Journey away from smartphones

Regaining focus

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Journey away from smartphones: Regaining focus

This series started with the realization that smartphones were fragmenting my attention span, so I abandoned my smartphone for six weeks. During that time, I rediscovered books and reading. I did return to my smartphone because disconnecting from it also meant disconnecting from family communication, but I continued reading and making more space in my life to consume more of the content offline, rather than the social media feeds on my smartphone.

Chapter sections:

1.1 My awakening moment about how smartphones fragment our attention span

Recognizing a problem

At work, near the beginning of the year, a colleague asked if anyone might be interested in participating in a corporate-wide "Read a book a week" challenge. I thought, I should do this. And it got me thinking about something that's been troubling me for some time now—my attention span seems to be fragmented.

I first started noticing my attention issue when I could no longer make it through fiction books by authors I previously loved. For example, I've listened to every book in Lee Child's Jack Reacher series, and I eagerly await upcoming ones. But when the latest book came out, *Better Off Dead*, I couldn't make it past the first few chapters. I thought, oh, it might just be a dud. So I tried listening to the latest book in the Orphan X series, *Into the Fire*, but couldn't get into that one either. What about the latest in Mark Greaney's Gray Man series, *One Man Out*? Nope, I also timed out quickly there.

Previously, I had listened to every other book in the Jack Reacher, Orphan X, and Gray Man series—this was my favorite relaxation genre (action-hero/vigilante fiction). I thought to myself, maybe I've outgrown this genre. Maybe I've matured a bit. But sadly, I couldn't get into nonfiction either. *Born to Run*, *Why we sleep*, *How autonomous vehicles will change the world*, *A brief history of motion*—all started, all unfinished. I eventually canceled my Audible account. I thought, maybe I'm just more into podcasts. But podcasts didn't provide substantial nourishment in the long-term.

As an alternative to full-length books, I learned about Blinkist, which provides summaries of books instead (typically 15-20 minutes long). I thought, why not, and so started a subscription to Blinkist as a way to get the high-level overviews of books in a quick way. Compressing a book into a chapter is an adept skill. I probably listened to 15 Blinkist summaries before encountering one that caught my attention in a serious way: *Stolen Focus*, by Johann Hari. I decided to get the full audiobook, as well as the Kindle book, and this time I finished the book (sometimes reading, sometimes listening). Hari's book was the first full-length book I'd completed in a while, and it felt good.

The domain of attention focus

Hari's book connected with me in a deep way, which is why I was drawn to it, page after page. Hari explained that "wherever my generation gathered, we would lament our lost capacity for concentration. I still read a lot of books, but with each year that passed, it felt more and more like running up a down escalator." Running up the down escalator describes his waning attention span for long-form content. Hari also watched his godson become utterly addicted to his smartphone. To overcome distraction and fragmented focus (for both himself and his godson), Hari decided to unplug completely (no smartphone, no internet) and go to Provincetown, a small town on Cape Cod in Massachusetts, for three months to learn how to regain his focus.

Listening to Hari and the descriptions of those in his book, I felt like I'd finally found someone like me, struggling to understand what had happened to my focus. Was I permanently rewired by tech and social media? What happened to the *college me?* I remember one particular week in my college undergraduate days, during a lonely spring break when the other students had gone home. I sat on our dorm couch and read through a whole stack of books (Faulkner, Aristotle, Kafka, Whitman, and more) and savored every minute of it, reading quietly on a sofa while everyone else had gone home for the week.

In graduate school, I once had a work-study job as a useless security monitor that allowed me to sit at a desk near a door, reading countless books from the library while "working." Professors passing by would look at me with jealousy, and one strangely cautioned that I should enjoy this time now because if I ever became an academic, I wouldn't have as much free time to just read like this.

I wondered, could I reclaim that aspect of myself, back when I could be immersed in an author's train of thought for an extended period of time? Could I reclaim those times when I could enter more of a state of uninterrupted flow? Or was that lost forever?

Awareness of how I'd changed

The more I read *Stolen Focus*, the more aware I became of how I'd changed. I realized that I was looking at my phone every spare moment of the day. When I pulled up at a stoplight waiting for the light to change, I would instinctively reach for my phone (mounted on my dash) to check my email (personal + work), check ESPN, look up something on Amazon, etc. While pumping gas in the car, I'd whip out my phone while waiting. Stuck in a line somewhere? Time for my phone. Waiting in an elevator? The phone. Riding the train? The phone. Going to the bathroom? Don't forget your phone! Eating breakfast? The phone. Any spare or idle moments? The phone. I didn't have any unique apps—some news apps, email, feeds, podcasts, music, messages, and more.

Sometimes, I'd occasionally pull out my phone without any particular reason, unlock the screen, and just stare at it dumbly, not sure which app to open. When I caught myself doing this, I was kind of shocked, but also too desensitized to act. In every spare moment of inattention, I occupied my focus with my phone's information. Something was wrong.

Hari's book opened my eyes to the way smartphones are wrecking our ability to focus. If every idle moment of our day was occupied by the smartphone's content feeds, social media tidbits, and other news pulling us in, what time did we have for personal thought? For reflection and analysis? For our own directed attention? Very little.

Thinking with a smartphone   Thinking without a smartphone
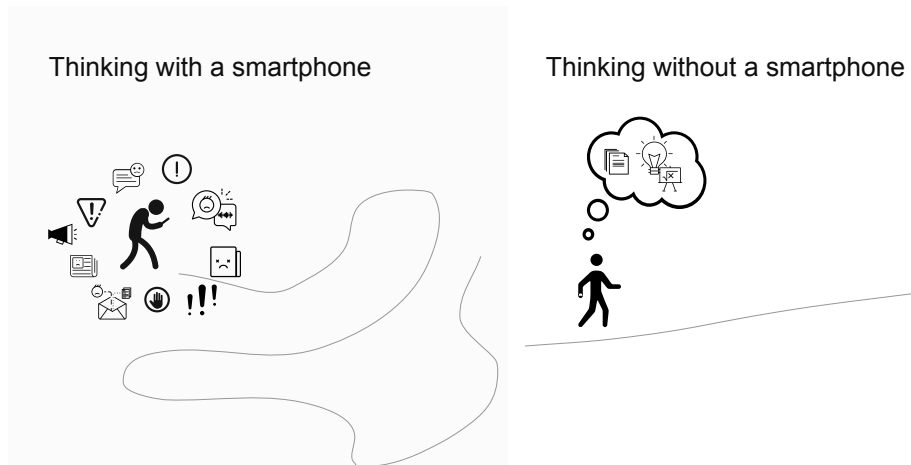
Distraction versus clarity -- the effect of smartphones on information overload and attention fragmentation

Perhaps most frighteningly, if I left my phone somewhere, it would be uncomfortable to be alone with my own thoughts. It was hard to have *nothing* to look at, to be *left alone in my head*. What would I think about?

After *Stolen Focus* (thank goodness I made it through!), I decided to read other books on similar themes. I picked up Cal Newport's *Digital Minimalism*, which takes a similar focus to Hari's book but with a different approach. Whereas Hari approaches the distraction issue within the context of personal struggle, Newport (a computer scientist academic) explains that he's never used Facebook nor been sucked into other social media, so his approach is that of an outside expert looking in. He grew interested in the topic of distraction after writing his book *Deep Work*. Many readers said that social media was making it difficult for them to concentrate. "The urge to check Twitter or refresh Reddit becomes a nervous twitch that shatters uninterrupted time into shards too small to support the presence necessary for an intentional life," Newport explains, summarizing their feedback.

One of Newport's key strategies is a thirty-day period of declutter, in which you detach from all but absolutely critical apps. Newport says, "The declutter acts as a jarring reset: you come into the process a frazzled maximalist and leave an intentional minimalist."

By "intentional," Newport refers to a more guided use of technology that supports your own values and goals. This is the basic philosophy of "Digital Minimalism," which he defines as follows:

> A philosophy of technology use in which you focus your online time on a small number of carefully selected and optimized activities that strongly support things you value, and then happily miss out on everything else.

When you use technology *intentionally*, you draw your own path through sites rather than being pulled by the whims and algorithms of feeds that are designed to suck you in for many more hours than you had planned.

Newport's book hits on the distraction topic from many interesting angles, exploring the value of solitude, analyzing Henry David Thoreau, offering more concrete tips (like a self-help book), emphasizing virtuous hobbies and human-to-human conversation (over texting), and so on. Newport is a computer scientist, not a Luddite who dismisses technology (he has an old iPhone he carries around in his bag). Rather than encouraging people to abandon smartphones, Newport encourages people to develop their own philosophy about how they'll intentionally use technology to support their goals.

I started to think about my use of Reddit. I'd developed a habit during my evening moments of decompression. At about 8 or 9pm, when I was mentally exhausted for the day, I'd lay down on my bed and decide to "retire." This meant opening my laptop, setting it on my chest as I was lying horizontally in bed, and often scanning through feeds on Reddit and other sites.

Because I'm a technical writer, I'd first start glancing through the /r/technicalwriting subreddit, which seemed to cycle through the same tech-writer newbie questions every few months (but were sometimes entertaining to see). Inevitably, I'd gravitate to the /r/popular subreddit, and then to my favorite subreddit: /r/publicfreakout. I'd wasted many hours of my life watching videos of people freaking out in public. I wasn't sure why I watched the videos. They pulled me in through their shock value and absurdity. Public freakouts highlight negativity in entertaining, novel ways. But it was also the opposite of "intentional" technology use—rather than defining my own path through the internet, during times of decompression, I let myself be pulled this way and that.

I knew these were time-wasting sites, but I didn't realize that scrolling through short-form content like this could actually disrupt my attention span so deeply that I wouldn't be able to sustain my concentration on books anymore. I didn't realize that I was training my brain to glance and skim, reading only a few sentences or watching a short clip before shifting focus to the next snippet. I thought, I'm just spending some time in the "escape quadrant"—it's fine.

But this type of information consumption (scanning feeds, jumping from link to link) became a pattern on other sites as well. The pattern was the same: scan down the page until a headline jumps at you, read a bit to get the gist of the article, then return to the feed and keep skimming and scanning.

The fragmentation of my focus affected my work productivity as well. Documenting a new API seemed to take me several weeks longer than I anticipated. Each day I felt like I was doing a lot, but I just wasn't making progress. I didn't seem to have the ability to shut off the noise of the world and focus on the task at hand. Whenever I started work, my brain would say, Let's check email. Find a good Spotify album. Let's see which teams are playing tonight on TV. Are there any discounted computers on Craigslist? Let me do something else. Anything but focus deeply and immersively in this project. I'd developed a rabbit brain.

In the process of responding to chats, emails, news, and attending meetings, I filled time without making much progress on the documentation. They would trick me into thinking I was completing something without actually accomplishing anything.

Stop reading the news

In my reading about the attention economy, I also started reading *Stop Reading the News*, by Rolf Dobelli, and realized that news itself (the staple of social media feeds anyway) might not be worth reading much. Whereas Hari and Newport focus more on trivial, short-

form content that users skim as they scroll infinitely along social media sites (from Twitter, Facebook, Reddit, etc.), Dobelli gets more into the substance of news itself (or lack of substance). News focuses on everything that's terrible or attention-getting in the world and lays it on you, story after story.

Dobelli explains that his constant reading of news feeds, headlines, and other snippets wrecked his long-form focus. He said that even though the news wasn't helping him understand the world better, he couldn't break himself from news streams. He writes:

> Yet I still felt inexorably drawn to the overwhelming, garish parade of news, even though it was clearly making me anxious. Fragments of news reports were constantly intruding into my reality, and I was suddenly finding it difficult to read longer texts in one go. It was as though somebody had carved up my attention into tiny pieces. I started to panic that I'd never be able to recover my attention span, that I'd never again be able to assemble these fragments into a whole. (p 10)

It's not just that news feeds are full of short content, training us to scan quickly. The problem is that news itself focuses on content that taps into our *negativity bias*. This focus exploits our psychological vulnerability to pay extra attention to bad things happening around us. (News is actually a double whammy that combines our negativity bias, a preference for the negative, with our *novelty bias*, an inclination to seek out what's new.)

Presenting us with negativity achieves what news organizations so desperately need to stay afloat: our attention. Just as we slow down to see a car crash on the freeway, our built-in *negativity bias* makes us more likely to focus on alarming events. Feed algorithms optimize around the most read content, so if we're drawn to the negative, it's a downward spiral. The negativity bias is a topic Hari also touches on in his book, explaining:

> The algorithm [that determines what you see in your news/Facebook/Instagram/YouTube feeds] is neutral about the question of whether it wants you to be calm or angry. That's not its concern. It only cares about one thing: Will you keep scrolling? Unfortunately, there's a quirk of human behavior. On average, we will stare at something negative and outrageous for a lot longer than we will stare at something positive and calm. You will stare at a car crash longer than you will stare at a person handing out flowers by the side of the road, even though the flowers will give you a lot more pleasure than the mangled bodies in a crash. Scientists have been proving this effect in different contexts for a long time—if they showed you a photo of a crowd, and some of the people in it were happy, and some angry, you would instinctively pick out the angry faces first. Even ten-week-old babies respond differently to angry faces. This has been known about in psychology for years and is based on a broad body of evidence. It's called "negativity bias."
>
> A study by the Pew Research Center found that if you fill your Facebook posts with "indignant disagreement," you'll double your likes and shares. So an algorithm that prioritizes keeping you glued to the screen will—unintentionally but inevitably—prioritize outraging and angering you. If it's more enraging, it's more engaging.
>
> If enough people are spending enough of their time being angered, that starts to change the culture. As Tristan [Harris] told me, it "turns hate into a habit." You can see this seeping into the bones of our society.

If the majority of your company's revenue comes through advertising, to maximize revenue, you need more user viewing time and more clicks on those ads. That increased engagement/stickiness/addiction will most easily be achieved through negative and outrageous content, as Hari describes. The car crash alongside the freeway attracts attention, not the wildflowers, he says.

This is the crux of the whole problem of driving revenue through advertising. To maximize profits, you need to maximize content engagement. And what kind of content engages users the most? Content that enrages you, content that shocks you, content that's absurd, content that's grotesque, content that's weird, or funny, content that exposes the horrible, content focusing on terrible events, threatening policies, etc. This content is shared 6x more widely than stories that don't enrage/outrage/upset you. Think back to Trump's campaign. His tweeting of the most outrageous statements *ensured* his visibility. People couldn't stop talking about him. It's almost as if the attention economy is destined to make the worst, most outrageous candidates/events/news surface to the top.

What is the mental consequence of all this focus on the negative, streaming from the news? Dobelli says that the negativity of news depresses us, but more alarmingly, teaches us *learned helplessness*. Quoting a British media researcher, Dobelli writes:

> When we tune into the news, we are constantly confronted with unresolved problems and the narrative does not inspire much hope that they will ever be solved." Dobelli then adds, "It's no surprise, then, that we feel depressed when we consume the news, which confronts us with the problems that are mostly impossible to solve. (93)

As we're confronted with impossible-to-solve problems, Dobelli says we come to accept an attitude that we can't do anything to change them. Dobelli explains, "Learned helplessness spills over into every area of our lives. Once the news has made us passive, we tend to behave passively towards our family and our jobs as well—precisely where we do have room for manoeuvre" (93).

I wasn't sure if I had adopted an attitude of learned helplessness, but consuming news all day was not uplifting. When I looked at sites like ESPN, which I thought were mostly keeping me up to date with sports, I realized that the focus frequently highlighted the negative. The Ben Simmons saga. Lebron's decline and disappointment about the Lakers playoff hopes. The struggling Brooklyn Nets and Kyrie's stubbornness about not getting vaxed. The absurdity of COVID policies and who can play. Donciv's 16+ tech fouls. Ejections—did this foul merit a level 2 flagrant assessment? *Watch here*.

ESPN's most popular analyst was Steven A. Smith. Smith's entire TV persona was all about getting riled up because that gets the audience riled up. And what got the audience riled up generated views, which not only drove more returns to ESPN but also pulled people into watching the games as well. (For a funny video parodying Steven A., see the SNL skit "ESPN's First Take." The news host tells Steven A. that despite the early morning, "you already sound like you've been hit by a bulldozer of cocaine.")

Unsurprisingly, when I stopped checking ESPN, I also stopped watching a lot of NBA games.

Distraction from ourselves

From Hari I learned about James Williams, an ex-Googler who wrote a book on attention: *Stand Out of Our Light: Freedom and Resistance in the Attention Economy.* Hari says Williams "has become the most important philosopher of attention in the western world." Williams gets more into the theoretical foundations of distraction, noting that through deep distraction, social media starts to change who we fundamentally are.

Williams describes three types of lights: *spotlight* (our focus on current tasks), *starlight* (our focus on goals), and *daylight* (our sense of values, aspirations, and being). When social media starts changing our daylight, our sense of who we are and how we perceive the world (for example, making us angry, upset, polarized, filled with learned helplessness, or reduced will), that's when social media transitions from being a trivial time-waster to being an amoral tool for manipulation. When the attention economy reprograms our sense of self, it's disturbing.

I started wondering if social media had changed me. Did I crave comments, likes, and other social validation for every blog post, every tweet, every online interaction through Slack or Linkedin or Reddit? Were these triggers moving me to care about things that I wouldn't normally care about?

One question, perhaps the most damning of all, described by Hari, is one Williams asks to a room full of designers: "How many of you want to live in the world you are designing?" No one raised their hand. As someone who worked in tech, this question haunted me more than others. Had I spent my entire career working for tech companies whose end result was to create a less desirable world?

I often thought back to a time before the internet, before smartphones saturated all aspects of life. I looked back on those times nostalgically. Wouldn't it be great to live without carrying a smartphone around everywhere, I thought? Wouldn't it be cool to go back to the early 2000s when my wife and I first got matching flip phones (so that we could communicate with each other while apartment hunting in New York City)? Practically every notification on those flip phones originated from each other, not from apps. Those were the days! Life seemed so much calmer, breathable, and enjoyable.

Hari cites one study finding that we now touch our smartphones 2,000 times throughout the day. I thought of my smartphone's pop socket (a must for wielding phones with massive screens), its finger sensor on the back, and how I would casually play with the pop socket or finger sensor almost unconsciously. It wasn't enough for the smartphone to offer camera + GPS + phone + alarm + email; it had now also become a *fidget toy* to satisfy my heightened tension.

Was this the strategy of smartphone makers all along, to give the smartphone enough killer features and apps to make it indispensable, so that we would carry it around wherever we went? So that we would feel incomplete, offline, and out of touch without it? The cyber-skeptic answer seemed clear: Only by making it indispensable could they ensure that we always carried this object around in our pockets, and that we pulled it out (at the prompt of notifications) to stare at whatever ads or messaging they wanted to promote.

Time for a change

After reading these books, I sensed alarm and decided to at least re-establish my attention span and go back to longer-form reading. I decided that I needed to make a change. My first thought was, let me ditch my smartphone! But then I toned that back a bit, not sure how I would get by without some things (Audible? Google Maps? A camera? My work calendar? Hotspots?). Instead, I figured I'd try dumbing down my smartphone first.

I uninstalled my news apps (NYTimes, Seattle Times, ESPN). I turned off all notifications (except for texts and calls from my family). I removed the Gmail Notifier extension from my browser (so I wouldn't be notified of each new email). I turned off all notifications from Google Chat. I removed my work email. I unsubscribed from virtually every newsletter. I installed the minimalist phone app (which converts your phone's UI into a list of text labels).

I took out my credit cards and license from my phone's built-in case so they wouldn't seem inseparable from my phone. I tried leaving my phone in my bag more (rather than always carrying it in my pocket). I also didn't spend much time reading news on my laptop, and would only occasionally check sports news and scores on ESPN. I installed Freedom.to and blocked Reddit permanently. When I wanted to listen to audio books, I used my Kindle to play them on my bluetooth AirPods.

Finding peace of mind

Within the next few days of simplifying my phone, I started to feel more peace of mind. I realized that, among all the baby steps I'd taken, turning off the notifications (hitting that "Do Not Disturb" button) and keeping my phone in my bag were the biggest game changers. Being notified throughout the day of every small incoming tidbit of news, email, chat, or other information was exhausting.

I realized that, even without notifications, simply reaching for my phone, opening it, and receiving some incoming information (news, social feeds, email, alerts, etc) had been presenting me with information that I needed to process. Most of the time, the information was trivial. However, doing this all day long, at every spare moment, built up the level of cognitive demand and expended more processing bandwidth. For example, reading through work emails in the evening, even if I didn't respond, would require some mental energy and processing power. Multiply those moments of information processing throughout the day, and it's no wonder smartphones overwhelm us with information. We become the "frazzled maximalist," as Newport says, with uninterrupted time shattered "into shards too small to support the presence necessary for an intentional life."

By shutting off notifications and feeds, I found that I had more mental energy in the evenings. Instead of feeling exhausted at 8 or 9pm, I had more gas in the tank now. And whereas previously I'd wake up sometimes at 4am for seemingly no reason at all, now I started sleeping more through the night. Most interestingly, I just seemed to have more time to read.

The constant information intake from incessantly glancing at our smartphones forces us to multitask while also demanding more context-switching, more decision-making, more figuring out what to do with the information. Like constantly sorting and filing a huge mountain of random papers each day, it's exhausting. Our brains probably aren't wired to take in this much information each day. In "Why the modern world is bad for your brain," Daniel Levitin explains:

> ... lots of multitasking requires decision-making: Do I answer this text message or ignore it? How do I respond to this? How do I file this email? Do I continue what I'm working on now or take a break? It turns out that decision-making is also very hard on your neural resources and that little decisions appear to take up as much energy as big ones. One of the first things we lose is impulse control. This rapidly spirals into a depleted state in which, after making lots of insignificant decisions, we can end up making truly bad decisions about something important.

Every incoming bit of information requires you to make a decision about it, removing you from your present focus. This is why carrying a smartphone around in your pocket all day, which ensures you'll interact regularly with it, might be the dumbest decision we've ever made. This constant information consumption and processing taxes our bandwidth, so that we're spent by early evening.

Even just looking at your phone apparently distracts you. In "Having Your Smartphone Nearby Takes a Toll on Your Thinking," the researchers write:

> In a way, the mere presence of our smartphones is like the sound of our names—they are constantly calling to us, exerting a gravitational pull on our attention. If you have ever felt a "phantom buzz" you inherently know this. Attempts to block or resist this pull takes a toll by impairing our cognitive abilities. In a poignant twist, then, this means that when we are successful at resisting the urge to attend to our smartphones, we may actually be undermining our own cognitive performance.

In other words, even if you resolve to leave your smartphone in your pocket and *not check it*, the willpower needed to resist the urge to check your phone also begins to drain you. And if you've left notifications on, responding to the buzz (and seeing what the incoming message is) is nearly impossible.

At the very least, I found that by putting my phone into "Do not disturb" mode and leaving it in my bag (out of sight), I greatly increased my chances of being able to focus.

I was still early on my journey away from smartphones, news, and the firehose of information. I still had a smartphone, but I longed to ditch it. (I kept it in a bag, like a ghost locked in a trap.) The more I read about the attention economy, the more I saw my smartphone as a cancer, something just waiting to metastasize. I longed to get rid of it. One day, I finally decided to order a basic phone on eBay.

As I waited for it to arrive, I started preparing. How would I navigate a city without Google Maps? I bought a handful of paper maps and tried to grok the logic of the streets, absorbing the layout of the area seemingly for the first time. All those micro-navigation directions from Google Maps had allowed me to avoid understanding the logic of *streets* (which run east-west) versus *avenues* (which run north-south), and other landmarks. As I studied the map, I tried to reclaim my sense of spatial awareness, my sense of location about where I was without my smartphone.

I anticipated navigating other challenges, like how to deal with the cognitive dissonance of working for big tech. Could someone who worked for big tech use a flip phone? Yet I liked the idea, argued by Hari, Williams, and Newport, that we need to be aware of technology's

designs and ensure that tech is working *for* us rather than *against* us. I didn't want to throw the baby out with the bathwater when it comes to technical innovations, but I grew increasingly skeptical that my smartphone was working for me.

Though still in the awakening phase, and still waiting for my basic phone to arrive, I was excited about the initial results. Specifically, I was most excited about the possibility of reclaiming *myself*. As Newport and others have said, it's not about sacrificing your smartphone, as if you're giving up some significant element in your life. It's about what you're getting. I started to see glimpses of my old self return. I started to think at stoplights again! In the elevator, I stopped reaching for something to distract me. I began to think again for myself. I started finishing books.

6/25/2022 note: This post was discussed on Hackernews ☒ . See the conversation thread there for lively comments.

1.2. My initial rules and reasons for intentional smartphone use

What intentionality means

In Cal Newport's *Digital Minimalism*, one of Newport's primary goals is to get smartphone users to switch to a more "intentional" use of technology. What does intentional use mean? Intentionality means that you make technology to support *your* goals, not the other way around. When you use tech to achieve what you want, not what it wants, that's intentional—your intent. In contrast, when we let technology define our path on the internet, such as getting pulled into distracting paths we don't want to take, we're not following our intent but rather someone else's. In that case, we become *used by* technology (usually for commercial purposes) rather than using technology for our intents and purposes.

For example, we might start out trying to work on a novel but soon end up watching funny public freakout videos. We might want to send a message to a family member and then find ourselves scanning news feeds for an hour. We might try to learn about new events going on in the city only to find that we get pulled onto Amazon buying things we don't need. In these cases, technology hijacks our intent and sends us on a wayward path to fulfill someone else's intent—to accrue viewing time, product purchases, or time on page.

Making your own rules

Newport recognizes that intentionality can involve various strategies for different people, job types, roles, and needs. There's not a one-size-fits-all intentional strategy. For example, he doesn't say everyone should abandon smartphones entirely, but instead says things like, look at your goals and determine how your smartphone might support those goals. For example, few people have a goal of mindlessly scrolling social media sites with every second of their spare time, but maybe they want to stay updated about news. Well, you can probably set a rule for yourself of 20 minutes of desktop-based viewing time a day (enforced by Freedom.to), or maybe even a print-based news source, such as *The Economist*, as Rolf Dobelli says. In contrast, the same rule might not work for others. To support more of an intentional use of technology, Newport recommends that people *develop their own philosophy* about how they will use technology and why.

Based on this idea of more intentional smartphone use, I developed a list of my own rules. I knew that I'd probably change, modify, and adapt my rules over time based on what I found to be working. I was still in the early [honeymoon] phase of smartphone abandonment at this point, and whatever rules I developed would likely evolve and mature over time. Nevertheless, I drafted up a list of draconian rules and abundant reasons why (to remind me if I later changed them).

Rule 1: Use a basic phone instead of a smartphone

Using a basic phone would reduce the frequent checking of news and information on my phone, which would in turn avoid attention fragmentation. Reducing that constant stream of incoming information would also ease cognitive load and help me be present with others.

Rule 2: Carry the phone in a bag, and don't sleep with it on your nightstand

Keeping the phone in a bag (out of sight) would keep it out of mind. Removing it from my bedroom would remove the chances of endless scrolling during sleepless nights.

Rule 3: Prefer calling instead of texting

Calling would provide richer, more meaningful communication with my family. Not to mention, texting from a 9-digit number pad would be impractical anyway.

Rule 4: Turn off notifications (except from family)

Turning off email, chat, and message notifications—except from family—would avoid the constant attention fragmentation and interruption that had come to punctuate my mental state.

Rule 4: Stop reading the [daily] news

Avoiding the daily news would reduce the cognitive demand for constantly processing often trivial, ephemeral information. It would also help eliminate the exploitation of my negativity and novelty bias.

Rule 5: Unsubscribe from newsletters that don't have high value for you

Unsubscribing from newsletters would reduce the chances of being pulled down paths that subverted my intentional goals. An empty inbox would also reduce any dopamine hits from frequently checking email and getting something new.

Rule 6: Avoid social media

Avoiding social media would reduce the likelihood of having my intentional goals for using the computer hijacked by clickbait and other sites that just wanted to pull me toward more time on page and link clicks. It would also free up more time for reading books instead.

Rule 7: Don't rely on mapping applications for directions

Avoiding GPS apps for navigation would allow me to learn the streets and roads in my area, allowing me to become more self-sufficient. It would expand my spatial awareness and environmental understanding.

Rule 8: Use a separate camera

Using a separate camera would avoid pulling out my phone each time I took a picture. I wouldn't be tempted by incoming information if the camera was disconnected from the device.

Rule 9: Use a tablet or smartphone only for specialized apps when there's no alternative

For those unavoidable situations that required an app, I could use an old tablet. This would avoid the mentality that owning and carrying around a smartphone everywhere was inevitable.

What I hope to get out of this

What do I hope to achieve by removing smartphones?

- Regain long-form attention to read a book without mind wandering
- Sleep through the night without randomly waking up early
- Have more mental energy in the evenings
- Get into periods of flow and become more productive at work

- Have more peace of mind
- Have more realizations from reflection
- Be more present with other people

1.3. First experiences in moving away from smartphones

Getting a basic phone

I debated just leaving my smartphone on Do Not Disturb permanently and keeping it in my bag. However, my daughter, who's into vintage and the 80s, kept asking me for a flip phone, which made me continue wondering what life might actually be like with a flip phone. I deliberated back and forth for about a week. Eventually, I figured the only way would be to experiment, so why not? And if I could get my daughter off smartphones in the process, all the better.

Flip phones are expensive (because they're not mainstream devices). I had a few basic requirements, such as hotspot capability, texting, 4G capability, carrier compatibility, etc. I bought a used Kyocera DuraXV Extreme for about $200 (and got a similar one for my daughter). The phone was a learning and experimentation period for us both.

I had to re-learn how to use a flip phone. (For example, you turn it on by holding down the End button, remember?) The operational how-to came back to me within a few days. It's a much more button-based experience, with a screen that you navigate using a D-pad controller rather than a mouse. (The D-pad controller is a circular ring that has a button press for each side—up, down, right, left—and center. There's no touch screen.)

The Kyocera DuraXV Extreme actually runs on Android 9, which turns out to be useful. Because the phone runs on Android 9, you can interface with it (using something called Android Debug Bridge, adb) to install apps or make other updates. When I worked at Amazon, I frequently used adb to sideload Android APKs onto Fire TV and Echo devices, so I was already familiar with this process, as is anyone who develops on Android.

Flip phones don't have an app store, but you can sideload any apps you want through adb and see if they work. (You just search for the app name + APK and download it.) Most apps these days don't actually support D-pad controllers. However, one app from Apps4Flip even switches your phone into mouse mode so you can operate touch-screen apps (see youtube.com/watch?v=D3fqvtsI4E8).

It takes a bit of poking around to find the downloadable APK file; then once you do, it's hit or miss whether it works after you install it. If it does work, you then have the challenge of manipulating the app on a screen the size of a triscuit.

The Kyocera also had Bluetooth, so I could pair my Bluetooth headphones to it or connect it to my car's speakers. It also had an earphone jack. With the Audible app and my earphones, I could listen to books both in my car and while walking or cycling.

I recorded a video showing various features of the phone here: https://idbwrtng.com/kyocera.

Single-function devices

The Kyocera had a camera but with such poor quality, I avoided using it for anything noteworthy. It also had an alarm function, but as per my rules, I wanted to avoid bringing my phone into my bedroom. Hence I started buying single-function devices: a camera and an alarm clock.

I bought the most compact point-and-shoot I could find. For the alarm clock, I bought a 1980s GE electric alarm clock, just like the one I had growing up. The alarm clock worked great, and I loved rotating the dial to change the FM radio station. The alarm clock was so old that if I unplugged it, there wasn't even a backup battery.

GE alarm clock

I wasn't sure what was happening to me, but suddenly I wanted to turn back time and live in the 80s again, or go back to the early days of the internet (90s), when everything was just coming online. I felt like I was going through a serious anti-tech phase. Would it last?

I also returned to carrying around a separate wallet (rather than using a smartphone case that includes a wallet case built-in). Using more single-function devices (phone, wallet, camera), I needed a sling bag to carry them. Admittedly, the sling bag was a mens' purse (murse) but if slung diagonally (commando-like), it looked more masculine. Carrying my phone this way (in the bag, out of sight) deterred me from interacting with it.

Texting

Texting on a basic phone, with its 9-digit number pad, proved the greatest challenge. I couldn't find a technical workaround that made texting easy. The only workaround was to mirror the entire device on my computer and text from my computer keyboard, but this required connecting my phone to my computer. I upgraded from scrcpy to Vysor for phone mirroring, but this didn't solve texting when I wasn't at a computer. I tried making phone calls more, and at times this resulted in a positive, more enriching conversation. But most of the time, it was just cumbersome.

By the way, I recorded a short video showing some of these features on the Kyocera.

Conclusions so far

Overall, the switch to a basic phone was both novel and fun. I enjoyed the reduced number of interruptions, and I felt my focus strengthening. Instead of distracting myself with my phone, I started reading more books. For example, I read *Autonorama* by Peter Norton. Was reading books better than consuming incoming information on a phone? Yes, it was. I also realized that I preferred reading paper-based books more than the e-ink screens of Kindles. I also started printing content at work (for example, long newsletters or engineering documents). It was easier to focus while reading on paper, and it allowed me to annotate with a pen.

I blocked Reddit through Freedom (freedom.to) to pre-commit myself to not relapse at 9pm at night when my brain was tired and I was ready to decompress. And shifted my focus away from reading the news, which was also a game-changer. I grew less aware of world events (such as the latest about the Ukraine war). The reduced information overload created more boredom and disconnection in my life, which I filled by reading more books. I started sleeping better, too, though not as deeply as I'd hoped.

The larger question I had was whether all the inconveniences of moving away from smartphones outweighed the benefits. So far, the answer seemed to be yes. But just like credit cards had become table stakes in modern society, smartphones too. I found that I could not go to live events (for example, a professional soccer game) without an e-ticket saved to my mobile wallet. Literally, it was not possible to print the ticket. But beyond a few random scenarios, which could be remedied by using an old tablet, I was able to get along just fine. And I felt more present and capable of listening when others talked to me.

I had another realization. Johann Hari's alarmist writing about our fragmented attention span in *Stolen Focus* was probably over-inflated. I seemed to be mostly back to my old self (the college self I reminisced about in my awakening post) after a month. The Internet didn't permanently rewire my brain. My brain was much more neuroplastic than I had assumed. In my experience, "rewriting" my brain didn't take much.

I thought about some other experiences where I had rewired my brain. For example, when I first started posting regularly on Twitter, I inadvertently taught my brain to think in tweets. Ideas for cleverly worded tweets just started popping into my mind. But once I stopped posting on Twitter, the tweet-thoughts disappeared.

Same with dreams. Have you ever kept a dream journal? One time, as a teen, I started writing down my dreams. Doing so made me remember more of my dreams. Before long, I was remembering my dreams practically every morning. But after I abandoned the effort (because my dreams were nonsense), I stopped remembering my dreams.

If you read feeds all day, constantly scanning and skimming, you teach your brain to operate in this mode—short attention, process, assess, file, act, next, etc. Your brain then adopts the same pattern in other contexts, such as reading books, even though books require more slow-form, sequential reading patterns. At any rate, in reflecting on alarmist writing about how the Internet might be rewiring our brains, I started to dismiss the alarmist concerns. Have smartphones and the internet, with its profit-driven attention economy, wrecked our ability to focus and permanently changed who we are? Not really. At least, for me personally, I've found that my brain could be retrained without too much effort.

What I want to achieve long-term, however, was *optimal Tom*. I was convinced that I could think and work better *without* my smartphone, and I wanted to take this to the next level, getting into states of productive focus and flow. I still found myself, even without any external interrupters, looking for a distraction. For example, while working on documentation, I would frequently stop because it was mentally taxing. During the break, I would respond to about half a dozen blog comments, then return 20 minutes later to the documentation task. Ideally, I wanted to get to a state where I didn't have any internal compulsion for distraction.

1.4. More developments on my journey away from smartphones — a sudden interest in classical music?

A sudden interest in classical music

Perhaps the most interesting observation about living without a smartphone is that I developed an interest in classical music. I'd never been into classical music before, but now this music seems so much more soothing and satisfying than other music types. What could cause a sudden interest in classical music? I found this Quora article:

> It's probably that with age you have developed the patience needed to appreciate the classical works. Typical "pop" tunes only last around three minutes, and listeners become accustomed to that pace, so when they're faced with classical works that may take far longer than that just to get through the introduction, they just don't have the attention span to appreciate the more expansive themes. (Whitehead)

Could there be a link between attention span and a preference for classical music? This gave hope that perhaps I'm recapturing my long-form attention again. I thought it was really happening.

One night I needed to drive to work (to drop off a testing device too large to carry on my bike). So after dropping my kid off at soccer practice, I drove there and back. From soccer practice, the drive was 25 minutes each way. I didn't listen to audiobooks but rather classical music the whole way. And although I've biked there countless times, the driving route is different from the bike route. Whereas normally I would have plugged the address into Google Maps, instead I just drove from memory after looking briefly at an [online] map.

After I returned to soccer, while waiting for practice to end, I started reading my book. I found that my concentration was much higher. My eyes didn't jump over the words or get impatient with the book's developing theme. Reading was enjoyable. I would have continued reading for hours had soccer practice not ended. I wondered if an hour of classical music helped lengthen my brainwaves (or something).

I wasn't quite sure how to describe it. It might have just been my imagination, but I did feel in a way that something good was happening to my brain. Before, when I was constantly checking feeds, news, and receiving other incoming information at the normal modern pace of an always online, always connected person/blogger who worked in tech, I felt like the electrical neurons in my brain were much more energized/frazzled and bouncing around faster and more rapidly, like a blender bouncing around liquid on high. As such, it was difficult to focus on any one thing for an extended duration because my brain was in a mode where it was quickly processing incoming information, making sense of it, and firing its cylinders rapidly to constantly process new incoming information in various contexts. It was like a car's tachometer running on high, needing to shift gears but not doing so.

Additionally, in the past, I could not fall asleep at night without listening to an audiobook. The audiobook would keep my mind focused on a continuous line of thought or plot, and after a few minutes, I'd drift off to sleep. Without an audiobook, though, my mind would chase different ideas and I'd have trouble falling asleep. If I didn't have an audio book, I'd have to wait until I was so exhausted that my mind was too tired to chase those thoughts.

But without a smartphone, the pace of life seemed to have slowed. There was a decrease in incoming information. Granted, I was still at a computer 8 hours a day due to my job as a tech writer, with email and chat all day. I was by no means unplugged. When I didn't have my smartphone with me during other parts of my day, things slowed down in many ways. And I felt more capable of long-form thought and concentration. My brain wasn't running at high speed with too much electrical energy. I was at peace even when I didn't have anything to read or listen to. I could maintain a more reflective mode, ruminating on day-to-day events or reading ideas. It's hard to describe it, but I really did feel like something good was happening in my brain.

I heard many people say that the Internet had rewired our brains, and I started to think it was literal. I had more capacity for long-form attention then. I wanted to avoid saying that my brain was moving at a slower pace because that suggested that I had dumbed down or something. It wasn't the case. I thought of a slow-moving but still powerful river, or a slow-rolling train. I could focus in a more sustained way, concentrating on a single thing. The frenetic context-switching from task to task, always consuming information, was gone. I could go on long walks and not feel the need to be taking in information through audiobooks, podcasts, or other news feeds. I could just walk and quietly be in the moment, as they said.

I wasn't quite where I wanted to be, though. I still had much more progress to make.

Sleep

Was I sleeping better? A bit. I wanted to sleep more soundly, but I still sometimes woke up in the middle of the night, or an hour earlier than I'd like.

I also hoped that I would have a lot more energy in the evenings, but so far, I didn't notice a surge of new energy.

Driving

I found that driving was more enjoyable without a mapping application. It felt good to have a sense of where I was going without constantly looking at an electronic map (which rotated with the changing direction of the car) out of the corner of my eye. There was a lot of information a map imparted, not just the next direction but the larger context of the roadscape.

Reliance on the map took some joy out of driving. Of course, so did being completely lost, but like I mentioned earlier, it was okay to get lost sometimes. Getting lost (when I wasn't late for a meeting) could be fun. (Even without using a mapping app, I had yet to actually get lost, dang it!)

I mentioned that I had purchased several paper maps. I sometimes unfolded them fully on a small desk or laid them on the floor, staring at them for long periods of time, as if I was seeing the city for the first time. Paper maps gave me the big picture, allowing me to see more of the area as a whole. It was a different perspective that I didn't get when just looking at an electronic map zoomed in on my immediate surroundings. As a comparison,

it was the difference between watching a sporting event in person, which allowed me to see the whole field or court at a time, vs. watching the same game on TV, which zoomed in to one part of the field or court, showing me only the ball's location and involved players.

Email

I continued to unsubscribe from nearly everything that landed in my inbox. It was amazing to me how emails kept on coming. Over 20 years, my email address had landed in so many companies and databases that newsletter spam and other incoming messages seemed endless. But I greatly thinned out the incoming information. And you know what? The fewer messages I got, the less likely I was to feel compelled to check my email. (But I still probably checked my email 20+ times a day, especially work email.)

When you had a lot of incoming messages, there was a tendency to think that a lot was going on, that you were busy and life was full of events. It was an illusion. The constant barrage of incoming information made me feel that way—busy, important, like a lot was taking place. Turning off that firehose of information allowed me to relax and breathe a bit more. There was really not that much going on (for me anyway).

Not a lot of people actually called or emailed me, surprisingly. If I got rid of all the communication that was not specifically to me as a person, I found that there was not much there. I was still working toward a state where 95% of email messages would be personally to me.

I liked being able to define my own path online each day, rather than having to fight the pull of each message coming to my inbox and where it tried to redirect me. I liked to start my day by jotting down my priorities, and then tackling them. I wanted to establish my own path and not be hindered in sticking to my plan.

Although some scenarios require smartphones, I could see now that I had overestimated their importance. I could get by without a phone in almost every situation, making it much less of an essential device. For those indispensable moments, an old smartphone connected to wifi would almost always handle it.

Second-factor authentication

One feature I didn't realize smartphones provided was a security token. You know how with second-factor authentication, you sometimes had to verify your login by acknowledging it was you on your smartphone? When you tapped "Yes, it's me" (or whatever), it was the equivalent of using a token. Without a smartphone, second-factor authentication was more problematic because Google's second-factor account verification didn't like sending an email or text to verify identity (the phone number could be intercepted, perhaps?).

At any rate, I bought some Titan physical security tokens to use for second-factor authentication. I already used them so much at work, I'd grown accustomed to them.

Phones

As for using the flip phone, I enjoyed it. The flip phone's form factor was unparalleled when used as an actual phone. There was something satisfying about starting and ending a call by flipping the phone open or closed, hearing the click. Smartphones functioned poorly as actual phones. The flip phone is even ergonomically contoured to your face.

I did find myself calling my wife and children a bit more. My wife knew that unless I was at work (where I had Vysor to emulate my flip phone's display and text more easily than on a TX9 keypad), it was better to call me. Texting was much more emotionally distant than calling on the phone anyway. Smartphones had made it easier to text, but they had also made it easier to interact in emotionally distant ways with people. The flip phone helped me actually talk to people using my voice. I didn't want it to be weird for my family to see an incoming call from me. If you never called with a phone (just text), that incoming call seemed reserved for emergencies or bad news. It shouldn't have been that way!

Stress level

I observed that my stress level went down a few notches. I was already a low-stress person, and even back in college, my wife said I was always extra calm. But on a scale of 1-10, if 10 was a full adrenaline freakout, and 1 was practically asleep, I then operated at about a 3. Previously, I operated at about a 5.

Overall, I felt less stressed. It really would have taken something to get me worked up or upset. Someone could have started shouting in my face and wringing their hands at me, and I might have moved from a stress level of 3 to 4. However, gauging a before-and-after of stress levels was challenging because other life events were different earlier as well, like having presentations to prepare.

News

I didn't miss listening to or reading more news. Sometimes I turned the news on while driving home. It was like the newscasters sat down each day and asked, what were all the bad things going on in the world? What were the worst possible things happening? What truly awful things were going on? That was the news of the day!

Sports news was so bad it was comical. Watching Stephen A. on ESPN was pure entertainment, not actual news.

Generally, I turned the news off as quickly as I turned it on. I sometimes scanned my tech comm feeds for interesting posts. There weren't many tech comm bloggers anymore, so this was usually a short foray. I also scanned some feeds on bike transit and urbanization, but not for long. I didn't like reading on screens.

If I found a worthwhile article, I saved it to My Pocket. Then I printed it out and read it. I had been printing a lot of things out and reading them—especially at work. I was amazed at how much more enjoyable it was to read printouts. I used to just scan and skim long company newsletters or articles. If I printed them out, however, I could read for 30-60 minutes. For example, the other day I printed out a 27 page EU legislation annex to read before a meeting. I was pretty sure I was the only one who read it.

Conclusion

Overall, life was better without a smartphone. How much better? So far, quite a bit. Granted, in abandoning the smartphone, I felt like I had rejected part of my tech membership, somehow. But one day I thought more people would suddenly realize that smartphones hadn't improved our quality of life. They had only reduced our quality of life, despite all the apps we thought were indispensable. Those apps really weren't. What was indispensable was life and the moments we lose.

1.5. One month in without a smartphone -- growing doubts about the value of technology in general

Books, printing things out

I abandoned my smartphone about a month ago. Not only had I continued to read and enjoy reading, but I had also begun to wonder if perhaps I needed to review each book I read. Earlier, when I finished a book, I thought it was such an achievement that it merited a review. For example, I wrote a massively detailed review of Autonorama. Now I started thinking maybe a few short paragraphs, or maybe not at all? I wanted to retain the information, to remember the arguments and reasons, and so on. But did I need to write a review for that?

Still reading

In reading more, I had initially thought Kindle would be the way to go, but early on, when I couldn't get one of the books I wanted on Kindle and so ordered the print version, I realized that consuming print material was 10x more enjoyable for me. In fact, I had grown to hate reading from screens altogether—not just smartphone screens. If someone sent me a long email (e.g., a work-related newsletter), I printed it out. I could focus better, annotate it, and save it when reading in print. I enjoyed reading from paper. It turned out that used books, especially popular books with lots of surplus, were much cheaper than Kindle versions anyway.

When did we all start reading exclusively on screens in the first place? Screens were too distracting. Not only were there dozens of links to click on each page, but there was no commitment in staying on the screen for any prolonged period of time. As a result, it was too easy to jump from page to page, task to task, until I was scatter-brained and unfocused. By printing something out, I could take my focus off the screen and read linearly for longer periods. It was a much more enjoyable experience to read offline.

While initially I developed a distaste for smartphone screens (due to their attention-wrecking influence), I've become more distrustful of screens in general, including computer screens. When I look around me, it seems that everyone is focused on screens of some sort almost all day long. In the morning, we eat breakfast and stare at our smartphones, then we sit at our desks and stare at computer screens all day at work, then in the evenings we look at TV screens for entertainment. Those driving the latest cars often have huge multi-color infotainment screens as well (e.g., look at any Tesla). Is this what life has come to—to always be looking at screens?

I do feel a growing cognitive dissonance about technology in general. Since moving away from smartphones was so satisfying, I keep wondering, what else can I abandon? How else can I move back into the 90s or early 2000s with tech? Do I start composing blog posts longhand? Do I explore vinyl records?

Driving without a screen

Let's talk about driving, because mapping applications are supposedly one of those can't-live-without-it apps. Not wanting a screen in front of my face while driving, I have now removed the smartphone mount entirely from my car. There are no more screens in my car beyond the blue built-in infotainment displays.

I needed to drive to an unfamiliar address the other day (picking someone up), and I consulted a paper map. After one trip, I'd committed the entire route to memory. I didn't need to time the trip to perfectly fit the drive into my timeline. I just estimated—and it worked out great.

I really enjoy driving without having to constantly look at a digital map. Seriously, driving is so much more enjoyable when you know where you're going without having to look at a digital map in the corner of your eye, and when you don't have a robot telling you what to do.

Additionally, I have a keener sense of the cardinal direction I'm traveling. When I combine that directional sense with the general avenue/street intersection that I'm aiming for, it works out. So what if my route takes me an extra minute or two. I'd much rather become familiar with the route than take a confusing shortcut that gets me there faster but which just confuses me about where I am.

There are multiple studies documenting how reliance on digital in-car maps reduces your brain's spatial awareness. For example, see Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and Cognitive Functioning by Wilmer, Shermen, and Chein. The authors explain:

> It has been posited that constant reliance on GPS navigation systems, which are now integrated into smartphone devices, interferes with our natural tendency to develop cognitive spatial representations. (8)... The available evidence suggests that when we turn to these devices, we generally learn and remember less from our experiences. (9)

As I've been driving around smartphone-free, I can attest to this effect: it's so much better screen-free in the car. And I'm reclaiming my spatial awareness. Those neural pathways that orient me in my world are reconnecting, reforming.

ebikes … nope

The other day at work, there was a micro-mobility fair of sorts, with all the micro-mobility options on display and available to try. Lime bikes and scooters, Wheels scooters, Vanmoof bikes, other scooters, and more. All electric powered. To try them out, the vendor said I just needed to scan a QR code to complete an online waiver. "Uhhh, I don't have my phone with me," I said. It was awkward. Some were like, "Well, come back when you do." Others said I could use their phones. I even sideloaded a QR-code reading APK onto my flip phone, and it worked—once. Then it froze. One guy saw my phone and said, "Oh, old-school." He assumed I had it for security reasons.

At any rate, I got the waivers completed and rode around on the bikes and scooters. They make it easy to get around, for sure. If you want an electric-powered motion device (such as to replace your car for inner-city travel without sweating), they're great. But I realized that I really like my 5-mile bike ride in the mornings and afternoons, the way it gets my heart beating and my blood pumping. It's like a natural caffeine, waking me up and making me feel alive. For someone substituting the ebike/scooter for a car, great. But I already sit on my butt all day long. Do I really need to sit without exercise while commuting? No, I decided, I did not.

Micromobility options

I still don't understand why all micro-mobility options are app-based and electric-powered. The Wheels/Veo option (like a scooter with a seat) literally feels like an electric-assisted shopping cart that you see in grocery stores for people unable to walk.

I asked if finding each bike/scooter and unlocking it inevitably required a smartphone app. One guy explained that I could actually unlock a Lime bike through texts; it would involve finding a 7-11 to use a kiosk. Then I thought, how will I know where the bikes are, and where the 7-11s are, without a location-based app or a lot of pre-planning? At the very least, Lime seems to be more considerate of basic phone users.

Shutting off incoming email from lists, groups, newsletters

I have been unsubscribing relentlessly to everything that arrives unsolicited in my email inbox. Last Friday I looked at all the lists I'm on at work, lists that channel endless messages into folders that I never read (via filtering rules). I decided to unsubscribe to 90% of them, choosing instead to view the group messages online on my own schedule.

With less email arriving in my inbox, I'm much less distracted and have less incentive to keep checking my email. In my personal inbox, I also deleted all my previous filtering rules. Life is better with email that is personal only.

When I wake up in the morning, my first instinct isn't usually to check my email. Instead, I mostly pick up the book I was reading the night before. By helping make email more of a disappointment (e.g., spam to delete, more privacy change notifications to confirm, etc.) I'm trying to reduce the whole cycle of variable rewards that powers the drive to constantly check email.

Music on CDs

On my way home, driving from the train station to my house, I noticed, for the first time in years, a CD slot above my car radio.

CD slot

Wouldn't it be nice, I thought, to have my own classical CDs where I could choose the type of music, and where I wouldn't have to listen to membership campaign drives? So I ordered a handful of classical CDs. I did not anticipate ordering CDs in 2022.

At a thrift shop, I also found a whole shelf of CDs and picked up a handful for a dollar each (one included Gershwin's Rhapsody in Blue, which brought memories of watching Fantasia back to my kids). I realized that I could get classical music from the radio, from Spotify, or elsewhere, but I liked being offline. I liked having more control and awareness of what I'm listening to. I liked being unplugged. There was something deeply calming about it, not to be interrupted by someone speaking between each track.

Cameras

The point-and-shoot camera I bought (a Canon Powershot Elph 180) was disappointing. I thought that even with a point-and-shoot, I wouldn't need to do much besides press a button. Nope. I have to re-learn how to use a camera as well. Even after learning how to use it, though, the pictures are still poor. I searched online for a better point and shoot and realized that all good options cost more than I wanted to spend.

Then I remembered that I actually had an old Nikon DSLR (digital single lens reflex) camera, a D60, which I got for my wife about a decade or more ago, before the smartphone revolution, and had tucked it away in a closet. We stopped using it because it was too bulky to carry around, I guess. Then the cameras on smartphones got pretty good, and it seemed redundant.

As I played around with the DSLR, I realized that it took fantastic pictures! I ordered some smaller lenses (35 mm and 50 mm) to make it more portable, rather than the default 18-55 mm zoom lens. Granted, this DSLR was bulky and not something I could stuff in my pocket. But you know what? I've noticed that I mostly just took pictures during events. For example, a final track meet for my daughter. Or a trip to a new place. Or during a social outing somewhere. During these events, it was okay to bring a bulky camera. I didn't actually need to have a camera always in my pocket (and if I did, my flip phone had a crappy camera that I could resort to, for example, to take a picture of where I parked).

I printed out the Nikon D60 manual (200 pages long) and started to read it, re-learning how to actually use the camera. I had to remember what aperture, ISO, shutter-speed priority, aperture priority, F-stops, etc., all mean. I'd forgotten how smartphones have basically made cameras so easy to use that one doesn't need to know anything about photography anymore.

Rediscovering my old camera made me think that perhaps those apps on my smartphone that I thought were indispensable—the camera, the mapping application, etc.—might not be so helpful after all. Could life actually be better without them? So far, yes! Taking pictures was fun again. I felt like I was rediscovering photography. Here are some pictures I took with the DSLR.

My cat Ponyo chillin'

My wife and second youngest daughter

My youngest daughter with shears

I thought back to the photography classes I took in high school (especially developing photos in the darkroom). I loved those classes! In using a smartphone, I grew to forget how enjoyable it actually was to take pictures—for example, to swap in a 50 mm lens and take closeups so that the background totally blurs out, directing focus to the subject.

Flip phones and Voxer, texting

Speaking of my flip phone, I did install the Voxer app on it. (Voxer is an app that allows you to leave recorded messages for other people.) Why did I install this? My wife started sending me long voice-transcribed texts that were cumbersome to read over text. We do communicate well with Voxer, as it allows us to leave asynchronous voice messages for each other during the day. So basically, Voxer and Audible are the only APKs I've sideloaded onto my flip phone.

I was still glad that I had gotten a phone with an Android operating system (Android 9) so that I could sideload APKs onto it. As I had said previously, the screen was so small and the interaction so tedious that even if I were to sideload a social media app onto it, the app would be too cumbersome to use. To use Voxer, I had to triple-click my asterisk key to switch my cursor into mouse mode, slowly move the mouse over the buttons I wanted to use, etc. When finished, I triple-clicked twice to switch back to D-pad mode.

I admit, though, that after having more real-time conversations with my wife over the phone, I preferred those real-time conversations to Voxer. But real-time conversations weren't always convenient, for example, if I was focused on some task or a meeting and my wife wanted to chat, or when I wanted to chat but she had a meeting right then. In those situations, Voxer worked better. This was a scenario that I was sort of mixed about. Presumably, having a basic phone helped reduce disruptions. However, if I always took calls in real-time, I opened myself to more disruptions. But disruptions from my family were

usually good ones that I welcomed. And ultimately, I liked to have talked on the phone more with my family. So I wasn't really looking to find a better way to text because, as Jonathan Foer wrote, texting diminished us. Foer explained:

> Most of our communication technologies [e.g., texting] began as substitutes for an impossible activity. We couldn't always see one another face to face, so the telephone made it possible to keep in touch at a distance. ...

> But then a funny thing happened: we began to prefer the diminished substitutes. It's easier to make a phone call than to make the effort to see someone in person. Leaving a message on someone's machine is easier than having a phone conversation—you can say what you need to say without a response. . . . With texting, the expectation for articulateness is further reduced, and another shell is offered to hide in. Each step "forward" has made it easier—just a little—to avoid the emotional work of being present, to convey information rather than humanity. (Jonathan Safran Foer: technology is diminishing us)

In other words, technologies like texting and email start off as substitutes for challenging scenarios (like the one I described). But then these technologies become the default rather than more in-person, real-time interactions because the substitutes take less emotional energy and effort. But they are diminished forms of communication.

Perhaps I needed to stop looking for ways to text from a flip phone and instead actually use the phone more. In short, to use my phone as a phone. (Seeing that last line as a revelation was astonishing.) I wasn't great at phone conversations, I admit, but I shouldn't have been looking for ways to text instead of talking on the phone. I imagined that, like all the other activities I had learned to enjoy (driving within an app, taking pictures with a real camera, etc.), speaking with other humans on the phone was something that would enrich my life more, if I put in the effort to do it.

Deeper doubts about technology

I kept looking for opportunities to get less techy in my life. I started to have deeper doubts about the value of technology that had transformed our lives. I began to wonder whether technology made our lives worse. For sure, all of these single-function devices I had resorted to were forms of technology, so I wasn't so sure why I had turned against the latest forms of tech. The DSLR camera was a much more sophisticated piece of technology than a pinhole camera, for example, and probably more sophisticated than a smartphone camera. My flip phone was a remarkable piece of technology too, no doubt. And so was the music CD. Perhaps it was simply novel and different for me to revert to retro technology, a phase I would soon outgrow.

But it seemed like the technology that I was reacting against at that time was the always online, always connected tech that entailed apps and screens with incoming messages and other information to continually distract and pull away or fragment my attention, or which pulled us away from others in a more diminished, reduced way. I tried searching for some articles on this topic, like, is technology just making everything worse, and found this video: "How Social Media is Destroying Society," by Common Knowledge (youtube.com/watch?v=yJ9oEi3Yyg0).

The video was great but didn't make strong enough recommendations toward the end, opting instead for balance. If you watch the video, be sure to read through some of the comments on the video too. Here are a few comments I liked:

> I remember the world before social media. It was so much better than it is now!!

> Man, I feel sorry for kids being raised on social media. Being in middle school, high school, and always comparing yourself to other people was tough back then. Today, there's no escape from it because of social media. It's constant.

> And god, the freedom of being able to go to a show and not feel compelled to film it. Of not worrying about missed calls, texts, of just being able to disconnect. Those days are gone forever.

> It all changed around 2008. All in all I really prefer the 90s and the early 00s. But I doubt society will be able to go back to that incredible mindset we had! Internet was great too.

> I'm so thankful my entire childhood was without computers, Internet etc.. we had our friends and lots of outdoor activities.. exploring the world around us made me ready for adulthood.

> I got my first smartphone when I was in 6th grade and it all went downhill from there ever since. People of all ages today seem to become more and more dependent on the internet and social media that it's actually crazy...I think things really started to change around 2008 when social media started to take a huge rise.

> Yeah I don't find life to be that interesting as a whole in this social media digital age. It's like everything caters towards technology and social media wayyy too much! It takes away from so many aspects of a persons life like their communication skills, their attention span, and most importantly their time.

Reading those comments was sad. They reinforced my sense that I wasn't alone in my experience with smartphones and social media. I hadn't quite pinpointed exactly what it was about smartphones, and at what point technology started to degrade my quality of life instead of improving it, but there was definitely some time period, maybe 2008 as one commenter said.

Maybe it was just social media that had poisoned technology (a sentence that seemed ironic coming from a blog), though my sense was that it was more than that. It was likely the deluge of never-ending information that came to you through using the device. Not just

social media feeds and posts (from LinkedIn, Twitter, Facebook, Instagram, etc.), but news, texts, emails, and other notifications that made the device constantly buzz and signal you with more incoming information to process, pulling you away from life and into a digital realm.

Were we trapped in a world of smartphones and apps, in which not having one made it impossible to function in society? Would there be a massive backlash against smartphones? Was I part of the beginning of the anti-smartphone movement?

The sad thing is that kids growing up today don't know how life was different before smartphones. I was born in 1975 and grew up in the 80s and 90s. Those were great times to be a kid. I loved playing baseball outdoors in the park, riding my bike and motorcycle everywhere, playing catch with my dad, and so on. All my great memories seem to take place outdoors. Today, kids interact through texts, Discord, Instagram, etc. Will they even realize how much richer and full life can be offline and outside? They might just assume that this is how life is. Looking further into the future, what kind of nostalgia will our children have about *their childhood*? For example, they might remember a time when they could take walks outdoors, before the air became too hazardous to breathe.

I started to wonder about my career as a technical writer, about my time blogging (which I've been doing since 2006). As I said, tech wasn't always this way. In the 90s when everyone was first going online, and that first decade in 2000, tech was growing/evolving/expanding in fun, interesting ways. It was exciting. That's when I became a technical writer. It was exciting to work in the digital frontier, as it seemed like so much potential was ahead. And blogging, too, was such a compelling, interactive hobby.

But it did seem like technology had caught up and revealed its true face. It had made us more disengaged with those around us, diminished us as people, made us less present, more overwhelmed with too much irrelevant information, exploited our psychological vulnerabilities, and more. I just wanted to turn the dial back to 2000 and rewind back to that time. Was it even possible? That experiment was all about finding answers to that question.

1.6. Review of What the Internet Is Doing to Our Brains: The Shallows, by Nicholas Carr

A genre of anti-technology books

In the genre of books exploring the psychological effects of technology, most authors begin in a similar way. Something is altering their brain or behavior. A list of technological indictments is explored, and the watchdog author concludes with a warning about the new technology. This pattern seems to repeat with each new technology, dating as far back as Socrates and his concerns about writing (a new technology that, at the time, threatened to displace the need for memory).

Although many people dismiss techno-alarmists, I'm much more mixed. Based on personal experience, I feel that there's real merit to the argument about some technology having a negative influence. In fact, dismissing the psychological impact trivializes the power of technology as a force for transforming culture. When I wrote the initial essay about my awakening moment, I felt, on a visceral level, my attention span was broken, and then as I abandoned it, I observed how life improved and my concentration returned. I went from reading no books per month to reading 6+ books per month. I felt more level-headed, focused, calm, and in control of my life. The effect was life-changing. This spurred my interest in reading more books that follow similar themes.

However, despite the negatives, web technology has amplified our opportunities, made life more convenient, opened up access to information, and has been a boon to innovation and knowledge. This left me feeling much more ambivalent about it. The trick, I felt, was to somehow harness technology's good while recognizing and rejecting those aspects that do harm.

One of the seminal works in this genre of tech's psychological influence is Nicholas Carr's *The Shallows: What the Internet Is Doing to Our Brains*, published in 2010 and revised in 2020. The theme isn't too different from Johann Hari's *Stolen Focus*, published in 2022, except that Carr doesn't focus as much on social media, since it was still ramping up in Carr's time. Carr explains that he's noticed his brain has been changing. He has the feeling that

> someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. … I'm not thinking the way I used to think. I feel it most strongly when I'm reading. I used to find it easy to immerse myself in a book or a lengthy article. My mind would get caught up in the twists of the narrative or the turns of the argument, and I'd spend hours strolling through long stretches of prose. That's rarely the case anymore. Now my concentration starts to drift after a page or two. I get fidgety, lose the thread, begin looking for something else to do. I feel like I'm always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle. (5-6)

Carr's friends say the same thing: "The more they use the Web, the more they have to fight to stay focused on long pieces of writing. Some worry they're becoming chronic scatterbrains" (7). The main quest Carr seeks to resolve is to "figure out what's been going on inside my head" (115).

What is Carr's main assertion? {#what-is-carr's-main-assertion}

Carr's conclusion is that the Internet is shallowing our brains. As we offload tasks to the computer, we weaken parts of our brain that would otherwise handle those tasks. The Net (as he refers to it) reduces our ability to read linearly, to absorb and immerse ourselves in books, and more. From memory to spatial awareness, reflection, storage, and more, by having the Net handle these tasks for us, our brain grows weaker.

Ultimately, as the Net cuts into our emotional depth and compassion, the Net diminishes our humanity, making us more computer-like. In becoming more computer-like, we process information in short bursts, multi-tasking, moving from page to page as we scan and skim for quick answers, like a high-speed processor managing bits of information in non-parallel threads (142). While this computer-like brain might excel at retrieving easy answers, it doesn't serve deeper thought processes and connection-making. As technology moves toward artificial intelligence, allowing us to offload even more of our own thinking and analysis to computers, our brains end up a shallow hull of what they once were.

Carr's argument goes something like this:

- Our brain is not fixed but rather plastic, susceptible to influence and change.
- Throughout time, new tools and technologies (from language to the alphabet, writing, maps, typewriters, and more) have impacted how people think.
- The Internet is a technology that likewise has an impact on how people think.
- Although the Net's screens involve a lot of reading, the screen differs substantially from the page. The reading experience is altogether different on a screen.
- The Net encourages skimming, scanning, jumping from page to page, multi-tasking, deciding whether to click each link and generally operating with a short, frenetic attention span. Economics reinforces the Net's content fragmentation model. The attention economy encourages attention disruption.
- Our online behavior spills over into offline activities as well, making reading long, linear books problematic. We apply the same Net-trained mind to a book and quickly times out, with no ability to focus in a sustained, immersive way.
- As a result, the Net discourages long-form reading and thinking. Ultimately, the Net makes us shallow.

Carr outlines two contrasting philosophies about technology's influence: instrumentalists and determinists. Instrumentalists believe technology is neutral—the way we use it determines the outcome. In contrast, determinists believe that the design of a technology inevitably sets into motion certain events and outcomes. Carr aligns more as a technology determinist than an instrumentalist and gives examples of how technologies have shaped and altered how we think, including the invention of writing, the Gutenberg printing press, and the Internet. All of these technologies have had an influence on how humans think and process information. The design of technology plays a part in the design of our minds.

How the screen differs from the page

At first glance, one might think that the screen, full of words, mimics the printed page in a book, which is also full of words. However, computer screens are different from books in many ways. The following sections list a few salient characteristics of screens that Carr outlines:

Multifunctionality. Computers are multifunctional, and as multifunctional devices, they pull us in different ways, encouraging multitasking. The impulse on the Net is to move towards other tasks, not just reading, but activities that might be more pleasure-inducing or less mentally exhausting. Given that reading long texts requires quiet focus, it's easy to get distracted or derailed by an easier task. The screen affords you that opportunity to allow yourself to be distracted. The Net is not just printed words on a screen. As a multifunctional device, the Net is a post office, a VCR, a bank, a shopping mall, a newspaper, a weather report, a radio, a writing slate, a day planner, a video game console, and so on. Is it any wonder that our attention drifts?

Bidirectional information flows. The internet is bidirectional. Whereas a book is mostly one-way, from author to reader, the Internet allows readers to interact in full ways. This makes the Net a much more useful, a full-service tool for doing many kinds of work, not just reading. We don't just consume, we produce, transact, transmit, and input too. We can be productive on the Net, yielding outcomes of our labor and effort. We work through the Net, producing digital products and services.

Hyperlinks with infinite sources stitched together. Although we spend hours upon hours reading from computer screens, perhaps reading more, Carr says the type of content we're reading isn't the same. We're not reading a linear work of complex thought. We're reading little snippets here and there from many different sources because the basic structure of the Net is the hyperlink. Hyperlinks stitch together documents at any connection point, allowing readers to travel from one context to another in an effortless way. (In contrast, books don't have hyperlinks. You can't tap a reference in a book and immediately be transported to another book.)

Unbundling/fragmentation of content. Due to this constant jumping around, the works themselves are fragmenting. We're reading parts of works (for example, individual chapters) from different sites rather than one long linear text (91). This is called the "unbundling" of content. The Net allows readers to consume parts of many different texts—a paragraph from one page, a section from another site, and so on. As such, authors themselves create more modular, standalone chunks of information. Authors assume that you might arrive from another context, read only a small section, and then continue on your way. In books, Carr says the narrative structure provides long texts with a framework to hold the reader's attention and interest. But now content must stand alone as a discrete entity unbundled from the rest of its content and be consumed in small nibbles here and there by a transient consumer (105). The lack of a larger narrative structure to pull readers through longer texts encourages us to read shorter content, leading to shorter attention spans.

Information overload. The amount of attention we devote to any one source shrinks (90). As a result, content producers shorten their content to fit our reduced attention span. The content itself changes because people can't devote long concentrated attention to it. Carr says, "Many producers are chopping up their products to fit the shorter attention spans of online consumers, as well as to raise their profiles on search engines" (94). But with shorter content, we also get more abundant content—infinite scrolling of feeds leads to pushing more and more information into our heads. This leads to information overload.

Economics of distraction. In addition to the links, many ads compete for our attention (whether through graphics, linkbait content, or other mechanisms). Carr says, "whenever we turn on our computer, we are plunged into an 'ecosystem of interruption technologies,'" quoting Cory Doctorow (91). Carr says Google's whole advertising approach is designed around click optimization. "The last thing the company wants," Carr says, "is to encourage leisurely reading or slow, concentrated thought. Google is, quite literally, in the business of distraction" (157). Pages load quickly and allow users to quickly find answers to their questions. Carr says the business model of search engines drives this model of distraction, where profits are maximized when users load as many pages as possible during their web sessions. It's a model of distraction by design. Further, by bringing all tools online (making the Internet completely multifunctional for every conceivable task), the web becomes a place not just for some activities but for *all* activities. More time online equals more searches and ads clicked.

Psychological responses and rewards. The Net also delivers dopamine hits through positive reinforcements (117). The rush of an email, making a connection on Facebook, getting comments on a blog post, or likes on an Instagram photo all tap into a system of positive reinforcement straight out of BF Skinner's psychology lab. "It also turns us into lab rats constantly pressing levers to get tiny pellets of social or intellectual nourishment," Carr says (117). Smartphones especially exploit our vulnerability by promoting "four types of stimuli: those that are novel or unexpected, those that are pleasurable or otherwise rewarding, those that are personally relevant, and those that are emotionally engaging" (231).

Overall, on the Net, the end result of all this is that we are constantly distracted while trying to do deep work. It's like trying to do a crossword puzzle while reading a book, Carr says (126). We're multitasking with many tabs and activities open. Sure, we might be reading more. "But it's equally clear that it's a very different kind of reading" Carr says (138).

The Net's impact on our brains {#the-net's-impact-on-our-brains}

Now that we've identified the many ways screens differ from pages, how do they affect our brains psychologically? Carr describes the following:

- Cursory thinking
- Cognitive strain
- States of mesmerization (blank stares)
- Immediacy bias (preferring what's happening now)
- An absence of calm, linear thought

As such, the Net has prompted a different mode of thought. Carr describes this altered mode of thought as perhaps being more utilitarian, but it's not a more reflective mode that allows us to follow more book-length arguments and narratives.

Action items from the book?

Unfortunately, Carr doesn't come to any definitive conclusions about the right actions to take. He doesn't blow the trumpet of retreat from the Net, and as far as I can tell, he still maintains an active blog (roughtype.com).

I tried to figure out how to make sense of Carr's book in my own life. Peter Norvid, a researcher at Google, recommends striking a balance between skimming the Net and concentrating on long-form reading (potentially offline). Norvid says:

> My conclusion is that when the only information on a topic is a handful of essays or books, the best strategy is to read these works with total concentration. But when you have access to thousands of articles, blogs, videos, and people with expertise on the topic, a good strategy is to skim first to get an overview. Skimming and concentrating can and should coexist ("If you're stupid, it's not Google's fault").

With this rule of thumb, you could use the Net for finding information and getting overviews, and then immerse yourself in deeper works offline with full concentration. The problem with this approach, however, is that much content online is unbundled/ fragmented, and the way you read online is by reading snippets from 20 different sources. This not only would be challenging to print, it's also exhausting to read.

I'm also divided about another point. Carr says reading online reduces the time we spend reading offline: "…the time we spend hopping across links crosses out the time we devote to quiet reflection and contemplation…" (120). In other words, we have a limited amount of time and bandwidth for reading. If we spend all day reading online (a different kind of reading), we no longer have the bandwidth for that book. By the time I've put in a day's work, I'm ready to unplug, sit in front of a TV, or decompress in other ways. Do I grab a thick book and devour it? No, my brain is too tired.

Here's another problem with the balancing act (finding online, reading offline). I might think that I'm only using the Net to gather and survey information. However, it's easy to get sidetracked on the Net, to lose myself in feeds, headlines, and endless shallow curiosities. Pretty soon all free time for deep reading disappears. If we use the Internet strictly for finding relevant information and reading overviews to orient us toward paths to deeper learning, the Internet would work well. However, the Internet is not optimized to do that. The Internet is optimized to hijack your attention and send you down paths you didn't want to go down. It's similar to going to a grocery store to buy milk. As with other core goods, milk is invariably at the back of the store because store designers know that if they can get you to walk all the way to the back of the store, then return to the front checkout, you'll pick up half a dozen other unplanned items on the way.

The Net experience starts hijacking your attention from the very start of the day: when you check your email. Newsletters vie for your attention as well as countless other messages. You might start off with good intentions (e.g., to do research for a project) only to find that intention quickly derailed, and before you know it, two hours have passed by and you've gotten no further in the project, but you did order three items from Amazon.

Reading as a superpower?

After reading Carr, an idea came to mind. Assuming that reading rates (for books and other long-form content) have in fact plummeted, could reading be my *superpower*? In a world where people simply do not read lengthy content anymore, what if I could be that technology worker who can actually read, who can get through enormous amounts of content and be hyper-educated, knowledgeable, and empowered through this information—the same information that remains dormant and locked for so many others? It sounds ridiculous, but honestly, as far as I can tell, people at work do not read anything longer than a pager. As such, how can they avoid sliding toward a trajectory of superficial knowledge, endless distraction, and fragmented thinking?

With my reading superpower, I surmised, I could maintain deeper thought, make more connections and innovations in my analyses, and develop longer periods of concentration. I could be uber-productive in ways that those jumping from chat to email to web page after page, with more than 100 tabs always open in their browser at any given time, are not.

But figuring out how to make reading my superpower wasn't clear to me, especially because I was expected to respond promptly to email and chat messages. In fact, if I missed a chat message from an engineer responding to my information needs, it might take longer to finish the documentation I was working on. Even so, I daydreamed about physically removing the computer from my desk. Exactly how and why should the computer be the central focal point on every single employee's desk? I wondered. Perhaps by removing it, and in so doing removing all distractions, I could focus in deeper ways.

My experiment

To attempt a balance between online and offline modes, I started experimenting with an alternative approach. Because my computer monitor is attached to a swing arm, I could swing it out of focus when I wanted to read. I could then swing it back to center when I needed to type or do other internet tasks.
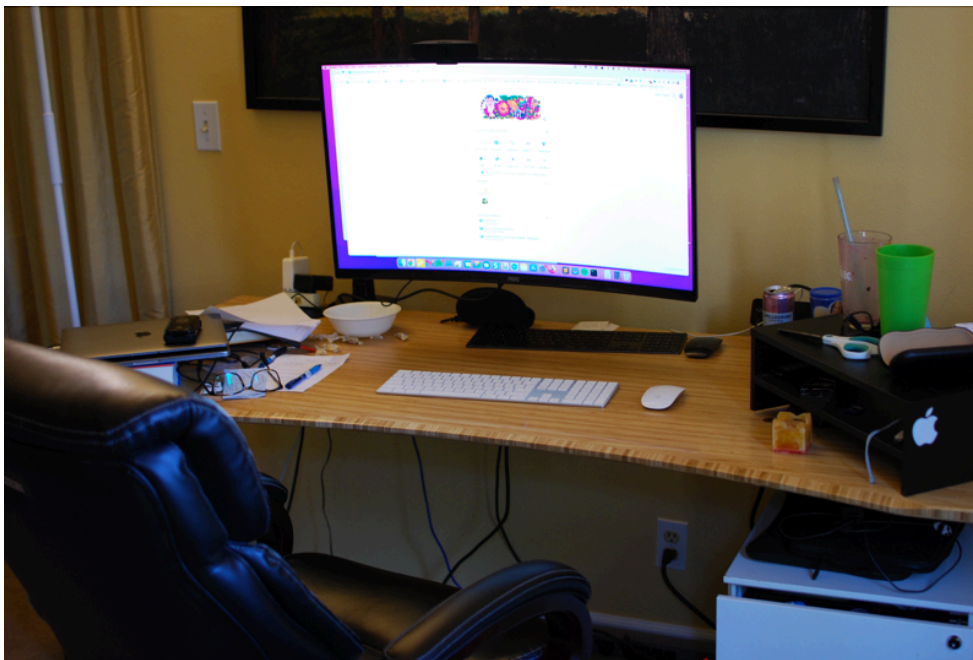
Online reading mode

When I want to switch to offline reading mode, I move my monitor off to the side, like this:

Offline reading mode

I tried this approach a few times, and it seemed to work pretty well. I also started printing things out (for example, those long newsletters) that I wanted to read. By printing content out, I could read and annotate it more carefully and patiently than when I was online. I found that reading offline magically transformed my patience. I could read much more than a page in a single sitting. I could take in 20+ pages or more, without the distraction of checking my email, interacting with chat, and so on. I could focus and take in information much more thoroughly.

In contrast, when I tried reading online, I quickly grew impatient being on a single site for more than a few minutes and longed to click and jump around elsewhere. When faced with a long document on a screen, I skimmed and scanned it for answers. Or I grew frustrated when a quick search didn't return the exact information I needed. Before long, I would become impatient and get derailed by some other activity. But when reading a printed page, it was different. I had much more patience, and I seemed to consume each word.

The conflicted feelings about technology and its impact on life have fueled many other authors to grapple with this subject. I don't suspect there's an easy resolution to it all, but I began to realize that we can't reject the commonly assumed technological tools of our time and still function seamlessly in society, so some compromises must be made.

1.7 Six weeks in -- returning to smartphone (but not as before)

The pivotal moment

Last Saturday was the pivotal moment in my smartphone experiment. I was coordinating a small detail with my wife, namely what type of potting soil to get at a local nursery (before driving there), and she sent me a link to the brand via email. I checked my Gmail (on my computer) for her message but didn't see the email, so I walked upstairs to verbally ask/confirm the brand, but my wife looked at me annoyed and frustrated that she had sent me a message that did not reach me due to my phone. She wouldn't just tell me the potting soil name, so I snapped back and said well fine I'll just go back to my desk and hit refresh again on my email and see if it comes up, or she could simply tell me the brand name now while I'm up here.

This surprised me because prior to this, I was just reflecting on how calm, unstressed, and generally peaceful I had been in having removed my smartphone from my life. But now all of a sudden, my wife was visibly frustrated, and I was snapping back.

This moment had been building. Some weeks ago, she'd been sending me texts, but they were intercepted by the Messages app on my Mac because I'd temporarily configured it to receive texts at my phone number. But I didn't realize that texts intercepted by Mac Messages would prevent them from reaching my phone, so I was not getting her texts (which described which tampons I was to buy for one of our daughters at CVS). She had to talk me through the product label image and colors while I wandered the feminine hygiene product aisle. At the time, it wasn't clear why I didn't get her texts, but my new dumb phone was to blame.

So when she sent me an email about potting soil and I didn't get it, she automatically blamed my phone. It wasn't even my dumb phone's fault. Sometimes emails seem to get delayed a bit, as our email applications wait an extra minute or two before refreshing. Also, I was checking my email at a computer, not through my phone. But I realized right then something important: I was using a communication technology that wasn't aligned with the communication technologies my family was using.

Many of us grew up in pre-smartphone eras, and when we look around at people glued to their phones, who say it's *impossible* to live without smartphones, we balk at this mentality and remember our own blissful childhoods where we got along just fine without smartphones. *Of course you can live without a smartphone. My childhood was just fine without one growing up!*

But what I'd failed to realize is this: in those pre-smartphone days, *no one* had smartphones. We all communicated using the standard communication technologies available back in those days—landlines, mostly. No one complained about someone not getting texts on a smartphone because neither smartphones nor texting had been invented yet. When everyone is on the same page with technology use, it's fine. But when you're the only one who can't text, and everyone else prefers to text, it's a real issue. For a historically contextualized analogy, it's the equivalent of insisting on snail mail when everyone else has landline phones. In short, not using a smartphone in a society where smartphones are ubiquitous is a different scenario than not using a smartphone in a society where smartphones don't exist.

From this experience I started to question other ideas. I thought that my family would enjoy me being more present. I didn't interact with my phone during conversations with my family, as my wife often does, and I thought others would appreciate this. Isn't Dad more attentive and present? Doesn't he listen better? Isn't he calmer, less stressed? Although I certainly thought so, apparently no one in my family noticed. The only thing they noticed was that I was less responsive to texts.

One time I tried sending my sister an email to coordinate something, rather than the usual text. I never heard back from her. She's apparently all in on texting only. Same with my kids. Send them an email and they might see it next month. Send them a text and they see it within a few minutes. Which method works better?

It turns out that texting and the full keyboard are the killer features of smartphones. You can get by without most of the apps, without the camera, without a map app, without email even, but when you eliminate texting, or reduce the experience to texting on a 9-digit numeric pad, it makes life really cumbersome. Not just cumbersome for the person with the basic phone, but for everyone else who needs to communicate with the person.

The day after the potting soil argument, my 15-year-old daughter, who had also gone back to a basic phone with me, asked to revert to her smartphone (an older iPhone). Unlike me, she hadn't made the decision to switch to a basic phone out of philosophical objections to the constant interruptions from smartphones; instead, she had wanted a flip phone due to her fascination with old TV shows that showed people using older cell phones. What broke her was spending 5 hours waiting in a parking lot outside an Urgent Care facility, waiting to see a doctor to get Tamiflu; during these 5 hours, she had only a basic phone. I can't imagine spending 5 hours in a minivan with nothing to really read, watch, or do.

Her reversion to smartphones didn't involve any behavior-changing realizations. She just liked Spotify, mostly. She said she didn't notice a change in behavior before or after the switch, neither going to a basic phone nor returning to a smartphone. I was bewildered. Was my experience a placebo effect? Maybe I anticipated that a certain behavior would result from the switch, and then I simply imagined that it did? Then again, she wasn't a heavy smartphone user in the first place, nor did she have a lot of friends she texts.

The inevitable progression of technology

Before I reverted to my smartphone, I was also reading a book called *What Technology Wants*, by Kevin Kelly, co-founder of Wired, that influenced my thinking. Of all the books I've read, this has been my favorite because of the depth and boldness of Kelly's ideas. Really, this book is worth checking out. Kelly says that technology keeps increasing, proliferating, diversifying, fragmenting, etc. no matter what we do. There's both an inevitability and an acceleration about it.

He compares the emergence of technology to a living organism that keeps growing and spreading, saturating the whole planet. I plan on expanding my thoughts on Kelly's book in another post, but in a nutshell, even people who reject technology, like the Unabomber, still end up relying on technology to live. Those who reject technology just sort of get pushed away as technology continues to evolve and advance forward. They're like a single pebble stuck at the bottom of a flowing river.

Kelly has a fascinating chapter on how the Amish selectively evaluate the technology they want to adopt. And while Kelly seems to be much more ambivalent about technology's role early on in the book, posing the question of what technology wants, probing its ultimate aim and design (trajectories, aims), and noting how he traveled across technology-ridden

areas of Asia until 28, then returned to bike across America and live with minimal technology and tools, by the end of the book, he celebrates technology just like Walt Whitman celebrates leaves of grass.

Kelly sees new technology as something we figure out the most effective uses for, the proper ways to adapt/adjust to, etc. But ultimately, technology usually adds to our number of choices and opportunities rather than detracting from them. And by opening up more choices, technology allows us to realize our unique talents and capabilities. For example, one might say that blogging opened up opportunities for me that helped me find a space for writing, which might otherwise have become a squelched talent.

When we do share our talents, they often open doors for others. For example, my API documentation course (spawned from my blog) has helped many people expand their skill sets. There's a symbiotic benefit ("mutualism") to technology, just like the mutualism that often exists in nature, where an oxpecker and a rhino find a mutually beneficial relationship. With the Internet, the more people collectively use it, the more it benefits each individual.

I realized that life was only going to get harder and harder trying to live with a basic phone. You can sort of get by now, in 2022, but what happens in 5-10 years? Technology doesn't recede. Every year, we accelerate faster and faster. Eventually you have to learn to live with contemporary technology. You can't run the other way. Better to figure out ways to deal with it sooner rather than later.

Returning to smartphones

But you don't have to adopt technology wholesale, especially every app on a smartphone. I think we're still figuring out smartphones. Many of us are realizing that for as much wonder and awesomeness as it is to hold the internet in our pockets wherever we go, we've traded something precious for it: the ability to read long-form. In gaining the smartphone, did we give up the capacity to read books? This is where I was particularly torn, because in my six weeks with no smartphone, I'd consumed more books than years previous. To be specific, I read the following:

- *Stolen Focus: Why You Can't Pay Attention—and How to Think Deeply Again*, by Johann Hari.
- *Digital Minimalism: Choosing a Focused Life in a Noisy World*, by Cal Newport (audiobook)
- *Stop Reading the News: A Manifesto for a Happier, Calmer and Wiser Life*, by

Rolf Dobelli
- *Stand Out of Our Light: Freedom and Resistance in the Attention Economy*, by James Williams
- *Autonomy: The Quest to Build the Driverless Car*, by Lawrence Burns
- *Ludicrous: The Unvarnished Story of Tesla Motors,* by Edward Neidermeyer (got halfway through the book and lost it)
- *Autonorama: The Illusory Promise of High-Tech Driving*, by Peter Norton
- *The Loop: How Technology Is Creating a World Without Choices and How to Fight Back*, by Jacob Ward (got halfway through and gave up due to boredom and bad writing)
- *The Shallows: What the Internet Is Doing to Our Brains*, by Nicholas Carr.
- *The Attention Merchants: The Epic Scramble to Get Inside Our Heads*, by Tim Wu (audio book)
- *Walkable City: How Downtown Can Save America, One Step at a Time*, by Jeff Speck (audio book)
- *What Technology Wants*, by Kevin Kelly.

In a personal way, I rediscovered the joy of reading. If I returned to my smartphone, would I stop reading books?

There's only one way to find out. I switched my SIM card back into my smartphone and put my basic phone up for sale on eBay. With this move, I began the second phase of my experiment: living with a stripped-down smartphone.

My adjusted rules

Even though I'd returned to the smartphone, I still wanted to keep many of the previous rules I'd set. As I said, when new technologies come out, they often undergo an adjustment period as we try to figure out how to best integrate them into our lives, what boundaries we should set for them, and so on. It's not too unlike figuring out the most efficient route to commute to work. I spent many mornings trying out different combinations of car + train + bike before settling on the commute I prefer the most (see http://y2u.be/FxMU3pP1bLE). Same with my smartphone rules here. Consider this phase two of my rules.

Here's a reassessment of my initial rules, with my notes about whether to keep, modify, or drop them:

~~Use a dumb phone instead of a smartphone~~

- Modify—switch back to a smartphone but strip it down to essential apps only. Get rid of social and news apps on your phone. Apps for social media require constant checking, which should be avoided. Basically, get rid of any motive to be constantly reading your phone except email. Keep other practices from before as well: remove work email but not calendar or work access. Remove work chat groups.

Carry the phone in a bag, and don't sleep with it on your nightstand

- Keep—one exception here is if you're biking and listening to audio books.

~~Prefer calling instead of texting~~

- Drop the rule. I'm not sure that calling unlocked anything exciting for me. I wanted to have richer, more frequent conversations with my family, but it didn't happen too often. Texting is just too convenient.

Turn off notifications (except from family)

- Keep the rule. Putting the phone on permanent Do Not Disturb seemed to be a smart move.

Stop reading the [daily] news

- Modify the rule. I felt a bit like I'd stuck my head in the sand. Consider limiting your news intake to one newspaper, and spend no more than 5-10 minutes per day on news. I've never been a news junkie or anything, so I might be over-indexing on this point.

Unsubscribe from newsletters that don't have high value for you

- Keep the rule. I love having space to breathe in my email. I do feel a bit out of touch, though. I still find it hard to pinpoint which newsletters I miss.

Avoid social media

- Modify the rule. I might have overdone my digital detox. Maybe allow a few outlets here. Not sure. Although I participate on Twitter and Linkedin, my participation has always been minimal. I usually just post links to new blog posts on these networks. Like the news, I'm probably singling these sources out too much.

Don't rely on mapping applications for directions

- Modify the rule. I like developing my sense of direction, but I will allow smartphone map use in certain conditions, like going to new/unfamiliar areas, times of emergency, or other needs. For example, finding a Taco Bell when we're off our normal route.

Use a separate camera

- Keep the rule. For family events and other photography, I prefer the larger camera. But for utilitarian uses of the camera, such as remembering a parking spot, use the smartphone.

~~Use a tablet or smartphone only for specialized apps when there's no alternative~~

- Drop the rule. It's not necessary if the apps are available on my phone. What are these specialized apps? Cue reader (at-home Covid tests), banking apps, mobile ticket apps, membership card apps.

Realizations about reading

The neat thing about experiments is that they lead to realizations that wouldn't come otherwise. Using a basic phone for six weeks, I made a number of realizations, specifically related to reading. In no particular order, here they are:

- **Still no creative flow.** I did not slip into moments of creative flow, unfortunately. It's been years since I slipped into a state of prolonged flow while writing that lasted more than an hour. (Maybe this mindset doesn't exist with tech comm?) Part of the problem is that even giving up a smartphone, it reduced only a sliver of tech from my life. My main habitat is the computer, where I work all day as a technical writer and then in my spare time as a blogger. The times when I'm away from a computer are actually scarce, so I'm not sure why I thought giving up a smartphone would magically transform my life. Giving up a computer, on

the other hand, would significantly change things. But since I primarily write on a computer and work on documentation, blog posts, or coding, giving up a computer would mean giving up my occupation, hobbies, and identity. These technologies allow me to think, and then rearrange those thoughts into coherent narratives. There would be no point in giving up computers because their influence is overwhelmingly positive in my life.

- **Neuroplasticity.** The brain is plastic, and it learns through repetition. If you constantly read by scrolling feeds, skimming and scanning, then you're training your brain to consume information in that pattern. This pattern doesn't work for reading books that have long arguments that require page after page of concentrated, slow reading. I think people might be too alarmist in lamenting how the internet is changing our brains. I seem to have fixed everything in a matter of a few weeks. There's also a potentially simple solution to it all. You don't have to abandon the internet to reclaim your book reading. Just print out the long-ish articles that you want to read. This leverages the strengths of the internet (findability, selection, access) while maximizing the focus of offline reading. I even realized that I can print entire chapters from O'Reilly books online! This floored me because I've had this subscription for years (I grandfathered in at a cheap price), but I never use it as much as I should.

- **Cultural shifts about long-form content.** If no one reads anymore, will books die out? At what point do books hit a free fall where book publishers throw in the towel and try to reinvent the genre (like O'Reilly Books Online, where everything is modular?) Do we still try to write for book readers, or do we chop everything up into pages consisting of 500 words or less? Even developers, famous for their dislike of reading long texts, prefer long web pages. They say they prefer long web pages so they can use Ctrl+F to find things, but long pages also provide more context, coherence, and structure to information.

- **High-level summaries.** Getting high-level summaries of things can be really helpful (for example, Blinkist). This is how I discovered the first book that I really wanted to read in full. Using the same app, I was able to get a gist of some other books that I thought might be appealing but which actually weren't. With so much information, we need summarization to figure out what to pay attention to. It's really hard to pick a book that exactly addresses what you're trying to learn/ answer/solve. Additionally, not all books are worth all their printed pages, so there's a possibility that you feel compelled to read a book that isn't actually addressing the information you want, solely because you purchased the book and have read half of it.

- **Tech writing and reading.** Previously, I wondered why tech writers spend so much time interfacing with a computer instead of reading. I mean, we're always looking at the screen, from the moment we arrive at work until we leave. Why? One reason why tech writers don't read so much (at work) is because we're working on the cusp of knowledge, trying to gather information that isn't written coherently anywhere. It's not as if we could just read a book about what we're documenting. If we could, there would be no purpose in writing your documentation. As such, we're using the computer as a tool for gathering, collecting, finding information sources, and then writing.

Some situations become very difficult with a basic phone

Finally, I want to note some scenarios that become problematic with a basic phone, in case anyone else is considering a similar experiment.

- **Emergencies.** I had to go to the emergency room in downtown Seattle in the middle of the night (not a time-sensitive issue), and while I navigated there by memorizing the directions from Google Maps on my computer, there was road construction that routed me off course. I found the ER (with a little meandering), but I could have easily ended up in Bellevue. I had another week where I had to go to multiple Urgent Care facilities in distant towns (Marysville, Everett), followed by Taco Bell after I picked up my sick kid from science camp in Stanwood (2 hrs from my house). Try doing this with paper maps or by memorizing/writing down instructions on paper. I did memorize the route there, but also ended up tethering my old smartphone for part of the trip because I didn't think it appropriate to prioritize my technology experiment at the expense of someone's health. But this prompts another question. For emergencies, do you always need to have a smartphone or tablet as a backup navigation device? And if so, isn't it a bit expensive having two devices?

- **Specialized apps.** There are a small handful of apps that aren't available on the desktop. For example, Cue reader. This is an at-home COVID test kit + app that is the most convenient thing I've had during the pandemic. Every time a kid misses school due to flu-like symptoms, we have to provide a negative COVID test for their return. Some other specialized apps include banking apps, mobile-only ticket apps, and more.

- **Text spam.** I'm not sure why Verizon can't identify "CBD gummies" texts as spam, but they can't/won't. Mostly, phone companies seem to rely on spam filtering apps on smartphones to deal with spam. But on basic phones, there aren't any spam filters. There's also no Do Not Disturb option. Try configuring the ring and notification options so they're off for everyone but on for contacts on your Favorites list—it's not easy to figure this out. I probably spent more time hacking workarounds on my phone than I ever anticipated.

- **Cost.** Basic phones aren't cheap. Nowadays, they're non-standard, boutique devices. A new Kyocera DuraXV Extreme costs $240. As I started switching to paper everything, I bought a handful of maps, lots of books, some security keys, music CDs, a grammar reference, a large dictionary (this purchase really irked my wife), some new photography lenses, various shoulder bags to carry my electronics in, and more. So yeah, the transition to an offline world is not cheap, ironically. My wife insists that I add all of these costs up. When I told her I was using my smartphone again, she was only too happy to say "I told you so!" The glee in saying this only slightly offset her frustration at how much I spent on this phone experiment.

- **Texting.** As I noted earlier, typing on a 9-digit pad doesn't work well. But also, when someone sends you an image attachment, it's often not viewable on a tiny screen. I ended up forwarding texts with images and links to another text number that I could view on the web (messages.textfree.us). It was kind of ridiculous. And just as the screen is too small to see images and text well, any APKs you sideload have only a marginal chance of being something you can navigate (with the Apps4flip Mouse cursor in mouse mode).

- **Missed meetings.** Since I didn't have my work calendar active, I missed a few early morning meetings. For example, I didn't think I had a 9am Monday morning meeting because who in their right mind schedules a meeting at this time? But when I logged into my computer and glanced at my calendar, I realized I was 24 minutes late to it. I felt so dumb. This happened a couple of other times, where I was just oblivious to a meeting because I didn't have any notification reminders for it.

By the way, many basic phones are more limited than the one I had (which had an Android operating system). I could still sideload APKs like Audible and Voxer onto it. Without Audible, I would probably have carried around my Kindle and bluetoothed to it or something cumbersome like that. I did a lot of texting by emulating my phone on my computer using Vysor and scrcpy, which could be too techy for mainstream users.

Conclusion

Although it seems like I flip-flopped a bit on my technology choices, I've come to realize that there's a whole genre of literature written by people who feel ambivalent about technology (e.g., see *The Machine in the Garden* by Leo Marx). The whole "pastoral" genre of people yearning to return to nature is an example. Even Kevin Kelly notes that the same technology that offers virtues can also pose a threat; it opens new opportunities while also introducing new problems. In my opinion, smartphones are the poster child of this mixed benefit that technology offers. Kelly writes:

> If we examine technologies honestly, each one has its faults as well as its virtues. There are no technologies without vices and none that are neutral. The consequences of a technology expand with its disruptive nature. Powerful technologies will be powerful in both directions—for good and bad. There is no powerfully constructive technology that is not also powerfully destructive in another direction, just as there is no great idea that cannot be greatly perverted for great harm. (246)

And he later says, "The greater the promise of a new technology, the greater its potential for harm as well" (246). This isn't too unlike other sayings—*with great risk comes great reward*. Or *with great talent comes great responsibility*. So it is with tech: *With great possibility for good comes great possibility for harm.*

This reassures me that my smartphone concerns and experiment has not been a fool's errand. There are serious consequences for the reading behavior that smartphones seem to encourage. I'm noticing it more and more. On my bike ride home (through the heart of downtown Seattle), I watched as the cyclist in front of me checked her phone at two stop lights. On the train, someone came up to me and asked if he could plug his smartphone into my computer because it was dead. I politely said no, since it was a work computer. And also, I didn't mention it, but c'mon, *really*? Did he need to play Candy Crush on his ride home? He seemed flummoxed, as if I were denying him first aid. But as I disembarked, I noticed he was engaged in a lively conversation with another passenger sitting across from him. All is not lost.

1.8 Random notes on recovering the lost art of reading

Queuing up books?

When I began the "Book a Week" challenge at work, I came across a page of tips that said to collect a pile of books that you plan to read over the year ahead of time. Otherwise, when you finish one book, you might lose your reading momentum for the next one. Ordering a hardcover or paperback through the mail often took a couple of weeks to arrive. So as I ordered them to queue the books up, I soon had a whole shelf of books waiting to be read.

Queuing up books to read (bottom shelf)

The problem was that my interests evolved from book to book. I started out reading with a question about how technology affects our attention span and focus, and I also read books related to the auto industry and driving. But sometimes a book ignited or prompted other questions, which then shifted my thinking and interests. For example, I wasn't so eager to continue reading about how smartphones affect the brain, as I felt I'd read enough material

tackling that question (*Shallows*, *Stolen Focus*, *Digital Minimalism*). I still had a few books queued up on that topic (such as *Hooked* and Irresistible), but I never got to them. My interests shifted to more philosophy-like topics.

Ordering books was a bit of a gamble as well. Some books turned out to be duds. For example, I started *Reader, Come Home* but found that after the first 15 pages, I wasn't really interested. Same with *The Loop*. I tried to like that book, but after 150 pages, I decided it wasn't worth slogging through. Given the possibility of duds, I decided that having a shelf full of unread books wasn't such a bad idea.

Buy print versions of audiobooks I enjoy?

Some books on my "To Read" shelf were print versions of audiobooks that I immensely enjoyed, which prompted me to order the print copy. But after finishing the audio version, I wasn't inspired to revisit it in print. Namely, *The Attention Merchants*, *Digital Minimalism*, and *Crash Course*. Even so, I wanted the print version so that I could easily reference some passages, perhaps. Yet so far, after I finished a book, I mostly moved on to something else. Maybe I just wanted a visible artifact to remind me of the book?

Returning or borrowing books?

I enjoyed writing notes in the margins of all the books I read. Sometimes my notes were high-level summaries of the author's main point in that section, which maybe just crystallized in my head. I also noted passages and paragraphs I liked. Sometimes I underlined the passages, but mostly I just bracketed them and put checkmarks in the margins. If it was a passage I really connected with, I would draw a star. Multiple stars if I really liked it.
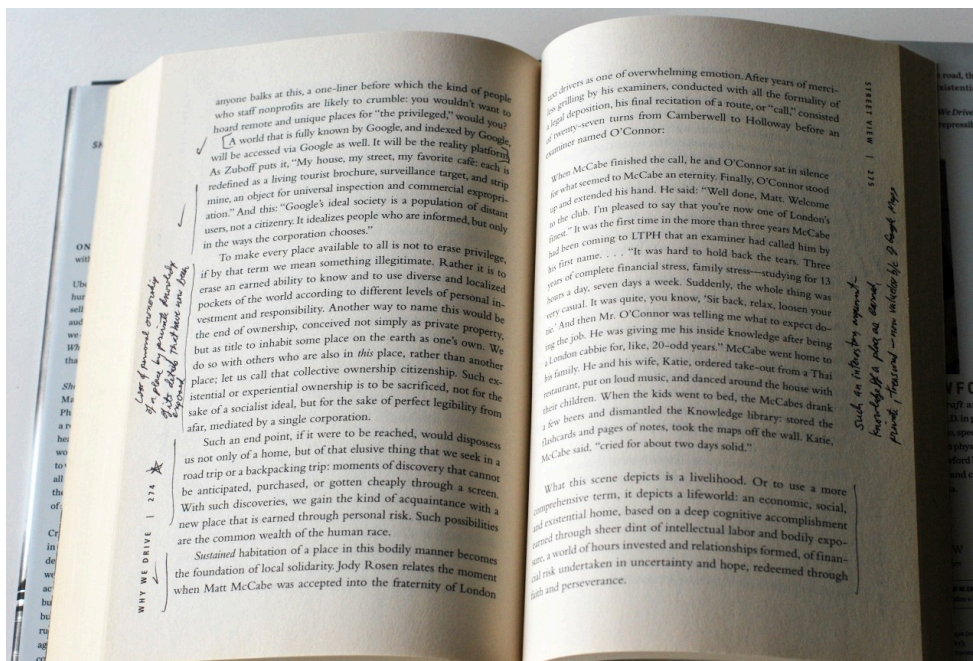
How I annotate pages in books

For me, part of the reading experience involved interacting with the book through these annotations. Writing in a book destroyed it for resale, but I considered that part of the cost of reading.

Could I hate and love the same book?

Even if I liked a book, not all of its chapters usually resonated with me. After I finished Matthew Crawford's *Why We Drive*, I felt the book had many ups and downs. Sometimes I struggled to follow the author's point and it seemed like random anecdotes that didn't support the larger theme. Other times, I had stars everywhere and many checkmarks. In other words, it was a rollercoaster of loving and hating the book for the whole 318 pages. Was that normal?

In the end, though, my likes outweighed my dislikes. I loved his balance of personal experiences and philosophical ideas. Crawford dropped enough philosophy to be interesting but peppered it with personal experiences to create a sense of authenticity and immediacy (akin to *Zen and the Art of Motorcycle Maintenance*). When I tried reading philosophers who omitted the personal element, I found the content too dry. (I mean, can anyone *enjoy* reading Heidegger in the same way you enjoy Kerouac?) Overall, I realized Crawford's approach was my favorite style: balancing personal experience with ideas. Learning should involve some transformation or commentary related to your life, I felt.

Paperback or hardcover?

I preferred hardcover because it traveled better. I would frequently stuff the books into my bike pannier or other bags as I carried them around. Paperbacks could easily be folded or otherwise mangled. And surprisingly, used hardcovers tended to be cheaper than paperbacks (especially for popular books, of which there's a surplus). I disliked Kindle entirely. Reading from screens wasn't my thing.

Used or new?

I preferred used books. The less expensive, the better. (That way, if the book was a dud, I wouldn't have blown too much money.) I didn't mind if there was writing from the previous author—it was kind of interesting to see what parts resonated with other readers. Seeing the annotations (systematically applied) let me see how others marked up books. I added my own annotations according to my style anyway, so the different annotations didn't confuse me. Sometimes, it was clear when readers stopped reading the book, as their annotations ceased.

Is reading expensive?

Even though I had a shelf of books, the cost was relatively cheap. I considered how much it costs to eat at a restaurant or go to the movies for just one day of entertainment. On the other hand, if you spent $100 on used books, I reasoned, you would have at least 1-2 months of entertainment right there. For the same cost as a latte or two, you might spend an entire week reading a book. And if I were broke, I could still borrow books from the library and resort to post-it notes as a form of annotation for a completely free experience.

I was fortunate that both my main hobbies, reading and writing, didn't require much money (just infinite time). It wasn't like being a car collector or an RV recreationist.

Is reading passive?

Reading did feel a bit passive to me. How does one engage with the ideas in a book, I wondered? Did you drink them in and then continue on about your life (slowly forgetting them)? Did you wrestle with the ideas in book reviews and other blog posts? Did you allow the book to naturally shift your world perspective? How did you switch from being a passive reader to a more interactive information consumer?

Writing book reviews seemed like an appropriate practice for more active reading, but book reviews by themselves weren't that engaging of a format. You could get a book review and snippets of impressions about the book from pretty much anywhere, especially from dozens of readers on Amazon, so what was the value of posting a review on my blog?

I liked picking out the author's larger argument as I read through their book. Sometimes the argument was murky at first and not clear how all the sections connected into a coherent argument. But learning to look for this larger argument helped me be a diligent reader. That's partly why I wrote more notes and idea summaries in the margins—I was looking to more clearly grasp the larger idea and reasoning that supported the author's assertions (probably a leftover habit from my composition teaching days).

Writing a post that articulated the author's argument also took a lot of effort. Synthesizing the author's main argument, assessing their support, and writing a review required a lot of literary prowess and erudition, especially to contextualize the author within a larger landscape of similarly themed books. It wasn't a genre I was skilled at given my limited awareness of the genres I was reading.

Writing as a conversation the authors were having about the books they read?

Much of writing, I noticed, involved a *conversation* the author was having with other sources. I liked thinking of writing as a conversation. Writing was the way the author interacted with what he or she was reading, either using the sources to support an argument, or calling them out to refute gaps or other errors of thinking, or connecting them with personal experiences and elaborations. Thinking of writing as conversation seemed to unlock a technique for content generation.

Almost every good book I'd read seemed to involve the author summarizing and responding to a variety of sources. When the sources were absent, the writing was usually narrow-minded. Reading was a natural precursor, even a requirement, to writing.

That said, I was overwhelmed by how much writers actually read. From the looks of the sources and books cited, it appeared as if the writers had read tomes on the subject they were writing about. Were they sampling only the relevant chapters in these books, or had they devoted multiple years to absorbing everything in a niche? And how did they keep all the quotations and references organized?

No doubt tools like Google Scholar helped them locate a network of relevant texts about a subject. Even so, I needed to figure out a system for storing quotations and summaries of books (my method for a "*commonplace book"*) so that I could reference the quotations later in posts. I tried using Foam (a personal knowledge management tool) for storing quotes, which included backlink functionality based on topic keywords, but the method didn't stick.

Were book clubs worth joining or starting?

If I didn't write book reviews, what substitute activities could be worth pursuing instead? Book clubs? I'd been reading books related to the auto industry as a way to increase my interest and knowledge of the domain I worked in (maps in cars). Because I discovered some really interesting books (*Autonomy*, *Autonorama*, *Why We Drive*, *Ludicrous [Tesla]*, *Crash Course*, *Mobility 2040*, *The Geography of Nowhere*, and more), I wondered if perhaps I should start a book club at my workplace for this niche. Or perhaps including book summaries and commentary in org newsletters could work? I couldn't quite figure out what to do with the knowledge from books.

Many months later I actually started a book club at work, called the Auto & Transportation Book Club. It turned out to be surprisingly successful, though it depends on how success is defined. If measured by the value of the discussions, then the success was 10/10. If measured by the number of participants, which ranged from 4-8 on average, then the success was 2/10. Even so, my idea to foster a "workplace literary salon" with invigorating and broadening conversations was probably too idealistic for a corporate environment where everyone had their own objectives and key results (OKRs) to answer for.

How do I remember words I look up?

Years of being a technical writer had taught me to prefer simple, easily understood words. As a result, I let my vocabulary stagnate. As I read more books, I noted unfamiliar or interesting words on a piece of bookmark paper as I was reading, along with other random notes.
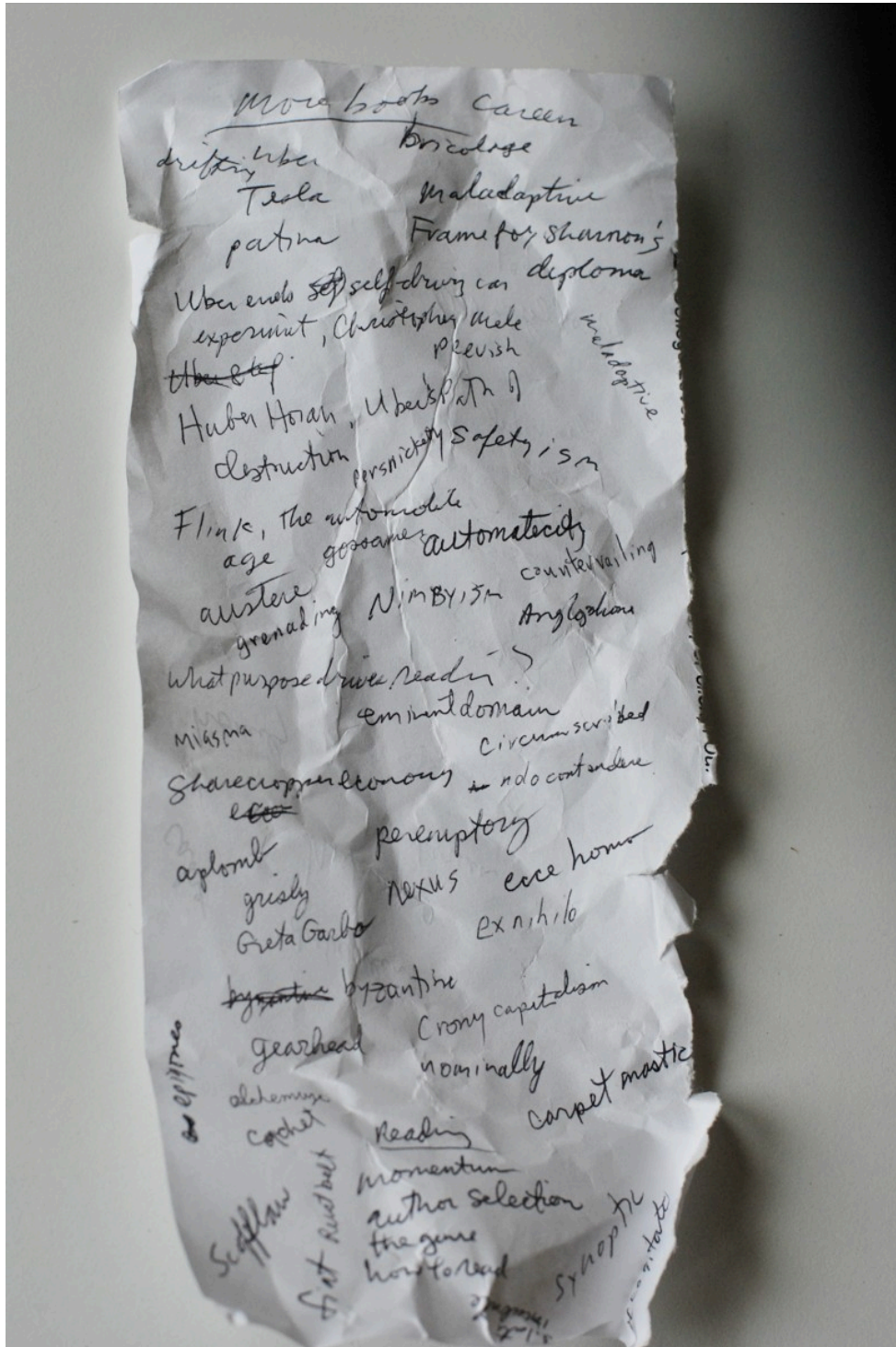
Writing down interesting or unfamiliar words and other notes

Then eventually, as I grew tired of reading, I'd take an hour or so to look up the words. A few times, I actually paired the vocabulary words with their image equivalents (pulled from an online image search) to cement pictures with words. Looking for supporting images

turned out to be fun and helped me remember the words better (such as "anarcho-primitivist"). If language provided the tools for expression, then I felt that increasing the number of tools at my disposal would certainly help me be more articulate.

Real purpose of reading is to spur intellectual engines?

Even if I didn't engage with a book by writing about it or discussing it in a book club, I figured reading by itself would spur more "intellectual vibrations," as Nicholas Carr described them. Reading helped prime and warm up my intellectual engine (unfortunately not a V-8), which then made me more capable of performing other tasks, including writing documentation. In this way, reading was like a way to start the day, warming up before practice or a game.

Modular reading versus single-book reading?

Was it better to read modularly/horizontally across authors and sources to follow a theme, such as individual essays or chapters from various sources, or to read a long book from start to finish? Reading modularly, such as chapters from the O'Reilly Books library or standalone journal articles, offered more direct access to a theme, while reading entire books from start to finish allowed for more random discovery of ideas and deeper immersion. Reading a book end to end, I got to know the author's way of thinking on a more intimate level. And across the length of a book, I stumbled upon themes and ideas that I wasn't searching for. It was more satisfying to make my way through an entire book. When I finished, it felt more gratifying than if I had sampled a theme from many different sources.

However, sometimes books shifted focus. For example, in *Stolen Focus*, the author steered the theme from distraction due to technology into distraction due to ADHD, abuse, nutrition, pollution, and other angles. Was it in the service of padding for page count, or was the author digging deep? Did books really need 200 to 300 pages to convey their argument and core facts? Couldn't that be done more efficiently in a single article? And if I needed a variety of sources to quote from, variety might be better in the long run. And yet, reading a single article wasn't nearly as enjoyable as an entire book.

Could I skip ahead when bored?

Sometimes while reading, a chapter bored me. I wondered if I should skip ahead, or whether I should instead slog my way through the boring parts? Skipping ahead could help me continue with the book instead of abandoning it altogether. Too many uninteresting chapters in a row and I would toss the book aside. But maybe, I thought, the book would slowly come alive in the chapters that I decided to skip. Later chapters might not make sense if I skipped earlier ones. It was hard to tell.

How to control my saccades?

"Saccades" refer to your eye movements as you track across lines and sentences while reading (or tracking other things). Our saccades aren't smooth, sweeping motions from left to right across the page. Instead, our saccades involve little uneven jerks of rapid movement. When I was searching and assessing information (or consuming information from feeds), my saccades were quick, tracking the F pattern that UX researchers described as I tore through the linguistic shape and high-level substance of a page in 15 seconds.

But when I was reading a book with worthwhile information, I slowed my saccades way down, almost like I was in slow motion. Otherwise, I would miss the meaning. Did this make me a "slow reader"? Perhaps. But not all content could be consumed at the same pace. Reading a fast-moving fiction novel required a much different pace than absorbing complex philosophical ideas. The ability to slow down my saccades helped increase my concentration and focus.

What aspects of technology discouraged long-form reading?

How did I get out of the practice of reading in the first place, I wondered? As a student, many books I read were assigned, while those that I discovered on my own had more personal reward for me. Even so, at some point in my career, I realized that to get ahead as a technical writer, I needed to expand my technical knowledge (for example, learn Java). Given that I had only so much bandwidth, I tried to confine my selection of books to technical books, to learning programming or other more career-useful information. I told myself that to thrive in an increasingly specialized career year after year, I needed to become more technical. Being technical was the key attribute that would allow me to thrive as a technical writer.

Yet I confess that more technical books on programming and engineering-related topics never interested me in a sustained way. I was much more interested in non-fiction literature, the kind I studied in my graduate MFA program. Crawford's *Why We Drive* was the perfect balance of ideas and personal experience, which was the type of content I'd longed to write myself on my blog over the years. I speculated that perhaps I stopped reading because I was mentally trapped in a programming genre that I found suffocating. As I branched out, it was like opening a window and breathing in fresh air. Maybe I started reading in part because I no longer confined myself to strictly technical books?

What value did non-technical books have on a technical career?

What value did non-technical books have for a technical career? Much of the work of technical writing, at least at this point in my career, didn't consist of individual study of APIs and code, as odd as that sounds. Much of the work in tech comm involved interviewing engineers and reviewing existing content. Sure, you looked at code and needed some level of technical proficiency, but there were diminishing returns. To climb up to the level of competency to understand code independently, you would need to almost be a programmer yourself. And the more technical knowledge you immersed yourself in, the more the gaps would develop in other areas, such as with review methodology, project management, information architecture, and last but not least, the business domain itself.

Also, ironically, I found that as a "tech lead," my role evolved to include more strategy and planning than actual writing. My role as tech lead wasn't so much to write more technical docs but to identify friction areas, convert those frictions into concrete and achievable tasks, prioritize the work against partner needs and upcoming releases from product teams, assign the tickets to other writers, and streamline our publishing processes. There was much less of a need to know how to read and execute code.

In short, the higher I climbed in job levels, the more my work shifted to content strategy rather than tactics. I no longer needed to be down-in-the-weeds technical. I needed to simplify complex information, but reading a book on Java wouldn't really help. The tasks

were more ambiguous rather than technical. I started to wonder if I had overestimated the need for deep technical knowledge in my career. This opened the gates for more aggressive reading outside the technical domains.

What about books related to tech comm?

In reading several auto-related books, I began to question how this specialized domain knowledge would benefit me in the long run, especially if I decided, after a few years, to switch domains. Shouldn't I be reading books about tech comm, I thought? Unfortunately, tech comm books tended to be boring, and in some ways, tech comm was meant to support more knowledge-specific domains anyway. There is a difference between studying knowledge domains (such as the auto industry) and communication methods (such as rhetoric). With communication methods, the focus was on decisions and patterns for communicating information, not specific to any particular product. The study of those communication patterns themselves was sometimes interesting, and obviously I have a blog about technical writing. But books on tech comm never ignited my curiosity, for some reason. There were a few exceptions, such as *Every Page Is Page One*, where the author followed a bold idea with interesting analyses. But it was more fun to become immersed in a specific knowledge domain, such as learning about cars. I never found a tech comm book written in a style like Matthew Crawford's *Why We Drive.*

At any rate, despite the many unanswered questions, these were the observations I've had about reading these past few weeks. Reading opened up a plethora of questions about reading itself that I hadn't considered.

Chapter 2: Wayfinding

In giving up my smartphone, I had to relearn how to navigate. This led to a major realization: I liked driving without having to pay attention to the micro-directions of my smartphone. I felt a sense of autonomy, control, and liberation. Although a seemingly small act, driving without GPS became somewhat life-changing.

Chapter sections:

2.1 Wayfinding -- finding my way without GPS

Intro to some posts on wayfinding

Earlier in this series, as I formulated my strategies for living without the smartphone's essential apps, I wondered how to get by without a mapping application (e.g., Google Maps or Apple Maps) while driving or biking. These apps, which rely on GPS to pinpoint your location on a map and give you turn-by-turn directions to a destination, were supposed to be one of those can't-live-without-it apps.

In fact, when it first came out back in 2007, according to Bill Kilday, "Google Maps became the killer app of Apple's killer new device: the iPhone, with Steve Jobs personally demanding the inclusion and implementation of Google Maps" (xvi).

And driving around the city, the need for GPS apps seemed essential. How the heck did people figure out the confusing sequences of unfamiliar turns, highway merges and exits, roads and avenues and roundabouts, etc., to reach their destination without the help of GPS? Further, weren't these GPS apps one of those technology advancements that helped reduce congestion by routing people around slow traffic and warning you about hazards by identifying crashes ahead of time? By not using GPS apps, wouldn't I be exposing myself to more congestion and crash risk?

And yet, something about GPS bothered me. Even though I'd been in Renton, Washington, for more than a year (having moved here from California), I still needed to route to common destinations that I'd driven to many times over. That Safeway just 1.5 miles away? Yeah, I still needed to route to it. I thought I was just direction-impaired; my wife always made fun of my sense of direction. If choosing routes without the help of GPS, I would naturally go in the opposite direction. North, south, east, west? No idea. Many times on my bike, I'd start riding a bit so that I could see the blue dot move along a map on my smartphone and know which direction I was actually heading. I realized this was pathetic but just attributed it to having a poor sense of direction. My wife had the compass in her head, not me.

As I started to route without my smartphone, I noticed an unexpected feeling surface every now and then—a sense of navigational certitude, a feeling of confidence and awareness of everything on the road. Not having to glance at a smartphone screen in the corner of my eye to know where I was going, but instead focusing more on the road and environment (the pedestrians, cyclists, cars, road construction, intersections, signs, trees, etc.), made me feel more connected and confident while driving. I found that I actually *liked* driving without GPS. I could be present in the driving experience.

After I reverted from my feature phone back to my smartphone, I still avoided using my phone's mapping apps unless I got lost or was in a pinch and needed directions. Instead, I started looking more carefully at Google Maps on my computer to study the route beforehand. I learned the logic of streets and avenues, and which streets crossed the freeway, which were main streets and which were residential go-nowhere streets. It didn't take long before I could confidently drive to most destinations in my area without my smartphone.

My brief experience of routing without GPS led to more interest in wayfinding. I started wondering if perhaps I could make navigation my strength rather than a weakness. I'd read many references to studies of London cabbies who had to learn 25,000 city streets (a feat called "The Knowledge") to enter a privileged order of London cab drivers. The hippocampuses of these cab drivers were noticeably larger, as this part of the brain controls spatial reasoning, navigation, and memory. Perhaps by learning wayfinding (that is, navigating without GPS), I could increase my spatial aptitude and sense of direction?

I also wanted to better understand what I felt to be a paradox about the information age. We have an infinitely knowledgeable digital map in our pocket, something that can tell us exactly where we are and how to get to our destination. And yet, despite frequently following the directions provided through this infinitely knowledgeable digital map, my sense of direction and location had in fact deteriorated. I couldn't navigate well on my own. Why didn't the digital map make me a better navigator? Why didn't any of the directions sink into my mind in memorable ways?

Perhaps the many routing recommendations from GPS apps are partly to blame. In Seattle/Renton/Kent, there are many different ways to get to the same place. If driving to work (from Renton to Fremont), there are half a dozen routes that GPS apps recommend depending on whether it will save me a minute here or there (e.g., 405 to I-5, 405 to 99, 405 to 518 to 99, 405 to 520, 405 to I-90 to I-5, 515 to Rainier, and more). But frequently changing the routes to optimize for time efficiency kept me in a constant state of confusion. The way to get places would never stick in my mind (e.g., one day this route, tomorrow another route, the next day yet another). And as I drove, I'd listen to podcasts or audio books the entire way, not focusing much on the route—just whether to go straight, turn right, or turn left within the next 500 feet.

On top of this, the map constantly rotated so that I was always looking forward, and my only directions were straight, right, or left. By constantly rotating into an *egocentric* rather than *allocentric* point of view, I would lose any cardinal sense of where I was. Egocentric refers to the first-person perspective of the moving vehicle, while allocentric refers to an external, third-party perspective. I never got a sense of where I was in the context of the map or how my current direction related to nearby landmarks.

The overall result of all this was to become more reliant on the app to navigate me. Even if it was just saving a minute of time, I'd given up trying to route on my own. I adopted the perspective that the routing algorithm knew best. It just took a few experiences of rejecting the recommended route, only to end up in congestion due to an unforeseen crash on the main route, to sigh and trust the app's all-seeing knowledge. *I should've listened to the app,* I thought.

Given all this context, when I saw a book titled *Wayfinding: The Science and Mystery of How Humans Navigate the World*, by M.R. O'Connor, I decided I needed to read it. This book just scratched the surface of an area I knew almost nothing about. I learned that wayfinding is a robust domain that has been the focus of countless research and studies. Did reading this book teach me the secret to wayfinding? Not really, it's not a "self-help" book. Wayfinding isn't a "simple trick" that can be learned overnight, but there are some attitudes (like paying attention to the environment around you) that lead to becoming better at wayfinding.

Questions about wayfinding

In *Wayfinding: The Science and Mystery of How Humans Navigate the World*, M.R. O'Connor asks these questions:

- "What happens when we outsource navigation to a gadget?" (5)
- "What exactly is it that humans are doing when we navigate? How and why do we do it differently from birds, bees, and whales?" (6)
- How has the speed and convenience of technology changed how we move through the world and how we see our place in it?" (6)
- "What if GPS is a gadget that [severs] the individual from direct experience and generational knowledge of a place?" (14)

As you can see, there's a strong interest in how technology, specifically GPS, has influenced our thought patterns when it comes to wayfinding. Like so many books in this genre, the man-vs-machine theme surfaces and gives us pause about the way technology is influencing our lives and changing our brains.

Overall argument about wayfinding

What is wayfinding? One geographer says wayfinding is "the ability to determine a route, learn it, and retrace or reverse it from memory through the acquisition of environmental knowledge" (O'Connor 16). Wayfinding is literally finding your way, especially without a clear set of turn-by-turn directions guiding you each step of the way, to get to a destination.

Wayfinding and navigation are topics of mystery in the scientific community. Animal wayfinding tends to be the most impressive, with bees, ants, whales, migratory birds, salmon, etc., performing unexplainable feats of wayfinding, sometimes through a magnetic sixth sense. (Apparently, bees communicate directions with other bees by vibrating at an angle in relation to the sun to indicate direction, and vibrating for a length of time to indicate distance of travel.)

But beyond the miracles of animal wayfinding, *human* wayfinding is also interesting because wayfinding connects with our scientific reasoning and imagination. Wayfinding isn't just a matter of imposing a Cartesian map in your head to make sense of your surroundings. Wayfinding requires you to derive inferences and conclusions from small environmental details. It's a skill that arises from an ability to "feel the land" as well as from cultural and experiential knowledge about a place.

Wayfinding taps into the spatial centers of our brain, the hippocampus, and is closely connected with memory. Think about how the Greeks used memory palaces (*loci*) as a way of storing information in individual rooms. Storing the information in a place allowed them to more easily recall it. That's because the hippocampus isn't just about manipulating spaces and places but also storing memories in those places. Consider *episodic memory*, such as remembering where you were during a historic event. I still remember exactly *where* I was when Mt. St. Helens blew in 1980—fishing at a pond with my dad near his work. In short, memories and places are intertwined. In fact, one reason scientists study wayfinding, O'Connor explains, is because wayfinding is a way to get to memory. Then along the way, scientists also become interested in wayfinding itself.

Overall, from what I can tell, there's not a single theory about how wayfinding occurs in the brain. However, metaphors like the hippocampus as GPS or having a map in your head don't reflect the complexity of what's taking place. A theme O'Connor returns to many times is that wayfinding is more like following music—a cadence that is rooted in various markers in time, and whose progress we can intuit even if we don't see it. O'Connor writes, "Maybe the metaphor at the heart of navigation is not following a map but listening and intuiting the progress of a piece of music" (179).

The music metaphor disrupts the "map" metaphor for wayfinding. We don't have a map in our heads that guides our sense of direction. Wayfinding is an experience in both space and time, and some say our brain connects vista points in sequence over time, such that one landmark triggers another visual sequence. Orienting by way of these landmarks is what's called the *beacon strategy*. Other wayfinding strategies involve dead reckoning ("keeping track of every stage of a journey in order to compute one's location" (174). Some navigate by following stories their ancestors told about the land, such as the Aboriginal Australians following "dreaming tracks," which are "the network of Aboriginal trade routes and cultural thruways that crisscrosses the whole of the continent like a noospheric highway system" (135). People in Oceania approach wayfinding by paying close attention to wave patterns in open water (e.g., sailing to small islands hundreds of miles away).

In a broad statement, O'Connor says, "What is navigation really? Insights into time cells, social space, and music highlight how complex human navigation in the brain is: not just a calculation based on reading a Cartesian map but an unfolding memory or narrative sequence, human relationships, sensory experiences, personal history, or paths into the future" (177).

If there's one enemy to the mental and social benefits of wayfinding, it's GPS, specifically following turn-by-turn directions to get to a destination. GPS removes decision-making and spatial reasoning demands from our brains, potentially atrophying the hippocampus. This atrophy could extend beyond just getting lost more frequently but also spill into areas of cognitive decline, including loss of memory, identity, and imagination. There's no study correlating GPS apps with Alzheimer's, and the author is careful not to assert any relationship. However, even experts admit it's hard not to speculate on some influence. Any part of the body or brain that you don't use atrophies, period. And if the hippocampus handles more than just spatial reasoning but memory, imagination, storytelling, and scientific reasoning, then its atrophy might involve more than just getting turned around as you're driving to Safeway.

In this series, I'll look at how wayfinding requires close observation and immersion in the physical world gives rise to scientific thinking, how GPS affects our sense of wayfinding, and more.

I'll interweave these ideas with my own experiences to try to make sense of wayfinding in my life. I'll argue that our road-dependent infrastructure, specifically the bland suburban landscape, numbs any interest in taking stock of our surroundings and makes navigation more about finding the fastest route from point to point. Given this roadscape and our car-dependent lifestyle, with increasing automation, wayfinding will likely become completely outsourced to algorithms that optimize for more efficient travel times.

2.2 Wayfinding requires you to be present in the world

The need to be attentive and present

The foundation of wayfinding involves a mindset of being present with the world around you. You have to pay close attention to the environment you're interacting with.

O'Connor says, navigation "start[s] with practicing acute observation of the places you already live" (298). As she interacted with various wayfinding cultures—the Inuit, Oceania, Aboriginal Australians—and with wayfinding experts from the neuroscience and psychology fields, she asked people for tips on learning wayfinding and navigation. "Again and again, I was surprised by how simple the answers were," she says. "Learn to draw," said one professor, and then continued, "We don't know how to represent the world well enough. Actually paying attention to the environment, making empirical observations and organizing them into a system—do that" (298).

The first principle of wayfinding is to be attentive to the world around you—so much that you could draw it. You have to be in the world, taking in the full sensory experience, not just the visual landscape, but the topography (inclines, declines), the wind patterns, the light, its history, and basically every detail you can observe and feel.

Being in the world requires that you mediate the world directly rather than by way of a screen. O'Connor says, "…wayfinding is an activity that confronts us with the marvelous fact of being in the world, requiring us to look up and take notice, to cognitively and emotionally interact with our surroundings whether we are in the wilderness or a city, even calling us to renew our species' love affair with freedom, exploration, and place" (10).

Part of the reason I like interacting with maps so much, as I sit on my computer, is because maps represent a form of what's out there, in the real world. By looking at places and planning routes, forays to different places, I feel the exhilaration of knowing that, eventually, I'll no longer be sitting in this computer chair looking at the flat screen of a virtual world but will be physically out in the real world, feeling the sun or rain or looking at gray clouds as I move about on foot, on bike, or use some other mode of travel in the real world.

Unfortunately, even when we go out into the world, modern life erects barriers between us and the world. To get from place to place, we get into our cars and shut the door on the world (putting another screen between ourselves and the world). The sound outside quiets, we adjust the temperature of our artificial environment, turn up the radio, and then move forward without any physical exertion at all. Insulated from the raw experience of the environment, we accelerate across cement landscapes in our own private space, protected from interacting with others except as other car forms. Is it any wonder that, as we cut ourselves off from the experience of the world, our wayfinding skills suffer?

One of the Inuit people O'Connor interviewed said, "Being out on the land lifts you up spiritually, emotionally, and physically. It gives you medication, or meditation, however you want to call it" (36). As someone who spends most of his life working in tech, indoors, looking at screens, I feel a longing for more connection with the outside world.

When I am out in the world, though, it's often in a car due to the infrastructure we as a society have built. The car as a mode of travel not only insulates us from a more direct experience of the environment, it travels too quickly for us to take in details (225). "In a car when you travel, you miss a lot of country, a lot of stories," says one of the Aboriginal Australians O'Connor interviewed (193). John MacDonald, an Inuit researcher, says, "The faster you traverse the land, the less observant of it you become" (Connor 78). Speed has an inverse relationship with the details you take in—the faster the speed, the less detail. The less detail, the less interesting. Pretty soon, the outside is just a blur. Passengers often don't look out the window at all, preferring their phones instead.

The fact that passengers often choose to look at their phones instead of the world passing by isn't surprising. Many of the roads we take follow the fastest route, so there's less to look at because the landscape along thoroughfares is generally more lifeless and plain. Driving down an interstate highway is an activity that induces hypnosis.

In this way, modern modes of travel are at odds with developing skills of wayfinding. Wayfinding experts say to be observant of the surrounding landscape, but our modern modes of travel (driving a car, following efficient GPS routes zipping along highways and thoroughfares) strip the landscape of interest and detail. Our minds tune out the surrounding areas and we focus instead on the radio or podcasts as a way to bide the time until we reach our destination. And yet, in many of the cultures O'Connor studied, the journey was part of the reason for the trip. One group in Oceania seemed to embark on a long sailing trip to a distant island to acquire some small grocery item, not for the item, but for the opportunity to sail across the water.

Sailing across ocean blue water is one thing, but driving across town at rush hour is quite another. In *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*, James Kunstler describes the appeal of walking through car-dependent infrastructures in suburban areas as follows:

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> Here there is no pretense of being in a place for pedestrians.
The motorist is in sole possession of the road. No cars are park
ed along the edge of the road to act as a buffer because they wo
uld clutter up a lane that might otherwise be used by moving tra
ffic, and anyway, each business has its own individual parking l
agoon. Each lagoon has a curb cut, or two, which behaves in prac
tice like an intersection, with cars entering and leaving at a r
ight angle to the stream of traffic, greatly increasing the poss
ibility of trouble. There are no sidewalks out here along the co
llector road for many of the same reasons as back in the housing
development—too expensive, and who will maintain them?—plus the
assumption that nobody in their right mind would ever come here
on foot.


> Of course, one could scarcely conceive of an environment more
hostile to pedestrians. It is a terrible place to be, offering n
o sensual or spiritual rewards. In fact, the overall ambience is
one of assault on the senses. No one who could avoid it would _w
ant_ to be on foot on a typical collector road. Any adult betwee
n eighteen and sixty-five walking along one would instantly fall
under the suspicion of being less than a good citizen. (116-117)
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Kunstler's book, written in 1993, couldn't more accurately describe the suburbia where I live (Kent/Renton). It's not a place where one walks. You drive everywhere. The walk score in my area is 10 (out of 100). If you do have to walk somewhere commercial, it's usually an unpleasant experience, treading on hot sidewalks beside busy roads with cars flying by at 45mph. When I see other pedestrians here, my first question is usually, why is this person walking here? Are they stranded? Are they homeless?

The other day I decided to bike home from the train station (a 5-mile ride, partly uphill). I rarely biked this segment because there weren't any suitable bike routes, so I pedaled along the sidewalks next to car-dominant routes. Here are some scenes from the ride:

These scenes wouldn't inspire anyone. They look like any other suburban city street: unmemorable, boring. At one point I passed a lady sitting on a curb in front of a Starbucks. I couldn't tell if she was lost or just waiting for someone. She looked down at the cement,

as if her life had been one depressing event after another. Or maybe she was just bored and her phone was dead. I couldn't tell, but her vacant stare toward the ground seemed fitting for the landscape.

In such suburban, car-dependent areas, can one develop an interest in the place? Can you ever develop the emotional attachment necessary to become a close observer of the land in a way that would yield more natural wayfinding abilities? Immersion in the cement infrastructure doesn't uplift you spiritually, connect you with stories from your past, or invite you to explore its rich detail with a fully present mind. It's more of a landscape where you want to get from point A to point B in the fastest way possible. It's no wonder that we've lost interest in wayfinding.

In *Walkable City: How Downtown Can Save America, One Step at a Time*, Jeff Speck, an urban planner, argues that a city's vitality and interest depend on its walkability. Unfortunately, thanks to city engineers and the prioritization of traffic flow, cities have largely been reshaped around the needs of the automobile, with wider streets and faster speeds along those streets. The prioritization of cars in cities "turned our downtowns into places that are easy to get to but not worth arriving at," Speck says. That pretty much describes the suburban scene we live in. It's easy to get to many of these places, but are they worth going to? There's a little shopping district near my house, complete with Fred Meyer, UPS, T-Mobile, and a bunch of other stores that litter the country in similar shopping districts.

For downtowns to be walkable, Speck says "a walk has to satisfy four main conditions: it must be useful, safe, comfortable, and interesting." *Useful* means you can get common household items. *Safe* means protected from cars hitting you. *Comfortable* means that many of the streets resemble "outdoor living rooms." And "*Interesting* means that sidewalks are lined with unique buildings with friendly faces and that signs of humanity abound." If walking doesn't satisfy these conditions, we walk less.

I've only experienced a handful of urban hubs that satisfy these conditions. Walking down Broadway in New York, for example, or walking along Capitol Hill's Broadway Street in Seattle, or walking in the financial district in San Francisco. The unique shops and people on these urban streets give them an interesting feel.

Most downtown areas near where I've lived, however, such as downtown Renton or downtown Tacoma, fail to meet any of these qualities. Walking to my local Fred Meyer might be useful, but the walk would take 45 minutes instead of a 5 minute drive. The walk is safe, but the cars are so loud and frequent, you can't even listen to podcasts. The walk is comfortable in the sense that you're not on the road, you're on a sidewalk. But there's no tree cover or other shade. It's usually hot, long, and tedious. Finally, as for *interesting*, walking along these sidewalks does not provide any visual interest at all. There is only the road, cars, and more cement.

Affinity for a place

Paying close attention to the land requires some affinity for the place you're in. If you have deep cultural, historical, and religious ties to the land, you are more likely to take in those details and remember them. Aboriginal Australians and their Dream Tracks are certainly examples of this. Even a watering hole might have a rich history to it.

O'Connor uses the term *topophilia* to describe "the sense of attachment and love for place" (296). If you establish a connection to the land, you'll be more likely to carefully observe its details. "If you're paying attention and listening, often there is a whole other

story, telling us where we are," explained one of the Oceania people, talking about sailing (245). You can't see that hidden story unless you slow down and absorb the details of an area.

O'Connor says that to develop topophilia, we have to accumulate treasure maps of memories: "Across cultures, navigation is influenced by particular environmental conditions—snow, sand, water, wind—and topographies—mountain, valley, river, ocean, and desert," O'Connor says. "But in all of them, it is also a means by which individuals develop a sense of attachment and feeling for places. Navigating becomes a way of knowing, familiarity, and fondness. It is how you can fall in love with a mountain or a forest. Wayfinding is how we accumulate treasure maps of exquisite memories" (297).

Not just maps, but *treasure maps*. To develop an affinity for a place, you have to learn its history and stories—its treasures. In the United States, we move from place to place every five to seven years, whether for job opportunities or other circumstances (or just boredom). As such, it's difficult to know an area beyond a superficial level. With such transience, how do we move from superficial maps to treasure maps?

A place doesn't have to be spectacular to be a treasure map. Our sense of place as home usually has deep roots in our psyche. Think about why one of the first questions we ask each other is "Where are you from?" Why does place matter so much? Where we grew up is much more than just a logistical question. Place references your home. And your home shapes our identity. So how does a place, even as dreary as commonplace drive-everywhere suburbia, become your home?

For O'Connor, her home "was the small, scrappy chicken farm that [she] had loved so much and so briefly as a child" (304), a place that "shaped [her] like clay" (305). I grew up in a small town in a dairy valley (Burlington, Washington), and like O'Connor, I can also still trace the map of my childhood's neighborhood—the slough in the back along a dirt trail, the roads up to the city's central park with its baseball fields and dirt mounds for biking, the long gravel roads along the dike out to the Skagit River and its sandy/dirty shoreline, the dirt farm fields where I rode around on my motorcycle, the strawberry fields where, as a sixth grader, I picked strawberries for my first job, the tall cherry tree we used to climb. The places on my treasure map are the small home I grew up in, especially the large tree out front that we used to climb up to watch people pass by. And then the large dirt farm field out back, which runs up to the edge of a dike protecting potential flooding from the Skagit River.

And yet, if a stranger were to drive through Burlington, this area would be indistinguishable. It looks like just any small town whose economic livelihood is waning and where people live in 75-year-old homes that haven't changed much with the passage of time. But for me, the map is my treasure map.

The field out back

This is the house where I grew up

Although Renton's downtown area holds little appeal, I am, in fact, located in one of the most beautiful areas in the Northwest. South Seattle might be an unappealing industrial wasteland (with some warehouses and complexes that would make IKEA look small), but southeast King County (Kent, Renton) sits at the edge of the Cascades in a lush, green area filled with tall Fir trees, watersheds, and rolling hills. Drive east for 15 minutes from Kent and, given the rolling rural landscape, you might think you're in another area entirely.

Taking the scenic route

The other week I needed to drop my 11-year-old off at a week-long summer camp near the Cascade foothills. I first routed to the destination using Google Maps on my computer. The initial route followed Highway 167, which parallels I-5. Two alternates were also proposed. Trying to break out of the pre-programmed, lifeless road routes, I decided to travel along a custom scenic route. (Taking the route not optimized for speed is almost never the default.)

The recommended route following I-5 gets you there just 1 minute faster than the scenic route, which passes through the foothills of the Cascades with green wilderness and hills to the east. The scenic route adds just 1 minute of time. The freeway route even adds 5 more miles of distance, which means you're traveling faster, so everything will be even more of a blur.
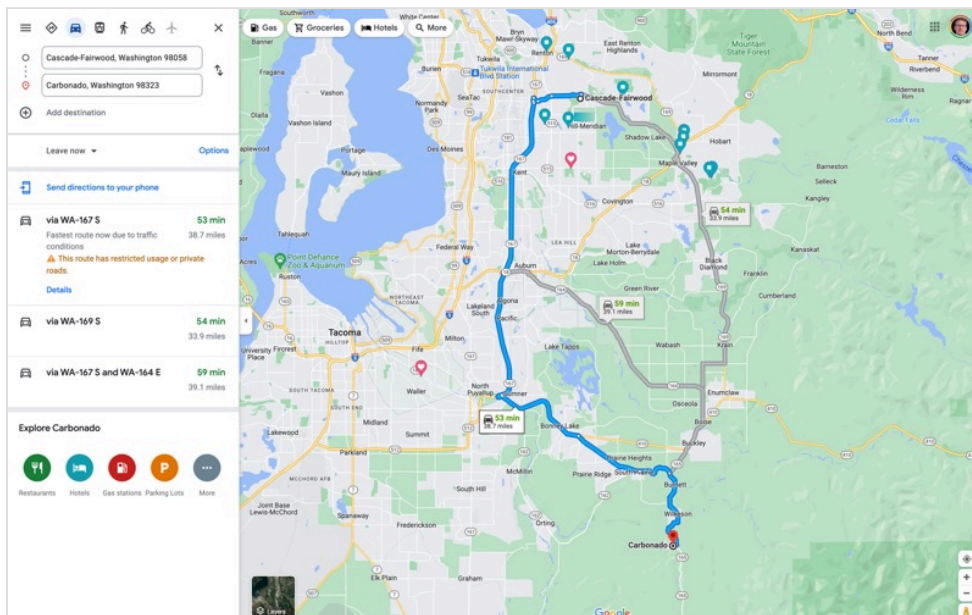
Recommended route
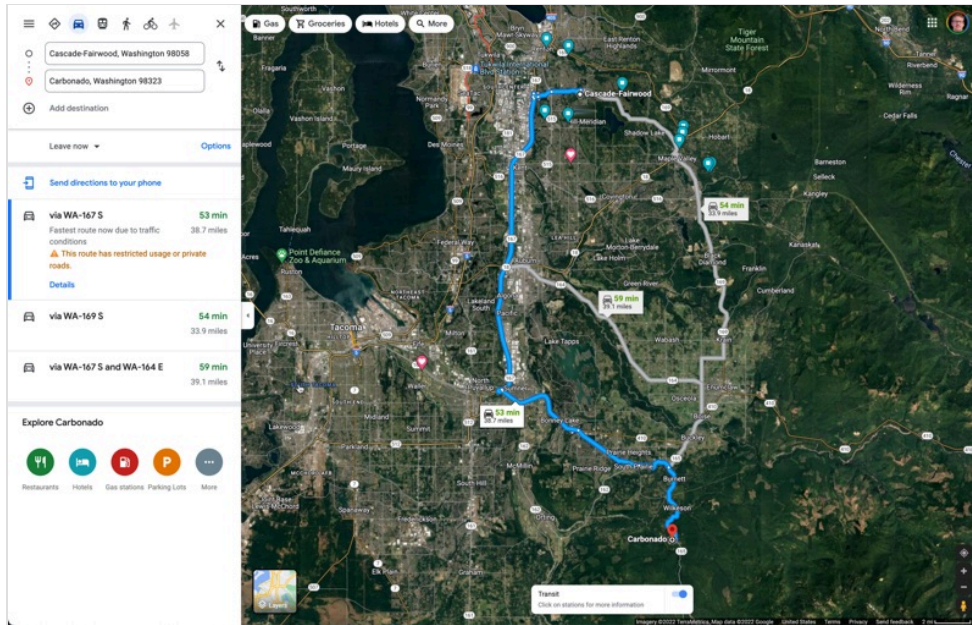
Green areas

I didn't want to use GPS to get to the camp, so I ended up printing off the map. Even traveling this short distance (a one-hour trip) made paper maps problematic. My printed map of the area (a GM Johnson City Map) didn't extend into Enumclaw, and I didn't have another map of that area with the needed detail. I tried printing off the route overview but it lacked the scale for the various connection points and turns that I'd need to make. This is one problem with relying on a printed map—if you drive more than an hour, you often exceed the scope of the map. If you get a larger scale map, it doesn't show detailed information in the areas you're driving. And I didn't have a Washington Atlas.

In the end, I took screenshots of the various connection points and referenced them from the larger map, with a few notes.
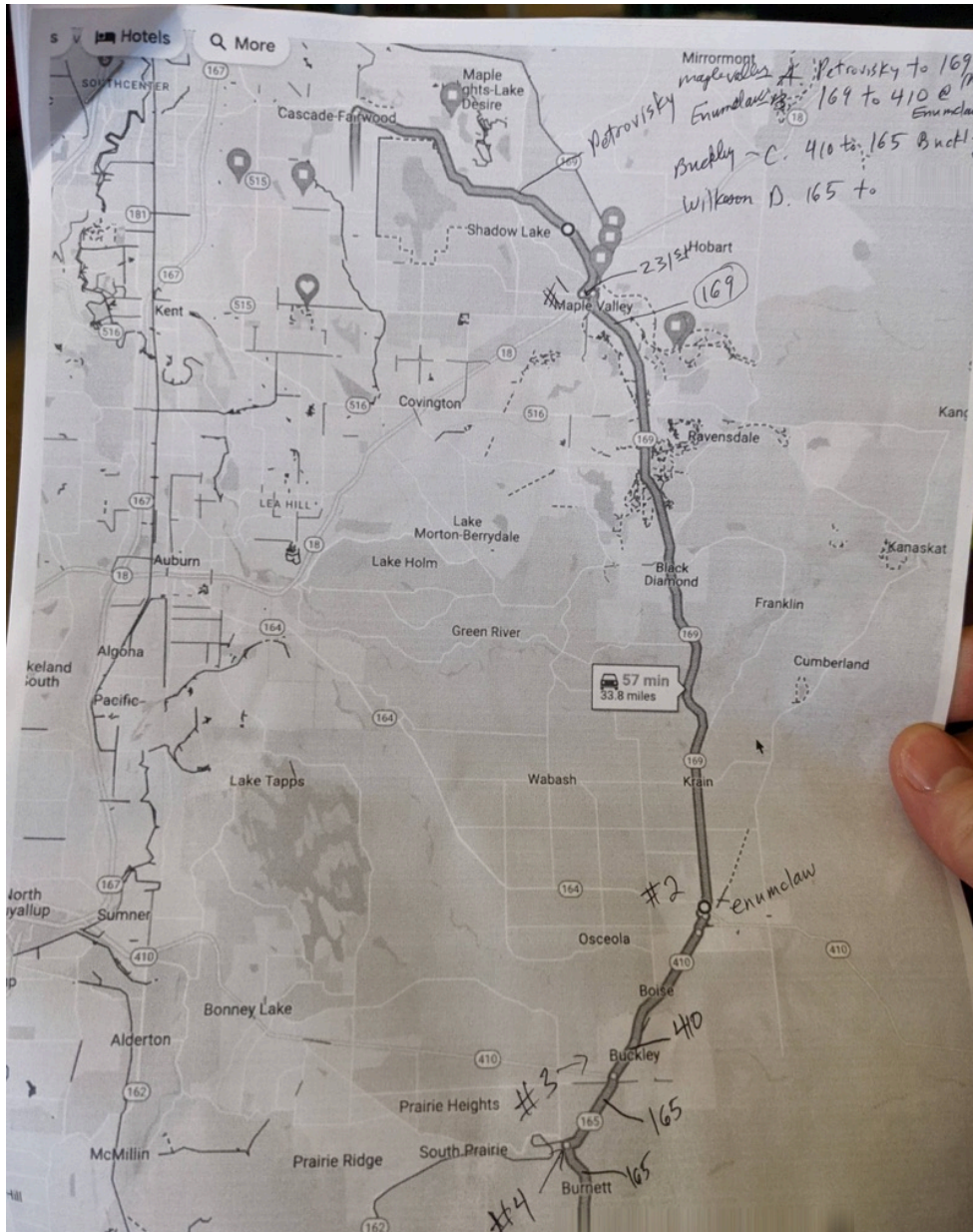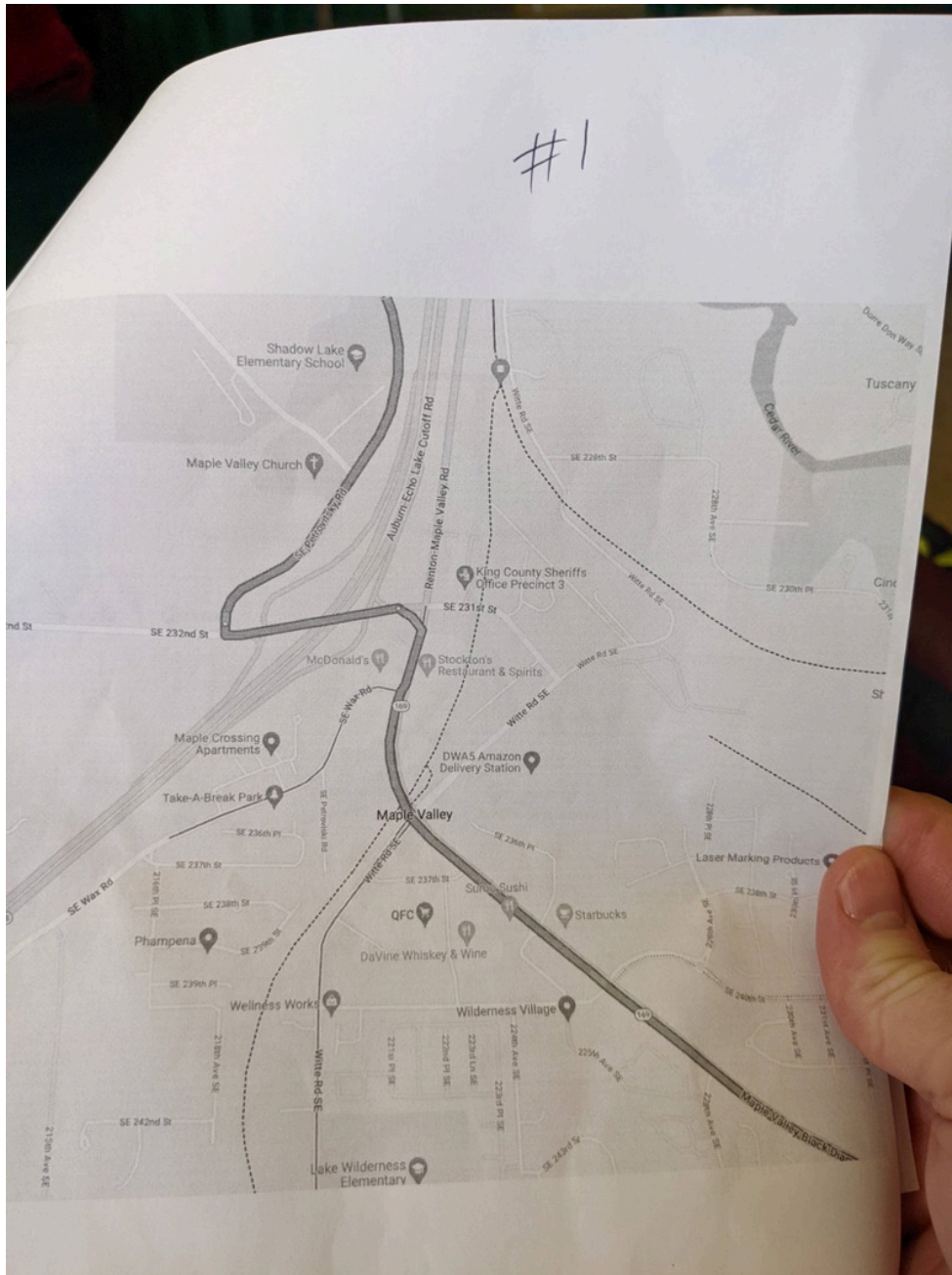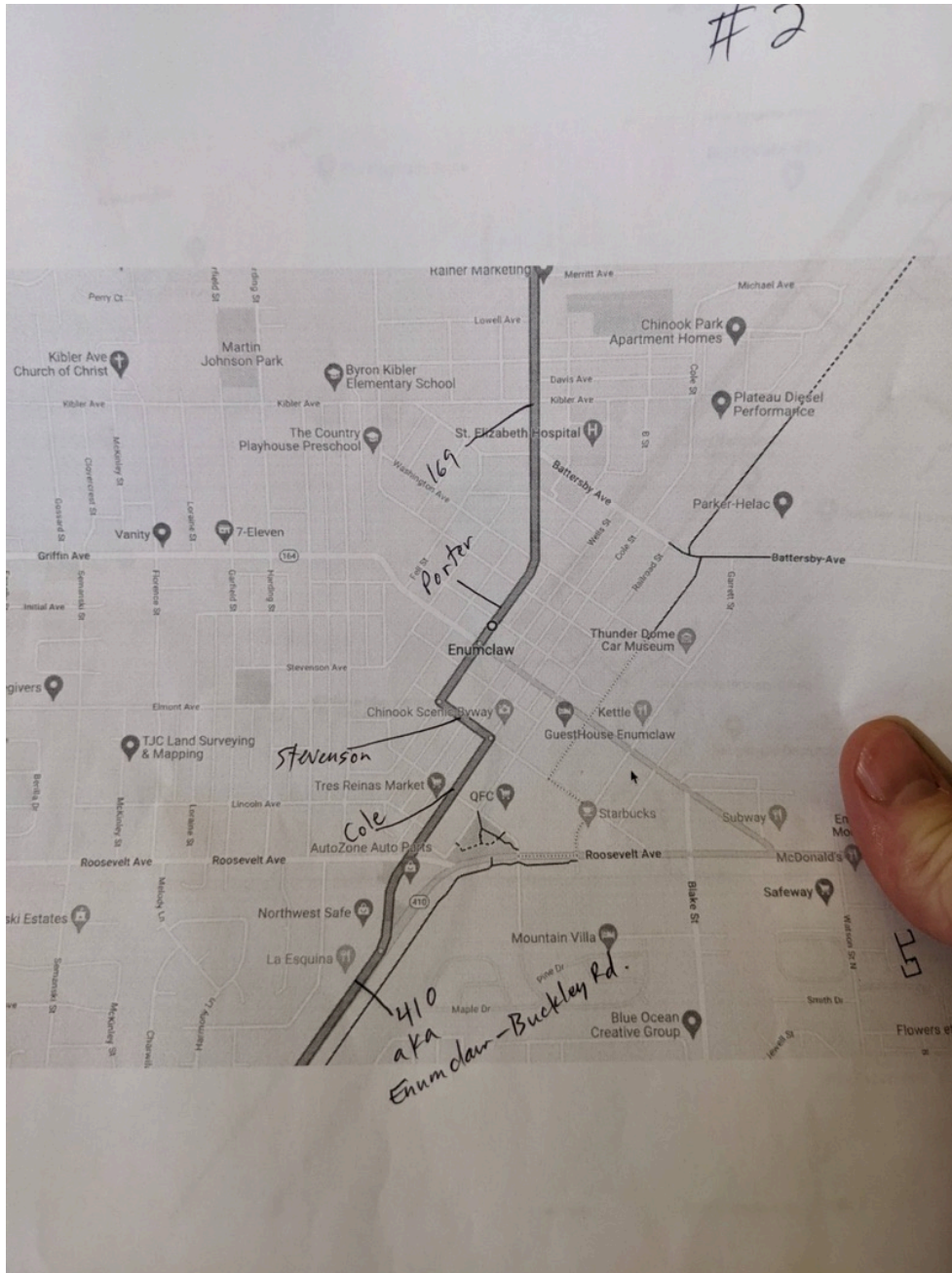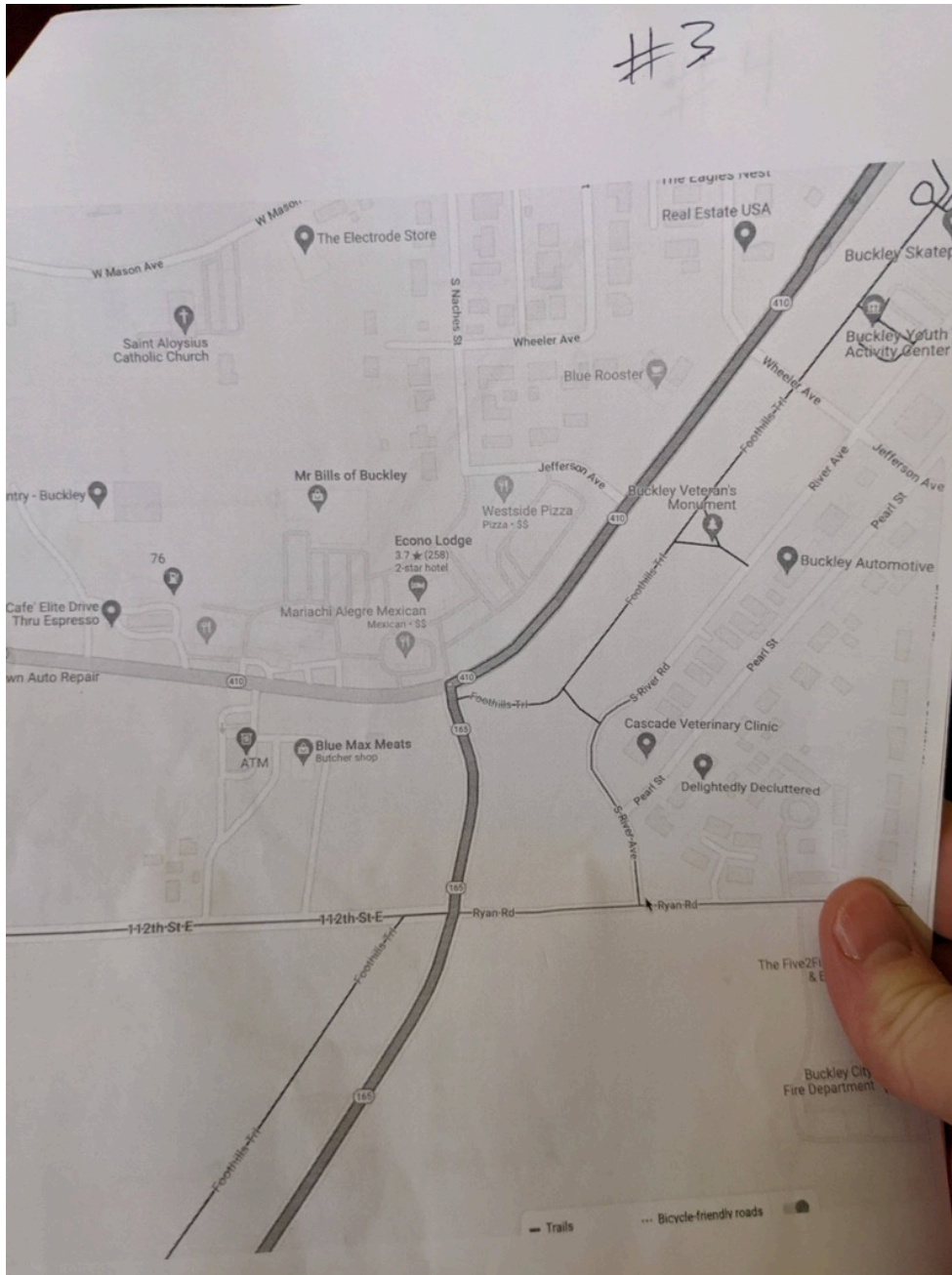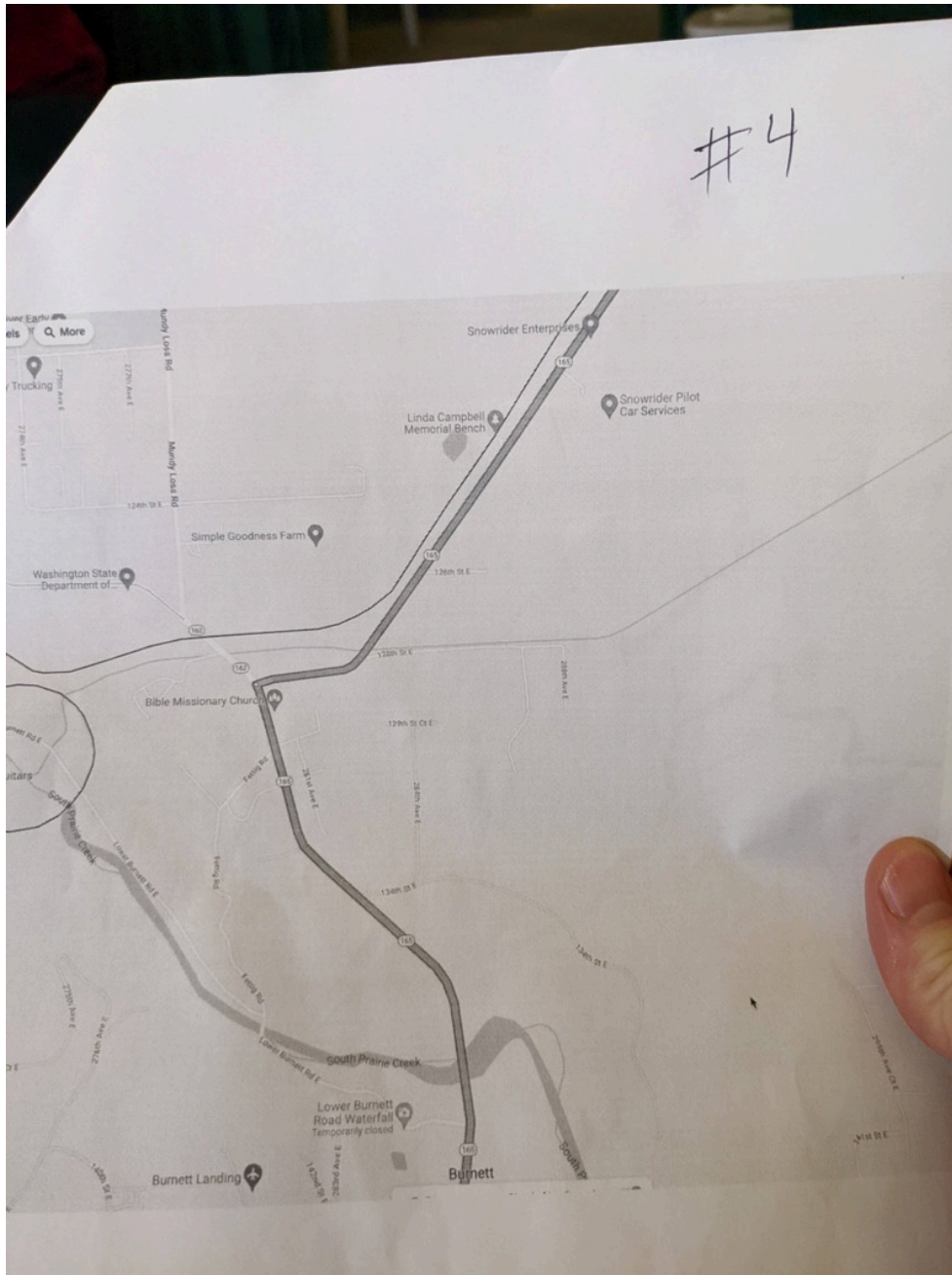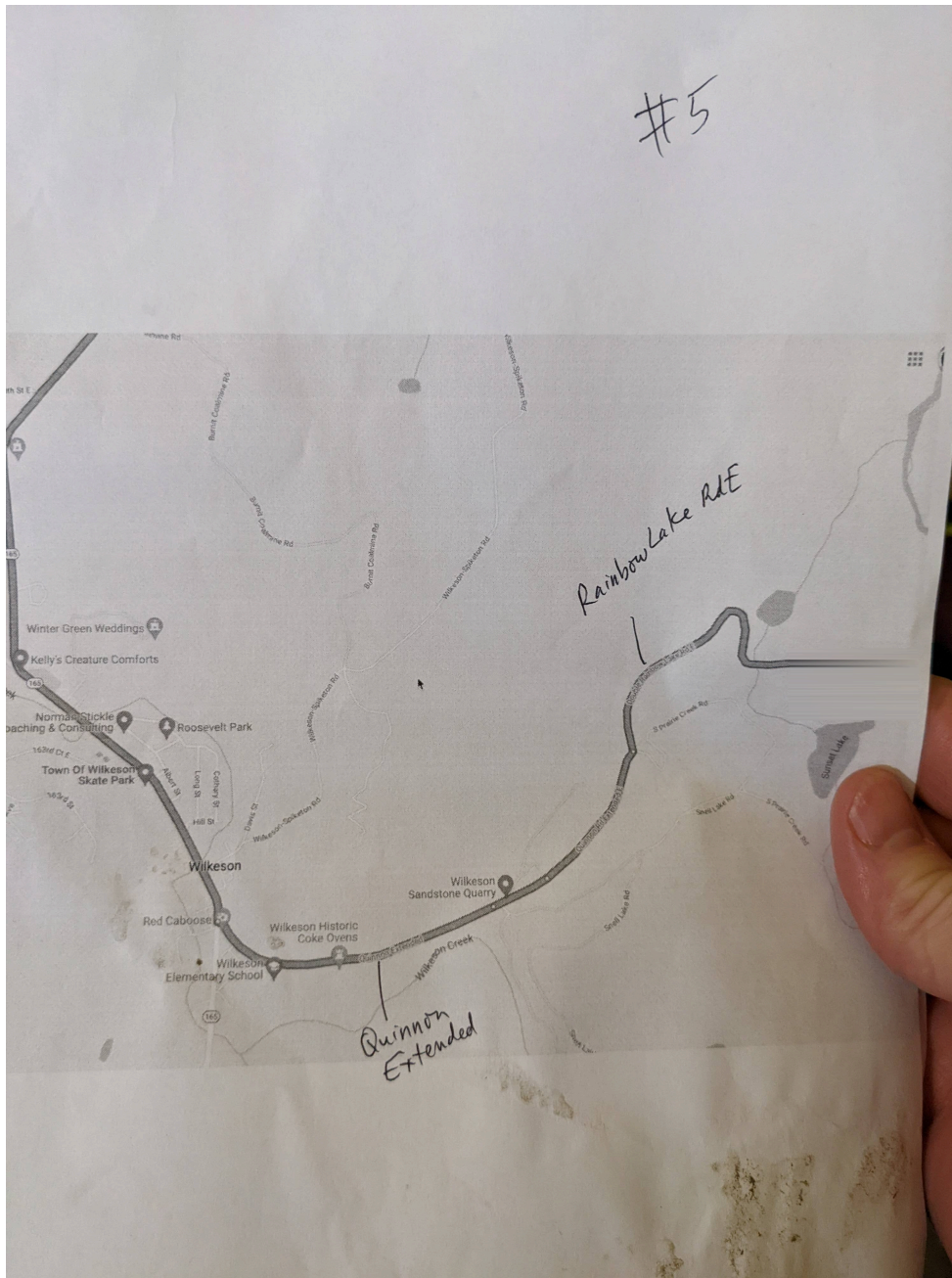
Albeit tedious, this method also allowed me to study the route a bit more. The drive was, in fact, much more scenic and enjoyable than the time-optimized route along I-5. My 15-year-old and 17-year-old are both learning to drive, so I sat in the front passenger seat, fully attentive and alert (even more so than when I'm driving because they're both still novices), and navigated for them while they drove. We stopped in Wilkeson and ate at a small diner called a Simple Goodness Soda Shop that had interior decor described as "Americana Mining Town chic."

Soda shop

Modern GPS technology optimizes our route algorithms on the principle that getting to a destination the fastest way possible is the preferred route. There's no setting to adjust for that. Instead, you have to venture out of your way to find more scenic routes. Even as my children drove (which can be somewhat terrifying), it was much more peaceful to travel a bit slower and through this lush green area. I developed more of an interest in the towns and scenery. I wanted to know more about the history of places like Buckley, Enumclaw, and Kangley.

Scenery in the green area

If I really wanted to develop wayfinding skills, the next step would be for me to learn the stories of these places, to maybe make day trips into these areas and be more observant of their city details and environment. In short, to cultivate a sense of topophilia. Topophilia doesn't naturally develop from a picturesque vista or two. Topophilia comes from spending time and having experiences in an area, either by living there or learning from those who do.

<figcaption>Scenery in the green area</figcaption></figure>

At least the paper maps helped me stay focused on the environment. We did get lost briefly, though it involved only a 10 minute detour. I sensed we were off course, checked the GPS to confirm it (I pulled my phone out of my bag), and then backtracked to realign with our planned route. I don't think GPS itself is bad; it's relinquishing our own decision-making to the turn-by-turn directions of an algorithm that might be at odds with our goals (like optimizing for speed instead of for place), without thinking about that algorithm or questioning its omniscience.

As we drove, I kept my focus on the area. In other words, I looked up. Some researchers say navigation involves connecting vistas, "traveling along a particular route so as to generate or re-create the temporally structured flow of information that uniquely specifies that path to the destination" (O'Connor, 181). These vistas connect in sequences that mimic the temporal harmony of music. Véronique Bohbot, in *The Hippocampus as a Cognitive Map*," explains:

> Once you have learned the relationship between landmarks, you can derive a novel route to any destination from any starting position in the environment. Spatial memory is allocentric [outside your own perspective], it's independent of your starting position. You use spatial memory when you can picture the environment in your mind's eye" (qtd. in O'Connor, 263).

Some landmarks can help orient me—a flowing river, for example, or mountains in the distance, especially Mt. Rainier. Distinctive landmarks aren't often visible through a barrier of similar-looking fir trees, though. But by studying my route, I'd become familiar with the sequence of towns: Maple Valley to Black Diamond, then to Enumclaw, Buckley, Burnette, Wilkeson, and so on. As we drove, road signs often indicated junctions to those

connecting towns (this way, rather than looking for the junction to the 410 or the switch to the 165, you just followed the sign that pointed to the next town in the sequence). Rather than natural landmarks, the small towns themselves provided visual cues about how to navigate without GPS.

Did this more scenic route and heightened attentiveness unlock wayfinding in a way that would allow me to make the journey again by memory? I doubt it. But perhaps if we drove it a couple more times, yes.

Besides wayfinding, though, there's something else that's valuable: the mindset that comes from being in control of where you're going.

2.3 Spatial and scientific reasoning from wayfinding

Origins of scientific reasoning

Regardless of whether you actually develop successful wayfinding skills, there's another reason for wayfinding: it stimulates spatial reasoning within your brain's hippocampus. This gets closer to the reasons why neuroscientists and other academics are fascinated by wayfinding. The hippocampus is the area of the brain that lights up during wayfinding. However, the hippocampus doesn't just perform spatial mapping, it encodes events in a location context in your memory and gives rise to scientific thinking and imagination.

Some researchers think scientific reasoning developed as a result of early hunters tracking animals by interpreting signs. This is called the *social trackways theory*. O'Connor says, "Hominids are animals that learned to 'read' the tracks of other hominids and animals and eventually infer meaning about events that happened in the past from these symbols. This enabled them to predict future behaviors based on these stories and use them to find one another, avoid predators, and successfully hunt prey" (105). In other words, as early humans tried to find the locations of animals, they had to look closely at tracks and interpret signs in the environment. They had to assemble these signs into a coherent story that would explain which animals had been there and predict where they went.

Louis Liebenberg, Harvard professor of evolutionary biology, says "[trackers] have to create a working hypothesis in which spoor evidence is supplemented with hypothetical assumptions based not only on their knowledge of animal behavior, but also on their creative ability to solve new problems and discover new information."Liebenberg argues that "rational scientific thinking didn't originate with the ancient Greeks but with hunter-gatherers" (qtd. in O'Connor, 218-19).

Tracking requires a significant number of logical inferences and deductions. This thinking eventually led to similar analytical thought processes like Sherlock Holmes, Freud, and others, O'Connor explains (101). "Our existence depends on thousands of instances of inference and deduction that allow us to draw conclusions about other people and things, what has happened and what will happen," O'Connor says (103). The hunter constructs a "narrative sequence" based on perceived signs to indicate what happened in a place and where an animal ventured to (102). These narrative sequences gave way to story and storytelling, which some academics believe is the centerpiece of human intelligence (122-23).

Apparently, this same reasoning process also led to *autonoetic* thought processes, in which humans are able to see themselves from an outside perspective. The "autonoetic consciousness" is "the capacity to be aware of one's own existence as an entity in time" (105). If you can imagine why an animal was in a place and where it traveled to, you can apply the same thought processes to yourself. You can observe your own self as if an outside observer, analyzing and perceiving yourself and your actions as if from another person's perspective.

As you can guess, these reasoning processes aren't active when people blindly follow turn-by-turn directions in a GPS-based app. If you're not making decisions, you're not getting any of the benefits of wayfinding. In fact, most of my wayfinding doesn't involve anything approaching the kind of observations and deductions required to track animals. In my

wayfinding, I study a map beforehand, identify what appears to be a good route, commit it more or less to memory (maybe with some notes on paper, or by printing it out), and then navigate there. I make a minimal number of decisions about the route—optimizing for ease, efficiency, and sometimes scenery.

The type of reasoning involved in animal tracking is much more Sherlock Holmesian. While I was reading this section of O'Connor's book, one of my daughters lost her iPhone. Other family members looked all day for it without success. Filled with confidence, I hoped I could track down the phone's whereabouts. Like an early hunter thinking through the details, I narrowed down the last time she had the phone, events that day and since, potential places it could and could not be, a radius from the last known location before the battery died, common places where my daughter interacted in the house, and more. I thought I could think through the problem, or potentially eliminate all other possibilities until arriving at the location the phone must be. Alas, despite my initial confidence, I did not locate the iPhone. It is still lost.

However, the experience made me more aware of this scientific reasoning and how it connects with wayfinding. I think similar modes of scientific thinking could be observed in non-wayfinding scenarios. For example, programmers who track down the source of tech bugs employ similar logical skills. To troubleshoot, programmers might isolate different elements to test. Or, they might strip down a piece of code to its simplest form and then build it back up piece by piece, analyzing the effects of each addition until the code breaks. They might search error messages, log files, recreate the issue and observe different analytics (memory usage, performance waterfalls, etc.) all trying to track down the whereabouts of the faulty code. They might identify all the components in a system and draw arrows in how they interrelate, and do other tests to suss out the issue.

When you're problem solving, you're paying close attention to detail and making many decisions and adjustments based on observations and feedback. Although it's not animal tracking, I've spent many hours looking at bike routes in the areas near me, trying to find the most ideal routes. Which streets look safe? If the streets lack protected bike paths, are there sidewalks? Are the sidewalks long unbroken stretches, or are they full of intersections? If it's just a bike shoulder, how fast are the cars traveling? Can they see me if I'm riding on the road? Does the route get me to a public transportation hub that could connect me to another part of the city? Would a bus, a train, a light rail, or some other transportation service be available at the starting location and destination I want to reach? What combination of car + train + bike would work best to get me there in about an hour? Which segment of the journey is best accomplished by each mode of travel? What's the maximum length for each segment mode? Would a longer and more scenic route be safer even if it added 20 minutes to the ride? Would an eBike allow me to ride a longer distance or just create other issues? How does rain complicate the route? Is it uphill or downhill? Which time would be best to leave at? If I optimize for time but sacrifice exercise, is that actually saving me time? Can I be productive on a train? What about train productivity during rush hour, when only standing room is available?

I've spent days looking at maps, then exploring areas in experiential ways, taking note of the widths of bike paths, the inclines or declines, traffic congestion, stop-and-go momentum with lights, and more. Then I take this feedback and adjust my routes and plans. Does this attempt to find optimal bike routes qualify as wayfinding? Does it involve enough decision-making, experimentation, imagination, logical inferences from signs, feedback loops, and other judgements to cause my hippocampus and prefrontal cortex to come alive? It's certainly using more of my brain than following GPS turn by turn.

Keeping the wayfinding mindset fresh

With wayfinding, one danger is that once you find a route, that route becomes a habit. When you no longer use your spatial reasoning and deductive powers to wayfind, your hippocampus no longer gets used. The caudate nucleus instead encodes the path as an automated habit. O'Connor says when this happens, "autopilot takes over. You see the white building, it acts as a stimulus and triggers a response to turn left to get to the bakery" (263).

This pattern befalls successful wayfinders, because as soon as you find your way and start taking that route time and again, all the brain benefits of wayfinding seem to disappear. To counter this, O'Connor says you need to vary your routes, try unfamiliar paths, and more. You want to avoid automation taking over. "Take new streets and shortcuts to get places; regularly draw a bird's-eye view of your environment with landmarks; incorporate new behaviors and routes into your daily life" (268).

Reading this, I thought about how my wife likes to go hiking in the same trail system (Lake Desire). She's been there so many times (75 or more within the past year, for sure) that she knows the right way to turn on the many unmarked trails. She no longer has to think about whether to turn left or right at the many forks and junctions. Although the trail junctions do have signs, she's long past the point where she even looks at them. She can put aside any thoughts about wayfinding and focus on a podcast or chat with a friend. She turns at each fork in the trail without even thinking about which way to go. It's the same way that driving home, when I get to about 2 miles from our house, I no longer have to look at road signs because the landscape is visually familiar.

I sometimes accompany my wife on hikes. On the most recent outing, I asked if we could explore somewhere entirely different. So instead of Lake Desire, we headed to Henry's Ridge. The trails were spaghetti (a compressed pattern designed more for mountain bike riding, it seems, rather than hiking). I printed out a map and we tried to navigate by looking at various signs. However, the map was rudimentary and seemed incomplete compared to the reality of the trails. Nevertheless, we compared signs posted on trees with trail names on the map and made educated guesses.

We walked first along Stingr trail and then on Beaver Trax, over to Ravensdale Lake, then up Snake trail and across Bail trail and then following some wider general access paths and who knows what—eventually, we just started walking in a general direction toward the lake, and then on the return, the general direction toward the car. My wife checked her GPS to ensure we were heading in the right direction.

By trying an unfamiliar route, we were forced into a state of more acute awareness of the environment, especially when we weren't sure which way to go. This hyper awareness prompted my wife to take more stock of the many types of trees, plants, and other vegetation. At least a half dozen times she paused to use her naturalist app to identify the type of tree/plant/shrub we were passing.

Her awareness and sense of detail were heightened precisely because we'd taken an unfamiliar route in an unfamiliar location. This is my entire point here. When you try new routes and places, your hippocampus wakes up, your spatial senses kick into gear, and your alertness and awareness of everything around you spikes.

Correlating the map to the world

In fact, a few times we could no longer correlate our location on the map. Comparing a map's drawings with what you see in real life is always a mismatch, which is the whole difficulty of wayfinding. The mismatch reinforces the notion that maps are metaphors for the environment, optimizing for some detail the map maker wanted to emphasize. By definition, maps must be a rudimentary subset of what we actually observe in the environment. This mismatch between the map (what we see on paper) and the world (what we see looking around us) is what forces our brains to make associations, interpretive leaps and to infer conclusions from small details. We interpret a 2D line on paper to represent the trail ahead.
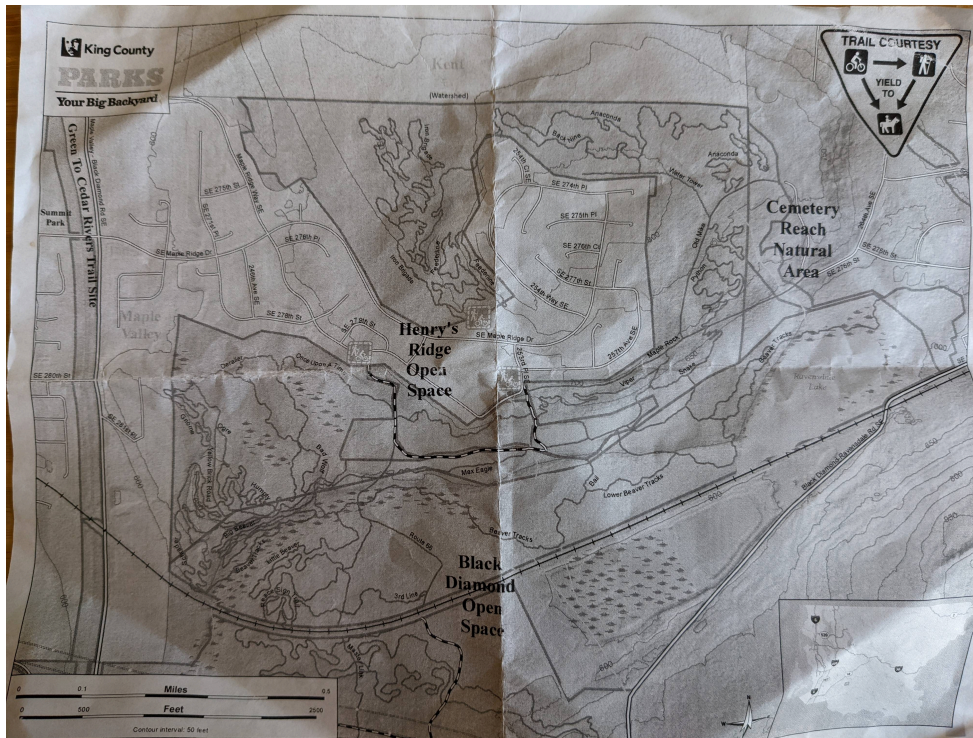
Henry's Ridge Map

When we're faced with this mismatch, we're forced to use spatial reasoning to make some kind of correlation between a model on paper and a model of reality. When the map doesn't seem to match reality, that's when the brain's spatial powers kick into overdrive. On the map, do we see a bending scribble for this trail fork? But why is only one path shown on the map rather than a fork? What other landmarks can we see to confirm that what we're looking at is in fact this mark on the map?

Following a trail map is similar to following product instructions to put together some physical product, such as a dresser or, in our latest purchase, a composter. One locates the instructions, looks at the pictures, and then tries to map the how-to guide's images to the physical pieces, screws, and other unfamiliar gizmos in the box. Then step by step, we correlate the assembly actions with the various pieces strewn all over the floor until we build the object.
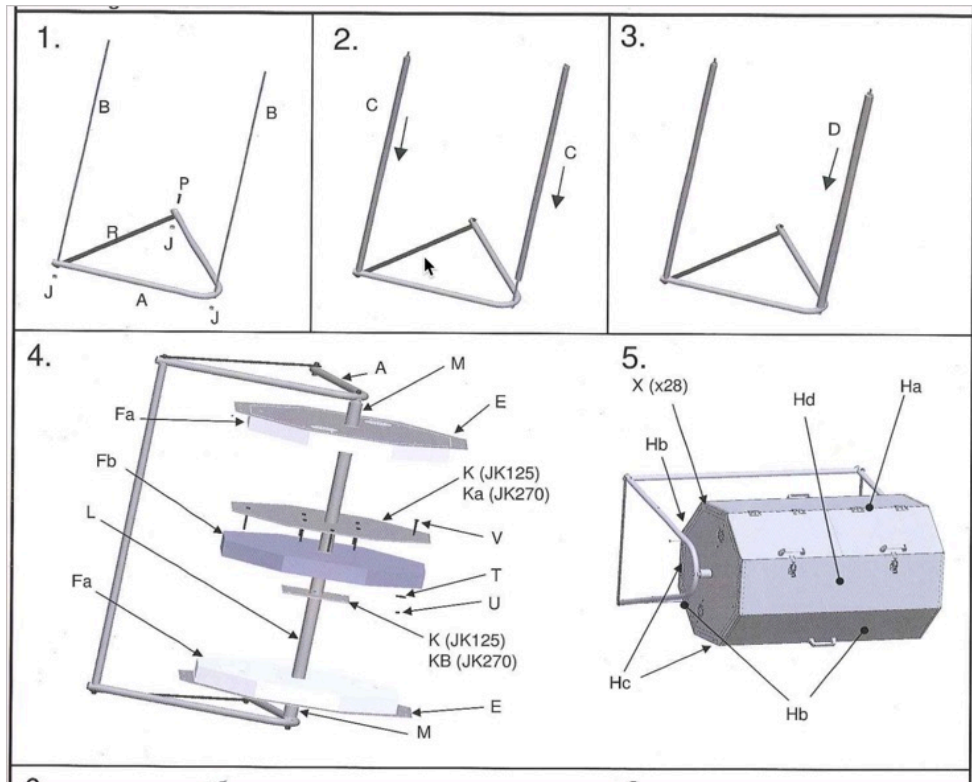
In other words, instructions (especially highly visual ones) are a map that the user must try to follow. It involves a high degree of spatial reasoning, comparing, matching, intuiting, and more. Pieces might look almost similar except for the presence or absence of a single screw hole. Assembling things isn't something anyone can do without practice. My youngest daughter (11 years old) is a skilled artisan with cardboard, but she flounders when assembling an IKEA desk.

My wife, on the other hand, scored high on the ASVAB test (a military spatial-reasoning test), and seems to have a knack for interpreting instructions to assemble products. When I assist, I often want to be the grunt who does what she says (e.g., insert this screw here, bolt this there) because I know that being the interpreter, her role, requires much more reasoning, spatial interpretation, and identification. It often makes my brain hurt. I supply the screwdriver, she supplies the brain.

Getting lost

There's also an argument for ditching the map entirely and just going with the flow. In Mary Oliver's essay "Upstream," Oliver remembers a time during her youth when others thought she was lost, but she was really just following a river far upstream, entranced by the beauty of the natural world so much that she ceased to take note of her camp location or the standard trails and other boundaries. Remembering this time, she writes poetically:

> Sometimes the desire to be lost again, as long ago, comes over me like a vapor. With growth into adulthood, responsibilities claimed me, so many heavy coats. I didn't choose them, I don't fault them, but it took time to reject them. Now in the spring I kneel, I put my face into the packets of violets, the dampness, the freshness, the sense of ever-ness. .... May I stay forever in the stream." (7)

There's a kind of beauty in being pulled into a natural setting in an immersive way such that all other matters fade into oblivion. This kind of getting lost means becoming engrossed in nature's detail rather than in the cares of the world.

Oliver's celebration of being lost is quite a different type of lost than Bill Kilday describes in *Never Lost Again*. Kilday, a member of the Keyhole team that created the app that later became Google Maps, recounts a time when trying to navigate through Boston's streets to find his way home to a wife. His wife, trying to calm a screaming baby, had called him twice asking when he'd be home, but he kept getting turned around and couldn't find the right exit or turn. Many roads in Boston have the same names (e.g., "Cambridge") because they were named after the place the road led to. Kilday writes:

> My wife, Shelley, at home with a screaming baby, had already called twice. 'Where are you?' In frustration, I pounded my fist against my car's dashboard, yelling at nobody but myself, while driving five miles in the wrong direction down Route 2, looking for the next roundabout. Or maybe it was 3A? From 2000 to 2003, I lived in Boston—and I was frequently turned around. The city was merciless to a transplanted Texan: It was like a foreign language. The locals seemed to take pride in the missing signage, serpentine streets, and roundabouts. You needed to solve a math equation to navigate some intersections." (xi)

In *Wayfinding*, O'Connor talks with a landscape historian named John Stilgoe who says that becoming lost is a rare treat, as it allows the mind to wander. Stilgoe says that "busy, rushed Americans … no longer take the time to explore and discover their surroundings and have lost their capacity to even see them directly" (290). O'Connor explains:

> To him, getting lost is an opportunity for discovery, one that demands that all the senses come alive, and creates a maximum alertness in which observation and possibility are heightened (290).
>
> When you're in an unfamiliar surrounding, not sure of which way to go, it changes your sense of perception. Everything looks new.

The other week I went for a walk outside my house and ran across a small path through a wooded area that I'd never noticed before. I took it and soon emerged onto another street that was entirely new to me, as it didn't have any other connecting streets in our neighborhood. As I walked down the new street, I noticed the houses were much older than the more recent subdivision buildouts. My eyes traced the lines of each house I passed. I felt like I'd stepped back in time to the 1980s, possibly in a different town. The street continued much longer than I anticipated, and I started to second-guess which direction I was heading.

"If I'm lost and I don't have anyone to ask, I love that feeling," Joe Stilgo says. O'Connor notes that Stilgo distinguishes "between being desperately lost in dangerous circumstances and getting lost in a generally unknown place. In the latter case, to go off track is really about challenging the borders of one's familiarity, pressing beyond the known spaces of our understanding and experiences and into the new" (291-292).

I'm sure that if Kilday were to suddenly become intrigued by Boston's serpentine streets and get lost in thought as he explored the area with novelty and wonder, he would have found his clothes and belongings on the porch when he finally arrived home. Even so, whether you're intentionally lost or accidentally lost, your perception determines the value of the experience.

2.4 Driving without GPS -- the desire to be free and in control

Expanded consciousness and other benefits of wayfinding

During the course of O'Connor's research, she visits a Harvard professor of particle physics named John Huth who teaches a course on wayfinding. Huth started teaching the course after nearly becoming lost in fog while kayaking at Cape Cod. He paid close attention to the sounds of waves crashing on shore, the swell, and other details, and he eventually made it back. A couple of months later, another enveloping fog forced him to use wayfinding again. Unfortunately, two young women also kayaking in the area became lost in the same fog and drowned. The experience spooked Huth and he developed an intense interest in wayfinding, wrote a book called *The Lost Art of Finding Our Way*, and started teaching a course on navigation to his students at Harvard. In the course, he teaches students to pay attention to the direction of the wind, for example.

What students get out of his course, however, isn't just the ability to navigate a world without GPS. One student said, "This course isn't about navigation but about a mindful way of living and finding our way and ourselves." Another said, "To truly understand our surroundings we must immerse ourselves in them," wrote a third. "We get philosophical about it, how knowing where you are helps you know your place in the world… I find it comforting to be orienting myself. … it forces them to be keenly sensitive to their surroundings. …. The more attuned they are, the more their consciousness seems to expand. In this respect the effect of learning navigation struck me as echoing the discovery of a religious worldview or a transformative life experience: it thins the barriers between ourselves and the world" (qtd. in O'Connor, 225).

These students' reactions resonated with me because I'd experienced similar sensations while driving without GPS (not a religious experience, but a sense of expanded consciousness). It felt more comforting to be orienting myself, and I sensed that this simple act symbolized something greater and was more philosophical. Driving and knowing where to go, without having to route to a place and receive turn-by-turn directions every step of the way, can change how you view your place in the world.

I wasn't quite sure what this feeling was, but it was something noticeable. Matthew Crawford explores this topic a bit more in *Why We Drive: Toward a Philosophy of the Open Road*. At the end of a lot of seemingly disjointed experiences related to driving, Crawford concludes, "To drive is to exercise one's skill at being free, and one can't help but feel this when one gets behind the wheel. It seems a skill worth preserving" (314). To drive, especially without the micro directions of GPS, is an experience of freedom, and it is exhilarating.

Because of this view, that driving "is to exercise one's skill at being free," Crawford has serious reservations about autonomous vehicles. (He's also a gearhead who makes engine parts and refits engines into older cars, so there's that too.) He says algorithms that control driving remove a level of freedom from human drivers, who become passengers routed and carried to locations defined by someone else's agenda. Crawford says the data that companies collect about us can be used "to herd and nudge our behavior" (287). He singles out Google as a culprit in social engineering because Google controls search results that in turn shape thought. Crawford explains that there's a concerning trend of

people perceiving human action to be incompetent, thereby needing the help of more sophisticated technical algorithms to guide our actions (e.g., to drive for us so we don't crash). Crawford writes:

> The last two decades saw the rise of new currents in the social sciences that emphasize the cognitive incompetence of human beings. The "rational actor" model of human behavior ... was deposed by the more psychologically informed school of behavioral economics, which teaches that we need all the help we can get in the form of external "nudges" and cognitive scaffolding if we are to do the rational thing. . . . It is a philosophy that nicely dovetails with the project of enlightened social engineering, and has re-emboldened the authoritarian tendencies of technocratic rule. (291)

In other words, humans make poor decisions on their own, so we rely on computers to help us—so the pro-tech argument goes. Driving along the serpentine maze of streets we've built, it does seem that "we need all the help we can get" in the form of GPS guiding our way. We need routing logic to get us to our confusing destinations, taking into account traffic congestion, crashes, or other factors that we can't see but which the algorithm understands. And given the high number of traffic fatalities, it does seem that humans are flawed drivers; wouldn't we be better off if computers did the driving?

However, Crawford is suspicious about the agenda of the system performing the automation. "In a far more comprehensive way," he says, "you are coming to inhabit a world that is tailored to your data-self through a process that is beyond your reach, and designed to serve the interests of whoever owns the algorithm" (287). But even the owners of the algorithm aren't to blame. He says that there likely isn't any one person who understands the algorithm's logic—it's too complex. "The logic by which an AI reaches its conclusion is usually opaque even to those who built the AI, due to its complexity" (287). With this idea, Crawford's thinking seems to align with Kevin Kelly in *What Technology Wants*, suggesting that technology has a trajectory of its own that is set in motion by its nature, independent of any explicit programming. One trajectory of technology is to expand itself, becoming more ubiquitous, multifaceted, integrated, and universally present. Technology is an organism that is squeezing out the dominance of other life.

Hundreds of people across dozens of teams work on major software products. However, ask any individual questions about why or what algorithm drives the logic, and other details, and you'll quickly find that all these teams are siloed. They understand their stewardship only; almost no one understands the bigger picture.

Pushing back

My act of removing GPS while driving could be seen as a symbolic gesture of removing algorithms influencing my life. Perhaps the renewed sense of control wasn't about driving, but about taking back control.

It's summer here in Seattle as I write this, and because my youngest was bouncing off the walls with boredom, we decided to enroll her in a week-long art camp at Gage Academy of Art in Capitol Hill, a district in Seattle. The plan was to drive to Capitol Hill, drop her off, drive over to Fremont (another district in Seattle), work all day, pick her up and drive back to Tukwila for soccer practice, and then drive home. I studied the routes from my house to Gage, from Gage to Fremont, back to Gage, back home, etc. I tried my best to commit them to memory. But as it turned out, reality proved more complicated.

Capitol Hill is, unsurprisingly, on a hill. It's bounded on the west by I-5, then Eastlake and Lake Union. The presence of the interstate makes navigation tricky because only a couple of roads cross it. Most of the roads are narrow (with cars parked on both sides of the road). They wind around due to the hills, and the district feels old. It took me a couple of days to figure out how significant E Roanake St was as a way to cross I-5. Anyway, despite my best intentions, I had to pull out my smartphone and figure out directions (unless I wanted to wander around all morning).

But the interesting thing was not my routing. It was to learn, after three days of driving, that my daughter preferred to take the light rail instead. She didn't want to sit there as a passenger while I drove her around. She instead preferred to take the light rail to Capitol Hill station and then skateboard the final mile to Gage. So toward the end of the week, that's what we did.

As I watched her skate down Capitol Hill's Broadway street, which runs through the heart of the district's vibrant countercultural life, it became apparent why she preferred this method: she was in control. She was no longer a restrained passenger, being driven about by Dad. She could choose where she wanted to ride, how fast, which way to lean, etc. (You can see a video of her skateboarding here: https://idbwrtng.com/mollyskateboarding)

From sidewalk to light rail to nearby Boba shop, skateboarding is much more immersive and interactive with the world.

Molly skateboarding

Molly drinking Boba

Molly doing pull-ups on the link light rail

Molly riding the link light rail

This got me thinking more about modes of travel. Not only was the car insulating her from the world, removing her from more direct interaction with the outside, but with this method, she had more freedom. She could express herself a bit as an individual.

Note that she's not an experienced skateboarder by any means. She acquired this skateboard as a hand-me-down from an older sister, and there aren't many places to skate around our house. Suburbia is optimized for driving, not for pedestrians on skateboards. None of the roads are smooth.

O'Connor touches on the need for children to wayfind on their own. Summarizing the work of landscape historian Joe Stilgoe, O'Connor says:

> Over the last century, but particularly the last few decades, Stilgoe believes society has circumscribed freedom of movement in America, especially for children. Stilgoe has documented how in the 1890s children and teenagers engaged in national recreations like canoeing, bicycling, and even amateur ballooning or flying with large, tethered kites.... How many teenagers today would be content to walk alone outdoors? ... Part of the problem is parents' incessant management of their children's time. "I think they've missed a kind of self-guided, non-organized activity, nonsports activity growing up. Wandering around, getting into things. ... Most of my colleagues I work with seem to have found their careers by being slightly disorganized. Lucking into something, you know." (292-293)

In other words, children today are increasingly caged up, no longer in control of their lives and able to wander. For physical outlets, we've structured them into directed activities like soccer and swim clubs, removing their free time. This helps explain my daughter's unbridled enthusiasm to be skating down Broadway in Capitol Hill. She had freedom of movement and a place to move about. The sidewalks are smooth, not too crowded, and there are many interesting shops to see.

My daughter's "self-guided, non-organized activity" seemed to parallel my own desire to untether myself from the structured routing of the GPS app and to move about more according to my own decisions, my own wandering and pathmaking, not be beholden to the gods of time efficiency by always choosing the most direct route to my destination. Sometimes the destination is not the only point of travel.

Touching on autonomous cars, O'Connor says,

> ... I see potential for a nefarious influence on our lives: the more we rely on driverless cars and their need for three-dimensional maps, the narrower our choices of where we travel and explore could become. As we grow to depend upon, or maybe even just prefer, autonomous vehicles, they will choose the routes we take, and they in turn will choose those routes that are already mapped. Where we go will increasingly be confined by the technology we use (283-84).

In other words, the more we rely on autonomous cars, the more we rely on algorithms to define our paths and routes, reducing our own choices. Untethering from GPS, then, is an assertion of individual will, to choose the routes you want to take rather than routes prescribed by some other entity. Making that decision out of self-will helps stimulate thinking, creativity, and action.

Self-will against the machine

I don't mean to take this too far, but perhaps in a larger philosophical sense, turning off GPS is a resistance against the modern state's design towards making us the "Last Man," as Nietzsche called it. The Last Man, the opposite of the Übermensch (Superman), is one who has become content with meaninglessness, mediocrity, and one who chooses the

comfort and security of the social contract (what the state provides in return for your abdication of freedom). He tries to satisfy a deeper discontent by buying commercial goods to numb his emptiness.

The film *Fight Club* provides a contemporary illustration of Nietzsche's ideas about the Last Man and the Übermensch. Critic Bob Doyle explains:

> He [Ed Norton, the narrator] has been thoroughly emasculated by the egalitarian conformity of postmodern society, which has left him fearful, lazy and entirely mediocre. Nihilism has corrupted his soul to a point where he cannot identify a clear purpose for his existence. His lived experience is an endlessly repeating loop of insignificant events, split between the offices of his employer, business trips and the suffocating comfort of his IKEA furnished apartment. … His attitude is cynical and pessimistic, despite the supposed fulfillment he finds in mindless consumption. Deep down, however, he's aware that his time is slowly running out and he's achieving nothing in the process.

> The Übermensch [Brad Pitt, playing Tyler Durden] is aware that his life will end in annihilation. So he overcomes the plain will to live and rather embraces the will to power. He shapes his environment through force to create something that will outlast his short existence. But in order to do that, he has to accept enduring pain, suffering and destruction as part of the process.

See this video: "Fight Club & Nietzsche: Overcoming Emasculation" (shortlink: y2u.be/NpxHFNvlUmU).

In contrast to the Last Man, the Übermensch creates meaning for himself or herself. The Übermensch doesn't need religion or other institutions/algorithms to prescribe meaning but rather gives rise to his or her own values, principles, and ideas. These individual, willful actions might result in a lot of pain and suffering (getting lost, wandering around on one's own for hours, struggling to decipher the logic of a system), but the actions strengthen one's own sense of power and purpose, helping overcome, in some probably futile way, the crushing meaninglessness of modern life that manifests itself in the form of a machine telling you where to go but not explaining why.

I have to note that the comparison to the Übermensch feels a bit ridiculous, just as *Fight Club* seems to be aware of how far-fetched its plot is. I don't feel like I'm drowning in nihilism with the need to remake the meaning and values of my own world. I'm too old or too desensitized for this. But still, Nietzsche might be right to some degree.

As my daughter and I returned to the light rail station in Tukwila, we needed a ride home. My oldest daughter, finishing up a history degree at UCSB, picked us up. She's less familiar with the area and so routed the way home. As she drove, I watched as she effortlessly navigated the route, occasionally glancing at the GPS screen that showed her a short distance ahead and the next maneuver to perform. She focused on a discussion about her museum internship and the business of curation, talking me through the issues involved in acquiring artifacts and the process for displaying them. As she talked, she glanced briefly at the map and turned left or right, almost unconsciously. I knew she had

little idea about where she was going or why, and I sometimes cringed at the prescribed route. But we did arrive home in good time, and we continued the discussion through dinner.

Chapter 3: Flow

As I sought to regain my attention, I explored ideas about deep focus, and attempted to concentrate for extended periods of time on single tasks. As these focus sessions were grueling, I looked into ideas of flow and other natural techniques to make it more effortless.

Chapter sections:

3.1 From smartphones to Netflix: moving past plateaus in growth

Background summary

As a quick recap up to this point, I gave up my smartphone to regain my sense of focus. I tried to make do with a basic phone, only to realize that it caused communication stress for my family. So I returned to my smartphone but still avoided social media apps, GPS, and continued to follow many of the digital detox rules I'd adopted.

During my time away from the smartphone, I started reading books again. I realized that reading long-form content was the primary goal I wanted in giving up my smartphone in the first place. I wondered whether I would continue the same pace of reading now that I had a smartphone again. My reading pace slowed with the return of my smartphone, but I wasn't sure why.

In troubleshooting, there's a technique commonly used to find a problem. You start by stripping down a system to its simplest form and making sure it works at the basic level. You then add the pieces back one by one, testing the functionality with each addition to see which re-added piece breaks the system. When the system breaks, voila, you've identified the problematic piece.

So as I returned to smartphone use again, I started to add back in some other activities I'd subtracted, allowing myself to read the news or ESPN more freely. I occasionally browsed Reddit. I carried my phone in my pocket sometimes, and so on. But I was hesitant to re-introduce everything at once because, as I said, I wanted to identify that piece that might be the culprit behind attention fragmentation.

My initial reading pace has slowed

As I returned to my smartphone, I started reading less, probably half as much as before. I still averaged a book every two weeks. Though measuring pace by books alone was likely unreliable. Some books were long, others short. Some books were easy reads, others harder to get through. Some I abandoned partway through because they weren't worth reading end to end. Even so, I felt myself slipping a bit. Here's what I read:

- *A Profile of the Global Auto Industry: Innovation and Dynamics*, by Mike Smitka and Peter Warrian (1/3 finished, paused)
- *Why We Drive: Toward a Philosophy of the Open Road*, by Matthew Crawford
- *Wayfinding: The Science and Mystery of How Humans Navigate the World*, by M.R. O'Connor
- *Crash Course: The American Automobile Industry's Road from Glory to Disaster*, by Paul Ingressia (audiobook)
- *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*, by James Kunstler (audiobook)
- *Mobility 2040: Exploring the Emerging Trends Radically Transforming Transportation Systems in the U.S.*, by Galo Bown
- *Building a Second Brain: A Proven Method to Organize Your Digital Life and Unlock Your Creative Potential*, by Tiago Forte (audio book, 1/3 finished, paused)
- *The World Beyond Your Head: On Becoming an Individual in an Age of*

> *Distraction*, by Matthew Crawford (audiobook, 1/3 finished)
- *The Fifth Discipline: The Art & Practice of Learning Organization*, by Peter Senge (1/2 finished, currently reading)

You can see that I have more half-finished books here, which could be a concerning trend or some books might just be duds. Another reason I'd been reading less was to write more. I wanted to write some posts related to books I'd read (for example, the wayfinding series), and if I immediately moved on to a new book after finishing the previous, I didn't allow myself that time to write. So I intentionally slowed my reading pace a bit between books. Despite the worthwhile goal to read more, there was a risk in simply consuming content without taking the time to wrestle with and apply the ideas.

But I also realized what else I'd been doing: watching Netflix more and more. Gradually, I started getting sucked into different TV shows. *Stranger Things Season 4*. *The Old Man. Resident Evil.* It's easy to start a single episode innocently enough and then realize that, instead of looking at my smartphone, I'm just watching Netflix, especially at the bookends of my day.

System theories that explain limited growth

It turns out there are a couple of theories that explain my behavior. In *The Fifth Discipline*, Peter Senge, describing systems theory, says systems have balancing functions. After some initial success, it's often followed by a plateau and eventual decline due to a secondary force that emerges as a consequence of the actions taken to achieve the initial success. The system balances itself out. Senge says this pattern recurs so frequently he calls it the "Limits to Growth" system archetype. He defines this archetype as follows:

> **Archetype 1: Limits to Growth Definition.** A reinforcing (amplifying) process is set in motion to produce a desired result. It creates a spiral of success but also creates inadvertent secondary effects (manifested in a balancing process) which eventually slow down the success. (94)

He gives the example of managers who cut staff to reduce expenses only to find that the company pays contractors more because the same amount of work is expected to get done, or the company spends more on overtime pay. Contractors and overtime pay are secondary effects that emerge to restore balance to the system, eliminating the initial savings gain. Senge says, "*The system has its own agenda*. There is an implicit goal, unspoken but very real—the amount of work that is expected to get done" (84). The managers still expected similar amounts of work to get done, so the system found a way to accomplish this goal. In doing so, it balanced itself out.

When I abandoned my smartphone, I experienced a growth in focus. I started reading more. My success was on an upward trajectory. But then I hit a plateau, and my reading rate declined. Why? What secondary forces emerged to balance the system?

When I could no longer find distraction and entertainment through my smartphone, I turned to television, primarily Netflix. Block TV and no doubt I'd find something else, such as YouTube. Block Youtube and maybe I'd end up going to local sporting events. Block local sporting events and maybe I'd start reading magazines from the corner store.

Senge says that you have to identify the underlying cause and find leverage against that cause. What is the underlying cause that prompted me toward distraction? Perhaps the smartphone was never the problem. The smartphone was an enabling mechanism I used

as a tool for distraction. The smartphone provided an opportunity to shift out of whatever focus I had to pursue something else instead. Had the smartphone not been available, I would have merely selected another distraction tool.

Countering growth plateaus

Senge says to deal with growth stagnation, you don't double down on the initial formula that brought you success. For example, I wouldn't get rid of my smartphone again. Instead, Senge says you have to identify the limiting factor (the balancing force that emerged) and deal with the deeper cause. Senge explains:

> But there is another way to deal with limits to growth situations. *In each of them, leverage lies in the balancing loop—not the reinforcing loop. To change the behavior of the system, you must identify and change the limiting factor.* This may require actions you may not yet have considered, choices you never noticed, or difficult changes in rewards and norms. (100)

The "reinforcing loop" refers to the initial measures you took that led to early growth (ditching the smartphone). It's perhaps a small activity that contributed to a virtuous cycle. The "limiting factor" is the secondary force that emerged (watching Netflix) to counter the early success and provide a balancing loop (back to distraction again).

Basically, if I keep taking away the enabling tools for distraction, it will become a matter of whack-a-mole seeing what pops up next. To provide leverage against the system's balancing forces, I have to tackle what's fueling my distraction in the first place. With that, let me probe more deeply into the causes of distraction.

Distraction as needed during downtime?

Why do we need distraction? My initial reaction was that we all need downtime and decompression. In those moments, my smartphone—the most convenient and available tool for the task—achieved this purpose.

Is watching Netflix, or scrolling feeds on a smartphone, simply a manifestation of the need for downtime? Surely everyone needs downtime, and I'm not looking to become a workaholic, but I don't want to morph into the cliché of the tired, middle-aged man who comes home from work, sits down on the couch, and watches TV until his brain becomes numb and he eventually falls asleep.

A certain amount of downtime is valuable, for sure. According to a study on the subject, "Having Too Little or Too Much Time Is Linked to Lower Subjective Well-Being," about 3.5 hours a day devoted to doing those things you prefer to do provides a healthy balance. The researchers say that too much downtime has adverse effects:

> … people are happiest having between two and five hours of discretionary time, and that the slope is negative beyond that point. The results from our experimental studies similarly show that people with 7 hr of discretionary time experience less subjective well-being than people with 3.5 hr of discretionary time. (13)

"Discretionary time" is defined as "time as the number of hours a person spends in a day doing what they want" (2). Discretionary time doesn't include every non-work activity, such as household chores, cooking, chauffeuring kids around, etc. Discretionary activities are those things *you prefer to do.* The main conclusion of the study is that there's a right balance between discretionary time and work for maximum happiness—too much discretionary time leads to dissatisfaction just as too little discretionary time does. Anyone who has watched children become increasingly bored as the summer progresses, wanting to return to school, understands this balance.

A range of 2-5 hours of discretionary time a day seems like a lot. But not all discretionary activities are the same. Discretionary activities can be further subdivided. Going for a run, playing basketball at a gym, walking alongside a river, and so on, are different discretionary activities than lying on your bed and binging Netflix, or laying on the couch while infinite-scrolling social media feeds on a smartphone. These latter discretionary activities fit more appropriately into time-wasting activities classified as escapism. Do recreational activities that are escapist or discretionary rejuvenate you, or do they accomplish another function? Do escapist activities provide restoration?

In Matthew Crawford's *The World Outside Your Head*, he describes the way gambling addicts become so numbed by slot machines and other automated actions that they take on a zen-like state where they abdicate control and just go with the flow of the machine. The gambler zeroes himself out in a mindless trance, having "moved beyond control to pure automaticity and experiences himself as part of the machine."

Crawford says this "death instinct" parallels the one who sits down in front of Netflix and watches mindlessly until they drain themselves of conscious thought or action. Crawford writes:

> ….such desubjectivication [of the slot-machine gambler] does look quite a bit like death. This might seem exotically pathological, but I can detect something like a death instinct in myself, for example, in those times when I slump in front of the TV and watch whatever is served up. It becomes an occasion for self-disgust as soon as I rouse myself from the couch, and is no great source of pleasure when I am in the trance. So why do it? I think because the passivity of it is a release from the need for control.

As a writer and teacher, Crawford says he doesn't have the structure of a regular job; as such, his life is full of constant individual decision-making. No manager tells him what to do. But sometimes he just wants to release that control and follow with the flow of whatever the TV guides him to watch.

Perhaps like Crawford, my desire to watch Netflix was an expression of the desire to release control, to let someone else steer the ship for a while?

Unlike Crawford, I work in a corporate job with many tasks and activities. Add to this the many honey-do's and family errands, and my own time is pretty limited. I'm not in the business of deciding what to do all day, so it's difficult to see watching Netflix as a desire to release control and desubjectivize myself into a death-like trance. Also, I like being in control, whether it's driving, leading documentation projects, organizing the garage, or even simple tasks, like arranging the contents of a drawer.

Distraction as an addiction

One narrative commonly touted in this literary genre is technology's addictiveness. The common narrative is that today's technology, with its data-enriched algorithms and extreme targeting, exploits our psychological vulnerabilities as addictive as a drug. This notion is one Crawford returns to frequently when talking about attention in the age of technology. Crawford writes:

> The media have become masters at packaging stimuli in ways that our brains find irresistible, just as food engineers have become experts in creating "hyperpalatable" foods by manipulating levels of sugar, fat, and salt. Distractibility might be regarded as the mental equivalent of obesity.

Let's explore the *addiction to distraction* for a moment. Is Netflix essentially the equivalent of fast food, or potato chips? You might start out eating (watching) one or two (episodes) only to realize that you can't stop because the chemical craving for the grease (action), salt (romance), and whatever else they add (humor) optimizes the appeal of the fries is beyond your control to resist (episode 8 already?).

With Senge's system archetypes, addiction fits into the "Shifting the Burden" archetype, described as follows:

> **Archetype 2: Shifting the Burden Definition.** An underlying problem generates symptoms that demand attention. But the underlying problem is difficult for people to address, either because it is obscure or costly to confront. So people "Shift the burden" of their problem to other solutions—well-intentioned, easy fixes which seem extremely efficient. Unfortunately, the easier "solutions" only ameliorate the symptoms; they leave the underlying problem unaltered. The underlying problem grows worse, unnoticed because the symptoms apparently clear up, and the system loses whatever abilities it had to solve the underlying problem." (103)

Senge says people start drinking, for example, in response to stress (such as an increased workload). Drinking makes them feel better for a while, relieving stress/tension and appearing to solve the problem. All the while, that original workload keeps building and becoming worse. The worse it gets, the more they drink. Then a physical addiction to the symptomatic solution sets in and makes it even worse because now they have two forces to contend with: the insurmountable workload and the physical addiction. Senge explains:

> What makes the shifting the burden structure insidious is the subtle reinforcing cycle it fosters, increasing dependence on the symptomatic solution. Alcoholics eventually find themselves physically addicted. Their health deteriorates. As their self-confidence and judgment atrophy, they are less and less able to solve their original workload problem. … stress builds, which leads to more alcohol, which relieves stress, which leads to less perceived need to adjust workload, which leads to more workload, which leads to more stress. These are the general dynamics of addiction. In fact, almost all forms of addiction have shifting the burden structures underlying them. All involve opting for symptomatic solutions, the gradual atrophy of the ability to focus on fundamental solutions, and the increasing reliance on symptomatic solutions…. The longer the deterioration goes unnoticed, or the longer people wait to confront the fundamental causes, the more difficult it can be to reverse the situation. (108-109)

"Symptomatic solutions" are solutions undertaken to address the symptoms of the cause, but not the cause itself. In this case, the symptom is increased tension/stress, and the symptomatic solution is to drink alcohol to reduce that tension/stress. By releasing stress/tension (through buzz), the symptomatic solution appears to solve the problem. You've shifted the burden from addressing the real cause to dealing with the symptoms.

But because the real problem (the increased workload) remains unaddressed, the real issue continues to grow more severe (that workload continues to pile up) and only adds more fuel to the addiction cycle. Now the person constantly turns to alcohol as a means of dealing with the increased tension from the growing workload until the alcohol's poison starts to weaken the person's judgment and capability to handle the workload at all. In a weakened state (constant drunkenness), the person can only see one solution to alleviate the tension: more alcohol.

This scenario is particularly poignant for me because my dad was an alcoholic during my early childhood (before I can remember) and then became sober through Alcoholics Anonymous (AA). Despite becoming sober, throughout his life he continued to attend regular AA meetings and celebrate each year of his sobriety. My dad passed away in 2018, and about the only thing I still keep of his is an AA coin he received upon achieving his first year of sobriety.

AA coin my father received after achieving his first year of sobriety

He kept sober for the next 30+ years. However, I'm guessing his first year (denoted by the Roman number "I") had special significance to him because he finally broke the addiction cycle.

I'm not sure how my father's addiction cycle started. His father was an alcoholic who shifted from town to town, unable to hold a steady job for more than a couple of years. As a result of the constant relocations, my father was socially awkward and a loner. After high school and the Air Force, he pursued a Ph.D. in English literature at the University of Washington but had little prospects for teaching jobs due to the market. Maybe alcohol relieved some of this tension, helping him build his social confidence and reduce the financial pressure of post-graduation career prospects? He told me he wanted to stay in school as long as possible to escape the world.

After finishing his Ph.D. coursework, he abandoned the dissertation (earning an ABD) and bought a tavern in Burlington instead. What was the point of completing a Ph.D. if there weren't any teaching jobs anyway? He had no business sense, having studied literature rather than business, and the tavern ran out of business a few years later. He then transitioned into soulless government work, working as a "safety officer" at a state institution called Portal, and later as an emissions safety inspector for the Department of Ecology. His marriage crumbled and my parents divorced when I was 10.

For most of my life, I have feared becoming an alcoholic. Given that my father and his father were both alcoholics, I thought I might be susceptible to alcohol genetically. But I never really understood how addiction cycles began.

How did my father break the cycle? He didn't break it by confronting the actual reason for drinking in the first place. Instead, my mother took her children (us) to Kansas and threatened never to return unless he sobered up. He chose his children over the bottle. My mother, sister, and I returned and we tried to live as a family again. However, alcoholism emotionally disconnected my parents in ways that would never heal.

In his case, the threat of losing his children broke the addiction cycle. My mother's constant story is that my father chose us instead of the bottle because he loved us so much. Let's return to the question at hand, considering whether technology (in the form of smartphones, Netflix, or other time-wasting, algorithm-driven sites, like Reddit) fits into the addiction cycle. Do these escapist activities constitute symptomatic solutions that we address instead of a real cause? In other words, while my workload builds (or whatever), I turn to scrolling Reddit to deal with the stress? I watch shocking, funny, weird, enthralling video clips and threads about everything and nothing until I forget that mounting workload stress and find, through distraction, some escape-based peace of mind? Maybe to some extent.

Fortunately, Netflix doesn't deteriorate your health and form bonds of addiction in the same way as alcohol (TV just numbs your brain a bit). And for all the hype about social media dopamine hits (getting likes, receiving comments, getting new emails, etc.), the dopamine hits don't compare to heroin, alcohol, gambling, or other vice addictions. But if there is a soft parallel, that Netflix acts as a symptomatic solution to some larger, underlying cause that I'm avoiding, then surely my life would be better by addressing the cause rather than letting it fester and grow more severe? Like a neglected lawn that becomes more difficult to mow the longer you put off cutting it, perhaps these underlying causes continue to grow the more I neglect them, such that when I finally start that lawnmower, I can't even push it through the tall grass.

Probing for the underlying causes

What could that underlying cause fueling a predilection for distraction be? My workload isn't insurmountable. I'm not facing bleak career prospects due to a saturated skillset. I actually work at a good tech company and make a six-figure salary working mostly business hours at a place that provides free breakfast and lunch. I get all the lattes, cappuccinos, and cortados I want—someone makes them for me. My children are high achievers. My wife is a rock star mom whose favorite activity is hiking. We're homeowners in a pleasant suburban area outside of Seattle. It's not perfect (some kids have ADHD, my wife gets stressed out, I keep getting injured, etc.), but life is more or less good. So why would I seek out opportunities for distraction?

Is it existential ennui and despair of someone who hasn't been challenged enough? Or discontent from a meaningless tech career that fails to engage? Am I Nietzsche's *Last Man* desperate to break free of society's numbing commercialization? Do I suffer from learned helplessness as a result of living in a world sliding into chaos and oblivion?

One aspect of Johann Hari's book, *Stolen Focus*, is that he moves past smartphones as the sole cause of distraction. He doesn't point the finger solely at tech; instead, there are lengthy chapters about ADHD, abuse, nutrition, pollution, and other causes that he says contribute to our distraction. He seems to be searching for something more, for that underlying cause beyond tech. Smartphones alone don't explain it. I also think blaming smartphones for our distractedness might be blaming the symptomatic solution instead of the real cause. What, then, is the underlying cause that nudges me toward distraction?

Distraction as biological wiring

It could simply be that, as Nicholas Carr says, we are biologically wired for distraction from a long evolutionary heritage. Carr says that the linear, immersive reading experience that emerged with the printing press revolution ran contrary to human attention:

> To read a long book silently required an ability to concentrate intently over a long period of time, to "lose oneself" in the pages of a book, as we now say. Developing such mental discipline was not easy. The natural state of the human brain, like that of the brains of most of our relatives in the animal kingdom, is one of distractedness. Our predisposition is to shift our gaze, and hence our attention, from one object to another, to be aware of as much of what's going on around us as possible. ... What draws our attention most of all is any hint of a change in our surroundings.

> .... Our fast-paced, reflexive shifts in focus were once crucial to our survival. They reduced the odds that a predator would take us by surprise or that we'd overlook a nearby source of food. For most of history, the normal path of human thought was anything but linear. To read a book was to practice an unnatural thought process, one that demanded sustained, unbroken attention to a single, static object. It required readers to place themselves at what T.S. Eliot, in *Four Quartets*, called "the still point of the turning world." They had to train their brains to ignore everything else going on around them, to resist the urge to let their focus skip from one sensory cue to another. (64-65)

Perhaps, then, there is no underlying cause that drives us to distraction other than our brain hardwiring. Developing a singular and sustained focus on reading a long book requires us to undo the constantly shifting attention we have learned over millions of years of human evolution. This is a basic survival technique for alertness that allows us to avoid being taken by surprise. In this sense, I need not look for some underlying cause that I'm avoiding but rather focus on training myself to evolve (or reprogram the previous evolution) my way of thinking. This might suggest that productivity techniques and other self-help type approaches to increased focus might be more effective than looking for technology to blame.

3.2 Techniques for deep work from Cal Newport

Introduction

In the last article in this series, "From smartphones to Netflix: moving past plateaus in growth," I explored how systems enforce constant rebalancing, so that if you make a change in one area that leads to a temporary gain, you might find that the system compensates in another area, eliminating your gains. Specifically, my abandonment of smartphones led to a temporary win with long-form concentration and reading, but it didn't take long to find another form of distraction through television.

When I couldn't identify the true source behind distraction (*why do I keep watching TV?),* I decided that maybe we point the finger too much at social media and other entertainment sites as the culprit behind our concentration failure. Long-form concentration is a difficult skill to develop. As such, I decided to read Cal Newport's *Deep Work: Rules for Focused Success in a Distracted World* (which is one of the best business books I've read and currently has 17k+ reviews on Amazon with a 4.5 star rating). The book lives up to the ratings: it describes techniques that unlock significant productivity. Fully implementing them, though, still remains a challenge.
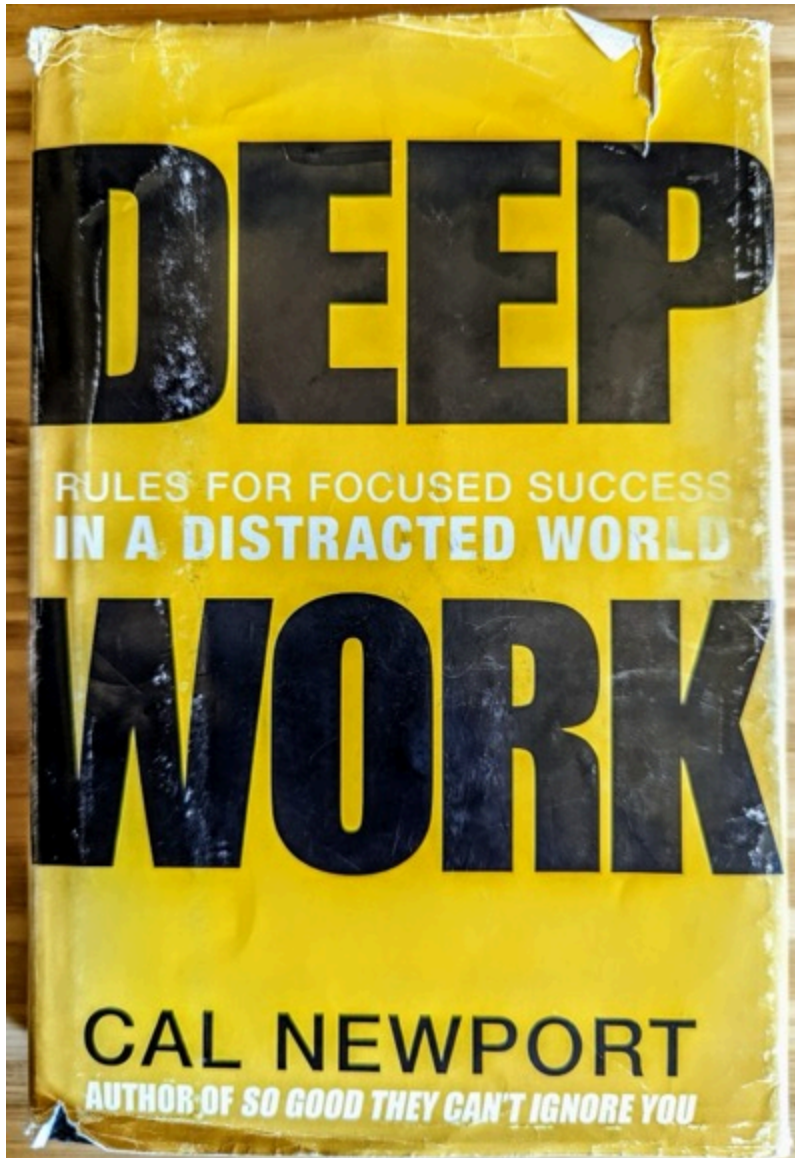
Cal Newport's Deep Work: Rules for Focused Success in a Distracted World is a highly popular book for a good reason — it has great advice. This is my personal copy, which I toted around pretty much everywhere while reading it. I also listened to the audio version.

The basic idea

I'll summarize and comment on Newport's ideas at length, but in case you want the short version, for me, it boils down to this: set aside several 90-minute focus sessions a day in which you block out distractions and focus on an important task. That's it. If you can do this daily, you'll be wildly productive. "Three to four hours a day, five days a week, of uninterrupted and carefully directed concentration, it turns out, can produce a lot of valuable output," Newport says (16). It's true. You'll be amazed at how much you can accomplish during a few focus sessions like this.

Note that Newport has many nuances to my simplistic distillation here. For example, Newport mentions different working models, from the total hermit who disappears for days at a time to more of a journalist who disappears for a half hour here and there during other work. But the fundamental idea is the same: you need to dedicate periods of sustained focus on deep work to become productive.

Newport also spends a lot of time arguing for the value of deep work over shallow work, trying to convince the reader that deep work is more rewarding and satisfying than immersion in shallow activities.

Definitions of deep and shallow work

First, let's start with some basic definitions. Newport defines deep work as follows:

> **Deep Work:** Professional activities performed in a state of distraction-free concentration that push your cognitive capabilities to their limit. These efforts create new value, improve your skill, and are hard to replicate." (3)

Notice that deep work pushes your cognitive capabilities, requiring focus and concentration. It's usually not something you can do while watching Netflix from the corner of your screen.

Deep work is something that usually requires your full concentration and focus. You can't just multitask and watch Netflix out of the corner of your screen while doing deep work, for example.

In contrast, shallow work is as follows:

> **Shallow Work:** Non-cognitively demanding, logistical-style tasks, often performed while distracted. These efforts tend to not create much new value in the world and are easy to replicate. (6)

In distinguishing between deep work and shallow work, Newport says to use this test: consider whether the work could be done by a bright, young college graduate. Ask yourself, "How long would it take (in months) to train a smart recent college graduate with no specialized training in my field to complete this task?" (229). If the answer is that the college grad could learn to do this task within a few weeks of training, you're not doing deep work.

Shallow work might involve tasks that you do on your phone, or tasks that involve social media consumption or even posting. If it's something that a bright young college grad could probably do, with little training, it might be shallow work. This could even include putting together a slide presentation, Newport says.

Shallow work might involve tasks that you do on your phone, or tasks that involve social media consumption or even posting. If it's something that a bright young college grad could do, with little training, it might be shallow work. This could even include putting together a slide presentation, Newport says.

Why prioritize deep work

Newport says that our natural tendency is toward easy, shallow work. We naturally follow the "principle of least resistance," which means "we will tend toward behaviors that are easiest in the moment" (58). In fact, we often busy ourselves with tasks that make it seem like we're doing a lot of work—responding to email, interacting in chat, attending meetings, doing little stuff, and so on—at the expense of a deeper focused state (74). This state of busyness is a mirage, however, and doesn't lead to productive output.

Focusing on deep work yields a more satisfying, rewarding life. "A deep life is a good life," Newport says (18). Deep work isn't just a technique for productivity. It's the key to a richer, more meaningful way of living. Newport says:

> 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. ...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. (82)

If we occupy our day with little meaningless tasks, checking our email obsessively, and doing small tasks that don't require much thought or contemplation, we're spending our time on frivolous errands that are the equivalent of junk food in a diet. Prefer more substance and you'll feel the rewards of it.

At the extreme, focusing on deep work can lead to states of flow. Quoting psychologist Mihaly Csikszentmihalyi, Newport says, "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" (84).

Devoting yourself to tasks requiring deep, complex thought tends to be more rewarding. In an ideal outcome, you might slip into states of flow (hyper-focus) where the external world fades away, you lose sense of time, and you become totally engrossed in your current activity.

Devoting yourself to tasks requiring deep, complex thought is more rewarding. In an ideal outcome, you might slip into states of flow (hyper-focus) where the external world fades away, you lose sense of time, and you become totally engrossed in your current activity.

Csikszenmihalyi focused his research on the theory of flow, which benefits our psychological well-being. Newport says, "…the feeling of going deep is *in itself* very rewarding. Our minds like this challenge, regardless of the subject. … the act of going deep orders the consciousness in a way that makes life worthwhile" (85).

Last weekend I spent most of my time cleaning and organizing our house while preparing for a birthday party. I didn't spend much time writing or doing other deep tasks. At the end of the weekend, I felt like I'd spent my weekend time poorly. Sure, our bathroom drawers and closet were organized, and I'd watched a lot of sports (so maybe the downtime refreshed me), but I had a sense of not having accomplished anything. There wasn't any deep satisfaction.

Newport also draws upon studies by Winifred Gallagher, who found that what people focus on most defines their state of happiness. Where you spend your time and thinking shapes your life. Newport says:

> Our brains instead construct our worldview based on *what we pay attention to*..
> ...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. (77-79)

Gallagher's "connection between attention and happiness" suggests that if you can focus your attention on deep tasks that matter, you'll be happier (76). In contrast, if you focus most of your time on shallow tasks, your happiness level will be lower.

Overall, Newport tries to persuade readers that a deep life is time better spent. I think most of us will readily agree, but the question is more of a tactical one: how do you carve out time to focus in deep ways? The chaos of the world makes this hard, even seemingly impossible, to do.

Carving out sustained focus periods

Newport doesn't force a one-size-fits-all model for deep work. He cites several possible working models for deep work. In the extreme, a person might retreat to a secluded cabin to work uninterrupted for days at a time. On the opposite end, a busy family man might escape for short blocks of time (such as 30 minutes) to work in a bedroom. In the middle of these extremes are the 90-minute focus sessions that I think fit me best. In part, this is because I want to gather momentum and flow for the writing task.

Newport says that David Dewane, an architecture professor, has a model of a Eudaimonia machine (Greek for "good spirit") that involves rooms that progress from socially interactive at the outer layer to deeply immersive (like an inner sanctuary) at the inner level. The architecture begins with a gallery and proceeds to a salon, library, office space, and finally inner chambers.
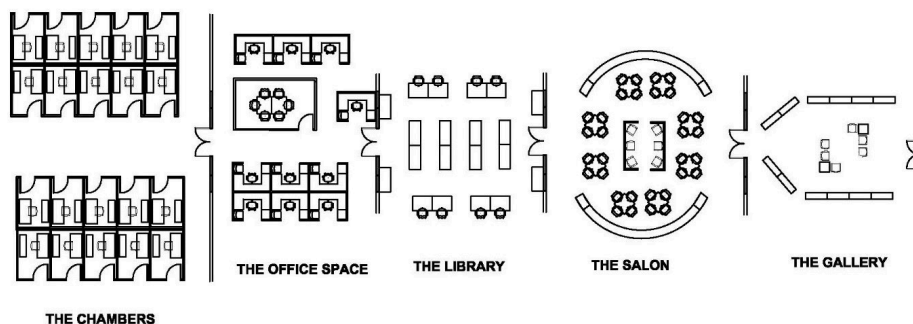
Sample layout for David Dewane's Eudaimonia machine. The architecture progresses to more and more isolated chambers for deeper focus. (Image from Alan Ruby ⧉)

Dewane's model is for people to retreat for periods of time into the inner recesses of the building for deep, immersive thought, and then periodically surface back to the outer layers with more social interaction. Newport explains: "He imagines a process in which you spend ninety minutes inside, take a ninety-minute break, and repeat two or three times—at which point your brain will have achieved its limit of concentration for the day" (97).

Newport recommends that you find what works for you. "You must be careful to choose a philosophy that fits your specific circumstances, as a mismatch here can derail your deep work habit before it has a chance to solidify" (102). In fact, near the book's end, Newport reveals that he follows more of the family man ("journalist mode") who disappears for short stretches of time; he can't simply withdraw from life for consecutive days or longer at a time like a hermit.

The 90-minute sessions resonate with me because I've found focus sessions to work well in the past. (I wrote about focus sessions earlier on my blog: idbwrtng.com/focussessions.) I use an app called "Focus" and previously followed a Pomodoro technique (more or less) of focusing for short periods of time. However, in my implementation of focus sessions, I developed some poor habits: anytime I wanted to stop, I simply paused the timer. Then I resumed it later. And I kept the sessions short, to either 20 minutes or 60 minutes. (For some reason, I'd stopped doing these focus sessions, and I can't remember why.)

After reading Newport's book, I decided to tweak the focus sessions a bit. Instead of pausing when I wanted a break, I tried not to hit pause. I'm not a monster, though. If my wife or kids needed me, or someone interrupted me with an information need, I would attend to it. I didn't ignore everyone around me in off-putting ways. But I'd try not to break the session, especially not to check my email or do some other mental break such as checking the news or sports.
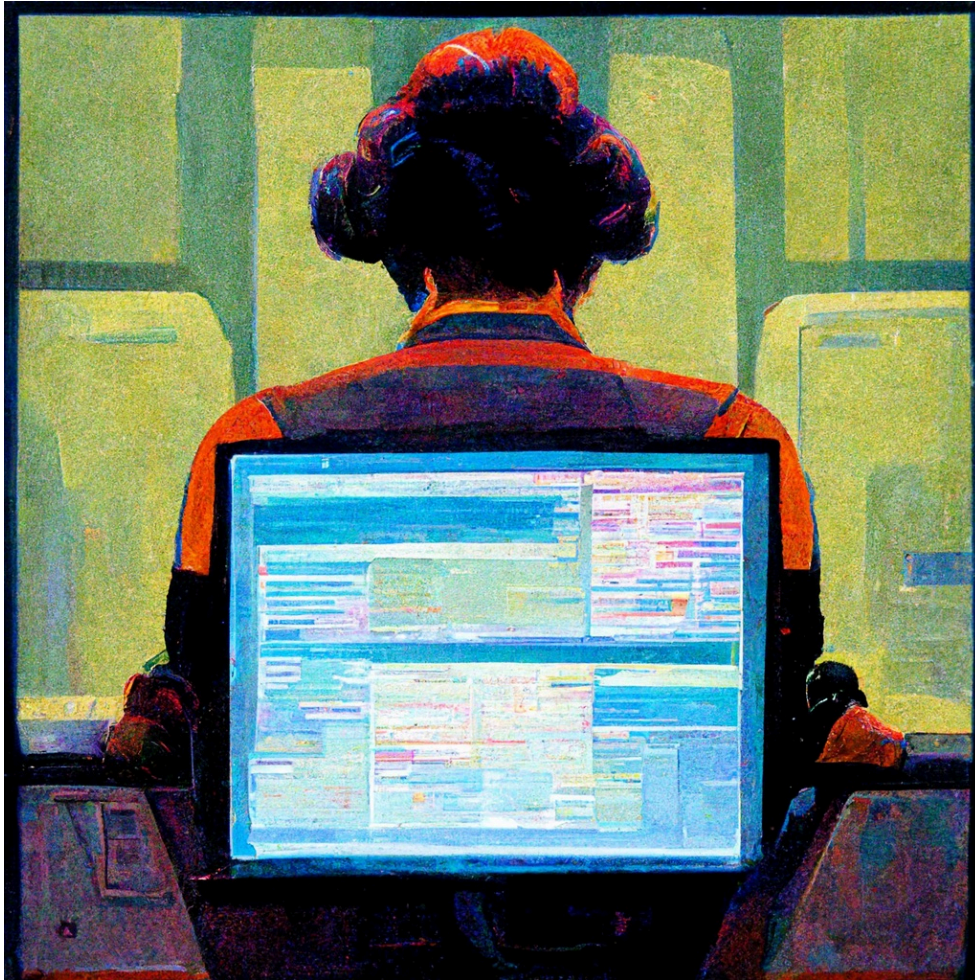
When you sit down and focus on a complex task, you have to avoid distractions from email or the Internet. Even going to retrieve a small bit of information from the Internet, Newport warns, can lead to being sucked down a rabbit hole, as that's what most Internet sites strive to do: hijack your attention. Put the internet, email, chat, and other disruptors on pause for a while.

When you sit down and focus on a complex task, you must avoid distractions from email or the Internet. Even retrieving a small bit of information from the Internet, Newport warns, can lead to being sucked down a rabbit hole, as that's what most Internet sites strive to do: hijack your attention. Put the internet, email, chat, and other disruptors on pause for a while.

It's critical to reduce context-switching so that you can get more into a state of flow. The more you context-switch during the 90-minute session, the less effective it becomes. Newport says, "To produce at your peak level, you need to work for extended periods with full concentration on a single task free from distraction" (44). Don't even glance at your email every 10 minutes because this creates context switching and carries over "attention residue." For example, suppose you check your email during a focus session and find that an email gets you thinking about another topic. Even when you try to get back into your focus session, you'll have some attention residue from the other context that dilutes your attention.

I'm also trying to train my brain's muscles for longer periods of concentration. Newport says that even when people want to focus on a task, they often can't because they're so used to distractions. Newport says:

> Unfortunately, when it comes to replacing distraction with focus, matters are not so simple. To understand why this is true let's take a closer look at one of the main obstacles to going deep: the urge to turn your attention toward something more superficial. Most people recognize that this urge can complicate efforts to concentrate on hard things, but most underestimate its regularity and strength. … you can expect to be bombarded with the desire to do anything *but* work deeply throughout the day… (98-99)

So I recognize that my general inclination is to break up this 90-minute focus session and do something easier, such as glance at the news and my email. By resisting, I'm building up my ability to focus in a more sustained way. "The ability to concentrate intensely is a skill that must be trained," Newport says (157). The brain is a muscle, and the more I can resist distraction, the stronger my long-form concentration power becomes.

Think of concentration as a brain muscle. You have to strengthen your concentration ability to get better at it. Our natural tendency is to stray off task and occupy our attention with easy things. Resist this tendency, and you'll improve at immersion in deep work.

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Routines

Another technique for carving sustained focus periods is to rely on routines. If you can build structures for your day that encourage deep work habits, you'll be much more productive. Newport says, "The key to developing a deep work habit is to move beyond good intentions and add *routines* and *rituals* to your working life designed to minimize the amount of your limited willpower necessary to transition into and maintain a state of unbroken concentration" (100).

Establishing routines can help you stick with your plans for deep work. For example, follow a similar structure at the same hour of the day. Maybe complement your rituals with a specific beverage.

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These routines and rituals kick in when your willpower drops. Matthew Crawford also mentions rituals in *The World Beyond Your Head: On Becoming an Individual in an Age of Distraction*. Crawford encourages people to establish structures—metaphorical "jigs"—that naturally guide people into the right actions. Crawford explains: "A jig is a device or procedure that guides a repeated action by constraining the environment in such a way as to make the action go smooth, the same each time, without his having to think about it" (31). For example, when carpenters need to create multiple pieces of wood with the same dimensions, they'll create a prototype that becomes the model for cutting the others rather than re-measuring and cutting each piece individually. If you can create jigs in your environment that naturally build into the routines you want to keep, you'll stick with them.

These focus sessions can't be a one-off activity every other day. Newport says that rituals are important because your success depends on your ability "to go deep, again and again" (119). That's where structure becomes important, as it helps transition the activity into a daily habit.

For me, writing during the first hour of the day works best. I often wake up earlier than others (kids and wife are still asleep), so this time of day has fewer distractions. Further, as I get older, I've noticed that my brain works best when it's fresh, during the first hours of the day.

The mornings can be most productive for me, since my brain feels fresh and I'm able to tackle more cognitively demanding tasks such as writing a first draft of something.

As the afternoon and evening set in, my brain gets more tired and I have less energy for mentally consuming tasks such as writing. Therefore, if I can get in 1-2 hours of writing in the morning, and then save the later hours of the day for editing or other less cognitively demanding tasks, I'm more productive. By the time evening rolls around, I mostly edit what I wrote earlier.
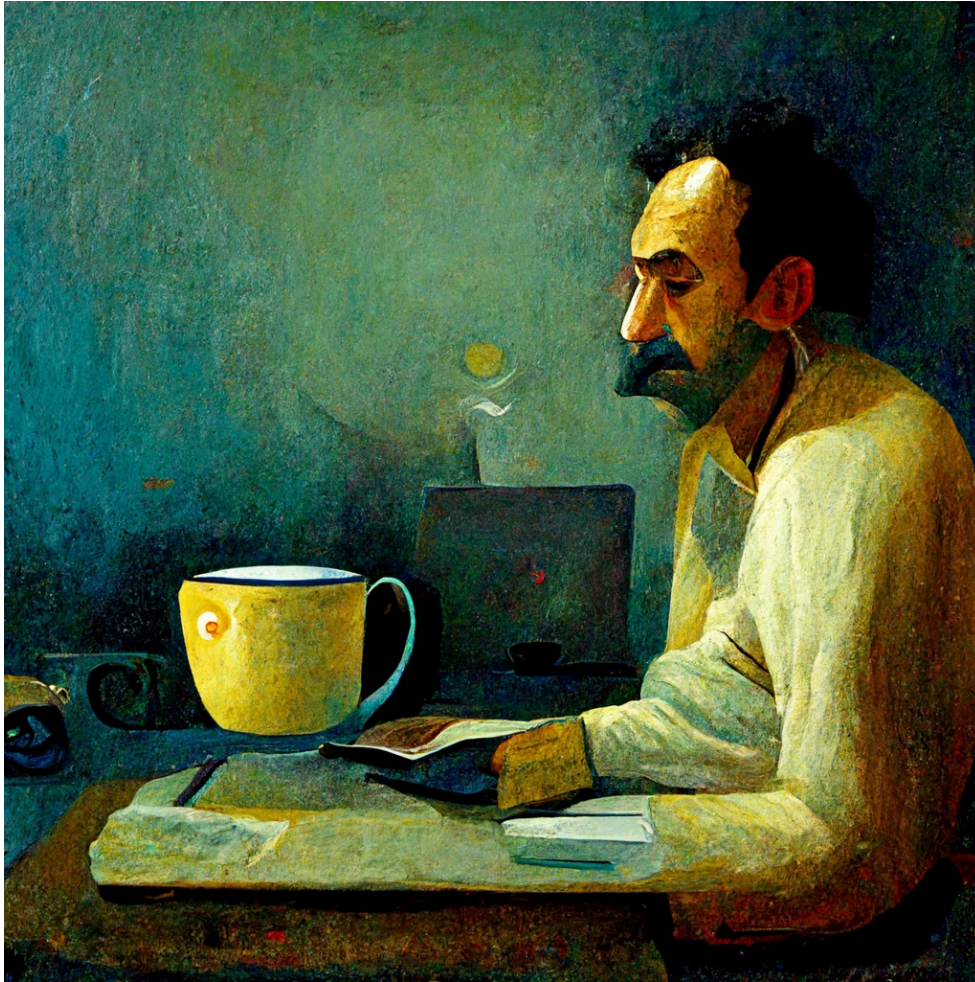
I follow a routine of using the first 1-2 hours in the morning for writing tasks. That's my most productive time of the day, and there are typically fewer distractions. As the day wears on, I gravitate toward easier tasks, like editing or tracking down missing details.

Enemies to sustained focus

Fitting in periods of sustained focus can be especially difficult in a corporate culture, where you're expected to respond to chat and email continuously, Newport says. If you disconnect at work, people will likely think you're not working. But if you open yourself up to constant disruption, you'll become entrapped in shallow activities all day.

Figuring out the *tactics* of deep work can be more challenging than the idea itself. For me, when I have several thirty-minute meetings punctuating the day, it can be difficult to focus deeply. First, I usually have to prepare for meetings, which means coming up with agenda topics. After the meeting, I'm emotionally depleted, so I need some recovery time. I also want to type up the notes and send them out, then create tickets for any action items. A thirty-minute meeting, therefore, takes at least an hour. Add lunch to three meetings, and my actual time is much less. If I look at the clock and see that my next meeting is in 20 minutes, it discourages me from jumping into a 90-minute focus session.

To get in several 90-minute focus sessions during a workday, I might need to adjust my schedule a bit. For example, I could try to adjust my meetings so that they're all back-to-back, which would allow for more sustained focus periods. Or I could shorten the focus sessions. But at work, I don't often have the luxury of changing meetings.

In short, carving out several 90-minute sessions a day isn't easy. It might involve ignoring colleagues and product teams for chunks of time, which could seem off-putting in a "ubiquitous *culture of connectivity*, where one is expected to read and respond to emails (and related communication) quickly" (56).

Constant distractions in an open-office, always-connected corporate culture can be an enemy of deep work. The paradox of this culture is that it leads to less productivity, not more, Newport says.

Constant distractions in an open-office, always-connected corporate culture can be an enemy of deep work. The paradox of this culture is that it leads to less productivity, not more.

The offline behaviors that might seem like you're not working (*why hasn't Tom responded to my chat message?*) are the exact behaviors that lead to greater productivity. If it takes you 90 minutes to respond to your manager's email, it might give the impression that

you're "away" from your desk during work time, maybe running personal errands or going on leisurely walks. Hardly! During this time, you might actually spend the necessary time to get that complex documentation written.

At my work, there's a common practice of writing "manuals" about themselves. I created a lengthy guide that explains my styles and preferences, including the fact that I have most notifications turned off and so might not respond immediately to chat or email because I prefer deep focus. But even if people don't read my user manual (I don't expect them to), they will appreciate increased documentation output in exchange for slower communication.

Part of the problem, Newport explains, is that knowledge workers have unclear productivity metrics. It's not easy to measure output, so the person who appears busy (by being visible online) might actually be the least productive. Academic work measures productivity through the number of peer-reviewed articles published each year. As a technical writer, measuring articles published (or more granularly, word count) with documentation is much more challenging. For example, I could tell you the number of lines changed in code commits I've submitted, but the auto-generated Javadoc I imported several times will drastically distort these metrics. Publishing content written by someone else could likewise distort metrics. It's much more time-consuming to author content from scratch than to lightly edit and publish something engineers wrote. But someone could equally argue that it's better to crowdsource the docs anyway, having product teams do their own writing. It's also challenging to measure the output of management tasks like distilling tickets into concrete, actionable tasks for others to tackle.

Even with these difficulties, I have noticed that if I can squeeze in several 90-minute focus sessions, I am massively productive. The difference is noticeable. Honestly, I wrote the bulk of this content in one such session. The other week at work I had a complex documentation task that involved describing some new and confusing attributes added to an API. I'd been meaning to get to these attributes for more than a week but couldn't make progress. One day I sat down for two hours and completed a first draft. That first draft (where you create something from nothing) is the most mentally taxing, but the subsequent edits are much less demanding.

Here's the secret: If you can complete three of these 90-minute sessions a day, you'll be so productive that you will finish your work earlier than you anticipated. A good focus session might wrap up the work entirely! Especially if I'm operating during my peak performance hours (early in the morning), I can make more progress on writing projects.

Limits to focused work

Working on the doc projects in 90-minute sessions, after I cranked out the description of those complex attributes, my brain hurt. I could feel my mental wheels were being taxed. That's a good sign that I was actually engaged in deep work: I could feel the muscles in my brain being worked over, like I'd just gone to the gym.

Newport says most people can't sustain focused concentration for more than 1-2 hours a day. Even the most experienced professionals tap out at 4 hours. Newport writes, "The most adept deep thinker cannot spend more than four of these hours in a state of true depth" (220).

I agree with this limit, which aligns with my general writing method for this blog over the years. I typically spend an hour writing a post in the morning or so. If I can space out the writing to 1-2 hours a day over a week, I can make a lot of progress. With writing (whether

blog posts, documentation, or books), it's hard to sustain an active writing effort in any genre for more than 4 hours, especially if you're generating original material. (This is why it pains me to see my children procrastinate essays right before the deadline—I know they probably can't sustain a long marathon writing session, especially after midnight.)

Newport says "once you've hit your deep work limit in a given day, you'll experience diminishing rewards if you try to cram in more. Shallow work, therefore, doesn't become dangerous until after you add enough to begin to crowd out your bounded deep efforts for the day" (220). In other words, Newport isn't against shallow work; he just says to prioritize deep work first in your day, then once you've hit your limit, cycle in the shallow work. In my experience, editing existing writing (improving sentence flow, removing typos, and other proofreading) fits into the shallow work category. In contrast, generating the first draft of anything requires deep work.

I was still developing my ability to work focused for 90 minutes at a time. It was challenging. One morning, I tapped out at 60 minutes and wandered into my garage to organize my tools (not something I usually do). I completed just two 90-minute sessions during a light meeting day, despite my goal of three. Meetings could make it nearly impossible, but even without meetings, my brain isn't used to sustained focus for 90 minutes (with no breaks to check email or browse Internet sites). I hoped a longer focus period, however, would lend itself to more periods of flow.

Newport devotes a lot of the book to enemies of distraction. Chief among these are social media and email. I've purposely downplayed the treatment of social media in my summary here because, in my view, we tend to want a scapegoat for our inability to concentrate. In exaggerated ways, social media becomes that scapegoat.

Social media can disrupt your focus, training your brain to naturally drift toward shallow, fragmented thinking. Staying in this mode too long can make it difficult to sustain your focus when you actually want to get lost in deep work.

It is certainly true that social media could interrupt my ability to focus and temporarily short-circuit the wiring in my brain. But based on my experiences, especially how I knocked out the lengthy documentation project in a matter of weeks, I felt that the real key to productivity was not so much to abandon the smartphone but rather to devote 90-minute distraction-free sessions during the day. If I could accomplish these focus sessions, what I did outside of those focus blocks, even if it involved interacting with social media, didn't seem too harmful to me. Newport did caution: "Spend enough time in a state of frenetic shallowness and you permanently reduce your capacity to perform deep work" (7). Again, I didn't think social media permanently rewired our brains. But it might take some re-training to break free of the constant scrolling and skimming habits.

Newport says that in a world increasingly consumed with shallow work, those who can focus on deep work possess a highly valuable skill. The larger hypothesis of his book is that "The ability to perform deep work is becoming increasingly *rare* at exactly the same time as it is becoming increasingly *valuable* in our economy. As a consequence, the few who cultivate this skill, and then make it the core of their working life, will thrive" (14). Most

of us will agree that devoting several sessions of deep focus (whether 90 minutes or another time period) will lead to significant productivity gains. The challenge is finding the right tactics and techniques to make those focus sessions a reality.

Email can be a major source of frustration and time disruption in the office. You can get ahead of email by requiring the sender to do more work upfront.

3.3 How to move from focus sessions to flow sessions

Recap of the Eudaimonia machine

In the previous section in this series, I described some techniques for deep work from Cal Newport. Although he provided a variety of techniques, they all boil down to setting aside time to focus on hard problems for a long period of time.

Among the techniques described, what stood out most to me was Newport's summary of David Dewane and his Eudaimonia machine. The "machine" is an architectural design based on chambers that become increasingly isolated for deep work. Newport explains:

> He [Dewane] imagines a process in which you spend ninety minutes inside [an inner room in the building, like a thought sanctuary], take a ninety-minute break, and repeat two or three times—at which point your brain will have achieved its limit of concentration for the day (97).

The basic idea is that you retreat into one of these inner chambers for 90 minutes of focus time to do deep work.

To put some of these 90-minute focus sessions to the test, I decided to carve out three sessions a day working exclusively on a large documentation project that detailed an end-to-end workflow spanning at least 20 different services (a genre we called "Life of a [something]" narratives). This was a project our team had been meeting about for 7 months, with endless planning and discussion. It was finally time to write. With a light meeting week, I focused all my energy on the project, using 90-minute focus sessions during which I avoided interruption or distraction.

At the end of the week, I had a draft of 6,000 words. The next two weeks I spent shaping that draft based on successive proofreading and reviewer feedback. But these subsequent weeks were much less taxing than the initial week I generated the first draft. Writing the first draft of anything is the most challenging part of writing. Proofreading, editing, responding to reviewer comments, etc., doesn't require as much mental effort.

I was so proud to complete a project we had discussed endlessly. It made me realize what I could accomplish, how much I could actually write if I just set a timer for 90 minutes and did that task and nothing else. (I wrote about this experience here: idbwrtng.com/trends-writinglifeofasomething). My productivity got another writer's wheels in motion as well, and about a month later she finished too. This was the first time I wondered what I could accomplish if I adopted these 90-minute focus sessions regularly. Strangely, even though three 90-minute sessions is only 4.5 hours, it seemed to consume my entire work day.

Troubled by motivation

I was floored by the productivity of the focus sessions, but something troubled me. They drained me in ways that demotivated me a bit. I looked at the next focus session like a begrudging sailor preparing to leave his family and go out to sea. I found it strenuous to focus on a single task for 90 minutes.

During these 90 minutes, to generate a state of flow, I tried not to check my email, chat, or Internet sites (news, sports, etc.). In other words, I tried to reduce all external stimuli. I wasn't always successful at tuning out the world. I probably check my email 50+ times a day, if I'm being honest. But during the focus sessions, that number was reduced to just a couple of times, if at all.

Reducing all distractions and focusing on a single writing task for 90 minutes was extremely strenuous and took some of the fun out of writing (as fun as writing documentation can be).

External stimuli disrupt the flow and context you generate from focused immersion in a task. When you write, you have many ideas and organizational structures in your head. If you switch contexts, those thoughts and patterns fade, making it harder to do anything. Thus, the whole point of doing a single task for 90 minutes is to get to a certain productive velocity without being sidetracked by another task.

To avoid being pulled into other tasks, if I thought of something I wanted to do, I'd write the tasks on a piece of paper to attend to later. It was amazing how, just as soon as I started working on a task, my brain thought of half a dozen easier things to do. *Order that thing on Amazon you need. Schedule that doctor's appointment. Respond to that message on LinkedIn.* Without strong discipline, it was easy to be pulled into light tasks and errands.

I stayed on track using a Focus app countdown timer to monitor my time. But as I said, these techniques made writing less fun. I normally enjoy writing, especially idea formation and content development, but these 90-minute focus sessions turned the activity into a slog. Yet they produced results (6,000 words in a week!), and I loved the results. Everyone loves *having written*, as many writers say. So I was mixed.

Newport doesn't address the motivation issue I encountered, other than to say that focusing on deep work yields a more satisfying life. He praises deep thinking and prolonged focus, and he acknowledges that it's challenging to do deep work, but he doesn't explain that focusing on a single task for so long can be like pounding your head against a blank wall. I knew that unless I could convert these focus sessions into a more enjoyable experience, writing wouldn't be something I could sustain. We do those activities we enjoy. And even with the productivity gains from the activity, I feared what might happen if the technique discouraged me from writing more.

With the need to inject more fun into the focus sessions, I started reading *Flow: The Psychology of Optimal Experience* by Mihaly Csikszentmihalyi, a Hungarian-American psychologist. ("Csikszentmihalyi" is pronounced "Chick-sent-me-high.") The book, a classic, was originally published in 1990.

What is flow?

Flow is a psychological state in which you get so deeply engrossed in a task that you lose all sense of time. External stimuli (outside your task) fade into unimportance as your current activity becomes all-consuming. Csikszentmihalyi says flow is "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (4).

This mental state is what I wanted to achieve with the 90-minute focus sessions. However, in my experience, I *did not* lose track of time nor become so engrossed in the activity that external stimuli faded. (If I did, it was only for brief stretches.)

How could I tweak these ninety-minute sessions to induce more flow? That seemed like the magic formula, because not only would I have the ultimate productivity technique, it wouldn't come at a huge mental cost. Essentially I'd show up to work, and before I knew it, the day would be over.

Entering states of flow during 90-minute focus sessions would result in maximum productivity without incurring a huge mental toll.

Conditions for flow

Csikszentmihalyi talks extensively about flow conditions. The most common examples of activities that generate flow include sports, music, dancing, sex, and religious experience. However, people can achieve flow through virtually any activity that they pay careful attention to, such as observing art, eating, or looking at landscapes.

Sports often give rise to a state of flow, especially when the activity has clearly defined rules and feedback. The activity must also be a good match for your skills — too easy and boredom takes over, too hard and anxiety gets in the way of flow.

But before getting into the conditions of flow, let me take a step back and unpack the larger psychology takeaways from Csikszentmihalyi. *Flow* isn't a productivity book; it's a theory about how to achieve more life meaning and satisfaction. Csikszentmihalyi first started thinking about the topic after observing the psychological impact on Europeans during WWII (Steimer). Csikszentmihalyi also recounts an experience as a boy in which he watched the mountain landscape during a trip. He became lost in the experience, and observed how this experience changed his mental state (Bodnar).

Later, as a researcher, to study the psychological states of people working at their optimum levels, Csikszentmihalyi equipped a large number of people with pagers and pinged them periodically throughout the day to capture their mental state about what they were doing and how they felt. He then identified common patterns during peak times and started to develop the idea of flow.

Psychic entropy as the natural state of our mind

Csikszentmihalyi says our normal mental state is one of disorder and random/scattered/fragmented thinking—what he calls "psychic entropy." Csikszentmihalyi writes:

> But when we are left alone, with no demands on attention, the basic disorder of the mind reveals itself. With nothing to do, it begins to follow random patterns, usually stopping to consider something painful or disturbing. Unless a person knows how to give order to his or her thoughts, attention will be attracted to whatever is most problematic at the moment: it will focus on some real or imaginary pain, on recent grudges or long-term frustrations. Entropy is the normal state of consciousness—a condition that is neither useful nor enjoyable. (119-20)

I could relate to this. When I tried to fall asleep at night, my mind naturally wandered and gravitated toward things I was worried about or preoccupied with. Upcoming presentations, college applications for my kids, family health issues, a new bike trail to explore, etc. It didn't take much to get my mind stirred around different topics. Consequently, at night I usually either listened to a podcast to give my mind some focus until I fell asleep, or watched TV until I got so tired that I fell asleep right after turning it off. Focusing on any specific topic for an extended period of time usually tired me out, whereas the pattern of wandering down rabbit hole after rabbit hole in the mind seemed easier (and kept me awake), but it wasn't pleasing.

I noticed the same mental chaos in the morning, as I arose from sleep. By the time I woke up, I could tell that my brain had been bouncing around different themes actively, thinking below my consciousness. My mind wasn't turned off at night. It was a chaotic world there sometimes. So yes, from my own experience, psychic entropy described the natural state of the mind.
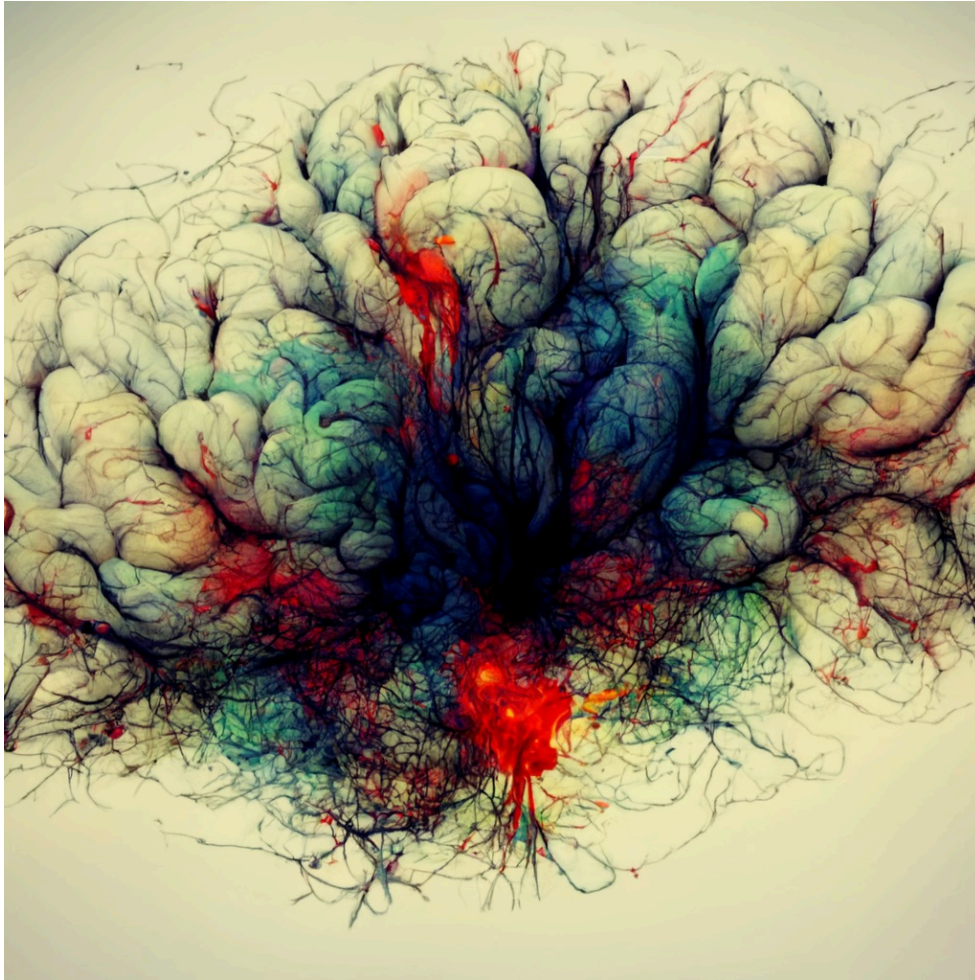
Psychic entropy refers to a state of mental disorder and chaos. Csikszentmihalyi says our natural mental state is one of entropy rather than order and focus. When left to its own, our mind chases rabbit hole after rabbit hole, often gravitating toward the negative.

Csikszentmihalyi continues:

> To avoid this condition, people are naturally eager to fill their minds with whatever information is readily available, as long as it distracts attention from turning inward and dwelling on negative feelings. This explains why such a huge proportion of time is invested in watching television, despite the fact that it is very rarely enjoyed. Compared to other sources of stimulation—like reading, talking to other people, or working on a hobby—TV can provide continuous and easily accessible information that will structure the viewer's attention, at a very low cost in terms of the psychic energy that needs to be invested. While people watch television, they need not fear that their drifting minds will force them to face disturbing personal problems. It is understandable that, once one develops this strategy for overcoming psychic entropy, to give up the habit becomes almost impossible. (119-20)

In other words, television's allure stems from our desire for mental focus and order—it aligns our psychic energy along a single trajectory (the show's story) and removes our rabbit-hole thinking. The more a show pulls you in, the better. I could see the truth in this observation. For example, have you ever found yourself lingering in front of the television for an extended period of time, despite knowing you should shut it off? But you're reluctant to shut off the TV because in its absence, you'll have to think independently and make your own decisions.

If we haven't trained our minds to retain focus, as soon as the TV is turned off, our psychic entropy expands in different directions as we shift from topic to topic in fickle, random ways.

I liked Csikszentmihalyi's ideas around flow because they didn't criminalize social media and scapegoat it as the cause of our fragmented attention. Csikszentmihalyi wrote the book prior to the Internet and social media. He didn't point the finger at Facebook or the constant notifications on our smartphones as the culprit for our inability to focus (as Johann Hari did in *Stolen Focus*). Instead, he argued that our brain's nature was to be scattered, fragmented, and chaotic—a state of entropy. That's why we turned to distraction—to find some mental order.

Overcoming psychic entropy

Overcoming entropy is less about ditching your smartphone (which will just be replaced with an equivalent) and more about training your consciousness. Csikszentmihalyi explains:

> The mark of a person who is in control of consciousness is the ability to focus attention at will, to be oblivious to distractions, to concentrate for as long as it takes to achieve a goal, and not longer. And the person who can do this usually enjoys the normal course of everyday life (31).

Psychic negentropy ("negative entropy") is the opposite state of entropy. It's a state in which you're focused and fully engrossed in the activity. This focus brings order and structure to thought. Just as with learning yoga and meditation, it takes a lot of mental training and discipline to become an avid practitioner.

Learning to control your consciousness is a constant theme in Eastern religions (Csikszentmihalyi spends a few pages comparing yoga with flow). But the larger point is this: Just like yoga, learning to get into a state of flow takes training and practice. It's unsurprising that my first attempts to sustain my focus for 90 minutes at a time resulted in feeling like I was beating my head against a wall. My experience is analogous to an impatient person trying to meditate—it's difficult to stop your mind from chasing random thoughts. To focus on breathing in and out, and nothing else, requires tremendous discipline over conscious thought.

Psychic negentropy ("negative entropy") is the polar opposite of entropy. It's a state in which you're focused and fully engrossed in an activity. This focus brings order and structure to your thoughts. Just as learning yoga and meditation, it takes mental training and discipline to become an avid practitioner.

Knowing that this state of flow isn't a simple technique but rather one that requires practice, like learning to meditate, compete in a sport, or play a musical instrument, gives me more patience on my first strained attempts at 90-minute focus sessions. Csikszentmihalyi explains:

> Like other complex forms of expertise, such as a mature political judgment or a refined aesthetic sense, it must be earned through trial-and-error experience by each individual, generation after generation. Control over consciousness is not simply a cognitive skill. At least as much as intelligence, it requires the commitment of emotions and will. It is not enough to *know* how to do it; one must *do* it, consistently, in the same way as athletes or musicians who must keep practicing what they know in theory. (21)

In fact, Csikszentmihalyi says if you develop a capacity to direct your own conscious thought in a focused way, you can more easily pull away from the need for external stimuli, such as television, to do that focusing for you. When you can define your own thought trajectories, you can find that same pleasure in directed thoughts that would otherwise come from external stimuli:

> When a person has learned a symbolic system well enough to use it, she has established a portable, self-contained world within the mind…. Without the capacity to provide its own information, the mind drifts into randomness. It is within each person's power to decide whether its order will be restored from the outside, in ways over which we have no control, or whether the order will be the result of an internal pattern that grows organically from our skills and knowledge. (127-28)

In a previous section in this series, "From smartphones to Netflix: moving past plateaus in growth," I observed that after abandoning my smartphone, it didn't take long before I moved on to Netflix instead. In order to understand why I needed distraction, I looked into the underlying cause. Csikszentmihalyi's psychology of flow offers a theory as to why: my mind sought for "consciousness ordered" (127).

3.4 Applying Csikszentmihalyi's psychology of flow

Recap

In the previous section, "How to move from focus sessions to flow sessions," I explained that while 90-minute focus sessions led to a significant productivity boost in my writing projects, focusing my attention for that amount of time on a single task was exhausting and demotivating. I then turned to the theory of flow by Csikszentmihalyi to make these focus sessions more enjoyable.

Flow refers to a mental state that comes when you get into the zone, completely engrossed in a task, such that time disappears and all outside stimuli fade away. More importantly, flow states please us because, as they elicit our full array of skills at a complex task, the activity orders our consciousness, Csikszentmihalyi says. The feeling of all cylinders firing in unison, harmoniously directed at the task, puts us in the present. In this state, we're not fretting about random worries and concerns. We're fully focused on the activity, and our brain likes this state.

Flow as the foundation of happiness

As a researcher whose primary concern is happiness (not productivity), Csikszentmihalyi believes that unless we absorb our minds in an engrossing activity, our mental state trends toward psychic entropy (random, diffuse thinking). Csikszentmihalyi says, "Each person allocates his or her limited attention either by focusing it intentionally like a beam of energy… or by diffusing it in desultory, random movements" (33). States of idleness that don't focus our psychic entropy become moments of rabbit-hole thinking, full of worry, regret, anxiety, and cyclical thinking. Csikszentmihalyi explains:

> In normal everyday existence, we are the prey of thoughts and worries intruding unwanted in consciousness. Because most jobs, and home life in general, lack the pressing demands of flow experiences, concentration is rarely so intense that preoccupations and anxieties can be automatically ruled out. Consequently the ordinary state of mind involves unexpected and frequent episodes of entropy interfering with the smooth run of psychic energy. This is one reason why flow improves the quality of experience: the clearly structured demands of the activity impose order, and exclude the interference of disorder in consciousness (58).

In other words, flow counters the naturally occurring entropy in our conscious minds. Without any activity to focus our attention, our natural mental state is one of entropy—in other words, randomness, disorder, unstructured thinking, and worry, says Csikszentmihalyi.

Without any activity to focus our attention, our natural mental state is one of entropy — in other words, randomness, disorder, unstructured thinking, and worry, says Csikszentmihalyi.

Csikszentmihalyi says people tend to experience their most negative experiences when alone, in part because their minds are more free to wander in random, unfocused ways. For those enduring long-term solitude, the time to be alone with their thoughts can be agonizing:

> Why is solitude such a negative experience? The bottom-line answer is that keeping order in the mind from within is very difficult. We need external goals, constant stimulation, and feedback to keep our attention directed. And when external input is lacking, attention begins to wander, and thoughts become chaotic—resulting in the state we have called "psychic entropy" in chapter 2. (168-69)

As you sustain focus on a complex activity that consumes your full attention and skills, this focused state organizes the "psychic energy" of your mind in pleasing ways. One reason we find flow-producing activities so rewarding is because they give order (psychic negentropy) to what otherwise tend to be fickle, flighty thoughts (psychic entropy).

Although other authors like Cal Newport praised moments of mental wandering (disconnected from social media), and even argued that this freeform thinking leads people to make unexpected connections or realizations, I found it hard to sustain freeform thinking in productive ways.

Csikszentmihalyi is so enamored with flow that he explores its application in seemingly every aspect of life, from hobbies to careers to family and more. But my interests here will focus on writing technical documentation and flow.

This is an odd combination because most people associate flow with fiction writing, not technical documentation. Csikszentmihalyi demonstrates time and again that the activity itself is irrelevant; from factory workers to mountain climbers, people can find flow in whatever they're doing. (Csikszentmihalyi specifically addresses the challenge of a worker performing a boring job in the chapter "Work as Flow," p. 144).

I wasn't so concerned about the merits of Csikszentmihalyi's theory of psychology and happiness. In many ways, it suggested our consciousness was more of a train wreck than a marvel, which was an idea I was still processing. I was more interested in whether I could incorporate the dynamics of flow into everyday documentation-writing projects to transform them from dullness to enjoyment.

Conditions that cause flow

Csikszentmihalyi identified eight traits that form common patterns when people are in flow. I'll explain the most salient, applicable traits and relate them to writing documentation.

Summarizing these traits, Csikszentmihalyi explains:

> First, the experience usually occurs when we confront tasks we have a chance of completing. Second, we must be able to concentrate on what we are doing. Third and fourth, the concentration is usually possible because the task undertaken has clear goals and provides immediate feedback. Fifth, one acts with a deep but effortless involvement that removes from awareness the worries and frustrations of everyday life. Sixth, enjoyable experiences allow people to exercise a sense of control over their actions. Seventh, concern for the self disappears, yet paradoxically the sense of self emerges stronger after the flow experience is over. Finally, the sense of the duration of time is altered; hours pass by in minutes, and minutes can stretch out to seem like hours. The combination of all these elements causes a sense of deep enjoyment that is so rewarding people feel that expanding a great deal of energy is worthwhile simply to be able to feel it (49).

There's a lot to unpack there, and Csikszentmihalyi elaborates on these traits throughout his book. They are never outlined in any clear-cut formula to follow, as I believe life is too messy for that. But let's go through the main traits below and discuss how they apply to a profession. In this case, I'll specifically apply them to technical writing because it's what I do, but they could likely be applied to many other professions and activities. The following sections cover skills balance, effortlessness, goals, feedback, and concentration.

Skills balance

This first trait involves striking a balance between tasks that aren't too hard or easy for your skillset. If it's too hard, the activity produces anxiety, which removes your flow. If it's too easy, it doesn't engage you enough and you become bored. You have to strike a balance between anxiety and boredom such that the activity proves a good match for your skills.

If an activity is too hard, it leads to anxiety; too easy, and it leads to boredom. The sweet spot is to find an activity that's just right for your skill set.

Csikszentmihalyi says, "Enjoyment appears at the boundary between boredom and anxiety, when the challenges are just balanced with the person's capacity to act" (52). This balance is common sense: To enjoy almost any game (chess, basketball, tennis), you need people roughly your same level of skill.

In writing documentation, sometimes the information we're asked to produce is beyond our understanding—given that we're usually generalists, not specialists. As we struggle to understand terms, techniques, and other approaches, the task can induce the anxiety Csikszentmihalyi talks about. Trying to explain to a Java engineer how to do an advanced task when you don't understand Java is like telling someone to give directions in Japanese when you only speak English—good luck.

On the flip side, if your task just involves publishing content that engineers write, maybe cleaning up the grammar a bit and incorporating Markdown syntax as you publish it on the site, this task will likely create boredom. Publishing tasks are usually easy (or they should be, ideally, once systems are in place). The other day I had to publish a long document on a site, and I admit I had to open a Mariners game in another window because I found the task too boring. It didn't engage my mind like writing raw content does. Finding grammar errors in sentences is also trivial, if you have a strong command of the language.

Finding a balance between anxiety and boredom is key to flow states. It's why I think the high-level overview (a topic I've explored in my series on Trends to follow or forget, idbwrtng.com/trendsseriesintro) provides an excellent focus for tech writers. The high-level overview provides enough attention to conceptual documentation to move it away from simple formatting or publishing. You're writing. You have to articulate complex concepts in readable, understandable ways.

At the same time, the focus on the high-level means you won't get into the nitty-gritty details of code samples, authorization protocols, parameter data types, or other granular details. This won't be like writing reference documentation for a Javadoc, where you have to chase down field descriptions for each class and what data gets returned for the methods, and so on.

Effortlessness

Another trait of flow Csikszentmihalyi talks about is effortlessness. When you're in a state of writing flow, your mind pours words onto the page in effortless ways, as if a muse is speaking to you. Compare the experience to an ice skater who glides effortlessly along the ice, almost like the wind moving across the landscape.

In states of flow, people appear to do the activity effortlessly, though in reality the activity is fully consuming of the person's intellect and abilities.

The effortless and apparent ease may actually be a mirage. Csikszentmihalyi says:

> Although the flow experience appears to be effortless, it is far from being so. It often requires strenuous physical exertion, or highly disciplined mental activity. It does not happen without the application of skilled performance. Any lapse in concentration will erase it. (54)

Writing tends to be a strenuous activity for most people, requiring "disciplined mental activity." Few can sustain writing modes for more than a few hours a day. No matter what you're writing, filling a blank page is frustrating. Especially when you're writing documentation, chances are you're thinking about things so complicated that you can barely keep your head above water. You might be drowning in acronyms, catching glimpses of understanding every now and then. Writing documentation differs from the creative writer who inhabits a character's mind and allows character-driven empathy to direct the flow of content.

Most tech writers will struggle with effortlessness and will not enter states of flow. You can't force your mind to articulate an understanding you lack. That attempt to clarify confusion might only result in mental anguish (and the desire to switch to easier tasks, like interacting on Slack). You might not know what to say because the topic is too complex and unfamiliar to you in the first place. This is why writing is difficult.

But it doesn't have to be. With the right technique, you can get past these hurdles and enter the flow state Csikszentmihalyi describes. As I was writing a longer documentation narrative the other week, which I described in "Attempting to write a Life of a [something] narrative" (idbwrtng.com/trends-writinglifeofasomething), I noticed a pattern that emerged that made writing almost effortless.

I was writing about a subject outside my stewardship. As such, I had to read widely and try to gather details about topics I knew little about. My approach involved alternating between reading and writing modes. More specifically, I would read product design documents and other information about a topic, copying and pasting from the material I read whenever I found relevant nuggets of information.

When you don't know what to say, read until you do. The basic pattern of writing is to alternate between reading (information gathering) and writing (information articulation) modes.

After I gathered enough information nuggets into a document, I organized them into a logical order (in this case, arranged by steps in a workflow). This phase was the information-gathering phase. Reading leads to information discovery.

After accumulating enough nuggets, I would read through that content and summarize, distill, or otherwise incorporate the information into my own words and narrative. In other words, I transitioned into writing. If the information nugget didn't need to be paraphrased or summarized, no problem, I could just weave it into the content as is (because the content all belongs to the company anyway). But usually, I had to identify a key point in a larger paragraph and paraphrase the idea in my own words. I would also stitch it together with the other nuggets in that section until the content fit seamlessly.

After running out of details, I would revert to the information-gathering phase again (usually reading), in which I would uncover yet more details (finding more nuggets). After weaving the newly discovered information into various sections of my draft (wherever the gaps were), I would return to my writing mode and smooth the information in, like a builder might smooth large rocks into a concrete wall through masonry. I continued alternating between reading and writing until I felt I had enough detail in my document.

After gathering nuggets of information, I smoothed them together like a masonry worker might smooth together rocks in a rock wall.

I realized that I had followed the same pattern on my blog. I had written two main essay series that year—"Trends to follow or forget" (idbwrtng.com/trendsseriesintro) and this series, "Journey away from smartphones"—following a similar pattern. Both series had 15+ posts. When I ran out of things to say, I read another book or article about the topic, and it filled me with more ideas and thoughts. I began quoting these authors and responding to their arguments and experiences. In other words, I started conversations with authors.

This technique isn't revelatory. Even Csikszentmihalyi notes, "As in all other branches of learning, the first step after deciding what area one wants to pursue is to learn what others have thought about the matter" (139). But I didn't realize how significant reading was to the writing process until I began these essays. Essentially, writing is just a conversation with the authors you're reading. As such, reading and writing go hand in hand. Reading leads you to discover new information, and writing is your way of responding to that information. It's like a see-saw—read a bit, then write, then read some more, then write. The two activities feed off each other. And in the books I read, it's clear that the authors themselves are having conversations with the sources they're reading. Writing is thus a conversation about a conversation.

It's not that simple, of course. There are times when information isn't available for reading. In that case, you might have to gather information by interviewing engineers and product managers. And you might discover other information through experimentation with the product. But the majority of the information comes from reading.

Seeing this pattern in my content generation process, even for the technical documentation I was writing, made my focus sessions less strenuous. I no longer felt like I was banging my head against a blank wall. If I didn't have content, I would look for material to read, copying and pasting highlights as I ran across them. Then from these nuggets, I would add them to my existing draft and keep working. If I ran out of content, I just needed to read more.

Understanding the balance between reading and writing helped transform focus sessions from a slog to a journey. Part of the struggle with writing is trying to explain something we ourselves don't fully understand. As we tax our brains to articulate an idea, process, or description that we can't fully grasp ourselves, this puts our mental wheels into overdrive. Crystallizing the words in our minds into coherent, organized explanations is difficult. But balancing this activity with reading reduced the strain. It seemed effortless.

Goals

Another point Csikszentmihalyi mentions as a trait of flow is goals: "To be able to experience flow, one must have clear goals to strive for" (209). On the surface, goals might seem like just another box checked with documentation-writing. Working facilitates the achievement of goals criteria more easily than when we are at home and have free time. Not only do we have tickets in issue tracking systems that establish the work (providing a "goal"), but managers usually require us to formulate goals we're working to achieve (for example, OKRs).

However, trying to complete a ticket or achieve my OKRs wasn't likely to get me into flow. I'd never met anyone who enjoyed corporate goal planning and reporting. Instead, try focusing on goals related to your immediate activity: writing.

Writing can unlock understanding of a complex topic. When I'm writing documentation about something, at the start of the project, my understanding is minimal. Much of the product confuses me. But at some point, a light bulb comes on and I suddenly get it. I get the point of the API, or I finally make it work, or something else clicks. Compare this with the sense of discovery you experience when you write a more creative essay or post. Good writing usually yields surprising realizations during the writing process. (If you think about it, a good story almost invariably involves the main character changing through some realization or epiphany.)

Csikszentmihalyi says that information discovery often becomes the goal of writing that leads to enjoyment of the task. Writing is not about typing out what you already know but about discovering what you don't know:

> In today's world we have come to neglect the habit of writing because so many other media of communication have taken its place. Telephones and tape recorders, computers and fax machines are more efficient in conveying news. If the only point to writing were to *transmit* information, then it would deserve to become obsolete. But the point of writing is to *create* information, not simply to pass it along. In the past, educated persons used journals and personal correspondence to put their experiences into words, which allowed them to reflect on what had happened during the day. The prodigiously detailed letters so many Victorians wrote are an example of how people created patterns of order out of the mainly random events impinging on their consciousness. The kind of material we write in diaries and letters does not exist before it is written down. It is the slow, organically growing process of thought involved in writing that lets the ideas emerge in the first place. (131)

In other words, if you're writing a letter or essay, much of the enjoyment comes from discovering some new realization or thought about the topics or events. It's no fun regurgitating what you already know. A thoughtful post leads you to discover new ideas. That's always been what captivated me about blogging, and why I feel I will never run out of ideas. When I'm writing a blog post, I'm exploring unfamiliar territory, curious to see what I will find.

The activity needs a clear goal, with rules for engagement. The goal of writing might not be to complete the ticket or fulfill a corporate OKR. Instead, your writing goal might be to discover new information, to unlock understanding about a product, or arrive at some other unknown detail that you didn't know when you started. I consider a good blog post one that leads me to new realizations.

Feedback

Another trait correlated with flow states is feedback. Csikszentmihalyi says, "… receiving clear feedback [is] a condition for enjoying whatever they were doing" (58). Csikszentmihalyi provides the example of a surgeon performing an operation and knowing immediately whether he or she is successful (such as by assessing whether blood flows into the cavity). Unfortunately, writing doesn't provide immediate feedback from an external reader. You're still drafting and shaping the content for many days before sending it to others to review.

However, writing can provide feedback as you examine what you've written. Maybe you read over a draft and see that it's taking shape and starting to feel like an interesting piece. Or maybe you read it and decide it's confusing and scattered. You could even use a rubric to score your draft against various criteria. Consider the analogy to shaping clay on a pottery wheel: as the artist sees the previously formless clay taking on the shape of a pot, that developing shape provides feedback to the artist about their work.

With writing, you're trying to shape amorphous content into some satisfying structure, such as a narrative structure, developer journey, workflow, or process. When you see that shape starting to form, that feedback pulls you deeper into the task. Seeing shapeless information suddenly form into a captivating story motivates you to keep writing.

I'm usually pleased when I read drafts of my work. I see that I've created something from nothing. Where there was previously a blank page, now there is a body of knowledge, a story, or some other interesting form. Just because you're the reader, it doesn't mean you're not receiving feedback as you read the draft. The most engaging feedback comes from reading your own content.

Concentration

Another trait of flow is concentration. Csikszentmihalyi says, "After choosing a system of action, a person with an autotelic personality grows deeply involved with whatever he is doing…. he invests attention in the task at hand" (210). I've spent many posts in this series already arguing for concentration modes. Turning off email, chat notifications, and other disruptions helps you maintain context and velocity in the task.

To move towards flow, you need to concentrate fully on the task. This means shutting out both external stimuli as well as internal distractions. The more mental discipline we develop, the more capable we become of long-term concentration.

In contrast, if you're constantly distracted (by colleagues, social media, or news sites), you probably won't get into a flow state.

Tuning out all disruptions is easier to say than to do, especially in a busy office environment where you're always connected. So how can you do it? One technique Csikszentmihalyi says is to pay close attention to the details of your activity. He writes:

> The traits that mark an autotelic personality [one who enjoys the activity for itself] are most clearly revealed by people who seem to enjoy situations that ordinary persons would find unbearable.... First, they paid close attention to the most minute details of their environment, discovering in it hidden opportunities for action that matched what little they were capable of doing, given the circumstances." (90)

By focusing on minute details, our concentration deepens. Close observation is something you can do with almost any task. For example, the other week I rode my bike through the same 5-mile downtown Seattle stretch that I've ridden for nearly a year. But this time, I

tried to notice 20 things that I've never noticed before. It didn't take long before I reached 20, and in the process I was engrossed in the ride, not even listening to a podcast. I couldn't believe all the things I'd been casually passing by. For example, I decided to take a closer look at a hole in the fence. When I peered through the hole, I realized the construction pit was so massive, the workers resembled ants at the bottom.

I ride by this small gap in the fence everyday, and while I knew some construction scene lay on the other side, I hadn't bothered to look through the gap.

When I looked through the gap, I saw a huge cavity in the earth, so deep that the construction workers looked like ants at the bottom.

When you write, you may pay closer attention to words. Csikszentmihalyi says that word play and investigation can be a source of enjoyment that leads to flow. By examining the word choice in your sentences, maybe looking up words and finding more precise diction, this will pull you deeper into the task.

The effort to concentrate for extended periods of time on a topic depends more on our ability to re-order our consciousness. If we've built a habit of TV-watching, smartphone addiction, and other ways of using external stimuli to order our conscious mind, our concentration muscles are probably weak and need more training. Csikszentmihalyi says:

> People without an internalized symbolic system can all too easily become captives of the media. They are easily manipulated.... If we have become dependent on television...., it is because we have so little to fall back on, it is because we have so little to fall back on, so few internal rules to keep our mind from being taken over by those who claim to have the answers. Without the capacity to provide its own information, the mind drifts into randomness. It is within each person's power to decide whether its order will be restored from the outside, in ways over which we have no control, or whether the order will be the result of an internal pattern that grows organically from our skills and knowledge. (128)

Csikszentmihalyi's point here gets into a larger topic, that of developing your mind in such a way that you can control your thinking and consciousness. Focusing on a topic without wandering into randomness is hard. Controlling conscious thought is more closely related to meditation and yoga.

In a previous section, I mentioned that after getting rid of my smartphone, I substituted TV for it. I wondered why I seemed drawn to distraction. Csikszentmihalyi's answer is that TV alleviates our psychic entropy. TV helps produce an ordered consciousness, taking us away from the worries and anxieties of our own lives. Csikszentmihalyi writes:

> Worries about one's love life, health, investments, family, and job are always hovering at the periphery of attention, waiting until there is nothing pressing that demands concentration. As soon as the mind is ready to relax, *zap!* the potential problems that were waiting in the wings take over.

It is for this reason that television provides such a boon for many. Although watching TV is far from being a positive experience—generally people report feeling passive, weak, irritable, and sad when doing it—at least the flickering screen brings a certain amount of order to consciousness. The predictable plots, familiar characters, and even redundant commercials provide a reassuring pattern of stimulation. The screen invites attention to itself as a manageable, restricted aspect of the environment. While interacting with television, the mind is protected from personal worries. The information passing through the screen keeps unpleasant concerns out of the mind. (169)

When you attempt to concentrate on a task, to look for distractions, whether from the TV or smartphone or light tasks. The urge comes from the psychic entropy that flitters about in our heads. Csikszentmihalyi calls this "the dark side of the emergence of consciousness" (227).

As thinking, reflective humans, we tend to celebrate our consciousness and fear the day robots turn sentient. But Csikszentmihalyi presents the flip side of consciousness:

> The forms of psychic entropy that currently cause us so much anguish—unfulfilled wants, dashed expectations, loneliness, frustration, anxiety, guilt—are all likely to have been recent invaders of the mind. They are by-products of the tremendous increase in complexity of the cerebral cortex and of the symbolic enrichment to culture (227).

It is this dark side of consciousness that the state of flow counteracts. When you're in a state of flow, you aren't thinking about your "unfulfilled wants, dashed expectations, loneliness, frustration, anxiety, guilt."

If I have any criticism of Csikszentmihalyi's arguments, I think he doesn't give enough attention to dealing with the underlying issues. There might be merit to addressing serious issues head-on. Engaging with the issues might reduce their power to overtake your mind and distract you from efforts to flow. Some disruptions can be so powerful that you can't ignore them—and probably shouldn't.

For example, suppose you have baggage from childhood that continually encroaches on your thoughts, making it difficult to concentrate without moving back to the issue. Surely dealing with the issue, perhaps through therapy, would help you concentrate. The smallest of issues can be distracting. At Amazon, I once disagreed with a product manager (PM) about a documentation-related issue, specifically the degree of transparency around the product's obvious limitations. As I biked to and from work, my mind couldn't stop dwelling on the topic. Even as I tried to listen to podcasts or audiobooks, I couldn't stay focused because I kept thinking about the issue.

Rather than forget about the issue, I could have set up a meeting with the product manager to hash out the issue with pros and cons. But I could have also explored why transparency was so meaningful to me, what personal experiences made this quality so essential. Rather than directly dealing with the topic, the issue slowly fizzled. Then the product flopped anyway and became a non-issue.

Perhaps one way to deal with these urges toward distraction is to write the thoughts down on paper as they come to you. Once on paper, you can approach them more strategically. When you're done with your focus session, figure out how to address the issues. Make a plan. For example, if you're worried about how your teenage child will transition to college, write down all the steps to be completed and work towards completing them. This will likely put your mind at ease about the subject and increase your concentration.

Other flow traits

There are a few more traits of flow I haven't covered here—time distortion, the feeling of control, and a disappearing concern for the self. However, these are more the consequences of flow rather than the conditions leading to it, so I'll omit discussing them here.

Conclusion

As I experimented with flow techniques, I found my focus sessions more enjoyable and durable. At times, time passed without me noticing. But flow wasn't achievable overnight. It might take many months and potentially years of practice to get to more immersive states of flow, just like yoga and meditation. One doesn't become a yoga guru overnight.
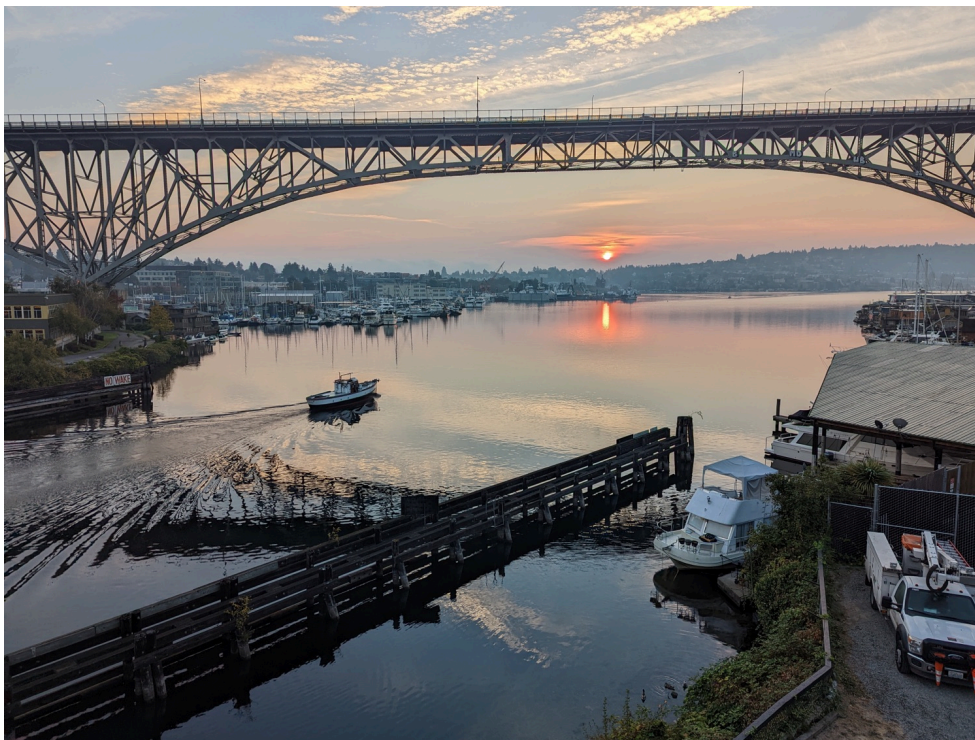
I ride past the Aurora bridge each morning on my way to work in Fremont, Seattle. Boats glide smoothly along the water, a constant reminder about the idea of flow.

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3.5 From monkey mind to calm, ordered consciousness -- even outside of flow? Wrestling with Csikszentmihalyi's assumptions about psychic entropy

Context and background for this topic

In my last post, "Applying Csikszentmihalyi's psychology of flow," I explained that Csikszentmihalyi says our normal psychological state is one of constant entropy (disordered, unstructured thought). Some people call this "monkey mind," a term coined by Buddha to refer to the way a monkey swings from branch to branch, similar to our mind jumping from thought to thought.

The whole point of getting into flow, according to Csikszentmihalyi, is to counter that entropy with a more "ordered consciousness." Csikszentmihalyi says,

> The optimal state of inner experience is one in which there is *order in consciousness*. This happens when psychic energy—or attention—is invested in realistic goals, and when skills match the opportunities for action. (6)

Ordered consciousness is the opposite of psychic entropy / monkey mind. (Csikszentmihalyi doesn't use the term "monkey mind," but it seems so much clearer than "psychic entropy," so I refer to them synonymously.)

I've covered a lot of straightforward ground in this series, but they've all sort of led up to this larger question of achieving order in consciousness (avoiding a state of distraction). So bear with me as I wrestle with this more abstract topic.

Why accept the monkey mind as a natural state?

Although I like the idea of getting into a flow state, Csikszentmihalyi's assumption about entropy being our natural mental state seems like a pessimistic view of human consciousness that view reduces the value of our most celebrated quality. Why is humanity's natural mental state entropy instead of order?

Csikszentmihalyi addresses this question in a short section called "Recovering Harmony" (p.227). Anticipating the objection, he phrases it as follows: "Aren't people born at peace with themselves—isn't human nature naturally ordered?" This is also my objection. Why shouldn't my natural mental state be naturally ordered? If it's disordered, how did it get that way?

If we can't have ordered consciousness *outside of flow*, and we only experience flow during optimal times, what does this imply about the rest of our time? The bulk of our lives are spent outside flow? If flow is difficult to achieve, maybe 1-2 hours a day, it can hardly

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form the backbone of our mental state. It seems like we should address the root of why we become disordered in the first place, so that we don't have to revert to infrequent states of flow to escape it.

Csikszentmihalyi on pre-conscious states

Csikszentmihalyi says flow helps us return to a pre-conscious state, almost like that of an animal. Csikszentmihalyi says:

> The original condition of human beings, prior to the development of self-reflective consciousness, must have been a state of inner peace disturbed only now and again by tides of hunger, sexuality, pain, and danger. ... If we were to interpret the lives of animals with a human eye, we would conclude that they are in flow... (227)

Look over at your cat or dog, and quietly observe their state. Presumably, the animal enjoys peace free from the psychic burdens of self-reflective consciousness. I have a young cat that likes to paw at random objects on the floor as if they were mice. In many ways, the cat gets into a state of flow doing this.

A cat that directs its attention playfully on an object could be said to be in a state of flow.

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But alas, we humans have the burden of a conscious mind, which leads to psychic entropy (monkey mind). Csikszentmihalyi continues:

> The forms of psychic entropy that currently cause us so much anguish—unfulfilled wants, dashed expectations, loneliness, frustration, anxiety, guilt—are all likely to have been recent invaders of the mind. They are by-products of the tremendous increase in complexity of the cerebral cortex and of the symbolic enrichment to culture. They are the dark side of the emergence of consciousness. (227).

Animals don't experience "unfulfilled ambition" or get overwhelmed by "pressing responsibilities." They don't "weigh possibilities unavailable" or "imagine pleasant alternatives." They aren't "disturbed by fears of failure" (228). These characteristics represent the "dark side of consciousness," which came about due to the "tremendous increase in complexity" of our brains and from an advanced culture.

How humans developed consciousness

Csikszentmihalyi doesn't spend much time on how consciousness is formed (at least not in *Flow*), and his writing about consciousness is more speculative than evidence-based (due to the nature of the topic), but he briefly touches on it. He says consciousness likely formed due to the following:

- the "biological evolution of the central nervous system"
- "the development of culture—of languages, belief systems, technologies"
- "the dubious blessing of choice"
- the transition from "dispersed hunting tribes to crowded cities … [which] give rise to more specialized roles that often require conflicting thoughts and actions from the same person."
- the juxtaposition of many different social roles, reinforcing the fact that all "see the world different from one another. There is no one right way to behave, and each role requires different skills."
- the "cacophony of disparate values, beliefs, choices, and behaviors."
- exposure to "increasingly contradictory goals, to incompatible opportunities for action" (230)

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The complexity of civilization, especially as it juxtaposes contradiction, differing points of view, and different roles and ways of being could have spurred consciousness to develop.

The overarching theme here is that as civilization grows complex and multifaceted, particularly in ways that prompt reflection, such as by being confronted with contradictory or opposing views or lifestyles, consciousness increases. These more complex scenarios prompt advanced thought.

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When you're confronted with contradiction or an alternate point of view that contrasts with your own, it might set off a state of reflection that leads to greater consciousness.

Overall, Csikszentmihalyi doesn't seem too concerned with how humans arrived at consciousness (or an advanced state of mind), only that they do experience consciousness, and that the mental state of consciousness drifts toward entropy. However, before dismissing the possibility of a better answer about how consciousness formed, let's explore one more theory about how consciousness formed.

Note: How humans became conscious is one of the big mysteries of human biology, philosophy, and psychology. "Consciousness" is probably too general and slippery of a term, but I'm hesitant to get into definitions and nuances because this is a deep topic that probably merits more space than I can give it. I want to explore it only briefly.

Origins of consciousness—the bicameral mind hypothesis {#origins-of-consciousness—the-bicameral-mind-hypothesis}

Csikszentmihalyi's *Flow* was published in 1990. About 15 years earlier, American psychologist Julian Jaynes published a book called *The Origin of Consciousness in the Breakdown of the Bicameral Mind*. It posits that consciousness was a relatively recent

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development (just 3,000 years ago), emerging from metaphoric language. The theory is speculative and most experts dismiss it, but they acknowledge a fascination with some aspects of the thesis.

Jaynes says if you look back several thousand years ago, during the time the *Iliad* was composed (about 8th century BC), you don't see subjective interiority (consciousness) in the characters. The characters don't introspect in explicit ways that embody a thinking, conscious mind. There's no Descartes-style mind at work, no Hamlet soliloquy.

Jaynes says the frequent gods and muses directing events in ancient texts were actually auditory hallucinations from the right hemispheres of people's brains. The left hemisphere incorrectly interpreted these auditory hallucinations as the voices of the gods. Jaynes called this the bicameral mind (for "two houses").

Subjective introspection seems absent in ancient texts. Why? Jaynes says people basically weren't fully conscious. They interpreted the voice in their heads as the voices of gods and muses. In reality, the voice in their heads was their right brain projecting an auditory hallucination to the left brain.

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As written language evolved, specifically metaphoric language, the bicameral mind started to break down. Those auditory hallucinations, which previously originated from the "gods," started to be perceived as emerging from the same human mind. As people evolved and the bicameral mind disappeared, the auditory hallucinations from their right brains ceased. Without the gods directing their actions, many people felt abandoned.

The auditory voice of the "gods" was really the conscious mind projecting these thoughts all along. As people evolved and the bicameral mind disappeared, the auditory hallucinations from their right brains ceased. Without the gods directing their actions, many people felt abandoned.

Jaynes' controversial bicameral mind hypothesis caused critics to reconsider their interpretations of gods and muses' frequent appearances in texts like the *Iliad.* Many started to think that the gods weren't literary devices or cultural tropes but rather literal beliefs about what was happening.

Metaphoric language and consciousness

Despite the intriguing hypothesis, there isn't compelling evidence for it, so it remains a hypothesis. But even putting aside his larger theory, there are aspects to Jaynes' ideas that are interesting, such as the idea that metaphor gives rise to conscious thought.

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Jaynes dissects metaphors into *metaphiers* (the familiar object) and *metaphrands* (the unfamiliar), arguing that the "most fascinating property of language is its capacity to make metaphors." He defines metaphor in the common way: "the use of a term for one thing to describe another because of some kind of similarity between them or between their relations to other things" (48). But even phrases not typically flagged as metaphors are in fact metaphors. For example, if you say, "layoffs are coming," it assumes that the layoffs are an object, that they have a means of movement (legs?) and that they are heading in your direction (*Watch out, the recession is coming to get you!*).

Jaynes says "… metaphor is not a mere extra trick of language, as it is so often slighted in the old schoolbooks on composition; it is the very constitutive ground of language." (48) More importantly, metaphor extends language: "It is by metaphor that language grows" (49). We're used to "seeing" metaphors as merely literary devices in language, one of many rhetorical techniques available, but Jaynes expands the scope of metaphors to make them the foundation of language and thought itself. Jaynes says:

> All of these concrete metaphors increase enormously our powers of perception of the world about us and our understanding of it, and literally create new objections. Indeed, language is an organ of perception, not simply a means of communication. (50)

Metaphoric language helps us consider unfamiliar circumstances and ideas, prompting more advanced thought and ultimately consciousness. Metaphors take us from the familiar into the unfamiliar. By taking us into unfamiliar territory, metaphors prompt us into more advanced thought (and eventually consciousness).

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Metaphoric language helps us consider unfamiliar circumstances and ideas, prompting more advanced thought and ultimately consciousness. Metaphors take us from the familiar into the unfamiliar. (Even this image is a metaphor. Does it make you consider new ways of thinking about metaphors?)
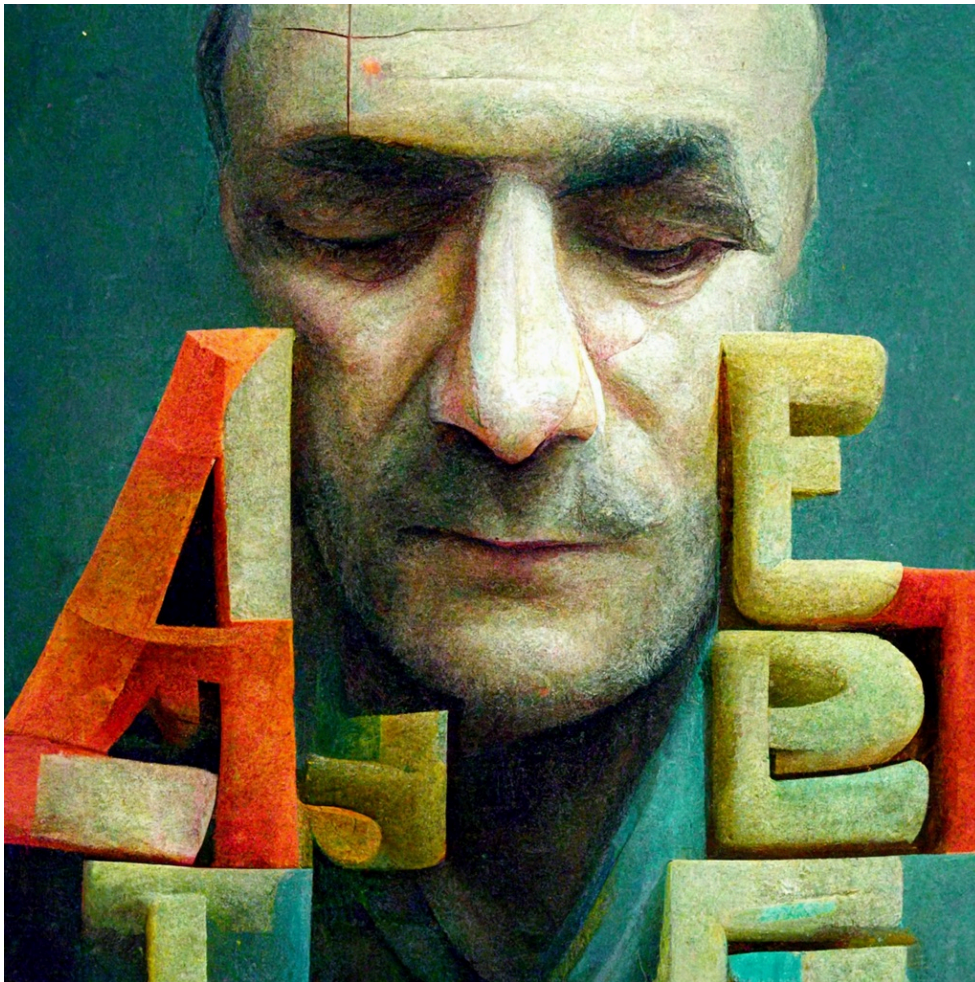
Jaynes continues:

> The lexicon of language, then, is a finite set of terms that by metaphor is able to stretch out over an infinite set of circumstances, even to creating new circumstances thereby. (Could consciousness be such a new creation?)" (52)

It's through language and metaphor that we perceive new circumstances, and awareness of these new circumstances leads us toward more consciousness.

Jaynes also says symbols in language allow us to assemble and manipulate advanced ideas:

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> Subjective conscious mind is an analog [such as a map] of what is called the real world. It is built up with a vocabulary or lexical field whose terms are all metaphors or analogs of behavior in the physical world. Its reality is of the same order as mathematics. It allows us to shortcut behavioral processes and arrive at more adequate decisions. Like mathematics, it is an operator rather than a thing or repository. And it is intimately bound up with volition and decision." (55)

If you consider how mathematical operations and computer programming involve converting ideas into symbols that you can manipulate and perform actions against in complex ways, it's not hard to see how language might perform a similar function. Words act as symbols that we can manipulate in advanced ways, leading to more complex thought.
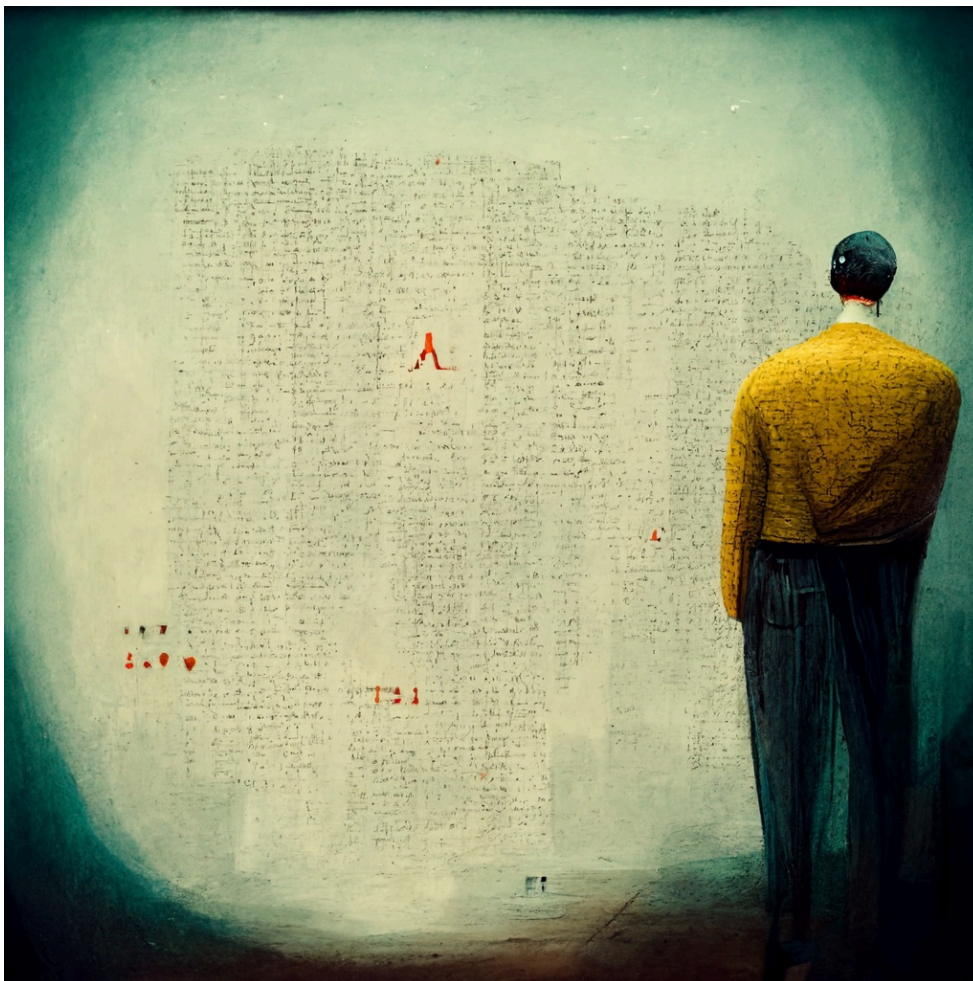

The symbolic nature of language allows us to explore more complex thought.

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Externalizing thought through writing

I'm not sure if Jaynes is right about metaphoric language and consciousness (can anyone know?), but there's widespread consensus that language plays a role in the development of consciousness. As someone who frequently writes, I can attest that written language plays a part in promoting introspection.

When you write something, you're literally making your internal thoughts external. This externalization allows you to see your thoughts more concretely, almost from another point of view. As E.M. Forster once said, "How do I know what I think until I see what I say?" Let more time pass (years, even) to the point that you forget that you're the author of the written text, and the words become even more external and foreign.

The widespread recognition of Forster's quotation reinforces its validity. The more you write, the more likely you are to know what you think. Knowledge of what you think creates self-awareness, and it leads you to deliberate about whether you agree with what you're reading or not. All of this complexity likely leads to more advanced thinking. And more advanced thought leads to more consciousness, the ability to step outside our frame of mind and analyze it formally, points of view, to be aware of ourselves and our mental processes, almost like an external observer looking at us.

Externalizing our ideas helps us see them from another perspective. This alternate

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perspective (outside ourselves) can help expand our awareness.

Regardless of how language works, there's no greater tool for thinking than writing. Not only can you see your thoughts in concrete form but you can also refine the logic of your arguments, trace out more complex trajectories of ideas, build elaborate narratives, and more.

The first time I became aware of consciousness

Language leads to thought, but thought alone doesn't trigger consciousness. You need a complex external event to set your thinking wheels spinning in ways that make you aware of yourself.

I remember the specific moment when I first became aware of my thinking mind, or when I recognized my consciousness. When I was about 5 years old, I had a friend who didn't talk much. One day I had lunch at his house. His mother made us a sandwich and chips, and we sat at his kitchen table, mostly eating in silence. As we ate in silence, I realized that I could think silently in my mind. I could think whatever I wanted, and no one else could know what I was thinking. Did others have this capability? Looking at my friend quietly eating his sandwich, I wondered, was he considering things in his mind too? Or was his mind blank, without any thoughts other than taking another bite of his sandwich?

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Was my ability to think whatever I wanted in my mind a unique capability, or did everyone possess it? The juxtaposition of a person in a seemingly opposite state prompted reflection, then awareness.

The juxtaposition of a person in a seemingly opposite state prompts reflection, then awareness. My experience reinforces Csikszentmihalyi's argument that when we "… see the world different from one another, [recognizing that] [t]here is no one right way to behave, and each role requires different skills," it moves us toward consciousness.

My wife had a similar experience. She says when she was a young girl growing up in the Mormon church, someone explained to her the doctrine of polygamy, and she felt repulsed by it. She reacted so strongly that she decided that internally, in her mind, she could believe whatever she wanted and wouldn't have to agree with polygamy. She realized her mind was a private sphere for her alone. No one else could enter her mind castle. It was her house, her space, and she could believe whatever she wanted. It was the first time she realized her private sphere of thought.

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When my wife rejected what her church leaders taught, she reveled in the private castle of her mind. She realized it was a space no one else could enter, and she was free to believe whatever she wanted in there.

The moment I started introspecting while eating a sandwich with my silent childhood friend, or when my wife first realized she could think her own thoughts about polygamy—were these the starting points for a mental state increasingly filled with, as Csikszentmihalyi says, "unfulfilled wants, dashed expectations, loneliness, frustration, anxiety, guilt"? (230) In other words, is this the transition point when we move from the bright side of consciousness to the dark side of consciousness? And if so, is advanced thought itself to blame for our disordered consciousness? Does avoiding introspective thought lead to ordered consciousness?

Paradoxes of consciousness

As humans, we usually celebrate our rational faculties. I love to trace and explore ideas in my head. In *Nicomachean Ethics*, Aristotle says the contemplative life leads to the most pleasure: "For contemplation is at once the highest form of activity, since the intellect is the highest thing in us …." Aristotle says this contemplative state is the highest form of human nature, so maximizing our highest nature leads to the highest form of living.

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In fact, Csikszentmihalyi even says philosophy can lead to flow:

> ... playing with ideas is extremely exhilarating. Not only philosophy but the emergence of new scientific ideas is fueled by the enjoyment one obtains from creating a new way to describe reality. The tools that make the flow of thought possible are common property, and consist of the knowledge recorded in books available in schools and libraries. A person who becomes familiar with the conventions of poetry, or the rules of calculus, can subsequently grow independent of external stimulation. She can generate ordered trains of thought regardless of what is happening in external reality. When a person has learned a symbolic system well enough to use it, she has established a portable, self-contained world within the mind (127)

In other words, the seemingly absent-minded philosopher who is lost in deep thought, running ideas through logical syllogisms to dissect them to their core and then reassemble them back into a whole, enters a flow state, despite heightened consciousness. It seems paradoxical, though they are different types of consciousness. One is focused, directed thought. The other is freeform, scattered thought. Are they really so different?

The entropic mindset Csikszentmihalyi warns against isn't the philosopher focusing on arguments about abstract ideas, but rather the idle person whose mind isn't focused on anything at all (monkey mind, not curious mind). It's "when we are left alone, with no demands on attention, the basic disorder of the mind reveals itself. With nothing to do, it begins to follow random patterns." (119).

The philosopher's deep introspection and rigorous examination of ideas, which one might consider the pinnacle of conscious thought, isn't the same dark consciousness that Csikszentmihalyi says is entropic and unordered. Philosophers get fully immersed and direct their focus on specific subjects, arguments, and other matters of logic and evidence. They immerse themselves so deeply they might appear catatonic, staring off into space while their mind actively explores an idea. Think of this state as the bright side of consciousness, the one that fills you with understanding of the world and human behavior. How then do we go astray with this consciousness and descend into darkness? Is it merely by not having something to focus on? As if by taking your foot off the accelerator in a car, the engine falls apart.

When consciousness trends toward the dark side

Obviously, monkey mind has been around long before tech, but I can't help but wonder if some technologies have the potential to exacerbate it. Specifically, the internet exposes the human mind to a firehose of complexity and chaos. What is the relationship between surfing the internet, specifically doom-scrolling and boredom browsing, and monkey mind?

In *What Technology Wants*, Kevin Kelly describes his love for the internet in what is perhaps the most eloquent[ly disturbing] passage I've read. He marvels at how the internet compresses randomness into one continuous experience of chaos and beauty:

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> I am no longer embarrassed to admit that I love the internet. Or maybe it's the web. Whatever you want to call the place we go to while we are online, I think it is beautiful. People love places and will die to defend a place they love, as our sad history of wars proves. Our first encounters with the internet/web portrayed it as a very widely distributed electronic dynamo—a thing one plugs into—and that it is. But the internet as it has matured is closer to the technological equivalent of a place. An uncharted, almost feral territory where you can genuinely get lost. At times I've entered the web just to get lost. In that lovely surrender, the web swallows my certitude and delivers the unknown. Despite the purposeful design of its human creators, the web is a wilderness. Its boundaries are unknown, unknowable, its mysteries uncountable. The bramble of intertwined ideas, links, documents, and images creates an otherness as thick as a jungle. The web smells like life. It knows so much. It has insinuated its tendrils of connection into everything, everywhere. The net is now vastly wider than I am, wider than I can imagine; in this way, while I am in it, it makes me bigger, too. I feel amputated when I am away from it.
>
> I find myself indebted to the net for its provisions. It is a steadfast benefactor, always there. I caress it with my fidgety fingers; it yields to my desires, like a lover. Secret knowledge? Here. Predictions of what is to come? Here. Maps to hidden places? Here. Rarely does it fail to please, and more marvelous, it seems to be getting better every day. I want to remain submerged in its bottomless abundance. To stay. To be wrapped in its dreamy embrace. Surrendering to the web is like going on an aboriginal walkabout. The comforting illogic of dreams reigns. In dream time you jump from one page, one thought, to another. First on the screen you are in a cemetery, looking at an automobile carved out of solid rock; the next moment, there's a man in front of a blackboard writing the news in chalk, then you are in jail with a crying baby, then a woman in a veil gives a long speech about the virtues of confession, then tall buildings in a city blow their tops off in a thousand pieces in slow motion.... (322-323)

In other words, he loves the web for bringing everything together in one seemingly continuous, paradoxical space.

Since the publication of *What Technology Wants* (2010), more insights about the harmful effects of internet content algorithms have emerged. Algorithms optimize for what gets clicked the most—usually thought-provoking or sensational content. Thus, the internet firehose isn't just randomness, but extreme chaos and complexity that challenges your ideas (by presenting alternative perspectives). The firehose of content shocks you into heightened levels of awareness, often forcing you to make sense of opposing lifestyles and viewpoints. It's content that, as Csikszentmihalyi would say, prompts you to "see the world different from one another. There is no one right way to behave, and each role requires different skills." On the internet, you see "specialized roles that often require conflicting thoughts and actions from the same person." You realize that we "see the world different from one another," that there is "no one right way to behave," that there are "increasingly contradictory goals" and "incompatible opportunities for action." In short, the internet offers you a "cacophony of disparate values, beliefs, choices, and behaviors"—streamed right into your brain for many hours a day.

Does the internet become a catalyst for encouraging our minds to jump around in the same way we jump around from site to site, topic to topic, search to search, online?

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The internet brings everything together into one experience. It presents the mind with far more chaos and complexity than anything before it.

The internet brings everything together into one experience. It presents the mind with far more chaos and complexity than anything before it. You move from scene to scene as different as night and day, moving across cultural and geographical boundaries without even noticing. You are exposed to ideas of every kind, often contradictory, challenging, or upsetting. Maybe this cacophony pushes our conscious brain into overdrive, such that our mental patterns trend toward entropy rather than order. We get too much awareness, too many associations, too many connections.

Kelly's depiction of his internet experience is one of "beauty" for technology. He enjoys how so many diverse experiences are juxtaposed into one. But others don't see it that way. Here is one Amazon reviewer's description of the internet, riffing off a theme in Nicholas Carr's *The Shallows*:

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> The brain, confronted with a glowing screen and the ability to hypertext its way from one interruption to another across the universe of knowledge from what its buddy in Australia thinks of rutabagas, to the spelling of rutabagas to the history of rutabagas to dishes that can be prepared from rutabagas leaves the brain sliding from one fact of surface interest to another fact even less useful, until it occurs to the brain to pursue the prompt on the pop-up menu and check the weather and get off of this slide onto the weather channel where a five minute video on playful seals on San Francisco Bay can be watched for free which does remind the brain that it could slide over to Facebook and find out if anyone "liked" the picture of the family cat posted an hour ago. And many do. Twenty-three "likes," praise the Lord. (Cowan)

In other words, the pattern on the internet promotes unstructured thought. You move from topic to topic by seemingly tenuous association, such that after 30 minutes of browsing, it would be nearly impossible to trace back the logic. This pattern fragments any linear, sequential thought into an endlessly random teleportation into different worlds every minute. For a fun video that encapsulates the internet's randomness, see Bo Burnham's "Welcome to the Internet" (youtu.be/k1BneeJTDcU).

Internalizing a 19-second pattern

Putting aside the internet's cacophonous content, the mere pattern of web-surfing behavior might trigger similar web surfing in the mind. A 2014 study found that when people use laptops, "switches occurred as frequently as every 19 seconds, with 75% of all on-screen content being viewed for less than one minute" (Firth 6). Throw in smartphone behavior on top of this, with its attention-fragmenting notifications, and you get continuous context-switching for most of the day.

If we constantly switch online throughout the day (every 19 seconds), is it surprising that our brain might switch topics every 19 seconds as well? When we teach our brain a pattern, it learns to follow it.

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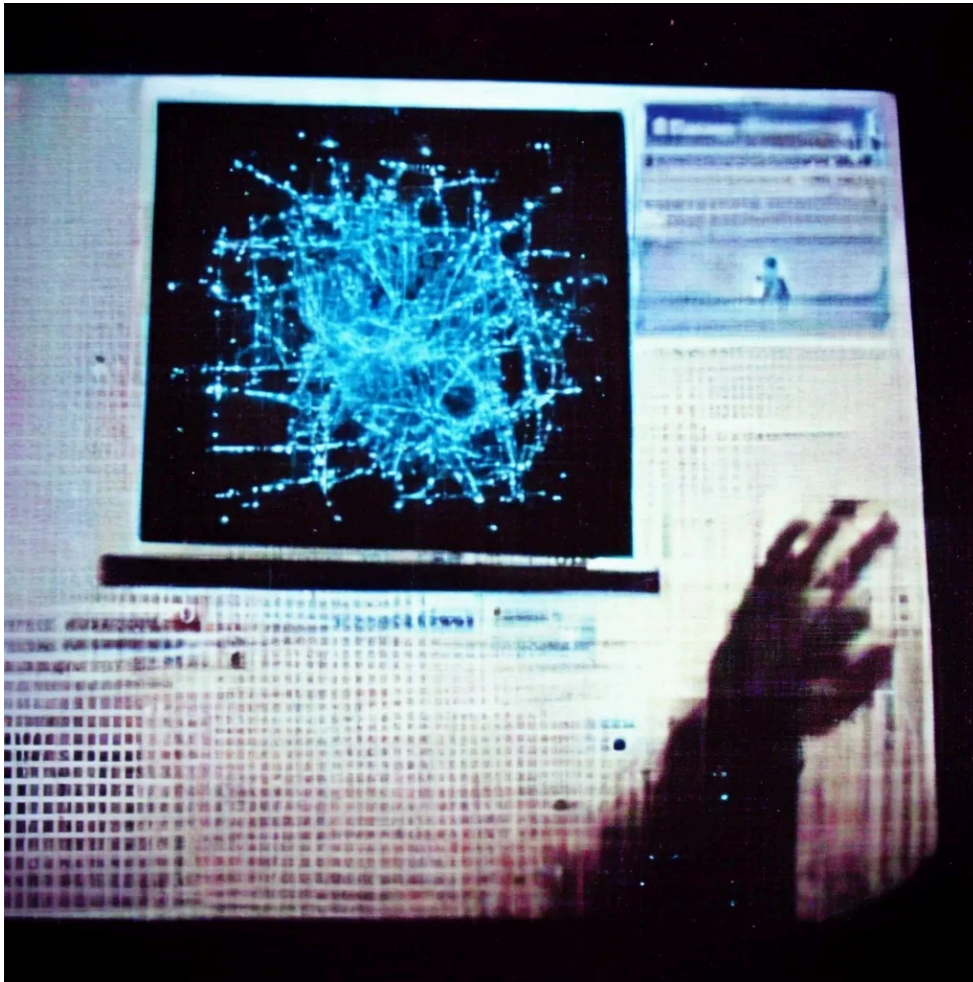
The constant context-switching behavior of the internet might cause us to internalize the same context-switching in our mind, moving from topic to topic by tenuous association rather than directed thought.

What I've noticed {#what-i've-noticed}

As I read, I noticed a fascinating phenomenon. When I tried to sleep at night, if I had read a book that day (say, 50 pages of something), my mind seemed to follow a more linear, sequential pattern, similar to the calm order in which my eyes moved left to right across a page, following a larger narrative or argument an author was making. The act of reading imbued my mind with more order even in a natural, unfocused state.

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Reading seems to induce harmonic patterns in my brain waves, or something. To experiment, read a book for an hour and note your mental state. Then watch TikTok and compare.

One researcher explains that books' story structure can instill a more sequential order in our brains:

> Story structure encourages our brains to think in sequence, expanding our attention spans: Stories have a beginning, middle, and end, and that's a good thing for your brain. With this structure, our brains are encouraged to think in sequence, linking cause and effect. The more you read, the more your brain is able to adapt to this line of thinking. ("Your Brain on Books: 10 Things That Happen to Our Minds When We Read")

In other words, your brain gets accustomed to thinking in story structures and imprints that same structure in the brain. This helps internalize sequential and causal thinking patterns.

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On days when I haven't read a book but instead have been immersed online, my brain has a different pattern. Instead of linear, focused thought, my mind skips around more. I get monkey mind, jumping from topic to topic. If I'm trying to fall asleep, my racing thoughts will keep me up unless I put an audiobook in my ear to focus my attention until I fall asleep.

I might not have noticed this contrast in mental states without my smartphone experiment. These past two months, I've been more relaxed in my technology rules. Earlier on in my experience, I adopted strict rules about when I would use a phone. My journey away from smartphones led me to read more. When I returned to my smartphone, I relapsed in other ways too, checking sports and news more frequently. Then my work provided me with a phone, equipped with work email and calendar. I started checking work email more often, in addition to checking my own email almost obsessively. I started reading Feedly (an RSS aggregator) more often.

At night I would use Youtube.com for entertainment (as an alternative to Reddit). On Youtube, I even unsubscribed from every channel to see what the algorithms would serve up, hoping the videos would lose their appeal, but they didn't. I watched multiple videos, usually humor-related, until I was too tired to stay awake.

But when I closed my eyes and tried to get to sleep, thoughts raced in my head. My mind jumped and flittered from topic to topic. The only way to sleep was to stay up (watching more videos or movies) until I was so tired that exhaustion itself put me out.

Unfortunately, the internet itself isn't something one can obviously abandon in modern life, and as I said before, monkey mind predates the internet (as well as Csikszentmihalyi's flow). But to avoid the random pattern of unfocused thought (instead of becoming idle and jumping down endless rabbit holes), I started writing interesting quotations from the books I was reading onto a notecard. Then I carried the note card in my pocket. When I had periods of idleness, instead of letting my mind wander and get bored, I would reflect on the quotation and try to ask some questions about it in my mind. The quotation served as a point to ponder, something to keep me from the psychic entropy that Csikszentmihalyi described.

3.6 What the Default Mode Network (DMN) and Task Positive Network (TPN) modes of the brain teach us about focus

Context recap in this series

In a recent section in this series, "How to move from focus sessions to flow sessions," I summarized Csikszentmihalyi's book on *Flow* and explored how to enter this state. However, I was dissatisfied about the assumptions Csikszentmihalyi made about "psychic entropy" being the natural state of the mind, and I wanted to understand the reasons why. I didn't uncover any special reason for our default monkey mind other than speculating that our random Internet surfing behavior (or similar behavior to surfing TV) might reinforce the brain with similar chaotic patterns to follow. Compared to this, reading books seemed to encourage a more linear, sequential, and mellow brainwave pattern. After Csikszentmihalyi, I stumbled into another book, ADHD 2.0, that moved forward into more modern science about how the brain works.

DMN and TPN

Scientists use fMRI to observe the brain in different states, and they found that when the brain isn't engaged in any particular task, the Default Mode Network (DMN) is active. The DMN was first observed in 1997. Scientists refer to it as the Default Mode Network because it's the default mode of the brain when you're not engaged in a task. In contrast, when you're focused on a task, the Task Positive Network (TPN) is active. (By network, this means there are various regions of the brain that become active, rather than one specific spot.)

In *ADHD 2.0*, Edward Hallowell and John Ratey explain that the DMN lights up when we're lost in thought. For example, brooding, ruminating, thinking about future events, dissecting past events, daydreaming, letting our imaginations go free, woolgathering, thinking about worries, going down rabbit holes, and more. When you miss an exit because you're thinking about what life would be like living on the street after the economy collapses and the Ukraine war escalates into WWIII, that's your DMN in fully active mode.

Most of the time, the DMN focuses on negative thoughts. And if you keep replaying negative thoughts over and over (negative rumination), you can get stuck deeper in this mode. Hallowell and Ratey say that when you find yourself in DMN mode, you should take advantage of the DMN's ability to jump tracks (for example, to go down random rabbit holes) by distracting it. The DMN can easily be sidetracked, evidenced by its ability to think about one topic a minute, then another the next, and so on. To exit DMN mode, externalize your thoughts in some other way. For example, focus on your breathing, and breathe in specific patterns. Or go find your pet and play with it. Or look at your environment and observe 10 things you never noticed before. Get outside yourself.

These ideas about the DMN align with Csikszentmihalyi's psychic entropy. Csikszentmihalyi's big idea about human happiness was for people to focus on tasks (slipping into the TPN mode) so that the DMN wouldn't run wild and fill the mind with

worries and negative imagination. It's the DMN that's responsible for "unfulfilled wants, dashed expectations, loneliness, frustration, anxiety, guilt … [and] the dark side of the emergence of consciousness" that Csikszentmihalyi mentioned" (227).

As you shift into specific tasks, the Task Positive Network, or TPN, activates. For example, suppose you're fixing your bicycle, writing code, or reading a book—in each case, you're doing a task. When you're focused on a task, your DMN recedes into the background and isn't active. With the DMN locked away, you aren't burdened by intruding ,negative thoughts. In Csikszentmihalyi's world, you slip into states of flow and no longer focus on anxious, negative brooding or concerns.

But as soon as you lose momentum on that task and your mind wanders, bam, the DMN becomes active again. Hallowell and Ratey explain:

> When you allow your mind to wander from a task, or when you finish the task, or if you pause too long in anger or dismay while doing the task, the TPN in your brain defaults to a different connectome. Not surprisingly—given that we default to this state—this other connectome is called the default mode network (DMN). The DMN allows for expansive, imaginative, and creative thinking. The back half of the DMN—called the posterior cingulate—facilitates your autobiographic memory, your personal history. This allows you to think back, draw upon, and pick apart the past.
>
> The front part, the medial prefrontal cortex, is the opposite. It enables you to look forward and to think about, imagine, and plan for the future. It is in the DMN mode that you can daydream (and miss your exit on the highway) or make interesting connections between concepts (helpful when appreciating riddles or jokes or solving crossword puzzles, or coming up with the Next Big Thing). It was surely in the DMN that the wheel was discovered!
>
> The DMN and TPN are the yin and yang of your brain. Both help us and hold us back in certain ways. One isn't better than the other. But as helpful as the DMN can be (angelic in its own right), it is also a Demon (as its initialism suggests!) for the ADHD or VAST brain because of our capacity for intractable rumination while captive in it. (24-25)

In other words, the DMN mode is active when you're not focused on any task, while the TPN becomes active when you are task-focused. The DMN provides more of the imaginative, daydreamy side of your brain, which can have both positive and negative effects. According to Hallowell and Ratey, the DMN is like an angel and a demon at the same time. Angel for the imaginative, creative muse that can give rise to insights, epiphanies, and other realizations. And demon for its ability to amplify negative thoughts, construct dark imagination, and to multiply regret and worry.

For a helpful podcast explaining DMN and TPN networks, see the Angels and Demons (The TPN and DMN Networks) episode of *The Attention Seeking Podcast _(buzzsprout.com/ 1990340/10633118)._*

The breakdown of the seesaw

When you're in monkey mind mode, the DMN is active. When you're engaged in a task, the TPN is active. In most brains, the DMN and TPN function like seesaws, Hallowell and Ratey explain. When the DMN is active, the TPN is inactive; conversely, when the TPN is active, the DMN is inactive.

The DMN and TPN normally function like a seesaw, with one active while the other is inactive.

People with ADHD can have both DMN and TPN modes *active at the same time.* There isn't always a seesaw effect. Further, when the seesaw tilts correctly, there can be a "glitchy switch" between the two modes, the authors say. Someone with ADHD can get stuck in TPN mode, which locks them into a hyper-focused state where everything becomes mute around them. Similarly, they can get stuck in DMN mode, unable to transition into specific tasks as they delve deeper into negative brooding.

With both modes co-active, however, as soon as someone with ADHD starts a task, the DMN distracts them away from the task, pulling their attention elsewhere. The inability to shut off the DMN when you're focused on a task can make it nearly impossible to focus on the task, as the mind wanders elsewhere and is pulled away by the smallest of curiosities. (ADHD medication focuses on fixing this glitchy switch between the DMN and TPN.) Hallowell and Ratey explain:

> To paraphrase Gabrieli, the problem when ADHD enters in is twofold. The first is what's called the anticorrelation property of the two networks. Imagine a seesaw. In a neurotypical brain, when the TPN is turned on and you're on task, the DMN is turned off. But in the ADHD brain, the fMRI shows that when the TPN is turned on, the DMN is turned on as well, trying to muscle its way in and pull you into its grasp, thereby distracting you. In ADHD, therefore, the DMN competes with the TPN, which in most people it does not do.
>
> The blessing and the curse vie for top billing, for attention. When the DMN brings lovely images, it is our golden tool. But when it jumps track into the TPN and hijacks consciousness, then the DMN becomes the Demon, the seat of misery, the disease of the imagination. Trapped in the past or future in the DMN, you're likely to abandon projects you once started with enthusiasm, make careless mistakes, or, worse, fall into a state of misery and despair, for no good reason whatsoever. (25)

Being aware of these two networks seems useful. If you can recognize your DMN taking over, you can distract it and try to reactivate your TPN. It's also helpful to recognize that the DMN gravitates toward *negative* thoughts. If the DMN gravitated toward positive thinking, it would be a much more welcome state. I wrote earlier about our negativity bias in reading the news; this negativity bias is the intrigue humans seem to have for the negative over the positive (we slow down to see wrecks alongside the road, but not wildflowers). The DMN also has its own built-in negativity bias, it seems.

Hacks for getting going in the morning

Learning about these networks in *ADHD 2.0* was eye-opening for me. Three of the four people I live with have ADHD. Learning about the traits brought me greater understanding and compassion. But also, I started wondering if the key to jumping into more productive, flow-like states was to figure out how to transition from the DMN into the TPN.

In particular, I had a hard time "getting going" on tasks in the morning. I often flittered around a bit, doing easy tasks, before I could get into the rhythm and groove of work. If I could figure out ways to quiet the DMN, or even just to warm up my TPN network, I would have solved a huge obstacle to productivity.

I struggle to get going in the morning. I'm like an old car that needs a lot of warm-up before it can go anywhere

I've written a lot about focus sessions and turning off distractions. But what I didn't find in previous books (such as those by Cal Newport) were techniques for sustaining motivation and getting into TPN mode early. It was common for me to procrastinate on difficult tasks, doing almost anything until deadlines and stress compelled me. How could I get my TPN engine running? Ideally, I wanted to wake up in the morning, list my highest priority tasks for the day, and then immediately start working on them—rather than slowly coming around to them after a couple of hours of reading email, checking the news, browsing the internet, and doing other easy/distracting activities.

For example, after I finished a book I was reading, I wanted to review it but had trouble starting. So to write this post, I tried a simple technique. I started watching 10 minutes of sports. Afterwards, I set a timer and told myself I'd work on this content for 5 minutes. I could do anything for 5 minutes, right? After that, I set the timer to watch another 5 minutes of sports. After that, I set my writing timer for 10 minutes. At that point, I caught a rhythm in writing the content and lost track of my timer. I no longer needed a timer to stay on track.

I haven't read about this TPN warmup technique, but it's probably just a spinoff of the Pomodoro technique or an implementation of "The first step is always the hardest." Just as you don't start playing full-on competition soccer without warming up first, why not treat the brain in a similar way? Do some light warmups to get you going. I even bought a timer that I could rotate to set a 5 or 15 minute timer automatically, making it even easier.

I also asked my colleague the other week what catalysts she used to get into tasks. She said she finds some aspect of the task that she likes and wants to do, and uses that aspect as a way to get into the task. For example, maybe a documentation task allowed her to learn about something she had always wanted to know. So she would start learning about that thing, and then gradually shift her attention to the less-interesting documentation task.

I felt that the ability to activate the TPN was one of the keys to unlocking productivity. If I could sustain my energy toward my goals, especially getting in TPN mode early and staying there, I knew I'd be unstoppable.

VAST

Hallowell and Ratey published their seminal book *Driven to Distraction* in 1994. In that book, they raised awareness and understanding of ADHD in major ways (even though ADD had been observed since 1902). In *ADHD 2.0*, the authors assess what's changed over the last 30 years in the ADHD field and catch up on the topic. Among the list of what's new is something they call "variable attention stimulus trait" (VAST), which is brought on by "modern life." When people describe their behavior as "so ADD" or describe themselves as having short attention spans but don't have diagnosed ADHD, Hallowell and Ratey call this VAST. The authors write:

> Beyond the sources of biologically based ADHD, there are a lot of people who act as if they have ADHD but on close inspection turn out not to have the diagnosable condition. These are the people who have ADHD-like symptoms caused by the conditions of modern life. Their "ADHD" is a response to the massive increase in stimuli that now bombard our brains and our world.
>
> The massive behavioral conditioning we've all been undergoing since the advent of ubiquitous electronic communications technology has changed us radically. But this dramatic, if not epochal, change is underappreciated. It's underappreciated because we're living in it as it happens, like frogs in cold water that slowly gets heated up without the frogs trying to jump out, until they're boiled. Our world has been getting heated up big-time. And while we could jump out, it's pretty difficult to do so and still function in the modern world. Most of us can go no more than a few seconds without looking for a screen.
>
> Modern life compels these changes by forcing our brains to process exponentially more data points than ever before in human history, dramatically more than we did prior to the era of the Internet, smartphones, and social media. The hardwiring of our brains has not changed—as far as we know, although some experts do suspect that our hardwiring is changing—but in our efforts to adapt to the speeding up of life and the projectile spewing of data splattering onto our brains all the time, we've had to develop new, often rather antisocial habits in order to cope. These habits have come together to create something we now call VAST: the variable attention stimulus trait. (14-15)

In other words, modern life has amplified the amount of information we consume daily, changing our brain's processors to handle more information in less time. If you recall my initial awakening moment essay, one writer said he became so addicted to reading the news that he started experiencing anxiety due to the massive amounts of information. Rolf Dobelli wrote:

> Yet I still felt inexorably drawn to the overwhelming, garish parade of news, even though it was clearly making me anxious. Fragments of news reports were constantly intruding into my reality, and I was suddenly finding it difficult to read longer texts in one go. It was as though somebody had carved up my attention into tiny pieces. I started to panic that I'd never be able to recover my attention span, that I'd never again be able to assemble these fragments into a whole. (p 10)

In my earlier experiments to reclaim my attention, I went through a period in which, following Dobelli's advice, I also stopped reading the news (as well as browsing social media). I didn't realize how the news had been affecting me, but I noticed a difference when I stopped. There was less information my brain had to process, and it cleared up more space for reading books. I soon rediscovered reading and how enjoyable books can be.

I eventually returned to reading the news (because I felt so disconnected from what was happening in the world), but I'd never been a news junkie like Dobelli. I glanced through the summaries of *The New York Times* and ESPN multiple times a day, at most. I also returned to glancing at Twitter, too. These activities, small as they were, strangely provided me with enough information that I no longer felt drawn to reading books. It was weird. I didn't consider my online intake of information to be that extensive. However, I could unequivocally say that _the more time I spent reading online, the less time I spent reading offline. _It's as if I had a maximum number of words to consume during a day, and if I consumed those words online, I consumed fewer offline. When I turned the online spigot off, I consumed more content offline.

Why does time spent online discourage book reading? Hallowell and Ratey explain, "Modern life compels these changes by forcing our brains to process exponentially more data points than ever before in human history" (14). In other words, modern life throws a firehose of information at you, filling up your brain's information sieves. What is it about the Internet's information delivery that wrecks our brains? Is it nonlinearity? Disjointedness? Fragmentation? Chaos?

In the previous section, I described the possible effects of immersion in the chaos and fragmentation of the Internet, but who can abandon such a resource, or modern conveniences? Critics often blame social media, while Hallowell and Ratey group all of this under the larger umbrella of "modern life." One can quit social media but … modern life? Not so much. Is the solution to pull a Thoreau to live in a disconnected shack in the woods without internet access?

Coming back to TPN

Coming back to TPN, I wondered whether I could learn something about these DMN and TPN modes of the brain that would make me better suited to the modern condition. For example, if I could flip a switch to activate my TPN, thus muting other distractions, it would be a decent coping mechanism. What hacks could be employed to switch from the DMN to the TPN at will?

Hallowell and Ratey champion the idea that the brain is malleable. Neuroplasticity is another modern finding of the brain, they say (23). The brain can change; it isn't fixed. They write:

> Incidentally, the reason that so many people are starting to look and act distracted, as if they all have ADHD or VAST, is that fewer and fewer people are spending time in the task-positive network. They are not spending enough time focusing on a single task, certainly not long enough to dig a deep enough hole or write an email longer than a sentence or two or do more than look at an egg, let alone fry one. Unfortunately, the TPN is akin to a muscle that atrophies when not used. So as we mentally flit around, the TPN weakens and our attention span shortens. (24)

In other words, Hallowell and Ratey say the fix for VAST is to focus more on tasks to build up the TPN. If we have a weak TPN, it might be because we're constantly shifting focus, never allowing the TPN to get up to full speed for long-distance cruising. It's 10 minutes of a task and then bam, checking email, or shopping on Amazon. Another ten minutes of a task, followed by online searches for mundane questions, or seeing what's new on social media. The TPN atrophies and weakens. Pretty soon, our weak TPN can't stay active for more than 10 minutes before the DMN takes over.

Balance exercises?

What else strengthens our TPN? Interestingly, the authors say that strengthening your balance can help you focus. Another part of the brain, the cerebellum, has a connection with balance such that strengthening your balance also strengthens your cerebellum, which helps address some ADHD issues. Hallowell relates a touching story about helping a boy in China overcome ADHD by doing things as simple as putting on socks while standing one leg at a time, juggling, and doing other balance exercises (in addition to hugs for Oxytocin). Zing Performance is all about addressing ADHD through balance.

While reading this section on balance, I decided to try some balance experiments. I went to a local longboard shop and got two longboards—one for my daughter and one for me. I figured skateboarding could be interesting and would teach balance in a fun way. In our initial foray on the skateboards, we skated down a small hill and my daughter crashed pretty hard (ripped jeans, skinned knee). After her crash, she was reluctant to return. But I returned to longboarding numerous times, including longboarding for a segment of my commute to work and along a long, flat trail near my house. I started to feel more comfortable on a longboard. It's mostly a matter of pushing with one foot while balancing on the other. Stopping is also something to figure out (you just drag one foot like a brake).

I also bought a balance board that sits on top of a cylinder (Revbalance 101), which also turned out to be fun. Almost every time I walked by the board, I couldn't resist getting on and balancing a bit, like some kind of circus performer. I had no way to measure whether any of these balancing tools (either the longboard or balance board) were strengthening my cerebellum and helping me focus better, but I figured it can't hurt. More than anything, they were fun.

Exercise

Hallowell and Ratey say other powerful non-medicinal factors for ADHD include exercise, sleep, and nutrition. There are no surprises here—these factors seem to influence many things. But for people with ADHD, getting exercise can help strengthen the connective tissues in the brain. In "Cardiovascular Effects of ADHD Therapies," Torres-Acosta et al explain:

> Exercise has immediate and long-term positive effects on behavioral and cognitive measurements in patients with ADHD (42). The potential benefits of exercise for ADHD are likely due to the increase of norepinephrine, dopamine, and serotonin levels in the prefrontal cortex during and after physical activity (43). Also, brain-derived neurotrophic factors, synaptic proteins, glutamate receptors, and insulin-like growth factors all rise during and after strenuous physical activity, which improves cognitive function by contributing to cell proliferation and neural plasticity (42).
>
> Ahmed and Mohamed (44) conducted an RCT involving 84 students in a 10-week aerobic exercise program for students with ADHD. After 10 weeks, the [subjects] reported that aerobic exercise significantly improved attention, hyperactivity, impulsivity, anxiety, executive function, and social disorders … data indicate that the dose of physical activity for treating ADHD should entail bouts of high-intensity aerobic exercise lasting at least 30 min, at least 3 to 5 times per week…. (863-64)

In other words, physical exercise isn't just a good idea. It's like a "dosage" of natural medicine that fixes our internal chemical levels, receptors, and tissues in ways that reduce ADHD symptoms.

My wife's daily hike had a noticeably uplifting effect on her. She always came back in a GREAT mood, so I encouraged her to hike as much as she could. My youngest daughter played club soccer, and the exercise rejuvenated her.

Hallowell and Ratey even recount a story of a high-achieving professional who, when he had to stop running due to a knee injury, found that his ADHD symptoms (which he didn't know he had) surfaced in crippling ways and started to dismantle his life. A doctor prescribed him Ritalin to address the issue temporarily. After his knee healed, he dropped the Ritalin and started running again. The issue was fixed.

Given exercise's potential benefits to the brain, I decided to walk 2 hours a day. Not fast walking or anything, just walking. Being outside. Disconnecting from screens. Getting my blood pumping. Walking made me feel more alive, but I was more interested in the psychological effects walking might bring. Learning to walk involved operating at a much slower pace, moving like a snail for many long minutes. In this way, walking provided a way to reject modern life's fast pace, to literally step outside of it and reconnect with the physical world. I walked 2 hours a day, for at least a month.

I want to say that walking this long each day was life-changing, but it wasn't that exciting. I didn't come back hyper-focused or with increased clarity about my life. I read_ 52 Ways to Walk_ by Annabel Streets. Following the book's advice, I tried walking in the mountains, in the rain, with zero-drop shoes and hiking boots, walking in the morning, at night, in the city, along the shoreline, and more. I did enjoy walking, but I couldn't say that it transformed my mental state in profound ways.

Unwrapping gifts

Hallowell and Ratey never reveal a single secret trick to fixing ADHD, and they are not averse to medicine by any means. The findings on medicine for treating ADHD are overwhelmingly positive (see "A 14-Month Randomized Clinical Trial of Treatment Strategies…") Instead, the overall message of Hallowell and Ratey's *ADHD 2.0* is for people with ADHD to learn to "unwrap their gifts." There are positive upsides to every negative trait associated with ADHD. ADHD provides "a complex set of contradictory or paradoxical tendencies," the authors write (7). The authors say:

> Of course, it's true that most people who have ADHD or VAST are really bad at quite a few things (in which their noses get rubbed all the time), but usually they are, or could be, truly exceptional at one or two other activities. Toward that end, we take a strength-based approach to treating people in our practices. As we like to say, we do not treat disabilities, we help people unwrap their gifts. More exuberantly: We help identify superpowers! (63)

For example, in my family, those with ADHD often have positive energy and charisma (an ability to let loose emotionally in fun ways) that draws people to them. The DMN might lead to worry but also facilitate empathy. ADHD people are better at taking risks and excel as entrepreneurs and in the financial markets. Some are adept at processing chaotic situations with lots of incoming data, remaining calm under pressure, etc. One time we had a flood in our house. While I buckled with anxiety, my wife took charge and calmly called in a plumber to fix things.

The authors try to reduce the stigma around ADHD, to get rid of the idea that it's a learning "disorder" and identify the strengths these traits lead to. The DMN isn't something to actively eliminate. The imaginative state that sometimes shows a dark consciousness can at times function as an angel.

Chapter 4: Push and pull

Despite my attempts to ditch my smartphone, I felt a constant pull drawing me back to my smartphone and the constant stream of tech news. This constant push and pull is one that I feel requires artful balance and judgement to navigate.

Chapter sections:

4.1 The diametric pull towards technology vs. wildness

Getting outside, away from screens

As the start of the new year approached, I tried to think of some meaningful activity I could incorporate that would be transformational (equivalent to giving up my smartphone). I thought back to an experiment I'd done the previous year in which I'd exercised for 2 hours a day for 50 days (see Experiments: What would happen if I exercised 2 hours a day?). The experiment gave me a boost of energy and reinvigorated my body, making me prefer standing and walking to sitting.

So I decided to formalize my goal—walking for two hours a day outside—to make it a permanent habit. This time around, however, I didn't just want to exercise; I wanted to be outdoors. Why walk outside? At the time, I'd grown increasingly weary of the sedentary, screen-based life of working in tech. I was tired of sitting in a corporate or home office all day, with my butt parked for eight hours on a padded chair, eyes focused on the artificial light of a screen, almost no body movement except for the tapping of my fingers across a keyboard, legs growing stiffer the longer I sit, hours passing me by until the sky grows dark and it's time to go home.

Sitting at a computer living the sedentary tech life

Sitting at a computer and living the sedentary tech life

This life in tech, a life of sitting and screen-staring, gave me an increasing itch to get outside and feel the natural elements, whether sun or rain, wind or cold. I wanted to feel the weather on my face, to transition my narrowly focused computer stare into a panoramic vision of the sky and outdoors.

I'd also been reading a cyberskeptic book called *May I Ask a Technical Question?* by Jeff Krinock and Matt Hoff. The authors push back against the blind tradeoffs we often make when we incorporate technology. As a former pilot, Krinock says digital monitors during flight numbed his situational awareness, reducing his ability to sense when something was wrong. Autopilot gave him digital dementia about how to act in emergencies (once auto-pilot was off). He and Hoff encourage constant questioning, inspection, and caution about the effects of technology, urging us to "measure and consider what human and social tasks, abilities, traditions, skillsets, and opportunities they displace" (39). I couldn't help but feel, on some level, that my life was reduced by being in front of the screen. What tradeoffs had I made for this life in tech?

Krinock and Hoff's book is just one of many technoskeptic voices that have recently emerged. I think the trend fits into a growing disillusion about technology. Let's take a step back in the timeline to see how we got to this point of disillusionment.

The road to technoskepticism

In *The Inevitable*, Kevin Kelly says that before we knew what the Internet would become, big media was skeptical that the Internet could have enough content to pull people away from traditional media sources. No one foresaw that consumers themselves would create the needed content. Kelly writes:

> We all missed the big story. Neither old ABC nor startup Yahoo! created the content for 5,000 web channels. Instead billions of users created the content for 5,000 web channels. There weren't 5,000 channels but 500 million channels, all customer generated. The disruption ABC could not imagine was that this "internet stuff" enabled the formerly dismissed passive consumers to become active creators. (19).

Web 2.0 saw the proliferation of amateur blogs, vlogs, and other content creators filling every niche with an abundant stream of content, eventually displacing traditional media. I started my blog in 2006, as did many others in tech comm, and I enjoyed watching people turn to blogs and other amateur content more than the old print media of industry publications. Everyone had a voice, it seemed, and no niche was too granular. Kelly attributes the abundance of user-created content to establishing the Internet as a permanent fixture, displacing traditional media. We celebrated the abundance of content creators producing and sharing free content out of our own passions and hobbies. Consumer-produced Internet content seemed as revolutionary as the printing press.

Then at some point, content creators shifted to social sharing platforms like Facebook, Twitter, Instagram, TikTok, Reddit, and Linkedin. Blogging on your personal site was deemed too tedious. You could instead build and grow an audience (if that was your purpose) through micro posts on social media platforms rather than lengthy blog posts. Collectively, the stream of micro-content on these platforms seemed enough to keep people engaged.

For content creators, the lack of a monetary ROI for blogging, compared with the time commitment of constantly cranking out lengthy articles, caused many to pull the plug and burn out (it was like a part-time job for 1/10 of minimum wage). The popularity of blogging plummeted, and as people took to Twitter, Facebook, and other social media platforms, they abandoned RSS. The abandonment of RSS readers made it difficult for content from individual sites to appear on people's radars. Nearly everyone had a presence on social platforms—the platforms allowed communities to quickly form around common interests.

And then around 2016, when Trump was elected, there seemed to be a wake-up call about social media platforms. The platforms weren't innocent but fostered extremism, conspiracy theories, and disinformation. Even worse, someone could dominate the headlines day after day by making outrageous statements, and that visibility, even if shocking, could lead to votes. Many wondered what these platforms were doing to society.

As social platforms optimized for viewing time, they amplified extremist and other negative content to maximize clicks and ad revenue. As per the capitalist designs, social content became more toxic, polarizing, and full of disinformation. The algorithms exploited our negativity and novelty biases, while collecting profile data to sell more advertising. The

conversation about social content took more of a dark turn, as people started experiencing some of the ill effects of these platforms (negative body images, fragmented attention spans, conspiracy-mongering, cultural polarization, dopamine-based behaviorism, and more).

In a *New York Times Magazine* article about AI, Steven Johnson explains that in 2015, at the same time AI companies were forming (like OpenAI, which introduced ChatGPT) and digital assistants (like Alexa devices), another shift was occurring:

> ... during that same stretch of time, a seismic shift in public attitudes toward Big Tech was underway, with once-popular companies like Google or Facebook being criticized for their near-monopoly powers, their amplifying of conspiracy theories and their inexorable siphoning of our attention toward algorithmic feeds.

With the recent layoffs at many big tech companies, if you read the comment threads on these articles, many people welcomed these reductions. High-paid tech workers were resented, and their contributions were maligned as being surveillance/chokepoint machines.

This sentiment is partly why the recent emergence of image and language AI tools (ChatGPT, DALLE, Midjourney, etc.) fills people with an equal mix of wonder and dread. We're not naive enough to swallow a techno-optimist use of these tools; their introduction will violate copyright, encourage academic cheating, proliferate spam and fake reviews, displace job roles, and more. At the same time, we're curious to see what advanced artificial intelligence will bring about, and what opportunities these new tools might open up.

Getting up and outside

As I said, I was caught up in a technoskeptic trend. Sitting in my chair for hours indoors, I wondered about the tech writing career I'd chosen. I knew sitting all day was bad for my health, but beyond my stiffening and atrophying legs, it was hard to take this warning seriously. One day I decided to take an afternoon break, renting an e-scooter and riding it 15 minutes along the Burke-Gilman trail over to the University of Washington campus, to wander around the Suzzallo library (which looks cathedral-like).

Riding the e-scooter, I relished the cold wind on my face, being outside in the natural air as I looked at the Fremont waterways and enormous ships to my side, some carrying giant rectangular containers loaded by tall shipping cranes. When I approached the UW campus, the e-scooter's geofence deactivated the acceleration, so I explored on foot.

Wandering in the Suzallo library, I observed that it was filled with students and designated as an extreme quiet zone. Oddly enough, the students weren't reading books but working on laptops. The long open tables of students were surrounded by bookshelves with books that seemed only decoration.

After this outing, I decided to start walking more frequently, not just for exercise, but to get outside. For example, I started nature walks. I explored a patch of woods behind a train station I frequented but never wandered around. While walking, I tried to look up and notice everything around me—a wooden birdhouse, the varieties of trees, old cement slabs with overgrown moss, a hidden pond, red and black berries of different shapes and

textures. I used Google Lens to identify things. I tried to notice everything around me, as if seeing it for the first time. I became more curious and inquisitive. I was like a prisoner let out of his cell, allowed to wander about outside for the first time in years.

Walking more regularly outdoors

Walking more regularly outdoors

I soon explored other areas outside of nature. Under an overpass I'd driven 100+ times taking my daughter to soccer, I discovered a DIY skatepark, with curious stone artifacts that seemed like a postmodern art exhibit. I gazed through a remote tunnel that passed under railroad tracks. I paced down unfamiliar roads near my house, walking through places I'd never been before. I walked around distant housing developments under construction. I walked around dirt tracks at school fields. I wandered here and there, driven by the pull of the new and being outside.

Reading a book called *Seattle Walks*, I followed the author's suggested walk along Alaskan Avenue to Post Alley and down to the original Seattle neighborhoods. I gazed at old brick buildings built at the turn of the century. I learned about Seattle's restructuring of its coastline, hill leveling, and the widening of streets after the Great Fire of 1889. Reading the guidebook's brief history brought the city blocks to life. What would have otherwise been

an ordinary road took on added significance with the historical backstory. For example, Post Alley, which has been around since 1850 (around when Seattle was founded), was originally a dirt road covered with wooden planks, featuring a single post office. Nearby was Seattle Steam—a pipe that still distributes steam for heat as an alternative to combustible coal (after the Great Fire). The more details I observed, the more the surrounding environment pulled me in.

I also started reading 52_ Ways to Walk_, by Annabel Streets. The book consists of short essays that describe ways to liven up walking, such as walking by a river, walking in early morning light, walking with a dog, walking at high altitudes, walking without a map, etc. The author draws on many studies about the benefits of walking, from the microbiomes exuded by mud to the way the cold air creates a layer of protective, mitochondria-packed brown fat under your skin. One of my favorite chapters is "Walk Beside the Sea." Streets writes:

> What is it about the sea that makes us feel so good? According to Professor Dougless Kenrick, constant overstimulation and mental clutter sends our brains "into overdrive," creating debilitating levels of stress. Our brains need recovery time, a chance to rest and replenish themselves. Or as Kenrick calls it, a period of "natural restoration." We do this most effectively when exposed to environments with a little bit of interest and novelty but also with a high degree of statistical predictability, keeping us engaged but simultaneously relaxed.... Others think the ocean's ebb and flow may contain the clue to its powerful mood-enhancing effects: namely that its pattern of continuous movement encourages our mind to move out of the vortex of its own thoughts. (128-129)

I could relate to this passage—I enjoyed walking next to water more than any other landscape. My favorite biking trail was the winding Green River from Kent to South Seattle. The river's constant flow entranced and mesmerized me as I rode, making me another object pulled along its current.

Following Street's advice, I walked along the Lake Union coastline from Gas Works park over to my work's campus in Fremont, looking at shipping vessels, docks, arcing bridges, and more—following the waterline. The random but predictable play of water ripples and wind-whipped waves soothed my brain while simultaneously presenting me with the wonder of boats, docks, and seagulls.

With these positive experiences, I thought walking could be my new hobby. And if I spent two hours a day outside, engaged in physical activity, it might counter the constant indoor sitting in front of a screen. It might provide just the right balance to a technology career. I kept this two-hour-a-day walking habit up for a couple of weeks.

Turning points

Despite my initial walking success, I soon hit a snag. First, walking didn't seem to do much for me physically. Despite the praised health benefits of walking, I didn't feel my legs rejuvenated as before. The biomes in the mud didn't penetrate under my skin (or something). In fact, I started feeling metatarsal pain in the ball of my foot from a previous toe ligament injury.

Besides being unimpressed by the health benefits, I also found that walking was, as much as I hated to admit it, boring after a while. Unless I put forth a lot of effort to walk someplace new, to learn about my surroundings, to use my curiosity to peel back the layers of detail, my mind inevitably gravitated to a podcast, audiobook, or TV show on my smartphone as I walked. Often, just to get two hours in, I circled my block while watching TV shows on my phone.

Two hours also took a lot of time. Even during a winter break when I didn't have other work, the limited daylight meant my walking excursion had to begin early. And if going into the city, shouldn't I take a family member or two? My children weren't nearly as excited as I was to learn about Seattle's history (unless I could render it in a tourist-style narration). There was also the problem of driving to the city and back (and parking), which added to the time. It took a lot of work to make the walk interesting.

Further, each time I stopped to explore a curiosity, such as taking pictures with Google Lens and then browsing the search results, or pausing to read the descriptions in Seattle Walks book, or stopping to look at a birdhouse and figure out which birds might use it, it reduced the aerobic benefits of walking, leading me to feel less of a physical return for the time spent. Outside time, yes, and mentally clarifying, yes, but not aerobic time.

While hiking on Margaret's Way in Issaquah with my wife, during an especially long stretch of the trail in which I felt ennui, an epiphany hit me: I'm drawn to tech because we find it interesting. I don't have to search history or guidebooks to decipher tree types or berries. Instead, I can open my phone or computer and see the latest information, trends, news, or issues in any niche I'm interested in. Yes, the content is often mediocre and low quality, but not always. Sometimes the content is multifaceted and thought-provoking. And I'm a thinking being. Humans are contemplative beings.

A good walk with historical details and other newness could be thought-provoking and contemplative—don't get me wrong. Especially when I'm reflecting on ideas in a book or sorting out ideas in my head, a walk can provide clarity. But only to a point. After half an hour or so, I'm often done thinking and move toward entertainment.

This is why, as much as I might move away from screens, banishing my smartphones or rueing all the time spent in front of a computer, I return to them. I want to know what's happening, to read an author's insights or perspectives, and more. Yes, the library and books can provide endless intellectual swimming. But it's easier to open a screen to access the stream of information. In less than a second, the internet can present you with information that engages your mind in some way. It's not all TikTok. You might be reading the *New York Times Magazine*, or the latest journal articles in your profession. This mental engagement has a magnetic pull on me, making it impossible to disengage from the screen for too long. The screen delivers an essential hit of information for curious minds.

Nature and city walks can provide a much-needed respite from information overload, for sure, but if the respite is too long, like a vacation that lasts on too long, the mind is ready to re-engage. The Internet provides something to contemplate. Because we are thinking beings, screens have a pull we can't fight. As much as I wanted to dismiss smartphones from my life, or to ride the technoskeptic wave and say goodbye to many technologies I don't need, I couldn't fully do it. The Internet draws me in through my curiosity to learn and the convenience of it all. What to learn? The issues surrounding AI. The controversies of tech leadership. The implications of quantum computing. The latest startup. This information is often more interesting than trees or city buildings. This is why my relationship with technology is so complicated: I love and resent technology at the same time. I'm pulled toward it as much as I push it away.

Reaching our potential

I often think back to Kevin Kelly's *What Technology Wants*, the book that brought me back to my smartphone. Kelly initially seems on the edge about technology but ultimately concludes that we embrace technology because of the opportunities it affords:

> How can technology make a person better? Only in this way: by providing each person with chances. A chance to excel at the unique mixture of talents he or she was born with, a chance to encounter new ideas and new minds, a chance to be different from his or her parents, a chance to create something his or her own.
>
> ...The technium is necessary for human betterment. How else are we going to change? A special subset of humans will find the constrained choices available in, say, a monastery cell or the tiny opportunities in a hermit's hut on the edge of a pond or in the deliberately restricted horizon of a wandering guru to be the ideal path to betterment. But most humans, at most moments in history, see the accumulating pile of possibilities in a rich civilization as something that makes them better people. That's why we make civilization/technology. That's why we have tools. They produce choices, including the choice for good. ... We need the full spectrum of choices won by the technium to unleash our own maximum potential. (348)

He even includes text in the technium. This is a reference I had trouble understanding. A book is a kind of technology, the invention of language combined with the printing press. The ability to manipulate thought through letters and words, and the technology of pen and pencil to transcribe that thought, is a form of technology. Technology opens more opportunities. I might resent the screen, but it has afforded me countless hours of writing time, in which I've expanded my mind, found an easy way to organize and edit my thoughts, and composed meaningful stories.

Yet I still struggle with an internal fight with techno-skepticism. Am I a techno-optimist or a techno-skeptic? Cyber-utopian or cyber-dystopian? Is it possible to be both at the same time? What's next in the internet cycle–after the honeymoon phase and disillusionment, will we find a new peak to be optimistic about? Is there another cycle outside of optimism, skepticism, and disillusionment I haven't experienced?

Whatever negatives it has, the Internet has the potential to be leveraged positively for nearly any project. The blog has allowed me to write this series, for example. What started out as a list of consecutive posts on a topic actually holds up as continuous long work (after a lot of editing). Given my full-time job and family responsibilities, I doubt I could carve out the time required to write an entire book from scratch, spending 1-2 years in semi-isolation or waking up at dawn each morning to work on a single long document. But I could write a post every week or two, and another one, and another. With each post, I gathered feedback from readers, who helped steer me in the right direction. I put one word in front of the other and continued this series, uncovering new ideas in books and articles that led me to more posts.

Eventually, the posts found momentum and the series hit a level of substance that made the effort feel worthwhile. If nothing else, the project gave me a task to focus on, not too unlike Csikszentmihalyi's emphasis on finding flow by immersing yourself in some activity. The blog allowed me to simplify a complex task by decomposing it into smaller chunks, and then gather feedback about each chunk. The feedback provided constant course corrections, allowing for an agile writing style.

If blogging can be used to write longer works, and help people like me achieve their writing ambitions, the screen doesn't have to be a waste of time. It helps provide opportunities that might not be fulfilled elsewhere. This is technology's double-edged sword. I could have spent the same amount of time composing pointless tweets and scrolling TikTok videos, getting embroiled in troll-filled Reddit threads, but the same technology can also be used to write stories and expand the mind.

Projects like these have applications far beyond writing projects. Any large project that you can chunk into small bites, and then gather feedback on each chunk through a reviewing audience, could benefit from a similar model.

Thoreau and walking

Back to walking. I have not given up on walking. Reading Thoreau's essay "Walking" inspired me to believe there's something more fundamental to walking than I'd initially realized—something that I felt under the skin but couldn't quite articulate. Thoreau says that when he goes walking, he naturally tends to go west, which is his metaphor for a magnetic pull toward *wildness*. Thoreau writes:

> The West of which I speak is but another name for the Wild; and what I have been preparing to say is, that in Wildness is the preservation of the World. (63)

That is, our inner core is rejuvenated by the wildness of nature. He continues:

> ... Life consists with wildness. The most alive is the wildest. Not yet subdued to man, its presence refreshes him. One who pressed forward incessantly and never rested from his labors, who grew fast and made infinite demands on life, would always find himself in a new country or wilderness, and surrounded by the raw material of life. He would be climbing over the prostrate stems of primitive forest trees. (69)

Wildness makes us alive and fills us with primal energy, moving us to consume new areas of wilderness.

> ... Hope and the future for me are not in lawns and cultivated fields, not in towns and cities, but in the impervious and quaking swamps. When, formerly, I have analyzed my partiality for some farm which I had contemplated purchasing, I have frequently found that I was attracted solely by a few square rods of impermeable and unfathomable bogh—a natural sink in one corner of it. That was the jewel which dazzled me. I derive more of my subsistence from the swamps which surround my native town than from the cultivated gardens in the village. (69)

He has no interest in perfectly manicured lawns and gardens; he prefers the landscape just as nature carves and hews it.

Walking is how Thoreau connects with this wild element. When he goes on walks, he doesn't do so for aerobic exercise. Instead, he saunters, like a wandering middle-aged saint with "no particular home, but equally at home everywhere." When he looks around at

shopkeepers and others sitting indoors, especially during the light of the day, their sedentary immobility perplexes him. He feels restless if he doesn't walk for four hours a day. Thoreau writes:

> When sometimes I am reminded that the mechanics and shopkeepers stay in their shops not only all the forenoon, but all the afternoon too, sitting with crossed legs, so many of them—as if the legs were made to sit upon, and not to stand or walk upon—I think that they deserve some credit for not having all committed suicide long ago.
>
> I, who cannot stay in my chamber for a single day without acquiring some rust, and when sometimes I have stolen forth for a walk at the eleventh hour, or four o'clock in the afternoon, too late to redeem the day, when the shades of night were already beginning to be mingled with the daylight, have felt as if I had committed some sin to be atoned for,—I confess that I am astonished at the power of endurance, to say nothing of the moral insensibility, of my neighbors who confine themselves to shops and offices the whole day for weeks and months, aye, and years almost together. I know not what manner of stuff they are of—sitting there now at three o'clock in the afternoon, as if it were three o'clock in the morning.

Thoreau wrote "Walking" in 1851 and published it in 1862. The essay forms part of the transcendentalist movement that celebrated individualism and the divinity of nature over religion and machines. Through his essay, which Thoreau read as a lecture ten times (more than any other essay), he encouraged immersion in the wildness of the outdoors, even to the point of abandoning your friends, family, and home as you go forth to saunter wherever you're pulled. He sees walking/sauntering as a way to reunite with wildness, and be purified and uplifted. Some of his thinking was spurred by the industrial revolution, which ushered in crowded cities, indoor living, and sedentariness.

Thoreau's essay moved me. I connected with the wildness theme, but I admit that I also read, ironically, much of the essay while sitting down on a commuter train taking me into the city. I understand the need for balance. Maybe not walking four hours a day, but certainly standing and walking outdoors as much as sitting in front of a screen.

4.2 Conclusion and takeaways from my Journey Away from Smartphones series

Luddite teens

The *New York Times* recently published an article titled "Luddite Teens Don't Want Your Likes" (Vadukul), which brought back nostalgic memories for me of the six weeks I spent without a smartphone. The article begins:

> On a brisk recent Sunday, a band of teenagers met on the steps of Central Library on Grand Army Plaza in Brooklyn to start the weekly meeting of the Luddite Club, a high school group that promotes a lifestyle of self-liberation from social media and technology. As the dozen teens headed into Prospect Park, they hid away their iPhones—or, in the case of the most devout members, their flip phones, which some had decorated with stickers and nail polish.

> ... [One club member comments:] When I got my flip phone, things instantly changed .... I started using my brain. It made me observe myself as a person. I've been trying to write a book, too. It's like 12 pages now.

"*'Luddite' Teens Don't Want Your Likes*" *article in the New York Times. This group of teens rejects smartphones.*

As I read the article, I began to trace back why I returned to using my smartphone and if I should return to living without it. The club founder, Logan Lane, explains how Instagram made her feel bad about herself, so she first deleted the app, then put her phone in a box. With her phone locked away, life opened up all around her. The article explains:

> For the first time, she experienced life in the city as a teenager without an iPhone. She borrowed novels from the library and read them alone in the park. She started admiring graffiti when she rode the subway, then fell in with some teens who taught her how to spray-paint in a freight train yard in Queens. And she began waking up without an alarm clock at 7 a.m., no longer falling asleep to the glow of her phone at midnight. Once, as she later wrote in a text titled the "Luddite Manifesto," she fantasized about tossing her iPhone into the Gowanus Canal.

I, too, once fantasized about throwing my smartphone into a canal. And I did give up my smartphone for six weeks, but then returned. Reading this article, I started to think back on my journey. What happened to me? Why did I revert?

I've already recounted the story of returning to my smartphone in "Six weeks in—returning to my smartphone (but not as before)." In my experience, the killer app of smartphones is not an app at all—it's the full-screen keyboard, which allows you to text. Without texting, I

couldn't communicate much with my wife and other family members. Email is pre-Jurassic, and ignored. Without text, you can still talk on the phone, but phone conversations and voicemail are inconvenient and slow, especially for quick notes.

Texting can be a double-edged sword, though. On the one hand, it allows us to communicate quickly and easily through a screen-based keyboard. On the other hand, it gives us access to app interfaces and the vast amount of information on the Internet, all in the palm of our hand.

Besides texting with my family, another factor that contributed to my decision to return to a smartphone was reading Kevin Kelly's *What Technology Wants*. Kelly convinced me that the constant introduction of new technologies is inevitable and that rejecting them completely is like adopting the mindset of Ted Kaczynski. Sure, I could resist, but doing so made everything harder, sending me on constant workaround hacks.

I realized that I needed to find ways to make peace with technology and use it in a way that worked in my favor. So I switched back to smartphones with modified rules. My modified rules worked well for several months. As I became more curious about what caused my attention to be drawn away from books, I began adding back more and more sites.

It wasn't long before I again checked sites on my smartphone frequently, even without apps. Even without apps, you can read most content from a web browser like Chrome. Responsive design has become that good. Chrome remembers your most frequently visited sites with little one-click images on its homepage, making it almost app-like.

I also started checking personal and work email on my phone. I found myself once again looking at email at any spare moment of my day—waiting in line for coffee, waiting for the elevator, in the bathroom, on the train, etc. I felt bad about this, especially because I don't receive that many email messages. In spite of this, I had already re-acquired the habit of checking my mail and news every twenty minutes.

I also started backsliding against my 90-minute pomodoros, which were the key to unlocking so much productivity. I told myself that I no longer needed these pomodoros. I told myself that my focus on a task was fine even with small interruptions to check email, news, or more.

All the while, I started reading less and feeling more superficial, getting less done. My productivity plummeted. What happened? I let the smartphone control my life again.

I avoided bringing my phone into my bedroom at night, but I brought my laptop instead and get hooked on some mindless TV show. Or I'd wake up early, such as 4:30 am, and reach for my laptop (conveniently located under the bed) to continue the show. After all, what else can you do at 4:30 am when you can't sleep?

I felt like a former alcoholic who had fallen off the wagon. I underestimated the insidiousness of smartphones and the Internet. I tried to remove both Chrome and Gmail but found that I couldn't remove these apps on Android, only disable them, so I did. I assumed that re-enabling them wouldn't be that hard, but I managed to resist doing so.

Disabling these apps (Gmail and Chrome, specifically) made my smartphone more of a paperweight. Without these apps, the smartphone became useful only for a small number of functions. I deliberated about switching to the Light Phone but remembered how with the Kyocera, I spent so much time figuring out complex workarounds (such as using srccpy, "screen copy," to digitally mirror the phone on my computer so that I could text my wife). Reading articles like I'm Gen Z, and I ditched my iPhone for the Light Phone II for a week reminded me of these hacks. The initial rush of abandoning these technologies is

quickly replaced by the inability to perform basic tasks, which reveal themselves little by little. For example, want to listen to Audible, check the weather, rent a Lime scooter, create a hotspot, join a Zoom meeting during your commute, view your work calendar, or find an unfamiliar address? The amount of time spent trying to replicate the convenience of a smartphone can make it feel like the basic phone is more of a hindrance than a help.

I also remembered how easy it was to replace my smartphone with another distraction: streaming media. Without some willpower to resist distraction (whether in the form of smartphones, TV shows, sports, or other), abandoning my smartphone for a basic phone was a losing battle. I could simply substitute the smartphone's distraction for something else, and I did. So the Light Phone probably wouldn't solve my problems, I reasoned.

I realized that finding the right balance (whether using a basic phone, smartphone, or some stripped-down middle-ground) was a learning process. After realizing that I'd resumed too many unwise practices with my smartphone, I course-corrected a bit, trying to find a better middle ground. I disabled Chrome and Gmail, for starters. With this change, I stopped checking my email frequently—and more importantly, I stopped thinking about my email. One morning I woke up, walked down the stairs to my computer, and worked on a post for an hour without checking email. (Normally it was the first thing I looked at when waking up.)

I also started doubling down on my bedroom technology use: no more bringing my laptop or smartphone to my bed, which only prompted me to get hooked on TV shows. Instead, I brought a book. Reading it for 30 minutes put my mind into a slumber. And the more I read, the more progress I made in books. And that progress gave me more momentum to keep reading. It didn't take long before I found myself again thinking about books rather than a TV show or email. (Our brain really is plastic and can be reshaped within a few weeks.)

In trying to restore the balance of technology use, I didn't realize how delicate my rules were. Simply checking email and news on my phone seemed enough to imprison me again (was it the Dopamine hit during boredom?). Removing those apps lifted the burden and prompted me to read more. My smartphone mostly sat on my desk, like an ominous Pandora's box. Without the apps, I neutered it.

I looked at my smartphone now and then wondering what the device was for. It was obviously underperforming in its capability, like having a Lamborghini you used only to drive to the mailbox and back. But just as with any sports car, could you really drive it without occasionally accelerating past the speed limit?

Did I achieve the experiment's end goal? {#did-i-achieve-the-experiment's-end-goal}

I mentioned the above only to be realistic and honest about my relationship with smartphones and technology. It's not as if one can easily walk away, form a Luddite club, and get immersed in the classics for ever more. Life is more complicated, especially if one works in tech and has family and friends with smartphones. The only feasible path, in my experience, is to find a way to neutralize the addictive elements of smartphones.

For me, this meant disabling email and news mechanisms. (Almost no one is addicted to checking the weather on their phones, or setting alarms all day.) I've never been much of an Instagram or Facebook user, and Twitter lost its appeal long before Elon Musk took over. Each person has their own kryptonite, so what might be Instagram for one person (like Logan Lane in the Luddite Club) could be a news or email app for another. (My kids

check their email once a week, if that.) By neutralizing my phone, I figuratively moved away from it while still interacting and participating in modern life and maintaining social relationships.

Overall achievements

Despite the ups and downs of my experiment with moving away from smartphones, I achieved and learned so much through this series. In this final section, I'll wrap it up and form a conclusion about it all.

In "My initial rules and reasons for intentional smartphone use," I listed these goals for my experiment:

> What do I hope to achieve by removing smartphones?
>
> - Long-form attention to read a book without my mind wandering
> - Sleep through the night without randomly waking up early
> - Have more mental energy in the evenings
> - Get into periods of flow and become more productive at work
> - Have more peace of mind
> - Have more realizations from reflection
> - Be more present with others

Definitely, both literally and figuratively abandoning my smartphone has achieved every one of these goals. I won't go through each one in detail, but overall, it's a resounding yes. Instead of commenting on each of these high-level goals, I'lll provide a few highlights instead.

Productivity

Of all the productivity techniques, 90-minute focus sessions worked the best for me. I'm still amazed by how much I can accomplish in 90 minutes when I focus on a task, not being pulled away into anything else. Some of the time, I measure out work by the number of 90-minute focus sessions I think it will take.

Although it can be hard to focus for that long, I'm in love with the productivity outcomes. I love the ability to knock out a substantial documentation project in a week, or write a lengthy article in a single session. The productivity method makes me think I can accomplish nearly any amount of work.

The technique has some tradeoffs, such as ignoring the world around me for a bit. But if I wait to check email and other sites between focus sessions only, the method works. Ninety minutes is enough to get some serious momentum going. The only drawback is that if I only have 30 minutes before a meeting, I sometimes feel that starting a focus session isn't worthwhile. And it is still difficult not to check email, chat, and time-wasting sites as a break from the task.

Reading

Reading! If there's one major reward for neutralizing my smartphone, it's the return to reading. I don't remember reading so many books in my life, not since college. Smartphones and the Internet have prompted a gradual, incremental transition from reading print to online media. At some point during the past 20 years, books became something I stopped consuming (except for audiobooks while commuting).

Returning to books, I realized I love reading. A well-written book can change my perspective in transformational ways. Reading feels enriching, soothes my brain waves, helps me understand topics on a deeper level, and makes me more informed, especially when I write.

I've learned that, for me, print books are superior to anything on a screen. This might be due partly to my declining eyesight. (I now carry two sets of glasses—one for driving, one for computers.) But I also like annotating books with a pen as I read. It makes me feel like an active, engaged reader. I've grown accustomed to reading each morning while sipping a caramel latte (my espresso favorite). Strangely, sipping a latte, wearing a cardigan, and reading a print book doesn't feel cliché, as everyone else stares at their smartphone screens.

At work, I've been running a book club focused on the automotive and transportation industry. I'm also reading long documents at work (whether product requirements, engineering designs, or other documents that others usually just glance at). Yes, I print them out and have a stapler at my desk. Recently, a neighboring engineer heard the sound of a stapler and perked up, noting that he hadn't heard the sound of a stapler for years. I now make a point of stapling things proudly.

Writing

I learned that writing is a conversation with the texts I'm reading. Previously, I approached writing primarily by following a technique of asking 20 questions about the topic and trying to answer them—going through this round of questioning multiple times. While this brainstorming technique still worked, it wasn't as powerful as finding a relevant author to read and then summarizing, commenting, and building off of the author's ideas. Writing is a conversation you're having with other authors.

Writing is also an experience in living. In my view, it makes little sense to explore a topic that doesn't matter deeply to me, and which doesn't involve incorporating any changes into my life. In the books I read, I like to see the author personally invested, trying things out, experimenting with changes. Although essays are enjoyable reads, when the author injects personal experience and takes me on a personal quest (like Johann Hari did in *Stolen Focus*), it makes the writing more engaging.

Balancing ideas from authors with my own personal experience was perhaps the only way to compensate for my lack of scholarly expertise about topics. I might not know every study done, but when I brought my own life experiments to the table, this sense of active living and experimenting seemed to add authenticity and intrigue to the content.

On a more practical level, I also realized one technique that worked well for documentation projects: alternating modes between reading and writing. I often devoted one focus session to reading and gathering nuggets of information. Then I devoted the next focus session to smoothing out and integrating the information. This switching back and forth

between reading and writing made creating documentation a lot easier. As a result, I could more easily sustain the 90-minute focus sessions and go about writing projects more effortlessly.

Television

During this series, I realized that streaming media (Hulu, Netflix, etc.) can replace a smartphone. Although we've all heard the advice about not taking devices into the bedroom (to promote healthy sleep hygiene), I ignored that advice. I learned that the advice should be followed. The more I propped my laptop on my chest as I reclined on my bed, the fewer books I read, and the later I stayed up. Staying up later meant getting worse sleep the next morning, which led to more caffeine and more distraction. (At one point I even got "caffeinism" and learned to limit my coffee intake more.)

Watching TV in the family room (rather than on a personal laptop in bed) also promoted TV as a social experience with other family members. TV brought us together on the couch as we commented and interacted about a show. Even a terrible TV show could be fun to watch with the right people. For example, I recently watched "Business Proposal," a Korean drama, with one of my daughters who wants to be an exchange student in Japan, and it was fun to see her excitement and point of view about the content. If I watched the show alone, I wouldn't have found it nearly as interesting.

I also replaced the phone-as-an-alarm-clock model in my bedroom. I loved the old-school 1980s GE alarm clock that I purchased (which you can now only buy on eBay). The idea of putting a screen-based digital assistant (Alexa Show or similar) on my nightstand seems counterintuitive to a device-free bedroom. I like looking at the red numbers on my old-school alarm clock, its only real function is to make an alarm sound (or play bad FM radio). My old-school alarm clock is a constant reminder of my childhood and the days before the Internet.

That said, because my phone is no longer a tool for distraction, it can also function as an alarm. There's nothing that draws me to stare at it beyond checking the weather or my calendar for the day.

Wayfinding

Wayfinding also proved to be a breakthrough for me this year. As I learned to navigate without GPS navigation apps (at least around my home city), I figured out where things were located! I know it sounds trivial, but it felt so good to be fully focused and immersed on the road rather than subjected to the micro directions of my smartphone's robot voice. I learned (more or less) the logic of avenues versus streets, the numbering schemes, and the main connecting roads and highways. Having a mental map of the roads helped me feel more comfortable and confident as I drove. I didn't anticipate how good it would feel to know where I was going, without relying on GPS.

I still use my phone for podcasts and music, but I try to avoid using GPS as much as I can for local routes, recognizing that if I navigate on my own, the route sticks in my mind much better. For trips outside of my home area, or emergencies or other spontaneous needs, or if I simply get lost, I open up the app, but not if I can help it.

I thought I would navigate via paper maps (and bought a handful), but not really. I usually study the route ahead of time on Google Maps on my laptop and sometimes make a few notes on paper. For 20 years of marriage, my wife has made fun of my navigational impairment. Not so much anymore! Sometimes I raise an eyebrow when I see her type in a direction on her map that I know how to get to.

Did the navigational certitude give way to increased memory for episodic events? I didn't have too many brain fog moments, but I never tried to measure my memory skills. Given how much time we spend driving, making the switch away from GPS navigation apps proved more fulfilling than I initially thought. It was an easy way to push back against automation and get my brain's wayfinding gears turning.

Cyberskepticism

With my smartphone experiment, I also realized that I was more of a cyberskeptic than I realized. Throughout my 20-year tech career, I was always excited to work on the frontiers of tech, seeing new technologies and applications as the next step forward. I was always a gadget/device person, someone who esteemed innovation and geeked out on some new website approach (for example, Docs as Code).

This year, my enthusiasm for tech waned a bit. I realized I longed to return to a world before smartphones. I didn't become a hardcore cyberskeptic (for example, I still can't stomach Zuboff's *Surveillance Capitalism*, and I don't mind being tracked), but I'm long past the idea that all tech is beneficial. So much of social media can be toxic, proliferating extremism, disinformation, and division online. It can lead to wacky conspiracy theorists (Q, R) attracting an astounding number of followers, and family members can become divided into "red" vs. "blue" teams. The list could go on. Perhaps more subtle, social media traps us in a world of superficiality.

I'm not sure how long I'll stay in cyberskeptic mode. I no longer foresee purchasing more digital assistants. The impact of the internet is still overwhelmingly positive, in my view. It has given me a space to write and publish, and an audience. It also opened up infinite knowledge resources. Many other technologies (including Google Maps, which I explore all the time on my computer) have opened up new possibilities to explore the spaces around me. But more and more, I'm learning to be more discerning about which technology to adopt and how to incorporate it.

Years earlier, technology seemed so innocent, so positive. Earlier in my career, I had adopted more of a "Whig mentality of history," as Krinnock and Hoff say in *May I Ask a Technical Question*. This mentality assumes technological innovation leads to progress. Not so anymore. The way smartphones take over everyone's attention at any spare moment is startling. If someone was transported from the 1980s to the present and observed how ubiquitous and attention-demanding smartphones are, they would be shocked. (Incrementalism obscures social change.)

I see the cyberskeptic narrative strengthening in other texts I read. For example, in Paris Marx's *Road to Nowhere: What Silicon Valley Gets Wrong about the Future of Transportation*, Marx upends the narrative that technology companies try to tell about the world: that they're using technology to solve big challenges in the world, such as transportation. However, ride-sharing apps, autonomous vehicles, underground tunnels, and so on are not actually reducing congestion and unlocking mobility; they're just increasing congestion and reinforcing the automobile as an essential and unavoidable transportation expense, to the benefit of corporate profits.

Marx's book excoriates Uber. While Uber sells a story about ease of mobility, reduced congestion, and additional income for drivers, Uber achieves none of this. Their lower prices are predatory prices to get rid of taxis, then their prices increase. They detract ridership from public transportation while increasing congestion due to deadheading (roving without passengers). In short, they make transportation more difficult for most people while expanding transportation opportunities for tech elites. Why have we swallowed this ride-hailing tech innovation? Marx writes:

> We were taught to believe that technology solutions alone could address difficult problems, and users and journalists bought the story Kalanick was selling. (94)

> The story of Uber demonstrates the continued relevance of the Californian Ideology. ... But despite all the bold claims about its transformative potential, Uber ultimately served an insidious agenda that harmed workers and the public while increasing corporate power. ... Sadly, that is not just Uber's story, but the reality of so many of the tech industry's ideas for the future of transportation and cities. More technology and regulatory rollbacks to not solve fundamentally political problems; they just allow wealth, powerful people to impose their will on everyone else. (113)

The idea that tech can transform transportation and solve other problems, independent of political and policy changes, seems more and more naive. More often, a profit-based capitalist agenda drives the effort.

As a partial cyberskeptic, I sometimes wonder about the value of the documentation I produce at the companies I work for. Would the world be better off *without* the work I do today? I'd never asked that before. One passage in Johann Hari's *Stolen Focus* book especially haunts me. Hari writes:

> One day, James Williams—the former Google strategist I met—addressed an audience of hundreds of leading tech designers and asked them a simple question: "How many of you want to live in the world you are designing?" There was a silence in the room. People looked around them. Nobody put up their hand.

In conversations with my kids, they also fantasize about living before the internet. Then sometimes we watch a show filmed in the 80s or early 90s, and that nostalgia fades.

Despite the cognitive dissonance of working for big tech, I also marvel at what new wonders technology might introduce, such as with generative AI. Despite having reservations about where technology takes us, I'm not a full cyberskeptic. I'm more in the middle between cyberskeptic and cyber-optimist, which gives me a great vantage point as a writer.

Camera

I haven't written much about using a regular camera instead of my smartphone camera. Part of my plan for initially abandoning my smartphone was to figure out how to take pictures sans the smartphone camera. Although I experimented briefly with a compact point-and-shoot, I ended up returning it due to poor image quality.

However, during the year I volunteered as a team photographer for my daughter's soccer club. I dusted off an old Nikon D60 DSLR (bought as a wedding anniversary gift for my wife more than a decade ago), upgraded it with a 55-118mm zoom lens, learned a bit about shutter speeds and apertures, and started taking action photos at almost every soccer game. It was a lot of fun, actually.

For sports photography, which almost invariably requires a zoom lens and control over your shutter speed, I had to relearn some photography skills that I had forgotten since my days as a yearbook photographer during high school (back in 1993!). I sometimes think I should take up photography as a hobby more actively. But for stills that don't involve zooming, smartphone cameras are comparable if not better (at least compared to my D60 and skill level). I love taking pictures of an area that I explore and then posting them as reviews on Google Maps.

News

I still struggle with the news. Ever since reading Rolf Dobelli's *Stop Reading the News*, I've been much more aware of the negativity bias of news. Another problem is that reading the news pulls me online, and once online, invites me to click elsewhere, making news more of a "gateway drug." But when I stopped reading the news, I felt disconnected from global events, curious to know what was going on. So I started glancing at the _New York Times _summaries.

The problem with glancing through daily news summaries is that I don't want play-by-play summaries of breaking news but rather more general summaries of what's going on at a higher level, which I can consume at a less regular cadence. I also want to read it offline. I once experimented with a print subscription to the _New York Times _but realized I didn't want to feel compelled read a massive paper every day. Each newspaper has nearly a book's worth of information and can take at least an hour to read, even when skimming.

Recently I decided to get a print subscription to *The Week*, hoping it would batch my news reading into a lazy weekend hour offline. I wasn't looking for in-depth reporting to explore all sides of an issue; I mostly wanted the gist of what's going on, consolidated into a weekly publication and easily digestible offline format. And I hoped reading offline would make me less prone to wandering online.

The Week isn't bad. It took me a few issues to get used to its style. Not all the news it includes is noteworthy; much of it feels trivial and tabloid-like. But I like consuming news this way—offline, in print. Reading news online presents too much temptation to click down rabbit holes.

Revisiting my rules

In this series, I listed various technology rules that I would follow, which is what Cal Newport recommends. The technology rules we make for ourselves require constant refinement until we get to the right mix of technology use. I started out with a strict set of initial rules only to modify them later on. Below, I'll provide another iteration. I suspect that in a few months, I'll make more adjustments.

Also, remember that what might work for one person might not make sense for another. My rules fit me, based on those apps that are *my* kryptonite, based on my social needs with my family, and my work. Here are my latest smartphone rules:

1. **Disable addictive apps.** Using a smartphone (instead of a basic phone) is OK as

    long as the distracting elements are neutralized. For example, remove news, social media, and sports apps. Also, disable Chrome and Gmail (both work and personal versions).

2. **No devices in the bedroom.** Don't take smartphones or laptops into bed (to view streaming media). Take a book instead.
3. **Disable notifications.** Try to keep the phone in Do Not Disturb mode—disable app notifications and phone calls except for family and calendar apps. Same with email and chat notifications on desktop—mute them.
4. **Read news offline.** Get your primary news offline rather than online.
5. **Avoid non-personal email.** Keep your email inbox light by unsubscribing to almost everything.
6. **Avoid using GPS to navigate.** Don't rely on mapping applications when driving if you can help it. Learn the logic of the streets. (GPS can, however, be a tool if you're actively learning and exploring new areas.)
7. **Avoid using social media as entertainment.** You can check it every so often to gather information, but generally, it's not worthwhile to consume social media as entertainment.

Here are some best practices related to focus:

1. **Approach tasks in 90-minute pomodoros.** During the 90 minutes, don't get pulled into distractions (such as email or news).
2. **Do TPN warmups to get into the zone.** To switch into TPN mode, do the task for 5 minutes. Then alternate back and forth until your TPN engine is fully warmed up and you no longer need the timer.
3. **Read print books regularly and voraciously**. Reading is key to providing the fodder for writing—both reading and writing fuel each other.

The process is an ongoing refinement about what works and what does not, taking the best of what new technology offers and toning down the bad.

Recommended reading list

Throughout this series, I've quoted and commented on many of the following books. If you're interested in continuing this theme, I recommend reading the following:

- *Stolen Focus,* by Johan Hari
- *Stop Reading the News,* by Rolf Dobelli
- *Digital Minimalism,* by Cal Newport
- *Deep Work,* by Cal Newport
- *Wayfinding,* by O'Connor, M. R.
- *What the Internet Is Doing to Our Brains: The Shallows,* by Nicholas Carr
- *What Technology Wants,* by Kevin Kelly
- *Flow,* by Mihaly Csikszentmihalyi
- *ADHD 2.0,* by Ed Hallowell and John Ratey

You will find that there's an abundance of books written about the themes I've touched upon. My experience isn't singular but one that many have struggled with, from the Romantics in the Industrial Age to now.

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