PART 1

The Idea

Chapter One

Deep Work Is Valuable

As Election Day loomed in 2012, traffic at the *New York Times* website spiked, as is normal during moments of national importance. But this time, something was different. A wildly disproportionate fraction of this traffic—more than 70 percent by some reports—was visiting a single location in the sprawling domain. It wasn't a front-page breaking news story, and it wasn't commentary from one of the paper's Pulitzer Prize–winning columnists; it was instead a blog run by a baseball stats geek turned election forecaster named Nate Silver. Less than a year later, ESPN and ABC News lured Silver away from the *Times* (which tried to retain him by promising a staff of up to a dozen writers) in a major deal that would give Silver's operation a role in everything from sports to weather to network news segments to, improbably enough, Academy Awards telecasts. Though there's debate about the methodological rigor of Silver's hand-tuned models, there are few who deny that in 2012 this thirty-five-year-old data whiz was a winner in our economy.

Another winner is David Heinemeier Hansson, a computer programming star who created the Ruby on Rails website development framework, which currently provides the foundation for some of the Web's most popular destinations, including Twitter and Hulu. Hansson is a partner in the influential development firm Basecamp (called 37signals until 2014). Hansson doesn't talk publicly about the magnitude of his profit share from Basecamp or his other revenue sources, but we can assume they're lucrative given that Hansson splits his time between Chicago, Malibu, and Marbella, Spain, where he dabbles in high-performance race-car driving.

Our third and final example of a clear winner in our economy is John Doerr, a general partner in the famed Silicon Valley venture capital fund Kleiner Perkins Caufield & Byers. Doerr helped fund many of the key companies fueling the current technological revolution, including Twitter, Google, Amazon, Netscape, and Sun Microsystems. The return on these investments has been astronomical: Doerr's net worth, as of this writing, is more than $3 billion.

Why have Silver, Hansson, and Doerr done so well? There are two types of answers

to this question. The first are *micro* in scope and focus on the personality traits and tactics that helped drive this trio's rise. The second type of answers are more *macro* in that they focus less on the individuals and more on the type of work they represent. Though both approaches to this core question are important, the macro answers will prove most relevant to our discussion, as they better illuminate what our current economy rewards.

To explore this macro perspective we turn to a pair of MIT economists, Erik Brynjolfsson and Andrew McAfee, who in their influential 2011 book, *Race Against the Machine,* provide a compelling case that among various forces at play, it's the rise of digital technology in particular that's transforming our labor markets in unexpected ways. "We are in the early throes of a Great Restructuring," Brynjolfsson and McAfee explain early in their book. "Our technologies are racing ahead but many of our skills and organizations are lagging behind." For many workers, this lag predicts bad news. As intelligent machines improve, and the gap between machine and human abilities shrinks, employers are becoming increasingly likely to hire "new machines" instead of "new people." And when only a human will do, improvements in communications and collaboration technology are making remote work easier than ever before, motivating companies to outsource key roles to stars—leaving the local talent pool underemployed.

This reality is not, however, universally grim. As Brynjolfsson and McAfee emphasize, this Great Restructuring is not *driving down* all jobs but is instead *dividing* them. Though an increasing number of people will lose in this new economy as their skill becomes automatable or easily outsourced, there are others who will not only survive, but thrive—becoming more valued (and therefore more rewarded) than before. Brynjolfsson and McAfee aren't alone in proposing this bimodal trajectory for the economy. In 2013, for example, the George Mason economist Tyler Cowen published *Average Is Over*, a book that echoes this thesis of a digital division. But what makes Brynjolfsson and McAfee's analysis particularly useful is that they proceed to identify three specific groups that will fall on the lucrative side of this divide and reap a disproportionate amount of the benefits of the Intelligent Machine Age. Not surprisingly, it's to these three groups that Silver, Hansson, and Doerr happen to belong. Let's touch on each of these groups in turn to better understand why they're suddenly so valuable.

The High-Skilled Workers

Brynjolfsson and McAfee call the group personified by Nate Silver the "high-skilled"

workers. Advances such as robotics and voice recognition are automating many low-skilled positions, but as these economists emphasize, "other technologies like data visualization, analytics, high speed communications, and rapid prototyping have augmented the contributions of more abstract and data-driven reasoning, increasing the values of these jobs." In other words, those with the oracular ability to work with and tease valuable results out of increasingly complex machines will thrive. Tyler Cowen summarizes this reality more bluntly: "The key question will be: are you good at working with intelligent machines or not?"

Nate Silver, of course, with his comfort in feeding data into large databases, then siphoning it out into his mysterious Monte Carlo simulations, is the epitome of the high-skilled worker. Intelligent machines are not an obstacle to Silver's success, but instead provide its precondition.

The Superstars

The ace programmer David Heinemeier Hansson provides an example of the second group that Brynjolfsson and McAfee predict will thrive in our new economy: "superstars." High-speed data networks and collaboration tools like e-mail and virtual meeting software have destroyed regionalism in many sectors of knowledge work. It no longer makes sense, for example, to hire a full-time programmer, put aside office space, and pay benefits, when you can instead pay one of the world's best programmers, like Hansson, for just enough time to complete the project at hand. In this scenario, you'll probably get a better result for less money, while Hansson can service many more clients per year, and will therefore also end up better off.

The fact that Hansson might be working remotely from Marbella, Spain, while your office is in Des Moines, Iowa, doesn't matter to your company, as advances in communication and collaboration technology make the process near seamless. (This reality does matter, however, to the less-skilled local programmers living in Des Moines and in need of a steady paycheck.) This same trend holds for the growing number of fields where technology makes productive remote work possible—consulting, marketing, writing, design, and so on. Once the talent market is made universally accessible, those at the peak of the market thrive while the rest suffer.

In a seminal 1981 paper, the economist Sherwin Rosen worked out the mathematics behind these "winner-take-all" markets. One of his key insights was to explicitly model talent—labeled, innocuously, with the variable q in his formulas—as a factor with "imperfect substitution," which Rosen explains as follows: "Hearing a succession of mediocre singers does not add up to a single outstanding performance."

In other words, talent is not a commodity you can buy in bulk and combine to reach the needed levels: There's a premium to being the best. Therefore, if you're in a marketplace where the consumer has access to all performers, and everyone's *q* value is clear, the consumer will choose the very best. Even if the talent advantage of the best is small compared to the next rung down on the skill ladder, the superstars still win the bulk of the market.

In the 1980s, when Rosen studied this effect, he focused on examples like movie stars and musicians, where there existed clear markets, such as music stores and movie theaters, where an audience has access to different performers and can accurately approximate their talent before making a purchasing decision. The rapid rise of communication and collaboration technologies has transformed many other formerly local markets into a similarly universal bazaar. The small company looking for a computer programmer or public relations consultant now has access to an international marketplace of talent in the same way that the advent of the record store allowed the small-town music fan to bypass local musicians to buy albums from the world's best bands. The superstar effect, in other words, has a broader application today than Rosen could have predicted thirty years ago. An increasing number of individuals in our economy are now competing with the rock stars of their sectors.

The Owners

The final group that will thrive in our new economy—the group epitomized by John Doerr—consists of those with capital to invest in the new technologies that are driving the Great Restructuring. As we've understood since Marx, access to capital provides massive advantages. It's also true, however, that some periods offer more advantages than others. As Brynjolfsson and McAfee point out, postwar Europe was an example of a bad time to be sitting on a pile of cash, as the combination of rapid inflation and aggressive taxation wiped out old fortunes with surprising speed (what we might call the "Downton Abbey Effect").

The Great Restructuring, unlike the postwar period, *is* a particularly good time to have access to capital. To understand why, first recall that bargaining theory, a key component in standard economic thinking, argues that when money is made through the combination of capital investment and labor, the rewards are returned, roughly speaking, proportional to the input. As digital technology reduces the need for labor in many industries, the proportion of the rewards returned to those who own the intelligent machines is growing. A venture capitalist in today's economy can fund a company like Instagram, which was eventually sold for a billion dollars, while

employing *only thirteen people*. When else in history could such a small amount of labor be involved in such a large amount of value? With so little input from labor, the proportion of this wealth that flows back to the machine owners—in this case, the venture investors—is without precedent. It's no wonder that a venture capitalist I interviewed for my last book admitted to me with some concern, "Everyone wants my job."

Let's pull together the threads spun so far: Current economic thinking, as I've surveyed, argues that the unprecedented growth and impact of technology are creating a massive restructuring of our economy. In this new economy, three groups will have a particular advantage: those who can work well and creatively with intelligent machines, those who are the best at what they do, and those with access to capital.

To be clear, this Great Restructuring identified by economists like Brynjolfsson, McAfee, and Cowen is not the *only* economic trend of importance at the moment, and the three groups mentioned previously are not the *only* groups who will do well, but what's important for this book's argument is that these trends, even if not alone, *are* important, and these groups, even if they are not the only such groups, *will* thrive. If you can join any of these groups, therefore, you'll do well. If you cannot, you might still do well, but your position is more precarious.

The question we must now face is the obvious one: How does one join these winners? At the risk of quelling your rising enthusiasm, I should first confess that I have no secret for quickly amassing capital and becoming the next John Doerr. (If I had such secrets, it's unlikely I'd share them in a book.) The other two winning groups, however, are accessible. How to access them is the goal we tackle next.

How to Become a Winner in the New Economy

I just identified two groups that are poised to thrive and that I claim are accessible: those who can work creatively with intelligent machines and those who are stars in their field. What's the secret to landing in these lucrative sectors of the widening digital divide? I argue that the following two core abilities are crucial.

Two Core Abilities for Thriving in the New Economy

1. The ability to quickly master hard things.
2. The ability to produce at an elite level, in terms of both quality and speed.

Let's begin with the first ability. To start, we must remember that we've been spoiled by the intuitive and drop-dead-simple user experience of many consumer-facing technologies, like Twitter and the iPhone. These examples, however, are consumer products, not serious tools: Most of the intelligent machines driving the Great Restructuring are significantly more complex to understand and master.

Consider Nate Silver, our earlier example of someone who thrives by working well with complicated technology. If we dive deeper into his methodology, we discover that generating data-driven election forecasts is not as easy as typing "Who will win more votes?" into a search box. He instead maintains a large database of poll results (thousands of polls from more than 250 pollsters) that he feeds into Stata, a popular statistical analysis system produced by a company called StataCorp. These are not easy tools to master. Here, for example, is the type of command you need to understand to work with a modern database like Silver uses:

```
CREATE VIEW cities AS SELECT name, population, altitude FROM capitals UNION SELECT
name, population, altitude FROM non_capitals;
```

Databases of this type are interrogated in a language called SQL. You send them commands like the one shown here to interact with their stored information. Understanding how to manipulate these databases is subtle. The example command, for example, creates a "view": a virtual database table that pulls together data from multiple existing tables, and that can then be addressed by the SQL commands like a standard table. When to create views and how to do so well is a tricky question, one of many that you must understand and master to tease reasonable results out of real-world databases.

Sticking with our Nate Silver case study, consider the other technology he relies on: Stata. This is a powerful tool, and definitely not something you can learn intuitively after some modest tinkering. Here, for example, is a description of the features added to the most recent version of this software: "Stata 13 adds many new features such as treatment effects, multilevel GLM, power and sample size, generalized SEM, forecasting, effect sizes, Project Manager, long strings and BLOBs, and much more." Silver uses this complex software—with its generalized SEM and BLOBs—to build intricate models with interlocking parts: multiple regressions, conducted on custom parameters, which are then referenced as custom weights used in probabilistic expressions, and so on.

The point of providing these details is to emphasize that intelligent machines are complicated and hard to master.[*] To join the group of those who can work well with these machines, therefore, requires that you hone your ability to master hard things.

And because these technologies change rapidly, this process of mastering hard things never ends: You must be able to do it quickly, again and again.

This ability to learn hard things quickly, of course, isn't just necessary for working well with intelligent machines; it also plays a key role in the attempt to become a superstar in just about any field—even those that have little to do with technology. To become a world-class yoga instructor, for example, requires that you master an increasingly complex set of physical skills. To excel in a particular area of medicine, to give another example, requires that you be able to quickly master the latest research on relevant procedures. To summarize these observations more succinctly: If you can't learn, you can't thrive.

Now consider the second core ability from the list shown earlier: producing at an elite level. If you want to become a superstar, mastering the relevant skills is necessary, but not sufficient. You must then transform that latent potential into tangible results that people value. Many developers, for example, can program computers well, but David Hansson, our example superstar from earlier, leveraged this ability to produce Ruby on Rails, the project that made his reputation. Ruby on Rails required Hansson to push his current skills to their limit and produce unambiguously valuable and concrete results.

This ability to produce also applies to those looking to master intelligent machines. It wasn't enough for Nate Silver to learn how to manipulate large data sets and run statistical analyses; he needed to then show that he could use this skill to tease information from these machines that a large audience cared about. Silver worked with many stats geeks during his days at *Baseball Prospectus*, but it was Silver alone who put in the effort to adapt these skills to the new and more lucrative territory of election forecasting. This provides another general observation for joining the ranks of winners in our economy: If you don't produce, you won't thrive—no matter how skilled or talented you are.

Having established two abilities that are fundamental to getting ahead in our new, technology-disrupted world, we can now ask the obvious follow-up question: How does one cultivate these core abilities? It's here that we arrive at a central thesis of this book: **The two core abilities just described depend on your ability to perform deep work.** If you haven't mastered this foundational skill, you'll struggle to learn hard things or produce at an elite level.

The dependence of these abilities on deep work isn't immediately obvious; it requires a closer look at the science of learning, concentration, and productivity. The sections ahead provide this closer look, and by doing so will help this connection

between deep work and economic success shift for you from unexpected to unimpeachable.

Deep Work Helps You Quickly Learn Hard Things

"Let your mind become a lens, thanks to the converging rays of attention; let your soul be all intent on whatever it is that is established in your mind as a dominant, wholly absorbing idea."

This advice comes from Antonin-Dalmace Sertillanges, a Dominican friar and professor of moral philosophy, who during the early part of the twentieth century penned a slim but influential volume titled *The Intellectual Life*. Sertillanges wrote the book as a guide to "the development and deepening of the mind" for those called to make a living in the world of ideas. Throughout *The Intellectual Life*, Sertillanges recognizes the necessity of mastering complicated material and helps prepare the reader for this challenge. For this reason, his book proves useful in our quest to better understand how people quickly master hard (cognitive) skills.

To understand Sertillanges's advice, let's return to the quote from earlier. In these words, which are echoed in many forms in *The Intellectual Life*, Sertillanges argues that to advance your understanding of your field you must tackle the relevant topics systematically, allowing your "converging rays of attention" to uncover the truth latent in each. In other words, he teaches: *To learn requires intense concentration* . This idea turns out to be ahead of its time. In reflecting on the life of the mind in the 1920s, Sertillanges uncovered a fact about mastering cognitively demanding tasks that would take academia another seven decades to formalize.

This task of formalization began in earnest in the 1970s, when a branch of psychology, sometimes called performance psychology, began to systematically explore what separates experts (in many different fields) from everyone else. In the early 1990s, K. Anders Ericsson, a professor at Florida State University, pulled together these strands into a single coherent answer, consistent with the growing research literature, that he gave a punchy name: deliberate practice.

Ericsson opens his seminal paper on the topic with a powerful claim: "We deny that these differences [between expert performers and normal adults] are immutable… Instead, we argue that the differences between expert performers and normal adults reflect a life-long period of deliberate effort to improve performance in a specific domain."

American culture, in particular, loves the storyline of the prodigy ("Do you know

how easy this is for me!?" Matt Damon's character famously cries in the movie *Good Will Hunting* as he makes quick work of proofs that stymie the world's top mathematicians). The line of research promoted by Ericsson, and now widely accepted (with caveats[*]), de-stabilizes these myths. To master a cognitively demanding task requires this specific form of practice—there are few exceptions made for natural talent. (On this point too, Sertillanges seems to have been ahead of his time, arguing in *The Intellectual Life*, "Men of genius themselves were great only by bringing all their power to bear on the point on which they had decided to show their full measure." Ericsson couldn't have said it better.)

This brings us to the question of what deliberate practice actually requires. Its core components are usually identified as follows: (1) your attention is focused tightly on a specific skill you're trying to improve or an idea you're trying to master; (2) you receive feedback so you can correct your approach to keep your attention exactly where it's most productive. The first component is of particular importance to our discussion, as it emphasizes that deliberate practice cannot exist alongside distraction, and that it instead requires uninterrupted concentration. As Ericsson emphasizes, "Diffused attention is almost antithetical to the *focused attention* required by deliberate practice" (emphasis mine).

As psychologists, Ericsson and the other researchers in his field are not interested in *why* deliberate practice works; they're just identifying it as an effective behavior. In the intervening decades since Ericsson's first major papers on the topic, however, neuroscientists have been exploring the physical mechanisms that drive people's improvements on hard tasks. As the journalist Daniel Coyle surveys in his 2009 book, *The Talent Code*, these scientists increasingly believe the answer includes myelin—a layer of fatty tissue that grows around neurons, acting like an insulator that allows the cells to fire faster and cleaner. To understand the role of myelin in improvement, keep in mind that skills, be they intellectual or physical, eventually reduce down to brain circuits. This new science of performance argues that you get better at a skill as you develop more myelin around the relevant neurons, allowing the corresponding circuit to fire more effortlessly and effectively. To be great at something is to be well myelinated.

This understanding is important because it provides a neurological foundation for why deliberate practice works. By focusing intensely on a specific skill, you're forcing the specific relevant circuit to fire, again and again, in isolation. This repetitive use of a specific circuit triggers cells called oligodendrocytes to begin wrapping layers of myelin around the neurons in the circuits—effectively cementing the skill. The reason, therefore, why it's important to focus intensely on the task at

hand while avoiding distraction is because this is the only way to isolate the relevant neural circuit enough to trigger useful myelination. By contrast, if you're trying to learn a complex new skill (say, SQL database management) in a state of low concentration (perhaps you also have your Facebook feed open), you're firing too many circuits simultaneously and haphazardly to isolate the group of neurons you actually want to strengthen.

In the century that has passed since Antonin-Dalmace Sertillanges first wrote about using the mind like a lens to focus rays of attention, we have advanced from this elevated metaphor to a decidedly less poetic explanation expressed in terms of oligodendrocyte cells. But this sequence of thinking about thinking points to an inescapable conclusion: To learn hard things quickly, you must focus intensely without distraction. To learn, in other words, is an act of deep work. If you're comfortable going deep, you'll be comfortable mastering the increasingly complex systems and skills needed to thrive in our economy. If you instead remain one of the many for whom depth is uncomfortable and distraction ubiquitous, you shouldn't expect these systems and skills to come easily to you.

Deep Work Helps You Produce at an Elite Level

Adam Grant produces at an elite level. When I met Grant in 2013, he was the youngest professor to be awarded tenure at the Wharton School of Business at Penn. A year later, when I started writing this chapter (and was just beginning to think about my own tenure process), the claim was updated: He's now the youngest *full professor*[*] at Wharton.

The reason Grant advanced so quickly in his corner of academia is simple: He produces. In 2012, Grant published seven articles—all of them in major journals. This is an absurdly high rate for his field (in which professors tend to work alone or in small professional collaborations and do not have large teams of students and postdocs to support their research). In 2013, this count fell to five. This is still absurdly high, but below his recent standards. He can be excused for this dip, however, because this same year he published a book titled *Give and Take*, which popularized some of his research on relationships in business. To say that this book was successful is an understatement. It ended up featured on the cover of the *New York Times Magazine* and went on to become a massive bestseller. When Grant was awarded full professorship in 2014, he had already written more than sixty peer-reviewed publications in addition to his bestselling book.

Soon after meeting Grant, my own academic career on my mind, I couldn't help but ask him about his productivity. Fortunately for me, he was happy to share his thoughts on the subject. It turns out that Grant thinks a lot about the mechanics of producing at an elite level. He sent me, for example, a collection of PowerPoint slides from a workshop he attended with several other professors in his field. The event was focused on data-driven observations about how to produce academic work at an optimum rate. These slides included detailed pie charts of time allocation per season, a flowchart capturing relationship development with co-authors, and a suggested reading list with more than twenty titles. These business professors do not live the cliché of the absentminded academic lost in books and occasionally stumbling on a big idea. They see productivity as a scientific problem to systematically solve—a goal Adam Grant seems to have achieved.

Though Grant's productivity depends on many factors, there's one idea in particular that seems central to his method: the batching of hard but important intellectual work into long, uninterrupted stretches. Grant performs this batching at multiple levels. Within the year, he stacks his teaching into the fall semester, during which he can turn all of his attention to teaching well and being available to his students. (This method seems to work, as Grant is currently the highest-rated teacher at Wharton and the winner of multiple teaching awards.) By batching his teaching in the fall, Grant can then turn his attention fully to research in the spring and summer, and tackle this work with less distraction.

Grant also batches his attention on a smaller time scale. Within a semester dedicated to research, he alternates between periods where his door is open to students and colleagues, and periods where he isolates himself to focus completely and without distraction on a single research task. (He typically divides the writing of a scholarly paper into three discrete tasks: analyzing the data, writing a full draft, and editing the draft into something publishable.) During these periods, which can last up to three or four days, he'll often put an out-of-office auto-responder on his e-mail so correspondents will know not to expect a response. "It sometimes confuses my colleagues," he told me. "They say, 'You're not out of office, I see you in your office right now!'" But to Grant, it's important to enforce strict isolation until he completes the task at hand.

My guess is that Adam Grant doesn't work substantially more hours than the average professor at an elite research institution (generally speaking, this is a group prone to workaholism), but he still manages to produce more than just about anyone else in his field. I argue that his approach to batching helps explain this paradox. In particular, by consolidating his work into intense and uninterrupted pulses, he's

leveraging the following law of productivity:

High-Quality Work Produced = (Time Spent) x (Intensity of Focus)

If you believe this formula, then Grant's habits make sense: By maximizing his intensity when he works, he maximizes the results he produces per unit of time spent working.

This is not the first time I've encountered this formulaic conception of productivity. It first came to my attention when I was researching my second book, *How to Become a Straight-A Student*, many years earlier. During that research process, I interviewed around fifty ultra-high-scoring college undergraduates from some of the country's most competitive schools. Something I noticed in these interviews is that the very best students often studied less than the group of students right below them on the GPA rankings. One of the explanations for this phenomenon turned out to be the formula detailed earlier: The best students understood the role intensity plays in productivity and therefore went out of their way to maximize their concentration—radically reducing the time required to prepare for tests or write papers, without diminishing the quality of their results.

The example of Adam Grant implies that this intensity formula applies beyond just undergraduate GPA and is also relevant to other cognitively demanding tasks. But why would this be? An interesting explanation comes from Sophie Leroy, a business professor at the University of Minnesota. In a 2009 paper, titled, intriguingly, "Why Is It So Hard to Do My Work?," Leroy introduced an effect she called *attention residue*. In the introduction to this paper, she noted that other researchers have studied the effect of multitasking—trying to accomplish multiple tasks simultaneously—on performance, but that in the modern knowledge work office, once you got to a high enough level, it was more common to find people working on multiple projects sequentially: "Going from one meeting to the next, starting to work on one project and soon after having to transition to another is just part of life in organizations," Leroy explains.

The problem this research identifies with this work strategy is that when you switch from some Task A to another Task B, your attention doesn't immediately follow—a *residue* of your attention remains stuck thinking about the original task. This residue gets especially thick if your work on Task A was unbounded and of low intensity before you switched, but even if you finish Task A before moving on, your attention remains divided for a while.

Leroy studied the effect of this attention residue on performance by forcing task switches in the laboratory. In one such experiment, for example, she started her

subjects working on a set of word puzzles. In one of the trials, she would interrupt them and tell them that they needed to move on to a new and challenging task, in this case, reading résumés and making hypothetical hiring decisions. In other trials, she let the subjects finish the puzzles before giving them the next task. In between puzzling and hiring, she would deploy a quick lexical decision game to quantify the amount of residue left from the first task.[*] The results from this and her similar experiments were clear: "People experiencing attention residue after switching tasks are likely to demonstrate poor performance on that next task," and the more intense the residue, the worse the performance.

The concept of attention residue helps explain why the intensity formula is true and therefore helps explain Grant's productivity. By working on a single hard task for a long time without switching, Grant minimizes the negative impact of attention residue from his other obligations, allowing him to maximize performance on this one task. When Grant is working for days in isolation on a paper, in other words, he's doing so at a higher level of effectiveness than the standard professor following a more distracted strategy in which the work is repeatedly interrupted by residue-slathering interruptions.

Even if you're unable to fully replicate Grant's extreme isolation (we'll tackle different strategies for scheduling depth in Part 2), the attention residue concept is still telling because it implies that the common habit of working in a state of semi-distraction is potentially devastating to your performance. It might seem harmless to take a quick glance at your inbox every ten minutes or so. Indeed, many justify this behavior as *better* than the old practice of leaving an inbox open on the screen at all times (a straw-man habit that few follow anymore). But Leroy teaches us that this is not in fact much of an improvement. That quick check introduces a new target for your attention. Even worse, by seeing messages that you cannot deal with at the moment (which is almost always the case), you'll be forced to turn back to the primary task with a secondary task left unfinished. The attention residue left by such unresolved switches dampens your performance.

When we step back from these individual observations, we see a clear argument form: To produce at your peak level you need to work for extended periods with full concentration on a single task free from distraction. Put another way, **the type of work that optimizes your performance is deep work.** If you're not comfortable going deep for extended periods of time, it'll be difficult to get your performance to the peak levels of quality and quantity increasingly necessary to thrive professionally. Unless your talent and skills absolutely dwarf those of your competition, the deep workers among them will outproduce you.

What About Jack Dorsey?

I've now made my argument for why deep work supports abilities that are becoming increasingly important in our economy. Before we accept this conclusion, however, we must face a type of question that often arises when I discuss this topic: *What about Jack Dorsey?*

Jack Dorsey helped found Twitter. After stepping down as CEO, he then launched the payment-processing company Square. To quote a Forbes profile: "He is a disrupter on a massive scale and a repeat offender." He is also someone who does not spend a lot of time in a state of deep work. Dorsey doesn't have the luxury of long periods of uninterrupted thinking because, at the time when the Forbes profile was written, he maintained management duties at both Twitter (where he remained chairman) and Square, leading to a tightly calibrated schedule that ensures that the companies have a predictable "weekly cadence" (and that also ensures that Dorsey's time and attention are severely fractured).

Dorsey reports, for example, that he ends the average day with thirty to forty sets of meeting notes that he reviews and filters at night. In the small spaces between all these meetings, he believes in serendipitous availability. "I do a lot of my work at stand-up tables, which anyone can come up to," Dorsey said. "I get to hear all these conversations around the company."

This style of work is not deep. To use a term from our previous section, Dorsey's attention residue is likely slathered on thick as he darts from one meeting to another, letting people interrupt him freely in the brief interludes in between. And yet, we cannot say that Dorsey's work is shallow, because shallow work, as defined in the introduction, is low value and easily replicable, while what Jack Dorsey does is incredibly valuable and highly rewarded in our economy (as of this writing he was among the top one thousand richest people in the world, with a net worth over $1.1 billion).

Jack Dorsey is important to our discussion because he's an exemplar of a group we cannot ignore: individuals who thrive without depth. When I titled the motivating question of this section "What About Jack Dorsey?," I was providing a specific example of a more general query: If deep work is so important, why are there distracted people who do well? To conclude this chapter, I want to address this question so it doesn't nag at your attention as we dive deeper into the topic of depth in the pages ahead.

To start, we must first note that Jack Dorsey is a high-level executive of a large

company (two companies, in fact). Individuals with such positions play a major role in the category of those who thrive without depth, because the lifestyle of such executives is famously and unavoidably distracted. Here's Kerry Trainor, CEO of Vimeo, trying to answer the question of how long he can go without e-mail: "I can go a good solid Saturday without, without… well, most of the daytime without it… I mean, I'll *check it*, but I won't necessarily respond."

At the same time, of course, these executives are better compensated and more important in the American economy today than in any other time in history. Jack Dorsey's success without depth is common at this elite level of management. Once we've stipulated this reality, we must then step back to remind ourselves that it doesn't undermine the general value of depth. Why? Because the necessity of distraction in these executives' work lives is highly specific to their particular jobs. A good chief executive is essentially a hard-to-automate decision engine, not unlike IBM's *Jeopardy!*-playing Watson system. They have built up a hard-won repository of experience and have honed and proved an instinct for their market. They're then presented inputs throughout the day—in the form of e-mails, meetings, site visits, and the like—that they must process and act on. To ask a CEO to spend four hours thinking deeply about a single problem is a waste of what makes him or her valuable. It's better to hire three smart subordinates to think deeply about the problem and then bring their solutions to the executive for a final decision.

This specificity is important because it tells us that if you're a high-level executive at a major company, you probably don't need the advice in the pages that follow. On the other hand, it also tells us that you cannot extrapolate the approach of these executives to *other* jobs. The fact that Dorsey encourages interruption or Kerry Trainor checks his e-mail constantly doesn't mean that you'll share their success if you follow suit: Their behaviors are characteristic of their specific roles as corporate officers.

This rule of specificity should be applied to similar counterexamples that come to mind while reading the rest of this book. There are, we must continually remember, certain corners of our economy where depth is not valued. In addition to executives, we can also include, for example, certain types of salesmen and lobbyists, for whom constant connection is their most valued currency. There are even those who manage to grind out distracted success in fields where depth would help.

But at the same time, don't be too hasty to label your job as necessarily non-deep. Just because your current habits make deep work difficult doesn't mean that this lack of depth is fundamental to doing your job well. In the next chapter, for example, I tell

the story of a group of high-powered management consultants who were convinced that constant e-mail connectivity was necessary for them to service their clients. When a Harvard professor forced them to disconnect more regularly (as part of a research study), they found, to their surprise, that this connectivity didn't matter nearly as much as they had assumed. The clients didn't really need to reach them at all times and their performance as consultants *improved* once their attention became less fractured.

Similarly, several managers I know tried to convince me that they're most valuable when they're able to respond quickly to their teams' problems, preventing project logjams. They see their role as enabling others' productivity, not necessarily protecting their own. Follow-up discussions, however, soon uncovered that this goal didn't *really* require attention-fracturing connectivity. Indeed, many software companies now deploy the Scrum project management methodology, which replaces a lot of this ad hoc messaging with regular, highly structured, and ruthlessly efficient status meetings (often held standing up to minimize the urge to bloviate). This approach frees up more managerial time for thinking deeply about the problems their teams are tackling, often improving the overall value of what they produce.

Put another way: Deep work is not the *only* skill valuable in our economy, and it's possible to do well without fostering this ability, *but* the niches where this is advisable are increasingly rare. Unless you have strong evidence that distraction is important for your specific profession, you're best served, for the reasons argued earlier in this chapter, by giving serious consideration to depth.

Chapter Two

Deep Work Is Rare

In 2012, Facebook unveiled the plans for a new headquarters designed by Frank Gehry. At the center of this new building is what CEO Mark Zuckerberg called "the largest open floor plan in the world": More than three thousand employees will work on movable furniture spread over a ten-acre expanse. Facebook, of course, is not the only Silicon Valley heavyweight to embrace the open office concept. When Jack Dorsey, whom we met at the end of the last chapter, bought the old San Francisco Chronicle building to house Square, he configured the space so that his developers work in common spaces on long shared desks. "We encourage people to stay out in the open because we believe in serendipity—and people walking by each other teaching new things," Dorsey explained.

Another big business trend in recent years is the rise of instant messaging. A *Times* article notes that this technology is no longer the "province of chatty teenagers" and is now helping companies benefit from "new productivity gains and improvements in customer response time." A senior product manager at IBM boasts: "We send 2.5 million I.M.'s within I.B.M. each day."

One of the more successful recent entrants into the business IM space is Hall, a Silicon Valley start-up that helps employees move beyond just chat and engage in "real-time collaboration." A San Francisco–based developer I know described to me what it was like to work in a company that uses Hall. The most "efficient" employees, he explained, set up their text editor to flash an alert on their screen when a new question or comment is posted to the company's Hall account. They can then, with a sequence of practiced keystrokes, jump over to Hall, type in their thoughts, and then jump back to their coding with barely a pause. My friend seemed impressed when describing their speed.

A third trend is the push for content producers of all types to maintain a social media presence. The *New York Times*, a bastion of old-world media values, now encourages its employees to tweet—a hint taken by the more than eight hundred writers, editors, and photographers for the paper who now maintain a Twitter account.

This is not outlier behavior; it's instead the new normal. When the novelist Jonathan Franzen wrote a piece for the *Guardian* calling Twitter a "coercive development" in the literary world, he was widely ridiculed as out of touch. The online magazine *Slate* called Franzen's complaints a "lonely war on the Internet" and fellow novelist Jennifer Weiner wrote a response in *The New Republic* in which she argued, "Franzen's a category of one, a lonely voice issuing *ex cathedra* edicts that can only apply to himself." The sarcastic hashtag #JonathanFranzenhates soon became a fad.

I mention these three business trends because they highlight a paradox. In the last chapter, I argued that deep work is more valuable than ever before in our shifting economy. If this is true, however, you would expect to see this skill promoted not just by ambitious individuals but also by organizations hoping to get the most out of their employees. As the examples provided emphasize, this is not happening. Many other ideas are being prioritized as more important than deep work in the business world, including, as we just encountered, serendipitous collaboration, rapid communication, and an active presence on social media.

It's bad enough that so many trends are prioritized ahead of deep work, but to add insult to injury, many of these trends actively *decrease* one's ability to go deep. Open offices, for example, might create more opportunities for collaboration,[*] but they do so at the cost of "massive distraction," to quote the results of experiments conducted for a British TV special titled *The Secret Life of Office Buildings*. "If you are just getting into some work and a phone goes off in the background, it ruins what you are concentrating on," said the neuroscientist who ran the experiments for the show. "Even though you are not aware at the time, the brain responds to distractions."

Similar issues apply to the rise of real-time messaging. E-mail inboxes, in theory, can distract you only when you choose to open them, whereas instant messenger systems are meant to be always active—magnifying the impact of interruption. Gloria Mark, a professor of informatics at the University of California, Irvine, is an expert on the science of attention fragmentation. In a well-cited study, Mark and her co-authors observed knowledge workers in real offices and found that an interruption, even if short, delays the total time required to complete a task by a significant fraction. "This was reported by subjects as being very detrimental," she summarized with typical academic understatement.

Forcing content producers onto social media also has negative effects on the ability to go deep. Serious journalists, for example, need to focus on doing serious journalism—diving into complicated sources, pulling out connective threads, crafting persuasive prose—so to ask them to interrupt this deep thinking throughout the day to participate

in the frothy back-and-forth of online tittering seems irrelevant (and somewhat demeaning) at best, and devastatingly distracting at worst. The respected *New Yorker* staff writer George Packer captured this fear well in an essay about why he does not tweet: "Twitter is crack for media addicts. It scares me, not because I'm morally superior to it, but because I don't think I could handle it. I'm afraid I'd end up letting my son go hungry." Tellingly, when he wrote that essay, Packer was busy writing his book *The Unwinding*, which came out soon after and promptly won the National Book Award—despite (or, perhaps, aided by) his lack of social media use.

To summarize, big trends in business today actively decrease people's ability to perform deep work, even though the benefits promised by these trends (e.g., increased serendipity, faster responses to requests, and more exposure) are arguably dwarfed by the benefits that flow from a commitment to deep work (e.g., the ability to learn hard things fast and produce at an elite level). The goal of this chapter is to explain this paradox. The rareness of deep work, I'll argue, is not due to some fundamental weakness of the habit. When we look closer at why we embrace distraction in the workplace we'll find the reasons are more arbitrary than we might expect—based on flawed thinking combined with the ambiguity and confusion that often define knowledge work. My objective is to convince you that although our current embrace of distraction is a real phenomenon, it's built on an unstable foundation and can be easily dismissed once you decide to cultivate a deep work ethic.

The Metric Black Hole

In the fall of 2012, Tom Cochran, the chief technology officer of Atlantic Media, became alarmed at how much time he seemed to spend on e-mail. So like any good techie, he decided to quantify this unease. Observing his own behavior, he measured that in a single week he received 511 e-mail messages and sent 284. This averaged to around 160 e-mails per day over a five-day workweek. Calculating further, Cochran noted that even if he managed to spend only thirty seconds per message on average, this still added up to almost an hour and a half per day dedicated to moving information around like a human network router. This seemed like a lot of time spent on something that wasn't a primary piece of his job description.

As Cochran recalls in a blog post he wrote about his experiment for the *Harvard Business Review*, these simple statistics got him thinking about the rest of his company. Just how much time were employees of Atlantic Media spending moving around information instead of focusing on the specialized tasks they were hired to perform? Determined to answer this question, Cochran gathered company-wide

statistics on e-mails sent per day and the average number of words per e-mail. He then combined these numbers with the employees' average typing speed, reading speed, and salary. The result: He discovered that Atlantic Media was spending well over a million dollars a year to pay people to process e-mails, with every message sent or received tapping the company for around ninety-five cents of labor costs. "A 'free and frictionless' method of communication," Cochran summarized, "had soft costs equivalent to procuring a small company Learjet."

Tom Cochran's experiment yielded an interesting result about the literal cost of a seemingly harmless behavior. But the real importance of this story is the experiment itself, and in particular, its complexity. It turns out to be really difficult to answer a simple question such as: What's the impact of our current e-mail habits on the bottom line? Cochran had to conduct a company-wide survey and gather statistics from the IT infrastructure. He also had to pull together salary data and information on typing and reading speed, and run the whole thing through a statistical model to spit out his final result. And even then, the outcome is fungible, as it's not able to separate out, for example, how much value was *produced* by this frequent, expensive e-mail use to offset some of its cost.

This example generalizes to most behaviors that potentially impede or improve deep work. Even though we abstractly accept that distraction has costs and depth has value, these impacts, as Tom Cochran discovered, are difficult to measure. This isn't a trait unique to habits related to distraction and depth: Generally speaking, as knowledge work makes more complex demands of the labor force, it becomes harder to measure the value of an individual's efforts. The French economist Thomas Piketty made this point explicit in his study of the extreme growth of executive salaries. The enabling assumption driving his argument is that "it is objectively difficult to measure individual contributions to a firm's output." In the absence of such measures, irrational outcomes, such as executive salaries way out of proportion to the executive's marginal productivity, can occur. Even though some details of Piketty's theory are controversial, the underlying assumption that it's increasingly difficult to measure individuals' contributions is generally considered, to quote one of his critics, "undoubtedly true."

We should not, therefore, expect the bottom-line impact of depth-destroying behaviors to be easily detected. As Tom Cochran discovered, such metrics fall into an opaque region resistant to easy measurement—a region I call the *metric black hole*. Of course, just because it's hard to measure metrics related to deep work doesn't automatically lead to the conclusion that businesses will dismiss it. We have many examples of behaviors for which it's hard to measure their bottom-line impact but that

nevertheless flourish in our business culture; think, for example, of the three trends that opened this chapter, or the outsize executive salaries that puzzled Thomas Piketty. But without clear metrics to support it, any business behavior is vulnerable to unstable whim and shifting forces, and in this volatile scrum deep work has fared particularly poorly.

The reality of this metric black hole is the backdrop for the arguments that follow in this chapter. In these upcoming sections, I'll describe various mind-sets and biases that have pushed business away from deep work and toward more distracting alternatives. None of these behaviors would survive long if it was clear that they were hurting the bottom line, but the metric black hole prevents this clarity and allows the shift toward distraction we increasingly encounter in the professional world.

The Principle of Least Resistance

When it comes to distracting behaviors embraced in the workplace, we must give a position of dominance to the now ubiquitous *culture of connectivity*, where one is expected to read and respond to e-mails (and related communication) quickly. In researching this topic, Harvard Business School professor Leslie Perlow found that the professionals she surveyed spent around twenty to twenty-five hours a week *outside the office* monitoring e-mail—believing it important to answer any e-mail (internal or external) within an hour of its arrival.

You might argue—as many do—that this behavior is necessary in many fast-paced businesses. But here's where things get interesting: Perlow tested this claim. In more detail, she convinced executives at the Boston Consulting Group, a high-pressure management consulting firm with an ingrained culture of connectivity, to let her fiddle with the work habits of one of their teams. She wanted to test a simple question: Does it really help your work to be constantly connected? To do so, she did something extreme: She forced each member of the team to take one day out of the workweek completely off—no connectivity to anyone inside or outside the company.

"At first, the team resisted the experiment," she recalled about one of the trials. "The partner in charge, who had been very supportive of the basic idea, was suddenly nervous about having to tell her client that each member of her team would be off one day a week." The consultants were equally nervous and worried that they were "putting their careers in jeopardy." But the team didn't lose their clients and its members did not lose their jobs. Instead, the consultants found more enjoyment in their work, better communication among themselves, more learning (as we might have

predicted, given the connection between depth and skill development highlighted in the last chapter), and perhaps most important, "a better product delivered to the client."

This motivates an interesting question: Why do so many follow the lead of the Boston Consulting Group and foster a culture of connectivity even though it's likely, as Perlow found in her study, that it hurts employees' well-being and productivity, and probably doesn't help the bottom line? I think the answer can be found in the following reality of workplace behavior.

The Principle of Least Resistance: In a business setting, without clear feedback on the impact of various behaviors to the bottom line, we will tend toward behaviors that are easiest in the moment.

To return to our question about why cultures of connectivity persist, the answer, according to our principle, is because *it's easier*. There are at least two big reasons why this is true. The first concerns responsiveness to your needs. If you work in an environment where you can get an answer to a question or a specific piece of information immediately when the need arises, this makes your life easier—at least, in the moment. If you couldn't count on this quick response time you'd instead have to do more advance planning for your work, be more organized, and be prepared to put things aside for a while and turn your attention elsewhere while waiting for what you requested. All of this would make the day to day of your working life harder (even if it produced more satisfaction and a better outcome in the long term). The rise of professional instant messaging, mentioned earlier in this chapter, can be seen as this mind-set pushed toward an extreme. If receiving an e-mail reply within an hour makes your day easier, then getting an answer via instant message in under a minute would improve this gain by an order of magnitude.

The second reason that a culture of connectivity makes life easier is that it creates an environment where it becomes acceptable to run your day out of your inbox—responding to the latest missive with alacrity while others pile up behind it, all the while feeling satisfyingly productive (more on this soon). If e-mail were to move to the periphery of your workday, you'd be required to deploy a more thoughtful approach to figuring out what you should be working on and for how long. This type of planning is hard. Consider, for example, David Allen's *Getting Things Done* task-management methodology, which is a well-respected system for intelligently managing competing workplace obligations. This system proposes a *fifteen-element* flowchart for making a decision on what to do next! It's significantly easier to simply chime in on the latest cc'd e-mail thread.

I'm picking on constant connectivity as a case study in this discussion, but it's just

one of many examples of business behaviors that are antithetical to depth, and likely reducing the bottom-line value produced by the company, that nonetheless thrive because, in the absence of metrics, most people fall back on what's easiest.

To name another example, consider the common practice of setting up regularly occurring meetings for projects. These meetings tend to pile up and fracture schedules to the point where sustained focus during the day becomes impossible. Why do they persist? *They're easier.* For many, these standing meetings become a simple (but blunt) form of personal organization. Instead of trying to manage their time and obligations themselves, they let the impending meeting each week force them to take some action on a given project and more generally provide a highly visible simulacrum of progress.

Also consider the frustratingly common practice of forwarding an e-mail to one or more colleagues, labeled with a short open-ended interrogative, such as: "Thoughts?" These e-mails take the sender only a handful of seconds to write but can command many minutes (if not hours, in some cases) of time and attention from their recipients to work toward a coherent response. A little more care in crafting the message by the sender could reduce the overall time spent by all parties by a significant fraction. So why are these easily avoidable and time-sucking e-mails so common? From the sender's perspective, *they're easier*. It's a way to clear something out of their inbox —at least, temporarily—with a minimum amount of energy invested.

The Principle of Least Resistance, protected from scrutiny by the metric black hole, supports work cultures that save us from the short-term discomfort of concentration and planning, at the expense of long-term satisfaction and the production of real value. By doing so, this principle drives us toward shallow work in an economy that increasingly rewards depth. It's not, however, the only trend that leverages the metric black hole to reduce depth. We must also consider the always present and always vexing demand toward "productivity," the topic we'll turn our attention to next.

Busyness as a Proxy for Productivity

There are a lot of things difficult about being a professor at a research-oriented university. But one benefit that this profession enjoys is clarity. How well or how poorly you're doing as an academic researcher can be boiled down to a simple question: Are you publishing important papers? The answer to this question can even be quantified as a single number, such as the *h-index*: a formula, named for its

inventor, Jorge Hirsch, that processes your publication and citation counts into a single value that approximates your impact on your field. In computer science, for example, an h-index score above 40 is difficult to achieve and once reached is considered the mark of a strong long-term career. On the other hand, if your h-index is in single digits when your case goes up for tenure review, you're probably in trouble. Google Scholar, a tool popular among academics for finding research papers, even calculates your h-index automatically so you can be reminded, multiple times per week, precisely where you stand. (In case you're wondering, as of the morning when I'm writing this chapter, I'm a 21.)

This clarity simplifies decisions about what work habits a professor adopts or abandons. Here, for example, is the late Nobel Prize–winning physicist Richard Feynman explaining in an interview one of his less orthodox productivity strategies:

> *To do real good physics work, you do need absolute solid lengths of time… it needs a lot of concentration… if you have a job administrating anything, you don't have the time. So I have invented another myth for myself: that I'm irresponsible. I'm actively irresponsible. I tell everyone I don't do anything. If anyone asks me to be on a committee for admissions, "no," I tell them: I'm irresponsible.*

Feynman was adamant in avoiding administrative duties because he knew they would only decrease his ability to do the one thing that mattered most in his professional life: "to do real good physics work." Feynman, we can assume, was probably bad at responding to e-mails and would likely switch universities if you had tried to move him into an open office or demand that he tweet. Clarity about what matters provides clarity about what does not.

I mention the example of professors because they're somewhat exceptional among knowledge workers, most of whom don't share this transparency regarding how well they're doing their job. Here's the social critic Matthew Crawford's description of this uncertainty: "Managers themselves inhabit a bewildering psychic landscape, and are made anxious by the vague imperatives they must answer to."

Though Crawford was speaking specifically to the plight of the knowledge work middle manager, the "bewildering psychic landscape" he references applies to many positions in this sector. As Crawford describes in his 2009 ode to the trades, *Shop Class as Soulcraft*, he quit his job as a Washington, D.C., think tank director to open a motorcycle repair shop exactly to escape this bewilderment. The feeling of taking a broken machine, struggling with it, then eventually enjoying a tangible indication that he had succeeded (the bike driving out of the shop under its own power) provides a

concrete sense of accomplishment he struggled to replicate when his day revolved vaguely around reports and communications strategies.

A similar reality creates problems for many knowledge workers. They want to prove that they're productive members of the team and are earning their keep, but they're not entirely clear what this goal constitutes. They have no rising h-index or rack of repaired motorcycles to point to as evidence of their worth. To overcome this gap, many seem to be turning back to the last time when productivity was more universally observable: the industrial age.

To understand this claim, recall that with the rise of assembly lines came the rise of the Efficiency Movement, identified with its founder, Frederic Taylor, who would famously stand with a stopwatch monitoring the efficiency of worker movements—looking for ways to increase the speed at which they accomplished their tasks. In Taylor's era, productivity was unambiguous: widgets created per unit of time. It seems that in today's business landscape, many knowledge workers, bereft of other ideas, are turning toward this old definition of productivity in trying to solidify their value in the otherwise bewildering landscape of their professional lives. (David Allen, for example, even uses the specific phrase "cranking widgets" to describe a productive work flow.) Knowledge workers, I'm arguing, are tending toward increasingly visible busyness because they lack a better way to demonstrate their value. Let's give this tendency a name.

Busyness as Proxy for Productivity: In the absence of clear indicators of what it means to be productive and valuable in their jobs, many knowledge workers turn back toward an industrial indicator of productivity: doing lots of stuff in a visible manner.

This mind-set provides another explanation for the popularity of many depth-destroying behaviors. If you send and answer e-mails at all hours, if you schedule and attend meetings constantly, if you weigh in on instant message systems like Hall within seconds when someone poses a new question, or if you roam your open office bouncing ideas off all whom you encounter—all of these behaviors make you seem busy in a public manner. If you're using busyness as a proxy for productivity, then these behaviors can seem crucial for convincing yourself and others that you're doing your job well.

This mind-set is not necessarily irrational. For some, their jobs really do depend on such behavior. In 2013, for example, Yahoo's new CEO Marissa Mayer banned employees from working at home. She made this decision after checking the server logs for the virtual private network that Yahoo employees use to remotely log in to company servers. Mayer was upset because the employees working from home didn't

sign in enough throughout the day. She was, in some sense, punishing her employees for not spending more time checking e-mail (one of the primary reasons to log in to the servers). "If you're not visibly busy," she signaled, "I'll assume you're not productive."

Viewed objectively, however, this concept is anachronistic. Knowledge work is not an assembly line, and extracting value from information is an activity that's often at odds with busyness, not supported by it. Remember, for example, Adam Grant, the academic from our last chapter who became the youngest full professor at Wharton by repeatedly shutting himself off from the outside world to concentrate on writing. Such behavior is the opposite of being publicly busy. If Grant worked for Yahoo, Marissa Mayer might have fired him. But this deep strategy turned out to produce a massive amount of value.

We could, of course, eliminate this anachronistic commitment to busyness if we could easily demonstrate its negative impact on the bottom line, but the metric black hole enters the scene at this point and prevents such clarity. This potent mixture of job ambiguity and lack of metrics to measure the effectiveness of different strategies allows behavior that can seem ridiculous when viewed objectively to thrive in the increasingly bewildering psychic landscape of our daily work.

As we'll see next, however, even those who have a clear understanding of what it means to succeed in their knowledge work job can still be lured away from depth. All it takes is an ideology seductive enough to convince you to discard common sense.

The Cult of the Internet

Consider Alissa Rubin. She's the *New York Times*' bureau chief in Paris. Before that she was the bureau chief in Kabul, Afghanistan, where she reported from the front lines on the postwar reconstruction. Around the time I was writing this chapter, she was publishing a series of hard-hitting articles that looked at the French government's complicity in the Rwandan genocide. Rubin, in other words, is a serious journalist who is good at her craft. She also, at what I can only assume is the persistent urging of her employer, tweets.

Rubin's Twitter profile reveals a steady and somewhat desultory string of missives, one every two to four days, as if Rubin receives a regular notice from the *Times*' social media desk (a real thing) reminding her to appease her followers. With few exceptions, the tweets simply mention an article she recently read and liked.

Rubin is a reporter, not a media personality. Her value to her paper is her ability to

cultivate important sources, pull together facts, and write articles that make a splash. It's the Alissa Rubins of the world who provide the *Times* with its reputation, and it's this reputation that provides the foundation for the paper's commercial success in an age of ubiquitous and addictive click-bait. So why is Alissa Rubin urged to regularly interrupt this necessarily deep work to provide, for free, shallow content to a service run by an unrelated media company based out of Silicon Valley? And perhaps even more important, why does this behavior seem so normal to most people? If we can answer these questions, we'll better understand the final trend I want to discuss relevant to the question of why deep work has become so paradoxically rare.

A foundation for our answer can be found in a warning provided by the late communication theorist and New York University professor Neil Postman. Writing in the early 1990s, as the personal computer revolution first accelerated, Postman argued that our society was sliding into a troubling relationship with technology. We were, he noted, no longer discussing the trade-offs surrounding new technologies, balancing the new efficiencies against the new problems introduced. If it's high-tech, we began to instead assume, then it's good. Case closed.

He called such a culture a *technopoly*, and he didn't mince words in warning against it. "Technopoly eliminates alternatives to itself in precisely the way Aldous Huxley outlined in *Brave New World*," he argued in his 1993 book on the topic. "It does not make them illegal. It does not make them immoral. It does not even make them unpopular. It makes them invisible and therefore irrelevant."

Postman died in 2003, but if he were alive today he would likely express amazement about how quickly his fears from the 1990s came to fruition—a slide driven by the unforeseen and sudden rise of the Internet. Fortunately, Postman has an intellectual heir to continue this argument in the Internet Age: the hypercitational social critic Evgeny Morozov. In his 2013 book, *To Save Everything, Click Here* , Morozov attempts to pull back the curtains on our technopolic obsession with "the Internet" (a term he purposefully places in scare quotes to emphasize its role as an ideology), saying: "It's this propensity to view 'the Internet' as a source of wisdom and policy advice that transforms it from a fairly uninteresting set of cables and network routers into a seductive and exciting ideology—perhaps today's uber-ideology."

In Morozov's critique, we've made "the Internet" synonymous with the revolutionary future of business and government. To make your company more like "the Internet" is to be with the times, and to ignore these trends is to be the proverbial buggy-whip maker in an automotive age. We no longer see Internet tools as products released by for-profit companies, funded by investors hoping to make a return, and run

by twentysomethings who are often making things up as they go along. We're instead quick to idolize these digital doodads as a signifier of progress and a harbinger of a (dare I say, brave) new world.

This Internet-centrism (to steal another Morozov term) is what technopoly looks like today. It's important that we recognize this reality because it explains the question that opened this section. The *New York Times* maintains a social media desk and pressures its writers, like Alissa Rubin, toward distracting behavior, because in an Internet-centric technopoly such behavior is not up for discussion. The alternative, to not embrace all things Internet, is, as Postman would say, "invisible and therefore irrelevant."

This invisibility explains the uproar, mentioned earlier, that arose when Jonathan Franzen dared suggest that novelists shouldn't tweet. It riled people not because they're well versed in book marketing and disagreed with Franzen's conclusion, but because it surprised them that anyone serious would suggest the irrelevance of social media. In an Internet-centric technopoly such a statement is the equivalent of a flag burning—desecration, not debate.

Perhaps the near universal reach of this mind-set is best captured in an experience I had recently on my commute to the Georgetown campus where I work. Waiting for the light to change so I could cross Connecticut Avenue, I idled behind a truck from a refrigerated supply chain logistics company. Refrigerated shipping is a complex, competitive business that requires equal skill managing trade unions and route scheduling. It's the ultimate old-school industry and in many ways is the opposite of the lean consumer-facing tech start-ups that currently receive so much attention. What struck me as I waited in traffic behind this truck, however, was not the complexity or scale of this company, but instead a graphic that had been commissioned and then affixed, probably at significant expense, on the back of this entire fleet of trucks—a graphic that read: "like us on Facebook."

Deep work is at a severe disadvantage in a technopoly because it builds on values like quality, craftsmanship, and mastery that are decidedly old-fashioned and nontechnological. Even worse, to support deep work often requires the rejection of much of what is new and high-tech. Deep work is exiled in favor of more distracting high-tech behaviors, like the professional use of social media, not because the former is empirically inferior to the latter. Indeed, if we had hard metrics relating the impact of these behaviors on the bottom line, our current technopoly would likely crumble. But the metric black hole prevents such clarity and allows us instead to elevate all things Internet into Morozov's feared "uber-ideology." In such a culture, we should

not be surprised that deep work struggles to compete against the shiny thrum of tweets, likes, tagged photos, walls, posts, and all the other behaviors that we're now taught are necessary for no other reason than that they exist.

Bad for Business. Good for You.

Deep work *should* be a priority in today's business climate. But it's not. I've just summarized various explanations for this paradox. Among them are the realities that deep work is hard and shallow work is easier, that in the absence of clear goals for your job, the visible busyness that surrounds shallow work becomes self-preserving, and that our culture has developed a belief that if a behavior relates to "the Internet," then it's good—regardless of its impact on our ability to produce valuable things. All of these trends are enabled by the difficulty of directly measuring the value of depth or the cost of ignoring it.

If you believe in the value of depth, this reality spells bad news for businesses in general, as it's leading them to miss out on potentially massive increases in their value production. But for *you*, as an individual, good news lurks. The myopia of your peers and employers uncovers a great personal advantage. Assuming the trends outlined here continue, depth will become increasingly rare and therefore increasingly valuable. Having just established that there's nothing fundamentally flawed about deep work and nothing fundamentally necessary about the distracting behaviors that displace it, you can therefore continue with confidence with the ultimate goal of this book: to systematically develop your personal ability to go deep—and by doing so, reap great rewards.

Chapter Three

Deep Work Is Meaningful

Ric Furrer is a blacksmith. He specializes in ancient and medieval metalworking practices, which he painstakingly re-creates in his shop, Door County Forgeworks. "I do all my work by hand and use tools that multiply my force without limiting my creativity or interaction with the material," he explains in his artist's statement. "What may take me 100 blows by hand can be accomplished in one by a large swaging machine. This is the antithesis of my goal and to that end all my work shows evidence of the two hands that made it."

A 2012 PBS documentary provides a glimpse into Furrer's world. We learn that he works in a converted barn in Wisconsin farm country, not far inland from the scenic Sturgeon Bay of Lake Michigan. Furrer often leaves the barn doors open (to vent the heat of the forges, one suspects), his efforts framed by farm fields stretching to the horizon. The setting is idyllic but the work can seem, at first encounter, brutish. In the documentary, Furrer is trying to re-create a Viking-era sword. He begins by using a fifteen-hundred-year-old technique to smelt *crucible steel*: an unusually pure (for the period) form of the metal. The result is an ingot, not much bigger than three or four stacked smartphones. This dense ingot must then be shaped and polished into a long and elegant sword blade.

"This part, the initial breakdown, is terrible," Furrer says to the camera as he methodically heats the ingot, hits it with a hammer, turns it, hits it, then puts it back in the flames to start over. The narrator reveals that it will take *eight hours* of this hammering to complete the shaping. As you watch Furrer work, however, the sense of the labor shifts. It becomes clear that he's not drearily whacking at the metal like a miner with a pickaxe: Every hit, though forceful, is carefully controlled. He peers intently at the metal, through thin-framed intellectual glasses (which seem out of place perched above his heavy beard and broad shoulders), turning it *just so* for each impact. "You have to be very gentle with it or you will crack it," he explains. After a few more hammer strikes, he adds: "You have to nudge it; slowly it breaks down; then you start to enjoy it."

At one point about halfway through the smithing, after Furrer has finished hammering out the desired shape, he begins rotating the metal carefully in a narrow trough of burning charcoal. As he stares at the blade something clicks: "It's ready." He lifts the sword, red with heat, holding it away from his body as he strides swiftly toward a pipe filled with oil and plunges in the blade to cool it. After a moment of relief that the blade did not crack into pieces—a common occurrence at this step—Furrer pulls it from the oil. The residual heat of the metal lights the fuel, engulfing the sword's full length in yellow flames. Furrer holds the burning sword up above his head with a single powerful arm and stares at it a moment before blowing out the fire. During this brief pause, the flames illuminate his face, and his admiration is palpable.

"To do it right, it is the most complicated thing I know how to make," Furrer explains. "And it's that challenge that drives me. I don't need a sword. But I *have* to make them."

Ric Furrer is a master craftsman whose work requires him to spend most of his day in a state of depth—even a small slip in concentration can ruin dozens of hours of effort. He's also someone who clearly finds great meaning in his profession. This connection between deep work and a good life is familiar and widely accepted when considering the world of craftsmen. "The satisfactions of manifesting oneself concretely in the world through manual competence have been known to make a man quiet and easy," explains Matthew Crawford. And we believe him.

But when we shift our attention to knowledge work this connection is muddied. Part of the issue is clarity. Craftsmen like Furrer tackle professional challenges that are simple to define but difficult to execute—a useful imbalance when seeking purpose. Knowledge work exchanges this clarity for ambiguity. It can be hard to define exactly what a given knowledge worker does and how it differs from another: On our worst days, it can seem that *all* knowledge work boils down to the same exhausting roil of e-mails and PowerPoint, with only the charts used in the slides differentiating one career from another. Furrer himself identifies this blandness when he writes: "The world of information superhighways and cyber space has left me rather cold and disenchanted."

Another issue muddying the connection between depth and meaning in knowledge work is the cacophony of voices attempting to convince knowledge workers to spend more time engaged in shallow activities. As elaborated in the last chapter, we live in an era where anything Internet related is understood by default to be innovative and necessary. Depth-destroying behaviors such as immediate e-mail responses and an active social media presence are lauded, while avoidance of these trends generates

suspicion. No one would fault Ric Furrer for not using Facebook, but if a knowledge worker makes this same decision, then he's labeled an eccentric (as I've learned from personal experience).

Just because this connection between depth and meaning is less clear in knowledge work, however, doesn't mean that it's nonexistent. The goal of this chapter is to convince you that deep work *can* generate as much satisfaction in an information economy as it so clearly does in a craft economy. In the sections ahead, I'll make three arguments to support this claim. These arguments roughly follow a trajectory from the conceptually narrow to broad: starting with a neurological perspective, moving to the psychological, and ending with the philosophical. I'll show that regardless of the angle from which you attack the issue of depth and knowledge work, it's clear that by embracing depth over shallowness you can tap the same veins of meaning that drive craftsmen like Ric Furrer. The thesis of this final chapter in Part 1, therefore, is that a deep life is not just economically lucrative, but also a life well lived.

A Neurological Argument for Depth

The science writer Winifred Gallagher stumbled onto a connection between attention and happiness after an unexpected and terrifying event, a cancer diagnosis—"not just cancer," she clarifies, "but a particularly nasty, fairly advanced kind." As Gallagher recalls in her 2009 book *Rapt*, as she walked away from the hospital after the diagnosis she formed a sudden and strong intuition: "This disease wanted to monopolize my attention, but as much as possible, I would focus on my life instead." The cancer treatment that followed was exhausting and terrible, but Gallagher couldn't help noticing, in that corner of her brain honed by a career in nonfiction writing, that her commitment to focus on what was good in her life—"movies, walks, and a 6:30 martini"—worked surprisingly well. Her life during this period should have been mired in fear and pity, but it was instead, she noted, often quite pleasant.

Her curiosity piqued, Gallagher set out to better understand the role that attention—that is, what we choose to focus on and what we choose to ignore—plays in defining the quality of our life. After five years of science reporting, she came away convinced that she was witness to a "grand unified theory" of the mind:

> *Like fingers pointing to the moon, other diverse disciplines from anthropology to education, behavioral economics to family counseling, similarly suggest that the skillful management of attention is the sine qua non of the good life and the key to improving virtually every aspect of your*

experience.

This concept upends the way most people think about their subjective experience of life. We tend to place a lot of emphasis on our *circumstances*, assuming that what happens to us (or fails to happen) determines how we feel. From this perspective, the small-scale details of how you spend your day aren't that important, because what matters are the large-scale outcomes, such as whether or not you get a promotion or move to that nicer apartment. According to Gallagher, decades of research contradict this understanding. Our brains instead construct our worldview based on *what we pay attention to*. If you focus on a cancer diagnosis, you and your life become unhappy and dark, but if you focus instead on an evening martini, you and your life become more pleasant—even though the circumstances in both scenarios are the same. As Gallagher summarizes: "Who you are, what you think, feel, and do, what you love—is the sum of what you focus on."

In *Rapt*, Gallagher surveys the research supporting this understanding of the mind. She cites, for example, the University of North Carolina psychologist Barbara Fredrickson: a researcher who specializes in the cognitive appraisal of emotions. After a bad or disrupting occurrence in your life, Fredrickson's research shows, what you choose to focus on exerts significant leverage on your attitude going forward. These simple choices can provide a "reset button" to your emotions. She provides the example of a couple fighting over inequitable splitting of household chores. "Rather than continuing to focus on your partner's selfishness and sloth," she suggests, "you might focus on the fact that at least a festering conflict has been aired, which is the first step toward a solution to the problem, and to your improved mood." This seems like a simple exhortation to look on the bright side, but Fredrickson found that skillful use of these emotional "leverage points" can generate a significantly more positive outcome after negative events.

Scientists can watch this effect in action all the way down to the neurological level. Stanford psychologist Laura Carstensen, to name one such example, used an fMRI scanner to study the brain behavior of subjects presented with both positive and negative imagery. She found that for young people, their amygdala (a center of emotion) fired with activity at both types of imagery. When she instead scanned the elderly, the amygdala fired only for the positive images. Carstensen hypothesizes that the elderly subjects had trained the prefrontal cortex to inhibit the amygdala in the presence of negative stimuli. These elderly subjects were not happier because their life circumstances were better than those of the young subjects; they were instead happier because they had rewired their brains to ignore the negative and savor the positive. By skillfully managing their attention, they improved their world without

changing anything concrete about it.

We can now step back and use Gallagher's grand theory to better understand the role of deep work in cultivating a good life. This theory tells us that your world is the outcome of what you pay attention to, so consider for a moment the type of mental world constructed when you dedicate significant time to deep endeavors. There's a gravity and sense of importance inherent in deep work—whether you're Ric Furrer smithing a sword or a computer programmer optimizing an algorithm. Gallagher's theory, therefore, predicts that if you spend enough time in this state, your mind will understand your world as rich in meaning and importance.

There is, however, a hidden but equally important benefit to cultivating rapt attention in your workday: Such concentration hijacks your attention apparatus, preventing you from noticing the many smaller and less pleasant things that unavoidably and persistently populate our lives. (The psychologist Mihaly Csikszentmihalyi, whom we'll learn more about in the next section, explicitly identifies this advantage when he emphasizes the advantage of cultivating "concentration so intense that there is no attention left over to think about anything irrelevant, or to worry about problems.") This danger is especially pronounced in knowledge work, which due to its dependence on ubiquitous connectivity generates a devastatingly appealing buffet of distraction—most of which will, if given enough attention, leach meaning and importance from the world constructed by your mind.

To help make this claim more concrete I'll use myself as a test case. Consider, for example, the last five e-mails I sent before I began writing the first draft of this chapter. Following are the subject lines of these messages along with summaries of their contents:

- **Re: URGENT calnewport Brand Registration Confirmation.** This message was in response to a standard scam in which a company tries to trick website owners into registering their domain in China. I was annoyed that they kept spamming me, so I lost my cool and responded (futilely, of course) by telling them their scam would be more convincing if they spelled "website" correctly in their e-mails.
- **Re: S R.** This message was a conversation with a family member about an article he saw in the *Wall Street Journal*.
- **Re: Important Advice.** This e-mail was part of a conversation about optimal retirement investment strategies.

- **Re: Fwd: Study Hacks.** This e-mail was part of a conversation in which I was attempting to find a time to meet with someone I know who was visiting my city —a task complicated by his fractured schedule during his visit.
- **Re: just curious.** This message was part of a conversation in which a colleague and I were reacting to some thorny office politics issues (of the type that are frequent and clichéd in academic departments).

These e-mails provide a nice case study of the type of shallow concerns that vie for your attention in a knowledge work setting. Some of the issues presented in these sample messages are benign, such as discussing an interesting article, some are vaguely stressful, such as the conversation on retirement savings strategies (a type of conversation which almost always concludes with you *not* doing the right things), some are frustrating, such as trying to arrange a meeting around busy schedules, and some are explicitly negative, such as angry responses to scammers or worried discussions about office politics.

Many knowledge workers spend most of their working day interacting with these types of shallow concerns. Even when they're required to complete something more involved, the habit of frequently checking inboxes ensures that these issues remain at the forefront of their attention. Gallagher teaches us that this is a foolhardy way to go about your day, as it ensures that your mind will construct an understanding of your working life that's dominated by stress, irritation, frustration, and triviality. The world represented by your inbox, in other words, isn't a pleasant world to inhabit.

Even if your colleagues are all genial and your interactions are always upbeat and positive, by allowing your attention to drift over the seductive landscape of the shallow, you run the risk of falling into another neurological trap identified by Gallagher: "Five years of reporting on attention have confirmed some home truths," Gallagher reports. "[Among them is the notion that] 'the idle mind is the devil's workshop'… when you lose focus, your mind tends to fix on what could be wrong with your life instead of what's right." A workday driven by the shallow, from a neurological perspective, is likely to be a draining and upsetting day, even if most of the shallow things that capture your attention seem harmless or fun.

The implication of these findings is clear. In work (and especially knowledge work), to increase the time you spend in a state of depth is to leverage the complex machinery of the human brain in a way that for several different neurological reasons maximizes the meaning and satisfaction you'll associate with your working life. "After running my tough experiment [with cancer]… I have a plan for living the rest of my

life," Gallagher concludes in her book. "I'll choose my targets with care… then give them my rapt attention. In short, I'll live the focused life, because it's the best kind there is." We'd be wise to follow her lead.

A Psychological Argument for Depth

Our second argument for why depth generates meaning comes from the work of one of the world's best-known (and most misspelled) psychologists, Mihaly Csikszentmihalyi. In the early 1980s, Csikszentmihalyi, working with Reed Larson, a young colleague at the University of Chicago, invented a new technique for understanding the psychological impact of everyday behaviors. At the time, it was difficult to accurately measure the psychological impact of different activities. If you brought someone into a laboratory and asked her to remember how she felt at a specific point many hours ago, she was unlikely to recall. If you instead gave her a diary and asked her to record how she felt throughout the day, she wouldn't be likely to keep up the entries with diligence—it's simply too much work.

Csikszentmihalyi and Larson's breakthrough was to leverage new technology (for the time) to bring the question to the subject right when it mattered. In more detail, they outfitted experimental subjects with pagers. These pagers would beep at randomly selected intervals (in modern incarnations of this method, smartphone apps play the same role). When the beeper went off, the subjects would record what they were doing at the exact moment and how they felt. In some cases, they would be provided with a journal in which to record this information while in others they would be given a phone number to call to answer questions posed by a field-worker. Because the beeps were only occasional but hard to ignore, the subjects were likely to follow through with the experimental procedure. And because the subjects were recording responses about an activity *at the very moment* they were engaged in it, the responses were more accurate. Csikszentmihalyi and Larson called the approach the experience sampling method (ESM), and it provided unprecedented insight into how we actually feel about the beats of our daily lives.

Among many breakthroughs, Csikszentmihalyi's work with ESM helped validate a theory he had been developing over the preceding decade: "The best moments usually occur when a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile." Csikszentmihalyi calls this mental state *flow* (a term he popularized with a 1990 book of the same title). At the time, this finding pushed back against conventional wisdom. Most people assumed (and still do) that relaxation makes them happy. We want to work less and spend more time in the

hammock. But the results from Csikszentmihalyi's ESM studies reveal that most people have this wrong:

> *Ironically, jobs are actually easier to enjoy than free time, because like flow activities they have built-in goals, feedback rules, and challenges, all of which encourage one to become involved in one's work, to concentrate and lose oneself in it. Free time, on the other hand, is unstructured, and requires much greater effort to be shaped into something that can be enjoyed.*

When measured empirically, people were happier at work and less happy relaxing than they suspected. And as the ESM studies confirmed, the more such flow experiences that occur in a given week, the higher the subject's life satisfaction. Human beings, it seems, are at their best when immersed deeply in something challenging.

There is, of course, overlap between the theory of flow and the ideas of Winifred Gallagher highlighted in the last section. Both point toward the importance of depth over shallowness, but they focus on two different explanations for this importance. Gallagher's writing emphasizes that the *content* of what we focus on matters. If we give rapt attention to important things, and therefore also ignore shallow negative things, we'll experience our working life as more important and positive. Csikszentmihalyi's theory of flow, by contrast, is mostly agnostic to the content of our attention. Though he would likely agree with the research cited by Gallagher, his theory notes that the feeling of going deep is *in itself* very rewarding. Our minds like this challenge, regardless of the subject.

The connection between deep work and flow should be clear: Deep work is an activity well suited to generate a flow state (the phrases used by Csikszentmihalyi to describe what generates flow include notions of stretching your mind to its limits, concentrating, and losing yourself in an activity—all of which also describe deep work). And as we just learned, flow generates happiness. Combining these two ideas we get a powerful argument from psychology in favor of depth. Decades of research stemming from Csikszentmihalyi's original ESM experiments validate that the act of going deep orders the consciousness in a way that makes life worthwhile. Csikszentmihalyi even goes so far as to argue that modern companies should embrace this reality, suggesting that "jobs should be redesigned so that they resemble as closely as possible flow activities." Noting, however, that such a redesign would be difficult and disruptive (see, for example, my arguments from the previous chapter), Csikszentmihalyi then explains that it's even more important that the *individual* learn how to seek out opportunities for flow. This, ultimately, is the lesson to come away

with from our brief foray into the world of experimental psychology: To build your working life around the experience of flow produced by deep work is a proven path to deep satisfaction.

A Philosophical Argument for Depth

Our final argument for the connection between depth and meaning requires us to step back from the more concrete worlds of neuroscience and psychology and instead adopt a philosophical perspective. I'll turn for help in this discussion to a pair of scholars who know this topic well: Hubert Dreyfus, who taught philosophy at Berkeley for more than four decades, and Sean Dorrance Kelly, who at the time of this writing is the chair of Harvard's philosophy department. In 2011, Dreyfus and Kelly published a book, *All Things Shining*, which explores how notions of sacredness and meaning have evolved throughout the history of human culture. They set out to reconstruct this history because they're worried about its endpoint in our current era. "The world used to be, in its various forms, a world of sacred, shining things," Dreyfus and Kelly explain early in the book. "The shining things now seem far away."

What happened between then and now? The short answer, the authors argue, is Descartes. From Descartes's skepticism came the radical belief that the individual seeking certainty trumped a God or king bestowing truth. The resulting Enlightenment, of course, led to the concept of human rights and freed many from oppression. But as Dreyfus and Kelly emphasize, for all its good in the political arena, in the domain of the metaphysical this thinking stripped the world of the order and sacredness essential to creating meaning. In a post-Enlightenment world we have tasked *ourselves* to identify what's meaningful and what's not, an exercise that can seem arbitrary and induce a creeping nihilism. "The Enlightenment's metaphysical embrace of the autonomous individual leads not just to a boring life," Dreyfus and Kelly worry; "it leads almost inevitably to a nearly unlivable one."

This problem might at first seem far removed from our quest to understand the satisfaction of depth, but when we proceed to Dreyfus and Kelly's solution, we will discover rich new insights into the sources of meaning in professional pursuits. This connection should seem less surprising when it's revealed that Dreyfus and Kelly's response to modern nihilism builds on the very subject that opened this chapter: the craftsman.

Craftsmanship, Dreyfus and Kelly argue in their book's conclusion, provides a key to reopening a sense of sacredness in a responsible manner. To illustrate this claim,

they use as an organizing example an account of a master wheelwright—the now lost profession of shaping wooden wagon wheels. "Because each piece of wood is distinct, it has its own personality," they write after a passage describing the details of the wheelwright's craft. "The woodworker has an intimate relationship with the wood he works. Its subtle virtues call out to be cultivated and cared for." In this appreciation for the "subtle virtues" of his medium, they note, the craftsman has stumbled onto something crucial in a post-Enlightenment world: a source of meaning sited outside the individual. The wheelwright doesn't decide arbitrarily which virtues of the wood he works are valuable and which are not; this value is inherent in the wood and the task it's meant to perform.

As Dreyfus and Kelly explain, such sacredness is common to craftsmanship. The task of a craftsman, they conclude, "is not to *generate* meaning, but rather to *cultivate* in himself the skill of *discerning* the meanings that are *already there*." This frees the craftsman of the nihilism of autonomous individualism, providing an ordered world of meaning. At the same time, this meaning seems safer than the sources cited in previous eras. The wheelwright, the authors imply, cannot easily use the inherent quality of a piece of pine to justify a despotic monarchy.

Returning to the question of professional satisfaction, Dreyfus and Kelly's interpretation of craftsmanship as a path to meaning provides a nuanced understanding of why the work of those like Ric Furrer resonates with so many of us. The look of satisfaction on Furrer's face as he works to extract artistry from crude metals, these philosophers would argue, is a look expressing appreciation for something elusive and valuable in modernity: a glimpse of the sacred.

Once understood, we can connect this sacredness inherent in traditional craftsmanship to the world of knowledge work. To do so, there are two key observations we must first make. The first might be obvious but requires emphasis: There's nothing intrinsic about the *manual* trades when it comes to generating this particular source of meaning. Any pursuit—be it physical or cognitive—that supports high levels of skill can also generate a sense of sacredness.

To elaborate this point, let's jump from the old-fashioned examples of carving wood or smithing metal to the modern example of computer programming. Consider this quote from the coding prodigy Santiago Gonzalez describing his work to an interviewer:

> *Beautiful code is short and concise, so if you were to give that code to another programmer they would say, "oh, that's well written code." It's much like as if you were writing a poem.*

Gonzalez discusses computer programming similarly to the way woodworkers discuss their craft in the passages quoted by Dreyfus and Kelly.

The Pragmatic Programmer, a well-regarded book in the computer programming field, makes this connection between code and old-style craftsmanship more directly by quoting the medieval quarry worker's creed in its preface: "We who cut mere stones must always be envisioning cathedrals." The book then elaborates that computer programmers must see their work in the same way:

> *Within the overall structure of a project there is always room for individuality and craftsmanship… One hundred years from now, our engineering may seem as archaic as the techniques used by medieval cathedral builders seem to today's civil engineers, while our craftsmanship will still be honored.*

You don't, in other words, need to be toiling in an open-air barn for your efforts to be considered the type of craftsmanship that can generate Dreyfus and Kelly's meaning. A similar potential for craftsmanship can be found in most skilled jobs in the information economy. Whether you're a writer, marketer, consultant, or lawyer: Your work is craft, and if you hone your ability and apply it with respect and care, then like the skilled wheelwright you can generate meaning in the daily efforts of your professional life.

It's here that some might respond that *their* knowledge work job cannot possibly become such a source of meaning because their job's subject is much too mundane. But this is flawed thinking that our consideration of traditional craftsmanship can help correct. In our current culture, we place a lot of emphasis on job description. Our obsession with the advice to "follow your passion" (the subject of my last book), for example, is motivated by the (flawed) idea that what matters most for your career satisfaction is the specifics of the job you choose. In this way of thinking, there are some rarified jobs that can be a source of satisfaction—perhaps working in a nonprofit or starting a software company—while all others are soulless and bland. The philosophy of Dreyfus and Kelly frees us from such traps. The craftsmen they cite don't have rarified jobs. Throughout most of human history, to be a blacksmith or a wheelwright wasn't glamorous. But this doesn't matter, as the specifics of the work are irrelevant. The meaning uncovered by such efforts is due to the skill and appreciation inherent in craftsmanship—not the outcomes of their work. Put another way, a wooden wheel is not noble, but its shaping can be. The same applies to knowledge work. You don't need a rarified job; you need instead a rarified approach to your work.

The second key observation about this line of argument is that cultivating craftsmanship is necessarily a deep task and therefore requires a commitment to deep work. (Recall that I argued in Chapter 1 that deep work is necessary to hone skills and to then apply them at an elite level—the core activities in craft.) Deep work, therefore, is key to extracting meaning from your profession in the manner described by Dreyfus and Kelly. It follows that to embrace deep work in your own career, and to direct it toward cultivating your skill, is an effort that can transform a knowledge work job from a distracted, draining obligation into something satisfying—a portal to a world full of shining, wondrous things.

Homo Sapiens Deepensis

The first two chapters of Part 1 were pragmatic. They argued that deep work is becoming increasingly valuable in our economy at the same time that it also is becoming increasingly rare (for somewhat arbitrary reasons). This represents a classic market mismatch: If you cultivate this skill, you'll thrive professionally.

This final chapter, by contrast, has little to add to this practical discussion of workplace advancement, *and yet* it's absolutely necessary for these earlier ideas to gain traction. The pages ahead describe a rigorous program for transforming your professional life into one centered on depth. This is a difficult transition, and as with many such efforts, well-reasoned, pragmatic arguments can motivate you only to a certain point. Eventually, the goal you pursue needs to resonate at a more human level. This chapter argues that when it comes to the embrace of depth, such resonance is inevitable. Whether you approach the activity of going deep from the perspective of neuroscience, psychology, or lofty philosophy, these paths all seem to lead back to a connection between depth and meaning. It's as if our species has evolved into one that flourishes in depth and wallows in shallowness, becoming what we might call *Homo sapiens deepensis*.

I earlier quoted Winifred Gallagher, the converted disciple of depth, saying, "I'll live the focused life, because it's the best kind there is." This is perhaps the best way to sum up the argument of this chapter and of Part 1 more broadly: A deep life is a good life, any way you look at it.