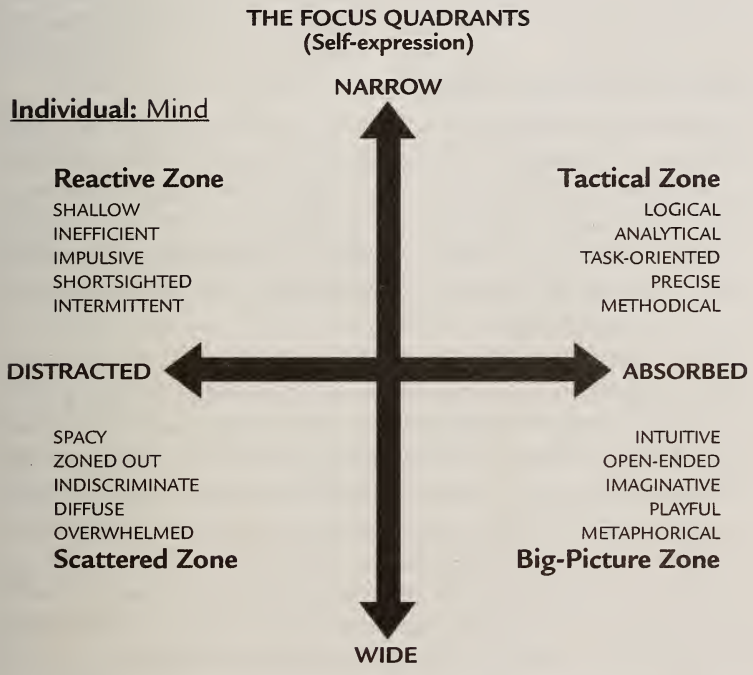
A Poverty of Attention



When was the last time you heard your e-mail ping? How quickly did you respond? How many windows are open on your computer right now? Have you searched for something on Google during the past hour or two? Checked your account on Twitter, Facebook, or LinkedIn? Watched a YouTube video? Bought anything online? Checked stock prices? Skimmed the news headlines? When was the last time you sent a text while walking from one meeting to another?

What's the longest you've gone without checking e-mail at all during the past month? How long do you stay focused on any one thing you're doing? When was the last time you took an hour out of your day just to think creatively or long term, without interruptions? How often do you sit back for a few moments, take a deep breath, and quiet your mind? Can you remember an occasion recently when you truly felt on top of things?

"Every one knows what attention is," William James wrote back in 1890. "It is the taking possession of the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. . . . It implies a withdrawal from some things in order to deal effectively with others."

Is there any doubt that our attention is under siege? More than two billion e-mails are sent every day. There were an estimated 75 million bloggers in 2009, and some 50 million Web sites. More than 500,000 new books are published each year, along with some 400,000 scholarly journals and 18,000 magazines. In 2005, when Google decided to stop updating the number of Web pages it regularly searches, the number had reached 8,168,684,336.

"It sometimes feels like I'm the ball inside a pinball machine," one senior executive at a large bank told us. "I'm always bouncing from one thing to another. I come in every morning, and the first thing I see on my desk is my computer screen staring at me, with all the messages that came in overnight. I start answering them, and then my phone starts ringing, and people start streaming into my office with questions and requests. I'm paying half attention to them because I've got two other screens in front of me telling me what's going on in the markets and in the world. If I look out on the trading floor, what I see are hundreds of traders, one next to the other, doing pretty much the same thing I'm doing: staring at their screens, typing on their keyboards, and talking into their phones. This goes on all day long—one demand after another, split up only by meetings in which everyone spends half their time answering e-mails on their BlackBerrys. The funny thing—the sad thing, really—is that there are a lot of nights when I walk out of the office at seven or eight P.M., after twelve hours, and I literally can't remember what I did all day."

Knowledge is power, as Sir Francis Bacon put it back in 1597, but there may well be an inverse relationship between the volume of infor-

mation available to us and our ability to make sense of it. Herbert Simon, a polymath who wrote more than a thousand scientific papers and won the Nobel Prize in Economics, saw our current attentional crisis coming forty years ago. "What information consumes is rather obvious," he wrote in 1971. "It consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention."

Which would you prefer: a day in which you made small progress on a range of tasks or one in which you completed one important project? The vast majority of people tell us that they prefer depth to breadth and quality to quantity. But that's scarcely the way we live our lives.

Anyone who has children knows that they rarely do one thing at a time. Among kids ages fourteen to twenty-one, more than one-third juggle somewhere between five and eight different media while doing their homework—listening to music, checking Facebook, texting, Twittering, and bouncing among Web sites. The rest of us aren't much different. In a much-cited study, Gloria Mark, a researcher at the University of California, Irvine, studied workers at two high-tech firms and found that on average they spent eleven minutes on any given project. Even those eleven minutes were split into tasks no longer than three minutes each. At Microsoft, the researcher Mary Czerwinski found that its programmers juggled eight computer windows at any given time and spent an average of twenty seconds in front of one window before moving to another. Czerwinski herself has said she considers twenty minutes of uninterrupted work a major victory.

The consequence is that our lives have been divided into smaller and smaller increments of focus. We do more things than ever, but we've lost control of our attention. More than 50 percent of American workers say they're interrupted so often that they find it difficult to get their work done. We're too busy trying to keep up that we don't have time to focus on the fact that the way we're working isn't working.

THE FOCUS QUADRANTS

Just as we move between four different emotional states depending on what's going on in our lives, so we each experience four attentional states. They're depicted in the focus quadrants page 177. The horizon-

tal axis refers to the *quality* of our attention, from distracted to absorbed. The vertical axis refers to the *span* of our attention, from narrow to wide.

Much as we perform best in the high-positive or upper-right emotional quadrant, so the upper-right focus quadrant is where we focus best when it comes to achieving specific goals. Just think about any great performer in action. You need only watch the eyes of an athlete such as Roger Federer, Michael Phelps, or Lebron James to see just how locked in and singularly focused they are. It's no different for a heart surgeon, a fighter pilot, a ballet dancer, or an attorney delivering closing arguments in a courtroom. All of their attention—their cognitive energy—is concentrated on the task at hand. It's the capacity to keep other distractions at bay, even under fierce pressure, that helps set them apart from less skilled practitioners.

The psychologist Mihaly Csikszentmihalyi named this kind of absorbed focus "flow" and defined it simply as "the state in which people are so involved in an activity that nothing else seems to matter." The ability to control our attention, he argues, is fundamental to optimal performance and also to the highest levels of satisfaction. Others share his view. "The skillful management of attention," writes Winifred Gallagher in *Rapt: Attention and the Focused Life,* "is the sine qua non of the good life and the key to improving virtually every aspect of your experience, from mood to productivity to relationships."

The external obstacles to absorbed focus are greater than ever and the demands on our attention continue to increase inexorably. "The way we live is eroding our capacity for deep, sustained perceptive attention," Maggie Jackson writes in *Distracted: The Erosion of Attention and the Coming Dark Age.* "As we cultivate lives of distraction, we are losing our capacity to create and preserve wisdom . . . and slipping towards a line of ignorance that is paradoxically born of an abundance of information and connectivity."

Given the way our brains are designed, we actually learn less well when we're presented with a great deal of information all at once. We do far better when it's delivered intermittently, in spaced cycles, because that gives us time to deeply absorb it and commit it to long-term memory. When we try to take in too much at once, we can easily be overloaded. Two Harvard University researchers, Anthony Wagner

and Daniel Schacter, leading experts in memory, undertook a study in which they asked students to memorize a list of words. The first group was shown the words all at once, repeatedly. The second group was shown the words intermittently, over a longer period of time. When it came time to remember the words, the second group dramatically outperformed the first.

"Learning occurs best when new information is incorporated gradually into the memory store rather than when it is jammed in all at once," writes John Medina, director of the Brain Center for Applied Learning Research at Seattle Pacific University and the author of *Brain Rules*. "Repeated exposure to information in specific time intervals provides the most powerful way to fix memory into the brain." Instead, faced with vastly more information and more ways to share it, our response is akin to that of kids set free in a candy store. We try to have it all. We've normalized a short attention span to such a degree that many of us wear it almost as a badge of honor. It serves as evidence of our busyness, efficiency, and dexterous ability to juggle numerous balls at the same time.

More often than not, we're not even aware that we're failing to make conscious and intentional choices about where to put our attention. Instead we shift focus reactively and reflexively whenever something new draws our interest. This is the hallmark of the upper-left quadrant, which we call the Reactive Zone. Think for a moment of your Pavlovian response to the ping of an incoming e-mail. Are you responding because it's critical to do so, or by rote? It's as if someone is throwing balls at us all day long and we assume that our primary job is to keep them all in the air. We accord more value to the number of activities we're juggling than we do to contextualizing, synthesizing, and prioritizing—the real routes to creating value that lasts.

Rather than setting and sticking to an agenda of our own, we cede our attention to the most urgent request or demand of the moment. How many of you, we ask our clients, believe that you're pretty skilled at multitasking? A few hands rise, tentatively at first, and then more invariably follow, as if the first responders have given everyone else permission to acknowledge a primary coping strategy they nearly all employ. How many of you, we ask next, believe that multitasking is a necessary skill given the demands you're facing? At this point, nearly

every hand goes up. Multitasking, conventional wisdom holds, is the only way to deal with the competing demands we face over the course of a day.

Once again, we've assumed that human beings operate in the same way that machines do. Multitasking is a phrase that grew out of computing. In the early 1960s, programmers discovered they could increase their efficiency by enlisting microprocessors to run multiple applications simultaneously. Human beings lack a comparable capacity. Unlike computers, we're hardwired to undertake tasks sequentially. Our brains are incapable of paying attention to two separate things at the same time. In order to move from one task to another, we must effectively tell ourselves, "I want to do this now instead of that." This process is known as "goal shifting" or "task shifting." It creates something called "switching time," which is the increment of time it takes us to move from one source of focus to another.

THE MYTH OF MULTITASKING

At considerable cost, we've convinced ourselves that we're capable of doing more than one thing at the same time. Nowhere are the consequences of this false belief more vivid than when it comes to driving. How difficult can it be, we ask ourselves, to drive and talk on the phone at the same time? Why not use those long commuting hours to catch up on calls so we can continue to be productive? The answer is sobering.

Talking on a cell phone makes us four times as likely to have an accident—the same as a driver who has a blood alcohol content of .08 percent, which qualifies as intoxicated in most states. The risk is equal for drivers holding their phones to their ears and for those speaking through a hands-free device. In both cases, researchers suggest, the drivers generate mental images of the unseen person at the other end of the line, which conflicts with their capacity for spatial processing. "It's not that your hands aren't on the wheel," says David Strayer, the director of the Applied Cognition Laboratory at the University of Utah, "it's that your mind is not on the road."

Switching time, and its attendant costs, rise with the complexity of the task. The more attention required for a given task, the less that's

available for another and the longer it takes to shift from one focus of attention to another. When it comes to driving, for example, texting is far more dangerous than talking on the phone. Researchers at the Virginia Tech Transportation Institute found this out by putting video cameras in the cabs of a hundred long-haul truck drivers over an eighteen-month period.

The truck drivers were an astonishing *twenty-three times* more likely to have a collision when they were texting than when they weren't. On average, they spent five seconds focused on the texting, which was enough to travel 100 yards as if they were effectively blindfolded. "Texting is in its own universe of risk," says Rich Hanowski, who oversaw the study. Subsequent research has confirmed that even drivers in smaller, far more maneuverable vehicles are at nearly equal risk to truck drivers when they text.

Perhaps the most primal reason we multitask is out of a hunger to feel more connected. Technology is an extraordinary enabler. Acceptance, belonging, and feeling in the loop are especially urgent needs for adolescents, which helps explain a recent finding by the Nielsen Company. Teenagers sent and received an average of nearly 2,300 text messages a month in 2008—twice the average of just a year earlier. Perhaps ironically, the relentless growth of texting may also reflect the fact that brief messages aren't very satisfying. Much as we do with any source of pleasure that begins to provide diminishing returns, our first instinct is to increase the dose. In the case of texting, the collateral damage is that the more messages we send and receive, the more frequently we interrupt whatever else it is we're doing.

Linda Stone, a former Apple and Microsoft researcher, has coined the term "continuous partial attention" to describe this phenomenon. "We've stretched our attention bandwidth to upper limits," Stone has written. "With continuous partial attention we keep the top level item in focus and scan the periphery in case something more important emerges. . . . To be busy and to be connected is to feel alive. But the consequence is we're over stimulated, over-wound and unfulfilled."

Consider how this paradox plays out in the workplace. Think for a moment about the last time you were in the midst of a conversation with someone at your office and found yourself peeking out of the corner of your eye to read an incoming e-mail. Or an occasion during

which you were talking on the phone to someone but also reading your e-mails or even quietly tapping out some replies. Partly, the motivation is to get more done, to keep up. In all likelihood, it's also a reflection of our insatiable thirst for novelty—the hunger we all feel for the next new thing.

Ironically, multitasking often leaves us feeling emptier and more disconnected. Partly, that's because divided attention makes each interaction more superficial. Also, if you are switching between multiple tasks, it stands to reason that the same is true for the people with whom you're interacting. When was the last time, for example, that you were on the phone with someone and heard a gentle "clack, clack, clack" on a keyboard in the background? How did it make you feel? "Devalued" and "unimportant" are the most common answers we hear, and it could scarcely be otherwise. Multitasking sends an unmistakable message: "You're not worth 100 percent of my attention."

Split attention also ensures that you won't absorb everything the other person is saying. "That's okay," one client told us, "because I get the *gist*." What she really meant is the headlines. When we settle for the gist, we sacrifice the essence—complexity, subtlety, and depth.

We also remember and retain less when we split our attention. If we're singularly focused, the brain's hippocampus, the key to building enduring memories, is in charge. When our attention is more distracted, the striatum, a subcortical part of the brain associated with rote activities, takes over. The consequence is that our memories are likely to be more vague and disjointed. Researchers at UCLA also found that when subjects were put through a multitasking exercise, they were significantly less capable of applying their learning contextually. They retained the facts, but they sacrificed the capacity to apply them more broadly—to generalize and create a broader principle from them.

The other reason we struggle with retention when we multitask is that we have a very limited store of something called "working memory." That's the short-term memory we use to navigate in any given moment, drawing on the most immediate information we need. As an example of the limits of working memory, Maggie Jackson cites research demonstrating that people remember significantly fewer facts related to a television news story when there is a crawl running continuously underneath. Our working memory isn't big enough to re-

tain both the story and the crawl, and we end up losing parts of both. Jackson also notes that when we focus on more than one thing, "simultaneous data streams flatten content, making prioritization all the harder." Trying to do multiple activities at the same time effectively desensitizes us to differences and distinctions between them. It's all just data. Think of Raymond, the autistic savant played by Dustin Hoffman, spewing facts to no particular end in the movie *Rain Man*.

Nor are we likely to get better at multitasking. There is no experimental evidence to suggest, for example, that young people in their teens and twenties, who've grown up with technology, are any more capable of effectively multitasking than the rest of us. At Oxford University, researchers tested a group of eighteen- to twenty-nine-year-olds against thirty-five- to thirty-nine-year-olds on a task that involved translating images into numbers. When they interrupted the two groups along the way, the negative impact on their speed and accuracy was the same. The one real generational difference may be that younger people actually seem to prefer multitasking to doing one thing at a time. "It's almost as if they prefer to just constantly scan the environment and grab new information rather than ponder what they have," says Stanford University researcher Cliff Nass. "We don't know whether there are advantages to that, but so far we haven't found any."

David Meyer, widely viewed as the leading researcher in the field and the head of the Brain, Cognition, and Action Laboratory at the University of Michigan, is convinced that we won't ever find any advantages. "Training can help overcome some of the inefficiencies by giving you more optimal strategies for multitasking," he says. "Except in rare circumstances, you can train until you're blue in the face and you'll never be as good as if you just focused on one thing at a time. Period. That's the bottom line."

OUT OF SIGHT, OUT OF MIND

The most surprising drawback of multitasking is the growing evidence that it isn't even efficient. In a study Meyer and his colleagues conducted in 2001, they found that when subjects switched back and

forth between two separate problems, it took them 25 percent longer to complete them than to do the tasks sequentially, one at a time. The difference was the cumulative switching time required during multitasking. In a parallel finding, the UC Irvine researcher Gloria Mark found that each time the computer programmers she studied switched from one task to another, it took them an average of twenty-five minutes to return to the original task, if they returned at all.

Once we're distracted by something new, we often forget about the original task. Given the limits of our working memory, out of sight often literally means out of mind. Ironically, one of the most common ways the programmers that Mark studied kept track of their competing tasks was technologically primitive. They wrote them down on Post-it notes and plastered the notes around the edges of their computer screens. This jerry-rigged approach seemed to help them avoid forgetting unfinished tasks as they switched between them. The cost was that it kept the tasks right in front of them as potential sources of further distraction.

The ultimate consequence of juggling many tasks is not superficiality but rather overload. That's depicted in the lower-left zone in the Focus Quadrants at the beginning of this chapter. We call this "scattered attention," and it reflects the difference between a short attention span and the inability to focus at all. "I just can't think straight" is a feeling we've all had at times, in response to hunger, fear, or simply having too much on our minds. When difficulty paying attention becomes more severe and chronic, it's sometimes diagnosed as attention deficit hyperactivity disorder (ADHD) and treated with drugs such as Ritalin and Adderall. But in the world we live in, there's an increasingly thin line between what's viewed as necessary and even optimal when it comes to paying attention, and what is literally pathological.

Consider these primary symptoms of attention deficit hyperactivity disorder as defined in the *DSM-IV Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association:*

- Often has difficulty in sustaining attention in tasks
- Often does not seem to listen when spoken to directly
- Often has difficulty organizing tasks and activities

- Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort.
- Is often easily distracted by extraneous stimuli

Do you know anyone who manifests most or all of those traits? More to the point, do you know anyone who doesn't? Edward Hallowell, a psychiatrist who specializes in treating ADHD, puts it this way: "Once applicable only to a relative few, the symptoms of ADD now seem to describe just about everybody." At nearly every organization in which we've worked, the work culture is characterized by the ADHD symptoms above, in large part because a short attention span and fractured focus are now so widely accepted as the norm. We've failed to recognize that attention is a capacity that must be both intentionally trained and regularly renewed.

When we default reactively or lazily to distraction—the province of the left-hand quadrants—we diminish our cognitive capacity, the richness of our experience, and ultimately our effectiveness. As Maggie Jackson puts it, "We are allowing ourselves to be ever-more entranced by the unsifted trivia of life. To value a split-focus life . . . is above all to squeeze out potential time and space for reflection, which is the real sword in the stone needed to thrive in a complex, ever-shifting new world. In the name of efficiency, we are diluting some of the essential qualities that make us human."

Given more information to digest and more ways to communicate with each other, we're more challenged than ever to build our capacity for absorbed attention. "Paying rapt attention," explains Winifred Gallagher, "whether to a trout stream or a novel, a do-it-yourself project or a prayer, increases your capacity for concentration, expands your inner boundaries, and lifts your spirits, but more important, it simply makes you feel that life is worth living."

How best, then, to seize back control of our attention?

CHAPTER FOURTEEN ACTION STEPS

- Resist trying to do two things at the same time. You'll inevitably give short shrift to both. If you're talking to someone on the phone, don't simultaneously check and answer e-mail. The person you're talking to will inevitably feel devalued if you do—and rightfully so. In effect, you're saying. "You're not worth 100 percent of my attention."
- Try turning off your e-mail completely for at least one hour a day, in order to devote all of your attention to a significant challenge you're facing. Your chances of success will increase if you choose the same time every day, so it eventually becomes something you do automatically.
- Ask a colleague how accurately the five characteristics of ADHD listed on pages 186–187 describe you. What action could you take immediately to improve the quality of your focus and attention?