Rule #2

Embrace Boredom

To better understand how one masters the art of deep work, I suggest visiting the Knesses Yisroel Synagogue in Spring Valley, New York, at six a.m. on a weekday morning. If you do, you'll likely find at least twenty cars in the parking lot. Inside, you'll encounter a couple dozen members of the

congregation working over texts—some might be reading silently, mouthing the words of an ancient language, while others are paired together debating. At one end of the room a rabbi will be leading a larger group in a discussion. This early morning gathering in Spring Valley represents just a small fraction of the hundreds of thousands of orthodox Jews who will wake up early that morning, as they do every weekday morning, to practice a central tenet of their faith: to spend time every day studying the complex written traditions of Rabbinic Judaism.

I was introduced to this world by Adam Marlin, a member of the Knesses

Yisroel congregation and one of the regulars at its morning study group. As Marlin explained to me, his goal with this practice is to decipher one Talmud page each day (though he sometimes fails to make it even this far), often working with a *chevruta* (study partner) to push his understanding closer to his cognitive limit.

What interests me about Marlin is not his knowledge of ancient texts, but instead the type of effort required to gain this knowledge. When I interviewed him, he emphasized the mental intensity of his morning ritual. "It's an extreme and serious discipline, consisting mostly of the 'deep work' stuff [you write

about],” he explained. “I run a growing business, but this is often the hardest brain strain I do.” This strain is not unique to Marlin but is instead ingrained in the practice—as his rabbi once explained to him: “You cannot consider yourself as fulfilling this daily obligation unless you have stretched to the reaches of your mental capacity.”

Unlike many orthodox Jews, Marlin came late to his faith, not starting his rigorous Talmud training until his twenties. This bit of trivia proves useful to our purposes because it allows Marlin a clear before-and-after comparison concerning the impact of these mental calisthenics—and the result

surprised him. Though Marlin was exceptionally well educated when he began the practice—he holds *three different* Ivy League degrees—he soon met fellow adherents who had only ever attended small religious schools but could still "dance intellectual circles" around him. "A number of these people are highly successful [professionally]," he explained to me, "but it wasn't some fancy school that pushed their intellect higher; it became clear it was instead their daily study that started as early as the fifth grade."

After a while, Marlin began to notice positive changes in his own ability to think deeply. "I've recently been making

more highly creative insights in my business life," he told me. "I'm convinced it's related to this daily mental practice. This consistent strain has built my mental muscle over years and years. This was not the goal when I started, but it is the effect."

Adam Marlin's experience underscores an important reality about deep work: The ability to concentrate intensely is a skill that must be trained. This idea might sound obvious once it's pointed out, but it represents a departure from how most people understand such matters. In my experience, it's common to treat undistracted concentration as a

habit like flossing—something that you know how to do and know is good for you, but that you've been neglecting due to a lack of motivation. This mind-set is appealing because it implies you can transform your working life from distracted to focused overnight if you can simply muster enough motivation. But this understanding ignores the difficulty of focus and the hours of practice necessary to strengthen your "mental muscle." The creative insights that Adam Marlin now experiences in his professional life, in other words, have little to do with a onetime decision to think deeper, and much to do with a commitment to training this ability early

every morning.

There is, however, an important corollary to this idea: Efforts to deepen your focus will struggle if you don't simultaneously wean your mind from a dependence on distraction. Much in the same way that athletes must take care of their bodies outside of their training sessions, you'll struggle to achieve the deepest levels of concentration if you spend the rest of your time fleeing the slightest hint of boredom.

We can find evidence for this claim in the research of Clifford Nass, the late Stanford communications professor who was well known for his study of behavior in the digital age. Among other

insights, Nass's research revealed that constant attention switching online has a lasting negative effect on your brain. Here's Nass summarizing these findings in a 2010 interview with NPR's Ira Flatow:

> *So we have scales that allow us to divide up people into people who multitask all the time and people who rarely do, and the differences are remarkable. People who multitask all the time can't filter out irrelevancy. They can't manage a working memory. They're chronically distracted. They initiate much*

larger parts of their brain that are irrelevant to the task at hand... they're pretty much mental wrecks.

At this point Flatow asks Nass whether the chronically distracted recognize this rewiring of their brain:

The people we talk with continually said, "look, when I really have to concentrate, I turn off everything and I am laser-focused." And unfortunately, they've developed habits of mind that make it impossible for them to be laser-focused. *They're*

suckers for irrelevancy. They just can't keep on task. [emphasis mine]

Once your brain has become accustomed to on-demand distraction, Nass discovered, it's hard to shake the addiction even when you *want* to concentrate. To put this more concretely: If every moment of potential boredom in your life—say, having to wait five minutes in line or sit alone in a restaurant until a friend arrives—is relieved with a quick glance at your smartphone, then your brain has likely been rewired to a point where, like the "mental wrecks" in Nass's research, it's

not ready for deep work—even if you regularly schedule time to practice this concentration.

Rule #1 taught you how to integrate deep work into your schedule and support it with routines and rituals designed to help you consistently reach the current limit of your concentration ability. Rule #2 will help you significantly improve this limit. The strategies that follow are motivated by the key idea that getting the most out of your deep work habit requires training, and as clarified previously, this training must address two goals: improving your ability to concentrate intensely *and* overcoming

your desire for distraction. These strategies cover a variety of approaches, from quarantining distraction to mastering a special form of meditation, that combine to provide a practical road map for your journey from a mind wrecked by constant distraction and unfamiliar with concentration, to an instrument that truly does deliver laser-like focus.

Don't Take Breaks from Distraction. Instead Take Breaks from Focus.

Many assume that they can switch

between a state of distraction and one of concentration as needed, but as I just argued, this assumption is optimistic: Once you're wired for distraction, you crave it. Motivated by this reality, this strategy is designed to help you rewire your brain to a configuration better suited to staying on task.

Before diving into the details, let's start by considering a popular suggestion for distraction addiction that doesn't quite solve our problem: the Internet Sabbath (sometimes called a digital detox). In its basic form, this ritual asks you to put aside regular time—typically, one day a week—where you refrain from network technology. In the same

way that the Sabbath in the Hebrew Bible induces a period of quiet and reflection well suited to appreciate God and his works, the Internet Sabbath is meant to remind you of what you miss when you are glued to a screen.

It's unclear who first introduced the Internet Sabbath concept, but credit for popularizing the idea often goes to the journalist William Powers, who promoted the practice in his 2010 reflection on technology and human happiness, *Hamlet's BlackBerry*. As Powers later summarizes in an interview: "Do what Thoreau did, which is learn to have a little disconnectedness within the connected world—don't run

away."

A lot of advice for the problem of distraction follows this general template of finding occasional time to get away from the clatter. Some put aside one or two months a year to escape these tethers, others follow Powers's one-day-a-week advice, while others put aside an hour or two every day for the same purpose. All forms of this advice provide some benefit, but once we see the distraction problem in terms of brain wiring, it becomes clear that an Internet Sabbath cannot by itself cure a distracted brain. If you eat healthy just one day a week, you're unlikely to lose weight, as the majority of your time is

still spent gorging. Similarly, if you spend just one day a week resisting distraction, you're unlikely to diminish your brain's craving for these stimuli, as most of your time is still spent giving in to it.

I propose an alternative to the Internet Sabbath. Instead of scheduling the occasional break *from distraction* so you can focus, you should instead schedule the occasional break *from focus* to give in to distraction. To make this suggestion more concrete, let's make the simplifying assumption that Internet use is synonymous with seeking distracting stimuli. (You can, of course, use the Internet in a way that's focused

and deep, but for a distraction addict, this is a difficult task.) Similarly, let's consider working in the absence of the Internet to be synonymous with more focused work. (You can, of course, find ways to be distracted without a network connection, but these tend to be easier to resist.)

With these rough categorizations established, the strategy works as follows: Schedule in advance when you'll use the Internet, and then avoid it altogether outside these times. I suggest that you keep a notepad near your computer at work. On this pad, record the *next* time you're allowed to use the Internet. Until you arrive at that time,

absolutely no network connectivity is allowed—no matter how tempting.

The idea motivating this strategy is that the use of a distracting service does not, by itself, reduce your brain's ability to focus. It's instead the constant *switching* from low-stimuli/high-value activities to high-stimuli/low-value activities, at the slightest hint of boredom or cognitive challenge, that teaches your mind to never tolerate an absence of novelty. This constant switching can be understood analogously as weakening the mental muscles responsible for organizing the many sources vying for your attention. By segregating Internet use (and therefore

segregating distractions) you're minimizing the number of times you give in to distraction, and by doing so you let these attention-selecting muscles strengthen.

For example, if you've scheduled your next Internet block thirty minutes from the current moment, and you're beginning to feel bored and crave distraction, the next thirty minutes of resistance become a session of concentration calisthenics. A full day of scheduled distraction therefore becomes a full day of similar mental training.

While the basic idea behind this strategy is straightforward, putting it into practice can be tricky. To help you

succeed, here are three important points to consider.

***Point #1**: This strategy works even if your job requires lots of Internet use and/or prompt e-mail replies.*

If you're required to spend hours every day online or answer e-mails quickly, that's fine: This simply means that your *Internet blocks* will be more numerous than those of someone whose job requires less connectivity. The total number or duration of your Internet blocks doesn't matter nearly as much as

making sure that the integrity of your *offline blocks* remains intact.

Imagine, for example, that over a two-hour period between meetings, you must schedule an e-mail check every fifteen minutes. Further imagine that these checks require, on average, five minutes. It's sufficient, therefore, to schedule an Internet block every fifteen minutes through this two-hour stretch, with the rest of the time dedicated to offline blocks. In this example, you'll end up spending around ninety minutes out of this two-hour period in a state where you're offline and actively resisting distraction. This works out to be a large amount of concentration

training that's achieved without requiring you to sacrifice too much connectivity.

***Point #2**: Regardless of how you schedule your Internet blocks, you must keep the time outside these blocks absolutely free from Internet use.*

This objective is easy to state in principle but quickly becomes tricky in the messy reality of the standard workday. An inevitable issue you'll face

when executing this strategy is realizing early on in an offline block that there's some crucial piece of information online that you need to retrieve to continue making progress on your current task. If your next Internet block doesn't start for a while, you might end up stuck. The temptation in this situation is to quickly give in, look up the information, then return to your offline block. *You must resist this temptation!* The Internet is seductive: You may think you're just retrieving a single key e-mail from your inbox, but you'll find it hard to not glance at the other "urgent" messages that have recently arrived. It doesn't take many of these exceptions before your

mind begins to treat the barrier between Internet and offline blocks as permeable—diminishing the benefits of this strategy.

It's crucial in this situation, therefore, that you don't immediately abandon an offline block, even when stuck. If it's possible, switch to another offline activity for the remainder of the current block (or perhaps even fill in this time relaxing). If this is infeasible—perhaps you need to get the current offline activity done promptly—then the correct response is to *change* your schedule so that your next Internet block begins sooner. The key in making this change, however, is to not schedule the next

Internet block to occur immediately. Instead, enforce at least a five-minute gap between the current moment and the next time you can go online. This gap is minor, so it won't excessively impede your progress, but from a behavioralist perspective, it's substantial because it separates the sensation of wanting to go online from the reward of actually doing so.

***Point #3**: Scheduling Internet use at home as well as at work can further improve your concentration training.*

If you find yourself glued to a smartphone or laptop throughout your evenings and weekends, then it's likely that your behavior outside of work is undoing many of your attempts during the workday to rewire your brain (which makes little distinction between the two settings). In this case, I would suggest that you maintain the strategy of scheduling Internet use even after the workday is over.

To simplify matters, when scheduling Internet use after work, you can allow time-sensitive communication into your offline blocks (e.g., texting with a friend to agree on where you'll meet for dinner), as well as time-sensitive

information retrieval (e.g., looking up the location of the restaurant on your phone). Outside of these pragmatic exceptions, however, when in an offline block, put your phone away, ignore texts, and refrain from Internet usage. As in the workplace variation of this strategy, if the Internet plays a large and important role in your evening entertainment, that's fine: Schedule lots of long Internet blocks. The key here isn't to avoid or even to reduce the total amount of time you spend engaging in distracting behavior, but is instead to give yourself plenty of opportunities throughout your evening to *resist* switching to these distractions at the slightest hint of

boredom.

One place where this strategy becomes particularly difficult outside work is when you're forced to wait (for example, standing in line at a store). It's crucial in these situations that if you're in an offline block, you simply gird yourself for the temporary boredom, and fight through it with only the company of your thoughts. To simply wait and be bored has become a novel experience in modern life, but from the perspective of concentration training, it's incredibly valuable.

To summarize, to succeed with deep work you must rewire your brain to be

comfortable resisting distracting stimuli. This doesn't mean that you have to eliminate distracting behaviors; it's sufficient that you instead eliminate the ability of such behaviors to hijack your attention. The simple strategy proposed here of scheduling Internet blocks goes a long way toward helping you regain this attention autonomy.

Work Like Teddy Roosevelt

If you attended Harvard College during the 1876–1877 school year, you would've likely noticed a wiry, mutton-chopped, brash, and impossibly

energetic freshman named Theodore Roosevelt. If you then proceeded to befriend this young man, you would've soon noticed a paradox.

On the one hand, his attention might appear to be hopelessly scattered, spread over what one classmate called an "amazing array of interests"—a list that biographer Edmund Morris catalogs to contain boxing, wrestling, body building, dance lessons, poetry readings, and the continuation of a lifelong obsession with naturalism (Roosevelt's landlord on Winthrop Street was not pleased with her young tenant's tendency to dissect and stuff specimens in his rented room). This latter interest

developed to the point that Roosevelt published his first book, *The Summer Birds of the Adirondacks*, in the summer after his freshman year. It was well received in the *Bulletin of the Nuttall Ornithological Club*—a publication, needless to say, which takes bird books quite seriously—and was good enough to lead Morris to assess Roosevelt, at this young age, to be "one of the most knowledgeable young naturalists in the United States."

To support this extracurricular exuberance Roosevelt had to severely restrict the time left available for what should have been his primary focus: his studies at Harvard. Morris used

Roosevelt's diary and letters from this period to estimate that the future president was spending no more than a quarter of the typical day studying. One might expect therefore that Roosevelt's grades would crater. But they didn't. He wasn't the top student in his class, but he certainly didn't struggle either: In his freshman year he earned honor grades in five out of his seven courses. The explanation for this Roosevelt paradox turns out to be his unique approach to tackling this schoolwork. Roosevelt would begin his scheduling by considering the eight hours from eight thirty a.m. to four thirty p.m. He would then remove the time spent in recitation

and classes, his athletic training (which was once a day), and lunch. The fragments that remained were then considered time dedicated exclusively to studying. As noted, these fragments didn't usually add up to a large number of total hours, but he would get the most out of them by working *only* on schoolwork during these periods, and doing so with a blistering *intensity*. "The amount of time he spent at his desk was comparatively small," explained Morris, "but his concentration was so intense, and his reading so rapid, that he could afford more time off [from schoolwork] than most."

This strategy asks you to inject the occasional dash of Rooseveltian intensity into your own workday. In particular, identify a deep task (that is, something that requires deep work to complete) that's high on your priority list. Estimate how long you'd normally put aside for an obligation of this type, then give yourself a hard deadline that *drastically reduces* this time. If possible, commit publicly to the deadline—for example, by telling the person expecting the finished project when they should expect it. If this isn't possible (or if it puts your job in jeopardy), then motivate yourself by setting a countdown timer on your phone

and propping it up where you can't avoid seeing it as you work.

At this point, there should be only one possible way to get the deep task done in time: *working with great intensity*—no e-mail breaks, no daydreaming, no Facebook browsing, no repeated trips to the coffee machine. Like Roosevelt at Harvard, attack the task with every free neuron until it gives way under your unwavering barrage of concentration.

Try this experiment no more than once a week at first—giving your brain practice with intensity, but also giving it (and your stress levels) time to rest in between. Once you feel confident in your

ability to trade concentration for completion time, increase the frequency of these Roosevelt dashes. Remember, however, to always keep your self-imposed deadlines right at the edge of feasibility. You should be able to consistently beat the buzzer (or at least be close), but to do so should require teeth-gritting concentration.

The main motivation for this strategy is straightforward. Deep work requires levels of concentration well beyond where most knowledge workers are comfortable. Roosevelt dashes leverage artificial deadlines to help you systematically increase the level you can regularly achieve—providing, in some

sense, interval training for the attention centers of your brain. An additional benefit is that these dashes are incompatible with distraction (there's no way you can give in to distraction and still make your deadlines). Therefore, every completed dash provides a session in which you're potentially bored, and really want to seek more novel stimuli—but you resist. As argued in the previous strategy, the more you practice resisting such urges, the easier such resistance becomes.

After a few months of deploying this strategy, your understanding of what it means to focus will likely be transformed as you reach levels of

intensity stronger than anything you've experienced before. And if you're anything like a young Roosevelt, you can then repurpose the extra free time it generates toward the finer pleasures in life, like trying to impress the always-discerning members of the Nuttall Ornithological Club.

Meditate Productively

During the two years I spent as a postdoctoral associate at MIT, my wife and I lived in a small but charming apartment on Pinckney Street, in historic Beacon Hill. Though I lived in Boston

and worked in Cambridge, the two locations were close—only a mile apart, sitting on opposite banks of the Charles River. Intent on staying fit, even during the long and dark New England winter, I decided to take advantage of this proximity by traveling between home and work, to the greatest extent possible, on foot.

My routine had me walk to campus in the morning, crossing the Longfellow Bridge in all weather (the city, it turns out to my dismay, is often slow to shovel the pedestrian path after snowstorms). Around lunch, I would change into running gear and run back home on a longer path that followed the banks of

the Charles, crossing at the Massachusetts Avenue Bridge. After a quick lunch and shower at home, I would typically take the subway across the river on the way back to campus (saving, perhaps, a third of a mile on the trek), and then walk home when the workday was done. In other words, I spent *a lot* of time on my feet during this period. It was this reality that led me to develop the practice that I'll now suggest you adopt in your own deep work training: *productive meditation.*

The goal of productive meditation is to take a period in which you're occupied physically but not mentally—walking, jogging, driving, showering—

and focus your attention on a single well-defined professional problem. Depending on your profession, this problem might be outlining an article, writing a talk, making progress on a proof, or attempting to sharpen a business strategy. As in mindfulness meditation, you must continue to bring your attention back to the problem at hand when it wanders or stalls.

I used to practice productive meditation in at least one of my daily cross-river treks while living in Boston, and as I improved, so did my results. I ended up, for example, working out the chapter outlines for a significant portion of my last book while on foot, and made

progress on many knotty technical problems in my academic research.

I suggest that you adopt a productive meditation practice in your own life. You don't necessarily need a serious session every day, but your goal should be to participate in at least two or three such sessions in a typical week. Fortunately, finding time for this strategy is easy, as it takes advantage of periods that would otherwise be wasted (such as walking the dog or commuting to work), and if done right, can actually increase your professional productivity instead of taking time away from your work. In fact, you might even consider scheduling a walk during your workday specifically

for the purpose of applying productive meditation to your most pressing problem at the moment.

I'm not, however, suggesting this practice for its productivity benefits (though they're nice). I'm instead interested in its ability to rapidly improve your ability to think deeply. In my experience, productive meditation builds on both of the key ideas introduced at the beginning of this rule. By forcing you to resist distraction and return your attention repeatedly to a well-defined problem, it helps strengthen your distraction-resisting muscles, and by forcing you to push your focus deeper and deeper on a single

problem, it sharpens your concentration.

To succeed with productive meditation, it's important to recognize that, like any form of meditation, it requires practice to do well. When I first attempted this strategy, back in the early weeks of my postdoc, I found myself hopelessly distracted—ending long stretches of "thinking" with little new to show for my efforts. It took me a dozen or so sessions before I began to experience real results. You should expect something similar, so patience will be necessary. To help accelerate this ramp-up process, however, I have two specific suggestions to offer.

***Suggestion #1**: Be Wary of Distractions and Looping*

As a novice, when you begin a productive meditation session, your mind's first act of rebellion will be to offer unrelated but seemingly more interesting thoughts. My mind, for example, was often successful at derailing my attention by beginning to compose an e-mail that I knew I needed to write. Objectively speaking, this train of thought sounds exceedingly dull, but in the moment it can become impossibly tantalizing. When you notice your attention slipping away from the problem at hand, gently remind yourself

that you can return to that thought later, then redirect your attention back.

Distraction of this type, in many ways, is the obvious enemy to defeat in developing a productive meditation habit. A subtler, but equally effective adversary, is looping. When faced with a hard problem, your mind, as it was evolved to do, will attempt to avoid excess expenditure of energy when possible. One way it might attempt to sidestep this expenditure is by avoiding diving deeper into the problem by instead looping over and over again on what you already know about it. For example, when working on a proof, my mind has a tendency to rehash simple

preliminary results, again and again, to avoid the harder work of building on these results toward the needed solution. You must be on your guard for looping, as it can quickly subvert an entire productive meditation session. When you notice it, remark to yourself that you seem to be in a loop, then redirect your attention toward the next step.

Suggestion #2: *Structure Your Deep Thinking*

"Thinking deeply" about a problem seems like a self-evident activity, but in reality it's not. When faced with a

distraction-free mental landscape, a hard problem, and time to think, the next steps can become surprisingly non-obvious. In my experience, it helps to have some structure for this deep thinking process. I suggest starting with a careful review of the relevant *variables* for solving the problem and then storing these values in your working memory. For example, if you're working on the outline for a book chapter, the relevant variables might be the main points you want to make in the chapter. If you're instead trying to solve a mathematics proof, these variables might be actual variables, or assumptions, or lemmas. Once the relevant variables are identified, define

the specific *next-step question* you need to answer using these variables. In the book chapter example, this next-step question might be, "How am I going to effectively open this chapter?," and for a proof it might be, "What can go wrong if I don't assume this property holds?" With the relevant variables stored and the next-step question identified, you now have a specific target for your attention.

Assuming you're able to solve your next-step question, the final step of this structured approach to deep thinking is to *consolidate* your gains by reviewing clearly the answer you identified. At this point, you can push yourself to the next

level of depth by starting the process over. This cycle of reviewing and storing variables, identifying and tackling the next-step question, then consolidating your gains is like an intense workout routine for your concentration ability. It will help you get more out of your productive meditation sessions and accelerate the pace at which you improve your ability to go deep.

Memorize a Deck of Cards

Given just five minutes, Daniel Kilov can memorize any of the following: a

shuffled deck of cards, a string of one hundred random digits, or 115 abstract shapes (this last feat establishing an Australian national record). It shouldn't be surprising, therefore, that Kilov recently won back-to-back silver medals in the Australian memory championships. What *is* perhaps surprising, given Kilov's history, is that he ended up a mental athlete at all.

"I wasn't born with an exceptional memory," Kilov told me. Indeed, during high school he considered himself forgetful and disorganized. He also struggled academically and was eventually diagnosed with attention deficit disorder. It was after a chance

encounter with Tansel Ali, one of the country's most successful and visible memory champions, that Kilov began to seriously train his memory. By the time he earned his college degree he had won his first national competition medal.

This transformation into a world-class mental athlete was rapid, but not unprecedented. In 2006, the American science writer Joshua Foer won the USA Memory Championship after only a year of (intense) training—a journey he chronicled in his 2011 bestseller, *Moonwalking with Einstein*. But what's important to us about Kilov's story is what happened to his *academic* performance during this period of

intensive memory development. While training his brain, he went from a struggling student with attention deficit disorder to graduating from a demanding Australian university with first-class honors. He was soon accepted into the PhD program at one of the country's top universities, where he currently studies under a renowned philosopher.

One explanation for this transformation comes from research led by Henry Roediger, who runs the Memory Lab at the University of Washington in Saint Louis. In 2014, Roediger and his collaborators sent a team, equipped with a battery of cognitive tests, to the Extreme Memory

Tournament held in San Diego. They wanted to understand what differentiated these elite memorizers from the population at large. "We found that one of the biggest differences between memory athletes and the rest of us is in a cognitive ability that's not a direct measure of memory at all *but of attention*," explained Roediger in a *New York Times* blog post (emphasis mine). The ability in question is called "attentional control," and it measures the subjects' ability to maintain their focus on essential information.

A side effect of memory training, in other words, is an improvement in your general ability to concentrate. This

ability can then be fruitfully applied to any task demanding deep work. Daniel Kilov, we can therefore conjecture, didn't become a star student because of his award-winning memory; it was instead his quest to improve this memory that (incidentally) gave him the deep work edge needed to thrive academically.

The strategy described here asks you to replicate a key piece of Kilov's training, and therefore gain some of the same improvements to your concentration. In particular, it asks you to learn a standard but quite impressive skill in the repertoire of most mental athletes: the ability to memorize a

shuffled deck of cards.

The technique for card memorization I'll teach you comes from someone who knows quite a bit about this particular challenge: Ron White, a former USA Memory Champion and world record holder in card memorization.* The first thing White emphasizes is that professional memory athletes *never* attempt rote memorization, that is, where you simply look at information again and again, repeating it in your head. This approach to retention, though popular among burned-out students, misunderstands how our brains work. We're not wired to quickly internalize

abstract information. We are, however, really good at remembering scenes. Think back to a recent memorable event in your life: perhaps attending the opening session of a conference or meeting a friend you haven't seen in a while for a drink. Try to picture the scene as clearly as possible. Most people in this scenario can conjure a surprisingly vivid recollection of the event—even though you made no special effort to remember it at the time. If you systematically counted the unique details in this memory, the total number of items would likely be surprisingly numerous. Your mind, in other words, can quickly retain lots of detailed information—if

it's stored in the right way. Ron White's card memorization technique builds on this insight.

To prepare for this high-volume memorization task, White recommends that you begin by cementing in your mind the mental image of walking through five rooms in your home. Perhaps you come in the door, walk through your front hallway, then turn into the downstairs bathroom, walk out the door and enter the guest bedroom, walk into the kitchen, and then head down the stairs into your basement. In each room, conjure a clear image of what you see.

Once you can easily recall this mental walkthrough of a well-known

location, fix in your mind a collection of ten items in each of these rooms. White recommends that these items be large (and therefore more memorable), like a desk, not a pencil. Next, establish an order in which you look at each of these items in each room. For example, in the front hallway, you might look at the entry mat, then shoes on the floor by the mat, then the bench above the shoes, and so on. Combined this is only fifty items, so add two more items, perhaps in your backyard, to get to the full fifty-two items you'll later need when connecting these images to all the cards in a standard deck.

Practice this mental exercise of

walking through the rooms, and looking at items in each room, in a set order. You should find that this type of memorization, because it's based on visual images of familiar places and things, will be much easier than the rote memorizing you might remember from your school days.

The second step in preparing to memorize a deck of cards is to associate a memorable person or thing with each of the fifty-two possible cards. To make this process easier, try to maintain some logical association between the card and the corresponding image. White provides the example of associating Donald Trump with the King of

Diamonds, as diamonds signify wealth. Practice these associations until you can pull a card randomly from the deck and immediately recall the associated image. As before, the use of memorable visual images and associations will simplify the task of forming these connections.

The two steps mentioned previously are *advance* steps—things you do just once and can then leverage again and again in memorizing specific decks. Once these steps are done, you're ready for the main event: memorizing as quickly as possible the order of fifty-two cards in a freshly shuffled deck. The method here is straightforward. Begin your mental walk-through of your house.

As you encounter each item, look at the next card from the shuffled deck, and imagine the corresponding memorable person or thing doing something memorable near that item. For example, if the first item and location is the mat in your front entry, and the first card is the King of Diamonds, you might picture Donald Trump wiping mud off of his expensive loafers on the entry mat in your front hallway.

Proceed carefully through the rooms, associating the proper mental images with objects in the proper order. After you complete a room, you might want to walk through it a few times in a row to lock in the imagery. Once you're done,

you're ready to hand the deck to a friend and amaze him by rattling off the cards in order without peeking. To do so, of course, simply requires that you perform the mental walk-through one more time, connecting each memorable person or thing to its corresponding card as you turn your attention to it.

If you practice this technique, you'll discover, like many mental athletes who came before you, that you can eventually internalize a whole deck in just minutes. More important than your ability to impress friends, of course, is the training such activities provide your mind. Proceeding through the steps described

earlier requires that you focus your attention, again and again, on a clear target. Like a muscle responding to weights, this will strengthen your general ability to concentrate—allowing you to go deeper with more ease.

It's worth emphasizing, however, the obvious point that there's nothing special about card memorization. Any structured thought process that requires unwavering attention can have a similar effect—be it studying the Talmud, like Adam Marlin from Rule #2's introduction, or practicing productive meditation, or trying to learn the guitar part of a song by ear (a past favorite of mine). If card memorization seems weird to you, in

other words, then choose a replacement that makes similar cognitive requirements. The key to this strategy is not the specifics, but instead the motivating idea that your ability to concentrate is only as strong as your commitment to train it.