STORYTELLING AND USER EXPERIENCE DESIGN: HOW STORIES SHAPE DESIGN AND HOW DESIGN SHAPES EVERYTHING

by

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APPROVAL

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For the college

To Christina
for without whom there is nothing

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ABSTRACT

STORYTELLING AND USER EXPERIENCE DESIGN: HOW STORIES SHAPE DESIGN AND HOW DESIGN SHAPES EVERYTHING

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Dr. Jason Helms, Associate Professor

Increasingly, classic storytelling techniques are being used in the technological space to communicate ideas or ideals that would be otherwise hard to communicate. Previously, storytelling is a specifically liberal arts, literature-based focus, and computing and the internet was left to computer scientists or other technical professions. There was little scholarship that provided a link between the two, highlighting how storytelling techniques are being used by technological leaders to mislead and manipulate the public at-large, creating culture on the fly through digital artifacts. This study leans on creative writing, philosophical theories, social science, as well as cultural observations/scholars to critique and make apparent this manipulation in a variety of forms and styles. The findings of this research encourages awareness and understanding of how the modern internet operates via storytelling in an effort to teach readers on how to understand how this manipulation operates, identify where it exists, and ultimately, reject in the favor of truth.

Introduction: Love in the time of Coronavirus

Anytime you take up a tool, and consider its use, imagine it in your worst enemy's hand, with the sharpest part of it pressed against your neck.
Tycho Brahe, *Penny Arcade, 6/6/2022*

Introduce the introduction

Things move quickly in the technology space. I can't keep up, not in a dissertation at least. The cogs of academic thought, often patient, careful, cautious, and thorough, move too quickly for technology, a place full of people that are often impatient, careless, uncaring, and unexamined. Initially, this project was approved and largely conceived in the Spring of 2020, the year of 2021, and then 2022 a little bit. Turns out, it would creep into 2023, and now 2024. Currently, it's a Thursday. The weather is nice; the tornado that had my wife, daughter, two dogs, and myself huddled in a terrified group at 5am was last week. Things, now, are pretty good. They won't stay that way, and likely, will get worse.

I was born in 1985, an age both old and young–simultaneously. For my generation, there's always some baffling once-in-a-generation tragedy every few years. You know the type: September 11th; the Global Financial Crisis; the January 6th insurrection; and countless other small decisions that left most people of my age more tired, with less money, fewer opportunities, and with for the first time in American history, a worse future than every generation previous. Personally, alongside all of these horrible, global events, my wife and I powered through the death of my mother from cancer at 60 years old, several years of

unsuccessful infertility treatments[1], and the backbreaking and heart-rending process of, after said failed infertility treatments, of trying to adopt. There was, and is, a bright spot in all of this: my wonderful daughter Claire, who helps me stay focused on trying to create a future without the current problems. This might be impossible, but there will always be value in doing. In a practical sense, that is design. We make up things we'd like to see, and then we work to make them true. A few weeks back in May 2024, while on paternity leave, I was laid off from my job at Indeed in a foolish effort to juice stock price on the back of yet another unproven and unnecessary technology, Artificial Intelligence. And with that, another too slow draft requiring a rewrite, editing out things like, "I've been lucky to avoid layoffs." Like I said: things move quickly.

I've always felt, but never known how to vocalize, how institutions are largely lazy, stupid, inefficient, and the most egregious and effective punishers of innocent and often helpless people. That's the crux of this dissertation and my academic learnings thus far. I think I've figured out a few things, and simply put, I'd like to share them so hopefully things can get better for everyone. I'm a pretty privileged white dude, on paper, and I'm tired of all of this. I can't fathom what that means for others who do not look like me, who haven't had a second-chance to get it right, or at the very least, less wrong. The System, capital-S and all, supposedly, is set up for me. And yet, it's still not working, and as I've come to learn, never has worked, not really–not for everyone[2]. Thus, I rarely, if ever, respect institutions. I do not respect their laws, customs, social mores, and I definitely have very little respect for those who prop them up and continue the stupidity and inefficiency at scale for their singular, personal gain. I

[1] Not IVF. There's lots of other stuff you do before that. We couldn't afford IVF, monetarily or emotionally. It's just important to note.

[2] Some tweet or tumblr post or some other internet thing said something along the lines of, "If you can't afford to pay your workers a living wage, then you don't run a business. You run an exploitation factory." This idea has stuck with me, and will stick with me, forever. If the system doesn't work for everyone, *it is a bad system.*

do not respect Religion at all, followed shortly thereafter by Big Business and Government. I formerly had an unimaginable respect for Academia, a deep, real love even, but the university structure has become Big Business with Books. Academia might still have a chance, but I am doubtful. But back to institutions in aggregate. Anything that doesn't churn top-level leadership in an efficient way is prone to stasis and stagnancy, and in the face of an ever changing and quickly shifting world, all of these places rely too heavily on the status quo. To solve future problems, these "leaders" look to the past, and worse, look around to see what everyone else is doing. There is little inspiration or creative problem-solving; there is mostly magical thinking and dread. If you do what you always did, then you'll get what you've always got.

To that end, I feel no obligation to follow genre-conventions or stylistic Best Practices. I think we need something new. So, you know, he said to himself: don't talk about–*be about it.* I think we need creative problem-solving and experimentation, not rigid doctrines on "How Things Have Been Done." One of my pet peeves is that there is so much knowledge sitting out in the world, but it's written and constructed in such a fashion as to be largely inaccessible to a huge portion of the population. If I have any talent (and I don't really think I do but if I do), it's that I can understand complicated things and then make them clear and understandable for the average person[3]. So while definitely poking fun and having a lark into various asides and "non-academic" topics, my goal is to take useful things I've learned in the confines of the

[3] Where did I acquire this skill? The Richardson Public Library, where a monumental amount of my academic work was written, and I have spent countless hours throughout my entire life. You can read all sorts of stuff here, for free, and then you can take that knowledge and tell people about it. Whatever intelligence I have started there. Why the Public Library? Single moms with three young boys don't have a ton of disposable income, and this was a place I could go for free, read for free, and simply exist without having to pay a fee to be a person in public. This, among other things, is another great tragedy of the modern condition. There are few, if any, public spaces not dominated by capitalism. "What about parks?" Here in Texas, most people need to drive to one, since living near one is wildly expensive. So you need a car–another serious expense. Thus, this "public good" is primarily for the rich people that live near them, who themselves already have spacious lawns and backyards.

university and share them more broadly with an audience that can't or otherwise wouldn't be able to access the original topic. This is generally why I don't use academic articles–heavily paywalled. This is generally why I use full books–easy to find/steal or rip off the internet. All of these are purposeful stylistic choices, not errors or a lack of awareness. The sum of the intro to the introduction is this: this work is a purposefully weird, definitely non-standard way to write a dissertation, and I view that as a huge asset. New things can net new ideas, and maybe, new ways of doing things. As a concession, I have to follow some of the rules of the form, but I do so begrudgingly and as sparingly as possible. However, the goal remains the same: try new thoughts in new ways to make new things. Try something different. As I am fond of saying often, and what gives me motivation to continue to be weird, genuine, and truthful to how I actually read and think:

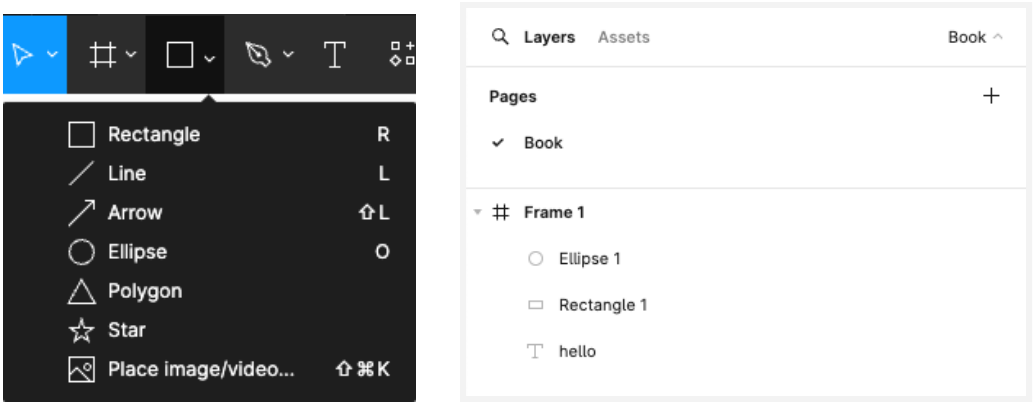
You can't stand out if you fit in.

Shapes

As noted, things move pretty quickly in the technological space. But regardless of their rapidity, there are some bedrock and foundational things that largely remain. Shapes just happen to be one of those things. As a designer, we use circles, squares, lines, rectangles, and a little bit of text to make a majority of the things you tap and click on every single day. The internet and the technology that supports it is, at its core, just a bunch of shapes. After working long enough in any medium, that medium seems to permeate everywhere, particularly this very work that you are reading right now. I'll provide a more clear and delineated chapter summary at the end of this introduction, but to help buttress my point, I offer this. Chapter 1 focuses on circles; how they always start someplace, undergo some measure of change, and then return

back to the initial starting point, perhaps a little bit changed. Chapter 2 focuses on squares; how they constitute the framing grid by which almost everything on a screen is constructed. Chapter 3 focuses on lines; how they can coalesce into systemic groups and form larger things, like a labyrinth, a place to lose one's self and also to get lost, forever. Chapter 4 focuses on layers; how individual planes lay atop one another and how when viewed individually and as a collective group a deeper meaning and a deeper understanding can be gleaned from seemingly everyday objects. This might feel overly simplistic, some real Sesame Street stuff, but it matters. Things start simply; they hardly remain that way.

If we accept, and we should, that the conditions that a person is under affects the products that they are able to produce, then I find it in no way coincidental or accidental that this work ended up being structured this way. I think, like Heidegger and Brown suggest (and I will expand on later), that these ideas were always in the work someplace but hidden from my view until the requisite work was performed to unearth them. These shapes and these ideas were always there; I just hadn't found them yet. Circles, squares, lines, and layers were staring me in the face, but I lacked the knowledge and awareness to make them real, to make them manifest in the world in tangible, useful ways. These shapes were things I used every day.



Figma (a digital design tool I use at work) tool selection menus

Surely, the conditions by which we make affects the things made, but at the core, most things are the same. This combination and recombination have always lived inside the very nature of the things we use, and it is in their reorganization and their reconfiguration that meaningful change can occur. In UX, we often think of things in two ways: an evolution and a revolution. An evolution is a steady advancement of a product, a step forward into some reasonably knowable and understandable future. We lay out projects this way, plodding forward iteration after iteration until enough time passes that the product has morphed meaningfully into something altogether different. A revolution, however, wipes the slate clean and asks and poses new questions. What if this thing did something different, entirely? What if this object, that isn't working correctly, was rethought to do a task but in completely and wholly new ways? What if instead of just a phone, it was a tiny little computer, music player, and internet machine?

In my quest for knowledge and understanding of structures, what I ended up finding was a few key things. First, there are limited amounts of foundational materials from which to begin. The screenshot above lists a pretty simple collection of tools from which to design online stuff: rectangle; line; arrow; ellipse; polygon; star; and an option to import an image. These are

extremely basic shapes; a child knows them and uses them daily. However, it is through process and execution that these shapes combine and transform one another, each ricocheting off another to create something that feels, and perhaps is, very much alive. We often call this product creativity, but creativity isn't a thing, really. It's a process, a mindset; for some, it's a way to live and make meaning of our limited time on earth. To take a thing, and through skill, thought, and effort, transform it into another, hopefully better thing–that is the essence of creativity.

This is no argument for essentialism or over-simplification. This is no argument for boiling everything down to its essence and then leaving things there, a burnt up mess that does no good for anyone. This is an argument for the recognition of our collective connectedness. This is an argument for understanding that because of our differences and because of the diversity of experiences, we are more similar than different. We tell stories. Each has unique and specific aspects that make them interesting and valuable. We seek out order, understand it, then reject it for chaos. Things live, things break, things die. Things are born again. By analyzing structures and understanding them, what I am always looking for is how those structures support the beautiful and fascinating differences that make up the world. Simple shapes can make complex technological things. Fertile soil, both literal and metaphorical, can grow almost anything. But the fertile soil is the most important part, the place from which everything can begin.

By understanding the rules, one can better break them. By understanding how things work, deeply and seriously, one can better change them. Each problem, on its surface, always feels really simple. Fix the website to close more deals. Update the app to get more users to

login and stay logged in. But the true solution almost always lives deep within the problem itself, where as one heads down into the problem's mantle deep into its core, the problems and solutions become more complicated and confusing. This is where real, substantive change occurs. The surface is fine for trapping and ensnaring. The interior of a thing is where meaningful and durable change occurs. Thought another way: the mind can be easily disoriented and tricked; the heart, however, requires more careful and thoughtful recognition but rewards with longevity.

Chapter Summaries

All of my chapters follow a similar structure, both to ease the writing process for me and to familiarize my structure and style for you. I start each with a personal story, something from my life that started a path of inquiry. I hardly ever knew at the time that these stories were useful; I just knew they piqued my interest and attention, and remained with me many years later. After storytime, I just jump into the scholarship, proper. It's a wide-ranging affair, from academic sources, often heady and weighty ones, but also songs, video games, comic books, philosophy, internet memes, and random internet videos to make my point. Whatever you *think* is around the corner or on the next page, you'll probably be wrong. This manic style reflects my lived experience writing and interpreting the world. The process is never linear and madly ricochets. For some, that's unnerving. For me, and hopefully you, that's exciting.

Chapter One is titled "a Lone Genius needs all the help they can get," a pop emo title that's not only long, not capitalized, but also offers a pithy clever little joke within it. In this chapter, I discuss fiction and narrative as a structural entity that can be learned, repeated, and

used for all sorts of purposes. I lean on the Hero's Journey to make my point, and I reference a few literary works that use this structure to tell their story. Finally, I show how the Hero's Journey is used in the myth-making process for technology professionals, something that is very much going on to this day with a variety of CEO-types attempting to ascend into mythology. By breaking down these obvious manipulative moves, my goal is to show how a person's life can be used to fit a codified narrative, and not serve as a true retelling of their actual life or experience. This chapter, and Post Malone, focuses on Circles.

Chapter Two is titled "The Tyranny of Squares," a phrase that came to me quite by accident, either in a dream or a dream-like state. At the time, I didn't really know what it meant other than it felt really true. The work of this chapter is a more technical analysis of how images and design are constructed on the internet. I examine how webpages are constructed on a grid, and what this can mean both for interpretation and design. Next, I look at comic books and video games, who use an equally exacting grid to make their story known and suffer under similar constraints as digital designs. The overarching theme of this chapter is how systems, even simple ones like a grid, exert a dominating influence and power over those creating on and with them, and how this creative process is deeply affected by this structure. This chapter focuses on Squares.

Chapter Three is titled "Welcome! (to Hell)" and serves as a collecting point and conversation between Chapter One and Chapter Two. The first two chapters show how structures are used and how these structures work, generally. Chapter Three focuses on how these structures can be used maliciously, creating an intellectual labyrinth that traps the user and reader. If Chapter One and Chapter Two show you how to build a knife and then cut an

onion, Chapter Three shows how this knife can be used to threaten, to kill. I examine the modern office structure with all of its pernicious side effects, and I examine modern business thinking around a notable idea, The Flywheel, which gets perverted and used against the general public. Finally, I examine notions of social power, both in the past and in the present, and how our modern social thought has become a type of self-interring labyrinth. This chapter focuses on Lines.

Chapter Four is titled “Emotions, then Stuff.” First, I discuss emotions. After emotions, I discuss stuff. Chapter 4 is meant as a place to offer methodologies of thinking and understanding, a place to grab a new tool from the academic and social toolkit to consider and examine. First, I suggest that by looking at small details more carefully, the reader can glean a method by which to understand how tiny mechanisms can have huge effects. Next, I examine how stuff in our world might have an animating spirit, what that might mean, and why that matters in our world that is so heavily occupied by things. How do these things work, and how can I think about them in a different context with different results? Finally, we end on literature, where I outline a method for reading and understanding not only literature but the world that allows the reader to be more thoughtful, empathetic, and understanding. Each of these methods is an attempt to offer choice where it felt like none existed previously. I am fighting against the idea that, “I’m too small, stuff is too big and hard to understand, and my emotions are constantly being attacked and I’m overwhelmed.” Chapter 4 attempts to offer solutions and remedies to problems noted in Chapters 1 through 3.

Ready Player One

Belief can feel icky, a crusty, scabrous by-product of a postmodern grunge aesthetic that shrugs as an attempt to critique; caring is lame and stupid since everything is lame and stupid and not worth caring about. If you're above it all, ironically detached from the world around you, then nothing can ever hurt you. In a certain sense, this is true. You can become immune. But opportunity cost always will have its say. Doing one thing prevents you from doing another. As you whisper to the monkey paw, "I don't want to have my feelings hurt," the backend ramifications of that desire removes the possibility of joy, of happiness, of love. Caring is an emotional risk, and it is most certainly a fraught time to take risks. Caring can open one up to hurt and heartbreak, sometimes publicly, and believing is particularly challenging in a modern age of disconnection and isolation. So as a gesture of good will, I'll start. I care about the work I've produced here, and I think it's useful. I think it can reach people on their intellectual home turf, and I think it can change mind's for the better. But it's not really up to me anymore; my part is done. Your part now begins.

Chapter 1: a Lone Genius needs all the help they can get

Fiction is, at its essence, a lie. On some basic level, we all know that, but the emotional resonance that stories can create is unique to the form. We make these magical story-people into heroes, and in turn, we feel a little bit more heroic ourselves. We like to watch them conquer dragons and we like to watch them fight the bad guys, and we like to think that in a similar situation, we'd conquer and fight, too. And in turn, maybe we do become a bit more heroic, a bit braver, a bit more compassionate and understanding to both the people and the world around us. That's the power of fiction; that's the power of telling stories to other people. The power to, in a very real way, transform people's behavior into something different, more grand. The power to take a simple, humble character and transform them into an idea. But like most reasonable things and like most reasonable people, fiction has its limits. A story on a page neither can nor should perform the real work of actual change. Real change is long, and kind-of boring, and hardly ever neatly fits into a two hour movie. The illusion of action is just as deleterious as a lack of action. At some point, the reader has to put the book down (or better yet, turn off the screen), lace up their shoes, and get out there and do the work. You'll never become good at running by reading books about running.

Fiction is just a story. If you happen to adopt a more weary and cynical view, a view I find myself more and more often adopting, fiction is nothing more than a manufactured and structured longform lie. These people don't exist, and they certainly don't affirm the capacities of the human condition in the manner in which we think of them. It's easy to manufacture and manipulate information. A real hero requires sacrifice, and they often have to make a

split-second decision in the moment, while almost always doing something else. A woman walking by a drowning man didn't have 100 pages of exposition where we learn about her past, her previous challenges with water, and how water killed her sea-faring father when she was just a small girl reading by the oceanside in Seattle, Washington. Through exposition, we learn what drama this one moment portends, and we as readers and consumers are prepared for it. The real world is less structured, however systemic it may be. The man is drowning, and she just acts. Sometimes it works out—she saves him. Sometimes, it doesn't. He dies; or, they both die. The grim probabilities play out, and that's that.

Real life is random, but fiction is *designed,* and like any design, choices get made in presentation. What's important to include? What's not important to include and must be cut? Who gets to tell stories, and who has to listen, whether they have an equally compelling story or not? Choices on how to present narrative are just that: choices. Someone, somewhere, is deciding how this thing is going to play out, and it's never fair, not completely. Unlike our heroic young lady above, in reality there isn't much in the way of plotting or structure. That's real life, bouncing from one mistake to another until the sometimes bitter end. Or at least that's how it used to be.

In this chapter, I will show how stories have a distinct and knowable structure, a specific way of telling stories that highlights the heroic actions of the individual. Next, I'll show how this structure is known and used often in the technology space, and I'll use what I call the Steve Job Mythos to highlight how this specific structure was used to prop up a man into mythic, nearly deity-like proportions. Third, I will delve into the world of literature, and prove how contemporary authors wrestle with the issue of character and story in a digital space. Finally, by

the end of the chapter, you will know how stories work, how the technology world uses stories for their own gain, and I'll do a close reading of a representative book from literature that highlights the nervousness, paranoia, and distrust that surrounds technology. Fiction is a lie; there is no doubt about that. But when done well and convincingly, liars are immensely powerful. The goal of this chapter is to lay bare the structure behind stories, and show how that structure is used in the real world, often for monetary gain or social capital. The only way to combat liars and sophists is to understand how their lies work, how they are created, and why they tell them to begin with.

Be yourself; everyone else is taken

Writing is immensely hard. To understand the final product, it's useful to understand the person and the process of making and writing fiction. I thought as I got older, more advanced in my academic and literary career, it would have gotten easier. It hasn't; it's maybe gotten harder, so much so I practically bailed on the whole enterprise all together. Through my struggles to "find my voice" or "write from the heart" or whatever else one is supposed to do to "get good", I've engaged in some contradictory behavior. To figure out how to best be myself, I look to others who I consider are "most themselves." I try on their style like a new coat. I wear their mannerisms, their jokes, speech, and cadence. It's a little embarrassing wearing someone else like this, acknowledging that some part of my behavior is largely influenced and created by movies, shows, and books. I don't like to admit in this fancy, professional-ish book-thing that I wore suits to work for a while because Don Draper from *Mad Men* looked super cool while ignoring almost everything else about his personality. I grew my hair long the very first time because the lead singer of *The Band of Heathens* had a cool, hippie, soulful vibe while *also*

being a professional musician, and that was a thing that I secretly want to be when I grow up. All of this playacting became tiresome, so I pared down and standardized my clothes and paid more attention to my time and focus, a very Steve Jobs Way of living one's life. And of course, I wanted to be an excellent writer, so I found someone close enough like me, or who I thought I was or could be, and I just tried to steal their life, too.

Anyone who has written short stories or attempted to create stories, at first does a poor imitation of a writer they admire, and I am no different. For George Saunders, MacArthur Genius, beloved and respected professor, National Award Magazine winner, O. Henry Award winner, Man Book Prize winner, and a generally congenial and cool dude, his mimicry of choice was Ernest Hemingway. He writes:

> I had graduated from the Syracuse MFA program in 1988 and had been writing stories that owed everything to Ernest Hemingway and suffered for that. They were stern and minimal and tragic and had nothing to do whatsoever with the life I was living or, for that matter, any life I had ever lived. (Saunders, 2013)

The move here is a tragic one. This passage comes from the preface of *CivilWarland in Bad Decline*, his first big short story collection, which often functions as the coming-out party for a New, Important Writer. But Saunders spends a majority of his time talking about how painful, and hard, and pretty much awful it was to write his short story collection. He continues on in greater detail, describing broken down cars, long bike rides in the rain with a homemade poncho, and the painful, scary, and challenging birth of his daughters. And yet, he felt compelled to write stories anyway. This type of metacommentary (or depending on who you ask, navel-gazing) on one's own work is a fairly normal rhetorical move for the postmodern and the modern author. The first story a reader often reads in contemporary literature is the process

by which this new, smart person who made the great thing you are about to consume, with all the requisite ellisions, reframing, and sometimes outright fabrications to help sell the product. The entire magazine industry is propped up by this type of feature profile, a “deep dive” into the workings of the modern artist. Capitalism seeps its way into everything, and the literary world is no different.

The short story collection itself shows an America in intense decay and rot, particularly the book’s eponymous story, “CivilWarLand in Bad Decline.” It’s somewhat hard to usefully summarize, but I’ll take a shot. The story revolves around a worker at a past-its-prime amusement park, but there’s ghosts, a sense of pervasive ennui, fear, and a fairly harsh critique of American capitalist life mixed with some version of Buddhism. Like most of Saunders’s stories, it’s a tightly drawn portrait of a rotting American idealism. It also just so happens to be a good, weird story. At any rate, life imitates art and art imitates life. There’s a circularity at play here; a bridge between fiction and reality that improves both in the process. From the preface, we are shown a struggling Saunders, unhappy in his career, stealing moments to write his fiction in-between work and family commitments, very much a dream deferred. This first story creates a fictionalized world that is just slightly more fantastic and grotesque than the actual world, each version of reality bouncing from one to another, each rebound magnifying the poignancy and vulnerability of both the subject and author.

What this vulnerability does, both in fiction and in real life, is create a trusting persona. This is the first crucial step in learning and understanding how stories work. The author’s trustworthiness is the first piece of the interrogative puzzle. Effectively, is this person believable, not believable, or something in between? In this instance, I believe Saunders. At the time of this

publication, Saunders is a well-respected, if not famous, author, and his incentives to lie or burnish his reputation by saying how hard, long, and scary it was to birth this baby of a collection seems to have little motive other than self-reflection focused on truth. I suppose it could be positioned as another entry into the "macho young author overcomes difficulty" canon, of which there are legions of stories. However, the preface itself is much more telling and vulnerable. Sure, he overcomes hardship to attain his goals, but he doesn't seem particularly proud of that fact. Mostly, he seems tired and a little bit sad from the whole enterprise. Saunders writes:

> Which raised a second question, one that I now see as being at the heart of this book: Why is the world so harsh to those who are losing? … I realized for the first time, in my gut, how harsh life could be and how little it cared if someone failed.
>
> Don't get me wrong: it wasn't the Gulag. But I was puzzled by how difficult it was proving for me (a nice guy, an educated guy, a guy who loved his wife and kids) to put together a middle-class, or even lower-middle-class, livelihood for our family, and what it was costing me in terms of personal grace.
>
> The realization that failure was possible, even for me, had the effect of increasing my empathy. If life could be this harsh/grueling/boring for someone who'd had all the advantages, what must it be like for someone who hadn't? A thread of connection went out between me and everyone else. They, too, wanted to be happy. They, too, wanted to succeed. (Saunders)

This is a punch in the gut at the *beginning* of a short story collection. At his very first big time success, Saunders spends most of his time considering his own failures and the challenges experienced by other people. He notes, rightly, the injustice that everyone except the rich face on a daily basis, and instead of turning him bitter and cynical (like me), he turns empathetic, caring. Through his struggle, he learned something, as many main characters do. As another

meta-modern, artistic truth-teller Sturgill Simpson noted, “Life ain’t fair and the world is mean.” (Simpson, "Life Ain't Fair and the World is Mean")

The dimension of metacognition, or self-awareness, is crucial to our understanding of how story operates in the twenty-first century. Effectively, stories give us context. A person doing a thing isn’t all that interesting. But a person doing a thing for a reason you can identify with and support–that’s the crucial component. The capacity to identify one’s self with another is empathy, and stories are tremendously good at creating empathy. In this instance, we learn a few crucial things about Saunders from the story that he tells about himself. We learn about his past, we learn about his struggles, we learn about how much he sacrificed to exist and write these stories and what those sacrifices could do to a person. We can more fully understand someone by interrogating the ideas that are presented about them, either by their own words or the stories that circulate around them. We do this often with stories, and it is mostly a really good thing. But in a world of self-presentation and carefully curated internet personas, awareness of truth and accuracy of story becomes all the more important. We all must become a bit like journalists, triangulating information from multiple sources to piece together an incomplete jigsaw puzzle of reality. This is often hard and time-consuming, all this heady analysis of what’s real and true--and what’s manufactured and massaged.

But like a great many things in an internet-connected and immediately accessible culture, there’s too much at stake to write off stories as a mere distraction or a way to pass the time. Stories are now told at a literal global scale, in every technological device you touch and in every article you read. Put a different way, and one that perhaps is more frightening, is that

dominant cultures can fully dominate at scale, and with limited time and limited opportunity, there will emerge a victor. That, often, means some version of an America everywhere, which is a very suboptimal outcome. The story that is sold of the American Dream is very different than the reality of living in America, and this dissonance is rattling the rusty iron bolts that hold this country together. Soon enough, the whole shaky edifice could fall. If the riots in the Capital on January 6th were illustrative of anything other than hate and ignorance, it's the power of the false narrative, the ultimate lie that can spur people to violence. When it comes to understanding stories and how they work, the stakes are very real.

Saunders' experience and account of his life is some version of the America that I know of and am familiar with. Rich people succeed despite themselves, and rarely, if ever, does someone from somewhere else rise up the ranks. It's an unjust and unfair system, and this is the system we are exporting, through our narratives, around the world. When coupled with the digital and the capacities and power that technology can bring, stories become more than just idle entertainment on a Friday night. You have to know what these stories are and you have to know how these stories work to dismantle them and protect yourself from them. You have to know the effects of stories in every facet of our lives and how those effects can be absolutely devastating. Stories create empathy, and they can be manipulated (through structure and presentation) to argue for all sorts of things. That's the real power of story, the power that is not only in the message itself but how a story carries the capacity to create indefinitely and across all boundaries a feeling.

Stories are simple but powerful structures. Once someone knows how to structure a story, that capacity to create and implant emotion in another becomes repeatable and infinitely

scalable. The content inside that story structure can be truthful, honest, and a fair retelling of someone's experience and events. Yet crucially, the content can be mismanaged, appropriated, and used for cross-purposes. Thus and therefore, I'll spend the rest of this chapter showing you how stories work by themselves and with technology, so you at least have a fighting chance against the onslaught of misinformation and outright lies.

On Superheroes and stasis

Anyone, and by the box office numbers seemingly everyone, has seen some version of a comic book superhero movie. In 2019 alone, before governmental incompetence in response to a manageable pandemic made movie theaters a potentiality of something in the future, 3 of the top 5 highest grossing movies worldwide were superhero films. In order: Avengers: Endgame; The Lion King; Frozen 2; Spider-Man: Far From Home; Captain Marvel. Toss in Elsa, the magic-wielding ice princess, and that makes 4 out of 5. As the numbers would suggest, people overwhelmingly vote for Disney's products with both their time and their money.

Those 3 movies alone brought in approximately 5 billion dollars. *Avengers: Endgame* in particular is of note as the capstone of the first phase of the Marvel Cinematic Universe. Putting aside their troubling jingoistic storylines and over-reliance on corrupt institutions of power to make non-corrupt decisions, these stories are technical marvels, shot on green screens, heavily digitized productions that still, sometimes, have a feeling of veracity. Largely, this feeling comes less from a CGI-raccoon and a CGI-tree fighting a CGI-alien in some backlot in suburban Atlanta, but because of their adherence to a strict structure codified by Joseph Campbell in *The Hero with a Thousand Faces*. It has several names, like The Hero's Journey but the one I found most

descriptive is “the story circle.” The focus on circularity is key: one starts; one does things; one changes; one returns.

My former creative writing professor, Dr. Matt Bondurant, once said that a story is one of two things: a character leaving home; a character returning home. Every story can be thought of in this way, and it’s somewhat unnerving to boil down emotional complexity and potentially life-altering narratives to such a simple calculus. That doesn’t make it any less true or less salient; it just kind-of feels weird and reductive. Characters either seek out change, and/or having been changed, return to where they came from. This is an observable trend beyond stories. However, Tyler Cowen’s book *The Complacent Class* largely tracks this idea through economic trends, noting the opposite. He comments how the interstate migration rate has fallen 51 percent below its 1948-1971 average and has continued to fall. Not only are people not moving between states, either for economic or social reasons, they aren’t even moving between counties within their own state. The rate of inter-county migration has fallen 31 percent, and even moving within a county from one side to the other has fallen 38 percent. If we are characters in our own story, we pretty much stay where we grew up, forgoing the opportunity to leave home, grow, and return as a different person, presumably more enlightened. Cowen’s analysis goes on in greater detail as how this has been a shift from generations past, but it is a curious modern development. Cowen argues an economic point here, that young people of my generation are staying put, unwilling or unable to travel to find better economic opportunities elsewhere. Further, this travel used to create a mixture of people from different places that tends to spur originality by the mixing of people from different backgrounds.

To marry the two ideas together, a whole generation isn't engaging in its own narrative and economic development, leaving anger, frustration, and stagnation in its wake. In a world that feels ever larger and more complex, we seek stability through staying put in a familiar place, as Cowen notes, and we seek out entertainment and stories that model an optimal view of the world, rather than the one that is ever-present and available, a world of stagnating wages and dwindling opportunity. A whole generation is seemingly stuck, and can you blame them? In my own life, I've experienced 9/11; The Great Recession; burgeoning racial, economic, and social violence; a global pandemic; and an attempt to overthrow the United States government by its own citizens. Additionally, in the one brief social moment of quiet, my mom was diagnosed with cancer, struggled, and died. I don't say this as a maudlin interpretation of one's life, one's station, and woe is me. I say this to note how disruptive these events are, and maybe staying at home has a certain flight/fight/freeze rationale. Further, throughout this entire process has been the unfettered rise of social media and widespread adoption of technologies that are unregulated and highly addictive.

How do we do our traveling, as both Cowen and Bondurant note from an economic and story perspective? We travel on the internet, and we travel through the story. On its face, the story circle is pretty simple. There are multiple permutations and specifics that Campbell discusses, but the major points of how a story is laid out are as follows:

The Call to Adventure

A hero is established, and the stakes, both the danger and the villain, are laid bare for the audience to know and understand. For our modern times, a story gets bonus points if the villain

is some abstract concept, like “societal pressure” or engaging in some norm-breaking behavior. Not only should a hero answer the call; they should do it in some socially risqué way. While this *feels* more heroic, it’s a low-stakes false framing effect that says a minor action is more risky or challenging than it actually is. The rare postmodern heroes do not war with outside forces; rather, internally they act as both hero and villain. The metaphorical journey of a character traveling to a far-off land becomes metaphysical and existential, a journey within the mind. No longer a dragon to slay, but rather a building of self-awareness. But also, some heroes physically travel places. But both “journeys” are true and valid, and worth watching out for. At this stage the audience is made aware of the stakes, either internally and externally, and a seed of doubt is introduced. Can, or will, our hero do it?

Crossing the First Threshold

The hero begins their journey, immediately facing obstacles that prevent them from obtaining their goal. Here, we get to see the hero in action, an empathy-building exercise that plays on one’s own failures and challenges. The more creative writing types call this “tension-building.” Almost always, the hero will initially fail, which is a curious departure to how our American society views failure. Often, we pretend that success is linear, a path from beginning to end with knowable and obvious milestones. But the True Heroes, the one’s lionized and then idolized, always experience failure, failing because of their own faults or lack of knowledge in their initial attempt to defeat the villain. The villain, to use a wrestling term, gets a little heat. They become more scary, more challenging, because we are led to believe that they have a possibility of winning. This could be one of those new stories where the good guy doesn’t win?! How

titillating. The villain in many ways earns the respect of the audience, a way for us, the good guys, to understand The Other, the bad guys. This dichotomy is purposeful, presenting a knowable person as good and an unknowable person as bad. Could we, the audience, think critically, and understand that the villain probably is just as motivated as the hero, and maybe, just maybe, if we saw *their* viewpoint in relation to *our* viewpoint, they wouldn't so much be villains but two actors in a grand play better served by compromise than violence? Of course, we could choose to think this way—but we won't! Thus, we must begin!

Road of Trials

The Hero is presented with a series of challenges to overcome, ultimately conquering each in order to be reborn as new, different, able to defeat the previously undefeatable villain. For our modern story circle, the challenges are often monetary or one of circumstance. Our heroes often "start from nowhere," which often means a lower-tier Ivy League school (truly, an unfathomable burden) or their true circumstance is hidden in order to make them appear more interesting or likable. If this rings false or strange, you are right. In our stories, we only like people *after* they succeed, not before, which is why so much of our social order seeks to punish the poor and the disenfranchised.Our heroes sometimes make a fortune! And then lose a fortune! And then crawl back to the top using their newfound skills, wisdom, and gumption. Meanwhile, the rest of us are still on conference calls, still sitting in traffic, if we are both lucky enough to have a job and a car.

The Master of Two Worlds

The hero returns from his journey for a final exchange with the villain. More accurately, the hero must reconcile with her own villainous actions, her own bad behavior. Crucially, the new and improved Hero must in some way communicate their newfound and chastened attitude. Whether real change occurred is immaterial; we as the audience only need to believe that it did. With our Hero's newly found knowledge, either spiritual or physical, the Hero is now able to conquer whatever had previously defeated her.

Freedom to Live

The Hero conquers the villain and is now able to return home or to the starting point, victorious but changed. In the story to follow, it is a big change, indeed.

Story circles are so prevalent that they've become tired and cliché, largely due to the screenwriting book *Story* by Robert McKee. The book is oft-cited as an "important book," but the lessons held inside are straight from Campbell. The works they inspire aren't exactly novel. You've seen these movies before, and you've read these books. They are so prevalent, like the fish who asks of another fish, "What's water?", that it probably never occurred to you to interrogate the stories in any way. The dance moves are the same, only the venue is changing. There's a sense of deja vu of watching movies these days that feels knowable, familiar, and a touch boring. We know the beats, "Where's the call to adventure? Got it. The first failure? Oh. there it is. Will they, 'randomly,' learn just the two skills they need to defeat the bad guy? Yup." This type of structure is more permissible in video games, particularly Metroidvania style games like *Hollow Knight* where the main character can't advance to the next zone without learning a

new unique skill that is used to defeat that region's boss or allows the player to advance to a previously unreachable zone. There is one specific section in the game that is exactly one jump too high, and in that same zone, guess what? You get the ability to do an extra jump. That single, relatively silly moment, was as impactful as any big twist in any big book or movie. But even this structure is becoming a bit worn, as the new series *The Last of Us,* modeled after the video game, struggles to overcome. Each episode feels like a discrete section of a game, which is fine for participatory activities like video games. However, this structure loses its power and tension when each episode feels ordained, and no main character, really, is in danger.

Story circles can be seen elsewhere beyond narrative structures. A user interface, the presentation layer that a user such as yourself uses to interact with a computer, often uses narrative-esque structures to allow a user to do something. A user has a problem (I need to login, so my inciting incident in the story), the interface offers ways to do that (a group of form fields to put in your email and password, so the challenge that must be overcome), and a way to advance beyond this realm to the next (hit login, the system lets you into your account, so I transition from an outsider to an insider of a system, having overcome this challenge). It's not a huge obstacle, but as anyone who can't remember their login or password can tell you, it's certainly a challenge and one that must be overcome. These story structures become so ingrained that they can prevent someone from seeing the world in a different way, a lightweight version of Baudrillard's radical alterity. To lightly paraphrase and substitute: the things I know are true and good and the things I don't know are false and bad. I know my stuff so well and so thoroughly that I cannot conceive of the world being another way. The story circle has been so common and is so pervasive that when it's applied to places it shouldn't be, we don't even think

twice about it. The story circle is used for all types of hero building, particularly in technology, where bits and bytes don't really capture the imagination of the populace. The lone genius sits deep in thought, overcomes challenges, reaches the top, is exiled, and has a glorious return to create the world's most profitable company.

Me not We

We Americans love singular people but generally hate groups. The lone genius, The Steve Jobs Mythos, is so ingrained in our culture, alongside other "titans" like Rockefeller, Carnegie, and Edison as to become functionally unimpeachable. However, stories of groups, like civil rights groups, LGBTQIA+ organizations, and unions generally get a short shrift in our society while accomplishing, arguably, significantly more important things than making money. These lone genius stories typically fall into neat, codifiable patterns, and they all tend to follow a similar structure, both in theme, plot, and characters. Throw a cape or some magic on any of these people, and we'd trip over ourselves handing over our money to watch them on a big screen in a dark room. These hero building stories are eerily similar to superhero movies, and The Steve Jobs Mythos is no exception. The story goes a little something like this, but you can probably already guess the beats and the movements of what is about to come. This is the story of Steve Jobs, an ordinary man who became extraordinary, and now floats somewhere in the pantheon of American Gods like Roosevelt, Ford, and the guy who invented the Hot Pocket.

Our hero must first be set up as an outsider, someone who doesn't "fit" or exist within a current operating system. He must be radically different and misunderstood–special. The New York Times obituary of his death, one of the more reasonable and fair recollections of the man's

life, notes, “His worldview was shaped by the ’60s counterculture in the San Francisco Bay Area … When he graduated from high school in Cupertino in 1972, he said, ‘the very strong scent of the 1960s was still there.’” (New York Times, “Apple’s Visionary Redefined Digital Age”) We initially begin to see the heroic Jobs begin his quest, but first we must have some measure of failure. The obituary continues, “After dropping out of Reed College, a stronghold of liberal thought in Portland, Ore., in 1972, Mr. Jobs led a countercultural lifestyle himself.” (New York Times). At this junction, we’ve set up our main character, the setting, and we’ve established his outsider bona fides. Now, we can start setting up the main tension and problem our hero must face, bringing into focus the first main hurdle to overcome. Simply bumming around California, taking LSD, and generally wandering about isn’t enough for our audience. He must heed his first challenge, The Call to Adventure.

For Jobs, the call to adventure was less a physical destination but rather a business insight coupled with a dose of spirituality. The New York Times notes:

> Coming on the scene just as computing began to move beyond the walls of research laboratories and corporations in the 1970s, Mr. Jobs saw that computing was becoming personal — that it could do more than crunch numbers and solve scientific and business problems — and that it could even *be a force for social and economic change.* And at a time when hobbyist computers were boxy wooden affairs with metal chassis, he designed the Apple II as a sleek, low-slung plastic package intended for the den or the kitchen. He was offering not just products but a *digital lifestyle*. (Emphasis added, New York Times)

This aside is an important one, as it introduces an important moment of conflict, the kith and kin of every good story. Throw out the pocket protectors and the suits, the long reams of paper and the stacked punched cards. Computers were for The People, and people are woefully complicated and intricate. Jobs’s big insight, and it is a Mt. Everest sized chunk of an idea, is that

the people using a computer matter more than the machine. This in a real way is the introduction of User Experience, or UX, into a person's every day life. UX is the focus on people and how they relate to and use systems, and Jobs' insight is paramount to the field. The hierarchy of value became inverted away from raw computing power to the operator of the machine. Snarkiness aside, this is one of the biggest developments in the history of both computing and user experience. As we will learn in the next chapter, how a person is situated, either in power or influenced by power relative to both powerful institutions or crushing social norms, is crucially valuable. Jobs began this bottom-up notion of computing.

Our hero must next cross the first threshold, which for Jobs was the founding of Apple with Steve Wozniak, his long-time friend and co-founder. Jobs was the sales, the taste, and often the muscle, while Wozniak is often described as the soft-spoken, technical, nerdy one. Every hero needs a sidekick, someone to serve as a natural foil in the narrative so that we can see our main hero as more complex and intricate than maybe they actually are. Someone has to make the machine; someone has to convince everyone of how technically magnificent and special it is. Jobs was the latter of the two, and he even garnered a modern tribute in the fantastically under-rated and consistently excellent show *Halt and Catch Fire*. Joe McMillan, the Jobs stand-in, serves as the marketing and entrepreneurial muscle, while Gordon is the nerdy, technical, bearded and bespectacled engineer trying to make it all work. The fact that these two modern archetypes, the handsome sales guy and the gruff, poorly dressed yet talented engineer, match so cleanly with past personalities speak to their stability within a narrative structure. A further interesting wrinkle in the show is that the *actual* talent are the two similarly opposite characters, punk rock coder Cameron and business savvy and engineering talented

Donna (married to Gordon), who have to fight not only the technological challenges of the day but misogyny as well. The show shifts to focus on them in later seasons, relegating Gordon and Joe to background supporting characters, and it is much, much better for it.

Opposites attract, and with Wozniak, they found a way to maybe make some money. The NYT obituary notes, “Mr. Wozniak designed the original Apple I computer simply to show it off to his friends at the Homebrew. It was Mr. Jobs who had the inspiration that it could be a commercial product.” Apple started out in a garage in 1976, and the company took off from there: “Sales skyrocketed, from $2 million in 1977 to $600 million in 1981, the year the company went public. By 1983 Apple was in the Fortune 500. No company had ever joined the list so quickly.” (New York Times) Our hero is experiencing his first bit of success and is quickly climbing the business ladder towards the top, which in America is the only ladder that matters. But good stories can’t ever operate so cleanly; that’s boring. We need some drama, baby! Dark clouds begin to gather.

Our hero must face challenges, both internally and externally, on our story’s Road of Trials. For Jobs, his challenges were often self-inflicted and then subsequently self-corrected. After garnering a reputation as a tyrannical, petulant bully, Jobs' days at Apple were numbered. He clashed with his own hire for CEO, John Sculley, and after a big bet failed on a new project, the now infamous Lisa, Jobs was ousted from his own company. The man known for popularizing computing mechanisms we now take for granted, like the graphical user interface (GUI) as well as the mouse as the main “driver” for a computer, was unemployed. He noted, “’I don’t wear the right kind of pants to run this company,’ he told a small gathering of Apple employees before he left, according to a member of the original Macintosh development team.

He was barefoot as he spoke, and wearing blue jeans." (New York Times) The purported genius, the petty tyrant, was no more. A meteoric rise, it seems, necessitates a meteoric descent. Future ventures in the computing space proved relatively fruitless, like the subsequent venture NeXT, a workstation built for the education market. But a well-placed bet on an emerging computer graphics company, Pixar, would right the ship for our listless hero:

> That film's box-office receipts ultimately reached $362 million, and when Pixar went public in a record-breaking offering, Mr. Jobs emerged a billionaire. In 2006, the Walt Disney Company agreed to purchase Pixar for $7.4 billion. The sale made Mr. Jobs Disney's largest single shareholder, with about 7 percent of the company's stock. (New York Times)

Having seemingly conquered his failings as an executive and a businessman, there was only one place for our hero to return to: home.

After facing the first trial, failing, growing, and ultimately learning via sacrifice the way forward through the Road of Trials, our hero must now return home as The Master of Both Worlds. Chastened by his exit and failure, Jobs went to work repairing relationships, working collaboratively rather than competitively with Apple's main competitor, Microsoft. For someone not familiar with computing history, this is essentially tantamount to a joint venture between the Capulets and the Montagues, a collaboration between the Jets and the Sharks, or a loving embrace between the Hatfields and McCoys. For someone so previously combative and ill-tempered, this was a fair test of the new Jobs. Has he really changed?

Microsoft needed Apple to run its pivotal Office software (and be a solid competitor to squash recent antitrust proceedings), and Apple needed, frankly, money–$150 million to be precise. But to be our Master of Both Worlds, Jobs would need something else. He would need to prove his vision of a personal computing artifact that was both spiritually and experientially

successful while also being commercially successful. In order to be a True American Hero, Jobs needed something he could plausibly say he invented and sold to great success. This success would come in the newly developed iPod, with its revolutionary touch wheel and equally revolutionary software, iTunes. The New York Times summarizes, “He pushed the company into the digital music business, introducing first iTunes and then the iPod MP3 player. The music arm grew rapidly, reaching almost 50 percent of the company’s revenue by June 2008.” One of Apple’s most personal products, the iPod was a meteoric success, and laid the way for the next big thing, the iPhone.

The iPhone is an ongoing and continuing revolutionary device, both in computing and society, but for the sake of *this story*, the Jobs Myth ends here. Our hero has returned, and now has the Freedom to Live. The remainder of Jobs’ life is well-known, but worth a quick retelling here. Apple becomes the world’s most valuable company, while Jobs simultaneously battles pancreatic cancer. The iPhone continues to dominate the device market, ultimately leading to the release of the iPad, another form-breaking computing device that serves as an interstitial space between a laptop and a touchscreen cell phone. Apple’s journey continues forward to this day, woefully without his founder. Steve Jobs died on October 5, 2011 from complications with pancreatic cancer. He was 56.

American Magic & Dread

American culture relies and almost demands a sole genius creator, a Hero, that starts small, undergoes strife, learns, and ultimately is redeemed. America’s purported rugged individualism has to be celebrated and as a group, ironically, we all must value it, believe it, and

then make it happen. There is an oft-repeated story, and it is one that worms its way into our collective consciousness. Some call it a story, a fiction. They've never experienced it. Others call it the American Dream, and if you're a rich, white, male it will more than likely come true for you without too much effort. Many people could have made the same discovery as every tech giant or captain of industry if a deal had gone a different way or time and place had been more fortunate. Being poor doesn't really open up a ton of doors into the echelons of wealth and power. Malcolm Gladwell notes in his podcast *Revisionist History* the concept of social capitalization: how effective is a society at maximizing the talents of its members? More personally, how many geniuses are laboring at meatpacking plants because they are poor and have the "wrong" skin color? The steady wheel of progress demands a healthy dollop of luck to keep turning, and good fortune plays just as much a part in our collective imagination as hard work and grit. What if Steve Jobs was born somewhere besides California, in any other circumstance than the one he was born into? History would be very different, but that's true for almost everybody. The Jobs' story is just one piece of a larger puzzle. The labyrinth is more complicated than our hero simply fighting a minotaur and attempting to escape. Jobs' story is not only a personal story but a technological one as well. How then, do we begin to understand Jobs relative to his creations? What is technology?

Technology is currently defined by glass squares and rectangles, and the form factor defines what one can and should do with a piece of technology. Televisions, computers, and then finally crystalline slabbed mini-monoliths that fit in our pocket and sometimes receive phone calls each have their own use case, their own methodology, and their own design. But the abstract constructs that support and create meaning for these products says just as much

about them as the objects themselves. Digital technologies seem to both intrigue and repulse in equal measure, an uncanny valley of fascination of some other world in the palm of one's hand.

A challenge with any definition of technology is that it changes over time. A groundbreaking desktop computer is surpassed within a few decades by a telephone, which will then be surpassed by something in the future. This, in my view, is the chief challenge faced by modern philosophers and academics who try to nail down what it means to understand technology. It's a bit of a Heisenberg Uncertainty Principle in action—the mere act of definition tends to cause the object being defined to shift and change. That isn't to say that thoughts exploring technology are wrong. Rather, they are specifically true in the moment and, occasionally, generally true over the long-term. Tracking how a society views technology in the past can offer context, both of the time and how that time relates to today.

Published in 1985 and a National Book Award Winner, Don DeLillo's *White Noise* is a contemporary masterpiece, tackling issues surrounding American culture and the encroaching media and technological landscape. Told in DeLillo's typically sharp expository style with fanciful flights into the absurd, the novel focuses on Jack Gladney, a professor of the recently created "Hitler Studies" at the ambiguous The-College-on-the-Hill. The narrative world in *White Noise* is half a click off from reality, just close enough to real life to render a feeling of truth while just distanced enough to become uncomfortable. Characters look and feel as if they could be a friendly, well-liked next door neighbor, while doing distinctly strange and befuddling things. The novel functions on the surface as a satire of both academic and American culture, highlighting the pernicious effects of technology, consumerism, pop academic discourse, and the challenges and dissolution of the nuclear, American family. But lurking beneath these themes is a

deep-rooted paranoia about change, a shift from a seemingly pastoral America to a more futuristic and dehumanized one. The root of all of this paranoia and agita is technology.

As a starting point for an analysis of viewpoints on technology, *White Noise* represents how a society feels about technology, particularly a society situated on the cusp of a technological revolution. As Jobs ascends the ranks at Apple, Delillo's novel is released, serving as a place for analysis of the current condition, and most of the scholarship of the era closer to the publication of *White Noise* posits a very specific reading, privileging the work of Jean Baudrillard and his theory regarding the simulacrum. For Baudrillard, "information devours its own contents; it devours communication," a moment that is "a sort of nebulous state leading not at all to a surfeit of innovation but to the very contrary, to total entropy" (97, 100). Nothing exists and nothing is revealed in the simulacrum. The only thing "true" is the simulation, and any notion of a true reality is subsumed by it. Everything—our existence, knowledge, the signs we give and receive—are mutable. Anyone with multiple Instagram or Twitter accounts, one real and several burners, is able to falsely influence perception, hyping up one's own thoughts and posts. The space is highly ductile.

According to Baudrillard, the world has become so saturated with simulacra as to render everything meaningless *except* the simulacra itself. He writes, "The simulacrum is never that which conceals the truth—it is the truth which conceals that there is none. The simulacrum is true" (In *the Shadows 3*). DeLillo mirrors this sense of falsity, of technology as a place for lies and deception early on within the novel. He writes, "Man's guilt in history and in the tides of his own blood has been complicated by technology, the daily seeping falsehearted death" (22). Death is no longer reliable nor is it even true. One could be physically dead and buried while

their bits and bytes dance on in eternity. Neal Stephenson's *Snowcrash* and the more modern, nostalgia trip *Ready Player One* by Ernest Cline interrogate this idea. People, through their computing device, enter into simulations to escape the drudgery of their everyday lives. However, the real more pressing tension comes from the intersecting collisions between these two worlds, the "fake" (which feels more real) and the "real" (which feels ridiculous and fake). From a global perspective, technology blurs the lines around "true" and "false."

However, the individual person in their daily interactions feels comforted and empowered by the use of technology. This creates a classic ethical dilemma for our character to face. How can something that personally feels good be socially bad? Midway through the first section of *White Noise*, the main character Jack Gladney engages in a fairly mundane task of removing money from an ATM. Here, the reader is paused to examine the relationship between person and system, of interactions, operations, and expectations. For Jack, it's a fraught moment. DeLillo writes, "Waves of relief and gratitude flowed over me. The system had blessed my life. I felt its support and approval" (46). Jack is not in charge here; expectations are reversed. The user, presumably the one in control, is situated as the beneficiary. A closer reading of this introductory passage draws a curious moment of word choice: "blessed"; "support"; "approval". Rather than the march inexorably towards death made painfully clear by the intrusion of new technology, Jack's view of his own safety and comfort is reified by technology. (NJack is safe; he trusts in the machine. He uses spiritual language, feeling *#blessed*, itself a nod to forces outside of one's control, but this time positive and affirming.

The passage continues:

> The system hardware, the mainframe sitting in a locked room in some distant city. What a pleasing interaction. I sensed that something of deep personal value, but not money, not that at all, had been authenticated and confirmed … The system was invisible, which made it all the more impressive, all the more disquieting to deal with. But we were in accord, at least for now. The networks, the circuits, the streams, the harmonies. (46)

Framed slightly differently, the system Jack is referring to is design. Someone, somewhere, made decisions and placed constraints on how Jack would interact with this particular piece of software, and those decisions have a real, seemingly positive effect on individual people–for now. The passage suggests the power of design, the ability to control actions and limit possibilities for a user's benefit. Psychologist Barry Schwartz in his book, *The Paradox of Choice*, comments how more choices and more options can negatively affect one's happiness while increasing anxiety. This pattern is adopted across all manner of user experience design, but the most obvious place you'll find this is in selecting a plan for something like a streaming service. Most will feature a chart of 3, maybe 4 if they are feeling bold, and this purposeful restriction helps frame the item being sold and importantly limit choice. Netflix could offer all sorts of permutations and differences in plans, but they purposefully narrow the available plans to decrease user anxiety and increase the chance the user will convert into a paying customer.

NETFLIX

STEP 1 OF 3

Choose the plan that's right for you

- Watch all you want.
- Recommendations just for you.
- Change or cancel your plan anytime.

	Standard with ads	Standard	Premium
Monthly price	$6.99	$15.49	$19.99
Video quality	Great	Great	Best
Resolution	1080p	1080p	4K+HDR
Watch on your TV, computer, mobile phone and tablet	✓	✓	✓
Downloads	—	✓	✓

See All Plans

[(Netflix sign up process)]

The system here is providing reassurance and guidance, much like the ATM above. A crucial selection of the passage notes how temporary this feeling is, how fleeting. DeLillo notes how they were in accord, "at least for now." There's a feeling of a delicately brokered peace between two combatants that could break into warfare at any moment. But Jack doesn't know he's in a battle, not yet. At least, for now, it's all good.

As a novice user in the beginning stages of the internet, everything was somewhat utopian, a place to freely exchange information and share with others. The contract between user and machine was a mutually beneficial one. Our society, mirrored by Jack Gladney and sold to us by the Steve Job Mythos, believed in the general good and positive outcomes that both

technology and the internet had to offer. Besides, the internet and computers were new and exciting! There were ways to talk to people, new devices; there were web logs and geocities and there was a cool website where you could type in almost any phrase and or any thing and it would bring back a list of *all of those things*. It was new and novel, those things are fun, and people like having fun.

But as time progressed and more and more people gained access, goals and priorities changed. No longer was everyone new to this internet thing, and as is often the case, a hierarchy developed. There were those on top, seasoned users or in my case, curious obsessives, who could do *more* with technology than the average person. A class system developed, rather organically, that separated the haves and the have-nots: those who understood versus those who relied upon those who understood. In some ways, it was a very real magic, a cadre of the devout who could intone the proper incantations in the proper order to make the computer do wild and unbelievable things like *print something*. This gulf between those who could make digital things and those who didn't and had to rely on those who could only grew wider over time as the internet and the use of computers became more mainstream and accessible yet complicated, hard to understand, and walled.

I've seen these things first hand in my previous role as a web developer and network administrator. Technology began to be viewed as a thing that is alive. The phrase, "This thing did this" or "The computer did that" became imprinted in my mind. Kevin Kelly in his book *What Technology Wants* discusses this notion, that technology extends beyond being merely a tool but a system in its own right. For Kelly, technology can be understood as an environment to inhabit or as an organism that is capable of shifting, growing, and moving. Some organisms are

benign, fruitful members of society working in symbiosis with their human counterparts. This is a nice version of technology. Other technologies function like the organisms in *The Last of Us*, like the brain-melting and control dominating cordyceps that overrun and dominate humanity.

Both Stephenson and Cline's novels rely on this understanding for their stories. Technology can be a place where one lives. Kelly comments that technology is very much alive, kind-of like a beehive. He refers to this activity/system as the "technium." He notes how technology is a kind of blanket over society that has the potentiality to rule and influence every single thing we do or act upon. While this is true on its surface, that technology is impactful and can or can not do something, more recent uses of technology suggest the overwhelming power and scale that technology has. Interconnected technologies that operate at massive scale, like the internet, consume everything in their wake, and what began as a fairly benign rhizomatic, bottom-up network gets usurped by top-down, capitalistic structures, like corporations, to become more dominating than cooperative, more enervating than empowering.

Technology is not a pleasant beehive in a pastoral idyll. Technology is power, and in a real way, the design of technology is the ability to allow or disallow users to do or say anything and everything, everywhere–all at once. The execution of this social power creates inherent inequity and coupled with capitalism has only one goal: dominate for profit. Technology isn't inherently bad; it has the *capacity* to do great good. Most people are online, and a somewhat quaint view of technology suggests that it merely makes visible what society already believes, values, or encourages. It turns out things were and are more dark, grotesque, and obscene than anyone could have predicted.

The modern application of technology is almost always thought of as the internet, which centers around a few key organizations: Google; Apple; Microsoft; and Facebook turned Meta, each in the business of data mining and writing algorithms to give you exactly what you want, rather than what is true, just, or fair. More often than not, what we crave and what we seek out are stories, tiny parables that reflect our condition back to us so we can agree with what we see. But what happens when these stories go haywire? What happens when the munificent ATM no longer works? In *White Noise*, our protagonist Jack runs into a colleague, Murray Jay Siskind, newly arrived to teach at The College-on-the-Hill. The interaction takes place in a grocery store, the epicenter of American life. Murray gives a bit of a monologue on his interest in grocery stores, but really, America at large. In the next chapter, I'll discuss how the very structure upon which the entire internet is laid is a type of tyranny, forced control, all of which center on a crucial sentence in Murray's longer speech. He shares his main academic interest with the audience, Jack, and Jack's wife, Babette:

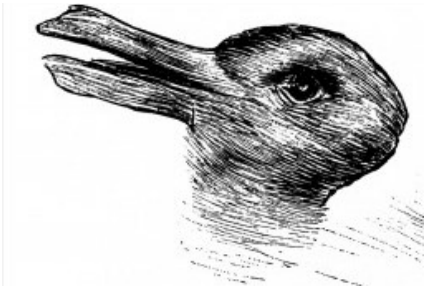
"I want to immerse myself in American magic and dread." (19)

Chapter 2: The Tyranny of Squares

Seeing is believing. There's something so solid seeming about the confidence in our own capacity to view, discern, and pass judgment on things we view. We are dead certain we saw the thing happen in exactly the way our brain's recorded it. There's no way we could be wrong; except, we are wrong all the time. Our brain does a decent job of collecting information, but the brain also does an excellent job eliding certain facts it deems not important, or conflating facts it finds similar, or ignoring non-essential facts all together. In the previous chapter, I discussed literary structures as means by which to know and understand how stories work and how those stories have tangible, real world effects. For me, that's a bit of a more solid ground from which to start. Words, typically, provide a clear outlet by which to analyze and understand a situation. They are reasonably stable, the construction is constant, and the words don't change. Usefully, the person viewing them changes, and that's where the learning happens. But at their core, the words are stable; or, at the very least, I think they are (or can be) *more* stable than other things. Although–perhaps not. Are they? Maybe. Maybe not. Good grief; what a mess. I feel pretty certain they don't change, which gives me pause. Can I be so sure? If you are sitting at a poker table, and you can't find the sucker: guess what? It's you.

When a person views an image or a sequence of images, the meaning and understanding often becomes more variable, harder to pin down and parse. When we read a comic or a graphic novel, did we see and interpret the entirety of every single image offered? When we watch a movie, do we understand every subtle nuance and choice the directors, writers, and actors made in order to portray meaning? I think it's fair to say probably not, and that's not necessarily a bad thing. The brain, as interesting and wide-reaching as it seems to be,

isn't limitless. The brain makes jumps and leaps and assumptions without knowledge, and those gaps become part of the story that we tell when we trust our capacity to believe in something we see. But much like textual stories, visual stories have their own structural and technical tricks, leaning on the spaces between panels and across pages to offer viewpoints and persuade. While understanding the rhetoric behind text is extremely important, sometimes knowing that what you see *you should not believe* is just as valuable. Obviously, the image below is a rabbit. Except sometimes, it's a duck.



In the previous chapter, I made visible a known structure, the hero's journey, to call attention to something that is all around us and yet we hardly pause to examine. I showed that structure in action, and then provided a few key pieces of literature that highlight some of the themes, philosophies, and problems that arise when we examine all of the pieces of a story, together. In this chapter, I'll follow a similar path to a new destination. First, I'll explain how visual storytelling works through the use of some key techniques that are seemingly simple but have big ramifications. Second, I'll show those techniques in action, except this time instead of sharing a story of a man becoming a business titan, I'll share the physical product that man helped create. Finally, I'll share some representative art that highlights and complicates some of the previously discussed ideas and themes. If words can be used to manipulate, trick and

coerce, then so, too, can images. Seeing certainly feels like believing, and seeing certainly feels like the truth. Certainly, these feelings count, but they always need context and awareness to make them more whole, more complete. When you are certain it's a duck, perhaps there's a rabbit lurking nearby. When you are certain you are seeing the truth, perhaps there is a lie lurking beneath, waiting to be unearthed.

Jeep People

When I'm not fumbling aimlessly and haphazardly with the written word via a dissertation, I am a user experience designer. It's always a fun moment when I tell people what that is, because it is not a job people are often familiar with. It's one of those scenarios that we hear more and more frequently, especially around technology, about "training for jobs that don't exist yet." When I was in college, UX wasn't really a thing that someone could do or be, or if it was, it was just the beginning, and if not the beginning, then just not that well known. Sometimes people like to combine ergonomics and UX together, but that doesn't quite work. I didn't really have any awareness of creating digital stuff that gives experiences that people like and would want to have. I just knew it was extremely bothersome to have to open a command line in Windows 95 to view stats in real time on why my ancient computer was crashing when I tried to play video games. I wanted things to work better for me personally, and only later did I realize my annoyances were other people's annoyances that I could do something about. At the time, I just read my novels and coded websites without any understanding of how those two might productively meet. Or better yet, how these two experiences could *work in conversation with one another*.[4]

[4] How clever in a dissertation [eye roll]

A user experience designer (Hello!) is a person who ensures digital products like applications, websites, or any other piece of software works well for the person using it. This is a pretty simple and obvious requirement for a product: that it works for the person using it. This was not the norm for a long, long time in computing. There was a certain pride in being able to coax action from this complicated gray box where others would fail, and there was a definite pride in gatekeeping that pitted those who knew (good; smart) versus those who did not (bad; dumb). The Comic Book Man from *The Simpsons* is the platonic ideal of this idea, the overly pedantic and snobby nerd who knew stuff. The application of that idea (stuff should work well) and skills required to make it true create a pretty challenging job. One must be pretty good at often competing enterprises:

Technical
How does the product work, both on its surface and a technical level? Any change I make on the surface layer affects all previous layers, sometimes down to the physical hardware running the program. I need to understand front-end development, a little bit of programming, often database knowledge, as well as how those systems work, interoperationaly.

Business
What does this product do, and how does it help the company make money? How much does this one change cost, and is it worth the return on investment (ROI) to make this change? A million dollar change that nets a thousand dollar return is a hard sell. I need to understand how changes to the product affect our consumers, the market in which we operate, and how making changes improves margins, rather than costing the company for minimal gain.

Presentation/Social skills

How do I get buy-in across multiple disciplines and departments for my ideas on improving things? Can I be persuasive in a meeting with C-suite executives who will either approve or kill my idea? Can I troubleshoot and solve problems on the fly, in the moment, while people stare at me? Presenting ideas is one of the most important, and overlooked skills, in UX. Being a good presenter is hard under any circumstance, but explaining technical and aesthetic analysis to those not familiar with those fields ups the difficulty significantly.

Design

Purportedly, the actual part of my job that models how the final product will work: the actual screens, layouts, and structures that help a person accomplish a task. This involves knowledge of human behavior, psychology, aesthetics, systems thinking, process analysis, and then executing those ideas to create a digital design that is pixel perfect, easy to understand, and easy to develop. I then need to test those ideas with actual users, so throw in interviewing, managing emotions, and research skills into the mix.

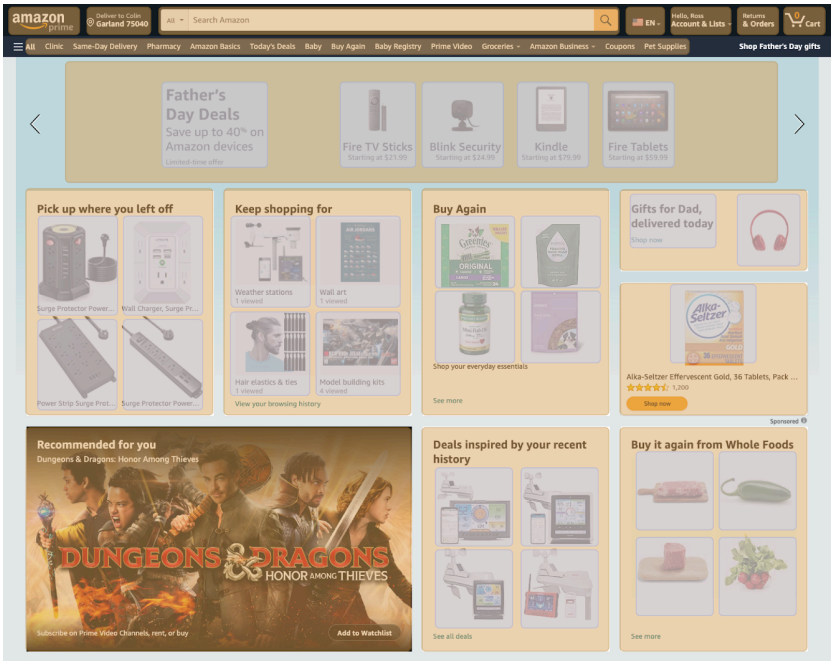
It's a lot of different skills, and one doesn't necessarily need to be an expert in any one of them, although it often helps. Rather, it's important to be able to blend and mesh disciplines at a moment's notice. Working this way creates an attitude of seeking, of looking outside one's discipline for inspiration, ideas, and often novel solutions to hard problems. As a UX designer, my job is often to view a situation, analyze it fully, fix it with some technical or social solution, and then pitch that idea to get buy-in to do my idea instead of another hundred competing ideas. There are loads of subtlety and nuance to each facet listed above, but one thing always

sticks out to me, a bit of a weird insight I stumbled upon quite by accident. In UX design, there are a lot of squares.

When I was getting my masters, I house-sitted (house sat?) for some friends one weekend. I needed the money; they needed someone to watch their dogs. It was a few weeks before the semester started, and I remember plowing through *Vanity Fair* with a pug-mix named Bernice, who had the temperament of your best friend and the body of the slipperiest seal. She was great. In-between bouts of studying, I'd borrow my friend's car, a Jeep Wrangler, to grab some food, take a break. I'm not a car person, and I don't really care about them, but people who drive Jeeps are distinctly and proudly *Jeep People*. Everywhere I went, I would get the subtle handwave from atop the steering wheel from *every single* Jeep person I passed. It was a little secret club that one could buy into, and it was a very fun and weird experience. House-sitting job complete, I went back to my apartment, thinking my time with this fun-loving crew was over. It was not. I saw Jeeps everywhere. I still do.

It's a pretty standard psychological quirk called the frequency illusion, or, the Baader-Meinhof phenomenon. Wrapped up in this idea are two others: selective attention (paying attention to stuff at the expense of other stuff); confirmation bias (people seek out information that confirms stuff they already believe). I mention all of this to prove an adjacent point. I'm not a Square Person. I don't actively seek out other Square people so we can knowingly nod to another, assured in our cohesion as a group. I wasn't just seeing squares because I was selectively editing out other, non-square shapes. The world, for all its organic and curved and free-flowing nature, *is made up of squares*. One space just absolutely littered with squares is the internet, where the square rules supreme. Almost every single web page or

application you use is built on a foundation of squares. Now aware of this fact, try not to see them everywhere. It will be an impossible challenge. Just look at this Amazon homepage that I spent one second finding. It's borderline obscene in its use of squares to collect and organize information.

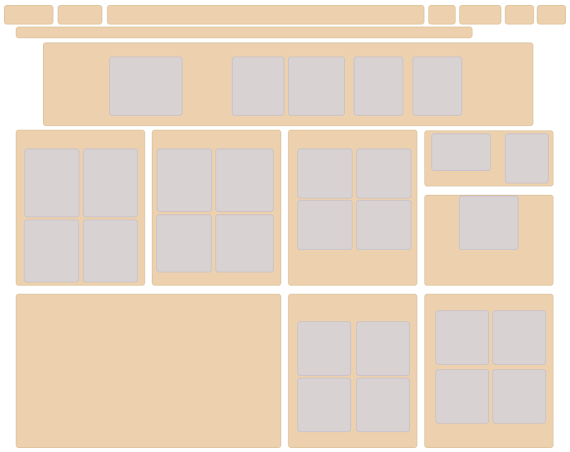


Amazon.com homepage. Sometimes, squares are full of *more* squares.

It might be useful to note that some of you might be saying, "Wait a minute. Those are rectangles!" Indeed, they are. I like to think of them as long or tall squares. Or, if you prefer, really short squares. Semantically, they are different. Functionally, they are the same. And as a person who makes sure things work well for the people using them, how things function and operate almost always supersedes strict, semantic meaning. Every choice has an opportunity cost for the non-choice. If everyone sees a duck, we often have to skew towards duck-see'ers, while still doing our best to attend to the rabbit folks. Everything is a trade-off.

The longer I worked as a UX designer, something curious seemed to happen. I started seeing beyond squares as independent shapes or really shapes at all. I began to think about

their relationships, both interior and exterior to themselves. How does this square relate to another square? If I have something of a certain size on a page, I can't have something of a different size based on how the first item lays out. Every piece, like a puzzle, affects the other pieces. How do we find meaning in all this squareness? Why do we use and like squares? When stripped of the content to focus on the structure, an interesting thing happens. A modern webpage has fairly obvious and known structures. These were pieces of art in a museum. These were a tile floor. These were windows on a window. These were webpages. These were comics[5].



Amazon screen without content

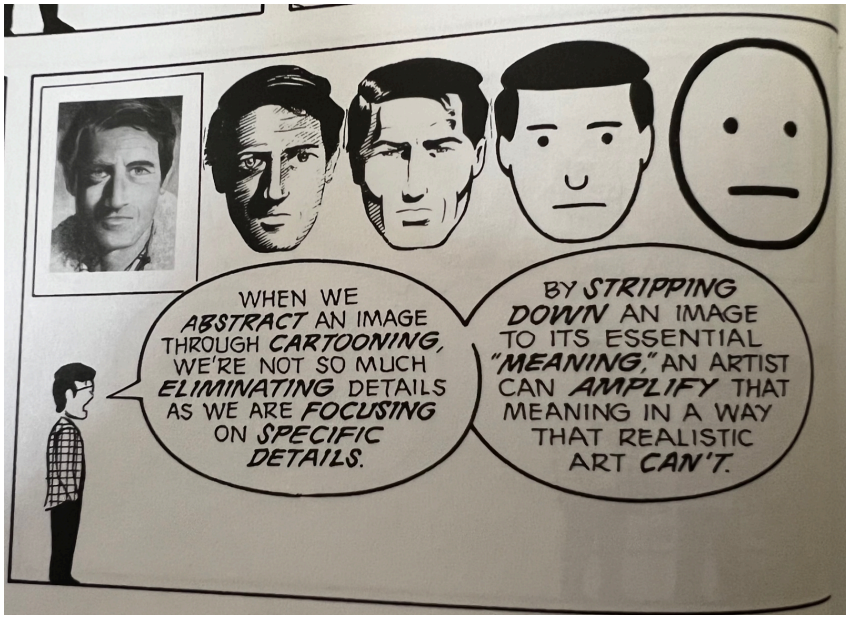
Seattle Times comics section

I was trained to look outside of my discipline to find solutions for novel problems. When thinking structurally about how the visual internet operates and how it affects the people that use it, comics is a natural place to begin.

[5] I'm at the pizza hut. I'm at the taco bell. I'm at the combination pizza hut and taco bell.

Arrange the squares

Scott McCloud, comic artist and comic theorist, outlines in his book *Understanding Comics* key tenets that many comics use in order to make meaning. One of the initial ideas he discusses in his book is the idea of “amplification through simplification” He notes:



(McCloud, 30)

By removing information and deleting (seemingly) unnecessary information, a comic is in effect *more* powerful than a highly detailed image. Rather than focusing on everything possible, the artist chooses to focus attention on information that is highly valuable. In effect, the artist is

making a trade-off, much like every designer/artist must. By removing context, the artist is focusing attention. Can this reduce images and ideas too far, into a reductive essentialism that gestures more towards a grotesque stereotype instead of a poignant observation? Of course it can, and this is something any observer should be aware of and keep a keen eye upon. When does an idea cross from poignant observation to crass stereotype? You'll have to decide. But by taking away elements that we could be interested in, the artist is focusing our attention on the item the artist wants you to see from their work. It is a very real type of intellectual control[6]. Notable in this single panel is the idea of removing for the sake of clarity and amplification. It feels slightly counter-intuitive. How does removing things make them more clear and more poignant? Isn't the devil in the details? He further expounds a few panels later, writing:

> Though the term [cartoon] is often used disparagingly, it can be equally well applied to many time-tested classics. Simplifying characters and images toward a purpose can be an effective tool for storytelling in any medium … The ability of cartoons to focus our attention on an idea is, I think, an important part of their special power, both in comics and in drawing generally. Another is the universality of cartoon imagery. The more cartoony a face is, for instance, the more people it could be said to describe. (McCloud, 31)

In McCloud's context, drawing and cartooning is a way to reach more people by the process of removal. By simplifying an idea into its essence, we in effect receive a more powerful message as communicated through image. By drawing more simply and therefore more universally, a cartoon can reach a wider audience because it lacks context, however highly focused. By focusing the reader on simple images with broad understandable themes, cartoons exert a certain level of power, one that has on its upper bound the power of the universal.

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[6] File this idea away, that of intellectual control. You will see it again because I am the Captain now, and *I will make you*.

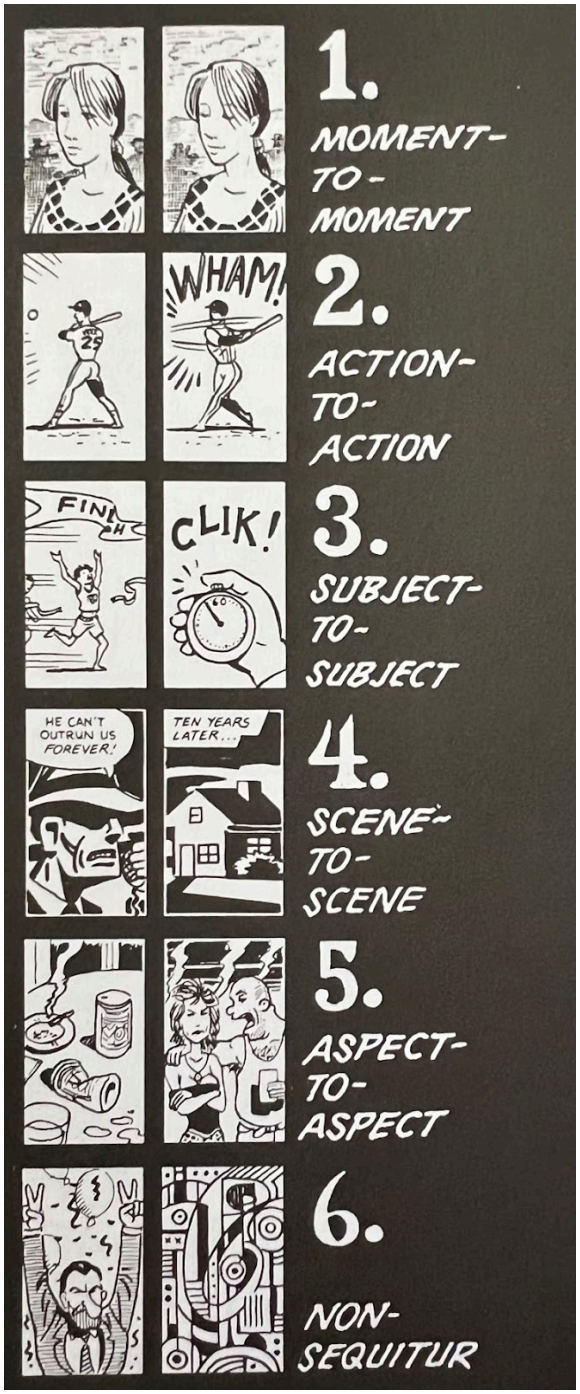
Presumably–and in an effort to push this idea as far as it can go for the sake of being illustrative–a comic could be so simple as to appeal on some level to every single person in the entire world. The comic, McCloud seemingly suggests, can be something to everyone.

User experience design leans on similar tactics, albeit through a different method. In UX, we focus on how much attention each task requires in order for a user to be successful. A person has a limited *cognitive load*, meaning the "amount of mental processing power needed to use your site" (Whitenton, NNG.com). To use a made up example and a made up unit of measurement: if each of us has 10 brain units of attention to devote to a site, and it takes 8 brain units to complete a task, it's not a good design if we distract you with pop-up advertisements, clickable banners, or other highly distracting or non-essential information that take up precious units for minimal gain. This of course is another example of design relative to opportunity cost: for every piece of information we as designers provide, we are choosing not to provide another piece of information. Design of all sorts is about trade-offs, and cognitive load is one of the key principles in user experience design. We try as best we can to control the elements on screen so as to not distract from the main goal we want a user to accomplish, such as logging in, buying something, or reading a piece of information.

Similar to cognitive load, people have limited ability to access and then use information. Generally, a person can handle about 7 (plus or minus two) pieces of information at a time without being confused. This is called Miller's Law (Laws of UX). When reading comics, or using a website or app, a person has limited working and external memory, similar to my ancient computer I mentioned above. A person can only handle so much. NN/G notes, "Tasks that tax our working memory are generally perceived as hard; so, to make the experience pleasant and

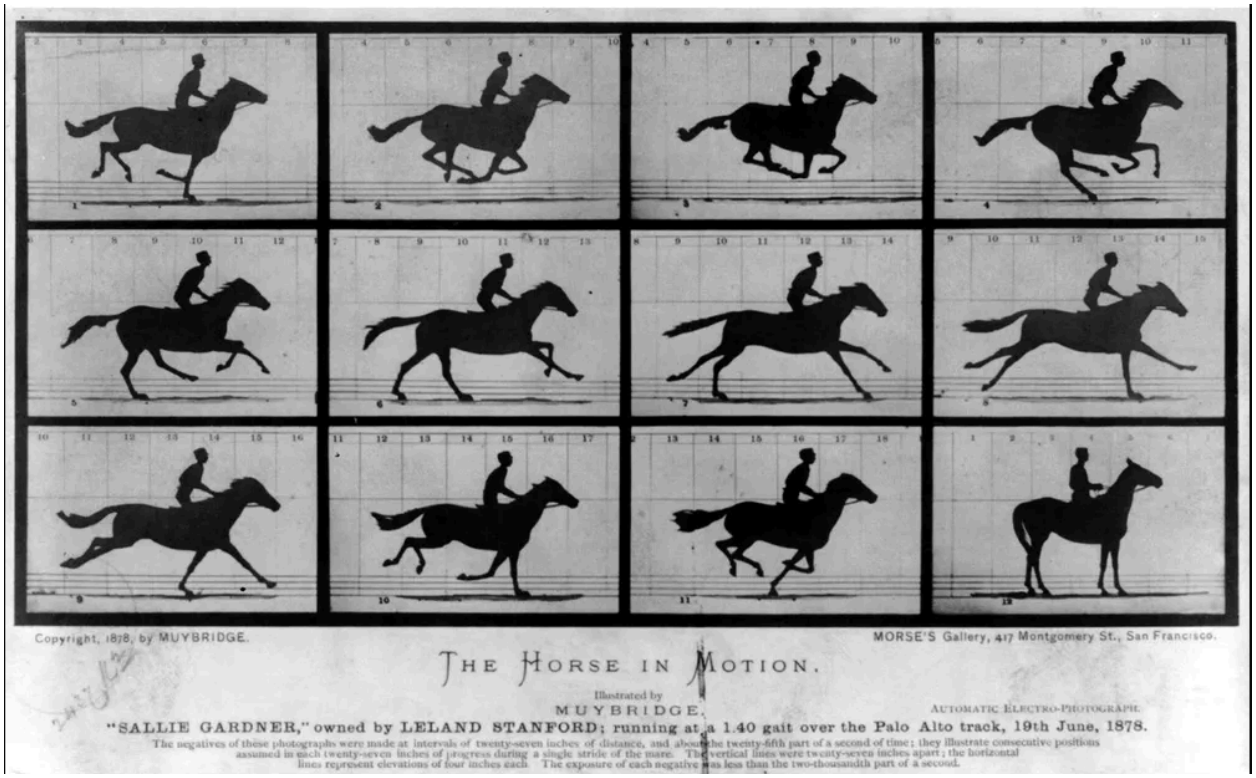
usable, designers must make sure that the user's working memory won't be overloaded" (Budiu). For both comics and design, an understanding of how much information a user can handle at a given moment is key. Too many actions on a page and too many plot points in a sequence create confusion, and ultimately, make users unable to understand what a designer or an artist wants them to take away from either an interaction or a story. Visually and experientially, less is more. A focus on key interactions, and key plot points, is paramount when considering how to construct an application as well as a comic.

McCloud continues, noting another key tenet for understanding how comics work, that of the idea of closure. He comments, "This phenomenon of observing the parts but perceiving the whole has a name. It's called closure. In our daily lives, we often commit closure, mentally completing that which is incomplete based on past experience" (*Understanding Comics,* 63).



Effectively, the human mind makes up information to fill in the gaps of our perception. When we say we “saw” something, we feel really certain that we saw an event followed immediately

by another event, pairing those two events together. We feel really certain about these events, because the brain does generative work to create a connection between them. In the figure below, we see two distinct events, and yet we make meaning from their connection based on placement. When placed side by side, two images create a connection, and we fill in the gaps around those images to make meaning. As in example number two, we see the baseball being pitched, and then we see a swing with some useful text (McCloud, 74). We can make a fair assumption that the batter was pitched the ball, and then the batter hit the ball. But crucially, we don't actually know for sure. We can make some assumptions using deductive reasoning, but it's still, technically, unknown. When placed in concert, images do make meaning. But it's important to understand that we, the person viewing the images, are making the meaning from the images, not the images themselves. We as the viewer are part of this interaction/presentation. And as we learned in the previous chapter, bad actors can use this tendency to make meaning in order to distort or manipulate based on how the brain works. Besides a simple 2-up comic, noting a distinct before and after situation, closure can be used at scale. Most people would call them movies, but the "moving pictures" are just that: a sequence of pictures that align in such rapid succession as to render any gaps between them null. A single rider, when put in sequence, becomes something much more powerful, much more grand. But never, ever forget: *you are the person making meaning.*



Eadward Muybridge "Horse in Motion"

This idea is explored in Jordan Peele's *Nope*. The film, like most good things, is hard to summarize briefly and in totality, so the best path forward is to go see it. Or don't; I'm not in the homework business anymore. But my best guess towards a description is something like: lonesome farmer and sister uncover a strange phenomenon, and then more extraordinary stuff happens, forcing them to do something[7]. What makes the movie a very mild horror movie and a very big summer blockbuster in the same vein as *Jaws* is the sense of absence, the focus on the non-action to amplify the action sequences. We spend a lot of time with the characters looking around, peering into the sky, planning, talking, and generally *not* seeing the Big Bad Guy that serves as the main character's foil. In effect, we spend most of our movie-going time *between* panels, where there is (supposedly) nothing going on. In between the cracks and between

[7] See? Functionally useless summary.

panels is where we as a viewer are tasked with making meaning, a place where we have to make meaning anyway. It's a wonderful sleight of hand. Moments are amplified by their narrative proximity: the quiet times are more quiet and the action more action-y because of their location and extreme thematic opposition. I've said often when reviewing designs that if everything is bold, nothing is bold. Narrative impact requires context and moments of thematic opposition. The impact of both loud and soft comes in their distinct juxtaposition with one another.

Comics researcher and theorist Thierry Groensteen helps explain what's going on between panels, between pages, and occasionally between books in his book *The System of Comics*. He writes about *iconic solidarity*, which he says is, "interdependent images that, participating in a series, present the double characteristics of being separated … and which are plastically and semantically over-determined by the fact of their coexistence *in praesentia"* (Groensteen, 18). Sequential images, then, can be thought of in two ways. Each image exists as a single moment, a horse and rider alone in the world, hoofs aloft ready to strike. Additionally and simultaneously, each individual image exists collectively, a sequence of images that bears additional meanings.

Crucially here is a bit of interesting language offered by Groensteen. He notes how "plastic" and "over-determined" images are. Images are both a single instance of an idea but are easily malleable for other purposes, cross or otherwise. Additionally, they are over-determined, meaning they can cause a variety of effects from a single node or instance. A single, simple seeming thing can have multiple meanings. This is a well-known idea in pulpy horror stories, both written and drawn. A down on their luck schmo finds a shady back-alley

magic store, uses a wish on a monkey's paw or uncovers a seemingly kind genie, and chaos from unintended consequences ensue. Thematically, this is often a reference to unintended consequences, or the idea that shortcuts aren't possible in this rare, weird, singularly unique instance of good fortune turning bad. But singular actions causing unintended consequences at scale are daily occurrences on the internet. A single tweet becomes the focus of both attention and algorithmic boosting, and suddenly a single idea ricochets around the world. There is a known twitter joke/trope that laughs at people who gain this notoriety, and twitter users are encouraged to "not be the main character" of twitter (x?) that day. But this happens so regularly that we often forget there was a time when the idea of a single moment creating such widespread havoc was in fact ridiculous or fantastical.

Groensteen introduces an idea, purposefully broad, to help explain how "comics submit the images of which they are composed to different sorts of relations" (21). He calls this arthrology, a term built from Greek and borrowed from medicine that is the study of joints and how they allow movement. Comics then become less a series of singular panel to panel moments but something larger, more grand like the human body, an entire subject by which to study connections, frames, movement, and the totality of an experience based on moments of collision and connection rather than moments of independence. A frame, by itself, can do a few things. Multiple frames when taken together create multitudes of experience, both simultaneously braided and fraying. When factored into the larger corpus of not only comics but literature, entertainment, and art, these moments of interconnection create something quite infinite and unknowable, similar to how we perceive and think of the internet. A comic's single frame and a phone's single app can do their one thing pretty well. That's the architecture as

designed: a single thing doing a single function. But nothing and no one lives in isolation, and it is through the combination of panels, the collection of squares that we see some interesting and troubling effects taking place.

When taken in totality, not only within the app but *across* the app's connection to other apps, websites, blogs or whatever internet artifact you like best, meaning begins to shift, often substantially. Each node connects and affects the other nodes not only in sequence but in meaning, changing both. A piece of information found in one place is reified when found in another place, whether that relative value or utility is earned or not. Simply put, things become more powerful when they are spread and shared, and when that sharing and spreading happens algorithmically and without necessarily any human interaction (or manipulated by bad actors), an echo chamber forms. This is similar to memetics as noted in Richard Dawkins' *The Selfish Gene*. The full name gets clipped to simply "meme", and it's a familiar notion today. A meme is an idea, often a funny or clever picture, gif, or video that's easily shared and passed around the internet, sometimes indefinitely. Ideas, like the game Katamari Damacy, grow exponentially, until a single idea is a rolling ball of trash cans, flowers, human limbs, cars, and other detritus found across the landscape. Truth or utility or accuracy are no longer important, if they (arguably) ever were. That's not to say that the truth doesn't matter. It very much does. It is simply that truth is not a necessary condition for an idea to be shared, amplified, and believed. If the idea I believe on this poorly vetted website is again shown to me on a Facebook feed *alongside* other, properly vetted sources, it gains a tinge of credibility that exacerbates over time as more and more people believe the idea. A single frame connects to another frame,

exponentially, as long as someone or something is pushing it forward. The horse is standing still. The horse is galloping. It's a duck. It's a rabbit.

Katamari Damacy, where you like…roll around a ball of junk collecting other stuff.

iPod, uPod, WeAllPod[8]

It was January 9, 2007. He was wearing what would become his typical look, and he gave a presentation in his typical style. "This is a day I've been looking forward to for two and a half years. Every once in a while, a revolutionary product comes along that changes everything," he said before a packed house, ostensibly there for MacWorld 2007 but the rumor mill was already churning about something new. Maybe a thing was coming; maybe it was a phone, a new ipod, a new *something* to titillate the technology folks. Steve Jobs in his black turtleneck, baby blue dad jeans, and white sneakers introduced the iPhone for the first time. He, as is his way, had to juice things up before getting into the nitty gritty of the product demonstration. Jobs said it wasn't one device being introduced today; oh no, it was three. "The first one is a widescreen iPod with touch controls. The second is a revolutionary mobile phone. And the third is a breakthrough internet communication device." I had just graduated from college. I was

[8] This is a stupid title, but I am stupid, so it's fine.

unemployed. This announcement in no way pierced my consciousness at the time. I didn't watch it live. Even if I did, I probably wouldn't have cared. Oddly, it feels like 100 years ago in another timeline from someone else's life. I tried to recall where and what I was doing around that time, but I don't know. It's gone.

I ended up getting a job at a convention travel agency, and worked my way around various departments until I ended up as what we now would call a front-end developer[9] in the IT department. By this time, the iPhone had started shipping and people started getting it, especially a few folks around the IT department. They were excited; I was reluctant. I hardly made any money, and this purchase felt like an extravagance. In hindsight, this is a hilarious notion, but, and this might come as a shock to not just readers of this fine missive but around the world: *things change over time.* I didn't want to spend a bunch of money on this phone that did what–text? Call? I already could do that. Why would I need to get on the internet from my phone or even want to? Besides, I had a perfectly good phone, a Blackberry, which certainly allowed me to cosplay a fancy, successful business person. I really bought the Blackberry to play Brick Breaker, a simple game with a paddle that hit a ball up into the top of the screen where it bounced off bricks destroying them. You know: *business stuff*. I finally decided it was time, and I will never forget this quote from my coworker and super technology person Jonathan. I asked him why *he* was so

[9] While this is technically true, it feels a bit gross. The actual, real front-end developers I know are so talented and skilled, leagues ahead of me in so many ways that to even put myself in their camp feels a bit unsavory if not downright false. But I do know a fair amount of code, and it changed the way I think about software and its construction, so maybe I can just nestle closely and listen to this group without being fully a part of it. If it's cool with them, which it probably is because they probably don't care as much about this as I do, if at all.

excited *for me*, and he said, "I'm so excited for you because *your life is about to get better."* A bold statement to be sure. He was right.

In the intervening years and iterations, most form factors for the mobile phone followed this initial idea: a relatively button-less interface with a touch screen; a grid of square-ish[10] apps; and a focus on the content within the screen rather than the screen itself. Presumably, this is a truly great idea because of its simplicity. Why have a keyboard, a little rolly wheel, and a bunch of side button controls when you could have nothing? Why, indeed. The Buddha would love this. Over time, other phones and design ideas trended towards this phone and the value of simplicity because it was the "best idea." Additionally, other ideas trended towards Apple's because their UX was so good. The phone is fun to use and easy to learn. This is definitely easy to say and hard to accomplish. Regardless, simplicity won. But "simple" is not quite right, at least not entirely.

Gilbert Simondon, OG French philosopher of technology in his book *On the Mode of Existence of Technical Objects*, writes about the idea of *concretization* within technology. To put Simondon in a historical context that I like, he's like Eazy-E in NWA, a crucial member of a foundational group who's other members went on to greater success and fame but couldn't have done so without his initial contributions[11]. Simondon's more widely known contribution is that of individuation, a semiotic structure focused on what makes a thing this thing instead of another thing. Taken wholly and in concert with Derrida's differánce, which offers a deconstructionist view of language that says "word" can only be known by its differences from

[10] The Apple app shape is technically called a "squircle," a word I find weird and a little gross sounding. But it's also a pretty accurate descriptor, so such is life.
[11] I guess in this metaphor that makes Dr. Dre as Derrida, and Deleuze/Guattari as like, let's say Ice Cube.

other words/signs, we get an opposite way of understanding what makes something *a thing*[12]. Derrida focuses on negation to find out what something is; Simondon suggests a funneling of thingness down to a specific point. Both philosophical modes attempt to classify something and bring meaning to it through a process, they just do so in different ways. Simondon initially focused his attention on a person's interaction with technology, outlining a philosophy with *concretization* at its core.

In an analysis provided by Andrew Iliadis, Assistant Professor at Temple University, in "Two examples of Concretization" he notes, "Concretization deals precisely with 'the things themselves', that is, with what happens to the specific elements that make up technological artifacts over the course of their evolution." There's a common misconception both in creativity and creation that ideas spring fully formed from some genius' mind, when the reality is that probably all inventions and ideas, both great and small, come from a lineage of iteration and improvement over time. A typical creative process is to make a thing, see how it works, make small changes here, small tweaks there multiple times over time until the final product appears suddenly "from nowhere." Concretization, simply put, "concerns the iterations that technological objects go through as they evolve" (Iliadis 88).

Initially, this idea is pretty straightforward and simple. Convoluted ideas become more simple and compact over time until they reach their final form, a reverse Pokemon's evolution

[12] This is, of course, a huge simplification of the entirety of Derrida's crucial theory. But also, reading Derrida is an absolute beating, so this is just one of the highlights to make a point. We have some Heidegger coming in later chapters, another absolute mental beating, so I have to be judicious with my rhetorical choices. I mean, look at this: "Doubtless this pyramidal silence of the graphic difference between the *e* and the *a* can function only within the system of phonetic writing and within a language or grammar historically tied to phonetic writing and to the whole culture which is inseparable from it" (280-281). We aren't even to the main course of the essay; we are just talking about spelling here! I like this type of stuff because I am a weird sicko, but for the sake of this little contextual moment, we don't need all that jazz.

type structure. Instead of starting small and getting big, creative ideas start either too large or too complicated and trend towards simplicity. Jobs references this in his speech, suggesting that the iPhone was a combination of three products combined into one, borrowing software from Mac OS X with charging and syncing from a known system, specifically a charging dock and iTunes. All this disparate stuff, all these separate ideas, they all coalesce into one. There are, technically, no new ideas here, other than the arrangement of the combined pieces of technology into one. Presumably, and as sold by Jobs, this creates a situation of knowability and simplicity. He suggests as much. Instead of a bunch of stuff, Jobs argues, you can just use this one, simple thing. But is it simple? Simondon argues it is in fact **not**.

He writes in *On the Mode of Existence of Technical Objects* that a technical object when iterated "condenses", increasing its functionality while dropping non-essential features. Iliadis notes of Simondon, "A technological object is charged with over-abundant functions when it concretizes; each individual element fulfills additional functions that increase while the total amount of elements decrease, leading to a deceivingly complex yet 'simple' object" (88). For example, one screen can open apps, zoom in, swipe, switch between apps, all based on different interactions on its singular plane. Again, let's remember Job's big pitch for his big, brand new product: widescreen iPod with touch controls; revolutionary mobile phone; breakthrough internet communication device. Three become one, a technological holy trinity that provides a clear, simple user experience top-most layer that can contain multiple functional variants underneath. The value proposition offered by Jobs is that of simplicity, but forgotten in this technical marvel is the deceptive part noted by Simondon. As features aggregate and become intertwined, a single function grows to do more and more, the background work

required to make the technology get up and go becomes harder to manage, more unwieldy, more difficult.

A change in one thing ripples into everything. I call this phenomenon in technology "linkage", or, having a "heavily linked" product. My main concern with linkage is the relative difficulty or availability to change. How easy or hard is it to adjust a core feature of a product, and how will those changes affect the entire product's ecosystem? While concretization deals with the idea of products becoming more rigid and stable by collection, my notion of linkage focuses on those internal features within the "concrete" as it were, and how hard it would be to break them apart back into their constituent parts. Good products are often heavily linked, providing a knowable and learnable feature set that can teach users quickly (and often with little intervention) on how to use that product. But each structural feature holds up other features, and heavily linked products can become stale and overwrought. The original Microsoft Word is one such product. As Word progressed through time, adding features and doing things it (shouldn't) do, the original purpose for the product (word processor) become intermingled with other varying and competing interests. Word can print labels, make resumes, add images, sometimes edit images, all things that are outside of the core function of "typing text on a computer." Conversely, most weather apps are extremely heavily linked[13] and yet simple to use and understand. Most of the good products you use are heavily linked, which isn't necessarily a bad thing.

[13] Weather apps are extremely interesting for what they have to do (call on a myriad of reporting services worldwide to gather information that is often changing by the minute) and how they present that information (show the weather; show temperature; show extreme events; show precipitation levels as well as timing). Weather apps are an interesting case study of linkage.

As a user, this feels really, really good. We know what to do, and the action we performed provides expected results based on prior experience. It can feel a bit magical, a dark incantation that not only can bring forth one's precious emails from the nether realm while also bringing forth stupid ideas from social media for your amusement. However, there's always opportunity cost to this structure. This structure works really well while being quite rigid and flexible. When things are heavily linked, they become interlocked, a spider web of sorts. Changing one thing ripples across the entirety of the product, and the design and the product can become tough to change. I have had quite a few designs rejected not because they were bad[14], but because they were *different*, proposing changes that would be hard to implement based on the intertwined nature of the design in question. By condensing in this fashion, products are then saddled with a high level of lock-in[15], a state that resists change not only within the product, but within the organization, and ultimately, within the consumer. On its surface, to use an apocryphal metaphor, your user experience is a calm duck smoothly sailing through the water. Underneath the hood of the iPhone, the duck's feet are churning like mad. The unmoving rabbit looks serenely upon a field before dashing away.

This is a crucial but almost always forgotten facet by many users of technology. The device in hand is only *seemingly* simple. Similar to McCloud above when he talks about simplifying images to create greater meaning, concretized products perform a similar trick. They appear to be quite simple and straightforward but can contain a multitude of meanings. The

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[14] Which, like, that was the whole point? To iterate and improve on a previous mishmashed idea? My designs were clearly and objectively better, but being new and different has a cost, one most corporations will not pay.

[15] This is completely different from technical debt, where organizational inefficiencies become encoded in products. Instead of spending the time and money to fix an issue for real, we (technology people) spend an hour cramming in a suboptimal solution that works well enough, that then becomes relied upon and foundational. This causes future problems and ultimately takes more time to fix than the initial solution would have taken. Short term thinking is the root cause, but deadlines are deadlines I guess.

simplicity of both the iPhone and the comic rely on the appearance of simplicity while simultaneously containing subcutaneous complexities. There are decades of work, both intellectually, socially, and technically that go into the production of a single technological object, let alone multiple objects across the world that all need to work together. Because an object like the iPhone is so successfully concretized, so seemingly simple and so seemingly straightforward, is it then able to become a bedrock of sorts for our society. Most of our entire modern social foundation relies on a troubling false story that technology is simple, reliable, and easy to use. This might seem like too grand of a statement and one that requires a bit more nuance and specificity. It is not. Technology is complicated, finicky, and hard to create.

We believe the story that technology is simple, so when it fails us (and it often does in spectacular ways), we cannot believe it. We externalize the causes and effects as to why the technology failed and then we personify the object in question. The Computer didn't work. The Printer is slow. But these aren't people; they are just things, objects really, a topic I'll discuss later in greater detail. We treat this inability to work as a personal attack. But here's the rub: all technology fails. The iPhone is just a piece of equipment like anything else. Nothing lasts forever, even cold November rain. The idea that technology is reliable and good, the foundation to base a society upon is similar to one of those beautiful, oceanside properties that is slowly falling into the ocean. It's a nice fantasy for now. It is not sustainable, and it will fail. Through concretization, we only see the duck above the surface: simple, calm, serene, cruising. We don't see the furious, hectic paddling underneath, and we certainly have lost the ability to see the rabbit at all.

ABC News: Pacifica, California

The Tyranny of Squares

Squares are everywhere. They are in the individual panels of a comic, and they are in the individual frames of a movie. But on your digital display, a different type of square reigns supreme. Pixels are the fundamental building block in all digital displays. Basically, a pixel is a tiny, tiny square that can show various intensities and hues of the red, green, and blue color spectrum. By themselves, they are fairly unremarkable, a grain of sand on the world's beaches. However, when used with other pixels, they can create complex images, show movement, and have the ability to mimic "real" things. A pixel is just a square, but it's also like an atom, a unit that can be combined, broken, rearranged, and rendered in seemingly infinite ways to make infinite things. Singularly, a pixel is just a simple thing, a discrete entity. More flexible and wide-reaching than letters of an alphabet, pixels are the building blocks that begin to create meaning in a digital space. Groups of pixels realize most fully the power and tyranny of squares on modern, digital computing because they make up the structure by which everything is made. This structure used everywhere is a simple grid, almost exactly like graph paper (if you

are of a certain age and remember what that even is). If you are feeling more dramatic, and who doesn't love a little *drama*, you could even call it The Grid[16]. Nothing can happen, digitally, without pixels, and nothing can happen without The Grid.

While the previous phrase might sound hyperbolic, it's not. I'll explain. The overarching goal of this entire work is to draw attention to small, often unknown or underappreciated things that we take for granted, a structure cribbed from the podcast 99% Invisible. The podcast points a finger and lingers on the mundane, trivial, and pedestrian parts of our lives to prove in fact that those things are unique, important, and extraordinary. For example, one of my personal favorite episodes of the 99% Invisible podcasts tackles Hawaiian shirts, or as they are better known in Hawaii, Aloha shirts. Not merely a clear signifier of laid back Jimmy Buffet fans, tenured science professors, and party animals, the Aloha shirt has a rich history of both colonialism, nationalism, and rejection of said colonialism and enforced nationalism. I acquired this very shirt (Kahala) featured here on a trip to Hawaii, and I love it so much *I hardly ever wear it*. Its significance and meaning feels too important to be sullied by using it as a mere covering for my body. It has transcended to some sort of Art-piece. We will get into things and objects and how they function later, but for now, it's a nice snapshot into my broken psyche and how I interact with things I really, really like, which is to say they are too important to wear or enjoy. They must be admired and appreciated from afar. It's a stupid way to live, and I don't do this with everything, but that's for me to fret over.

[16] Not the, but Thee, like The Ohio State University, an insistent nickname on all my sports watching that I find really annoying but also am jealous of. Everyone does it! Thee Ohio State. I appreciate the commitment to the bit.

For me, a simple shirt with festive, island themed motifs take on a greater meaning than the one modernity has ascribed and forced upon it. When examined closely, a single thing can tell a grand story. Certainly, pixels in and of themselves aren't bad or good, much as an Aloha shirt can be both this (sign of colonialism) and that (rejection of colonialism), both sign and signifier of nothing and something[17]. Pixels are just squares on a computer. But like the Aloha shirt, of which Kahala is a notable originator and standout, how people use and understand things draws attention to their capacities–and their limitations. A natural (to me) place to dig into the facets and breadth of the pixel when placed in and on a grid is in early video games.

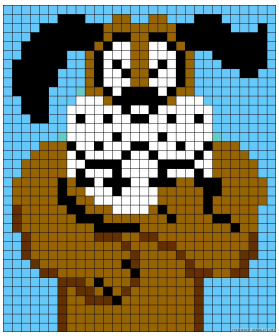
The Nintendo Entertainment System, more colloquially referenced as the NES, was released in Japan in 1983, receiving a domestic United States release in 1985 (Wikipedia)[18]. My first encounter with the NES was when I was around 5 years old before a soccer game. My two brothers and I, collectively, had gotten to somewhere around level 2-2, 2-3 in the original Super Mario Brothers before we had to go to a soccer game. We paused the game. We returned. The pause screen image was burned into the screen. Mom was not happy. With a, compared to today, rudimentary but pretty advanced for its time computing capacity, the NES did remarkably well with what it had under the hood. Some of the obvious standouts of the time were some of my favorite games to this day: *Super Mario Brothers*; *The Legend of Zelda*; *Duck Hunt*. Each had a fascinating protagonist and provocative gameplay. There was jumping on platforms *and* enemies. There was exploring a map and slashing monsters and throwing bombs at brick walls. There was a smarmy dog who derisively laughed at you after you couldn't shoot the fake ducks

[17] Buckle up; we are inching towards the philosophy part of the dissertation, where this type of confusing capitalization and writing style is almost required by Serious Academics. Things get *loose*, so make sure to stretch and warm up appropriately.
[18] Gasp! Citing Wikipedia as a source! Yeah; Wikipedia is dope. Grow up.

with your fake plastic gun. These are reasonably advanced facsimiles of a type of "real" life, or a very real story world, all rendered simply albeit clearly by pixels.

Mario

Link



I hate this dog

These examples are foundational icons in the gaming world, codified in countless ways over the proceeding years into foundational icons in the Actual World. All of them are simple, pixel-based graphics laid onto a grid. Groensteen, our comics scholar from above, notes how the grid is the "stage in the process of creation [that] can be briefly described as the first appropriation of the space that it is invested in" (28). In a real way, there was once nothing, a blank page or a blank space, and the act of making a grid grabs hold of that blankness and makes it into some tangible Thing. Another decently known work famously points to the idea of creating something from nothing: "…the earth was a formless void and darkness covered the face of the deep, while a wind from God swept over the face of the waters" (*New Revised Standard Bible*, Genesis 2)[19]. The very act of creation can feel quite ephemeral, and perhaps is in some capacities a religious experience. A new idea can feel like it comes from places unknown

[19] Anyone who knows me personally and knows my combative and antagonistic attitude towards most religions but *specifically* and *especially* "American Christianity" would be tempted to read this as a slight or an ironic, tongue-in-cheek joke. I assure you, in this instance, I am very, very serious. Unequivocally, I am comparing the very human act of creativity and of creation to that of "God-like" significance, purposefully conflating the two. If that rings blasphemous or troublesome in some way, then cool–mission accomplished.

and through some powerful actor is made manifest within the world. By placing a grid on a blank space, and subsequently populating that space with characters restricted and made literally *from* that grid, the space that was once wild and limitless becomes tamed, limited. It can no longer be another thing, another example of opportunity cost at work. Further, what was once free, crucially, becomes bounded and *under control.* Groensteen summarizes this idea well: "Applied to the manufactured unit that is the page, gridding corresponds to the moment of *taking possession* of the original space" (144).

Creativity is making choices at the cost of other choices, and those choices exert control. As a UX designer, I am allowing you to do something within an application, and I am concurrently not allowing you to do other things. When we place a grid upon our digital screens, those screens become rigid and organized, and the things placed upon that grid are, at their essential level, bounded and under control. A person, now, is in charge of the space. When you play video games, what are you if not some God-like entity exerting their influence on a knowable and bounded space? Further, would that space exist without your intervention? Sure, it's a real "if a tree falls in the woods does someone hear it" type comparison, and the point is not to argue yes, you do, or no, you do not. The point is to note, simply, a person organizing and creating order on an unordered space is in control of that space. It's easy to write off video games or digital apps, all gridded and squared up, as things that just *exist* within the world, created in some *formless void* by some *nameless person*. But that's not true; it never has been. People make this stuff. Creation, particularly digital creation, occurs in layers, and those layers have a starting point of a grid. A person has an idea for a digital thing, creates that thing on square pixels organized in a very distinct square grid in a codified way, and then that thing is let

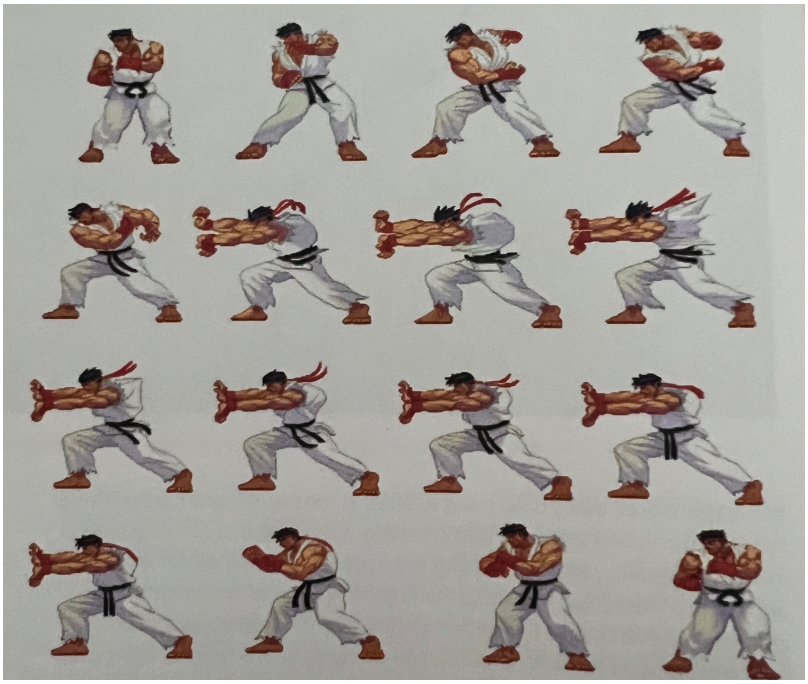
loose upon the world to do…whatever it does. Because we, as a human group, personify technological stuff into The Printer or The iPhone does not make them human and does not give them agency. Calling the truth "Fake News" does not make it so, even if you really, really believe in it.

The Knight

Video games are an excellent example of this phenomenon, because the person playing the game is almost always playing a distinct character with real seeming emotions, actions, and feelings. Modern video games are particularly good at this immersion because of the increased verisimilitude of graphics and the capacity to layer a game's current meaning atop other game's previously known meanings. Video games used to be a nascent artform, battling it out against other new media. But time marches on, and video games now can self-reference and redraw previously known boundaries and lines. Savvy game designers call upon these tropes and themes, creating a digital palimpsest that both knows the past while creating a new future informed from it. One heady example is the game *Hollow Knight*, where you literally play as an empty vessel created by some long lost King. The Knight arrives to rescue a sickened and failing

kingdom; or is he? It's a great game–maybe the greatest game, and that's saying something[20]. This thing has layers like a baklava; it's wild. Anyway, the point: you play as a literal empty vessel, a literal hollow knight. This move is a known trope, a standard artistic sleight of hand: create a character that is either literally or figuratively empty, creating a void that is a natural space for the player to insert themselves into. I am the video game; the video game is I. The best video games are great at creating this immersion, a real-seeming connection that merges player and character. But at their core, video games are as full and as hollow as a movie, as divided and connected as a comic book panel. No matter what we think we see, we are not seeing reality. We are imposing reality on a space. We are seeing divided chunks arranged by squares that exert control over a space, both literal and mental. As a video game, comic book, or movie this isn't really all that problematic or weird. We accept that this is entertainment, occasionally we get some emotional heft from these works, and that's (mostly) fine. That's just how stuff in these mediums work and how they capitalize on the brain. That's totally fine because, for comics and movies, we are simply viewing something. Video games are a little more tricky, because what I will argue in the next chapter is that *interaction* is the problem. But unlike a digital technology or application, a video game has clear and knowlabe edges from a storytelling perspective. Most video games have a beginning and an end, and the ones that don't definitely suffer from and cause the same problems as other unbounded, infinitely scrollable applications.

[20] Even *Hollow Knight* layers on meanings, callbacks, and structures from other games, such as *Castlevania*, *Metroid*, and even *Super Mario*. To play *Hollow Knight* is to play a bunch of other games at once, simultaneously calling attention to both itself and other games. Very postmodern.



Individual animation cels of Ryu's signature move from Street Fighter, the Shoryuken.
It's a comic! It's a game! It's a movie! (Cooper, 34)

Vulgar Display of Power

Modern visual technology is built from squares and is **only** built of squares. Like the base units of all code are ones and zeroes, the base unit of visual, technological narrative is the square. An image is just a bunch of squares, organized. Images in sequence are highly active and variable while also stagnant, a plastic moment of interdependence that requires one part to rely on the other. A single image is a single image, and a sequence of single images become something quite altogether different. Images, both singular and collectively, perform a certain type of magic within the brain. McCloud calls this closure, where we insert our own assumptions to create connections between the moments of silence between panels. Squares, when viewed holistically, can create larger, more complex things/objects that feel real. Sequential images can create new images that individual images alone cannot, and yet that meaning can be highly variable and plastic.

There is a fallacy that technology, in this instance digital products, simplify over time. As features combine and coalesce, we intuit that product has become (seemingly) simpler and simpler. Simondon shows us that is not true. In fact, the products become more complex. Both the physical product, like an iPhone, and the software that it runs grows more complicated, more locked in, more resistant to change as it evolves over time. Further, user preference, knowledge, and ability is often reliant upon a piece of technology staying the same. People, as any UX designer or many other folks from all sorts of human-centric fields can assure, are extremely resistant to change. This makes iterating and improving on established products difficult. There's very real intellectual lock-in.

The grid that technology must lay itself upon is a collection of squares, locked together, into a grid. An image from a video game, however stable, is still just a collection of highly organized squares. This grid is a container that exerts control by its inherent nature and by its very existence. In a way, the grid is a universe full of atoms in which individual points interact, combine, decay, and occasionally break apart. By bounding squares into a grid, we give ideas shape and form and we come to know them. But that knowing has a cost, as by knowing something as one thing we cannot know it as another. This is design: choices made prevent other choices. Digital design, and technology, is about opportunity cost. There is no superposition; there is only the one thing that exists at the cost of the other thing. But what about choice? Don't we, as people, have some measure of agency to decide how involved or uninvolved we are with our digital counterparts?

I think this used to be possible, but has since all but vanished. The power and draw of technology as a sort of magic coupled with the habit-forming nature of many, many things on

the internet can override choice, short-circuiting real needs with assumed wants. I stopped using Facebook about a decade ago, a choice that seemed unfathomable to my friends and family at the time. How would I know what's going on; how would I attend events?! Since leaving (and staying gone), my life has only improved. What seemed like an impossible choice, quitting, was actually quite easy. But it's less important what I did compared to how others viewed that choice, that of an impossibility. I perceive the internet and technology as a choice to use, and knowingly pay the costs. Many, many people think of technology as necessary and vital to their life. How much choice, then, do they feel they actually have? When trapped in a maze, it's not a "choice" to turn left or right. It's just the only thing you think there is, an entire world condensed and confused.

Thus having ventured, we must return, more enlightened, Master of Both Worlds[21], to Simondon: "In order to restore to culture the truly general character it has lost, one must be capable of reintroducing an awareness of the nature of machines, of their mutual relations and of their relations with man, and of the values implied in these relations" (19). To fully use and understand machines (technology), we must be aware of how our relationship with technology works, and we must be aware of how technology's relationship to *other* technologies work. A pixel is a single building block. A grid is a collection of blocks that form a structure. Once created, that structure is now a real thing that people can use, interact with, and modify. But the main actor doing the using, interacting, and modifying is still a person, and people are notoriously finicky, callow, and driven (often) by greed and/or fear. When trapped in a grid they feel they cannot escape, bad things tend to happen. As I will discuss in the next chapter, the

[21] Remember the Hero's Journey from the previous chapter? You do? Good!

same grid that can make beautiful digital art can become a prison, social and technological inertia too intense to allow escape. Grids can give shape, and that shape can overwhelm and overcome our best intentions. The small and seemingly inconsequential grid reveals itself to be a dangerous labyrinth.

Chapter 3: Welcome! (to Hell)

"If every cultural product on the market increasingly reflects the fundamental inhumanity and cynicism and brazen lazy defectiveness in the institutional and structural forces that produce it, that is doubly true on Musk's Twitter."
David Roth, *Everything is Silicon Valley Now*
Defector.com

In this chapter, I'll examine how structures coupled with technology can be actively hostile, malicious even, especially when the structures are supported by stories, especially ones we internalize and don't even realize are fictions any longer. Stories, by their very nature, demand an ending. Something starts, a change happens, and then something ends. In this chapter, I'll examine these structures that don't quite resolve, that don't quite end. There's neither a clear start nor a clear end. Logically, we can assume something started, sure, but not in the story proper. Something ends, no doubt, but it's definitely not shown to the reader in any satisfying way, a symphony ending on a minor chord. This type of narrative feels weird–unresolved. These type of structures feel claustrophobic. Thematically, we are left in the dark, frantically turning left and right, working deeper and deeper into an unknowable structure with no end in sight, no end available. When this happens in a work of fiction, the results can be quite impactful, intellectually. When this happens in technology, the results can be quite devastating, societally. Chapter One lays out a knowable structure, while Chapter Two shows that structure in action. In this chapter, I will discuss labyrinths, both narratively and structurally, and how those structures are littered across the modern internet, ensnaring the mind.

I live in Texas, where purportedly everything is bigger: football stadiums; barbeque

plates; and sprawling suburbs. Consequently, these places require rather large high schools, labyrinthine places that look more like a series of community colleges rather than a single building. It was at one of these high schools that I substituted to make some extra cash during my masters program. As one would traditionally think of a substitute teacher, I was not a very good one. In a non-traditional sense, I was *the best* substitute teacher. I chafe under, and wholly reject, the idea of forced authority, an authority that I very much did not earn by having a college degree and going to one, 4-hour seminar describing the ins and outs of the job. Further, I did not pay attention to this seminar. It was bullshit. Like Bartleby the Scrivener, I preferred not to learn the made up and arbitrary rules, and so, I did not. I needed the money, and a school seemed as good a place as any to drop in for a few hours, make some cash, and quickly leave, avoiding eye contact at all costs.

Before each class, I had a standard spiel that went something like this: "My name is Mr. Robins, or Colin. I am your substitute teacher today. Ostensibly[22], you are supposed to do the assignment your teacher has outlined here [motion to paper]. However, I don't care what you do. I need to study for grad school, so this is how it will go. If you interrupt my reading by being loud or noisy or if you call my attention in *any way*, I will write you up for detention. I don't *want* to write you up for anything. But I can't get in trouble with other teachers. Therefore, as long as you are silent, you can do whatever you want. Whatever you choose to do, do it quietly." And this is how it went, and it went really, *really well.* I handed out zero detentions and was often invited back to "teach" again as one of the student's favorite substitutes.

[22] I did use "ostensibly" so I did let them know I was at least marginally qualified.

It was during one of these classes, a hushed, tentative whisper from various locations within the class providing the perfect amount of ambient background noise, the kind that washes over you like a shower with good pressure, that I came across *Labyrinths* by Jorge Luis Borges. It was a book I had stashed on a shelf for many years and for no real good reason ever read. It was a bit of a fortuitous coincidence, or as Morpheus said in *The Matrix,* providence. Some things are just like that. The art, or whatever it may be, lies in waiting for the exact right moment when you need it most. Then, whatever soul or inner mechanism that animates this art-thing springs to life, and it stumbles into your direct vision and life's path. Thus, during fifth period computer science when the class was playing a bootleg server of *Halo* against one another, I read a good chunk of the Borges masterwork[23].

Labyrinths is an interesting piece of cumulative fiction, a postmodern mash-up of traditional short stories, fake cultural histories, musings, and philosophical propositions that argue for some truly wild claims. The one indelibly marked in my brain forever is that of "Three Versions of Judas," which argues quite successfully that Judas is in fact the real savior and the one who truly sacrificed for mankind. This has been a standard rhetorical move for a long, long

[23] A quick sidebar: some random, non-science teacher came in and yelled at them for "breaking the wifi" and "hurting the server" by playing *Halo*. They seemed annoyed but chastened, and she left in a huff. That was, and remains, the biggest interruption in *my damn class* that I'd ever have, both substituting and professoring. I was incensed. First, don't come into my class and boss my children around. I have a strict laissez faire policy that is working like gangbusters, so back off. Maybe you should be learning from me. Second, that person was painfully wrong on so many things, so wrong that it was a disservice to knowledge. Breaking personal policy, I spent about ten minutes teaching that the content of the tirade they just experienced was most definitely not how servers work. I then showed them how servers and wifi actually work, did a very brief networking demonstration, and told them to go back to playing, reading, or whatever it was they were doing. After my impromptu lesson, I could do no wrong with this little band of nerds. I was not only a little punk rock; I was smart. Of course, the great irony was that being smart and kinda punk rock in *actual* high school had no immediate positive outcomes. Further irony might suggest that I, in fact, am not that clever. I'm just a nerdy looking white guy, and that for some reason earns me some authority, which I don't really want but nonetheless get. The moral is this I guess: life is long; just keep going. Turns out, most young adults, who are surprisingly people like the rest of us, simply want someone to listen to them and respect them without resorting to condescension and an unearned sense of control. Aggressive power, it seems, is best used sparingly, if at all.

time[24]: take a thing or an idea; invert it; argue for its veracity. However, this one rang more resonant and more shocking still when thinking holistically of the cultural import and space that Jesus and Judas occupy, that of the greatest betrayer ever and the greatest savior ever. How can this (supposedly true) guy, known as the greatest betrayer in the history of betrayers, be in fact the good guy, and not just the good guy but the *real* savior of humanity *instead* of the big special Boy Jesus?

Borges' argument is simple and obvious after he makes it–genius-level ideas often are. Quite simply, if Jesus was that of the great sacrificer and savior of mankind, who, in fact, is doing the real sacrifice? On a scale, who had to sacrifice *the most?* The guy who is globally praised every day in the most deistic and extreme language available, or the guy who is universally loathed and reviled forever? Each gave their life, but crucially, under what conditions? Borges writes:

> The ascetic, for the greater glory of God, vilifies and mortifies his flesh; Judas did the same with his spirit. He renounced honor, morality, peace and the kingdom of heaven, just as others, less heroically, renounce pleasure. With terrible lucidity he premeditated his sins. … He acted with enormous humility, he believed himself unworthy of being good. (97)

Jesus *cannot* be the capital-J ***Jesus*** without Judas. They are interwoven and connected forever. One ascends, one descends, in perpetuity. Like a great many CEOs and tech titans, someone else has to do the dirty work for significantly less praise and reward so they can purport to be Gods.

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[24] In Gorgias' *Encomium of Helen*, he does a similar thing, arguing for Helen as an innocent party in the start of the Trojan war, using multiple rhetorical styles and moves to make his point.

This inversion, of cultural norms, of subject matter, of ways of thinking, echoes throughout the entire collection, gaining volume and speed as the reader progresses through *Labyrinths*. It's a wild, often confusing, ride. A similar experience is reading Ludwig Wittgenstein's *Tractatus Logico-Philosophicus.* Each work, *Labyrinths* and *Tractactus,* offers kernels of knowledge, statements, and ideas that build and build and build until one finds that they might be trapped. Wittgenstein's philosophy is structured in simple sentences, each idea leading into the next idea, simple moments that resolve into an entire philosophical stance. Within *Tractatus,* Wittgenstein is attempting to understand the relationship between language and reality. In this confusing mess of language, what makes something real and not real? Where are the edges of the maze-like linguistics? Reading Wittgenstein forces the reader to understand the entire work as well as the individual pieces. He begins with a simple proposition[25]:

> 1. The world is all that is the case.
> 1.1 The world is the totality of facts, not of things. (Wittgenstein, 5)

There's 5 more propositions in this section, and the structure is what I want to focus on here. Small simple phrases, small rhetorical decisions, rapidly accrue and build until just a single page later, Wittgenstein is ready to make some pretty interesting claims:

> 2.012 In logic nothing is accidental: if a thing can occur in a state of affairs, the possibility of the state of affairs must be written into the thing itself.
> …
> 2.014 Objects[26] contain the possibility of all situations.
> …

[25] Citing this thing is both seemingly simple and clunky. I'll preserve the original spacing and structure, but lean on some standard grammatical stuff, like an ellipsis for ellison, to aid comprehension where needed.
[26] Hold on to this notion that ideas and language can be Objects, or, something real and tangible-seeming. You'll need it next chapter.

> 2.0271 Objects are what is unalterable and subsistent; their configuration is what is changing and unstable. (Wittgenstein 6-9)

The philosophy and logic can get a bit unwieldy the further one treks, but on its surface the idea feels really simple. The world is made up of facts, which can come in a variety of styles and ways. In logic[27], you can't bring in extra information, only information that is contained in the thing being analyzed. Therefore, whatever is "there" must already exist, since we already know that the world is made up of facts, nothing more. Finally, Wittgenstein offers a summative statement that pushes everything else not touched on out of the way. He writes, "What we cannot speak about we must pass over in silence" (96). Think of language somewhat like an atom. The initial structure presents itself as one thing, but an atom is made up of other things that have always been there. But what is *there*? According to Wittgenstein, *everything* is in there (and if it's not, don't worry about it, you shouldn't/can't discuss it), which then begs the question. What makes an object different from other things? He argues it's the organization, "the configuration," which makes up what something is versus what something else is. A stoplight is red and green; so is Santa Claus. It's the arrangement, the structure, that makes and gives meaning. This happens both on the surface of language as well as within it. This website, this application is itself a unique thing with specific facts based on configuration. There's only so

[27] There is a super sly trick going on here. By dropping in the qualifier "in logic", the structure that this entire work is presented (a longform enthymeme), he's somewhat giving himself credibility in his own work without providing all of the premises usually required of the logician. You have to fill in some of these premises. Who would impugn logic as an unsound way in which to reason?! That would be absurd! Further, if you don't get it or disagree, then you aren't understanding one of the premises that is conveniently hidden (and provided by you, so it's your fault). The claim of logic as impenetrable, which everyone learns in like, Logic 101, is untrue, is both a clever move and one that supports his point. Some things are true, and some are assumed, and if we can't quite get there intellectually, we must be missing something. And if we are missing something, don't sweat it. Just leave it alone and don't consider it. It's a clever intellectual trap.

much *stuff* (intellectual or otherwise); how someone arranges that stuff is, in a sense, the only thing that matters and gives meaning.

Wittgenstein builds a rhetorical structure through logic. Borges does something similar using short stories, building a structure that is similar to Wittgenstein but different in its outcomes and goals. The entire collection that I have features around 40 stories, essays, and an entire section called “parables” (a section I find immensely charming) referencing a lesson one should learn told in a similar fashion like Jesus might have told. But there is, of course, a crucial distinction between the two, a rhetorical choice that can feel very similar but is vastly different. Wittgenstein works the reader clearly and deftly through a complicated subject, building on previous statements to ultimately arrive at a concrete idea. Wittgenstein knows his ideas are complex, and he carefully and judiciously leads the reader through this complicated maze. Wittgenstein wants you to get it. Borges does not want you to get it.

He lures you in with this clever writing and true-seeming fictions about past civilizations and exotic places, an exciting fake fantasy world that feels really true, and maybe, just for a second, you do think it is true[28]. It is in this moment that the real epiphany occurs. Borges has sucked the reader into a complicated labyrinth. The distinction between a maze and a labyrinth is crucial. Creating simple structures that build to complexity, often confusing the reader and then reaching resolution or some version of enlightenment is a known story-telling structure that operates like a maze. It is only by going forward can one get through. While not completely mapping to chapter one’s hero’s journey, the maze structure has similar moves of beginning, struggling, overcoming, and finally enlightenment. People generally like this, and it feels

[28] Everything is professional wrestling.

intellectually satisfying. Borges is not seeking resolution. I mean, it's right there in the title. He doesn't really care if you "get it". You can checkout any time you like, but you can never leave.

It's an unsavory fact to admit, but we are all trapped, in some machination or another, known or unknown. What Borges does throughout the work, and what theme I will explore in this particular chapter, is the idea of circularity within a structure.

The Flywheel

I've worked for much of my adult life in an office. The office, in and of itself, isn't particularly memorable or notable in any way. Sure, the amenities change, the decor rearranges, and entry and egress points vary. But for the most part, offices are a fungible commodity, none better or worse than the other. The week preceding March 6, 2020 was only notable in that the tacos served in our corporate café were exceptionally good that week. I would get these tacos with my friend and fellow technology professional Zach, and we watched the stock market line graph begin to slowly curl downward, the beginning stages of a gnarled, arthritic finger. Some cautious broadcasters would broach the subject, but there wasn't any urgency or fear, not yet at least. There's some strange disease going on, but rest assured, we Americans are impervious to the trials of the rest of the world. It's almost enshrined in our public documents and most certainly anchored fast to our cultural awareness: other places are bad. But this place? This place is good.

In spite of our cultural conditioning to get in line and follow, Zach and I made a decision, a mutually agreed upon pact. In the best of times, the office is a place of collection. People sit together, work together, pass gossip back and forth. But other things get shared as well, and this new disease seemed a little bit different and more dangerous, and we had seen how a mild flu

could dominate our cramped quarters. That afternoon, we staged a tiny mutiny. We packed up our laptops, grabbed keyboards and mice, chargers, a handful of personal items like a picture of my wife and my dog, and I crammed all of those items into my laptop briefcase. I walked out of the office that Friday and never would return[29]. Time passed; I got a new remote job, which finally allowed me the space to consider something we all just accepted as a normal and usual part of life: what's the deal with offices[30], and why do we need to go there?

Americans love(d) a good office. We watched programs called *The Office*, both domestic and abroad. We love shows set in offices (*Mad Men).* Every lawyer show, or cops and robbers show, or medical drama, always ends up in some office somewhere. We used to spend a majority of our time there, so we liked to see our daily reality reflected back to us in a more entertaining and novel way. We were told that the office provided a place for culture, a place for belonging and meaning, a place that goes beyond the mere production of goods and services. Once we all left, it was priority number one to get people back into an office for seemingly curious reasons. In a written address to the Federal Workforce, President Biden noted, "And because of our progress combatting the pandemic, we can safely increase in-person work, while continuing to protect your health and safety." Jamie Dimon, CEO of JPMorgan Chase, took it a step further. Speaking at a conference hosted by The Wall Street Journal, he said of working from home, "It doesn't work for those who want to hustle. It doesn't work for spontaneous idea generation. It doesn't work for culture". Big business and big government, without a doubt the

[29] My point here is to note a change in attitudes and how I experienced it personally. If you want a more full retelling of the pandemic, check out *The Plague Year* by Lawrence Wright.
[30] Jerry Seinfeld voice.

most reliable place for the more sociopathic and controlling members of our society to really achieve, felt offices were essential.

The modern office as a design structure is representative of a larger way of thinking. *Peopleware* by Tom DeMarco and Timothy Lister outlined the problem with modern offices clearly and succinctly, all the way back in the first edition in 1987. The book is a well-researched and clearly written book on how to maximize productivity and satisfaction for knowledge workers, in this case, software developers and other technology professionals. They write, “The bald fact is that many companies provide developers with a workplace that is so crowded, noisy, and interruptive as to fill their days with frustration” (48). As a knowledge worker myself, none of these findings are surprising. If you need to concentrate for long stretches of time, a shared office is the worst place to do that task. A clear anecdote that has happened so many times that I can’t even pick one that is more egregious than the other, is a group of us, heads down working on complex problems, getting interrupted. This interruption is almost always by Sales or Manager types, who enter the space, get no attention from anyone in there, and thus must make a big fuss in order to get attention. These people proclaim one of two statements for all to hear:

1. “Why does everyone have headphones on? Must be nice to listen to music!”
    a. The headphones are to drown out the constant noise in an office, noise that is deleterious to knowledge work.
2. “Wow! It’s so quiet! I’m jealous!”
    a. The quiet is the result of deep concentration, a psychological state called Flow, which allows knowledge workers to do their job at a high-level. Also, you’re not jealous. You are loud on purpose.

We would then stop working, take off our headphones[31], make polite small talk, and then completely forget what we were working on. This is maddening for all people, but especially so for folks who experience many types of neurodiversity, for whom distractions and interruptions can be wholly debilitating.

The IT people in your life aren't maladjusted grumps who hate people. We are people who are constantly bothered and interrupted while working on hard things, and then admonished and ostracized for the annoyance that other's create for no justifiable reason. This isn't some made up problem or the complaints of a bunch of weirdos. It has a real cost, this loud and terrible office. DeMarco and Lister ran an experiment, asking developers to code solutions to a problem. The developers were broken up into three groups, with various levels of noise allowed during the exercise. They found, "Workers who reported before the exercise that their workplace was acceptably quiet were *one-third more likely* to deliver zero-defect work" (65). The study goes on to note that, unsurprisingly, noisy environments increase the number of defects a developer introduces into her work. As the pandemic wore on, much hand-wringing and concern occurred over whether all those lazy employees were slacking off at home. Turns out, the office as "the place to work" was and is a made up story we tell ourselves, a place for control not productivity. Over time, research found that companies experienced no productivity losses and largely experienced productivity gains. The International Labor Organization found a marked increase of output during the pandemic, noting, "The world's output per hour worked surged by **4.9 per cent in 2020**, more than double the long-term average annual rate of 2.4 per

[31] I had a manager who required us to remove our headphones when someone came in to talk to us, a behavior they weren't supposed to do and one we actively discouraged. I always liked when someone came in to ask when their project would be done when I was working on their project and I would show them their project not being done because they were asking me when it would be done and then we would just look at each other.

cent registered between 2005 and 2019. This is the fastest global growth in hourly productivity observed since data have been available." (Emphasis added). Rather than working harder or longer hours, being removed from noxious office spaces allowed people to be more productive while simultaneously spending less time working.

In one of these office spaces, a book was once recommended to me by the Head of Sales[32], and as someone who tries to give things a fair shot, I read it. Jim Collins, Stanford MBA and Management Consultant[33], wrote the I guess "influential" work on modern management "theory"[34] *Good to Great: Why Some Companies Make the Leap and Others Don't*. Along generally banal and obvious "insights" like "hire good people who are self-motivated" and "have a competitive advantage in your market", came a decently intriguing insight about modern business that has since been used and perverted many times over. The concept is called The Flywheel, and a tidy graphic introduces the concept reasonably well:

[32] Shoutout to Ross. He was always cool to me and let me do my work.
[33] Double red flag for anyone who's not a Director or above. This dude is about to cut your benefits and probably some of your coworkers. Also, enjoy those generic powerpoints.
[34] Cards on the table: this book is mostly bullshit, full of obvious seeming stuff to normal people but revolutionary ideas to I guess management consultants who are used to just cutting companies to the bone and then leaving. I don't love air quotes (just say what you have to say) but people reference it this way. Do I think those people are right? I do not.

Hubspot.com, The Flywheel

Simply, a successful business strategy is to attract strangers, engage them in some useful way so they become prospects, delight them with your product so they become customers who then are so in love they want to evangelize your product to others. This then turns other strangers into prospects, and around and around we go. For modern business, this is a revolutionary idea, because it suggests some measure of quality in the products that people are sold[35].

For normal people who live in the Real World, this is so obvious as to be meaningless. Framed differently, the Flywheel encourages businesses to do the following: create a product people *actually like and want to use* and then provide mechanisms or encouragement to *tell other people*. The fact that this idea is revolutionary is a scathing indictment of turn-of-the-century business, where I guess the guiding principle was to create products and experiences as cheaply and quickly as possible, and through advertising, monopolies, and shady government contracts, brute force and bully people into buying their product. The big takeaway

[35] One of my favorite commercials in the past ten years was this Dominos commercial effectively saying their product is terrible, they knew it was terrible, and now please consumers trust us we made some changes. I think about this commercial and idea daily, and it's insane to me. And yet, *it totally worked.* Americans are forgiving to a fault, the cowards.

of “make stuff people like using” shouldn’t be that wild of a concept, and one that definitely doesn’t warrant an entire section of a book, but here we are. Further, this is a pretty standard UX principle called “social proof”, which means “People are guided by other people’s behavior, so we can represent the actions, beliefs, and advice of the crowd in a design to influence users” (Nielsen Norman Group). The fact that The Flywheel was able to be codified and marketed as “new” just speaks to the intellectual vapidity and short-sighted corporate greed driving almost all business book’s that purport to have some sort of singular secret to Win at Business.

The Flywheel and the Modern Office should be forever in conflict. The Flywheel is made for customers, who supposedly require some measure of wooing and respect in order to purchase one’s product. However, once hired, the office is merely a place to work, rather than a place to delight, so the tendency for quiet, productive places for people to work is hardly ever a priority. Some major tech companies, in an effort to stand out among other, fungible type work spaces, have attempted to create “fun” or “interesting” work spaces, and this worked, for a time. However, once the average employee figured out that the reason for all these amenities was to increase work hours and effectively entrap the employee, they became less successful. Generally, offices are spaces that are confusing, hard to navigate, and generally hostile to doing excellent work that would delight customers, so much so they’d tell their friends about it. However, these two things are linked and support one another. On the surface, it’s a bit of a paradox, that of the flywheel and the office. But Objects contain the possibility of all situations and an Objects configuration is what is changing and unstable, then offices contain the capacity to change and morph. Designer and information architect Jorge Arango, author of *Living in*

Information: Responsible Design for Digital Places, thinks about software not as a transaction but as a place where one can exist. He writes:

> Most contemporary discussion about software design frames the object of the work as a product, tool, an interaction, or (at best) a service–all transactional and, to a greater or lesser degree, ephemeral. Software applications do have characteristics of all of these things, but they also have characteristics that make them place-like; they create contexts that influence the way we understand the world and, hence, how we act in it. (XVI)

When we act on software products by clicking on a website or scrolling through an application, we often forget how that software is acting upon us. A mean-spirited throwaway comment on a post or a thumbs down emoji, over time, can impoverish the soul. The internet is not only a place where you do stuff. The internet is also a place where you are, metaphorically[36]. The Flywheel creates a virtuous cycle that begins with a good product and ends with more customers learning about that product. The office perverts this idea, creating not a virtuous cycle but a restrictive labyrinth, a place of confusion and disorientation.

The Apple+ show *Severance* highlights this idea beautifully. The show takes place at Lumon Industries, a mysterious and shadowy corporate place where the workers of the show aren't exactly sure what they are doing. They are reassured, by way of a mystical and reverential explanation, that, "The work is mysterious and important." There are some heavy cult-like language and themes, and much of the show takes place underground in winding and inscrutable hallways and cubicle farms. Meeting product goals nets workers a chinese finger trap, and particularly exceptional quarters are rewarded with a Melon Party, which as we all

[36] TBD on where you are, "literally," the goals of VR and AR, two things that so far don't really work well or solve any problems while introducing a whole host of other ones.

know are at worst gross and at best forgettable[37]. The show's title references a required procedure workers undergo, which severs their brain in such a way as to make their work life and their outside life completely separate. Those outside of Lumon can't remember the work they do inside of it; those inside Lumon have no idea what happens to them once they leave. As workers descend in an elevator to their work below, they are switched from an outside person (learned) to an inside, work person (ignorant). Inevitably, this inside/outside structure leads to conflict, as well as some truly inventive and magnificent story-telling. This idea poses a few questions worth really considering. Why do a job that you don't want to remember? Does going to work, in essence, feel like a real type of death, where your Inner-person is forever imprisoned?

The ideas and structures that created the modern workplace are largely codified into our cultural attitudes writ large, and they get reified and reinforced every day into the technology that we use. The conditions by which a product or person is made materially affects the final product. Choices are made in production, and those choices aren't set in some stone tablet somewhere, unalienable. They are active decisions, often made from little insight or information. The Flywheel suggests that this cycle is virtuous, but the structure of the modern office is structured in such a way as to create confusion and entrapment. Once severed from the day to day hustle of commuting to work into offices, I was able to see more clearly the cage in which I was ensnared. Once rejected, it was hard not to see labyrinths everywhere. The Jeeps were and have always been–everywhere[38].

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[37] Seriously. If you are ever at a party and someone says, "Oh good someone brought *melon!"* Go find a better party. You deserve more in your free time.

[38] Chapter two callback! Remember? Jeeps and confirmation bias? Good!

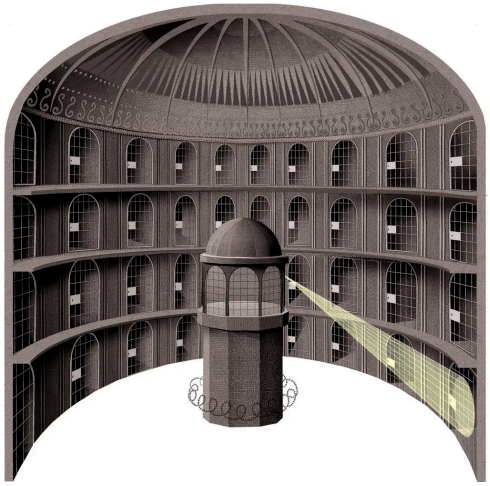
The Gristmill

One day, you might get a call from HBO, and they are going to offer you the big development check. It's going to have a few commas on it, so don't get nervous or freak out. Stay calm; you got this. Obviously, the big development check is a good thing, so call your friends and family and let them know that you won the lottery. Susanna Clarke got the big check, a promise and a plan to develop her best-selling novel *Jonathan Strange & Mr Norrell.* The book (and show) follow the exploits of the two eponymous characters in 19th century England where magic exists but is looked down upon. Think Harry Potter plus Downton Abbey but make it slimier, dirtier, and more dangerous. It's a fun, although somewhat slow, show.

After the commercial and literary success of *Jonathan Strange & Mr Norrell*, Clarke's next work was eagerly anticipated. Mining another historical source, this time the Italian architect, archeologist, and artist Giovanni Battista Piranesi, Clarke's next work *Piranesi* tackles what it means to be free, to search for knowledge, and to trust another. The book follows the main character, Piranesi, as he wanders around cataloging various curiosities within a magical labyrinth, making meaning from the duplicitous corridors where he lives, and occasionally meeting with a mysterious person called the Other, who serves as a sort of friend, boss, and jailer. No spoilers here, but suffice to say various things happen, new discoveries and secrets are revealed, and we ultimately learn that our main character was trapped against his will in the labyrinth. He is presented with a choice: to remain; or leave. Woefully, the many years he spent as a prisoner changed him. When given an opportunity to return to his previous life as a free man, he initially refuses, like Brooks from *The Shawshank Redemption*. Too long spent in any prison ensnares more than just the body; it entraps the mind. This new prison has become his

home, and he is loath to give up the familiarity of his work, producing a detailed list of the various sculptures around the labyrinth. We never really learn why or for what purpose this catalog serves, only that it's something that needs to be done, forever. The work, it seems, is both *Mysterious and Important*.

This point towards the end of the novel is a crucial one for our understanding of modern technology and design. When physically constrained within a labyrinthine office building, where one's mind becomes artificially limited in scope and told to do something by a person in power, the subjugated person begins to believe that their limited experience is wholly representative. This style of power is best explained and analyzed by Michel Foucault's work on the idea of the Panopticon. In short, the panopticon is a confinement structure that allows a single viewer to observe multiple confined spaces without the person within that space knowing for certain when and whether they are being observed. It looks a little like this:



"Surveillance State", The New York Times

For Foucault, the panopticon is a multi-tool weapon that's main goal is to exert ultimate power on those being observed. He writes in *Discipline and Punish*:

> He is seen, but he does not see; he is the object of information, never a subject in communication. The arrangement of his room, opposite the central tower, imposes on him an axial visibility; but the divisions of the ring, those separated cells, imply a lateral invisibility. And this invisibility is a guarantee of order. (200)

Similarly, modern technological businesses rely on the user as a source of data, a resource that can be packaged en masse and sold. This is easiest when the user doesn't know they are in fact the product being sold, the invisibility referenced by Foucault. The general rule is this: if a product is free, then it is *you* who are for sale. Foucault notes the central observer as crucial in exerting power over those within the cells. A single person can control a mass of people rather easily. A single app can harvest billions of people's unique and specific information. Over time, prisoners become dislocated from one another, broken apart and severed from their power as a collective by the singular structure of an individual in power. The many bend to the will of the singular, a perverse reverse democracy[39]. One never knows when and if they are being observed, therefore, it makes a certain type of sense to always follow the rules. The structure exerts individual control at scale; there's no latitude or option for misbehavior. Creativity often springs forth from this type of misbehavior, a desire to flex and bend the rules. Within confined structures, creativity is all but snuffed out, subservient to rules (arbitrary or not) and the invasive sense of forced, controlled community. This is social proof, mentioned above, as a method by which to control outliers, dissenters. Foucault concludes, "Hence the major effect of the Panopticon: to induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power. " (201) The ability of a single individual to

[39] In theory and name only. Modern democracy works like this.

dehumanize and control people at scale certainly feels like an idea that's really familiar. Unfortunately, I just can't put my finger on what that structure is, so we will have to move on.

"The Cubicle You Call Hell Was Designed to Set You Free," Wired.com

Foucault's panopticon relied on an individual to exert control. But our modern society reifies power in a different, more pernicious way. Working from Foucault, philosopher Byung-Chul Han advances the idea of the panopticon into a more ephemeral but no less dominating social idea. While not a literal building with literal guards, Han notes how now social ideas and expectations of behavior exert very real control over individuals. Similar to Jarango above, the idea of a "place" still gives context and operates similarly to a literal place without all the messy buildings and physical structures. Han call this social structure an "Achievement Society," and in his book, *The Burnout Society*, comments:

> Today's society is no longer Foucault's disciplinary world of hospitals, madhouses, prisons, barracks, and factories. It has long been replaced by another regime, namely a society of fitness studios, office towers, banks, airports, shopping malls, and genetic

> laboratories. Twenty-first century is no longer a disciplinary society, but rather an achievement society. (8)

For Han, the new more troubling notion is that of the exploitation of the self without interference from some larger state or overarching control apparatus. Rather than requiring a central observer, the modern Achievement Society exploits the individual by requiring "success" or read differently, production, in order to successfully follow the rules. Disciplinary society restricts; achievement society forces the nonstop pursuit of success, netting effects similar to the ravages of any type of extreme addiction. Han notes the distinction:

> Disciplinary society is a society of negativity. It is defined by the negativity of prohibition … Achievement society, more and more, is in the process of discarding negativity. … Prohibitions, commandments, and the law are replaced by projects, initiatives, and motivation. Disciplinary society is still governed by *no*. Its negativity produces madmen and criminals. In contrast, achievement society creates depressives and losers. (8-9)

Instead of spending time disallowing someone from doing something, fill their time with meaningless and time-consuming meetings, emails, and interruptions. Rest is stupid and for the weak. This goes by many names, but the modern version is "hustle culture." Every single influencer on the internet is trapped in this cycle. If one isn't using every free moment to produce, to achieve, to attain likes and subscribers, then that person is wasting their life. What's never mentioned or thought through is productive for whom? Achievement–why?[40] If the end goal is constantly shifting, always requiring more and more, a person can never really be done.

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[40] I like playing music. For me, it's fun and I have no goals. My buddy and I even have a band, Galactic Dragon. We don't really have any songs or anything. We just like playing and having fun. This idea, for many people in my circle, is kind-of baffling. Don't I want to record it? Make money? When I tell them "not really" or "we don't really think or care about that," these ideas feel *deeply weird.* There are no longer hobbies or activities for fun and joy; there are only business opportunities. The only path is the path towards money. This is a lifestyle bereft of the animating features of life.

There's no end. There is only hopelessness. There is only more work, no matter how mysterious or important.

Much like the latter character development of Piranesi, this endless work and endless toil creates a person afflicted. Regardless of how pointless the whole exercise is, one must finish their work because one has the ability to do so. Piranesi eventually does leave but regularly comes back to the labyrinth, a liminal figure struggling between the free, outside world and the confined, knowable space of the labyrinth. Now physically free, he remains emotionally and spiritually constrained. The prison worked. Piranesi becomes a person functioning in a convoluted space between Foucault's structural discipline (the prison of the labyrinth) and Han's personal self-regulation (achievement). He was tricked and forced to be there by larger more powerful outside forces, but when forced back into freedom, he is conflicted. Should he remain shackled to familiarity and the past, or return back to his own reality and his own time, a place that's new and unknown? Tellingly, the main reason he wants to stay is to *finish his work,* work he does with little understanding of its utility or value. Perseverance, *Piranesi* proposes, can be perverted for its own purposes.

Mazes and equally confined and disorienting spaces are rife across modern and postmodern literature. Alongside Borges' *Labyrinths*, John Barth, in his titular short story from *Lost in the Funhouse*, begins, "For whom is the funhouse fun? Perhaps for lovers. For Ambrose, it is a place of fear and confusion" (76). The story follows Ambrose, a young man who explores a funhouse inside of an amusement park, commenting on the story and its telling as he explores. This isn't exactly a ringing endorsement of what is, thematically, a representation of the modern American consciousness circa the 1960s and 1970s. For Barth, society was and is a confusing

mélange of disoriented reflections, each mirroring a grotesque caricature of attitudes, behaviors, and social mores. Social media only makes these caricatures more extreme and abhorrent, each post an escalation of tone or intensity, each new thing a more extreme version than the last. Like Han notes, we participate in these activities to achieve some measure of success, and we are conscious of not only our own behavior and looks but how those behaviors and looks are interpreted. Thus, we tend to overly self-regulate online, watching what we say and to whom we say it. This creates an equal and opposite backlash, so when someone says something outlandish that abuts the norms and accepted realities of real world society as well as "internet culture," they are perceived to be "canceled," often waving this title around proudly. A clunky and often misused phrase is "cancel culture," the idea that society creates too restrictive and regulated spaces in which to voice one's opinion. It's a mostly hollow phrase without much teeth, either intellectually or morally. But what I think really gives "cancel culture" obsessives and freaks the most trouble is not the words themselves, but someone else providing a sense of social regulation, of having to actually be responsible for the things they say and the reasoning and logic they use in which to make arguments, either in good faith or more often than not, bad faith.

The literature of the mid-century tackled labyrinths in a specific context, that of the negative and the bounded. This again reinforces and reintroduces Foucault's prison, a place where one is still internally free, albeit externally bound and dominated. Barth approaches the modern maze-like condition in amusement, and Borges suggests that a labyrinth is one of the mind, but each shows a labyrinth as externally wrought and applied. But as we transition closer to the end of the 20th century, years of discipline and training aren't as needed or required as a

method of control. Like Han describes, we start to seek these structures out, a masochist society in pursuit of self-domination. These ideas, much like the ones presented by the modern office, become internalized, the dominant mode of thinking of things as they are rather than things as constructed. Interrogation of the obvious and "true" narratives needs a little bit of a postmodern demolition, and no one does a good takedown piece better than David Foster Wallace.

Another eponymous essay from a larger collection, Wallace's essay *A Supposedly Fun Thing I'll Never Do Again,* is simple in conceit as it is complex in its analysis[41]. A magazine paid him to go on a cruise ship and report back what he saw, a fairly wide open and paralyzing prompt for someone as neurotic and prone to over-analysis as Wallace. In fifty-ish pages or so, Wallace is able to sum up my own feelings about modern social dynamics in a way that I knew to be true but could never quite vocalize. For as long as I can remember, I hate and adamantly reject what I call "forced fun." I hate being coerced into a circle, where we all should just give a quick fun fact about ourselves. I don't like scheduled volleyball at 9am, and I most certainly, after saying good morning, don't want to repeat it again because *c'mon we can do better than that!* These social structures are noxious and limiting, a type of freewheeling panopticon whose only goal is to force you to feel something that should come naturally. This type of stuff is the exact opposite of a good story. A good story builds and carefully and deftly brings about a true

[41] I assigned the opening two pages (two pages!) for a class to analyze and prepare for discussion. They found the two pages to be too dense and complicated to really get through. After much prodding, we did, in fact, get through them, but they did not have a good time. It's a good piece of writing like that.

emotion. These types of forced fun activities *make* you feel something. Wallace notes these elements aboard a cruise ship, or as I see it, the prison of the sea[42].

The essay is worth a read in its entirety, but the germane parts are easily excised. When discussing his initial feelings aboard the ship, Wallace gets right to it towards the beginning. He writes:

> The product [cruises] is not a service or a set of services … It's more like a feeling. But it's also a bona-fide product–it's supposed to be *produced* in you, this feeling: a blend of relaxation and stimulation, stressless indulgence and frantic tourism, that special mix of servility and condescension thats marked under configurations of the verb "to pamper"... The fact that contemporary adult Americans also tend to associate the word "pamper" with a certain *other* consumer product is not an accident." (260-261)

The goal here is not to inspire or delight from natural circumstances or the skillful telling of a beautiful story. Once aboard, you are a mere cog in the grand entertainment machine, and the experience is designed in such a way as to force you to feel or think a certain way. It is brute and industrialized forced fun. Put another way, this is a type of socio-entertainment propaganda of the highest order, and any sort of higher order thinking or deep analysis (like Wallace provides) is strongly discouraged. Sip the mai-tais, use fifty towels a day, and in no way interrogate the environmental and human-dignity costs that must be paid to produce this particularly weird and grotesque outcome. I mention this story at this juncture because this is in a very real way how the modern internet functions. As long as I can post my hilarious memes, I shouldn't interrogate the larger environmental or human costs associated with such extreme levels of interconnectedness. I am actively encouraged to participate in the modern internet without

[42] Watch *The Last Cruise*, which chronicles the Diamond Princess cruise liner and the guests who were trapped aboard during the initial phases of the Covid-19 pandemic. It is, in almost every way, my actual, literal nightmare of a situation.

attending to any concerns about privacy, malicious designs, server farms baking the planet, or hostility from the worst corners of society.

Wallace, more so than most, can feel his own smallness in comparison with the vastness of the floating panopticon. He writes:

> There is something about a mass-market Luxury Cruise that's unbearably sad. Like most unbearably sad things, it seems incredibly elusive and complex in its causes and simple in its effect: on board the *Nadir*–especially at night, when all the ship's structured fun and reassurances and gaiety-noise ceased–I felt despair. The word's overused and banalified now, *despair*, but it's a serious word, and I'm using it seriously. For me it denotes a simple admixture–a weird yearning for death combined with a crushing sense of my own smallness and futility that presents as a fear of death. (261)

In the face of the grandiose and awe-inspiring, a single person is essentially null, a human rounding error. Awash in the great tide of a cruise ship's wake or the internet's stream of information, it's easy to feel trapped, separated, useless, and impotent to the very real and crushing forces of the outer world. Everything sucks now, has sucked in the past and will continue to suck in the future, so why bother? Make another design that hurts its users; create another "platform" that dehumanizes and exploits. Who cares? This despair, offered by Wallace here on a cruise ship but made manifest more globally by the internet, is a very real and tangible problem. All of our connections it seems, both physical and spiritual, are brittle.

Much like the cruise ship and the very literal severing of one's work mind from the rest of one's life, there's an underhanded manipulation going on that speaks to a darker truth. Cruise ships are rife with sexual assaults, poor wages, and dangerous working conditions. So while the average cruise-goer complains of a slightly under-heated steak or not as cool as one would expect lobster claw, workers from third-world countries toil behind the scenes in dangerous and

cramped conditions to make sure the show, very much, goes on. I think it's a tempting idea to compare this type of manipulation with the manipulation of "storytelling" writ large. They both deal with emotion management; they both attempt to take you (literally for the cruise, metaphorically for a story) from a place of unknowing to a place of knowing and back, now much more enlightened. The cruise ship-goer sits on the dock, travels to wondrous places, and returns maybe slightly changed, although that part I am less convinced. Stories, too, take you from a place to a different place, back to a similar place now more enlightened than before. However, a crucial variable in this equation is both agency and choice. A story doesn't have to be read. A story is something you choose to participate in, and as such, you often get what you put into it. A cruise ship offers a similar level of choice; you don't have to go. But unlike a story, a cruise ship manufactures the experience for you. You get everything and put in nothing. Your effort, really, isn't all that necessary or wanted. As long as you're slathered in sunscreen, ready to limbo and dial your clocks all the way to Island Time, you're good to go. The more pliable and dead-brained, the more successful your cruise experience will likely be. Like Ambrose, and *Severance*, and Borges, and the culture pervasive within offices, the less one thinks, the better one is–better to be used, manipulated, and thrown out on the street when the company needs to be "right-sized" for future profits[43].

Final Products

The cultural conditions that are created and reinforced by the modern office leach into the products made there, and then those products go on to reinforce and justify the conditions

[43] You know who never gets fired or laid off? The executives who supposedly run the businesses that, presumably, aren't running well or optimally and therefore require layoffs. Curious.

under which they were made. If I feel hopeless and severed from the feelings and concerns of the outside world, how can I make products or experiences that are helpful and useful for people? The modern office typifies larger problems, both with technology as well as how we structure our thinking and work. These problems, much like the structure of offices, are not particularly new or novel except for one crucial, modern development. Globalization plus monopoly powers incentivize cheap products, restrictive labor policies, and generally bad products and bad experiences. Biden and Dimon ignore this, and sell the fiction to the American public via stories. These problems used to be localized, a thorny issue for your neighborhood or state. Unfortunately, our specific brand of American problems now have massive network effects. The unintended consequences of our perverse office and work culture end up getting into everything and everywhere, an equally troubling aerosol agent of destruction similar to Covid-19. Rather than a mere place of work, the modern office is a labyrinth, a maze built solely to entrap the mind and the soul, a place that over time will coerce and defeat. Spend enough time in the abyss and assuredly, you become abysmal.

But it doesn't have to be this way. There are ways of thinking, outside of the technological space, that can help course correct into a more positive and helpful future. Some of these solutions might feel backwards or contradictory, and some of them might come from places that the average person may not expect. But rest assured, there are solutions and there is a way to, if not completely reverse, improve the way we think about work and technology. So far, I've highlighted how stories can be used to lay bare the negative conditions of the world. This is definitely something stories have done, historically, and something they will continue to do, in perpetuity. Stories are good at digging up insights that are hard to understand. I've used

many of them in this chapter to provide insights into how we think about spaces. Stories can worm their way into resistant minds and offer new modes of thinking and new ways to consider information, affecting real change in the world.

As I noted above, the modern internet has reached a nadir[44] as typified by Elon Musk's takeover of Twitter. Gone is content moderation, stable technology, as well as anything resembling good user experience. The new Twitter is a place that doesn't care about its users and is actively hostile against many of them, mostly the ones who belong to minority groups. But I don't really feel cynical or sad that this product is the way that it is. Twitter, now, is just lazy and stupid, and laziness and stupidity are known quantities that can be fixed. There's a tongue-in-cheek "law" called Hanlon's Razor that posits, "Never attribute to malice that which is adequately explained by stupidity" (Bloch, *Murphy's Law, Book Two).* To fix the internet, we don't need a revolution of ideas. We need a minor evolution towards understanding and awareness. In the next chapter, I'll discuss how to engage with complex issues more deeply by focusing on small details, how to be a more emotionally resonant and empathetic reader which can help combat technological hostility, and how developing good judgment and good taste can improve society.

[44] At least I hope so! [laughing nervously]

Chapter 4 - Emotions, then Stuff

Technology fills a great portion of our daily life. We use it to work, we use it for entertainment, and we use it for the gaps in-between those two activities. Technology, it seems, is ubiquitous. In a certain way it is, and many conceptions of technology operate under this condition. A computer or phone is a single node within a vast network of interconnected nodes. This, on its face, is definitely true. It feels really simple. A computer calls a server, gets the ok, sends information, and that server then passes it along to another connected device on the network that requested the information. Simple as that. The internet works on one, flat plane, like a car driving through a street. Something leaves point A and follows a straight line to point B. This *can* be, and is true–sometimes.

However, more exists within the devices we use and the structures in which they inhabit. Things and ideas and whole layers of philosophy live within our stuff, but most often they are hidden, hard to find, or purposefully obfuscated. A flat level of understanding of the internet and the technology that powers it is a simple one. I'd venture this idea is oversimplified as to be incorrect, but this understanding is not without value. It has a lot going for it. It's simple. It feels pretty true. It's easy to share with others. But it's also not quite right, not completely. This conception of how the internet works and the technology that powers it lacks depth and context, two crucial ingredients in critical understanding. Like the inhabitants of *Flatland* come to understand, understanding without depth or context doesn't quite tell the entire story of what something is. You'll miss the entire picture of what's real. The internet is most assuredly a labyrinthine structure, easy to get lost within and difficult to escape from. And building on this puzzle, there are more than just left and right turns. To escape, you'll need more than front and

back movement. You'll also need the confusing ability of needing to go both up and down, left and right, across, down, every direction in three-dimensions and occasionally the fourth dimension–time. As Ender learns in *Ender's Game* when he is first confronted with weightlessness in space, there isn't a stable place from which to view a single thing, holistically. Everything is relational to one another by connected points rather than a firm location, and each thing changes as one changes both who they are and where they are when looking.

What this means in practice is that, sure, the internet is something you can use in a linear fashion, moving in a straight line from logging in, browsing, clicking, and purchasing. However, there are depths within the internet itself, both as the Thing as it is represented socially, the Thing as it's represented philosophically, as well as the Thing as an Object that exists in the world. Any IT support person can verify this as true, as countless numbers of the people they support refer to these machines as The Computer or that Thing, tiny little boxes with human-traits and agency of their own. This always felt weird to me, assigning human-like qualities to clearly non-human things. I know now it felt weird because *it was* weird and also because it is true–paradoxical. There's a certain animating spirit within objects that when held too long or too seriously falls through one's conception and understanding, kernels of the unknown slipping away like sand on Arrakis. Perhaps it is a deep-seated alarm within our psyche to ascribe negative agency to objects we find threatening for their assumed intelligence and efficiency. This thing is a threat; it must be monitored at all times. But maybe that's not so weird after all? Maybe these technological objects do contain something within them that gives them some sense of kinetic animus, and by better understanding them, we can seek to disarm them.

In this chapter, I'll present two major methods by which to consider the different structures I've discussed so far. Previously, I've discussed structural and technical methods by which to understand. This chapter will focus on the harder to pin down, but no less resolute, philosophical and maybe even spiritual ways to understand technology. First, I'll review short stories and literature, and provide a way of meaning-making and looking that isn't always so clear and obvious at first. How do we dig into a short story and find the kernels of truth buried within? Next, I'll interrogate the objects themselves. What's inside there? Is it merely components and parts, or is there something else going on? Finally, I'll interrogate the act of creativity itself, and how one goes about making both stories and stuff. How does it happen? What goes on when we make something?

Each of these facets, each new way of looking and considering isn't really right or wrong. I wouldn't even say that one is better or worse than the other. I don't really operate in that mode of thinking anymore after being a designer for so long. Goodness and Badness are always relative. Rather, what I suggest is that these strategies are ways of making meaning, ways of consideration that then offer some measure of success or failure, with all of the attendant confusions and questions of what it means to "succeed" or "fail". Is a design that doesn't work quite well enough but contributes knowledge and ideas to the final design in meaningful ways a failure? Sure; maybe. Maybe not. But that's not really the goal. Consider this as a trip to the home improvement store. While you won't always need all the tools or knowledge offered here, when you have the specific tool one for the right situation[45], the job becomes much, much

[45] I swapped out a few toilets once in my house. At first, I used a mish-mash of random tools to get the job done. It took a long time. The next time I needed to swap a toilet, I purchased the 4$ tool specially made for unscrewing specific types of screws that are used on toilets. It took about 5 minutes. Did I *need* it, strictly speaking? Not really. But it sure made the job easier, more enjoyable, and ultimately, more successful.

easier. But along the way, it's also important to understand how to think about solutions. This is where we will begin.

Taming of the screw

In 1974, philosopher and writer Robert Pirsig published his breakout book, *Zen and the Art of Motorcycle Maintenance.* A very mild American picaresque, the novel follows a father and son as they traverse the American West on a motorcycle as they attempt to repair a damaged and broken relationship, and often, a damaged and unresponsive motorcycle. The son is young and petulant. The father gruff and quick to anger. When recounting the travel narrative portion of the work, the book is told in a fairly straightforward and descriptive fashion, a standard telling of events as they unfold. However, what really drives *Zen* as a work with staying power decades later is the short interludes discussing notions of Quality, what it means to solve problems, and how we as people go about considering and thinking about those problems. A particularly notable moment involves a single screw that effectively debilitates an entire motorcycle, rendering it essentially worthless. A single, small thing echoes, tearing down the functionality of everything around it.

Pirsig writes, "If you want to build a factory, or fix a motorcycle, … classical, structured, dualistic subject-object knowledge, although necessary, isn't enough, You have to have some feeling for the quality of the work. You have to have a sense of what's good" (284). It's not enough to merely understand who acts (subject) and who is acted upon (object). Something else exists within this space, and for Pirsig, it is a notion of Quality[46]. For Pirsig, and myself as

[46] So you've probably noticed all these mid-sentence capitalizations. These aren't arbitrary or "not understanding how capitalization works," as the worst professor/teacher/manager-type of my entire life once noted. This is my *doctoral dissertation*, so do the math on the volume of that number and the meaning of that statement. These are capitonyms, which reference the translation of Plato's works and the use of capitalization to show transcendent

well, understanding a thing's Quality is a relational exercise in understanding both context and situation-ness. How does this thing relate to other things and those things to the initial thing? Under what conditions does this thing operate, and under what conditions does this thing *do what it's intended to do*? Rather than looking at a broken screw as a part to replace, Pirsig encourages looking at the job a screw does in relation to other items doing jobs. In Pirsig's example, a single broken screw is preventing his motorcycle from running, but what is important here isn't getting a new screw and fixing the motorcycle. All solutions seem obvious after one goes about the hard, sometimes seemingly impossible work of finding it. The method by which one thinks about locating the screw to fix is only possible through a process of understanding and ultimately, revealing. What's important is the process by which one evaluates "brokenness" and the relationships created and caused by this break.

Forgive the longish quote, but this next part is important to understand and needs more context than the usual short-ish quote would provide. He continues:

> Normally screws are so cheap and small and simple you think of them as unimportant. But now, as your Quality awareness becomes stronger, you realize that this one, individual, particular screw is neither cheap nor small nor unimportant. Right now this screw is worth exactly the selling price of the whole motorcycle, because the motorcycle is actually valueless until you get the screw out. With this reevaluation of the screw comes a willingness to expand your knowledge of it…
>
> If you concentrate on it … you will come to see that the screw is less and less an object typical of a class and more an object unique in itself. Then with more concentration you

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ideas that represent an ideal, yet unattainable, state. So when I (and many, many others) write things like Quality or Beauty, they are meant in the philosophical sense of highlighting a term that then gets explained more fully or deeply, in this instance "perfection that is unattainable but worthy of pursuit," which is a deeper and more meaningful understanding of capitalization, writing, and communication and neither a mistake nor a misunderstanding of how any of that works. But hey; when you're looking to be awful to someone for questionable reasons, you use whatever you can, no matter how indicative of one's ignorance and/or stupidity it may be. This all nets out to the following lesson: seek to understand and ask questions, less you become an A-hole.

> will begin to see the screw as not even an object at all but as a collection of functions…What it *is* has ceased to be a category of thought and is a continuing direct experience…You are interested in what it *does* and why it's doing it. You will ask functional questions. (286-28).

Without consideration, it's far too easy to overlook simple things that can cause big problems. A small, broken screw can break an entire motorcycle. A poorly written line of code can offer a backdoor for hackers and malware to break giant systems. The goal here is not to encourage some level of neuroticism and paranoia about every small and minute thing every minute of every day. Rather, the goal is to offer a method by which to solve big problems by beginning at the very simplest of ideas and considering what role they have within a larger system. It's easy to look at the big picture, and in fact is so encouraged in our modern discourse as to become cliche.

What Pirsig offers here is useful methodology not only for User Experience, one I use daily, but understanding how things work and break in a variety of ways–big and small and the echoes and ramifications of each. Sometimes, you need a new computer. The whole thing is trashed. Sometimes, you just need to restart it. Both would solve the problem, but one is simple, efficient, and effective. It's always tempting to point one's finger at big, monolithic-seeming structures and say, "tear these mf-ers down." This is an often popular (yet intellectually lazy) way of offering "analysis" of "problems," one that nets out a great deal of scholarly articles and yet very little tangible solutions. Pirsig offers a way to think about things, both big and small, and consider their *function* within a system rather than their *location* or presumed *value* within a system. Why tear down an entire monolith, when a well-researched

and thoughtful analysis of the structure would reveal how a single crack in the right spot would do the job just as effectively as a wrecking ball?

This type of monolith destruction was and is a popular way by which to understand the world. It's got a fun catchy name, postmodernism, and for a while made a lot of sense as a way to understand the world and affect change. Fredric Jameson in his major book on the topic, *Postmodernism, or the Cultural Logic of Late Capitalism,* calls attention to this change. Rather than Pirsig's depth, Jameson notes a shift in our social thinking. Our contemporary culture is defined by two main tenets: depthlessness and pastiche. For Jameson, our culture has rejected depth in favor of capital. Why make something deep, complicated, and interesting when one can make something superficial and profitable? Jameson looks a little bit backwards to make his claims. One support column for his argument is Warhol, who's Campbell's soup cans were meant to interrogate and represent the notion of art within a capitalist space (9). He compares them to Van Gogh's infamous shoes, meant to portray not merely the opportunity to purchase shoes but the very lives, actions, and culture of a people portrayed by a single object. These three objects–soup cans, shoes, screws–contain much more than just soup, people, and functional utility. They are representative of *ideas*, a cultural milieu made obvious by objects. The stuff we have, and use, represents who we are, as much as we like to pretend it does not. For Jameson and postmodernism, what is being portrayed by our objects is shallow, superficial even. We are *too* free of depth and nuance, and the typical means that we would use to criticize our stagnant and repressive culture, parody and/or satire, have become a toothless pastiche devoid of an intellectual or social power. There's not even enough Quality within these items to even offer critique. He notes, "Pastiche is thus blank parody, a statue with blind eyeballs: it is to

parody what that other interesting and historically original modern thing, the practice of a kind of blank irony, it to what Wayne Booth calls the 'stable ironies' of the eighteenth century" (17). As a culture, we used to be able to rely on certain types of rhetorical structures–parody, satire, irony–to poke fun (often, at those in power) and affect change. For Jameson, those opportunities are gone. There is no There there. Postmodernism, then, remedies this by doing all of the tearing down and none of the building. There's nothing worth saving. But there's always something worth saving, and postmodernism's desire to destroy leaves behind rubble that can be sorted, cataloged, and rebuilt with. In order to answer these claims and offer some measure of a solution on how we can make things better, we need to ricochet around time a little bit.

Russian philosopher and critic Mikhail Bakhtin in his chapter "Epic and Novel" from the *Dialogic Imagination* comments, "After all, every great and serious contemporaneity requires an authentic profile of the past, an authentic other language from another time" (30). Bakhtin is attempting to reconcile the differences between the Epic, a structure I've laid out in Chapter One's hero journey and a newer form of writing, the Novel[47], which doesn't need or even want to follow a strict, rigid structure in order to tell stories and make meaning. The Epic is often standalone, rigid, and inflexible. It doesn't offer the ability to bring in *other intellectual stuff*, a requirement for the understanding of Quality that Pirsig noted above. The Epic is a monolith; the novel is more amorphous. In a sense, the novel is like the modern internet, a place where

[47] "New" and "Old" here are real, real generous in their scope. For Bakhtin, old means like, thousands of years old, and new means only a few hundred years. Intellectual thought is often like this, requiring a fair amount of context to understand what's going on. I technically study "contemporary" literature, which is a scant 80-120 years, give or take. So I get it–this can feel kinda weird, time-wise, saying new and old. Particularly now when an "old iPhone" is like, one year old in some cases.

multiple nodes and seemingly disparate pieces of information can coalesce to create something weird, new, and interesting. He continues:

> No matter how distant this object is from us in time, it is connected to our incomplete, present-day, continuing temporal transitions, it develops a relationship with our unpreparedness, with our present. But meanwhile our present has been moving into an inconclusive future (*Epic and Novel*, 30).

For Bakhtin, the novels of the past offer a means by which to understand the future. Taken more liberally, the past can be instructive of the future, giving and making meaning on things that don't exist yet. While Jameson suggests that cultural objects are too devoid of meaning and value to make productive critiques and changes, Bakhtin suggests we can somewhat short circuit the intellectual tradition. We can use the past to make meaning of the present-day, and we can use the present-day to influence both the past and the future based on the interconnectedness of the structural forms of writing. The novel has the capacity to make meaning by fluidity, rather than rigidity. There is no "right." There is only "right"--for right now. Novels don't have a right answer; they are mirrors, reflective of the conditions by which they are received, understood, and discussed. This, for Bakhtin, is the crucial work of the dialogic imagination. The conversations about something and the understanding that is created from this process *across time* is where the meaning of a novel is both continually made and constantly transformed. Meaning, then, is borne from the past, observable within the present, and able to make and understand the future.

George Saunders leans on both Jameson and Bakhtin in his work *A Swim in a Pond in the Rain,* a guide-like work that takes short stories, and leaning on his years of being a professor, teaches the reader effectively *how to read*. In his introduction, channeling his inner Jameson,

Saunders writes, “We live, as you may have noticed, in a degraded era, bombarded by facile, shallow, agenda-laced, too rapidly disseminated information bursts” (5). But unlike postmodernism, Saunders goes a step further, offering solutions and methods by which to understand. None of this is new or particularly groundbreaking for any Liberal Arts Types who have done this type of work before. However, it isn’t particularly common or practiced among those in other disciplines and thus bears repeating and sharing. Further, his methodology for analysis is a good reminder on how to simply *exist* and carefully consider any work for itself, rather than stripmine the piece for Key Takeaways and listicles. He continues:

> The basic drill I’m proposing here is: read the story, then turn your mind to the experience you’ve just had. Was there a place you found particularly moving? Something you resisted or that confused you?A moment when you found yourself tearing up, getting annoyed, thinking anew? … No need to dress up your response in literary language or express it in terms of “theme” or “plot” or “character development” or any of that. …
>
> The main thing I want us to be asking together is: What did we feel and where did we feel it?” (All coherent intellectual work begins with a genuine reaction.) (6-7)

Notably absent are any notions of good versus bad; literary devices being used and their effects on the reader. The first step of any level of understanding deeper and more complex pieces of Art or Literatures is really, really simple. What did this thing do to you, emotionally? How did you feel and where did you feel it? That’s it. After, if you want, you can then go back to the parts of that Art or Literature Thing and see why those things made you feel that way. But simply understanding *what* you feel and *where* you felt it is the main thing. There’s this idea that literature and art are hard to understand, and sometimes literature can be confusing, I’ll concede that. But I don’t think they are ever hard to understand when considered this way,

arguably, their truest and best way, with all these high-brow conceptions and exclusionary jargon stripped away. At the end of the day, it's a simple proposition. After you read this thing, how do you feel?

Saunders, like Pirsig, is asking the reader to do less. They both ask the reader to consider information cautiously, slowly, and carefully with a keen eye towards the internal mechanism within one's mind. Pirsig suggests that by understanding small, simple things and how those things work, one can solve big impossibly seeming problems. Saunders suggests something similar, using simple emotions and their location within literature as the place to begin understanding. He concludes:

> What we're going to be doing here, essentially, is watching ourselves read … Why would we want to do this? Well, the part of the mind that reads a story is also the part that reads the world; it can deceive us, but it can also be trained to accuracy; it can fall into disuse and make us more susceptible to lazy, violent, materialistic forces, but it can also be urged back to life, transforming us into more active, curious, alert reader of reality. (8)

Effectively, what Jameson bemoans and problematizes and what Pirsig, Bakhtin, and Saunders offer solutions for are all the same. The way to understand and make meaning of the world is by slowing down and understanding how the thing we are looking at works, either physically, temporally, or emotionally. Rather than immediately reacting and responding, slow down and consider. Rather than rushing to *say something*, a crucial technique offered by stories is to *feel something* in order to *understand something*. Put another way, rather than using emotions to fuel action, use emotions to fuel understanding of the self and how the self makes meaning. Another word for this is Empathy. Another word for this is Love.

How it's made

A single screw offers a moment of reflection, a place to consider functionality as well as how a part affects the whole. What is the thing made of? How does it do its job? How does this job affect other jobs that other things do? In User Experience, this is called Systems Thinking. Systems Thinking looks at input and outputs, both human capital as well as physical processes, and analyzes how stuff gets accomplished or made. A broken water pipe not only affects water production[48], it affects the other parts of the system that rely on water like washing dishes or clothes. In effect, every thing in a system affects every other part of a system, both forwards and back. To use an extreme example, a broken water pipe might not let me wash clothes, which could affect my job performance, which could lead me to losing my job, which would then prevent me from earning money to fix the broken water pipe. Systems, like stories, are often circular, self-contained, and highly integrated.

Each system is made up of other systems, and down the rabbit hole we could go if we so desired. Pirsig offered a human-centric approach to understanding how things work. We, as people, consider the screw. However, what if we inverted our frame of thinking, shifted our paradigm ever so slightly to not consider the person in the system and instead considered the things in the system and the *system itself* as objects and structures that have their own animating features? The objects around us, perhaps, have agencies and motives of their own, crafted and held deep within their being. Can stuff have a Soul? Maybe items have thoughts, feelings, and intuitions about what they should be used for? This feels a little silly, until, like I've noted above, you hear us human-types use phrases like, "The guitar wants to be played" or

[48] I had a broken water pipe the night before writing this and let me tell you. A broken water pipe really screws up *everything*.

"The Computer doesn't want to work today." Do these things actually have something like a Soul, or Motive, or are we merely imposing our own view on these lifeless things, giving them energy where none existed? Do these things have some sort of internal motion, a forward movement that practically forces the user to use them for a certain outcome? I think I would suggest in this chapter that two things can be true at the same time. Two things can be false, as well.

Jean-Francois Lyotard in *The Libidinal Economy* writes, "Everything is what it is because each thing resembles another thing," and it is through this lens of interconnected *thingness* that we begin. In our lived world, there are a great many objects, artifacts, items, commodities, devices, gadgets, instruments, tools, utensils, implements, thingies and thingamabobs and thingamajigs, gizmos, and doodads[49]. And yet despite all their unique and special qualities, they each share similar traits of their essence that interconnect them. To lean on our platonic capitalization from above, there are things and then there are Things; there objects as well as Objects. One denotes a generic category; one denotes a specific way of thinking about that item. If we consider these items at all, which we rarely do, we tend to think in a binary way–working or not working. In most design sessions, we spend a great deal of time focusing on things that aren't correctly working, moments within a design that are troubling, confusing, or don't allow the user to accomplish the task that they set out to do. Software designer and programmer Alan Cooper in *The Inmates are Running the Asylum* notes early on, "It's one thing to see that a problem exists, but it's quite another to devise a solution" (19). When the printer doesn't print, it's pretty obvious that it's not working. A thornier and more interesting question

[49] Who's-its and whats-its galore.

is *why*. Almost always, the problem isn't the surface one immediately obvious and clear to us; the problem lies behind the obvious thing that *feels* like it should be the place to begin one's work. The problem is the *thing behind the Thing*.

Bill Brown in his article "Thing Theory" provides a basic outline for how items in the world can be understood. He comments, "As they circulate through our lives, we look through objects (to see what they disclose about history, society, nature, or culture—above all, what they disclose about us), but we only catch a glimpse of things" (4). Brown is doing two things here, both of them important. First, he is calling attention to relationships like Pirsig previously, that of the observer/actor and that of the observed/subject. As people, we often position ourselves as the actor, or as the kids would say, "the main character." This is the starting point of most interrogations, and a place where Pirsig encourages us to move beyond–the simple understanding of subject-object relationships, actor and acted upon. Like Lyotard suggests and Brown notes, when we view or use stuff in our lives, we almost naturally view them in relation to other things–this is like that except in a few ways that are notable. Natural comparisons and ontological categorizing is an outcropping of this tendency. There's phylums and genuses and all sorts of scientific language for saying how a beetle is like other beetle-things and not elephant-like-things. For people, that often turns into hierarchies, where the thing I like is better than the thing you like. When presented at scale, this is a Twitter argument over some banal and facile subject matter, a boxing match of semantics that is almost always a waste of time.

Secondly, Brown gestures quite subtly at a more hidden and less apparent facet of objects, noting how we as viewers "only catch a glimpse of things." We can see how things relate in our lives, but we aren't really able to see in totality the essence of an object in

question. As Pirsig and Saunders advocate for, if we look more closely and slowly with emotional resonance at the forefront, we could unearth an important distinction within the nature of an object. As Brown later notes in his book *A Sense of Things*, items within the world can be categorized in two ways:

- Things
    - *Things have value*, measured by successful functioning, utility, or some other value-derived from a person's experience with them
- Objects
    - Objects have lost their value by either not working or no longer serving the role they were supposed to fulfill[50]

Pirsig's example of a screw shows this shift. A screw holding up an important part of the motorcycle that contributes to the motorcycle functioning is a Thing. When that screw breaks or no longer works, it shifts into an Object. Brown continues, "We begin to confront the thingness of objects when they stop working for us: when the drill breaks, when the car stalls … when their flow within the circuits of production and distribution, consumption and exhibition, has been arrested, however momentarily" (4). This moment of breakage is often a moment of frustration and negativity. I want this artifact to work and it's not working–I don't like that. But instead of shifting immediately to negativity, we could choose to stop and consider, like Pirsig and Saunders suggests, to consider something altogether different. Are we mad it's not

[50] Heidegger, who we will discuss in a moment, introduces similarly parallel but slightly different concepts. For Heidegger, there are two ways to approach the world: *Vorhandenheit* (present-at-hand) and *Zuhandenheit* (ready-to-hand). *Vorhandenheit* suggests a more theoretical stance when approaching the world, while *Zuhandenheit* refers to a more practical relationship to things that are useful. One can endlessly analyze the world and the things within it, creating theories and ideas for discussion and thought. However, one's relationship with the practical world is that of interaction and utility. We can forever think of the hammer and its many layers and meanings across art and time, but a hammer is also a practical object that has real-world uses and applications. This tension, that of objects as theory and objects as practice/utility, is an important insight. Planning and thinking about things is great, but sometimes it's more useful just to *do*, to *act.* Knowing the right time to stop analyzing and start doing is tremendous creative skill, one I still am working to understand.

working, or are we mad it's not showing us what it is? Do we miss the action the Thing did, or do we miss how the Thing made us feel?

Brown works from a position articulated by Martin Heidegger[51] in *The Question Concerning Technology.* Items only have value insofar as they can be used for something productive, calling on the Greek term *poiesis* or "to make". Taken a step further, then, we can consider technological artifacts as a method by which to bring-forth truth, order. He writes, "Technology is therefore no mere means. Technology is a way of revealing. If we give heed to this, then another whole realm for the essence of technology will open itself up to us. It is the realm of revealing, i.e., of truth" (12). The phones and computers we surround ourselves with can log into Facebook, send emails, and also post funny pictures around the world. What these items can also do is function as a Thing, where their primary ability (although often hidden or hard to discern) is revealing the true nature of that which is already there. This, then, poses a more sinister and troubling question. We bemoan the cruelness and vapidity of the internet; but was this already there in our society, ever-present just oft ignored? The technology we use

[51] No need to bury the lede: Heidegger, for a chunk of his life, was a Nazi. Obviously, not great and very, very bad. How do we square up really important philosophical contributions with other more noxious and baffling lines of reasoning that are clearly and painfully anti-semitic? Bernad Stiegler's "Doing and Saying Stupid Things in the Twentieth Century" sums up and solves this conundrum quite simply. Heidegger, for all of this intelligence and insight, was also stupid, and forgot that he, as sharp and as lauded at the time as he was, *could* be stupid. Stiegler writes, "This is above all a question of my stupidity such that it is capable – that is, such that I am capable – of making me ashamed: a stupidity such that I perceive my being stupid. Without which (for want of being stupid, of being able to be) I would not be able to be affected (pained, struck) by the stupidity of others, or to have shame for myself (as if their stupidity necessarily and immediately becomes mine): without that, I could not be made ashamed." Steigler also notes Heidegger's passion, which allows him both to chase down complicated notions of Being and Technology, working against him when chasing down ideas of German dominance and anti-semitism. So what, then, do we do with this guy? I use him as a cautionary tale of awareness. A hammer can build a house; a hammer can kill a person. Not allowing or forbidding hammers doesn't make them go away; it simply hampers those who need them to build houses. For everyone, and especially those who achieve great success of any kind but *especially* intellectual success, an awareness of the power of one's ideas and the requirement for further and aggressive interrogation of those ideas (since they now have scale) is paramount. Otherwise, you might forget that you, too, can be stupid and say stupid things, and you might say some truly regrettable and awful things that can and do tarnish your entire body of work. Heidegger is a cautionary tale, a lesson all should remember about remaining sharp, humble, and aware.

can show us something, and it can teach us something as well about the things that often live within the ineffable ether with a hidden essence. Technology isn't only lines of code for function. Technology can reveal truth and emotions that were long buried. Technology can be just as wondrous and magical and dangerous and scandalous as any painting or sculpture. Technology can be art.

In the "Origin of the Work of Art," Heidegger attempts to understand how art creates within the viewer a deeper understanding of things and a person's position relative to objects. Heidegger begins by making some careful delineations in the world of stuff. He starts by understanding what art is *not*, before tackling that which it is. Brown notes there's a difference between Things and Objects, but Heidegger has another category worth consideration as we examine the technological objects in our day to day life. Heidegger notes a subcategory, that of Equipment, who's value hinges on its capacity to be reliable, fashioned by people, and ultimately, forgettable throughout the course of one's life. The oft-used and reiterated Heideggerean example is a hammer, only knowable through its utility. A hammer is decidedly not art. Its chief characteristics are its ability to function and its desire to be forgotten.

However, art serves a very different purpose, that of revealing. He writes, "The art work opens up in its own way the Being of beings … In the art work, the truth of what it has set itself to work. Art is truth setting itself to work" (38). Although technology is typically understood through the framework of its Greek etymology of *techne* as craftsmanship or craft, Heidegger suggests that art is a place for revealing, both of itself as Art and something within the viewer. Similar to an interface that a user has never seen before, as they work through the particular flow or screen, something very tangible is happening. Interactions occur between both subject

(person) and object (interface). When we look at art, we assume there is some back and forth occurring as the person views the art in question. However, we seem to forget this back and forth when dealing with computers or technology. We assume that we only put things in, that we act upon technology. In return, we get whatever it is that we want. However, technology is telling us something very important, and in a tangible way, is acting upon us as well.

A quick example is the infinite scroll. Social media uses the infinite scroll to trap users, encouraging them to continually scroll down the page (and stay on their app) endlessly. This encourages addictive behavior, similar to a slot machine. This is called "gamification" in the technology space and is a wildly pernicious and troubling way to design things. Technology, in a real way, changes behavior, modes of thinking, and emotions almost always for a profit motive. What technology is revealing is our capacity to understand, to think, and to listen. When something breaks, as Brown notes, we are *definitely* aware of the limitations and flaws of a computational system. But these flaws always exist, have always existed, and likely, will persist. It's merely our capacity as people to understand, to see, that fluctuates.

For Heidegger, Things can be thought of in three discrete ways: "as a bearer of traits, as the unity of a manifold of sensations, as formed matter" (30). He uses a granite block to prove his point. A granite block bears the traits of being hard and gray. It also can be understood through a viewer's senses (such as sight or touch). Finally, it can be thought of as a form, "the distribution and arrangement of the material parts in spatial locations, resulting in a particular shape, namely that of a block" (27). These particular traits can be a bit muddy in our modern conception of Technology as Things. Assuredly, computers have definable traits, but those traits seem to be more hidden and hard to find as time progresses. Anyone who's tried to fix their

own iPhone can attest to this challenge. Apple uses proprietary screws that require special screwdrivers to access and use. A user can definitely touch and see a computer, but they don't see the computer, not really. They see the interface layer atop the circuits and components, a pleasing facsimile of life in what is in reality a gray machine that bleeps and bloops. Further, the iPhone has a form, no doubt, but not really an organic one in any real sense. A painting has brush strokes, visible by the human eye as remnants of the human hand. An iPhone is machine milled, designed and built largely on *other* computers, a thing making a Thing to make more Things. The kaleidoscope folds upon itself infinitely. All of these layers, one atop another, compact and compress until the kernel of Truth deep within the system becomes too hard for the average person to find. And yet, it remains.

Heidegger puts two items in conversation with one another to prove his point: a physical pair of peasant's shoes and a painting of peasant's shoes by Van Gogh. The peasant's shoes are equipment; they serve no other purpose than to function as protection for one's feet. They don't "say" or "do" or "possess" anything other than their assigned function as protection. Heidegger notes their "reliability" as a defining trait that makes them equipment. This is how we consider our computers, our phones, on an unexamined and cursory level. The shoes invite no further examination; they are common, mundane. Conversely, Van Gogh's painting can give a deeper understanding and *reveal*—of the peasant woman's world, her place in society by revealing the shoe's inner essence. Heidegger comments, "This painting spoke. In the vicinity of the work we were suddenly somewhere else than we usually tend to be" (35). This transformation occurs in art for Heidegger because he views art as "the happening of truth" (37). Art's function is to reveal a thing's general essence through work (arguably, the work of

reflection, examination, and interrogation). Like Saunders suggests, we should stop and consider how these items make us feel. Heidegger summarizes his initial thesis on art at the end of the opening section, writing, "The art work opens up in its own way the Being of beings … In the art work, the truth of what is has set itself to work. Art is truth setting itself to work" (38). Where we have gone astray and currently struggle with is tension.

Most modern computers hide themselves within themselves, trapped between layers of proprietary screws and purposefully hidden software, a labyrinth of technical prowess and design. There's a decent reason for this–proprietary information is extremely valuable and limiting choices for users helps them use the product and not feel overwhelmed. But by hiding everything about the machine and leaving only the visual interface, the user isn't able to accurately view what this Thing is and what its true function desires. Art is so powerful that it *forces* a revelation within the viewer, but art's unflagging interpellative power gets muddled and confused when packed into a metal case. Technology is Art whose function as a Thing is to reveal, but in our contemporary society this function is so hidden as to be thought of as Equipment. How, then, can we learn to see and tap into the technology's power as Art? Do we need to pause, like Pirsig suggests, and look at the simple small things around us? Do we need to focus on feeling at certain moments, like Saunders recommends? Perhaps, we need one more skill.

Ken Kocienda was a principal engineer[52] of iPhone software at Apple for over fifteen years. The on-screen keyboard on every iPhone and seemingly now every phone, the one that

[52] If you aren't familiar with technology like, ranking and status, principal anything is at the top and pretty rare. Most organizations don't even have, or need, one. It mostly works like: Associate [title]; then just [title]; Senior [title]; Lead [title]; Principal [title]. It's pretty similar to academia or the military. The point here is Principal is a big deal.

doesn't require buttons? He figured that out and made it work[53]. Kocienda wrote a book, *Creative Selection: Inside Apple's Design Process During the Golden Age of Steve Jobs*, that tells the process by which decisions are made within Apple. He tells a great many "how we did it" type stories within the book, and I highly recommend it for anyone who wants a real, thoughtful recounting of how stuff is made and how decisions are made on that stuff at a really high level. But what Kocienda does best is his discussion not necessarily on technical problems to solve. Those, generally, are more scientific in approach and more linear in thought. Often, when solving a problem, some engineers cook up a few solutions to a problem, test them to see which works pretty well, and then refine those ideas into what they believe is the best version of that thing. This works great for technical problems. This does not work at all for design decisions. Those are nebulous. Which shade of blue is better? You might think this is a silly question, but it most definitely is a serious one. People generally believe that designs that look better *work and operate* better, and in a marketplace with similar products, looks matter. This is called the aesthetic-usability effect (*The Aesthetic-Usability Effect*, NNG), and I can tell you from personal experience it is true. How then, do you decide on the blue?

There's a few ways, and they are indicative of how companies operate and make decisions. Google is very technical and data focused, and Kocienda cites Doug Bowman, a former Google employee, on how they go about making decisions:

> Without a person at (or near) the helm who thoroughly understands the principles and elements of Design, a company eventually runs out of reasons for design decisions …

[53] The story itself is super cool, using dictionaries, probability, and previous letters typed to make accurate guesses as to what the next letter is based on the relative locations of the letter typed and its surrounding letters. The whole explanation and process of how he figured it out is super smart and interesting, and he tells it in a really compelling, natural way.

> Without conviction, doubt creeps in. … Reduce each decision to a simple logic problem. … Data in your favor? Ok, launch it. Data shows negative effects? Back to the drawing board. *And that data eventually becomes a crutch for every decision* … Yes, it's true that a team at Google couldn't decide between two blues, so they're testing 41 shades between each blue to see which one performs better" (213, emphasis added)

As a "numbers are always true while language is flexible" denier, this matches my life experience perfectly. Numbers are useless without context, and this idea that numbers can tell the whole truth, always, is patently false. A person who operates under this condition, and as expounded upon by Stiegler, has lost the ability to be stupid, to consider that their viewpoint might in fact be the wrong one. Without entertaining the idea that one's viewpoint could be incorrect, true analysis will be difficult, borderline impossible. Numbers, like language, require context, and that context can be manipulated, adjusted, and repurposed for all sorts of reasons. Bowman continues, citing further issues with the "follow the data and launch" mentality:

> In this kind of test, commonly referred to in the high-tech industry as an A/B test, the choices are already laid out … While the A/B test might be a good way to find the single most clickable shade of blue, the dynamic range between best and worst isn't that much. More important, the opportunity cost of running all the trials meant there was less time available for everyone on the development team to dream up a design that people might like two, or three, or ten times more. A/B tests might be useful in finding a color that will get people to click a link more often, but it can't produce a product that feels like a pleasing and integrated whole…Google factored out taste from its design process.(212-213)

This isn't to say that testing things isn't useful. It most definitely is, but testing can only tell you so much in a limited way. Ultimately, a person needs to have a certain skill that allows them to see beyond the numbers into the realm of Heideggerian Art. The person needs a refined sense of color, shape, and often an intuitive sense of what works and why. A person needs to be able

to see deep into the Being and Essence of a Thing in order to understand. How did Kocienda and Apple make decisions? He writes, “When it came to choosing a color, we picked one. We used our good taste–and our knowledge of how to make software accessible to people with visual difficulties related to color perception–and we moved on” (214).

Good taste is required to make something great. It is as simple as that. What, then, is “good taste?” There’s no accounting for taste, as the saying goes, so what does that even mean and how do we get it? Kocienda suggests, “Taste is developing a refined sense of judgment and finding the balance that produces a pleasing and integrated whole” (183). This is a bit of an annoying statement, because it’s true but also easily refuted when the plane of argument is shifted away from the aesthetic to the technical. Often, people will demand *definitions*. My sense of judgment and your sense of judgment are different. What does “balance” and “pleasing” mean? This line of thinking and interrogation completely misses the point. This isn’t a technical process that can be brute forced and tested into a solution. There’s no formula to solve. It’s a question of how hundreds of decisions work together as a discrete whole. Kocienda writes, “The small-scale justifications must contribute to a scheme larger than themselves. The design responsibilities expand to balancing the many individual refined-like responses against the other side of the taste equation, the attempt to create a pleasing and integrated whole” (186). Solving one variable changes all the variables. Choosing this color of blue negates all other blues, and affects how that blue works within a larger, complicated, and shifting aesthetic landscape. There is not a “final” answer or theorem to solve. To do Good Design, one must have good taste and to have good taste is to understand small decisions (like the screw) and how those small decisions all coalesce into a single artistic Thing (that creates feeling).

This is an aesthetic understanding of how Art creates Thingness (often using Beauty) as a compilation of a multitude of factors. Instead of reading a spreadsheet, to have good taste we need to stop and consider function and how we felt at the moment of consideration. This feels like some mystical power, but I can assure you it is not. I have good taste, and I am wholly unremarkable. Good taste requires work like every other technical discipline, but it's just a little harder to discuss because it's centered in the emotional world rather than the analytical world. Emotions can feel fleeting and unmoored, but they are very much real and worthy of attending to when making decisions. Arguably, attending to one's emotional life is the *only* way to make artistic decisions. Where, then, do we start? Kocienda offers the path forward, "Studying great work from the past provides the means of comparison and contrast that lets us tap into the collective creativity of previous generations. The past is a source of the timeless and enduring" (184). As an engineer would study great buildings from the past to understand their timelessness, so too can a designer (or anyone) study great work from the past to gain an aesthetic understanding. Taste, then, is a compilation of skills performed at the same time: function; utility; performance; and an awareness of how an item is situated among other items, both in their action and in their aesthetics.

Hello, world

In the work *10 PRINT,* poet and professor of Digital Media Nick Montfort examines how a single line of computer code can offer a glimpse into the culture that created it. He writes, "Like a diary from the forgotten past, computer code is embedded with stories of a program's making, its purpose, its assumptions, and more. Every symbol within a program can help to illuminate these stories and open historical and critical lines of inquiry" (3). Far too often, this

examination begins and ends with the technical machinations required to make a computer *do stuff.* For a long time, computer advertisements worked this way, pushing a technical message that companies felt users cared about. How big is the memory? How fast are the processors? Tell me all the *data* about a thing. But Apple shifted the understanding of how computers worked, pushing an aesthetic and feelings-based approach to computing that made them more accessible, genuine, and relatable to the average person. No longer were RAM and megabytes important; they were replaced by what could I do on a computer and how could that computer engender some measure of an emotional response.

Technology is a place to reveal, and society has forgotten this power. In its place are infinite scrolls, advertisements, hate speech, and distracting nonsense. As Brown suggests, we only notice this thing to object, valuable to value-less transition, when technology stops working for us, which it most certainly has. The artistry within technology has been lost among its other functions. Computers fade into the background much like Heidegger's Equipment when they are working properly, and as Brown notes, it's only when a Word document freezes or an email jams are we forced to pay attention to the details of this larger Thing we are using. But paying attention is important and highly valuable, as Saunders suggests. Arguably, it's the only thing worth doing. For when we look deeper into the machines we use on a daily basis, they are telling us something, and the way we interpret that something is how we, as people, always interpret things–through story. By understanding stories, we can understand the message that technology gives. By using techniques discussed in this chapter, we can more ably understand that when something goes wrong what that means, why it happened, and how to fix it.

By stopping and considering the small details, like Pirsig suggests, we can see computers both as a place of artistic creativity as well as function, so when something on the computer doesn't work quite right, we can consider the functions behind it. When we approach a piece of noxious content or hateful actions, we can, like Saunders suggest, stop and consider the emotional resonance this piece of information has, and then act accordingly, rather than blindly flying into a rage and responding with equally hateful and noxious behavior. Finally, like Kocienda suggests, we can make better things in the future by relying on good judgment and Good Taste, an action that is a learned skill for everyone and not some innate, specialized talent. Technology allows us to be everywhere and nowhere all at once, and this ubiquity and dislocation creates a tension inside one's Self. But this tension can be resolved; it need not persist. By understanding how things work, and by choosing how to look at something differently, we can, maybe, do a little bit better tomorrow than we did today. Small things accrue into big things, and those big things can, if we want, do good rather than harm.

Conclusion

"I've been thinking about how, when I was younger, I used to walk into a bookstore full of wonder. When I was a kid, I walked into a bookstore like, 'Look at all this stuff I'm gonna learn.'

As a grown-up, I walk into a bookstore like, 'Look at all this stuff I'm never gonna know.' Oh. It's hard, man. It's hard to see your ignorance alphabetized. I don't *like that*. I'm at the Staff Picks section.

I'm like, 'Of all the things I don't know, these are Brian's favorites.'"
Sheng Wang, *Sweet and Juicy*

Coheed and Cambria's *The Second Stage Turbine Blade* was released in 2002. I was a junior in high school, filling out college applications and studying for Academic Decathlon, the high school nerd olympics. I would end up getting third in state and missed first place by about one hundred points, which tracked across the ten events means I missed getting first place in state by about a question or so every other test. This was, and is, *a hard pill to swallow*. The idea that small decisions over time coalesce into outcomes, rather than large pivotal moments like the stories I found so inspirational, annoyed me then and annoys me now. A single decision can have huge effects. Thus, be careful and thoughtful when making things; your influence might be greater than you imagine. Anyway: *The Second Stage Turbine Blade.*

My friend purchased the album right when it came out, and we listened to it shortly thereafter at his house in between bouts of *Tony Hawk Pro Skater*[54] and microwavable pizzas. The disc is a convergence of a wholly unique idea set to equally interesting music. The band Dredg's initial album, *Leitmotif,* had a similar effect[55]. Hearing and being wholly overwhelmed

[54] Which one? *All of them*. I celebrate the entire THPS universe/catalog, remake included.
[55] What are we doing here? Are these just some hamfisted attempts to get some weirdo pop culture stuff you like into the scholarly and academic canon? Who's to say.

by something that both feels and is new and fresh is a rare experience and even rarer as one gets older. That's why the young are so passionate, borderline strident, and the old are so weary, borderline disgusted. Young people get to have powerful, epiphanic moments every other week it seems. I get excited, genuinely excited, to have sparkling water at lunch instead of the usual flat. Experience and time dulls sharp edges, things begin to blur, and moments of overwhelming creativity fade and become increasingly harder to find. The user experience of life trends towards ennui.

Coheed's entire catalog consists of concept albums, works that have a clear theme, focus, and story that is told across the album. To add another degree of difficulty, all of Coheed's albums are in the same narrative world. Subsequent albums build and transform the narrative structure laid out in the first album. Dredg also writes concept albums, but their focus is on philosophical stories that deal with the nature of existence, reality, and what it means to make art rather than science fiction. Creating a band that does this–make concept albums that center around a sprawling, multi-planetary conflict–seemed, at the time, impossible. Only later, as I sit here reflecting and trying to give context without sounding completely unhinged, do I realize what a challenging and near-impossible proposition this must have been. Claudio Sanchez, the band's lead singer and incredible hair-haver, pitched to some record executive in early 2000, hot off the heels of pop-nu-metal acts like Korn, Limp Bizkit, and Linkin' Park, a slate of albums that go something like:

> "So it's a space opera that takes place in an interconnected galaxy of planets called Heaven's Fence, all connected by a powerful beam of light that provides energy called The Keywork. Coheed and Cambria are mild-mannered parents on one of the planets, Apity-Prime, until they find out that the Supreme Tri-Mage Wilhelm Ryan implanted

> them with an invisible weapon, the Monstar. To protect the galaxy, they must kill their children before the virus becomes active in them. Additionally, Coheed and Cambria learn they have special powers, much like their parents. Further, there are war-angels and evil mages, cyborgs and devil's grown in test tubes who all battle both for and against this abstract notion of God as well as the interventions and actions of the people within Heaven's Fence. Please sign my band."

And wouldn't you know it, they *did.*

This type of generative thinking requires, quite simply, belief–either in one's self, an idea, or a group. Further, this type of thinking requires a willingness to be in conflict with the attitudes and ideas of the day. New things are scary, but believing in them and then advocating for them is the type of thinking required to move forward. A great many Coheed and Cambria songs follow this mantra–rousing moments of optimism, hope, and belief couched in the crackly tough exterior of progressive rock. Famously, one of their more beloved songs from *The Second Stage Turbine Blade*, "Everything Evil," says quite simply, "Goddamnit–we'll make it, if you believe."

The album as a whole is a serious artistic accomplishment, not only in the temerity in pitching a science fiction space opera as a prog rock metal concept album, but then the gall to actually go out there for 20-plus years and keep making it happen, year after year. It's inspirational to see someone take an idea that, on the surface, doesn't fit anywhere, and then to go make that idea a reality. For the times, both in which the music began and the pall under which the music is still being made, this felt and feels deeply weird. Belief feels, and often is, in short supply. The institutions we were taught to rely on failed, work against us, and now actively

are antagonistic towards us. This is, of course, the end result of capitalism: the glutton, after consuming all available food, eats itself.

It doesn't have to be this way. We can try new things. To start, to re-energize, a new type of looking and understanding is a useful place to begin. We can reexamine stories, how they emotionally affect us and how much of them are actually true. We can look at how stuff is made, how the grid that everything is laid out upon might be more than just a collection of squares. We can review where we work, how we work, and how we think about that work. And finally, we can try to think new thoughts, whether it be by looking more deeply at simple things, like a screw, or by considering what our Things might ask of us, in return, if they were given the opportunity. Would the stories like how we use them; would they agree? Are they true? Are the things we own proud of how they are being used? Would your computer reject you if it could?

Importantly, who's at the center of all of these things? I'll tell you. We are. We always have been and we always will be. It's up to us. Never forget, not for one second, that everything we have is something we have built, fought for, and encouraged in others. We have built this thing; we can rebuild it, too. No higher institution or large-scale initiative is going to help. Those days are over, if they ever existed at all. There is only us now, and we need to look after one another–because *no one else will*.

When I have a particularly bad day or are feeling particularly loathsome not only of our society but how we choose to operate, it helps me to think about a 20-something year old group of people who had an idea and worked tirelessly to make that idea come true, no matter how niche, specific, or downright weird. This whole project is/was niche, specific, and sometimes downright weird, and I wouldn't have gotten this far without inspiration and

encouragement gleaned from all sorts of disparate sources. For me, Coheed and Cambria represent the actual, real, and tangible American Dream, the idea that anyone from anywhere, even from one of the smallest planets in the Fence, can work hard enough, practice, keep improving, and then finally make it, in whatever capacity and at whatever value that might mean to you. You can't fix everything, no one can. But you can do something.

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