

SuperBetter: A Revolutionary Approach to Getting Stronger, Happier, Braver and More Resilient--Powered by the Science of Games

By Jane McGonigal

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An innovative guide to living gamefully, based on the program that has already helped nearly half a million people achieve remarkable personal growth

In 2009, internationally renowned game designer Jane McGonigal suffered a severe concussion. Unable to think clearly or work or even get out of bed, she became anxious and depressed, even suicidal. But rather than let herself sink further, she decided to get better by doing what she does best: she turned her recovery process into a resilience-building game. What started as a simple motivational exercise quickly became a set of rules for “post-traumatic growth” that she shared on her blog. These rules led to a digital game and a major research study with the National Institutes of Health. Today nearly half a million people have played SuperBetter to get stronger, happier, and healthier.

But the life-changing ideas behind SuperBetter are much bigger than just one game. In this book, McGonigal reveals a decade’s worth of scientific research into the ways all games—including videogames, sports, and puzzles—change how we respond to stress, challenge, and pain. She explains how we can cultivate new powers of recovery and resilience in everyday life simply by adopting a more “gameful” mind-set. Being gameful means bringing the same psychological strengths we naturally display when we play games—such as optimism, creativity, courage, and determination—to real-world goals.

Drawing on hundreds of studies, McGonigal shows that getting superbetter is as simple as tapping into the three core psychological strengths that games help you build:

• **Your ability to control your attention,** and therefore your thoughts and feelings
• **Your power to turn anyone into a potential ally,** and to strengthen your existing relationships
• **Your natural capacity to motivate yourself and super-charge your heroic qualities,** like willpower, compassion, and determination

SuperBetter contains nearly 100 playful challenges anyone can undertake in order to build these gameful strengths. It includes stories and data from people who have used the SuperBetter method to get stronger in the face of illness, injury, and other major setbacks, as well as to achieve goals like losing weight, running a marathon, and finding a new job.

As inspiring as it is down to earth, and grounded in rigorous research, *SuperBetter* is a proven game plan for a better life. You'll never say that something is "just a game" again.

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Editorial Review

Review

Kirkus:

"For those in search of a new self-help regimen, "SuperBetter" might just be the answer. Strong medical research and firsthand accounts provide evidence that playing games can make you a healthier, happier, more confident person."

Daniel H. Pink, bestselling author of *Drive* and *A Whole New Mind*:

“At the heart of *SuperBetter* is a simple and potentially transformative idea: We can use the same psychological strengths we display when we play games to confront real-life challenges, whether it's illness, injury, or just changing our habits for the better. Grounded in research and informed by McGonigal’s own sometimes harrowing experiences, this book will make you stop and think, then get you to act.”

Daniel J. Siegel, M.D., Clinical Professor, UCLA School of Medicine and author of *Mindsight*:

“*SuperBetter* delivers mind-boggling, science-supported, health-promoting knowledge and practical steps to bring more well-being into your life in a fun and engaging way, even if you are facing epic challenges like anxiety, depression, traumatic brain injury, or medical illness. Visionary innovator and researcher Jane McGonigal provides the proof and the practices that reveal how living a ‘gameful’ life can help you get personally stronger, closer to others, clearer in your mind, braver in your actions, and a greater hero in your own unfolding life story. *SuperBetter* is a playful, hands-on manual immersing you directly in challenges and adventures of creative gaming to develop more flexibility and resilience as you transform your life.”

Jennifer Senior, author of *All Joy and No Fun*:

“In this dazzling manifesto, Jane McGonigal knits together state-of-the-art research, moving anecdotes, and extremely satisfying mini-challenges to show us how games—video and otherwise—hold the key to a more productive, joyous life. A game designer by training and an empath by nature, McGonigal uses every power-up at her disposal to convince her audience that the very tools we deploy in imaginary worlds can be used to overcome struggles in everyday life. The result is a candy-crushing, genre-slaying read, for which fans will surely be sending her gratitude notes for years to come.”

Felicia Day, creator of Geek and Sundry and author of *You’re Never Weird on the Internet (Almost):*

“*SuperBetter* is an amazing book that fuses psychology and play in an revelatory way. With a wonderfully encouraging writing style, Jane morphs the tropes of gaming into an empowering tool set for change. *SuperBetter* is impeccably researched, extremely accessible, and sure to inspire gamers and non-gamers to adopt gameful techniques into their day-to-day lives. The sword of self-improvement never seemed easier to wield against the monsters lurking in one's mind!”

Rob Delaney, comedian and author of best-selling memoir *Rob Delaney: Mother. Wife. Sister. Human. Warrior. Falcon. Yardstick. Turban. Cabbage.*:

“You can't think your way out of a problem, but you can work your way out of a problem. *SuperBetter* shows us that it's also possible, and maybe even healthier, to play your way out of a problem. Especially if you're a silly person, like me or Stephen Hawking.”

Asi Burak, President of Games for Change:

“Jane McGonigal is easily one of the most innovative thinkers in gaming today. In *SuperBetter,* she reveals

to the world a great secret that avid game players kept for years: games are not a waste of your time; they can make you stronger, happier and more mindful. Reading this book is a compelling quest for anyone—whether you play games regularly, or you just have an open mind about them."

Amy Cuddy, associate professor, Harvard Business School; author of *Presence*:
"This book is a wise and compassionate distillation of a wealth of good research about the psychology and neuroscience of resilience and social support, married to a game framework that itself comes out of rigorous new science into the psychology and neuroscience of gaming. SuperBetter has been studied in action by the University of Pennsylvania and the National Institutes of Health, among others, and the facts are incontrovertible: following the SuperBetter rules makes people happier, more satisfied, less controlled by suffering, and stronger in their relationships with others. It really works."

Susan Cain, co-founder of Quiet Revolution LLC and *New York Times* bestselling author of *Quiet: The Power of Introverts in a World That Can't Stop Talking*:
"After reading Jane McGonigal's *SuperBetter* I'll never again say that something is 'only a game.' *SuperBetter* gives readers the tools to take the same challenge mindset we bring to playing the games we love and apply it to facing our greatest life challenges. The result is a clear path, not just to post-traumatic recovery, but to post-traumatic *growth*. In every sense a game-changing book."

Jack Kornfield, Buddhist teacher and bestselling author of *A Path With Heart*:
"Jane McGonigal shows a playful doorway to well-being and how much we can gain from training attention. This is using the art of games to grow, heal and learn."

Charles Duhigg, *New York Times* bestselling author of *The Power of Habit*:
"Hundreds of thousands of people have had their lives changed by Jane McGonigal's SuperBetter program, and I see why. It's a marriage of positive psychology with pioneering insights from cutting-edge game design. This is a plan for profound growth in the face of whatever challenges life throws at you - and whatever ones you can throw at yourself."

Gretchen Rubin, bestselling author of *Better Than Before* and *The Happiness Project*:
"Don't we all want to be better than before? If fact, we'd like to be *super better*! Jane McGonigal's fascinating, ground-breaking approach shows how 'living gamefully' can help us lead happier, healthier, more engaged lives."

James R. Doty, M.D., Professor of Neurosurgery, Stanford University School of Medicine:
"Many of us struggle to overcome challenges that seem overwhelming. Jane McGonigal has taken her immense knowledge of the science of gaming to create an innovative guide that allowed her to overcome her greatest challenge and now, thankfully, is available to each of us to overcome our own."

Nilofer Merchant, CEO, Silicon Valley strategist, and author of *The New How*:
"Until you understand yourselves as the hero of your own story, you'll never make a dent in the world. This insightful book shows you how to create the life of your dreams, using a gameful approach."

Stacy London, host, *What Not to Wear*; author of *The Truth About Style*:
"Jane McGonigal's book is an inspiring one about overcoming personal obstacles, and a revolutionary testament that game playing is for ANYONE who wants to change their life for the better. To become stronger, braver, and happier, you have to 'play with a purpose.' And if you don't know what that means, get ready… you will."

Marc Goodman, author of *Future Crimes* and Chair for Policy, Law & Ethics at Singularity University:
"Masterfully written and well researched, *SuperBetter* is literally a game-changer for anybody looking to build resilience in their lives. Though today's rapidly evolving world can often seem overwhelming, McGonigal offers an important and timely roadmap to take back control of our own lives and focus on what really matters. *SuperBetter* is a quest well-worth going on."

About the Author
Jane McGonigal, PhD, is a senior researcher at the Institute for the Future and the author of *The New York Times* bestseller *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. Her work has been featured in *The Economist*, *Wired*, and *The New York Times* and on MTV, CNN, and NPR. She has been called one of the top ten innovators to watch (*BusinessWeek*), one of the one hundred most creative people in business (*Fast Company*), and one of the fifty most important people in the gaming industry (*Game Developers Magazine*). Her TED talks on games have been viewed more than ten million times.

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Before You Play, Here's What You Need to Know

The SuperBetter method is designed to make you stronger, happier, braver, and more resilient.

It's based on the science of games—and there's *a lot* of evidence that it works.

A **randomized, controlled study conducted by the University of Pennsylvania** found that playing SuperBetter for thirty days significantly reduces symptoms of depression and anxiety and increases optimism, social support, and players' belief in their own ability to succeed and achieve their goals. The study also found that people who followed the SuperBetter rules for one month were significantly happier and more satisfied with their lives.

A **clinical trial funded by the National Institutes of Health** and conducted at Ohio State University Wexner Medical Center and Cincinnati Children's Hospital found that the SuperBetter method improves mood, decreases anxiety and suffering, and strengthens family relationships during rehabilitation and recovery.

Meanwhile, **data collected from more than 400,000 SuperBetter players** has helped me improve the method, to make it easier to learn and more fun to use in everyday life.

Every single day for the past five years I've heard from someone who says that the SuperBetter method has changed their life. It is my greatest hope that SuperBetter will help *you* tackle your toughest challenges, and pursue your biggest dreams, with more courage, creativity, optimism, and support.

Please remember, the SuperBetter method is *not* a substitute for medical advice or treatment. Many successful SuperBetter players—including a majority of participants in the University of Pennsylvania study and all the participants in the clinical trial—followed the SuperBetter method alongside some form of continuing counseling, medication, or rehabilitation, or with a doctor's supervision. *The SuperBetter method is NOT an alternative to therapy, counseling, ongoing medical treatment, or medication—nor is any game recommended or discussed in this book.*

Now that you know—let's play!

Introduction

You are stronger than you know.

You are surrounded by potential allies.

You are the hero of your own story.

These three qualities are all it takes to become happier, braver, and more resilient in the face of any challenge.

Here's the good news: You already have these qualities within you. You don't have to change a thing. You are *already* more powerful than you realize.

You have the ability to control your attention—and therefore your thoughts and feelings.

You have the strength to find support in the most unexpected places, and deepen your existing relationships.

You have a natural capacity to motivate yourself and supercharge your heroic qualities, like willpower, compassion, and determination.

This book will help you understand the powers you already have—and show you that accessing these powers is *as easy as playing a game*.

And yet this book is not about playing games—at least, not exactly. It's about learning *how to be gameful* in the face of extreme stress and personal challenge.

Being gameful means bringing the psychological strengths you naturally display when you play games—such as optimism, creativity, courage, and determination—to your real life. It means having the curiosity and openness to play with different strategies to discover what works best. It means building up the resilience to tackle tougher and tougher challenges with greater and greater success.

The best way I know to explain what it means to be gameful—and how being gameful can make you stronger, happier, and braver—is to tell you a story. It's the story of how I invented the SuperBetter method—and the life-threatening challenge I had to overcome to be able to write this book.

In the summer of 2009, I hit my head and got a concussion. It didn't heal properly, and after thirty days I still had constant headaches, nausea, and vertigo. I couldn't read or write for more than a few minutes at a time. I had trouble remembering things. Most days I felt too sick to get out of bed. I was in a total mental fog. These symptoms left me more anxious and depressed than I had ever been in my life.

I had trouble communicating clearly to friends and family exactly what I was going through. I thought if I could write something down, it would help. I struggled and struggled to put together words that made sense, and this is what I came up with:

Everything is hard.

The iron fist is pushing against my thoughts.

My whole brain feels vacuum pressurized.

If I can't think who am I?

Unfortunately, there is no real treatment for postconcussion syndrome. You just rest as much as you can and hope for the best. I was told I might not feel better for months or even a year or longer.

There was one thing I could do to try to heal faster. My doctor told me I should avoid everything that triggered my symptoms. That meant no reading, no writing, no running, no video games, no work, no email, no alcohol, and no caffeine. I joked to my doctor at the time: “In other words, no reason to live.”

There was quite a bit of truth in that joke. I didn’t know it then, but suicidal ideation is very common with traumatic brain injuries—even mild ones like mine.1 It happens to one in three, and it happened to me. My brain started telling me: *Jane, you want to die.* It said, *You’re never going to get better. The pain will never end. You’ll be a burden to your husband.*

These voices became so persistent and so persuasive that I started to legitimately fear for my life.

And then something happened. I had one crystal-clear thought that changed everything. Thirty-four days after I hit my head—and I will never forget this moment—I said to myself, *I am either going to kill myself, or I’m going to turn this into a game.*

Why a game? By the time I hit my head in 2009, I’d been researching the psychology of games for nearly a decade. In fact, I was the first person in the world to earn a Ph.D. studying the psychological strengths of gamers and how those strengths can translate to real-world problem solving. I knew from my years of research at the University of California at Berkeley that when we play a game, we tackle tough challenges with more creativity, more determination, and more optimism. We’re also more likely to reach out to others for help. And I wanted to bring these gameful traits to my real-life challenge.

So I created a simple recovery game called “Jane the Concussion Slayer.” This became my new *secret identity*, a way to start feeling heroic and determined instead of hopeless.

The first thing I did as the concussion slayer was to call my twin sister, Kelly, and tell her, “I’m playing a game to heal my brain, and I want you to play with me.” This was an easy way to ask for help. She became my first *ally* in the game. My husband, Kiyash, joined next.

Together we identified and battled the *bad guys.* These were anything that could trigger my symptoms and therefore slow down the healing process—things like bright lights and crowded spaces.

We also collected and activated *power-ups.* These were anything I could do on even my worst day to feel just a little bit good or happy or powerful. Some of my favorite power-ups were cuddling my Shetland sheepdog for five minutes, eating walnuts (good for my brain), and walking around the block twice with my husband.

The game was that simple: adopt a secret identity, recruit allies, battle the bad guys, and activate power-ups. But even with a game so simple, within just a couple days of starting to play, that fog of depression and anxiety went away. It just vanished. It felt like a miracle to me. It *wasn’t* a miracle cure for the headaches or the cognitive symptoms—they lasted more than a year, and it was the hardest year of my life by far. But even when I still had the symptoms, even while I was still in pain, *I stopped suffering*. I felt more in control of my own destiny. My friends and family knew exactly how to help and support me. And I started to see myself as a much stronger person.

What happened next with the game surprised me. After a few months, I put up a blog post and a short video online explaining how to play. Not everybody has a concussion, and not everyone wants to be “the slayer,” so I renamed the game *SuperBetter*.

Why SuperBetter? Everyone had told me to “get better soon” while I was recovering from the concussion, but I didn’t want just to get better, as in back to normal. I wanted to get *super*better: happier and healthier than I’d been before the injury.

Soon I started hearing from people all over the world who were adopting their own secret identities, recruiting their own allies, and fighting their own bad guys. They were getting “superbetter” at facing challenges like depression and anxiety, surgery and chronic pain, migraines and Crohn’s disease, healing a broken heart and finding a job after years of unemployment. People were even playing it for extremely serious, even terminal diagnoses, like stage-five cancer and Lou Gehrig’s disease (ALS). And I could tell from their messages and their videos that the game was helping them in the same ways that it helped me.

These players talked about feeling stronger and braver. They talked about feeling better understood by their friends and family. And they talked about feeling happier, even though they were in pain, even though they were tackling the toughest challenges of their lives.

At the time, I thought to myself, *What on earth is going on here?* How could a game so seemingly trivial, so admittedly simple, intervene so powerfully in such serious, in some cases life-and-death, circumstances? To be frank, if it hadn’t already worked for me, there’s no way I would have believed it was possible.

When I was recovered enough to do research, I dove into the scientific literature. And here’s what I learned: some people get stronger and happier after a traumatic event. And that’s what was happening to us. The game was helping us experience what scientists call *post-traumatic growth,* which is not something we usually hear about. More commonly, we hear about *post-traumatic stress disorder*, in which individuals experience ongoing anxiety and depression.

But research has shown that traumatic events don’t always lead to long-term difficulty. Instead, some individuals find that struggling with highly challenging life circumstances helps them unleash their best qualities and eventually lead happier lives.2

To give you a better idea of what post-traumatic growth looks like, here are the top five things that people with post-traumatic growth say:

1. My priorities have changed. I’m not afraid to do what makes me happy.

2. I feel closer to my friends and family.

3. I understand myself better. I know who I really am now.

4. I have a new sense of meaning and purpose in my life.

5. I’m better able to focus on my goals and dreams.3

Taken together, these five traits represent a powerful positive transformation. But it’s more than that. There’s actually something quite astonishing about the benefits of post-traumatic growth, something I noticed in the course of my research.

A few years ago an Australian hospice worker named Bronnie Ware published an article called “Regrets of the Dying.”4 Ware would know—she had spent a decade caring for patients at the end of their lives. She wrote that the same regrets were repeated again and again by her patients, year after year—and after she published her article, she heard from hundreds of hospice workers and caretakers all over the world who confirmed her findings. They had heard the same five regrets over the years. Apparently they are nearly

universal. Not everyone has regrets on their deathbed—but if they do, they are likely to be one or more of the following:

1. I wish I hadn't worked so hard.

2. I wish I had stayed in touch with my friends.

3. I wish I had let myself be happier.

4. I wish I'd had the courage to express my true self.

5. I wish I'd lived a life true to my dreams, instead of what others expected of me.

Think about this list for a moment. Are you having the same "aha!" moment that I had, two years ago, when I first encountered it?

Remarkably, the top five regrets of the dying are essentially the *exact opposite* of the top five experiences of post-traumatic growth. With post-traumatic growth, we find the strength and courage to do the things that make us happy, and to understand and express our true selves. We prioritize relationships and meaningful work that inspires us.

Post-traumatic growth is not the opposite of post-traumatic stress disorder, by the way. Many people who suffer post-traumatic stress disorder *also* go on to experience post-traumatic growth. The two are not mutually exclusive by any means. In fact, one study found that symptoms of post-traumatic stress were actually predictive of eventual post-traumatic growth—possibly because transformative growth requires wrestling in a deep and sustained way with something very difficult. If we bounce back too quickly, we miss the growth.5

Extreme personal challenge—if we respond in the right way—unlocks our ability to lead a life truer to our dreams and free of regrets. Looked at this way, post-traumatic growth—or getting superbetter—seems like a pretty strong candidate for the single most desirable personal transformation anyone could hope to undertake.

But how do you get from extreme stress or trauma to these five benefits? Research shows that not everyone who experiences a trauma goes on to have post-traumatic growth. So what exactly is the right process?

More important, is there any way to experience these benefits *without having a trauma*? I'm pretty sure no one would ever choose to suffer a terrible loss, an injury, an illness, or any other kind of trauma just to get these benefits. But at the same time, who wouldn't want to lead a life truer to their dreams and free of regret?

And so I set off on another two years of research. And here's what I discovered: you *can* experience the benefits of post-traumatic growth without the trauma, if you are willing to undertake an extreme challenge in your life—such as running a marathon, writing a book, starting a business, becoming a parent, quitting smoking, or making a spiritual journey. Researchers call this *post-ecstatic growth.* Ann Marie Roepke, a practicing clinical psychologist who first identified the phenomenon as a University of Pennsylvania doctoral candidate, describes it as "gains without pains"—or at least, far fewer pains.6 It works the same way post-traumatic growth does, except you get to choose your own challenge. Instead of waiting for life to throw a terrible trauma at you, you can cultivate post-ecstatic growth at any time by intentionally undertaking a meaningful project or mission that creates significant stress and challenge for you. This stressful adventure you've chosen for yourself creates the necessary conditions for you to struggle and grow as much as someone who is battling a trauma.

So if post-traumatic growth and post-ecstatic growth work the same way, what exactly is that process? What makes the difference between buckling under extreme stress and flourishing because of it? What determines whether you'll be weakened by adversity or strengthened by it?

This is where the research gets really exciting—at least for a game designer like me.

It turns out that there are seven ways of thinking and acting that contribute to post-traumatic and post-ecstatic growth. *And they are all ways that we commonly think and act when we play games.*

1. Adopt a challenge mindset. You need to be willing to engage with obstacles and look at stressful life events as a challenge, not a threat. In games, we call this simply "accepting the challenge to play."

2. Seek out whatever makes you stronger and happier. When you are facing a tough challenge, you need constant access to positive emotions, and you must look after your physical health. In games, we practice this rule by seeking out "power-ups," items that make us stronger, faster, and more powerful.

3. Strive for psychological flexibility. Be open to negative experiences, such as pain or failure, if they help you learn or get closer to your larger goal. Be driven by courage, curiosity, and the desire to improve. In games, we follow this rule whenever we battle a tough opponent or "bad guys," knowing we may fail many times before we become clever or skillful enough to defeat them.

4. Take committed action. Make small steps toward your biggest goal, every single day**.** Taking committed action means trying to take a step forward, even if it is difficult for you. It means always keeping your eyes on the larger goal. In games, we have a structure to do this. It's called a "quest," and it helps us stay focused on making progress toward the goal that matters most to us.

5. Cultivate connectedness. Try to find at least two people you feel you can ask for help, and who you can speak to honestly about your stress and challenges. In multiplayer games, we practice the art of making "allies"—people who understand the obstacles we're facing and who have our back.

6. Find the heroic story. Look at your life and find the heroic moments. Focus on the strength you've shown and the meaning and purpose to your struggles. In games, heroic stories abound. We often take on the "secret identity" of heroic characters as part of the journey; their stories inspire and motivate us to try harder and become better versions of ourselves.

7. Learn the skill of benefit finding. Be aware of good outcomes that can come even from stress or challenge. In games, we have the notion of "epic wins," or extremely positive outcomes that can arise when you least expect them, from the most unlikely or daunting circumstances.

No wonder SuperBetter works so well for so many people! Once you understand the science, it makes perfect sense. Of course a game designer like me would create a system that taps into these naturally gameful ways of thinking and acting. I didn't know it at the time, but SuperBetter was essentially a perfect road map to post-traumatic and post-ecstatic growth. Not because I was a genius but because I was a good game designer, and *all* good games train us in the seven ways of thinking and acting that help us turn extreme stress and challenge into positive transformation.

These seven rules to live by make up the SuperBetter method, and they are the heart of this book:

1. Challenge yourself.

2. Collect and activate power-ups.

3. Find and battle the bad guys.

4. Seek out and complete quests.

5. Recruit your allies.

6. Adopt a secret identity.

7. Go for an epic win.

If you're already facing a tough challenge—an illness, an injury, a loss, a personal struggle—following these rules will not only help you be more successful in dealing with the challenge; you'll also be more likely to experience the benefits of post-traumatic growth.

If you're *not* facing an extremely stressful challenge at the moment, but you still want to become stronger, happier, braver, and more resilient, just pick a meaningful and challenging goal for yourself—and then follow these rules as you try to achieve it. You will have the satisfaction of doing something extraordinary *and* start to unlock the benefits of post-ecstatic growth.

If I sound quite confident that you can transform your life for the better with a gameful mindset and the SuperBetter method, it's because I am.

Since I invented SuperBetter, more than 400,000 people have played an online version of the game. We've recorded every power-up they've activated, every bad guy they've battled, and every quest they've completed—so we know what works and what doesn't. I've joined forces with data scientists to analyze all the information we've collected from these 400,000 players over the past two years. I wanted answers to some of the same questions you might have: Who can the SuperBetter method work for? (Virtually anyone—young or old, male or female, avid game player or someone who has never played a video game in their life.) How long do you have to play by the seven rules before you start to feel stronger, happier, and braver? (Our studies show measurable improvements within two weeks and even bigger improvements at four weeks and six weeks.) And most important, do these benefits last? (As far as we know, yes. This method has existed for only a few years, but we've followed up with successful players at six months, a year, and when possible two years later. We found that gameful ways of thinking and acting are a skill set that, once learned, you are likely to keep practicing and benefiting from.)

I've waited five years to write this book because I wanted to be absolutely sure that the gameful method works. I waited for early research on the positive benefits of games to be confirmed in larger, more robust studies. I waited for scientists from a wider range of fields, including neuroscience and behavioral psychology, to weigh in with their theories on how a gameful mindset can help. Most important, I waited until I could team up with doctors and psychology researchers myself to test the SuperBetter method in rigorous studies—and I have, with a randomized, controlled trial with the University of Pennsylvania *and* with a clinical trial with the Ohio State University Wexner Medical Center and Cincinnati Children's Hospital. (You'll read about that research in "About the Science," at the end of this book.)

Not a day has gone by in these five years that I haven't received an email or Facebook message from someone telling me how much SuperBetter has inspired them or helped their family. I hear from people from all walks of life, like Norman J. Cannon, a commander in the air force.

I was taking command of a 2,000-person squadron in the air force and wanted to talk to them about resilience. Meanwhile, my wife had just fallen down the stairs in September 2012 and had a severe concussion. She had all the same thoughts and experiences you mentioned. I showed my wife your

SuperBetter video. She cried while watching, realizing that somebody understands. I then showed the video to all 2,000 of my military and civilian employees in a commander's call that I had. It hit home with a lot of people.

I hear from parents like Michelle T., a mom in West Virginia, who says:

My thirteen-year-old son has juvenile diabetes, and this is EXACTLY what I've been praying for. Our family has formed our own superhero team, and the emotional change I see in my son is glorious! I'm getting my son back! Thank you!

And I hear from patients like Jessica MacDonald, then a thirty-year-old administrative assistant from Denver who played SuperBetter while she battled multiple surgeries and hospitalization for a severe staph infection.

When you're ill or injured, the world becomes one of can'ts. I can't lift that because of the antibiotics IV in my arm; I can't attend that event because I'm too tired; I can't go to work because I'm on enough medications to kill a horse and barely know my own name. A million times a day the word *can't* goes through your mind, and it murders your soul by inches. If I boil all the benefits of this game down to one thing, it is this: SuperBetter turns *can't* into *can*. Sure, there are still things you aren't allowed to or shouldn't do, but you stop focusing so much on the limitations. You begin to see and celebrate your achievements.

Jessica invited her doctors and nurses to be allies, and they had a lot to say about the game, too.

The question everyone asks is "Did it help speed your recovery?" I can't say unequivocally that I got better faster because of this game, but I will tell you what my infectious disease doctor told me. In nearly fifty years of medical practice, he said he's come to one conclusion: patients' attitudes overwhelmingly influence the recovery process. He told me, "I don't know if you got better faster, but you got better *better*."

It doesn't matter if you're a lifelong game player or you've never played a video game. It doesn't matter if you prefer sports, card games, or board games to digital games. Whatever your history with games, you have the capacity to tap into your natural strengths by playing games—and you can learn to bring these gameful strengths to your real life challenges and goals.

Most people see games as nothing more than a pleasant distraction—or worse, as an addicting waste of time. But I see them differently—and not just because of my personal experience with SuperBetter. I've been researching the psychology of games for nearly fifteen years. I've studied games that decrease anxiety, alleviate depression, prevent pain, and treat post-traumatic stress disorder. I've analyzed games that increase willpower, boost self-esteem, improve attention skills, and strengthen family relationships. The mounting scientific evidence about games from the fields of psychology, medicine, and neuroscience has changed my mind about what games are—and what they can teach us. Games are not just a source of entertainment. They are a model for how to become the best version of ourselves.

I want you to look at games differently, too. I want you to discover the connection between the strengths you naturally express when you play games and the strengths you need to be happy, healthy, and successful in real life. To be more specific, I want you to see games as an opportunity to practice the seven life-changing skills that will make you a stronger person in every way: mentally, emotionally, physically, and socially.

You don't have to be an avid game player to activate your gameful strengths in everyday life, but if you love or play any game regularly—golf, bridge, Scrabble, soccer, poker, *Candy Crush Saga*, solitaire, sudoku—you're probably a bit more in touch with your gameful strengths already.

To lead a more gameful life, you simply have to be open to learning about the psychology of games—and be

willing to experiment with new ways of thinking and acting that can help you increase your natural resilience.

The *fastest* way I know to get you to see games—and your own capabilities—differently is to play a game with you.

So let's play a game together—right now.

I challenge you to complete four life-changing quests in the next five minutes.

Don't worry, it's easier than it sounds. I've watched some amazing people complete the same four quests you're about to undertake—including Oprah Winfrey, legendary skateboarder and entrepreneur Tony Hawk, and Colonel Bat Masterson, the surgeon general for the U.S. Armed Forces. If they can do it, you can do it, too.

These are the first four quests that every SuperBetter player completes. I guarantee that if you successfully complete them all, roughly five minutes from now you will already be a stronger person—mentally, emotionally, physically, and socially. (You'll also have a much better idea of how this book can help you unleash your gameful qualities.)

Ready to play? Let's go!

THE GAME STARTS NOW

Here's your first life-changing quest. I want you to complete it, right now, before you read any further.

Do not skip this first quest. I repeat: DO NOT SKIP THIS QUEST. If you skip it, you'll be tempted to skip others—and then the game will be over before you've even started playing. So here we go. Your first quest—I know you can do it!

QUEST 1: Physical Resilience

Pick one:

Stand up and take three steps.

or

Make your hands into fists and hold them over your head as high as you can for five seconds.

Go!

Did you do it? Well done!

By completing this quest, you've just boosted your physical resilience.

Physical resilience is your body's ability to withstand stress and heal itself. And research shows that the number-one thing people can do to boost their physical resilience is to not sit still. Whenever you sit still for

more than a few minutes, your body starts to shut down at the metabolic level. This shutdown negatively impacts every aspect of your health, from your immune system to your ability to handle stress.7

Every single second you're *not* sitting still, however, you're actively improving the health of your heart, your lungs, and your brain.8 You'll have more energy and sleep better, too—which is crucial when you're facing a hard challenge, even if it isn't primarily physical in nature.

So stand up for just one second. Take three steps. Throw your arms in the air. That's all it takes. You are now physically stronger than you were thirty seconds ago.

Ready for your next quest?

?

QUEST 2: Mental Resilience

?

Pick one:

Snap your fingers *exactly* fifty times

or

Count backward from 100 by 7, like this: 100, 93 . . . all the way to at least 0.

Go!

All done? Good work.

By completing this quest, you've just increased your mental resilience.

Mental resilience is motivation, focus, and willpower—strengths that are essential to achieving any goal.

Researchers have figured out that willpower is like a muscle. It gets stronger the more you exercise it—as long as you don't exhaust it.9 Accomplishing tiny challenges—even ones as absurd as snapping your fingers exactly fifty times or counting backward by seven—helps you exercise this muscle without wearing it out. That means you're more likely to have the motivation and determination you need when it's time to tackle tougher obstacles. So congratulations: you are now mentally stronger than you were a minute ago.

Let's keep playing!

QUEST 3: Emotional Resilience

Pick one:

If you're inside, find a window and look outside for thirty seconds. If you're outside, find a window and look in.

or

Do a Google Image or YouTube video search for "baby [your favorite animal]."

Go!

Mission accomplished? Great!

By completing this quest, you've just strengthened your emotional resilience.

Emotional resilience is the ability to access positive emotions at will. It doesn't matter if you're stressed, or bored, or angry, or in pain—when you have emotional resilience, you can choose to feel something good instead.

Emotional resilience is a particularly important strength. Research has shown that if, on average, people experience more positive emotions than negative ones, they gain a huge range of benefits. They're more creative at solving problems. They're more ambitious and successful at school and at work. They're less likely to give up when things are hard. People around them are more likely to offer help and support them in their goals.10

To achieve emotional resilience, you don't need to eliminate negative emotions—that's obviously impossible. You just need enough positive emotions, over the course of a day, to beat out the negative ones.

Both options in this quest are scientifically validated methods for provoking a specific positive emotion. Looking through a window provokes *curiosity*—the positive emotion that psychologists define as "a desire to gratify the mind with new information or objects of interest."11 (Hopefully you saw something interesting through the window!) Meanwhile, researchers have demonstrated that looking at photos or videos of baby animals is all it takes to make virtually anyone feel the emotion of *love*. (Baby animal cuteness brings out our nurturing instinct!) Better yet, this quick burst of love from looking at baby animals doesn't just feel good, it also improves attention and productivity.12

Even if you felt the curiosity or the love for only a few seconds, you just got emotionally stronger. Enjoy it.

Let's try one more quest.

QUEST 4: Social Resilience

Pick one:

Shake or hold someone's hand for at least six seconds.

or

Send someone you know a quick thank-you by text, email, or Facebook message.

Go!

All done? Awesome.

By completing this quest, you've boosted your social resilience.

Social resilience is the ability to get support from friends, family members, neighbors, and co-workers. You're able to ask for the help you need—and you're more likely to receive it. Social support is crucial to tackling challenges successfully. You can try to go it alone, but your odds of success are vastly improved when someone else has your back.

There are lots of ways to increase your social resilience. Touch and gratitude are two of the most effective.

Studies show that shaking or holding someone's hand for at least six seconds increases the level of the "trust hormone," oxytocin, in both of your bloodstreams.13 Boosted oxytocin levels make you want to help and protect each other. The more oxytocin you release together, the deeper your bond.14

Meanwhile, expressing thanks is one of the most reliable ways to cultivate good feelings and a closer connection. Gratitude is the single most important relationship-strengthening emotion because, as researchers explain, "it requires us to see how we've been supported and affirmed by other people."15

So whether you just touched or thanked someone, you are now socially stronger than you were a page ago. Success!

I knew you could do it: you've completed four simple quests, and you're already building up life-changing skills and abilities. You're discovering that you are, in fact, stronger than you know; you are indeed surrounded by potential allies; and you really can become a hero to others just by tapping into your natural resilience.

Are you having fun yet? I hope so. Because my goal is to make this the most fun book you've ever read. You'll complete nearly one hundred more quests before this book is through. Each one is based on a different scientific breakthrough about what makes you more resilient. And at the start of each quest, you'll see one of these four icons to let you know if you're building primarily physical, mental, emotional, or social resilience:

, , ,

I promise you these quests will make you feel more confident, more in control, and more optimistic about all your real-life challenges. (As with any good game, these quests will get a little bit trickier the further you go!)

Seeking out and completing quests is just one of the seven gameful skills that will help you become stronger, happier, and braver in everyday life. Now that you've gotten a taste of what it feels like to adopt a gameful mindset, let me tell you a little bit more about what you can expect from this book.

I won't ask you to start leading a more gameful life until you're absolutely convinced of the ability of games to solve real problems and change real lives. So in Part 1, "Why Games Make Us Superbetter," we'll start with an overview of the evidence on games. What strengths do they tap into, and what psychological benefits do they bring? We'll look at games that increase motivation and willpower, that block the feeling of physical pain more powerfully than morphine, that help you overcome anxiety and depression, that can change your eating habits, develop your compassion for others, and help you forge stronger, happier relationships with

friends and family. Most of the games we discuss in Part 1 are readily available for you to play on your phone or your computer as a way to practice and understand your gameful strengths better. However, even if you decide never to play any of these games, Part 1 will give you a solid foundation to understand what it means to be gameful. You will know exactly what it takes to tap into your three most important challenge-facing, problem-solving powers: your abilities to control your attention, to make allies and get support, and to motivate yourself to do what's important, even when it's difficult for you. We'll finish by exploring the research on why some game players are better able than others to bring these powers from their favorite games into their real lives.

Part 1 is full of gameful quests for you to complete, just like the ones in this introduction—so you'll have plenty of opportunity to play and get stronger with every page.

In Part 2, "How to Be Gameful," we'll talk about your life. Now that you understand your strengths, what is the best way to harness them in everyday life? We'll go in depth with each of the seven gameful skills that can help you tackle real-life challenges with more courage, creativity, and determination. I'll give you seven simple rules to follow to practice each of these skills in daily life. This is the SuperBetter method, and it's designed to make it easy for you to lead a more gameful life—*whether or not you have the time to play games*.

In Part 2, you'll meet people who have used the SuperBetter method to grow stronger, healthier, and happier in the face of challenges like anxiety, depression, chronic pain, and PTSD. You will hear stories from people who have adopted a gameful mindset to find a better job, have a more satisfying love life, run a marathon, start their own company, and simply enjoy life more. And because everything in this book is grounded in research, you will discover the science behind these success stories—more than two hundred studies from the fields of psychology, medicine, and neuroscience that explain exactly why living by these seven gameful rules builds mental, emotional, physical, and social strengths.

If you're facing a major challenge in your life, and you want to start using the SuperBetter method right now**, you can skip directly to Part 2.** Come back to Part 1 whenever you want. (I think that once you see for yourself how well SuperBetter works, you'll be even more curious to understand the science behind it!)

Part 3, "Adventures," brings it all together with three SuperBetter journeys I've created so that you can continue practicing your new gameful skills. Each journey is full of targeted power-ups, bad guys, and quests to help you achieve a major resilience breakthrough. On the "Love Connection" adventure, you'll build your social resilience with ten quests designed to help you find love in the most surprising ways and places. In "Ninja Body Transformation," you'll learn twenty-one sneaky ways to increase your physical resilience. And on your final adventure, you'll discover what it means to be "Time Rich"—the feeling that you have abundant free time to spend on all the things that matter most to you. Getting time rich is an excellent way to build your emotional and mental resilience.

Taken together, these three adventures contain *just* enough quests for you to keep playing SuperBetter for six weeks. That's an important number—because six weeks is exactly how long participants followed the SuperBetter rules in our clinical trial and randomized controlled study. In those cases, playing SuperBetter for six weeks resulted in significantly better mood, stronger social support, more optimism, less depression and anxiety, and higher self-confidence. If *you* complete all three of these adventures—by tackling just one quest a day—you'll have achieved a full, life-changing dose of the game.

Together, the stories and the science in this book will reveal how adopting a gameful mindset can change your life for the better. They will not only change what you think games are capable of. They will change

what you think *you* are capable of.

Let's go get superbetter.

The evidence that games can make us stronger is all around us. Over the past decade, thousands of scientists and researchers working at hospitals and universities across the globe have documented an astonishing range of real-life positive impacts of video games and virtual worlds.

In this part of the book, you will discover games that:

- increase your motivation and willpower
- block the feeling of physical pain more powerfully than morphine
- help you overcome anxiety and depression
- make you a better learner
- inspire you to exercise more
- help prevent post-traumatic stress disorder
- make you more likely to come to a stranger's rescue
- forge stronger, happier relationships with friends and family

Chances are, you've already played one or more of these potentially life-changing games—from *Tetris* to *Words with Friends* to *Call of Duty* to *Candy Crush Saga*. But even if you play games regularly, you're probably not getting all the benefits. That's because when it comes to unlocking the benefits of games, it's not just *what* you play or *how much* you play—it's why you play, when you play, and who you play with that really matter. In other words, you need to *play with purpose.*

As you'll learn in Part 1, when you play games with purpose, you tap into three core psychological strengths:

- *Your ability to control your attention* and therefore your thoughts and feelings
- *Your power to turn anyone into a potential ally* and to strengthen your existing relationships
- *Your natural capacity to motivate yourself* and supercharge your heroic qualities, like willpower, compassion, and determination

These strengths exist inside you already. Games are just an incredibly reliable and efficient way to discover and practice them—so you're better able to access them in everyday life.

Playing games isn't the only way to tap into these strengths. But the scientific research on *why* games make it so much easier to do so will help you understand these strengths more clearly.

Let me be clear: the point of Part 1 is *not* to persuade you to spend more time playing video games. You *do not* have to become an ardent game player to benefit from games research. Instead, I want to help you learn from the science of games how to be stronger, happier, braver, and more resilient—*whether you ever play any of these games or not.*

One important thing to note: although *all* kinds of games develop these gameful strengths, including sports, puzzles, board games, and card games, Part 1 focuses primarily on digital games, for several reasons.

More than one billion people on this planet currently play digital games for, on average, at least one hour a day.1 This number will undoubtedly rise in the future; according to a Pew Internet Life study, in the United States, 99 percent of boys under eighteen and 92 percent of girls under eighteen report playing video games regularly (on average thirteen hours a week for boys and eight hours a week for girls).2 The sheer time and energy poured into digital games by such a vast and growing number of people make it crucial to understand how digital games in particular impact us psychologically. The science of games can help us minimize the potential harms and maximize the potential benefits.

Equally important is the fact that over the past two decades, scientific research on the psychology of games has focused almost exclusively on digital games, largely for the reasons stated above. This book is grounded in the science of games, which means it necessarily focuses on the kinds of games that scientists have dedicated the most time and energy to understanding.

Finally, as you will see in the next four chapters, digital technology can actually heighten and accelerate many of the psychological benefits we experience from all games. For example, all games teach us to be comfortable with failure, because loss is always a possibility. However, digital games tend to have a higher and more rapid rate of failure. In digital games, we fail as much as 80 percent of the time, on average twelve to twenty times an hour.3 This extremely high and rapid rate of failure helps players more quickly cultivate the strengths of grit and perseverance, as well as the ability to learn effectively from mistakes. You can build these same strengths by failing at basketball or Scrabble or chess, but the capability of digital games to automatically adjust the difficulty level upward so you are constantly playing at the edge of your ability helps you develop them faster.

This is just one example of the kind of research you'll read about in this part of the book. But before we dive deeper into the science of games, you have a special quest to complete.

Chapter 1 has some of the most surprising and eye-opening information in the entire book. It contains some *very* unexpected scientific findings.

I want you to be fully prepared to absorb these findings and act on them in your own life, no matter how surprised you are by them! So here's a quest to help you get ready.

QUEST 5: Palms Up!

Trying to solve a problem? Want to learn something new? You can prime your brain to be more open to creative solutions and more receptive to surprising ideas. Here's how.

What to do: Turn your palms up, and leave them that way. You should start to notice a more open mindset in as little as fifteen seconds.

Why it works: Turning our palms up triggers a powerful mind-body response. With our palms up, we adopt an "approach and consider" mindset. We're less likely to reject or dismiss new information or ideas, and we're better able to spot new opportunities and solutions. With palms down, however, we adopt a "refuse and resist" mindset. We're more likely to reject new information and overlook creative ideas.

It sounds like a simple action to have such a big effect, but the evidence is compelling: peer-reviewed research published by the American Psychological Association shows that out of seven different experiments on the palms-up phenomenon, all seven showed the same mind-opening effect.4

Researchers theorize that this mind-body link stems from physical behaviors we exhibited thousands of years ago before we invented language.5 When we offer someone a helping hand, our palm is upturned. When we ask for help ourselves, or when we prepare to receive something, we also turn our hands up. And when we welcome someone into our arms, our palms are facing up. But when we want to reject something, we slap it away with our hands turned downward. When we push someone away, the palms are turned away from us as well.

Through thousands of years of these gestures, we are biologically primed to associate *upward palms* with receptiveness and openness, *downward palms* with rejection and closing ourselves off.

So before you read the next chapter, **turn your palms upward for at least fifteen seconds.** Do this right now. 15 . . . 14 . . . 13 . . .

Quest complete: All done? Good job. You're ready for some surprising science! And in the future, whenever you're brainstorming, problem solving, or trying to wrap your head around some new information, remember the power you have to open your mind with a simple palms up.

1

You Are Stronger Than You Know

Your Mission

Unlock the ability to control what you think and feel, even during extreme stress or pain

Games are famously, perhaps even notoriously, attention grabbing. Players frequently become so immersed, they lose track of time and seem to ignore everything and everyone around them. Parents and spouses of gamers often complain that it's nearly impossible to tear their loved ones away from their favorite games. But could the highly immersive quality of good games actually be a clue to how our attention works—and how we can better control it?

In this chapter, we'll look at video game research that reveals the power we have to prevent anxiety, depression, trauma, and physical pain, by learning to *control our attention*. Whether you struggle with any of these challenges currently, or you just want to increase your mental and emotional resilience, games provide the perfect platform for mastering life-changing attention skills. This chapter will show you the science behind attention control and teach you the practical, gameful techniques you can use to discover and develop your attention superpowers.

Nothing hurts more than a severe burn injury. Doctors describe it as the most intense and prolonged pain a human being can experience. Naturally, burn patients receive powerful drugs during wound care, most commonly morphine. But the drugs aren't very effective at alleviating this uniquely excruciating pain. Medical researchers have spent decades searching for something better. Is there anything that can treat the most severe pain in the world more effectively than the traditional morphine approach?

Yes. And it's a video game.

Snow World is a 3-D virtual environment created by University of Washington researchers to help patients undergoing treatment for severe burns. Patients are given a virtual reality (VR) headset to wear and a joystick for navigating a virtual frozen ice world. There are ice caves to explore, snowballs to throw, and a whole landscape of winter delights to encounter. Patients wear their VR headset and play this game during

the most painful part of burn treatment, while their wounds are being cleaned and redressed.

Medical researchers have tested *Snow World* in clinical trials. Here's what they learned: this VR game reduced pain by a whopping *30 to 50 percent.* For the most severe burn patients, the game proved to have a bigger impact on their pain and overall suffering than the morphine they also received.1

Better yet, *Snow World* players were able to almost entirely ignore whatever pain did remain. They reported being consciously aware of pain only 8 percent of the time. Compare this with traditional burn treatment: even with the highest doses of opiates that can be safely administered, patients typically report spending *100 percent* of treatment time thinking about their excruciating pain.

Simply by playing *Snow World*, patients discovered they were able to control what they were thinking and feeling *an extraordinary 92 percent of the time*. As a result, doctors have found that with the game, they can reduce the level of medication and dramatically improve pain management at the same time. And the benefits are more than psychological. When patients feel less pain, doctors are able to pursue more aggressive wound care and physical therapy—two factors that can speed up recovery and reduce medical costs. Most important, the patients feel more in control and suffer far less.2

How exactly did a video game create such a powerful change? In scientific papers describing the game's positive impacts, *Snow World*'s inventors, Dr. Hunter Hoffman and Dr. David Patterson, attribute its success to a well-established psychological phenomenon: the *spotlight theory of attention*.3

According to this theory, human attention is like a spotlight. Your brain can process and absorb only a limited amount of new information at any given moment. So you focus on one source of information at a time, ignoring everything else. As a result, information everywhere competes constantly for your brain's attention—sights, sounds, tastes, smells, thoughts, and physical sensations.

What does this have to do with pain? The signals from your nerves that cause pain are just one of many competing streams of information. It's a particularly compelling stream. Your nerves are sending signals to your brain to let you know that you're injured—which is pretty important information! It makes perfect sense that without conscious intervention, you'd be more likely to focus your attention spotlight on these pain signals than just about any other source of information.

But you're not powerless against pain signals. In fact, if you learn to control your attention spotlight, you can actually stop your brain from spending its limited processing resources on pain signals from your nerves.

For burn patients, that's where *Snow World* comes in. In order to prevent pain *signals* from turning into a *conscious awareness* of pain, patients need to swing their spotlight of attention somewhere else—and keep it there. How? By deliberately monopolizing all their brain's processing power with as challenging and information-rich a target as possible. Games, and particularly virtual worlds rich in 3-D imagery, serve this purpose perfectly. They require so much active attention, the patient runs out of cognitive resources to process the pain.

This is exactly what scientists observed when they decided to study the brain activity of *Snow World* players using functional magnetic resonance imaging (fMRI). This technology allows researchers to see where blood is flowing in the brain—the more blood flow, the more active that region of the brain. In *Snow World* studies, fMRI footage showed reduced blood flow to all five regions of the brain associated with processing pain. This data revealed that players weren't just doing a better job of dealing with the pain they felt—they were actively blocking the brain from dedicating resources to processing the pain signals.4 No cognitive resources, no pain.

This is the real breakthrough at the heart of the *Snow World* technique: the game isn't merely a distraction from feelings of pain; it actively *prevents* conscious feelings of pain in the first place. And you can learn to use this technique in your own life.

You may never be in as much physical pain as a burn patient. But if and when you do find yourself in pain, you now know: *You don't have to pay attention to the signals from your nerves. You can choose to pay attention to anything you want.* Even when you're in pain, even when you're suffering, you can control your attention spotlight and change your experience for the better.

And you don't necessarily need a fancy 3-D VR headset to do it. Although advanced game technology makes it easier to commandeer cognitive resources, other studies on pain and gaming show that in less extreme cases, a simple handheld game—the kind you can play on your mobile phone or iPad—can also block pain signals effectively.5

Or if you prefer a nongaming solution, you can choose any challenging activity that successfully captures your full attention. Research suggests, for example, that knitting and crafting both require enough brain-processing resources to successfully reduce chronic pain.6 The key is simply to realize that *you* are in charge of your cognitive resources. If you don't want your brain to pay attention to pain signals, give it something else to pay attention to instead.

Snow World is an important health care innovation—but it's also much more than that. It's a clear lesson in how much untapped power we all have over what we physically feel. Even when we're in pain, even when we're suffering, we can control our attention spotlight and change our experience for the better.

As you'll see in the coming pages, this finding is repeated again and again in video game research: we have more power, more mental control, over what we feel, moment to moment, than we realize.

You have this power—and it comes from your ability to control your attention spotlight, and in doing so, to change what is happening in your body and your brain.

Let's start practicing that power now, with your next quest.

QUEST 6: Stop the Pink Elephant!

Don't think of a pink elephant. Whatever you do, do *not* think of a pink elephant.

Stop reading this book for the next ten seconds, and in that time, be absolutely sure you do not *once* think about a pink elephant. Go!

10 . . . 9 . . . 8 . . .

Did you think of a pink elephant? Of course you did, even though I told you not to. Fortunately, that's not your quest. At least not yet—not until you have a concrete strategy for controlling your attention spotlight.

The command "Don't think of an elephant" (or sometimes "Don't think of a bear") is one of the most widely employed exercises in cognitive psychology. Devised by Harvard University professor Daniel Wegner and later made popular by University of California at Berkeley professor George Lakoff, the idea is simple: once you evoke a concept in someone's mind, they are essentially powerless to block it. Despite the instructions to

not picture a large gray (or pink) mammal with a trunk and floppy ears, the brain is incapable of obeying. The word *elephant* calls up the idea of an elephant, and you're stuck with it, for better or for worse.7

We're going to try a different experiment here. I want you to keep trying to not think about a pink elephant, but I'm going to give you a strategy for doing just that.

What to do: This time you're going to control your attention spotlight by focusing your cognitive resources on a challenging, high-attention task.

To stop the pink elephant from commanding your attention, I want you picture a giant letter P and E (short for *pink elephant*, naturally). P and E. Got it?

Now I'm going to give you sixty seconds—set a timer, or just estimate it—to list as many words that contain *both* the letter P and the letter E, in any order. Here are a few to get you started: *help, hope, pickle, peanut*.

Write the words down, or if it's easier, just think of them and tick them off on your fingers, or keep a mental tally.

If you can think of at least ten more words with a P and an E in sixty seconds, that's very good. If you can think of twenty or more, that's amazing. If you can think of thirty or more, you're a rock star at this, one of the best in the world. Try to aim for at least ten—and remember, while you're doing it, don't think about a pink elephant.

Go!

Okay, now I want you to notice two things.

1. Were you better able to stop thinking about a pink elephant while you were engaged in this high-attention, challenging task? I hope so. The higher your word score, the more likely you are to have completely blocked that silly animal out of your mind. (If you don't like your score or you couldn't stop the pink elephant from occupying your thoughts, give it another try with these two letters: S and B, for *SuperBetter*!)

2. As you go back to reading this book or go about the rest of your day, see which is more likely to occur: you keep picturing a pink elephant *or* you randomly think of or spot another word with the letters P and E in them. If you are like most people, you're more likely to flash back to the word game than to the mental image of an elephant. That's because your attention spotlight is more likely to drift back to something that engaged more cognitive resources. Be sure to notice what happens in the next few minutes or hours to see if this is true for you!

Quest complete: If you found this word game an effective technique to control your attention spotlight, congratulations. You now have a new tool in your toolkit for blocking unwanted thoughts, feelings, or physical sensations. Try it anytime, with any two letters, to practice swinging that spotlight of attention quickly and more effectively.

Just for fun: Check out the following footnote for twenty P and E words you could have thought of!*

* People, preach, happen, pamphlet, prairie, prayer, apple, yelp, rope, dampen, patent, prehistoric, petal, penumbra, pennant, sniper, eclipse, epicenter, spine, rapture, empty, prince, poke.

As you're hopefully starting to see, researchers have figured out all kinds of ways people can get better at controlling their attention spotlight. Let's take a look at other types of mental and emotional resilience you

can develop by mastering this important skill—such as the power to prevent trauma, fight cravings, block anxiety, and heal from depression.

You've almost certainly seen *Tetris*, the falling blocks puzzle game, even if you've never played it. It's estimated to be one of the most widely played video games of all time, with nearly half a billion players to date.

Despite having been around since 1984, it wasn't until recently that researchers realized that *Tetris* can do more than entertain us. It can, remarkably, help us recover more quickly from traumatic events.

Post-traumatic stress disorder, or PTSD, is a psychological condition that can develop after an individual witnesses or experiences a terrifying or tragic event. The hallmark symptom of PTSD is recurring flashbacks. Unwanted, intrusive memories can haunt individuals for months or even years after a traumatic event, disrupting sleep, triggering panic attacks, and causing severe emotional distress. Typically, these flashbacks have a strong visual component. Someone repeatedly "sees" a traumatic event in their mind's eye, as vividly as if it were really happening all over again. Psychologists consider these flashbacks to be the single most stressful and difficult-to-treat symptom of PTSD.

But what if, instead of trying to treat flashbacks as an unavoidable symptom of trauma, we could prevent them in the first place? Cognitive scientists have shown that memories change and take shape for up to six hours after a traumatic event. That has led some researchers to wonder: Is there anything we can do in the first six hours after trauma to inhibit our brains from forming the kinds of visual memories that lead to flashbacks?

Yes, there is. You can play *Tetris*.

In 2009 and 2010 a team of psychiatrists at Oxford University completed two studies showing that playing *Tetris* within six hours of viewing traumatic imagery helped reduce flashbacks of the traumatic events. It worked so well, in fact, that the Oxford researchers proposed that a single ten-minute session of *Tetris* could effectively serve as a "cognitive vaccine" against PTSD. Play the game as soon as possible after a traumatic event, and you may significantly reduce your likelihood of experiencing severe post-traumatic stress.8

How did the Oxford researchers figure this out? It's not easy to study trauma in a laboratory, as you can imagine. It's simply not ethical for researchers to do horrible things to study participants just to measure their traumatic response. So the Oxford team used an experimental method that has been tested and validated in hundreds of other trauma studies: they gathered together test subjects in a laboratory and showed them a series of extremely graphic, gory images of death and injury. (Trust me, these are the kind of images you truly hope you will never see.) Then they measured the subjects' emotional response to the images to ensure that they were truly disturbed.

In the hours that followed, half of the test subjects played *Tetris* for ten minutes while the other group did nothing special. Here's what the researchers found: most of the group that did nothing special reported a high number of disturbing visual flashbacks from the images over the next week. The group that played *Tetris*, however, had just half as many flashbacks. And when both groups completed a psychological survey one week later, the *Tetris* players had significantly fewer symptoms of PTSD than the group that did not play.

So how did ten minutes of game play prevent flashbacks and PTSD symptoms? The Oxford researchers explain that *Tetris* occupies the visual processing circuitry of the brain with something *other* than what it's usually preoccupied with after a trauma—involuntarily remembering and replaying the trauma over and over again. It's similar to how *Snow World* works to prevent pain, but it's a more targeted approach. To interfere with involuntary visual memories of the trauma, you have to swing the attention spotlight to something that

specifically demands a huge amount of *visual attention*.

Crucially, the Oxford researchers found that not every video game can successfully hijack the visual processing centers. It must be a game that requires a massive amount of constant, visual processing—ideally, a pattern-matching game like *Tetris* or *Candy Crush Saga*, in which your goal is to move and connect game pieces according to a visual pattern. These kinds of games are so visually engaging, players notoriously report seeing game play flashbacks—typically, colored blocks falling, or matching candies swapping places—whenever they close their eyes, even hours after they've stopped playing. But if you play a less visual game, like Scrabble or a trivia quiz, this technique doesn't work. Your brain will have too many visual processing resources still available to replay traumatic images.9

One more important detail from the Oxford study: playing *Tetris* did *not* prevent individuals from voluntarily remembering details of what they saw. A week later, when they were asked questions like "What color was the hair of the man who drowned?" or "About how old was the woman on the stretcher?" the *Tetris* players accurately recalled as many details as the group that did not play. Their memories were intact—they just weren't as haunted by them.

This is extremely important, so I'll say it again: the *Tetris* technique does not erase memories; it simply stops the cognitive process of *involuntary* memory. It gives you control over the memory. You won't think about it when you don't want to.

The Oxford researchers have not followed up their initial study with research on how well this technique works in real-world contexts. However, since they publicly shared this work five years ago at scientific conferences and in the media, many individuals have had the chance to learn and try it outside formal scientific studies. As part of my ongoing work to understand how people use games to become stronger and heal faster, I've heard from many people who have conducted successful *Tetris*-style interventions in their own lives: a runner who, after the 2013 Boston marathon bombings, found herself worried about whether she would ever be able to participate in road races again; a high school student in Norway who lost a friend in the 2011 mass shooting and kept replaying media images of the scene in his mind; a woman who did not want to suffer flashbacks of her elderly father's final moments, which were not peaceful. What I have heard from individuals like these is that a short period of game play in the hours, days, and even weeks after the trauma gave them control over what they were thinking and seeing in their mind's eye—and that this level of control not only helped limit flashbacks but also gave them a sense of comfort and strength.

Let's put this *Tetris* research into a bigger perspective. The power to prevent flashbacks can potentially help anyone, even someone not directly involved with a traumatic event. We often see traumatic images of violence or accidents in the media. Children can be especially disturbed by these images. But a quick session of visually absorbing game play can help them avoid nightmares or intrusive memories.

The *Tetris* technique also has potential to change how you respond to ordinary negative events. When you have a particularly upsetting day, or if you can't stop thinking about something that went wrong, you can activate this gameful ability.

You can put a stop to involuntary thoughts quickly and simply. This power to control what you're remembering *in the moment*, right now, ensures that you can choose to truly leave difficult moments in the past when you need to.

There's one more surprising—and potentially life-changing—way to apply the *Tetris* technique in everyday life.

To find out what it is, try this quick quest!

QUEST 7: Control the Mind's Eye

What to do: Think of something you often crave—something that, once you start thinking about it, it usually feels impossible to resist. Imagine it in detail. Picture yourself enjoying it, as vividly as you can. Do you have a specific craving in mind? Good.

The next time this craving kicks in—including right now, if you're already feeling it!—I want you to **play a pattern-matching game like** Tetris **for three minutes**. Do this, and you will be much better able to successfully resist your craving.

Why it works: Multiple studies have shown that playing *Tetris* for three minutes while feeling an intense craving cuts the intensity of the craving by 25 percent.10

This may not sound like a lot, but a 25 percent reduction in craving intensity is enough to change behavior. It's just enough of a boost to give your willpower a fighting chance. (Keep in mind that if you're hungry when you play *Tetris*, you'll still be hungry afterward—but you'll be less likely to give in to a specific, unhealthy craving, and more likely to make a smarter choice about what to eat.)

This anticraving strategy works on exactly the same scientific principle as the strategy of using a pattern-matching game to prevent flashbacks and PTSD. Research has shown that cravings have a very strong visual component. The more you mentally imagine yourself enjoying what you crave, the more likely you are to give in. To resist a craving, you simply need to give your brain's visual-processing centers something else to visualize—and you'll find the craving significantly reduced.11

What to play: You can find countless pattern-matching games for free online and on your mobile phone or tablet. The easiest ones to pick up from scratch if you've never played them are *Tetris*, *Bejeweled*, and *Candy Crush Saga*. (This last is the first video game my sixty-seven-year-old mom played in her entire life—and she taught herself how to play it in less than a minute.)

If you don't want to play a digital game, a wonderful pattern-matching card game called *SET* offers the same powerful flashback effects. You can find it on Amazon or at Setgame.com. Finally, some SuperBetter players report that solving jigsaw puzzles is another way to control visual attention and stave off cravings effectively.

A SuperBetter Story: The Bride- and Groom-to-Be

When Joe and Elisa decided to get married, they promised each other that they would both successfully quit smoking by their wedding day.

In the months before the big day, the Michigan-based couple both wore nicotine patches, which helped them fight their cravings at work. But when they came home in the evening, Joe told me, it was harder to avoid reverting back to old habits.

"There was so much going on at work, the patch was enough—we didn't need anything else. But at home, with less going on, we were really tempted. We thought about lighting up constantly."

Thanks to the nicotine-replacement therapy, their physical cravings were in check. But they hadn't yet gotten control over their *mental* cravings. They kept picturing themselves smoking and imagining how good it would feel. Those mental images were the real problem.

The gameful solution? Joe and Elisa decided to start a new tradition: puzzle nights. Every evening after dinner they sat down at the kitchen table to work on a giant jigsaw puzzle together.

“It totally worked for us,” Joe told me. “Zero cigarettes on puzzle nights.” It worked so well, in fact, that they worked on puzzles every night all the way up to their wedding. Two years later the happily married couple are still smoke-free.

Puzzle nights had one additional surprise benefit for the bride- and groom-to-be: working cooperatively on the puzzles together for so many hours, night after night, boosted their communication and problem-solving skills. “We got really good at working together and solving the puzzles as a team.” Not a bad way to prepare for marriage!

Joe and Elisa were, as it turns out, ahead of the curve with their creative solution. In 2014 a team of researchers from the American Cancer Society, Brown University, and Stony Brook University found that nicotine-deprived smokers were able to reduce their cravings by playing two-player cooperative games with their relationship partners. Functional magnetic resonance imaging (fMRI) scans showed that cooperative game play and puzzle solving lit up the same reward centers of the brain that nicotine does. The scientists believe this is evidence that social games and puzzles could provide smokers with an alternative neurological pathway to feeling a reward when they crave it most.12

In other words, game play provides a powerful one-two punch for changing behavior. First, it gives you control over your thoughts and mental cravings by fully absorbing the visual-processing center of the brain. Second, it gives you a pleasurable neurochemical reward—the same kind you would get from a cigarette or a cookie or whatever else you might crave. Who needs a cigarette or cookie when you already feel deeply satisfied by the game?

Sweethearts Joe and Elisa might not be surprised to hear about one final scientific discovery from the same team of fMRI-scanning researchers: falling in love also dampens cravings for food, alcohol, and drugs, by activating the same reward pathways.13 “Intense, passionate love,” as the researchers put it, is like kryptonite to cravings—they just can’t stand up to it.

The moral of the story: if you want to quit something, anything, just solve a puzzle—or fall in love. Or if you’re really lucky, like Joe and Elisa, do both at the same time.

By now, you’re catching on: purposefully controlling your attention has all sorts of real-life benefits. By why are games such an effective means of attention control, compared with other activities? Let’s explore this question by taking a look at another strength you can develop through game play: the ability to block anxiety, even in extremely stressful situations.

Surgery is scary—especially for kids. Over the past twenty-five years, doctors have tested every idea imaginable to reduce kids’ anxiety in the operating room. They’ve tested powerful medications. They’ve allowed parents to hold their kids’ hands while they go under and wake up from anesthesia. They’ve even tested *clowns* in the operating room.

What works best? Not surprisingly, it’s not clowns. But it’s not parents or medication either. Kids who are allowed to play handheld video games—such as *Super Mario* on the Nintendo DS—experience virtually *no* anxiety before surgery. And after surgery, they wake up from anesthesia with less than half the anxiety of children given drugs—and with zero medication side effects.14

It’s another headline-worthy scientific result: “Ordinary video games prevent anxiety more effectively than the most powerful antianxiety medications.” But what makes it work? The research team at the department

of anesthesiology at New Jersey Medical School argues that—as with the *Snow World* and *Tetris* techniques—*cognitive absorption* is the key. By focusing intensely on something *other* than the impending surgery, young patients avoid becoming upset or panicked.

This hypothesis makes perfect sense, given what we already know about the spotlight theory of attention. Anxiety—just like pain, traumatic memory, and cravings—requires conscious attention in order to develop and unfold. It’s fueled by active thoughts about what could possibly go wrong. Fear is a response to something actually going wrong right now. Anxiety, on the other hand, is the anticipation that something *might* go wrong in the future. The more vividly we imagine something bad happening, the more anxious we get.

Users Review

From reader reviews:

Casey Larsen:

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