

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 muddled. 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 disenchanting.”

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.