practice the skill to get better at it than how we work around it to avoid the negative impact of weak organization. Perhaps the best way to modify the environment to reduce the impact of weak organization is to take a minimalist approach: get rid of everything in your environment that is not necessary for daily life. Depending on how cluttered your space is, this could be a major undertaking, in which case we recommend proceeding slowly. You might choose one small space to begin with—the odds-and-ends closet in your kitchen, for instance. If throwing away stuff is hard for you, then sort things into three piles: definite throwaways, definite keepers (the only things in this pile should be stuff you use at least once a week or seasonally, such as holiday wrapping paper) and a “not sure” pile. Put the “not sure” pile in a box, label

the contents and date it, close the box, and put it in your garage or cellar—someplace where you can get at it, but it's out of the way. After 2–3 months, if you've never opened the box, throw it out. (*No, do NOT open the box to look at the contents before you throw it out. Just toss it!*) Do the same thing with the seasonal stuff—put it in a box, label it, and store it. The only things left in the space you chose to start with should be things you use at least once a week.

- **Modify the task.** Many of the task modifications listed in the “Ways to Modify Tasks” table in Chapter 3 would apply here. We've adapted it for organization, as shown on the facing page.

- **Solicit help from others.** If you live with someone for whom organization comes naturally, one way to solicit help would be to see if you can do a trade. Can you get that person to take charge of some aspect of organization that's hard for you? Here's an example. (This is Peg speaking:) My kitchen closet grows clutter like weeds. Once or twice a year it reaches a point where it drives me crazy—well, it drives my husband crazy, who then starts making snide remarks about my messiness and *that* drives me crazy. This year, it came to a head just before Christmas. So I made a deal with him. In exchange for my wrapping Christmas gifts (something he *hates* to do), he agreed to clean out my closet. I even wrapped my own presents (preserved in the packaging they came in so that I wouldn't know what they were). So a couple of days before Christmas, he put on some of his favorite music and went to work. I know I would have done just enough to make it look fairly neat, but he was hard core. He threw away lots of stuff, and if he wasn't sure about throwing it away, he put it in a pile on the kitchen floor or directed me to a shelf in the closet where he'd collected questionable items. “Peg,” he said, “make a decision. And how many coffee mugs and tote bags do we really need, anyway?”

How to Improve Your Organization through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity that reflects your organization weakness.** You may know right away where to start, but if you don't, here's a fill-in-the-blank for you: If I tackled _____ (name the space), the quality of my life would improve (for example, I would feel calmer, I would be able to find things faster, I would be able to work more efficiently, my spouse or boss wouldn't give me such a hard time).

Task modification	Explanation
Make the task shorter or build in breaks.	Any task that requires organization can be chopped up into smaller pieces with breaks built in. Give yourself permission to do this.
Pair the unpleasant task with something that's pleasant.	Can you watch television while you sort through files? Football games take up a good chunk of time. You're sitting in one place anyway—can you pay bills or organize expense receipts during the commercial breaks?
Give yourself something to look forward to doing when the effortful task is done.	Look at the Reward Menu in Chapter 4 for ideas.
Break the task into very small pieces, list the pieces out, and turn them into a to-do checklist.	See the example on page 195 for study cleaning.
Use technology such as tablets and smartphones to build in cues and reminders.	We list a few apps later in the chapter, but alarms and reminder apps that come with most smartphones are a place to start.
Turn open-ended tasks into closed-ended tasks.	Getting organized is often an open-ended task because it has multiple components and there's often no obvious sequence of steps to follow. By analyzing what needs to be done and turning it into a to-do list or checklist, you make the task more manageable.

- **Set your goal.** Don't assume you'll be able to achieve your goal in a day. In fact, the rule about "baby steps" applies here as much as to any other executive skill we've talked about. The key will be to develop a plan (see "Make a Specific Plan" on the next page) that will allow you to proceed at a pace that is comfortable for you.

- **Set a deadline.** When disorganized people decide to get organized, they often underestimate how much effort this takes. Feel free to set a deadline that extends out weeks or even months (depending on the task you've chosen). It

helps to have an end point to keep you motivated, but the key to success is to be specific about the plan you make and to follow that plan as consistently over time as you possibly can.

- **Make a specific plan.** Use the Action Plan form provided in Chapter 4 to make your plan or devise one of your own. This skill should be an easy one to build in daily practice, especially in the beginning. Since we're talking about both *creating* organizational systems and *maintaining* them, the plan would have two parts. (This is Peg speaking:) For instance, my plan for getting my study clean and for keeping it clean is on page 195:

- **Externalize the organization behavior you are working on.** One way to do this is to take “before” and “after” pictures of the space you're trying to organize. Because when you begin the process you won't have an “after” picture, find a picture of a space that resembles what you want your final product to look like. We know of an individual who set a goal of clearing off his desk at work. This was a slow process for him, and as inspiration he would periodically take a look at a neat coworker's desk, just to remind himself of his goal.

- **Whatever it takes, stick to some part of the plan.** If on any given day you can't bring yourself to spend the 10 minutes you've promised yourself you would do, can you spend 5? Can you do *half* the daily task? Even doing some small part of your plan will help you maintain some behavioral momentum so that tomorrow it will be easier for you to get back on track.

- **Select a reward.** This could be tied to your organizational goal. Maybe there are some attractive storage containers you covet (go to the Container Store online for some great ideas). You could earn them bit by bit—give yourself 5 points for every day you follow your plan. When you have 50 points, buy a container. If necessary, award yourself fewer than 5 points if you're partially successful in following your daily plan. See the Reward Menu in Chapter 4 for other ideas.

- **Write down two or three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

We referred to using smartphone alarms earlier, but here are some organization apps you might want to take a look at:

PEG'S PLAN FOR A CLEAN STUDY

Step	Task	Time frame	When will you do this?	Done (✓)
1	Clear clutter off surfaces; get a card table, set it up in the middle of the room, and put everything on my desk surface and bookcase top on the card table.	Spend 10 minutes per day putting things on card table away (or throwing out)	Every night right after dinner until the job is done	
2	Sort books on bookshelves; decide which to keep and which to recycle or donate.	One shelf per day	Weekends (Saturday and Sunday when home)	
3	Clean out file cabinets.	One half drawer per day	Weekends (Saturday and Sunday when home)	
4	Clean out desk drawers.	One drawer per day	Weekends (Saturday and Sunday when home)	
5	Clean out storage boxes (large ones under desk, smaller ones on bookshelves).	One box per day	Weekends (Saturday and Sunday when home)	
Maintenance plan Every evening just before I brush my teeth, I will put away anything that's out of place on my study surfaces. I will allow myself an "in-box" tray to hold things I can't decide about; every Saturday morning right after breakfast, I will clean out the in-box tray.				

- **HomeRoutines.** This app allows you to create routine checklists for daily and weekly household chores. The best part of the app, though, is that it builds in detailed cleaning lists, tied to different “Focus Zones.” It also includes a built-in timer that you can set to 10 or 15 minutes that can be spent on “speed cleaning.” Finally, it has built-in to-do lists for one-off jobs, but the whole app can be customized to fit your needs.

- **Cozi Family Organizer.** Available for iPhone and iPad, this is a color-coded family calendar that can be shared among family members that tracks schedules for the whole family all in one place. It also includes shopping lists and to-do lists that can be shared, allows you to set reminders to make sure people remember what’s on the schedule, and will e-mail an agenda for the upcoming week to family members.

- **ChoreMonster.** *Parents* magazine rated this as one of the 70 Best Apps for Families in 2014. The app allows parents to manage their children’s chores, and kids can earn points for completing them. Points can be traded in for rewards (determined by parents or by parents and kids together), but they can also be used to win monsters at the “Monster Carnival.”

- **Inbox.** This is an e-mail management system that works on Google Chrome. It sorts your emails into categories such as “Travel,” “Purchases,” “Promos,” and “Social” (for example, social media such as Facebook) and gives you the option of dealing with the e-mail right away or choosing the “Snooze” function, which gets it off the e-mail list until you tell it to bring it back. This last function ends up being very satisfying to people who feel compelled to clean out the e-mail folder every day but want to postpone responding to the e-mail until a later point in time.

What It Looks Like in Practice: Clearing Out the Clutter

Robin’s organizational weaknesses affected her both at home and at work. At home, things had a way of piling up on any available surface—yesterday’s mail on the kitchen counter, catalogues on coffee tables, unread newspapers on the dining table. Now that her kids were grown, it was less of an issue (because at least the house didn’t fill up with their belongings, too), but she could see that it was getting to her husband, who happened to be about as neat as she was messy. And she really didn’t like living in chaos. Not only that, but she had a

tendency to lose important things—bills, credit card statements, cards for doctors' appointments, coupons she'd clipped that could save her lots of money if only she could find them before the expiration date.

She was a little more controlled at work. She was very careful about the critical paperwork, carefully putting things in labeled folders as soon as new projects or clients entered the picture. But still, extraneous notes piled up on her desk, or papers that she wasn't sure where to file. And she was terrible at keeping track of expense receipts. She didn't know how much money she'd lost because she misplaced receipts or didn't get them turned in by the monthly deadline.

"At least it's not as bad as that TV show *Hoarders*," she'd tell herself as she looked around her cluttered kitchen. But even if the chaos was controlled both at home and at work, the combination of the disarray in both settings was really beginning to eat at her.

At work, Robin decided that the first thing to address was the expense receipts because taking care of this problem would provide its own reward in the form of cash back to her. Since she'd been able to use a folder system at work with some success, she decided she could extend this to store her receipts and created a folder for them. Most of Robin's expenses had to do with driving (for example, gas) and associated costs (for example, tolls, parking). She realized that the problem she initially needed to address occurred between the time she first got the receipt (for example, for gas at the pump) and where that receipt ended up (car floor, console, coat pocket, handbag). Then she had to collect the receipts together weeks later. She decided she needed a transitional storage location in the car, and for this she bought an accordion-style envelope file with five pockets she could label for the different types of expense receipts. She put this storage device on the seat beside her (in the console if she had a passenger), and she taped a sticky note to the car odometer to remind her to immediately file the receipt. On her phone she set a weekly voice reminder to move the receipts from the car to her work folder. To help her get a handle on the other work papers that piled up, Robin enlisted the help of her organized coworker to help her decide what other file categories she needed to clear off the papers she couldn't make a decision about right now.

At home, Robin asked her husband to help her set up a storage system with categories for the "stuff" that accumulated on surfaces. He suggested they get a baseline on the number of different categories needed by taking all the stuff off the various surfaces and organizing it into categories. That helps them decide what type and how many different storage systems they needed. Robin, operating from the "drudgery loves company" point of view, asked if twice weekly her husband would help her pick up, and they agreed on a day and approximate time

when this would take place and both put reminders on their phones. While her husband saw a silver lining in this plan if it led to improved organization on Robin's part, he was wary that it would become solely his job. Robin assured him that she wanted to improve her skills and not just hand off the job to him and that it was the company during the cleanup that was important. Convinced and wanting to encourage Robin, he offered that if she could keep the system going, twice a month they would go out on a special date of her choice for dinner, a movie, or theater.

Why It Worked

- **It was the right time!** Sometimes interventions work because you've reached the tipping point. Robin's chaos was beginning to bug her. In the past, it had made her sad and a little frustrated, but now it felt like it hit her over the head starting from the moment she got up in the morning. It was also the right time because, with her kids out of the home, the problem didn't seem quite so massive. The advice we give to parents and teachers regarding chores and homework for kids is that *the end should be in sight when the child begins the task*. In Robin's case, it now felt like "getting organized" was actually achievable. And here's the good news about organization. Once being neat becomes the standard, it's really hard to go back to being messy again. (This is Peg speaking:) At least that's been my experience (too bad it took me about 50 years to start getting neat)!

- **Robin prioritized.** At work, she decided the place to start was with developing a system to manage expense receipts. Not only did this make sense because there was a reward built into pulling this off (she'd actually get paid for her expenses), but it was a source of tremendous frustration to her—she wasted time looking for things and emotional energy getting angry at herself for losing things. At home, her file cabinets and desk drawers might still be messy, but at least she didn't have to look at those all day long. She knew she'd feel better when surfaces were decluttered, but since this bugged her husband as well, she felt that they'd both feel better if she tackled this issue first.

- **She enlisted help from an "expert."** In Robin's case, she turned to her husband. Some people pay for the assistance of organizational coaches, but Robin knew her husband had the skill to help her. Furthermore, he knew how her mind worked, which increased the likelihood that the system they came up with would be one she would be able to keep going over the long term.

- **She collected data before designing the system.** Her work disorganization had more structure to it (a specific issue with a finite number of materials and tasks to keep track of) than her home disorganization. Robin's husband's idea of categorizing the material that contributed to the clutter was a necessary first step to designing an effective organizational scheme. It also turned "clutter" into a problem to be solved, and Robin loved problem solving, so it became a very appealing first step in addressing the problem.

- **She created a weekly schedule to follow and included accountability.** When people make resolutions, they often create a schedule to go with it (for example, Monday, Wednesday, Friday in the gym at 6:00 A.M.—be there!). But if you involve someone else in that schedule, there's a greater likelihood that you'll follow through. How many times would Robin be able to cancel her cleanup times with her husband before she would risk hearing those teasing comments he'd made in the past that had started getting on her nerves well before she decided to take action? And since her husband knew that Robin would need his support to make this work, he, too, was reluctant to cancel their appointments.

- **She built in a reward.** Interestingly, it was Robin's husband who came up with the idea of a reward. As with the scenario for emotional control (see Chapter 10), people often feel they don't deserve to be rewarded for things they feel they should be doing anyway. Robin's husband knew what she liked, and she jumped on the idea when he suggested it. But don't wait for someone else to suggest a reward—keep in mind that this can be a critical component contributing to the intervention's success.

15

Sticking to the Schedule *Time Management*

What It Is

The capacity to estimate how much time one has, how to allocate it, and how to stay within time limits and deadlines. It also involves a sense that time is important.

What We Know about It

Time is complicated. Here's a brief summary of how we develop our grasp of time. Very young children live "in the moment," estimating time only when prompted to pay attention to it and then gauging time based on their own actions (how long it takes them to do something). Around age 5 or 6, they begin to be able to equate one time span to another (how long it takes to eat breakfast compared with how long it takes to get dressed). Their ability to mark time increases when they are taught to "count time," although their counts don't exactly line up with the seconds that pass. It's not until about age 10 that children count time on their own without prompting from an adult. From that ability to count time comes the ability to estimate time. And time estimation is a key skill that underlies time management.

It turns out that time perception and time estimation activate different parts of the brain depending on the length of the time interval involved. If we're talking milliseconds, the motor system, governed by the cerebellum, is

implicated. If we're talking hours or days, circadian rhythms take over (controlled by the suprachiasmatic nuclei). But if we're talking seconds and minutes (required for counting and estimating time), the prefrontal cortex comes into play—that is, executive skills.

Other skills that impact time management include several of the executive skills we've already talked about: task initiation, sustained attention, and planning are integral pieces of time management. This suggests that if an individual is weak in any one of these skills, there's a good chance that time management is also weak. It also happens that emotions affect time perception as well. Fear distorts time and leads people to perceive fearful events as lasting longer than they really do. And severely depressed individuals tend to perceive time as being slower than it is. On the other hand, people who experience strong positive emotions, such as happens in the early stages of falling in love, tend to feel that time flies by faster than it really does.

Here's another fun fact about time: dopamine is the main neurotransmitter involved in time processing. This means that if dopamine levels are low (as is the case in individuals with ADHD), time perception distortions arise. ADHD experts such as Russ Barkley have maintained for some time that an attention disorder, at root, involves time distortions—which is why people with ADHD chronically run late, lose track of time, or underestimate how long things will take. The relationship between dopamine and time perception likely helps account for this.

What We Can Do about It

First of all, because other executive skills are involved in time management, make sure this is the skill you want to work on. When we talk about time management weaknesses, we generally focus on people who struggle with time estimation or who lose track of time. Some people who struggle with time management get so caught up in what they're doing at the moment that they fail to notice when they've run out of time and their schedule calls for them to be somewhere else or to be doing something else. Others have only a vague notion of how long it takes to complete a task or get somewhere, and they're chronically running behind schedule. It's conceivable that some people who can't estimate time get tasks done faster than they thought they would or arrive early for appointments, but in general this is not seen as a problem either by them or by the people with whom they live or work! And then there are some with a

combination of the two problems. These people often insist that they have time to *do one more thing* before they have to leave or get to the next scheduled event.

How to Modify the Environment to Make Time Management Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** We know people who set every clock in their house and their car ahead by 10–15 minutes to help them compensate for being chronically late. (You might think this wouldn't be effective since you'd know you had set your clocks ahead, but most of us depend so much on quick glances at our watch or phone that we forget easily. It's worth trying.) We know friends and family members of people with weak time management who achieve the same end by deliberately telling them the wrong time for the start of an event (such as a dinner engagement or family party). Another strategy is to build in alarms to go off 10–15 minutes before a scheduled activity is set to begin. Bear in mind that if you set the alarm too far in advance, you may once again lose track of the transition point because you go back to being fully engaged in what you're doing at the moment.

- **Modify the task.** We suggest you do this first by creating a daily schedule. You don't have to plan out your whole day—in fact, we recommend that you don't, since people with time management weaknesses tend to find this aversive. Write down the day's "have-to's," and next to each, write when you hope to start the task. Then estimate how long you think the task will take (we think time estimation can be improved through practice). Later, when you do the task, write down the actual start and stop times. Finally, compare your estimate with the actual time. A sample scheduling chart is shown on page 203 and is also available for downloading and printing at www.guilford.com/dawson7-forms.

If keeping a chart seems daunting, choose one task a day to try this with and see how it goes. If your actual start time consistently is much later than the time you plan to start, you may want to read about task initiation in Chapter 11 and begin with that skill. If you find that you frequently fail to complete the task despite starting it on time, you may want to read about sustained attention in Chapter 12. And if in the course of doing this you realize that poor planning or prioritizing is an interference, check out Chapter 13.

- **Solicit help from others.** Ask someone to cue you. Of course, you can

Today's Plans

Task	How long will it take?	When will you start?	Actual start	Time finished	How close was the estimate? (+/- minutes)

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use technology to do this, but if you feel you might respond better to a live person than to an alarm on your smartphone, ask a partner or a coworker to check in with you to see how you’re managing your time. We worked with a physician once whose difficulty sticking to a schedule put his job at risk (the perils of managed care!). We arranged to have his nurse interrupt him 5 minutes before the scheduled end of his appointments. She gave him a random message, but the point of the interruption was to cue the doc that he needed to wrap up the appointment within 5 minutes.

How to Improve Your Time Management through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

• **Identify a task or specific activity that reflects your time management weakness.** There are several ways to think about how to identify a place to begin, and your choice may depend on your analysis of your biggest time management problem. An *If . . . , then . . .* chart to help you make the decision follows:

If . . .	Then . . .
You are chronically late getting started on tasks.	Focus on starting on time.
You get started on time but underestimate how long it will take to do the task.	Work on improving time estimation skills within a task.
You get lost in whatever you’re doing and don’t make timely transitions between tasks.	Work on finishing tasks on time.
You have trouble with all three of these.	Choose <i>one</i> recurring task or activity and focus on all three in your intervention design.

- **Set your goal.** In all three of the time management scenarios, your goal can be stated in terms of time. Examples:
- ♦ “My goal is to start a task within 10 minutes of my planned start time.”
 - ♦ “My goal is to estimate accurately to within 5 minutes of my ‘guess.’”
 - ♦ “My goal is to finish a task within 10 minutes of my anticipated finish time.”

As with other executive skills, we always suggest you start small and work from there. Choose one task or one activity to start with (for example, getting to a weekly staff meeting on time, being in the car ready to take the kids to school by 7:30 every morning, being home from work within 5 minutes of the stated time 4 days out of 5). When you achieve 85–95% success with your first goal, you can move on to another one.

- **Set a deadline.** We don't mean a deadline by which you'll have corrected all your time management problems, but a deadline by which you will have achieved success on the first task you decided to handle in "Setting Your Goal." As you meet the first deadline, decide on a next step and set a deadline for that.

- **Make a specific plan.** Use the Action Plan form provided in Chapter 4 to make your plan or devise one of your own. The time and frequency of your practice will depend on what task or activity you've chosen to start with. If getting to a weekly staff meeting on time is the goal, you'll practice this on staff meeting day (although if you wanted to fit in some extra practice, you could build in the same prompts or transition strategies the other 4 days of the work week just to get used to what it feels like). For time management, as we've defined it, the cues you build in will be critical to your success. Setting a recurring alarm on your smartphone might be the easiest cue.

- **Externalize the time management behavior you're working on.** Visual cues (signs, Post-it Notes) or auditory cues (smartphone alarms) can be created as reminders, but we also recommend using visual imagery as a rehearsal strategy. If you're working on getting out the door on time in the morning, then when you climb into bed the night before, walk yourself through the process in your mind: getting up when the alarm goes off (rather than hitting snooze), going through your morning routine step-by-step, checking your watch from time to time to determine whether you're on track, picking up speed if you're not, and turning on your car engine and looking at the clock on the dashboard to see that it reads the time you were shooting for.

- **Select a reward.** This could be tied to the time you've saved by doing things efficiently. For example, if you get to work on time, you could reward yourself by scanning the headlines on your favorite news website before you begin your day's work. Or check the Reward Menu in Chapter 4.

- **Write down two or three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to the answers daily.

Technological Supports

We referred to using smartphone alarms earlier, but the productivity section of your app store may give you other ideas. Here are a couple that we like:

- **Pomodoro.** We described this technique/app in Chapter 12 because it helps with sustaining attention, but it's worth mentioning again here. Breaking your workday into 25-minute segments, with 5-minute breaks, may help you learn to manage your time more effectively, especially if you combine it with practice estimating how much you can accomplish in each 25-minute segment. Check out the website, pomodorotechnique.com, for more information.

- **ATracker/ATracker Pro** is an iPhone or iPad app that enables you to track how you spend your time based on your own customizable categories. It's easy to set up, you can set alarms to prompt you to begin an activity at a certain time, and you can easily track how much time you spend on any activity by tapping the activity to start and stop it.

- **RescueTime** is a desktop application that keeps track of how you spend your time across the workday. It records what websites you visit and tracks how long you spend on each at any given time. There's a free version as well as a paid subscription service that issues weekly reports with time breakdowns. It classifies websites as either productive or wasteful and lets you know how much time you spend on each. You can also set goals and limit your access to wasteful sites according to your own rules.

What It Looks Like in Practice: Meeting Deadlines and Getting to Things on Time

Gabriel enjoys his job and his coworkers, and he is valued by his company as a skilled analyst. But his last two performance reviews noted his problems with time management. His manager told him that these issues could impact future opportunities for promotion since his tardiness impacted the work of others on his team. Gabriel resolves to improve his time management skills (he hopes!), but he doesn't want to take on too much at once. He meets with his manager and asks her what area she thinks he should address first. She says his weekly product and cash flow analysis that is due at 10:00 A.M. on Monday is a priority because the rest of the team needs this information to complete their reports. Gabriel has typically been late with this report because, although the

information he needs is available, he usually gives himself insufficient time to complete the report because he is trying to get some other task done first (just one more thing and then I'll start!).

His first step is to get a reliable estimate of the time he needs for preparation of the report. Since the task is pretty familiar, he is able to establish a minimum/maximum range of 80–100 minutes. He sets up reminders on both his computer and phone calendars for Mondays at 7:45 A.M. He then sets up two alarms on his phone. The first is at 8:00 A.M., and it signals to him that he has 15 minutes to finish or close out of any other projects he is working on. The second is at 8:15 and signals that he needs to stop what he is doing immediately and begin working on the analysis. His manager and one of his team members have agreed to be “timekeepers” for him and will give feedback on the timeliness of his report. Gabriel sticks with his plan, but he notices that for the first 2 weeks stopping 5 minutes before it's time to start the report makes him feel like he's “wasting time.” His coworker reacts with humor to this and points out that he “gains” the time on the other end, a thought, oddly, that has not occurred to Gabriel until now.

Home is a different issue. Gabriel's wife is already the timekeeper, and his lack of time management is a source of near constant frustration and irritation to her. Being late for both leisure and social events, in addition to being frustrating, is an embarrassment and has made his wife reluctant to make plans with their friends. When she does make plans, friends routinely ask if the plan is for “real time” or “Gabriel time.” Since Gabriel really enjoys going out with his wife and friends and has noticed her hesitation, he is definitely motivated to address the problem.

Gabriel tells his wife that he wants to work at being on time, or at least more on time, for social events, and he fills her in on what he is doing at work. She agrees to help him, but she is hesitant to rely on his good intentions, at least when the plan involves other people. They agree to start with social events (for example, dinner out, movies) that involve only the two of them. Gabriel makes the first dinner reservation and leaves it to his wife to decide on the departure time for the restaurant. He follows the same strategy as at work, setting two alarms, one at 20 minutes before departure to wrap things up and a “drop everything and go” alarm at 5 minutes. It works, and they celebrate this accomplishment, albeit small, at dinner. The next event, a movie, doesn't go as well for Gabriel, and they arrive late, having to choose a different movie from the one they'd planned on seeing.

Since the social events are their own reward, Gabriel decides he needs some additional incentive or disincentive to be on time. He regularly plays golf

in a foursome after work on Wednesdays. To his wife, he commits that if he is more than 10 minutes late for any event that they plan, he will forgo his golf date for the week. His wife is stunned, given his passion for golf, but it signals his intention to work on this, and it proves to be the incentive that Gabriel needs to be motivated.

Why It Worked

- **Gabriel was willing to recognize he had a problem.** Some people find this hard to do. They tend to make excuses or decide it's not *their* problem because they're not the ones getting upset. Gabriel's performance reviews helped him face the reality, and when your friends start talking about "Gabriel time," it's hard to ignore. Putting aside defensiveness for some is an important first step in coming up with a plan to address the problem. In Gabriel's case, it made it possible for him to approach his manager and enlist her help. At home, Gabriel was willing to listen to his wife and accept her advice to start with events that involved only the two of them rather than moving on to social events when friends were involved.

- **He established a baseline.** This was an important component of his work intervention plan because he needed to consider how long it took to write the report he chose as his first time management problem to tackle. In his case, he'd had a lot of experience with the task and could come up with a fairly reliable estimate for how long the report took to write. If he hadn't been sure, he could have timed it a couple of times to answer that question.

- **His plan was built on self-knowledge.** Gabriel knew that transitions were hard for him, so he built in two alarms to facilitate this. One alarm acted as a warning, and the second served as a *stop everything* signal. And because he knew that technology alone might not be enough, he sought the assistance of a coworker to provide encouragement and feedback.

- **His home plan incorporated successful elements from his work plan.** Gabriel found that the alarm system worked at the office, so he took it home when it was time to begin that piece of the intervention.

- **He revised his plan when his first effort didn't achieve 100% success.** Gabriel's work plan worked well, but he struggled a little more at home. When he failed on his second attempt, he decided he needed to up the ante.

- **He was willing to build in a negative consequence for not following his**

plan. Whenever possible, we recommend using rewards to shape behavior. But let's face it, sometimes the imposition of a negative consequence works better and faster. Giving up his golf game was a huge deal for Gabriel. Knowing that the game was on the line helped him keep his goal in his mind (or in his working memory, to be more precise). When that second alarm rang, he might say to himself, "Remember the golf game," and that would be enough to help him drop what he was doing.

- **He built in accountability.** By letting his wife know that his golf game was on the line, he knew he couldn't get away with cheating. This presumes, of course, that his wife is willing to hold him to account—probably a safe bet in this case, since it's evident she had become very annoyed by his chronic tardiness.

16

Shifting Gears *Flexibility*

What It Is

The ability to revise plans in the face of obstacles, setbacks, new information, or mistakes. It relates to adaptability to changing conditions.

What We Know about It

From a developmental perspective, we can measure flexibility in children as young as age 3 or 4, and there is some evidence to suggest that this particular executive skill reaches its peak by the age of 8 or 9. The good news is that people can learn to become more flexible—but it may be difficult for them to realize they need to learn this skill, since a defining aspect of flexibility is the belief that there's only *one* way to do something (or *one* perspective, or *one* right answer, or *one* solution to a problem).

In neuropsychological terms, flexibility is often defined as “set shifting”—that is, the ability to update or shift the cognitive strategies we're employing to perform tasks in response to changes in the environment. If you planned to go for a bike ride but found your bike had a deflated tire, and furthermore, you couldn't locate the bicycle pump you *know* you own, you would “shift set” by deciding to go for a walk or run instead, or to make a quick car trip to the bicycle shop to purchase a new pump—or maybe by deciding to get your exercise by

cleaning out the shed in an effort to locate the missing pump. If you had trouble shifting set, you might not do any of these things, but simply stew as you sat down in your easy chair and decided to watch television instead.

Over the years some neuroscientists have proposed a unitary theory of executive skills, maintaining that there really is only a single skill, sometimes called “the central executive.” These scientists maintain that the variety of executive functions are in fact reflections of a single underlying mechanism. Other scientists, as mentioned in Chapter 2, have proposed more diversity in underlying skills. They sometimes boil down executive skills into three primary domains (termed a “three-factor model”), of which set shifting is one. The other two are working memory (also referred to as “information updating and monitoring”) and response inhibition (more technically, “inhibition of prepotent responses”).

These three skills have been combined in a number of research studies, both because they are generally seen as more circumscribed and lower-level skills than, say, planning, and because they are believed to underlie many of the more complex tasks that have been considered measures of executive functioning. The proponents of this model have performed a useful service in that they have demonstrated that while all these skills have something in common, there truly are separate and distinguishable executive skills rather than a single unitary skill. There seems to be some consensus that, to quote one research study (by Akira Miyake and colleagues), there is “both unity and diversity in executive functions that need to be taken into consideration in developing a theory of executive functions.”

We know that dopamine is the primary neurotransmitter in supporting frontal lobe functioning. There is some evidence to suggest, though, that different dopamine receptors are implicated in different executive skills. One distinction sometimes made is between working memory and flexibility. Both are critically important skills. One allows you to draw on past experience (working memory), while the other allows you to use that past experience to make the best decisions about how you will choose to act in the moment.

Poor flexibility has been implicated in a number of psychological disorders, including depression, obsessive-compulsive disorder, and, logically enough, eating disorders such as anorexia nervosa. Cognitive inflexibility is also a key weakness in individuals on the autism spectrum.

We have found, however, that, as with all other executive skills, flexibility exists along a continuum and many people who fall well within the range of normal nonetheless struggle with flexibility.

What We Can Do about It

People who struggle with flexibility are often also weak in emotional control. While these are overlapping executive skills, we see them as distinct. Inflexibility is one common trigger of unpleasant emotional reactions, so if you think your main executive skill weakness is emotional control, you may want to look at inflexibility as a contributing factor and consider targeting this skill for an intervention.

Another executive skill that overlaps with flexibility is metacognition. Certainly there is a set-shifting element to metacognition. From our perspective, though, people with weak metacognition aren't necessarily *inflexible*; rather, they may not consider alternatives or other perspectives because it just doesn't occur to them to do that. People who are inflexible may not consider alternatives either—but when you suggest they might do that, they tend to put up roadblocks. While some inflexible people fall into that “My way or the highway” mentality, others are less dogmatic about it and may react to unexpected events or proposed changes by saying, “You know what? This is the way I've always done it, and it's always worked for me, so why should I try anything else?”

If you found in taking our Executive Skills Questionnaire (see Chapter 2) that you tend to be inflexible and you think there's some value in becoming more flexible, then read on.

How to Modify the Environment to Minimize the Impact of Inflexibility

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** As with emotional control, the most straightforward way to modify the environment is to avoid situations that require flexibility. For example, if you have a choice of whom to vacation with, choose people who like to plan their vacations in advance and avoid people who like to “play it by ear.” Think about those social environments you do best in—and seek them out. Maybe you struggle with casual conversation because you can't think on your feet. The social situations that may work best for you are ones that are focused on an activity—going to a movie, a ball game, or playing a sport. Then think about the social environments that make you uncomfortable—cocktail parties with a lot of people you don't know well, for instance—and avoid those.

- **Modify the task or the situation.** There are two broad categories of steps you can take to modify the task or situation. First of all, there are steps you can take in anticipation of entering situations requiring flexibility. If you have to go to that cocktail party anyway, plan in advance for how you can get through it. Ask your spouse not to walk away from you and leave you on your own with a stranger. If you know the hostess, plan to ask if you can help serve snacks or drinks, since that gives you something to do—and something to talk about. Rehearse some questions or conversation starters you can use when you draw a blank when your spouse makes the mistake of leaving you on your own with a complete stranger.

Second, you can identify some “repair” or coping strategies you can use in the moment to manage discomfort. (This is Peg speaking:) I have learned over the years that when I feel inflexibility coming on (it usually presents itself as a tightness in my chest), I know I need to pause before responding—take five deep breaths, walk away and come back, or even say to whoever else is involved in the situation, “Okay, I feel my inflexibility kicking in. I need some time to think about this.” My husband has just learned to expect this from me, so when he raises a suggestion that involves a change in plans, he just lays it on the table and lets it sit there. He’s come to learn that my first decision regarding a suggestion for doing something differently is not necessarily my last decision.

- **Solicit help from others.** Be clear with others about the kinds of situations you struggle with due to inflexibility. (This is Peg speaking:) My husband learned sometime in the first year of our marriage that bringing home a surprise dinner guest was not a good idea. The more those around you understand that you have trouble dealing with unexpected events, changes in plans, or any kind of surprise, the more likely they are to avoid springing those things on you or to break it to you gently when the situations can’t be avoided.

How to Improve Your Flexibility through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific situation where you struggle with flexibility.** The key feature of our definition of flexibility is the “ability to revise plans,” so you may want to think of a recurring situation where you are asked to adjust to unexpected change. Maybe you find that some family member disrupts your weekend plans on a regular basis, or your boss fairly often asks you to take on

something new or to change your schedule for the day. As we've said before, choose something that occurs relatively frequently so you'll have lots of opportunity to practice.

- **Set your goal.** Because flexibility is hard for you, it's unlikely that you would set as a goal "be able to embrace change wholeheartedly," because you know that's too much of a stretch. So the goal might be something like these:

- ♦ Respond to the change without complaining.
- ♦ Use a coping strategy (for example, walk away and come back) when confronted with an uncomfortable change.
- ♦ State concerns or objections to change without sounding angry or upset.
- ♦ Reduce the length of time it takes to recover from an unexpected change of plans.

- **Set a deadline.** As we suggested with the skill of emotional control, you may want to work toward improvement on a weekly basis until you reach a level where you're satisfied with the results. You could use a 5-point scale (see Chapter 10 for an example of this), or at the end of each day you could stop and assess how the day went in terms of practicing the skill and meeting your goal. Even a simple +, ✓, or – system gives you good data to work with. In this case, + might mean *Did great/on course/better than yesterday*, ✓ might mean *Did okay/same as yesterday*, and – might mean *Not so good/ kind of lost ground*.

- **Make a specific plan.** This is another situation where an *If . . . , then . . .* plan would work. For example, *If my boss asks me to drop everything and change my plans for the day, I will either agree to do this or clarify with her what my plans were and make sure she wants me to shift.*

Since inflexible people are often quite comfortable engaging in the same routines every day (some might say "being stuck in a rut"), you may want to do some practice exercises as a warm-up. Switch your routine around, change your breakfast food, drive home from work on a different route. All of these are inconsequential and involve low-stress change, so they might get you accustomed to the idea of changing your patterns of behavior. Then you can move on to the situations you've established in your goal.

- **Externalize the behavior you're working on.** Write words of inspiration on a Post-it Note and display it prominently. Google "surprise" for suggestions. Here are two of my favorites, both from books by Jarod Kintz (found at www.goodreads.com):

- ♦ “I don’t put my name and address on the return address section of an envelope. I simply write ‘Surprise!’”
- ♦ “I asked for her hand in marriage, but instead got the whole body. Love is full of surprises!”

And then there’s that Bob Hope story: When asked whether he wanted to be buried or cremated after death, he said, “Surprise me!”

- **Whatever it takes, stick to some part of the plan.** Pat yourself on the back for improvement when success eludes you. And if it’s just too hard, do some of those practice exercises described earlier.

- **Select a reward.** Being able to handle unexpected events without undue stress may be its own reward. If that’s not enough, build in something extra to celebrate your success (see the Reward Menu in Chapter 4). And if your goal involves handling things thrown at you by someone in particular (spouse, partner, kid, boss, supervisor, parent), you may want to include that person in the reward (alternatively, the reward might be a chance to get away from these individuals for a while!).

- **Write down two to three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

Here are a few ideas:

- Research suggests that meditation can increase flexibility (along with a number of other executive skills). We’ve described apps for meditation in Chapter 10.

- Here’s a fun app for getting used to adjusting to surprise or the unplanned-for. It’s called Make Dice, and you can label the sides of a die with different tasks (chores or fun things to do) and then roll the die to see what comes up first. This might also be a fun app for a family with kids as a way to divide up household chores among several family members. Each member can roll the die to see what chore he or she has to do that day.

- There’s evidence to suggest that cognitive flexibility can be increased by playing real-time strategy video games. One of the biggest raps against

brain-training games is that if there are any benefits from playing them, they are most likely to show up on improved game performance and do not generalize to real-world applications. One recent study done with college students found that students who played the game StarCraft for 40 hours improved on other tests of cognitive flexibility. Admittedly, these tests were lab tests—such as the Stroop, which requires the subject to read color words as quickly as possible when the colors and the words don't match, and the color the word is printed in has to be ignored to read the word correctly. Nonetheless, they are quite different from the video game that students were playing and are generally considered good measures of cognitive flexibility in that they require the test taker to switch rapidly between contexts. Unfortunately, most real-time strategy games are war games and may be more appealing to men than to women. Interestingly enough, though, the study just described was done with female undergraduates because they were looking for students with no prior experience in playing these kinds of games.

What It Looks Like in Practice: Letting Go and Going with the Flow (at Least a Little)

Cora was rigid. That was the best word to describe her—she even saw it in herself, but she'd sort of accepted that that's who she was and the rest of the world needed to adjust. She was an office manager, and she felt that the systems she'd put in place made the office function smoothly, but it irritated her no end when others didn't honor her systems—or tried to get around them. She even had a sign posted by her desk where everyone could see it: "Poor planning on your part does not constitute an emergency on my part." She loved her boss—he was kind to her and gave her responsibilities that previous bosses hadn't, but he broke the rules more than anyone else, and it was beginning to get to her. In fact, she found herself reacting irritably to coworkers and even at times to her boss, and she realized she valued her job and especially her boss too much to want to jeopardize this.

Home posed less of an issue because Cora lived alone and could structure her personal life the way she wanted to. But she was beginning to realize that she was overreacting every time something didn't go according to plan. She'd make a date to have dinner with a girlfriend and then the girlfriend would call to cancel at the last minute, and Cora would fume for hours. Or she'd order something online and when the package arrived and she discovered they'd sent the wrong item or left out an important part, she'd call and berate customer

service for making stupid mistakes. Cora knew this wasn't healthy—and if she'd had any doubts, her doctor had recently told her that her blood pressure was beginning to elevate to perilous levels. She knew she had to do something.

Cora realized, and had repeatedly heard from others, that in the real world nothing was a sure thing. Nonetheless, in her world, once she set a plan, she acted as if it were (and frankly wished that it worked that way!). In fact, as the sign on her desk indicated, at times she found it hard to understand why people couldn't be more like her. But it was becoming clear that this was her issue and that her reaction was taking a toll on her as well as on her interactions with others.

At work, Cora decided to frame the problem as one of trying to be more accommodating to her coworkers and boss. She realized that the sign on her desk did not suggest accommodation, so she changed it to "Planning issues on your part do not always constitute an emergency on my part, but if I can, I'll try to help." Her boss noticed and asked immediately why Cora had changed the sign, and she told him she was working on being more flexible. He congratulated her and offered to help in any way he could, which was a big payoff for her. Cora quickly realized, however, that intentions are easier said than done. When one of the other managers told her that he needed to reschedule a meeting that Cora had organized, she started, "That's not poss . . . !" but stopped herself and instead responded, "Sorry, let me see what I can do and get back to you later this morning."

Since Cora was as strong in time management and organization as she was weak in flexibility, she figured out a new schedule and got it to the manager in an hour, which impressed him, and he told her so and also told her boss. From this situation as well as a couple of others, Cora realized she needed to stifle her immediate irritability when someone needed a change, so she adopted, as her first response, "Let me see what I can do." She did worry that people at work would take advantage of her new approach. But what happened instead was that when people in the office needed to make a change, they didn't dump the problem on Cora but enlisted her problem-solving skills to help them take care of the change.

Social events were a different story. Cora looked forward to them, so the anger she felt about a change was aggravated by the disappointment. For this, she decided on a two-step approach. The first was an explicit acknowledgment that the event, whether planned by her or a family member or friend, might not happen as planned. So when she recorded a social event, she also recorded, "THIS MIGHT CHANGE" next to the event. The second step in her strategy was, at the time when the event was initially scheduled, to plan a preferred

alternative activity that Cora would do if the event did not take place. This way she had an activity to look forward to and engage in rather than the void of nothing to look forward to, where she would obsess about her frustration. The first time a friend had to cancel, she still experienced the twinge of irritation, but she was able to move on and went on a shopping trip for herself, which she enjoyed.

Out of this, Cora came up with another idea to reward herself and, at the same time, possibly increase her flexibility. She was not at all a person to engage in an unplanned, spontaneous activity. She made a list of activities she liked to do: browse at a bookstore, walk in her favorite park, visit a nearby museum, go to the garden shop and greenhouse where she had bought her plant, and so on. When she had 10, she cut them into individual strips and resolved each Saturday afternoon to pick an activity out of the bowl at random and do it. Over time she added more activities and found herself looking forward to these surprise “treats” as a reward for engaging in an unplanned event.

Why It Worked

Here are some of the strategies Cora used to help her become more flexible:

- **Cora reframed the problem.** Rather than fuming when the world didn’t conform to her expectations, she decided to focus on trying to be more accommodating. She couldn’t control the rest of the world, but she could figure out how to work on the way she reacted to the things that were beyond her control.
- **She created verbal and visual reminders.** The new sign on her desk did both—and so was the note “THIS MIGHT CHANGE” in her social calendar. She also adopted a new automatic response, “Let me see what I can do,” which she plugged in whenever someone asked her to deviate from her plan or schedule.
- **She came up with a replacement behavior.** Sometimes the hardest behavior change involves *stopping* a behavior. This can be made much easier if you can identify a replacement behavior to use instead. When Cora found herself beginning to utter her reflexive “No, that’s not possible,” she replaced it with “Let me see what I can do.” That statement had a communicative intent, but it also served as self-talk for Cora. If you say, “Let me see what I can do,” then your own self-talk acts as a cue to go into problem-solving mode.
- **She made a public announcement.** In this case, she didn’t go running to

her boss or coworkers to announce “the new me,” but the new sign on her desk served the same purpose. That left people free to notice and comment or not (sometimes people are afraid to comment on proposed behavior change for fear they’ll “spook” the process).

- **She was able to draw on her executive skill strengths in new ways.** By no longer closing things down quickly with her “No, that’s not possible” mentality, Cora was able to put her strengths in time management and organization to new uses. She now felt good about being helpful to her manager in new ways—and it earned her kudos from him that reinforced that feeling.

- **She found a way to practice flexibility.** Cora recognized that there are different ways to think about flexibility, including being open to new experiences and being comfortable with ambiguity. She also knew it’s easier to work on flexibility around pleasant surprises than unpleasant ones. Drawing a random activity out of a bowl helped her learn to enjoy unplanned events. Making last-minute adjustments to do whatever that fun activity was each weekend helped her apply the same skills when confronted with other changes that might not be so much fun.

17

Learning from Experience

Metacognition

What It Is

The ability to stand back and take a bird's-eye view of yourself in a situation. It is an ability to observe how you problem solve. It also includes self-monitoring and self-evaluative skills (for example, asking yourself, “How am I doing?” or “How did I do?”).

What We Know about It

Metacognition is basically the ability to reflect on our thoughts and to evaluate our behavior or performance. And it turns out that's a really important skill to have, because without it we tend to be blind to our shortcomings and we can't figure out what we need to do differently to be more successful.

Metacognition is a late-developing executive skill, in part because of “pruning.” Introduced in Chapter 2, pruning is a brain process that occurs in early adolescence and involves getting rid of unused and unneeded neural connections. Humans are born with more neural connections than they'll ever use, and at a couple of points in development the brain discards the ones it's not using. The ultimate effect of this process is that the neural connections that remain work much better—they transmit larger quantities of information faster and communicate more easily with distant brain regions. And in a sense, metacognition is all about making connections—both figuratively and literally.

It took a while for neuroscientists to figure out how to study metacognition and map the brain regions key to this skill. There are no clear markers for metacognition, but researchers realized they could assess metacognition by giving people a task to perform and then asking them to judge how well they did the task. Some people were quite accurate in their self-assessment and others weren't, and they determined that it was metacognition that distinguished the two groups. They went on to localize this skill in the front part of the frontal lobes (technically, the anterior prefrontal cortex). Through studies asking subjects to evaluate how well they performed on tasks, they found that those with good metacognitive skills not only had more gray matter in the anterior prefrontal cortex, but they also had more white matter—the part of nerve cells that transmit electrical impulses to neurons in other parts of the brain (the “connections” mentioned above).

What We Can Do about It

Because people with weak metacognitive skills tend to be unaware of this weakness, this ends up being a challenging skill to improve. You may have become aware of your own weakness in this skill through taking the Executive Skills Questionnaire (see Chapter 2). Or you may have come to that understanding through a cumulative set of personal experiences. These experiences often have to do with problems that arise due to a failure to read the situation right in the moment or to think ahead and anticipate consequences. For example, we know someone who let her car registration lapse because she lived in a city and took public transportation to work. She left her car parked illegally because there were no readily available parking spots, and parking tickets began accumulating. She then couldn't move her car because her registration had lapsed. Meanwhile, she decided she didn't need her driver's license anymore because she wasn't driving—forgetting that her license was also an ID, and without that she had trouble proving who she was when she wanted to vote or accept wire transfers of money from her parents. The cumulative effect of these experiences made her feel bad about herself, but also planted a seed: Maybe she needed to start looking at the big picture.

Strategies for Improving Metacognition

With other executive skills, we've divided our suggestions into two broad categories: environmental modifications and skill building. We're not sure that

makes sense for metacognition. Since metacognition involves being able to think about thinking, we would like to suggest some things you could do to get better at that. Here are two ways to become more observant and more adept at problem solving. These can both be incorporated into the skill-building piece, described below.

Develop a System to Learn from Your Mistakes

If you have weak metacognitive skills, you have a great source of material to learn from. Every time something doesn't go right, you can use that experience as the raw material for lessons in metacognition. Ask yourself several questions:

- “What was the task or situation?”
- “What went wrong?”
- “How did I handle the situation?”
- “What cues did I miss?”
- “What can I do differently the next time this situation occurs?”

You could turn this into a chart like the one on the facing page to help you organize your experiences (you can download and print this form at www.guilford.com/dawson7-forms).

An example of the chart, filled in with a couple of situations that people with weak metacognitive skills might find themselves in, follows.

If you complete this chart for these kinds of experiences for several weeks, you may begin to see patterns. Maybe problems arise because you don't read facial expressions well, or maybe they arise because you don't make sure up front what you are supposed to be doing, or you don't go back and check your work. Perhaps you find that you make faulty assumptions about what the person you are living or working with wants you to do. Or you consistently misinterpret what that person is saying to you. Maybe you misjudge how well or poorly you did on an assignment or job task.

You may find this kind of exercise discouraging—especially as you watch the incidents mount. Don't! Look at these experiences as a source for material you can learn from. If they occur only occasionally, or with a particular person, then maybe your metacognitive skills are okay, but there's something about the particular person that affects metacognition. (This is Peg speaking:) My husband, for instance, maintains that my problem-solving skills diminish when

Learning from Mistakes

Task or situation	What went wrong?	What did I do?	What cues did I miss?	Next time I will . . .

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LEARNING FROM MISTAKES: EXAMPLE

Task or situation	What went wrong?	What did I do?	What cues did I miss?	Next time I will . . .
<i>Date with girlfriend</i>	<i>Went to sports bar; watched game while we ate.</i>	<i>Didn't talk to my girlfriend; ignored her.</i>	<i>Angry facial expression; irritation in her voice.</i>	<i>Take her to a restaurant without a television.</i>
<i>New job responsibility at work</i>	<i>I thought I understood what I needed to do, but I didn't.</i>	<i>Did task wrong; left out important parts.</i>	<i>The final product didn't match specifications and I failed to see that.</i>	<i>Go through task instructions before I start; make sure I understand what I'm supposed to do; check my work against instructions when I'm done.</i>

he is around because I know I can rely on his (stronger) metacognitive skills. But if you find problems arising across a variety of settings and with a variety of people, you should be able to gather a lot of data pretty quickly—and the more data you collect, the more likely you are to see patterns of behavior that you can begin to address.

Many problem situations that arise as a result of weak metacognition can be addressed with one strategy: checking with the person you're living or working with to make sure you both see things the same way. This could sound like:

- “Let me make sure I understand what you're looking for. . . .”
- “Let me make sure I understand what you just said. . . .”
- “You sound angry/irritated/frustrated/annoyed—am I right about that?”
- “You look angry/irritated/frustrated/annoyed—am I right about that?”
- “I think I just did/said something wrong. Can you help me understand this?”
- “Can you give me some feedback about . . . ?”

Develop a Problem-Solving System That Can Be Applied in the Moment

The long-term goal, though, is to be able to see issues in the moment that are potential problems and put in place a strategy for avoiding those problems. This means stopping to analyze the situation in real time and to generate possible solutions that can be put in place in the moment. In situations like these, here are the kinds of questions you should ask yourself:

- “What is the problem?”
- “What are some possible things I could try to solve the problem?”
- “What will I try first?”
- “If that doesn't work, what's another option (Plan B)?”

But the analysis shouldn't stop there, because after you try your solution, you need to reflect on how it went:

- “How did it go? Did my solution work?”
- “What might I do differently the next time?”

Let's turn this into a chart that organizes those questions, as shown on the next page (or go to www.guilford.com/dawson7-forms and download a copy to print and use).

How to Improve Your Metacognition through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Identify a task or specific activity that reflects your weakness in metacognition.** If you track your problem situations for a while, we suspect that trends will emerge in the form of recurring problems. Choose one or two of those to work on—perhaps one related to a problem at work and the other to a problem at home.

- **Set your goal.** The easiest way to set your goal is to work toward reducing the number of problem situations. For instance, if your wife or girlfriend tells you every day that you've misunderstood her at least once, then your goal might be to go from a daily occurrence to only twice a week. Or if you get negative feedback from your boss that involves weak metacognition in project management situations two or three times a week, then your goal might be to cut that to once a week or once every other week.

- **Set a deadline.** As we've stated with the other executive skills, deadlines should be set for individual goals. As you achieve each goal, you select another target situation and create a new deadline for managing that one successfully.

- **Make a specific plan.** Use the Action Plan form provided in Chapter 4 to make your plan or devise one of your own. The time and frequency of your practice will depend on what task or situations you've chosen to start with. Since regular practice is important, though, choosing a situation that occurs fairly frequently is the best place to start.

We also suggest that part of your practice include cognitive rehearsal. By that we mean thinking about the kinds of situations you are targeting and imagining following through on your strategy—playing out the whole scenario in your head to make sure you know your routine. If the routine involves a conversation with another person (boss, girlfriend, boyfriend, spouse, or partner), then role-play that conversation in your head, too. Since people with weak metacognition often fail to recognize the cues until after the fact, picturing in your mind the cues that are likely to alert you to use your strategy may help you see those cues when they occur in the actual situation.

Problem-Solving System

What is the problem?

What are some possible things I could try to solve the problem?

What will I try first?

If that doesn't work, what's another option (Plan B)?

How did it go? Did my solution work?

What might I do differently the next time?

- **Externalize the behavior you're working on.** Increasing metacognition usually means increasing your vigilance so that you recognize the problem situations when they arise. Without daily reminders, you may lose that vigilance. If you spend some time on a computer every day, use a Post-it Note on your computer desktop to remind you to be alert to the situations you've selected for practice.

- **Select a reward.** Reducing the negative impact of weak metacognition is a reward in itself, but you may want to build in an extrinsic reward as well as another way of patting yourself on the back for the hard work you're doing to improve this skill (see the Reward Menu in Chapter 4).

- **Write down two to three encouraging statements.** What are you working on? Why are you working on it? What will you gain if you can improve on this skill? Answer those questions and refer to them daily.

Technological Supports

While there are no technological supports developed specifically for this skill, people who are weak in metacognition can take advantage of all the Internet has to offer in terms of advice, tips, and pointers. As you will see with the illustration that follows, Jake was able to find materials online that he could put to good use to improve his self-awareness and figure out a plan of attack.

What It Looks Like in Practice: Learning to “Take Initiative”

Jake was kind of clueless. This led to trouble in the workplace as well as in his personal life. He'd recently lost his third job, this time as a night receptionist/auditor in a hotel. Although he was fired this time, he left one of his previous jobs when they kept reducing his hours, and in the other he was given the option of quitting because he “didn't have the right qualifications” for the job. This time the issue that cost him this job was that he overlooked things he was supposed to do but also that he “didn't take initiative.” When the computer system went down and he couldn't log in the day's receipts, it didn't occur to him that he could at least organize those receipts and do the preliminary work to make logging them in easier for the next morning's receptionist. Or when the copy machine stopped working, he didn't bother to try to figure out what had

happened; he just stopped copying. He was pleasant enough—he could carry on friendly conversations with staff and guests, and his manner when taking phone calls was fine, but if someone asked a question he couldn't answer, he'd say, "I'll get back to you on that," but then make no effort to find out the answer to the question and make a return phone call. He also cut corners. If some aspect of his work didn't seem important to him, he'd do the minimum—or skip it altogether. When he was fired, the human resources director showed him his performance evaluation, gave him a copy, and explained in a calm voice why they had to let him go. When she was finished, he had one question for her: "So, will you be able to provide a reference for me?"

In his personal life, Jake had gone through a number of relationships, never quite understanding why girls were breaking up with him. They'd tell him things like "You're not in touch with my feelings" or "You never offer to help out" or, most perplexingly, "You just don't *notice* things!" He told them, "You need to tell me!" but they seemed to feel he should be more observant and take steps without needing explicit instructions. His current girlfriend seemed to be a little more tolerant, but he was afraid this relationship would end the same way previous ones had.

When Jake got home after his exit interview, he realized that something had to have been wrong with his performance as this was his third failed job. And in light of what happened this time, he guessed that in the previous jobs his performance, or lack of it, may also have been an issue. Nonetheless, knowing this did not tell him what to do. He decided that the copy of the performance evaluation might give him some ideas. His interpersonal skills were rated as satisfactory to good. In contrast, his lowest and clearly unsatisfactory ratings came on the items related to "Takes initiative." In his parting review with the human resources director, she had given him some specific examples of problems that he had encountered but made no real effort to solve. Still, he didn't know how to address this issue, especially since he didn't have the job anymore and he was embarrassed to call his girlfriend to talk about it with her.

With nothing to lose, he searched the term *taking initiative* on the Internet and was surprised by the amount of information available and the resources about the topic. Jake noticed at least two common themes on the websites. One was a consensus that initiative is a skill that can be improved. Another was that being self-aware is a key step if a person is to develop initiative. This hit close to home with Jake since in a couple of his past relationships, in moments of frustration, girlfriends had told him he was "clueless." The good news was that a number of the websites offered tools to increase self-awareness and improve initiative.

Jake took three of the recommended self-assessment instruments from one of the websites that he found and liked. Based on his answers, he was described as a “passive” person who tended to be satisfied with the status quo and who either didn’t notice or didn’t act when a problem arose. Thinking back to his most recent job, he knew that he recognized things like the copier and computer malfunctions; he just didn’t try to do anything about them or find the answers to questions that potential guests asked.

With this information, the “takes initiative” low scores made more sense because in the material he read, people who take initiative are described as *proactive* and as problem solvers. While Jake initiated a new job search, he continued to work on the various practice exercises that were suggested to help improve self-awareness and initiative because he read that improving and maintaining these skills requires ongoing practice.

Fortunately for Jake, the jobs he was applying for were plentiful since they were not high paying or in great demand. He had a couple of interviews within a few weeks. He didn’t think he could handle one, but the other was similar to what he had been doing, and he liked the manager. However, the manager wanted to know about his last job, and Jake, as part of his goal to improve initiative, told the manager exactly what had happened and what he was doing to work on the problem.

The manager, somewhat surprised by his honesty, decided to give him a try. To take it a step further, Jake asked the manager to tell him, as explicitly as possible, what she wanted to see in an employee. Jake took notes and also asked if he could meet with her weekly for a few minutes to get her feedback about his performance and to let him know immediately if there was a problem. She did have some suggestions for him to improve, but after his 6-week probationary period she indicated that she was quite pleased with his performance and they decreased their informal performance meetings to biweekly and then monthly. Six months into the job, Jake got his first raise and some additional responsibilities.

With his girlfriend, he approached the situation in a similarly head-on fashion. He started by telling her what had happened with the previous job, what he had learned, and what he was trying to change. First he told her that their relationship was important to him, which was not easy because these types of conversation were not familiar territory for him. He followed this by saying that sometimes he probably seemed “clueless” about her feelings or about issues that arose and he wanted to change but needed her help. He asked her to tell him about issues that had arisen between them where she felt like he didn’t get it. She did tell him about a few but did not want to hurt his feelings.

To help him understand her better, he asked her about things (for example, people, places, clothes, food) she liked and then things she didn't. From time to time he would "surprise" her with something she liked, and she thought this was cute. As with his manager, he asked if every so often they could just talk about how they were doing and whether there was something she liked and something she found annoying.

Why It Worked

- **Jake recognized he had a problem.** In the case of metacognition, this is hugely important. Many people who are weak in this skill fail to connect the dots and see the role they play in their own misfortunes. They blame others or they chalk it up to "bad luck." In Jake's case, the evidence had to pile up for quite some time (three lost jobs, chronically unhappy girlfriend) before it became visible. To his credit, he did not blame his most recent employer or get defensive with his girlfriend.

- **He researched the problem.** Jake did this in three stages. He took a piece of feedback he'd gotten from his former employer ("doesn't take initiative"), and he went to the Internet to learn more about it. This led him to a number of useful sites as well as some self-assessments that gave him more information about himself. Second, he found some practice exercises that could help him work on the skills that he saw were weaknesses for him. And third, he set up weekly feedback meetings with his new employer, both so he could continue to improve on the job and to catch and correct any problems early.

- **He was able to be honest in his job interview and with his girlfriend.** When people have had a number of failure experiences, they generally want to hide those experiences. They feel bad enough about themselves already, but they worry that sharing those experiences will open them up to more criticism. This can sometimes happen, of course, but Jake felt he had to plot a new course with the next job, and he was willing to risk the fallout from laying all his cards on the table. When this conversation takes place in an open, straightforward manner, employers really do appreciate the honesty—especially when the individual says, "Look, I know I made mistakes in my last job and it led to my being asked to leave. Since then, I've learned as much as I can about myself and what went wrong, and I'm determined to handle my next job better." When that approach got Jake the job, he figured it was worth trying with his girlfriend as well.

- **He followed through on his self-improvement plan.** With any self-improvement plan, the inclination is to slack off when things are going well—that’s where the expression “No news is good news” came from. Jake recognized he needed to keep it going—in part because, given the problems he’d had in the past, he didn’t trust his ability to read his work performance accurately.

- **He was rewarded for his efforts.** As you know, we recommend building in rewards whenever possible. In this case, although the weekly meetings with his employer were set up to catch and correct problems, they ended up being an opportunity for Jake to get positive feedback on a regular basis. And within 6 months, there was a monetary reward as well! Rewards played a role with his girlfriend too. His surprise gifts to her were rewarded by a grateful girlfriend who now saw that he cared and was making an effort to understand her.

18

Reaching the Finish Line *Goal-Directed Persistence*

What It Is

The capacity to have a goal, follow through to the completion of the goal, and not be put off by or distracted by competing interests.

What We Know about It

In some ways, this is the culmination of all the other executive skills. When we work with young people with weak executive skills, we focus whenever we can on this skill—in fact, we developed a coaching program that was designed basically to help kids build goal-directed persistence. Why do we focus on this? Because if you have this skill, you can use it to compensate for your other executive skill weaknesses. You may be lousy at task initiation, but if the goal is important enough to you, you'll get started. And you may have a really hard time finishing things, but if the goal is important enough to you, you will find a way to sustain attention.

We have said before that the frontal lobes act as a “central executive” communicating with other brain regions to execute tasks. In the case of goal-directed persistence, this cross-region communication is a critical feature of the skill. Neuroscientists (who must be an obsessive, detail-oriented lot) work really hard to parse out exactly which brain regions are involved in which activity. And their work on goal-directed behavior is a great example of this. They point out that to select and pursue a goal is a complex, multistage process. It would

seem, on the surface, to be fairly straightforward: (1) think about the goals available to you at any given time, (2) decide which is the best one, (3) make a plan to achieve that goal, and (4) follow the plan to the end. It turns out, though, that at every step of the way a great deal of information needs to be weighed. Starting with this: If you've got multiple possible goals, how do you choose the best one? You have to consider the relative value of each possible goal, how likely you are to be able to achieve that goal, and how hard you would have to work to achieve the goal. And then as you make your plan to achieve the goal, you'd have to consider multiple routes, taking into account, for example, the likelihood of encountering obstacles that would impede your ability to achieve the goal.

One researcher (John P. O'Dougherty) came up with a great scenario that incorporates these elements. Imagine that you have a choice of eating lunch at three restaurants (Chinese, Italian, or French). Your brain has to process the relative merits of each of those three restaurants and stack them up against one another to allow for a comparison. All this takes place *before* you make a choice, and then with the relative merits presented to you, you make a choice. All of this decision making takes place within the prefrontal cortex. However, once you make a choice and begin to develop your plan, other regions become activated, primarily regions associated with motor movements.

There's a straightforward reason for this in the restaurant example. Maybe you choose the Chinese restaurant, but in planning goal attainment, as the author points out, "There's no point in selecting the Chinese option, even though it is my most preferred food, if the only actions available to select that goal involve a treacherous five-mile walk with a substantial risk of falling into a pothole on the way." So you picture taking that walk (and, it turns out, when you picture a motor activity you activate the same part of the brain as you would once you actually started walking) and make a decision about how feasible that is.

Whenever we engage in goal-directed behavior, we begin in the prefrontal cortex (technically, the ventromedial prefrontal cortex), where we make a goal selection. To carry out that goal, we recruit other parts of the brain (for example, parts of the parietal cortex, dorsal striatum, supplementary motor cortex) to help compute the value of particular actions so as to generate a plan that has some likelihood of success. Interestingly enough, although we think of ourselves as being pretty cerebral, when we act on our thought, the motor system of our brain goes to work. The theory of *embodied cognition*, which is the notion that, in Wikipedia's terms, "the nature of the human mind is largely determined by the human body" is a fascinating intersection of psychology, philosophy, and

neuroscience that deals with just this issue of how we make decisions and act on them. Interested readers may want to explore this further.

Since goal-directed behavior is central to the human experience, researchers in the social sciences have devoted a great deal of thinking to how people select and achieve goals and what differentiates people who are effective at this from those who aren't. If you don't mind wading through thousands of scholarly articles, this makes for fascinating reading. In our reading, we have culled some of the most interesting studies and summarized the findings that seem most relevant to helping people improve goal-directed persistence. This summary appears in the sidebar on pages 244–249.

What We Can Do about It

First of all, it's important to differentiate goal-directed persistence from other executive skills. This is tricky because a number of other executive skills are embedded in this one. To have goal-directed persistence you have to not only select a goal but also:

1. keep the goal in mind as you pursue it, which requires working memory (Chapter 9);
2. decide what steps you need to take to achieve your goal, which requires planning and prioritizing (Chapter 13);
3. take the first step, which requires task initiation (Chapter 11);
4. manage any negative emotions you may experience, such as disappointment or frustration, associated with the self-deprivation involved in choosing a long-term goal over immediate pleasures—which involves emotional control (Chapter 10);
5. redesign your plan if you encounter obstacles along the way, which requires flexibility (Chapter 16); and
6. stick with the plan, including all the individual steps, long enough to get it done, which requires both response inhibition and sustained attention (Chapters 8 and 12, respectively).

You may want to look at all the other executive skills involved in goal-directed persistence and decide whether any of those are weak enough for you

that they will derail your ability to learn goal-directed persistence. If so, go to the relevant skill chapter and do some work there first. The strategies described below assume that your other executive skills are fairly intact but for some reason you find it difficult to go from performing quite adequately on a day-to-day basis to being able to work toward something bigger that takes a longer time to achieve.

How to Modify the Environment to Make Goal-Directed Persistence Easier

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** Look around you and decide whether there's anything in your physical or social environment that may be standing in the way of you pursuing long-term goals. See if you can reduce its salience (or get rid of it altogether). If you have trouble saving money, get rid of excess credit cards. If you find yourself wasting time in trivial pursuits (like playing video games), get rid of those stimuli or restrict your access to them (for example, by putting time blocks on computer or video game use). If your long-term goal is to lose a significant amount of weight, don't bring tempting foods into your house.

- **Modify the task.** When thinking about task modification and goal-directed persistence, the more you can bypass having to make any decision at all regarding your long-term goal, the easier it will be to reach it. If you tend to spend money as soon as you get it, for instance, and your goal is to start saving for retirement, this would be an ideal place to institute an automatic withdrawal from your paycheck to be deposited directly into an individual retirement account (IRA) or some other form of investment account.

Another way to modify the task is to build automaticity through habit formation. Say your goal is to get in shape. If you can establish a daily routine where you begin every day (or every other day) with a trip to the gym, then eventually you won't even have to think about it or make a choice: you'll begin to get up and put on your gym clothes and head to the gym by habit alone. Other task modifications: build in visual cues (set out your gym clothes the night before), use visual imagery (as you're lying in bed at night, picture yourself getting up, dressing in your gym clothes, picking up your gym bag, and driving to the gym), use verbal prompts and rewards (*Just do it* as you begin to feel some

resistance before heading out to the gym, and, after that successful trip to the gym, *Hey, you just did it—good for you!*).

- **Solicit help from others.** This is one executive skill where working with a coach might be particularly beneficial, since a coach could help you think through all the steps involved in achieving a long-term goal. This skill lends itself to what we call a reciprocal coaching model as well: Find a friend or family member who also wants to work toward a long-term goal but hasn't met with a whole lot of success. Help each other through the planning process and connect on a daily basis to see if you're both sticking to your plans.

How to Improve Your Goal-Directed Persistence through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

- **Set your goal.** If you've read our other chapters, you'll notice that we usually have people select one specific activity to begin with and set a goal around that. We're taking a slightly different tack with this skill because the whole point of strengthening the skill is to build our ability to achieve long-term goals. So in this case, it makes sense to identify the long-term goal you ultimately want to work on. You still may take baby steps to get there, but start by thinking about whatever that long-term goal is. Behaviors that lend themselves to long-term goal setting include:

- ♦ Losing weight.
- ♦ Getting in shape.
- ♦ Saving money.
- ♦ Going back to school.
- ♦ Looking for a more satisfying job.
- ♦ Learning a new skill (for example, playing the guitar, learning how to paint).
- ♦ Pursuing a dream (for example, writing the Great American Novel, taking that trip around the world, climbing all the 4,000-footers in New England).

- **Identify a place to start.** If you've tried setting long-term goals in the past and have never lasted more than a couple of weeks or a month in pursuit of those goals, then begin by choosing short-term goals with deadlines that

come soon. Start smaller than you did in the past and take smaller steps. In the book *One Small Step Can Change Your Life*, Robert Maurer, mentioned earlier in Chapter 5, gives good advice about how starting small can help you end big.

- **Set a deadline.** Here we're talking multiple deadlines. Set interim deadlines for those smaller goals you've set up for practice. But set a deadline for that long-term goal as well. When you read about people who've achieved their dreams, you'll notice that having a target date they're working toward is always an important part of their success. The reminder that there's an end date helps keep them on track.

- **Make a specific plan.** Either the Action Plan form in Chapter 4 or the Planning Template in Chapter 13 may be applicable. Another planning form that might work appears on the next page (and is available to download and print at www.guilford.com/dawson7-forms).

- **Externalize the task initiation behavior you're working on.** This one's easy. Take a picture that represents the long-term goal. Post it prominently. Or make multiple copies of the picture and put them everywhere—something to remind you of what you're working on.

We once worked with a kid whose parents had promised him a new smartphone if he brought his grades up over the course of a marking period. He could earn points for engaging in behaviors that led to school success (handing in his homework on time, writing down homework assignments, producing quality work, getting grades of B– or better on tests, with more points for higher grades). We told him when he reached 500 points, he earned the smartphone. The point system helped, but what also helped was the fact that he already had a phone, but it didn't work well. Half the time when he was texting his friends, the screen didn't work, so he couldn't even read what he was texting. How did this help? Every time he pulled out his phone to text his friends he was reminded of how much he wanted that smartphone!

- **Whatever it takes, stick to some part of the plan.** Let's say this again. If you've never been able to pull off achieving a long-term goal, give yourself lots of practice time. Set smaller goals that you can achieve fairly quickly. Do several of these and make each one a little more challenging. When you've built the cushion of success, move on to your original long-term goal.

- **Select a reward.** Achieving the long-term goal will itself be a huge reward. But to keep yourself on track, you will need to give yourself rewards along the

Planning for a Long-Term Goal

Long-term goal:	Target date for reaching goal:	
Potential obstacles to goal achievement	Ways to overcome obstacles	
Action plan —List the steps, along with the interim deadline attached to each step and how you will reward yourself for finishing that step.		
Steps	Deadline	Reward

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way. This may be a game changer, which is why we included a column for this in the planning form on the previous page. Don't skimp on rewarding yourself for progress! (See the Reward Menu in Chapter 4 for suggestions.)

- **Write down two to three encouraging statements.** These should communicate what task you are working on, what the specific benefit will be, and that you've followed through on your plan when the practice is completed. Once you have these, create a specific mental picture of you starting the task in the location and at the time that you chose, working on the task and finishing the practice. Use the first two statements just before you bring up the image, bring up the image, and when you see yourself finish, tell yourself that you followed the plan and earned the reward.

Technological Supports

There are countless apps for goal setting, planning, and task completion. We cannot recommend specific ones, but we recommend that you read the user reviews before downloading or purchasing anything. To our eyes, many if not most look quite complicated and seem almost designed to encourage you to set more goals than you're likely to be successful at (given what we've learned about the dangers of setting too many goals).

In addition to researching options by looking at the productivity category in whatever app store you frequent, you may want to look into programs that help you design a Gantt chart. If you're not familiar with this term, it is a bar chart superimposed on a calendar that allows you to track a project schedule by breaking down projects into subtasks with timelines associated with each. These, too, tend to be more complicated than is necessary, but you may be able to find something that suits your needs.

What It Looks Like in Practice: Saving Money to Achieve a Long-Term Goal

Aziza had always had problems spending money as soon as she got it. In high school, she had a part-time job, and the money she earned was quickly eaten up by those grande mochaccinos she used to buy on her way home from school. In college, she was easy prey for those credit card come-ons that target students, and before she knew it she was several thousand dollars in debt. Her parents helped her out with that mistake, but once she graduated from college and got

a decent job, she continued to rack up bills, and her parents, naturally, stopped coming to her rescue.

Now, in her mid-30s, Aziza had a pretty good-paying job and had finally gotten her credit card debt under control (she allowed herself only one card, and she was faithful about paying off the bill in full at the end of the month). But she had bigger dreams that involved money, and she still continually fell short. The dreams varied between wanting to set aside enough money to afford the down payment for a condo and wanting to save up enough money so she could quit her job and travel around the world for a year. But when she was honest with herself, she admitted that the “quit my job and explore the world” dream was just that, more of a fantasy in fact, and she really did want a place she could call her own. Regardless, whatever the “real” dream was, it didn’t matter right now because at the end of every month she found that the money in her bank account was only enough to maintain minimum balances in her accounts plus a few dollars.

Every month, as she paid off her rent, car payment, electric bill, and credit card bill, she sighed. Yet again, pretty much breaking even. How was she ever going to be able to pursue her dreams?

Since having a place of her own was the more realistic desire, she decided to start with that as the general goal. Aziza realized pretty quickly that it was a general goal—way too general. She really had no idea what she could afford, what a place might cost, what she might need for a down payment, and the timeline she should plan on. She had known for a while that this would involve saving money and that would mean a budget, but without a ballpark figure she didn’t feel like she could even think about a budget yet.

To get started, Aziza decided to put her strength in planning to good use. She made getting her own condo the long-term goal and backed up from there to fill in the information she needed, creating a series of steps that made sense to her and that could become mini-goals. These included:

- Knowing what she could afford on her salary.
- Creating a wish list for what she’d like (ideally!).
- Discovering what was out there in affordable condos.
- Deciding what she was willing to take off her wish list.
- Determining the needed down payment.

- Setting a timeline to reach the goal of a down payment.
- Creating a budget that would get her there.
- Saving!

Just doing this, Aziza discovered, made the goal seem more real and motivating and gave her a direction. She made the first six steps in her list mini-goals, and set aside a total of 4 days, 2 hours per day, across 2 weeks to complete these steps. She found the Internet had a host of financial service sites where she could put in her current salary and expenses and get an estimate of what she could afford. She did this using a few different tools and took the low-end estimate to make sure she had the best chance of really getting to her goal. Next, she Googled “best online real estate service” and chose one of the top five in ratings to use to search for condos in her price range and preferred geographic location. In her initial search, she realized her wish list was more extravagant than she could afford, so she made it a “What I can be pretty happy with” list. She found four that fit the bill and that she liked, so she printed sample pictures from each and posted them in her kitchen and bedroom as reminders of her goal. Aziza really wanted to see a place in person, but she realized if she did this, she’d want something right away, and since that wasn’t possible, she didn’t want her frustration to undermine her determination.

Now came hard part number one for Aziza, *the budget* (hard part number two was actually *saving*). She knew that if she was going to get to her goal, she would need to be honest with herself and would have to track all of her expenses to decide what she did and didn’t need. Returning to the Internet, Aziza found a well-recommended budget site called Mint.com (www.mint.com) that offered free budget analysis and budget advice.

She checked on the security of the various sites and chose this site because it was the most secure she could find. But more than that, she chose it because it required that she put in all of her financial information (for example, bank accounts, credit/debit cards) and thus could track spending, saving, and so on in real time. She thought she was ready to start but realized she didn’t really know how much she was spending weekly on “extras.” Since she was spending pretty much everything, she figured she probably needed most or all of it, but she never had actually looked at her spending. So for 2 weeks she didn’t change any of her spending habits, and at the end of 2 weeks, using the Mint data, she had a spending baseline.

Wow, that proved to be a wake-up call! On coffee and a breakfast burrito

in the morning and salad and iced tea or diet soda for lunch, Aziza was spending about \$60 per week. And that didn't count dinner and drinks with friends after work on Friday or the occasional Saturday night out. She had the premium cable television package at home and the max data package on her phone (how else was she going to communicate socially?). And then there was hair and makeup. Aziza didn't really have any big-ticket items in her expenses except the 1-week stay-and-ski-trip package.

With this information and a lot of determination in hand, Aziza embarked on what a budget plan would look like. She started with the idea of changing over to make and take breakfast and lunch, spacing out hair appointments, and finding less expensive makeup options. She substituted an online movie package for premium cable, and her cell phone carrier set her up with a less expensive data package. She scratched the vacation trip for this year and proposed rotating wine and cheese get-togethers with friends after work. With these adjustments, Aziza calculated that she could save just over \$400 per month and not become a hermit or social outcast in the process. By scrapping the vacation she immediately added nearly \$1,500 to the condo kitty.

With this plan in mind, Aziza called her mom, who was good with financial advice, and asked for her thoughts. Her mom suggested automatic deposits out of her check to eliminate the "spend it if you've got it" urge. She also suggested that Aziza put her money into a conservative financial fund where it could at least earn something. Her mom explained the risk but offered their financial advisor to make a suggestion; Aziza decided to go with both of these suggestions.

Aziza was still worried about the day-to-day temptations to purchase. Since she had decided in advance what and where she could spend (and not!), she decided to make an image of what she would now do whenever she went out and might be in a place where she had routinely spent money in the past, followed by an image of being in her new condo. In addition, when in one of those situations, she made her mantra "I don't need . . .," which she found surprisingly helpful. Being the social person that she was, she posted her plan and target on Facebook for her friends and family to see, and she included her monthly thermometer chart with one of four sections colored each week that she made her savings goal. While she knew what her long-term goal was, managing it from week to week felt much more doable. With the constant encouragement from her friends and family for meeting her weekly goals, in a little over a year she had nearly enough money for a down payment and closing costs. Her parents, impressed with her commitment and discipline, surprised her with a gift to get her over the top so she could begin the condo search in earnest.

Why It Worked

Here are the strategies that contributed to Aziza's success:

- **Aziza made a plan.** Any time you can use an executive skill strength to help bolster a weakness, your chances of success are increased. Aziza was actually quite good at planning, and she put this skill to good use. She thought quite methodically about the problem before her, she did extensive research, and she collected critical information about her current spending habits. The nice thing about putting the time into planning is that not only do you acquire a more thorough understanding of the problem, but it is also a legitimate way of easing into your long-term goal.

There's a concept from behavioral research called "readiness for change" that suggests that there are a number of stages one goes through in making a decision to change a fairly intractable behavior. Stage 1 is *precontemplation*. At this point, you're happy with yourself the way you are and have no intention of change. At Stage 2, *contemplation*, you acknowledge that you have a problem but you're not quite ready to consider changing. Stage 3 is the *preparation* stage: now you're committed to changing, but you need to get yourself ready for it. This was the stage Aziza was at when she began to investigate what she would have to do to buy a condo. The amount of research she had to do, including looking at her own spending habits and figuring out what was amenable to change, was fairly extensive, given the long-term goal she had selected. Not all long-term goals would require this much planning or preparation, but we would encourage you not to skimp on this stage. Part of what Aziza did was to look at obstacles (such as the things she was spending a good deal of money on currently) and figure out alternatives. As much as possible, do this thinking up front, so those obstacles won't come as surprises once the plan is up and running. By the way, the other three readiness-for-change stages are *action* (putting the plan into effect), *maintenance* (consolidating gains and preventing relapses), and *termination* (you've met your goal and can "exit the program").

- **In the early stages of planning, she created a number of discrete subgoals and developed deadlines for them.** Research cited in the sidebar on the next page suggests that long-term goal attainment is easier if the work can be divided into a series of discrete tasks because accomplishing small subgoals on the way toward a larger goal acts as a motivator to help you persist.

- **She used cues to keep her mindful of her goal.** These included pictures of the kinds of condos she wanted to save for, but she also used visual imagery

have looked at the impact of implementation intentions on a vast array of behaviors, including study habits for students, exercise, eating healthy foods, flossing teeth, losing weight, and quitting smoking, to name just a few. Inevitably, these studies show the superiority of making implementation intentions over either making imprecise goal statements or not taking any specific steps to facilitate behavior change. If you decide to try to improve your goal-directed persistence, you are strongly advised to accompany your goal with precise implementation intentions.

However, researchers have worked to refine their understanding of this strategy and identify features that might make the strategy more or less effective. Following are descriptions of what has been learned from their attempts to do that:

- There have been a couple of meta-analyses assessing the impact of implementation intentions as a strategy to increase healthy behaviors and physical activity. Meta-analysis uses a statistical procedure to boil down a large number of studies on a topic to a single number called *effect size* that allows one to draw conclusions about a strategy's effectiveness. One study (by Peter M. Gollwitzer and Paschal Sheeran) pooled a number of healthy behaviors and found a medium to large effect size showing the benefit of the strategy. A second meta-analysis (Ariane Bélanger-Gravel and colleagues) pooled studies focusing exclusively on physical exercise and found a small to medium effect size. However, this research study noted some additional findings. First of all, *the benefits were long lasting*. In a number of studies, researchers came back well after the study was completed to see if people were still engaged in their exercise program, and they found this to be the case. Another finding: studies where people considered possible *barriers to implementation* and strategized ways to get around those barriers were likely to lead to greater success in sustaining exercise programs.

- **Developing implementation intentions improves the ability to use *prospective memory* to help people sustain goal-directed persistence.** This means we're more likely to remember what we said we were going to do and to use that memory to carry out the promised behavior. This is particularly apt if the form of the implementation intention is an *If . . . , then . . . plan*, since the *If* portion of that statement acts as a cue to prompt the behavior associated with the *then* part of the statement.

- **The more complete the implementation plan, the more likely it is to be followed.** This includes not only establishing an intention to

engage in a certain behavior under certain conditions (for example, time and place), but also identifying *coping strategies* for high-risk situations. For instance, if you have made a plan to stop smoking, it helps to identify what you will do in situations in which you are most likely to be tempted to smoke (for example, if someone offers you a cigarette, or when you feel stressed, or when you're engaged in a daily routine that in the past included smoking). For instance, you might decide that if someone offers you a cigarette, you will tell them you've stopped smoking and ask them not to offer you any more cigarettes. Smoking cessation is offered as an example here, but you should be able to identify specific high-risk situations that might impede your goal attainment whatever you have decided to work on.

- **Implementation intentions may be more effective when they incorporate a mental contrasting exercise.** Mental contrasting means doing this: Think about the goal you would like to achieve or the behavior you would like to change and imagine the positive future that will occur if you're successful. Then think about obstacles that might get in the way of success. Decide whether they're surmountable and then picture how you can overcome the obstacles. In so doing, you will make a strong association between the positive future you are envisioning and the steps you'll take to overcome any obstacles standing in the way. This practice increases the likelihood that you will achieve your long-term goal.

- **Another way to increase success is to complete a Decision Balance Sheet at the time you create your implementation intention.** This involves thinking through and recording all the anticipated gains and losses associated with carrying out your plan. You might, for instance, as was done with one exercise study (by Andrew Prestwich and colleagues), create a chart and record gains to self, losses to self, gains to important others, losses to important others, approval from others, disapproval from others, self-approval, self-disapproval, and any others. In this particular study, participants read aloud all their responses to an interviewer who responded by providing encouraging feedback. If you decided you wanted to try this, you could use a friend, spouse, partner, therapist, or coach at this point.

- **Success of implementation intentions may be enhanced by building in booster plans.** *Getting started* on long-term goals can be challeng-

ing, but persisting for many is particularly hard. Implementation intentions work best at the front end, but your ability to persist may be enhanced by periodically writing new implementation intentions. One study (by Janine Chapman and Christopher J. Armitage) worked with college undergraduates to get them to increase their intake of fruits and vegetables. At the end of 3 months, those who had made implementation intentions increased their intake compared with a control group. Half of the experimental group were then asked to make a second implementation intention. At the end of 6 months, the fruit and vegetable intake of the group that had made only one implementation intention at the beginning of the study had dropped off. In contrast, the fruit and vegetable intake of the second group (the one that had made another implementation intention at 3 months) not only had not dropped off in their consumption of fruits and vegetables but had actually increased their intake during the second 3 months. This suggests that repeating implementation intentions periodically will be important for achieving goals that take longer than 3 months or so to achieve.

- **There are some situations in which implementation intentions are more effective than others.** Some studies have looked at whether working on multiple goals and making implementation intentions for each will result in improving one's ability to achieve multiple goals simultaneously. The results suggest the answer may be no. *Best to focus on a single goal at a time.* Implementation intentions may also be less effective when one is working on *hard* goals. However, one study (by Siegfried Dewitte and colleagues) found this offered a qualification. *If you want to work toward a difficult goal, better to build your implementation intention around your actions rather than around the goal.* Instead of deciding that at the end of 6 months you will be able to run a half-marathon, you may want to set an implementation intention that specifies how many days and how many miles per week you will run. And finally, *implementation intentions are most effective if the goals you're working toward are self-concordant*—in other words, when the goals are consistent with how you think of yourself and what you want for yourself (as opposed, perhaps, to what someone else might want for you). To use this knowledge, in addition to creating a plan that specifies *what* and *when* you intend to engage in a certain behavior, spend some time thinking about *why* you want to engage in the behavior. Spell it out, write it down, and remind yourself of that *why* whenever the time comes to engage in the goal-directed behavior.

Here are some other research-based strategies to think about if you're trying to improve goal-directed persistence:

- **If you're marking your progress toward goal attainment (and whenever possible, this is a good idea), focus on "the small area."** If you're at the early stages of attempting to achieve a goal, focus on how much you've accomplished. If you're reaching the end, focus on how much left you have to do. Thus, say to yourself, "I've completed 20% of my goal" in the beginning rather than saying "I have 80% left." As you near the end, though, say to yourself "I have 20% to go," rather than "I've finished 80%." Focusing on the small area creates an illusion of fast progress, thereby increasing your motivation to persist.

- **Small victories can translate into big goal attainment.** It turns out that completing discrete subtasks also motivates you to continue to work toward the long-term goal. This was seen in a study that looked at people's efforts to get out of debt. It compared two common strategies for debt reduction: taking out a consolidation loan and using that to pay off other, smaller loans versus debt counseling, which typically involves creating a debt management plan in which the debtor pays a certain monthly fee to the credit counselor, who disburses the money to the various creditors involved. The authors of this study (David Gal and Blakeley McShane) found that debtors who focused on the discrete tasks of paying off individual loans were more successful over the long term than debtors who focused on simply paying down the debt. In other words, if two debtors had the same amount of debt and the same number of creditors, the one who paid off the greater number of debtors at the end of a set time period was more likely to get out of debt in the long run than the other, even if the other had actually paid down more of the overall debt. The authors of this study concluded that marking progress through discrete steps was the motivator that kept the successful debtors on the way to ultimate victory. This argues for breaking down long-term goals into discrete and manageable subgoals or subtasks as a way to build in markers of progress.

- **Self-talk can be an effective strategy to support goal-directed behavior.** We've discussed self-talk in more detail in Chapter 10, but it's relevant to goal-directed persistence as well. And as we've stated elsewhere, *how* you talk to yourself can make a difference. We found an elegant study that used as subjects college students who wanted to improve

their eating habits. Once the authors (Vanessa Patrick and Henrik Hagtvedt) determined they were working with a motivated group, they taught one half of the subjects to say to themselves “I *can’t* eat unhealthy snacks” as a way of guarding against giving in to temptation. The second half they taught to say “I *don’t* eat unhealthy snacks.” They conducted several related studies exploring the benefits of one form of self-talk over the other, and the results were consistent and pretty impressive. Which group do you think did better resisting unhealthy food? The *I don’t* group. I bet you guessed that group, and I bet you know why. *I don’t* is empowering: you are basically saying “I am not the kind of person who eats unhealthy snacks—this is a behavior *I* can control.” Saying *I can’t* sounds more like you’re depriving yourself of something you’d like to do, perhaps because of an arbitrary rule that feels like it’s imposed by someone else.

- **Behavior contracts can also be effective.** This is a variation on implementation intentions. Make a behavior contract with another person for the behaviors you plan to engage in. Two instructors at the U.S. Air Force Academy used this approach with students in their classes who were performing poorly after the first exam of the quarter. They made it voluntary and had a control group of similarly performing students who were not offered the contract. The contract had three components to it: (1) the students acknowledged that they were doing poorly in the class; (2) the students agreed to engage in specific behaviors to improve performance (do all the course readings, ask for help if needed, and come to the professor’s office according to an agreed-upon schedule); and (3) the students understood that the contract would expire when two conditions were met—the students achieved the grade on the next exam that they’d explicitly contracted to work toward, and the students informed the instructor they would like to terminate the contract. Each learning contract was personalized for each individual student. The results showed that students on learning contracts improved course performance more than a comparable group of control students.

This approach, writing a behavioral contract, could be considered another variant on the implementation intentions. Although the strategies we’ve described in this chapter are intended primarily for individuals who want to improve this skill, this particular strategy may well be suited for use by an employer, manager, or supervisor who wants to help an employee improve job performance.

19

Rolling with the Punches *Stress Tolerance*

What It Is

The ability to thrive in stressful situations and to cope with uncertainty, change, and performance demands.

What We Know about It

First, it's important to lay out related terminology. When we use the term *stress tolerance*, we're referring not only to people who can manage well in stressful situations but also to people who may actually *seek out* the kind of stimulation that stressful situations often provide. There are a number of different terms that describe these groups: *sensation seekers*, *stimulus seekers*, and *novelty seekers* are the most common ones. The way the items on our Executive Skills Questionnaire (see Chapter 2) are worded particularly draws for people who fall into one of these categories. This has been purposeful on our part. We find that people who are stimulus seekers tend to function optimally in a very different environment than people who are low on sensation seeking. Understanding where you fall in the continuum from low sensation seeking to high not only will help you understand what kind of setting you thrive in but may also help you understand better those around you if it turns out their profile is very different from your own. If you're high on sensation seeking, a night on the town Friday night or spending the weekend rock climbing or hang gliding may sound

like a great way to pass the time. To people who are low on this dimension, any of these activities sound like a terrible idea—whereas curling up in front of the fire with a good book or a romantic comedy may be just their cup of tea.

When you're making a decision about how to spend your time, the frontal lobe plays a key role. But it also turns out that dopamine levels may predict what activities appeal to you as well as how you respond to stimulation. And there appear to be clear differences in dopamine responses between those who are sensation seekers and those who are prone to anxiety or respond to stress physically (for example, stomachaches, headaches, high blood pressure). However, response to stress and response to stimulation are very complicated processes, with implications for other regions of the brain besides the prefrontal cortex, such as the fight-or-flight region (the amygdala), the reward center (nucleus accumbens), and the part of the brain where long-term memory is stored (the hippocampus).

In addition to dopamine, responding to stress and stimulation involves hormones, such as cortisol. People who live with chronic stress have chronically elevated cortisol levels as well, which is associated with an array of physical ailments, including destroying healthy muscle and bones, slowing down healing and cell regeneration, impairing digestion and mental function, and weakening the immune system. High cortisol levels put you at risk not only for anxiety and depression but also for heart disease, weight gain, sleep problems, and digestive problems. This is one reason physicians pay particular attention to stress levels when they are consulting with patients about the state of their health.

To boil it all down, there are individual variations in response to both stress and sensation seeking that have both a genetic component and an experiential component. Living in stressful circumstances over time, for instance, can change both brain structure and connectivity in a way that is detrimental to mental health. Long-term stress appears to increase white matter (nerve axons and the myelin sheath that surrounds them). White matter and myelination are generally good things (since they allow good habits to form through practice), but in the case of stress this excessive myelination serves to enhance the connectivity between the amygdala and the hippocampus—which means we interpret everyday, small stressors as big threats to the system that force us into fight-or-flight mode when this is not a helpful response.

People interpret situations differently, however, and if you are high on stress tolerance, then events that might trigger elevated cortisol levels in those who are low in stress tolerance do not have the same effect on you.

What We Can Do about It

Stress tolerance either overlaps with a number of other executive skills or is impacted by those skills. People who are low in stress tolerance are often low in flexibility as well. If this is the case for you, then you may want to look over Chapter 16 to get some ideas for tackling this aspect of your problems dealing with stress. Impulsivity overlaps with stress tolerance in that some individuals who are high in stress tolerance also tend to be pretty impulsive (you do things without thinking because they seem exciting in the moment). If you're high in stress tolerance, you may not even be reading this chapter, but if you are, and you recognize that impulsivity is a piece of your sensation seeking that sometimes gets you in trouble, you may want to look at Chapter 8 for ideas on how to rein that in. Finally, there is some overlap between stress tolerance and emotional control. People who are weak in one tend to be weak in the other, and we would encourage you to check out Chapter 10 for additional ideas and strategies.

How to Modify the Environment to Minimize the Impact of Low Stress Tolerance

(For detailed information about environmental modifications, refer to Chapter 3.)

- **Modify the physical or social environment.** The most straightforward way to minimize the impact of low stress tolerance is to avoid stressful environments whenever you can. Perhaps more easily said than done, but you may want to look closely at the match between your work environment and your level of stress tolerance to see if you are in a job that may be ill suited to you. (This is Peg speaking:) As mentioned in Chapter 5, I didn't start learning about executive skills and my own executive skills profile until after I stopped working in the public schools. Once I began that journey and found that stress tolerance is one of my weaker skills, I understood why I no longer worked in the public schools—a pretty stressful work environment, especially if you're working as a school psychologist and are expected to handle every mental health crisis that arises in that setting.

If it's not possible to change jobs to create a better match, you may want to look at those aspects of your job that you can change to reduce stress. (This is Peg speaking:) I begin my workday with 20 minutes of mindfulness meditation.

I also make my office space appealing and comfortable so that it serves as a refuge if I need to get away from the hubbub of the larger mental health center where I work. And at home I loved raising my two sons, but I have to admit I'm happy to be at that stage in my life when I can come home to a quiet house where my introverted husband and I coexist quite happily.

• **Modify the task.** Look at those tasks you're asked to perform at work or expected to perform at home and see if you can alter the stressful ones in some way. Learning to say no when someone asks you to do something you know is stressful for you can help. But if that's not an option, then some task modification options include:

- ♦ Finding someone else to do the task, perhaps switching off with her and taking on one of her tasks that's a better fit for you.
- ♦ Preparing yourself in advance for the stressful task (by mentally rehearsing it so you know what to expect and how you will handle it, or by using self-talk to pump yourself up to get through it).
- ♦ Breaking it into very small pieces so that you're switching off between the stressful task and something that's easier for you, and you're not having to spend a lot of time all at once on the stressful task.
- ♦ Building in recovery time, so that you can take a break and reenergize before you go on to the next task.

• **Solicit help from others.** We gave you one option above—finding someone else to do your stressful task. That, of course, is not always (or maybe even not often) possible. You may find it helpful to let a coworker and/or supervisor know that some tasks take a lot out of you, and this may elicit some sympathy, especially if you tell them in such a way that it is clear that you're not asking to get out of the task; you're just asking for understanding and support. They may even offer you words of encouragement before you begin the task and a pat on the back after you complete it.

How to Improve Your Stress Tolerance through Practice

(For detailed information about skill improvement strategies, consult Chapter 4.)

An approach to helping people manage stress that is congruent with our methodology is “stress inoculation therapy,” developed initially by Donald Meichenbaum, a cognitive-behavioral psychologist. Therapists who use this

approach help clients prepare in advance for stressful situations to minimize the effects of the stressors. The three phases are:

1. Educate clients about stress and its effects in general and help them identify the specific stressors they are experiencing.
2. Teach coping strategies tailored to individual clients and have them rehearse those strategies.
3. Practice the skills, using a variety of simulation methods.

MentalHelp.net (www.mentalhelp.net/articles/developing-a-personalized-stress-prevention-plan/) has created a step-by-step approach for individuals to use on their own to create a “personalized stress prevention plan.” Let’s walk through the steps Harry Mills and colleagues recommend, which are quite similar to the approach we outline in Chapter 4.

- **Step 1: Challenge.** The point at this stage is to create the motivation to take steps to reduce the impact of stress on your life. Think of stressful experiences you’ve had, the impact they have had on your personal well-being, and challenge yourself to take steps to improve your response to stress.

- **Step 2: Awareness.** Learn what you can about stress management by doing an Internet search, reading books or articles, or going to seminars. We recommend visiting Amazon.com, typing in “Stress management,” and reading the reader reviews for the books offered—there are a number that come highly recommended.

- **Step 3: Preparation.** At this stage you organize what you’ve learned about stress management and select which strategies you want to learn. List the methods you want to use and any equipment you may need (for example, DVDs with guided relaxation exercises). Strategies you might consider include relaxation, exercise, meditation, and guided imagery. We list a variety of stress management techniques in the sidebar on pages 262–263. If any appeal to you, you can investigate them further by doing Internet research.

Step 3 also involves making a detailed plan. At this point the Action Plan form in Chapter 4 will be useful. We may suggest a variation, however. Whereas our plan calls for identifying a specific activity or situation for which you want to develop a response that you can practice, in the case of stress management it may be more beneficial to identify a particular coping strategy that you can

practice to address a number of different stressful situations or events. If you choose this route, the template may be modified as shown on pages 256–257 (available to download and print at www.guilford.com/dawson7-forms).

- **Step 4: Action.** Now you put your plan into effect. Keeping a log of your activities will serve as a way of both documenting progress and reminding yourself to engage in the practice. A template for doing this might look like the log on page 258 (a form you can download and print is available at www.guilford.com/dawson7-forms).

- **Step 5: Maintenance.** You've now incorporated your strategies into everyday life, so at this stage you just make sure you're continuing to use the strategies you know are helpful. If aspects of your life change, you may need to move back to Step 4, increasing the intensity of your practice to adapt to the increased stress.

Technological Supports

See Chapter 10 for a list of suggestions.

What It Looks Like in Practice: Dealing with Home and Work Stress

Gwen struggles with stress both at home and at work, and she knows she doesn't handle it well. Her difficulties with stress go way back—she was one of those students who suffered from test anxiety in high school, and she remembers holding herself up in her bedroom when her two younger brothers fought and her parents began screaming at them to cut it out. And now, in her early 40s, she feels she's dealing with the perfect storm. In her personal life she's trying to manage a 10-year-old son with special needs and an ailing parent who's unable to recognize that her cognitive impairment means she can no longer live safely by herself. The school keeps calling her about her son's latest meltdown in the classroom, and her mother's neighbors keep calling to report the latest act of forgetfulness. At work her job as a critical care nurse throws stuff at her every day. The hospital is short staffed, and her supervisor keeps trying to change her hours—adding overtime or changing her schedule at the last minute. Her husband works out of the house, which helps, but at least once a month he has to go to his remote office and is away for an entire work week.

Action Plan for Stress Management

What is your plan?

- What will you practice?

- When will you practice? (Be specific: What days in the week and what time in the day? Use the space below if that will help.)

Sunday time:	Monday time:	Tuesday time:	Wednesday time:	Thursday time:	Friday time:	Saturday time:

- How long will the practice session last? (**Remember:** Keep the session brief in the beginning.)

What is your start time? Date:

Time:

Back-up date:

Time:

What cues will you use to remind yourself to follow your plan?

(continued)

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Action Plan for Stress Management *(continued)*

Positive self-statements to support your plan. Briefly describe the following:

- What are you working on?
- Why are you working on it?
- What benefits will you get?
- What will your feelings be if the plan is successful?

What can you use as a motivator to reward yourself for following your plan?

Stress Management Log

Date	Time	Strategy practiced	Comments (for example: How did the practice go? Did it impact your reaction to a real-life stressor? Do you need to try a different strategy?)

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Gwen knows the impact of stress on physical health—she’s dealing with high blood pressure and back problems. It’s also beginning to affect her sleep, and when she doesn’t get enough sleep, she knows she’s more prone to make mistakes, in a job where a mistake can mean the difference between life and death.

Gwen is aware that she has built her personal and professional life around caring for others—her son, her mother, her patients. In difficult times, like now, this can be a significant source of stress, but for Gwen it is also her source of personal worth and self-esteem. Now, though, she feels like she may be letting down the people who she cares for because she can’t readily handle all the demands. She’s just not sure what to do about it.

Starting her shift at work, she’s at the nurse’s station and sees, on the

bulletin board, a notice that's probably been there as long as she has; she just never attended to it before. Her large urban hospital offers an Employee Assistance Program (EAP). Gwen always associated these programs with staff members who had substance abuse or marital problems interfering with work. But on her break she brings up the website and sees that they have resources for work and life balance and elder care among a host of services. Since they have an office in the hospital and offer day and evening appointments, she schedules one at the end of her shift for the following day.

Gwen meets with a female counselor, and they hit it off immediately. Gwen describes her situation in detail, focusing in particular on her problem with stress management. At the end of her tale, the counselor smiles somewhat wryly and observes that under these circumstances most people would probably struggle with stress management. This comes as something of a wake-up call for Gwen, who had never entertained this thought, but even if this is the case, it doesn't solve the problem. Fortunately, the counselor's next question—Who might help Gwen?—points her in a direction.

This direction, however, doesn't sit quite comfortably with Gwen, and she talks with the counselor about why it's okay to dump her responsibilities on others. The counselor takes issue with Gwen's notion that this is a "dump." Over the course of the discussion she and Gwen are able to reframe sharing responsibility as both a family member's role and a stress management strategy. Before ending the appointment, Gwen commits to two plans. She'll talk to her husband about needing his help in managing the school issues with their son, including making him the first contact person when the school calls. For her mother's issue, the counselor gives Gwen the name of the EAP elder care specialist, and Gwen resolves to call her brothers so that the three of them can meet with this person and discuss possible options. Gwen schedules one follow-up visit with the counselor to update her on Gwen's progress.

Jack, Gwen's husband, agrees to handle the school issue, which turns out to be a good decision. Fairly quickly he grows impatient with the school calls, does a little investigating, and finds out that the school has a responsibility to do what is called a functional behavior assessment. This means that the school is charged with determining the reasons for the behavioral "meltdowns" and then developing a plan to be implemented at school to resolve these issues. He meets with the school team and sets this in motion.

Gwen's brothers, however, drag their feet, bringing up various excuses for not being able to meet. Gwen decides on a back-door approach since she has a good relationship with both of her sisters-in-law. With their calculated nagging, the brothers relent. They and Gwen meet with the specialist and, after

considering the options, decide that an assisted living arrangement may be the way to go. This option provides for their mother's independence, which she values highly, while at the same time offering support, monitoring, and a community of peers. Between her 401(k), social security, and her husband's pension, plus the eventual sale of her house, she can afford this option.

Selling this plan to their mother could be an issue, but she enjoys the company of others and currently, more often than not, is isolated and alone. The elder care specialist agrees to work with them and their mother on positive ways to approach this issue. Not only does Gwen feel as if a giant weight has been lifted from her, but also having family members who are interested and involved has provided an ongoing source of support for her.

Work is a different issue, in part because taking care of critically ill patients inevitably involves a degree of stress. But, feeling confident and energized by having adopted an action plan for her other stressors, Gwen decides to approach this issue head-on. She's been a nurse on her unit for 3 years, has barely used any sick days, and doesn't complain. As her husband has noted, she's the ideal employee, and this had made her the ideal employee to approach to take up the slack for others, through overtime, schedule changes, and so on.

Looking at her reliability and performance, Gwen decides that she has built up some capital and can afford to use it. She meets with her supervisor, reviews her current life circumstances, and tells her supervisor what she can and cannot do regarding overtime and scheduling. For the most part, her supervisor respects her wishes, but a few weeks later, when she goes to Gwen requesting that she cover a coworker's shift, Gwen tells her that she can't. The supervisor shows some irritability but accepts Gwen's decision. For her part, Gwen admits to herself that this was anxiety provoking, but at the same time she feels empowered by setting a limit in her job since this is a first.

During her follow-up EAP meeting, the counselor congratulates her on the steps she has taken to manage her stress and her willingness to involve other people as resources. She also mentions to Gwen that stress is a chronic and significant issue for critical care nurses. Realizing that this is not just an issue for her, Gwen asks about resources, and the counselor notes that there is research to indicate that mindfulness meditation, available through the EAP, has demonstrated benefits for stress relief with health care professionals. Gwen discusses this with some of her colleagues on the unit and, with their encouragement, approaches her supervisor and tells her of the potential benefits for staff and patients. Her supervisor agrees to a pilot program of 3 months for staff. Gwen arranges for a trainer once a week at the end of their shift. Staff respond enthusiastically, and the program continues as a component of their work environment.

Why It Worked

- **Gwen was willing to seek help.** Given how overwhelmed she was, the likelihood that Gwen could make a plan or think her way through to a solution all on her own was pretty minimal (remember, under stress, executive skills in general tend to degrade). This is why some people choose to see a therapist or mental health counselor, but Gwen was lucky enough to work in a setting that had an EAP she could turn to. Since the counselor worked in the same setting, she could easily understand what Gwen was dealing with—and there's a likelihood she'd helped other people deal with stress arising from the same issues.

- **She was able to understand how her psychological makeup factored in.** Gwen recognized that the problems she was having arose in part because she was a caregiver by nature. She realized this was a double-edged sword: It explained why the work she did was so satisfying to her, but she also saw how the same trait led her to take on too much. This may have been the tipping point: Unless she took better care of herself, she could not help others the way she wanted to. This realization gave her the courage to talk with her supervisor and enlist the support of family members in a way she never had before.

- **She broke the problem down into manageable pieces.** For each source of stress, Gwen created a separate plan of action. Maybe all the ideas were hers, but having an impartial third party to bounce ideas off probably helped a lot. Sometimes people resist engaging a counselor because they don't see how anybody else can solve their problems for them. The best help a counselor can sometimes provide is to give you a chance to lay out the problem and think about it logically.

- **She sought help from others.** Gwen accessed a support network that included professionals (the EAP counselor and the elder care specialist) as well as family members. She may have thought that she was the only one who could handle her son's issues at school, but it turned out her husband was quite good at this. He clearly had a different executive skills profile. It's possible Gwen had seen his impatience as a weakness, but she was likely pleasantly surprised to see it had its uses in getting the help her son needed.

- **She identified a long-term coping strategy and created the space to practice it.** Whenever possible in designing interventions to improve executive skills we suggest that people first look at their immediate environment for things they can change to reduce the negative impact of their executive skill weakness. And then we suggest they look for ways to improve the weak skill. Gwen did

both: She addressed the day-to-day issues that were the source of her stress, but she also recognized she needed to do something to help herself cope with stress more effectively. She settled on mindfulness meditation. The weekly training available through her work fairly quickly taught her the techniques that she was then able to use on her own in between sessions. The short-term benefits were immediate—Gwen finished every meditation session feeling calmer and more ready to face whatever home or work threw at her. With consistent practice over time, she will see that benefits expand: She'll be able to handle stress in the moment more effectively, and she'll be able to access "on demand" the same calm, relaxed feelings that in the beginning are evident only at the end of each meditation session.

STRESS MANAGEMENT TECHNIQUES

Here's a list of options to consider for managing your stress.

- **Build in downtime and do something relaxing.** Any of these might work: go for a walk or spend time in nature, take time to read a book or listen to music, work in your garden, write in a journal, get together with a friend who makes you feel good. The important thing is to set aside time on a regular basis to engage in any of these activities.
- **Create "stability zones."** Based on an idea first presented by Alvin Toffler in his book *Future Shock*, stability zones are places in your life where you feel safe and relaxed—buffers against the stressful world in which you live. Stability zones might include places, people you like to be with, activities you enjoy, or even favorite possessions.
- **Exercise regularly.** Ideally, three times a week for 30 minutes at an activity you enjoy. And if you have trouble making yourself do this, watch a favorite television series while you exercise or listen to a book (Audible.com has thousands to choose from).
- **Reduce caffeine and sugar and avoid alcohol, cigarettes, and drugs.** These may provide temporary highs or temporary escapes, but they don't solve the problem of too much stress.
- **Learn and practice stress reduction techniques such as tai chi, yoga, deep breathing, mindfulness meditation, guided imagery, pro-**

gressive muscle relaxation, or other relaxation techniques. WebMD lists 10 relaxation techniques that include those listed as well as others such as decompressing (placing a warm heat wrap around your neck and shoulders for 10 minutes), laughing out loud, and keeping a gratitude journal to help you remember the positives in your life. HelpGuide.org describes in some detail a number of relaxation techniques for stress reduction.

- **Use cognitive restructuring.** This is a cognitive-behavioral approach in which you work to understand what is causing your stress, identifying any “automatic beliefs,” such as irrational thoughts, that might be underlying the stress, and then challenging those thoughts by looking for evidence to support them as well as contradictory evidence, and from those two sets of evidence coming up with a more “fair and balanced” view.

Part IV

LOOKING AHEAD

20

Aging without Losing Your Edge *A Prescription for Preserving Executive Skills*

Neuroplasticity, in the world of neuroscience, is a very recent concept. Throughout most of the 20th century, it was commonly held that as the brain aged, the number of neurons declined and no new ones were created. In fact, it was felt that neurogenesis (the birth of new neurons) was impossible once we reached adulthood. The belief was so firmly entrenched that when the journal *Science* published articles in the 1970s that purported to show neurogenesis in adult mammals, the results were either ignored or criticized. Since the criticism came from highly respected researchers, more than 20 years passed before papers began appearing that proved neurogenesis occurs in adult humans.

Now we know that it does, and since the dawn of the 21st century, the field of aging has exploded with research that has shed light on how the brain ages, what skills tend to decline with age and what are preserved, and what biological mechanisms underlie the aging process. This research became possible with the development of more sophisticated brain imaging techniques, including, in particular, functional magnetic resonance imaging (fMRIs), which enabled us to study what happens in the brain when an individual is engaged in an activity, and, more recently, diffusion tensor imaging (DTI), a process that makes it possible to study the flow of water molecules on the axons that make up white matter. This helps us understand how aging affects myelin, the fatty sheath that wraps itself around axons and speeds up the transmission of nerve impulses.

If you're reading this book as a young adult, or even as a middle-age adult, you may be thinking that you can skip this chapter, but it will be worth a few minutes to learn about how your brain might change with age and what protective factors could help you keep your cognitive functioning sharp well into

old age. It turns out that when we look at adults who age successfully, we find there are activities and behaviors that these adults put in place when they were younger as a sort of prescription for preserving executive skills. Why not take advantage of it?

Here's What We Know about Brain Changes with Age

First, a caveat: This research is fast-moving. The material presented here is pulled primarily from sources published in 2012 or later, but by the time this book goes to press, there may be new information that will likely add to—and may qualify—what we've documented. Much of what is summarized comes from an excellent book, *Nurturing the Older Brain and Mind* (by Pamela Greenwood and Raja Parasuraman), and from a theoretical article by Patricia A. Reuter-Lorenz and Denise C. Park published in *Neuropsychology Review* in 2014.

- **Brain volume shrinks with age.** Pruning accounts for this in childhood and adolescence, but it is estimated that between the ages of 30 and 90 the brain loses 12–14% of its gray matter and 23–26% of white matter. Brain shrinkage is particularly evident in the prefrontal and parietal regions; thus the impact on executive skills may be particularly pronounced. However, brain shrinkage has not been consistently linked to cognitive loss, so the implication of this brain change for healthy aging is unclear.

- **Older adults use their brains differently than younger adults.** Some intriguing studies show that when older adults are asked to engage in a variety of cognitive tasks they engage the prefrontal cortices bilaterally rather than unilaterally, as is the case with younger adults. In other words, they are using both the right and left hemispheres to work on cognitive tasks that younger adults can perform using only one hemisphere. This suggests older adults have developed a compensating strategy that involves a greater use of executive skills, perhaps to make up for declines in other skills—for example, using more active rehearsal strategies to remember information because the hippocampus, the part of the brain associated with long-term memories, generally shrinks as we age.

- **Cortical thinning and changes in white matter integrity occur with age.** The thickness of gray matter declines with age, a phenomenon seen particularly in the prefrontal cortex. In addition, there may be a loss of white matter integrity with age. Since white matter governs communication among different

regions of the brain, this can impact the ability of the brain to process information efficiently. The good news is that cognitive and motor training can have a positive impact on these processes.

- **Dopamine depletion is a function of the aging process.** As we've pointed out before, dopamine not only affects frontal lobe functioning but also plays a key role in other brain regions, notably the reward center of the brain. Decline in dopamine levels with age have been well documented, and research is now fleshing out the impact of this loss. One study suggested that this loss of dopamine may contribute to the fact that we tend to become more conservative with age. Low dopamine levels are associated with a preference for avoiding negative outcomes, whereas higher dopamine levels are associated with seeking positive outcomes. In other words, low dopamine levels are associated with a tendency to avoid risk taking.

- **Glucose regulation may be problematic in some older adults.** Glucose is the fuel that powers the brain, and if this is dysregulated, as it is with people who are diabetic or have metabolic syndrome, it can have a particular impact on the hippocampus and, more specifically, a region called the dentate gyrus, which is responsible for the formation of new memories. It is this part of the brain that is affected very early on in individuals who go on to develop Alzheimer's. The good news is that studies that have put people through several weeks of aerobic training (for example, cycling, treadmill running, elliptical trainer walking) have shown increased cerebral blood flow in the hippocampus and the dentate gyrus.

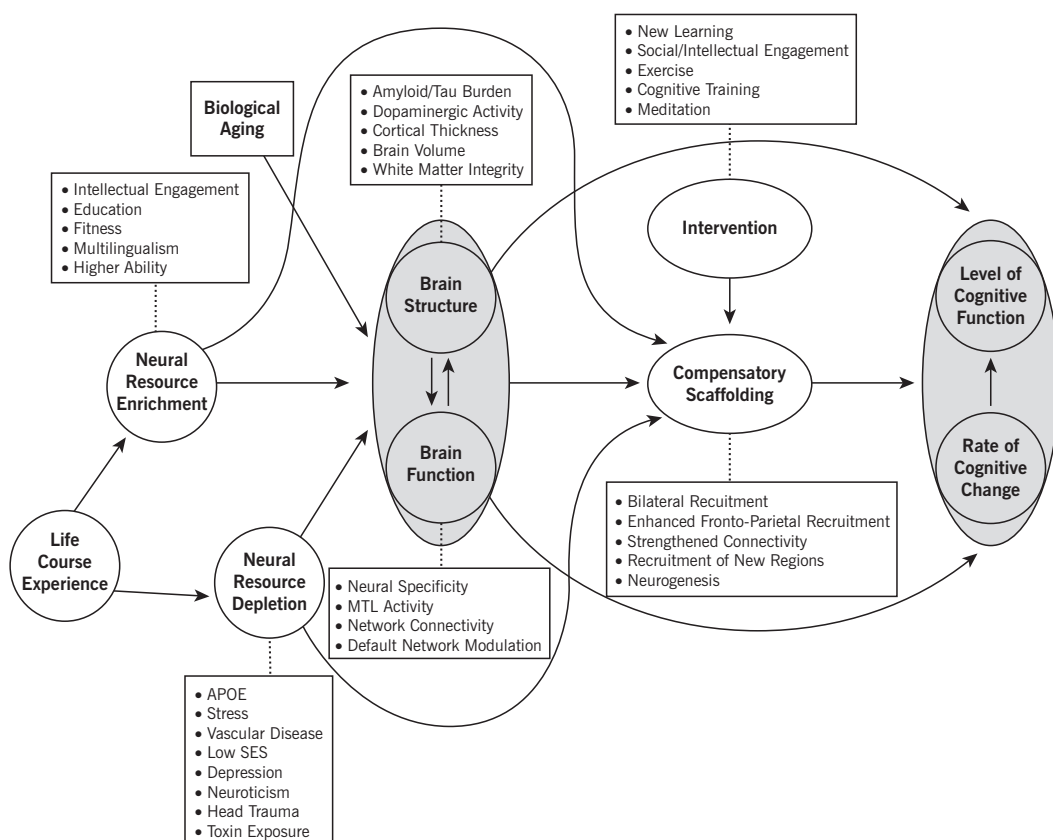
- **Changes at the neuron level are *not* associated with normal cognitive aging.** Although it was long believed that the brain suffers significant loss of neurons with age, this belief was based primarily on a flawed study done with aging monkeys. More accurate research methodology has led to the conclusion that loss of neurons is not inevitable with age, nor is there evidence of reduced neuron complexity (such as a loss of dendritic branching or synaptic abnormalities). These may occur but are not part of the normal aging process.

The Role of Compensatory Processes in Cognitive Aging

As we age, the brain adapts. How well it adapts depends on a host of factors, including our physical health, genetic factors, and our exposure to life

experiences. In 2009 Reuter-Lorenz and Park developed a theory they called the “scaffolding theory of aging and cognition” to account for these various influences, built around the notion that the brain develops “compensatory scaffolding” to counteract the negative effects of aging. More recently they revised this theory to incorporate “life-course variables,” which they define as “the accumulation of experiences and states an individual has experienced from life to death.” It goes like this:

- As we grow older, there is a normal course of biological aging that can impact brain structure and function. But our life experiences also affect this process, and the impact can be either positive and lead to neural resource enrichment (for example, fitness, education, intellectual engagement) or negative and lead to neural resource depletion (for example, stress, depression, head trauma).



*A life-course model of the scaffolding theory of aging and cognition (STAC-R).
Reprinted from Reuter-Lorenz and Park (2014), an open access article.*

- As a result of changes in brain structure and function, the brain develops compensatory scaffolding, such as bilateral recruitment, enhanced activity in the frontal and parietal brain regions, and neurogenesis.
- Interventions at this stage, such as new learning, exercise, and social/intellectual engagement, can also impact the compensatory scaffolding.
- All of this affects the ultimate level of cognitive functioning as well as the rate of cognitive change.

The figure on page 270 depicts this revised theory. We know, it looks overwhelming and confusing at first, but if you take a deep breath and look at it bit by bit (going from left to right), the meaning should emerge.

Makes sense, right?

So What Works to Preserve the Brain and Executive Skills as We Age?

This model suggests, and research is being compiled to support this, that the course of brain development in older age is affected by life experience, genetic factors, and environmental influences—all of which can either enhance or deplete brain resources. We won't spend a lot of time on the negative influences—those that lead to neural resource depletion. These include things one has no control over (such as a particular gene that is highly associated with Alzheimer's), as well as vascular risk factors, such as smoking, obesity, and diabetes. Other negative factors include heart disease, stress, and major depression.

Let's focus, instead, on activities and experiences that lead to neural resource enrichment. Evidence is accumulating that engaging in these activities as young or middle-age adults may increase the likelihood that the brain will continue to function well into old age.

Physical Exercise

Guidance on how much physical exercise and what kind seems to change constantly (just this weekend we read a study that suggests that jogging at a relatively slow pace may be associated with a longer lifespan than more intense aerobic exercise), but what is consistent is that people who engage in aerobic

exercise on an ongoing basis have better cognitive functioning as they age than people who don't. One meta-analysis looked at the impact of exercise on four aspects of cognitive aging and found that the biggest benefits accrued for executive skills—particularly planning, inhibition, and working memory. Exercise enhances neurogenesis, synaptic plasticity, and cerebral blood flow, as well as leading to an increase in neurotrophins (naturally occurring secreted proteins that serve as growth factors).

Dietary Factors

This is complicated (and evolving), but there is evidence that dietary restriction (reduced calories) improves cardiovascular health, although its impact on cognition is still open to question. Replacing saturated fat with polyunsaturated fatty acids improves cardiovascular health and has a positive impact on cognition, as does eating foods containing resveratrol (a natural ingredient found in grapes and grape skins—and red wine). There is also evidence of the benefits of antioxidants in the diet, but little or inconclusive evidence for the benefits of vitamin B supplements or other specific foods, spices, or herbs.

Cognitive Stimulation

Sources for cognitive stimulation are many and varied and can have a significant impact on the aging brain. Continuing to work can have a positive impact (depending on the job, presumably). One multinational study that looked at memory performance in older adults in countries where the retirement age varies found that Americans, who have a high retirement age (65–70), outperformed people from countries with a low retirement age. Other forms of cognitive stimulation associated with better cognitive functioning include playing musical instruments and bilingualism and multilingualism. Picking up a new language as an older adult can also be beneficial. Sadly, there is little evidence of any particular benefit from doing crossword puzzles or Sudoku, since these activities tend not to stretch our thinking skills particularly (especially once we have mastered the instructions). Social engagement has been shown to be a protective factor as well.

Meditation

We discussed meditation in Chapter 10, but among the studies done on the impact of meditation on brain functioning are ones that have attempted to gauge

its impact on aging. A study reported in *Frontiers in Psychology* (by Eileen Luders and colleagues) recently compared gray matter atrophy in subjects between the ages of 24 and 77 who had been meditating for many years with subjects who had never meditated. Although the study is correlational (meaning that other factors such as other lifestyle choices cannot be ruled out as contributors to the outcome), the study found age-related declines in gray matter in both groups, but significantly less decline in the meditation group.

Cognitive Training

This gets tricky. If we focus only on a narrow definition of cognitive training—namely, computer-based cognitive training software, or brain games, then the conclusion is that playing these games does not improve broad cognitive abilities. See the sidebar in Chapter 9 for more about this.

A great deal of research, however, has been devoted to more complex forms of cognitive training, and the results of these studies are a little less straightforward. To attempt a brief summary, research has looked at three areas: (1) changes in brain structure and activity as a result of cognitive training, (2) changes in performance on cognitive tasks (mostly laboratory-based tests), and (3) changes in functional outcomes (such as improvement on activities of daily living).

With respect to brain changes as a result of cognitive training, studies have shown increases in neural volume in regions such as the hippocampus and nucleus accumbens following cognitive training (for example, teaching older adults to juggle). Changes in neural activity in activation of specific brain regions have also been demonstrated. One 2009 study (by Carlson and colleagues) had older adults volunteering for 6 months in elementary schools to support literacy and library activities for children, as well as teaching conflict resolution through play in a supervised recess format. The researchers found an increase in brain activity in the left prefrontal cortex and anterior cingulate cortex (a part of the brain involved in decision making, empathy, and impulse control, among other things). They also found improvement on laboratory measures of executive skills. This is very promising, but it begs the question of whether these structural changes result in improvement on real-world functioning.

With respect to the impact of cognitive training on behavioral outcomes, here's what the research shows: In general, cognitive training has been shown to improve people's ability to perform the tasks they were trained on, and there's also good evidence to suggest they may improve on similar or related tasks. There's also some evidence that training may have a positive influence

on broader abilities, such as fluid reasoning (the ability to solve new problems independent of previously acquired knowledge).

Most consistently, though, the research shows that if you learn strategies to increase your processing speed on lab tasks, for instance, you may be able to generalize that skill to similar (but not identical) lab tasks of processing speed. Or if you learn some strategies for remembering certain kinds of information (such as lists of words), you may improve on related memory tasks (such as learning number sequences). However, there is very little evidence to suggest that that learned skill will translate to everyday tasks (technically, activities of daily living or ADLs in the lingo of the geriatric community) that require memory or processing speed (such as remembering details of prescription medicine or being able to pay your bills faster).

One of the most frequently cited studies about the long-term impact of cognitive training was completed in 2002 (by Bell and colleagues). This was a multisite study involving almost 3,000 individuals between the ages of 65 and 94 who were randomly assigned to one of three intervention groups or a no-intervention control group. The interventions took place in 10 group sessions and consisted of:

1. **Memory training.** Participants were taught strategies for remembering word lists, sequences of items, text material, and details and main ideas of stories, as well as everyday memory tasks such as remembering a shopping list.
2. **Reasoning training.** Participants were taught strategies for solving problems involving serial patterns, including both abstract reasoning tasks and problems related to ADLs.
3. **Speed-of-processing training.** These emphasize teaching visual search strategies to enable people to identify and locate information quickly in a divided attention task.

After 11 months, 60% of each intervention group received “booster” training (four sessions spread over 2–3 weeks).

Outcome measures included assessing participants’ ability to perform tasks similar to the ones they were trained on (called “proximal outcomes”), as well as functional measures associated with activities of daily living (both performance measures and self-reported). These outcomes were assessed 2 years after the initial training. The results? In the investigators’ words:

Overall, this large-scale study demonstrated that cognitive interventions helped normal elderly individuals to perform better on multiple measures of the specific

cognitive ability for which they were trained. *It did not, however, demonstrate the generalization of such interventions to everyday performance* [emphasis added], at least in the initial two years.

Now, it should be noted that, when a 5-year follow-up was conducted, participants who had been part of the reasoning training group reported less decline in self-assessed activities of daily living skills than the control group. But the outcome measure was narrow and only one of the three intervention groups showed significant improvement.

The problem with cognitive training, as it is currently designed, is that because it takes place in a laboratory, the tasks people are trained with do not approach the complexity of real-world demands on memory, reasoning, or processing speed. For this reason, it is not surprising that although we can achieve “near transfer” (improvement on similar lab tasks), we’ve yet to reliably demonstrate “far transfer” (improvement on skills in the real world).

So What’s the Take-Away?

The good news is that we have ample research to demonstrate the benefits of things you can do—starting now—to preserve executive skills into old age. It’s even more good news that most of these activities are things you can incorporate into your everyday life without having to purchase expensive equipment or technology. Aerobic exercise, meditation, and cognitive stimulation in the form of learning new skills can be done at little or no cost—and the benefits may be profound across the long term.

What is clear to us is that the more you do to strengthen and preserve your executive skills, the more likely you are to age well. If this doesn’t motivate you to redouble your efforts to make even small improvements in your executive skill weaknesses, we’re not sure what could (but we’re both in our mid- to late 60s, so that may influence the sense of urgency we feel about this!). And think of it this way: not only will you gain in the short term but the benefits may accrue over the long term as well.

Go back and revisit those chapters that target your particular areas of challenge. If your first attempt at an intervention didn’t work, scale back, start smaller, and build a ramp that inclines more gradually. Think of it as bestowing a gift on your future self.

In fact, make that a mantra to encourage you to keep working: “I do this as a gift to my future self.”

Best of luck!

Resources

Books

Aladina, S. (2015). *The mindful way through stress: The proven 8-week path to health, happiness, and well-being*. New York: Guilford Press.

Not all of us have the opportunity to go to a mindfulness retreat to learn this kind of meditation. This book gives you the chance to learn mindfulness meditation at home, following an 8-week step-by-step program that is actually two programs: a mini-course for people for whom time is at a premium and a more complete program for those who have the time to delve more deeply into the practice. The book also comes with downloadable meditations.

Barkley, R. A. (1997). *ADHD and the nature of self-control*. New York: Guilford Press.

Barkley, R. A. (2012). *Executive functions: What they are, how they work, and why they evolved*. New York: Guilford Press.

While technical, both these books help the reader understand executive skills as well ADHD. Written by a leading expert on ADHD, Barkley makes the case in the first book that ADHD is, at base, a disorder involving executive skills, while in the second he offers a comprehensive theory of executive skills, combining neuropsychological and evolutionary research.

Barkley, R. A. (2010). *Taking charge of adult ADHD*. New York: Guilford Press.

Barkley converts his vast knowledge of ADHD into practical, everyday strategies for adults to address the executive skill and daily living issues associated with ADHD.

Baumeister, R. F., & Tierney, J. (2011). *Willpower*. New York: Penguin Press.

Written by a leading researcher on the topic, this book summarizes the

research on self-control and gives the reader not only a window into how psychologists understand self-control but how they identify effective strategies for improving this critical skill.

Begley, S. (2007). *Train your mind, change your brain: How a new science reveals our extraordinary potential to transform ourselves*. New York: Ballantine Books.

The author, a well-known science writer, reports on how cutting-edge science and the ancient wisdom of Buddhism have come together to reveal that, contrary to popular belief, we have the power to literally change our brains by changing our minds. An accessible book that helps the reader understand neuroplasticity.

Davidson, R. J., & Begley, S. (2012). *The emotional life of your brain: How its unique patterns affect the way you think, feel, and live—and how you can change them*. New York: Plume Books.

In this book, Begley combines forces with Richard Davidson, a pioneering neuroscientist, focusing on the neurological basis of emotions. They describe six distinctive brain patterns associated with different emotional styles, referencing research from Dr. Davidson's laboratory to support their framework.

Gawande, A. (2009). *The checklist manifesto*. New York: Holt.

Atul Gawande is a surgeon who writes about medical issues for a lay audience. In this book, he describes how checklists can be a vital tool to preserve the health and safety of consumers (patients and airline passengers, among others). After reading this book, you may decide that checklists are a survival tool for life in the 21st century.

Greenwood, P. M., & Parasuraman, R. (2012). *Nurturing the older brain and mind*. Cambridge, MA: MIT Press.

A bit technical, but packed with information. If you want to sort out myth from fact regarding factors that affect cognitive aging, both positively and negatively, this is the book for you. And if you want to know more about how the brain ages, you won't find a better resource.

Hallowell, E. M., & Ratey, J. J. (2011). *Driven to distraction (revised)*. New York: Anchor.

A classic, updated, in the field of adult ADHD, offering a thorough explanation, coping strategies, and the range of treatment options available.

Harris, D. (2014). *10% happier: How I tamed the voice in my head, reduced stress without losing my edge, and found self-help that actually works—a true story*. New York: Harper Collins.

If you're intrigued with the idea of mindfulness meditation but are skeptical all the same, read this book. Dan Harris, an ABC correspondent, writes a

compelling first sentence: “According to the Nielsen ratings data, 5.019 million people saw me lose my mind.” After having a panic attack on national television, Dan went searching for help. He looked to neuroscience, religion, and self-help gurus for a path forward, and ended up with mindfulness meditation. A fun book that packs a lot of information between the covers.

Levitan, D. J. (2014). *The organized mind: Thinking straight in the age of information overload*. New York: Dutton.

Keeping track of things and staying organized in a world filled to capacity with information is not easy. Other books in this resource list address response inhibition. This one looks at organization, working memory, and time management. As with other books on our list, this one combines neuroscience with practical suggestions.

Maurer, R. (2014). *One small step can change your life: The Kaizen way*. New York: Workman.

We can’t say enough about this book. We’ve been believers for a long time in a “baby steps” approach to behavior change. This book not only shows why that’s the way to go but provides compelling stories about how it works.

Mischel, W. (2014). *The marshmallow test: Mastering self-control*. New York: Little, Brown.

The marshmallow test is the best-known research study showing the impact of self-control on behavior, starting in preschool and continuing throughout life. Mischel makes the case that this is a skill that can be modified through the use of cognitive strategies, and the book provides ample examples of this.

Perry, J. (2012). *The art of procrastination: A guide to effective dawdling, lollygagging and postponing*. New York: Workman.

This is a light-hearted take on procrastination written by an emeritus professor of philosophy at Stanford University. He describes a productive way that procrastinators can become more effective in managing this bad habit by using a method he calls “productive procrastination.”

Magazines/Periodicals/Newsletters

ADDitude

This magazine is chock full of strategies and supports for people with weak executive skills. Even if you don’t have ADHD, you will find this magazine helpful (a recent issue had a cover story entitled “47 Must-Have Apps—Get Your Life in Order Now”). They also have a useful website: www.ADDitudeMagazine.com.

Attention

This is the official publication of Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD). It also offers practical strategies and resources for managing the symptoms of ADHD. CHADD's website is www.chadd.org.

Brain in the News

This is a free monthly newsletter published by the Dana Foundation, whose mission is to advance brain research and educate the public responsibly about advances in brain science. Check out their website (which also provides links to other great websites) and sign up for their newsletter at www.dana.org.

Scientific American Mind

This is a bimonthly popular science magazine that translates research on the brain and cognitive science into accessible, readable articles on topics that readers can apply to their everyday lives. Their website is www.scientificamerican.com/magazine/mind.

Useful Websites

In addition to those listed above, here are some other helpful or informative websites:

Headspace

www.headspace.com

There are lots of resources available for people who want to pursue mindfulness meditation. This is one of our favorites—developed by Andy Puddicombe, a former Buddhist priest based in the United Kingdom. It offers a series of guided meditations using a number of different techniques. There's a subscription involved, but the first 10 days are free, so check it out first. As we've explored mindfulness resources, we've discovered that the voice that guides you through a meditation practice is really important. We happen to like Andy's voice, but listen for yourself.

ISHA Foundation

www.ishafoundation.org

Another website that provides guided meditations as well as videos about meditation. This site offers free materials.

Medscape

www.medscape.com

This is another website that features health news—particularly useful to track research on aging as well as current practice in treating mental health issues such as ADHD, anxiety, and depression.

Science Daily

www.sciencedaily.com

This website features breaking news about the latest discoveries in health and science from major news services and leading universities, scientific journals, and resource organizations. Sign up for one of their newsletters and it will be sent to your inbox.

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