

## Chapter 3: Hijacked

*Jason*

“Thump . . . Thump . . . Thump . . .” blasted the sound of a heartbeat through our television speakers. It was an all-too-familiar sound that my father, brothers, and I hated. It meant our treasured weekly show, *24*, had come to an end. The room would explode with excitement and frustration. I remember wondering how I was expected to go about my life for the next week without knowing if Jack Bauer, the show’s hero, would be able to ditch a small plane before being obliterated by the nuclear bomb inside. Jack had volunteered to fly the bomb into the desert, sacrificing himself to avoid turning Los Angeles into a crater. The sheer bravery and patriotism that Jack displayed were exhilarating. The professionals at 20th Century Fox had us hooked. *Come hell or high water*, we would tune in to next week’s episode to see how Agent Bauer would rescue the world from global terrorists bent on destroying our beloved country.

I can’t think of a better series than *24*, where the writers understood the art of implementing the perfect mind-blowing cliffhanger after every episode. The show loaded their endings with unexpected betrayals and outrageous plot twists. The writers had no problem killing off our favorite co-stars, only to bring them back as double or triple agents later. It was a grueling 24-week-series that constantly left you hanging on the edge of your seat, only to reveal the outcome when the next show aired, which of course ended the exact same way every week. It literally felt like one could not go on living until the mystery was revealed. However, after 10 to 15 minutes, the adrenaline would wear off and the dopamine rush would settle down. We slowly pulled ourselves off the sofa as our sanity returned, until next week, when we would all head down to the basement and get ready for the next adrenaline-filled, terrorist-butt-kicking adventure.

### Hook, Line, and Sinker

Companies that produce entertainment media have sunk billions of dollars in research to make their products as addictive as possible. We get to experience intense adrenaline rushes and dopamine kicks while sitting in a comfortable seat, sipping cola and munching popcorn. Many of us can relate to the intoxicating buzz of a gripping action flick or the dopamine high of a romantic drama that pulled all the right heart-strings. Like skilled fishermen, the industry producing modern-day media entertainment knows just how to lure us in, *hook, line, and sinker*. However, since *24* first aired in 2001, the barriers to consuming media have become virtually nonexistent. Media is accessible all the time; the only blockade standing between us and binge-watching whatever our heart desires is ourselves. Adolescents are trapped in a loop of consumption when Netflix automatically starts playing the next episode post-mind-blowing cliffhanger, and YouTube auto-plays their favorite content without them even selecting it.

### The Business of Personal Data

Mark Zuckerberg, the 35-year-old billionaire and owner of Facebook, stood in front of a packed Congress on April 12<sup>th</sup>, 2018 to justify the outrage his company had stirred. Facebook's lack of incentive to protect users' personal data had forced Zuckerberg to appear in a public hearing after the Cambridge Analytica Scandal made world news.<sup>105</sup> It was the straw that broke the camel's back. Nearly 87 million Facebook users' personal information had been passed on to the third-party app developer under the guise of "academic research."<sup>106</sup> Cambridge Analytica was accused of influencing the presidential election in 2016, as well as Brexit in 2017, through the data collected by Facebook. After the company's alleged tampering made headlines, Facebook's stock value dropped \$50 billion within two days.<sup>107</sup> You would think that Facebook would have radically changed their business model to prioritize the security and privacy of their billions of users. However, a few months after the public outcry, it seemed like the storm had blown over. Facebook managed to temporarily silence the masses through empty promises to protect their data. Despite losing a couple of lawsuits,<sup>108</sup> the company has largely

kept their business model, and remains one of the largest global tech companies. In their 2018 quarter, Facebook managed to make more money than ever before, earning 16.9 billion dollars in profits.<sup>409</sup>

The *Cambridge Analytica*

scandal did not only reveal Facebook's failed attempts to protect personal data, but also gave us a taste of how the attention economy works. We must understand the ways in which social media, gaming, and pornography industries have manipulated their products in order to fully grasp the influence they can have on a teenager's social development. The larger aim of the technology industry is to create a product that responds to our most fundamental human needs and desires, keeping us locked to our screens as long as possible. Their model for making profit parallels a con artist's scheme; they tantalize us with the hope of fulfilling our deepest desires through a screen—finding the perfect relationship, thousands of approving followers, or sexual satisfaction. This fixates our attention on something dazzling, while the pickpocket fleeces us for as much time and data as they can get. The industry views us as a confident conman sees his mark. All we observe is the curated interface of digital media portraying a seductive commentary on the world around us, while algorithms analyze our personal data and predict what will evoke the strongest responses. The more time we spend on a specific internet platform, the better our habits can be studied. Sean Parker, co-founder of Facebook, explained in an interview with *Axios* that the founders were driven by one question: "How do we consume as much of your time and conscious attention as possible?"<sup>410</sup> We unknowingly reveal unfathomable amounts of personal data that is used to customize specific advertisements geared to our interests, needs, and desires. For digital media innovators, attention equates to profit.

Tech giants such as Facebook, Google, Amazon, and Apple are the wealthiest companies in the world with a combined stock worth more than \$2.3 trillion.<sup>411</sup> Facebook alone is worth \$420 billion, and is crowned as the world's biggest display marketing firm. It promotes ads from five million different advertisers every month.<sup>412</sup> In an attempt to remain the dominant social media platform, Facebook used its

### RUMB Challenge

Analyze five of the top addictive aspects of the media you consume.

What characteristics make it so difficult to stop consuming?

seemingly infinite resources to purchase Instagram in 2012 for 715 million dollars.<sup>143</sup> Zuckerberg could foresee that Generation Z would gravitate towards more visual-based platforms of communication. His decision paid off. To date, Instagram is worth more than \$100 billion.<sup>144</sup> Instagram is expected to amass two billion users within the next five years.<sup>145</sup>

The entertainment industry floods the market with products that are designed to reward us with euphoric adrenaline rushes for essentially doing nothing. The lack of actual effort it takes to receive such a reward is likely what makes media consumption so enjoyable. Humans are wired to take shortcuts whenever possible. This programming can make us highly efficient people when channeled in healthy ways. A teenager will most likely find the path of least resistance to get a good grade. The desire to accomplish tasks quickly can help streamline their study habits, which improves productivity. However, being pre-programmed to favor shortcuts can also lead to less desirable behavior, especially among maturing adolescents.

### Hooked

Cam Adair, a Canadian national, was fifteen years old when his online gaming obsession led him to drop out of high school. He even pretended to have a job so no one would hold him accountable. When his parents would drop him off at a restaurant where he was supposedly training as a prep cook, he would catch the bus back home to game. Cam, once a successful hockey player in his early teen years, was bullied throughout high school and found solace in online gaming. In the digital world, he mattered; he was somebody; he had friends. This world didn't judge or ridicule him. In the virtual world, he had a safe place to escape his real-world problems.<sup>146</sup> Cam had learned that this technology could grant him what he was deeply lacking in real-life: acceptance, purpose, and community.

Human behavior is largely influenced by our brain's reward center. Cravings and pleasure are experienced in the reward circuitry, for the purposes of self-preservation and procreation, by creating a desire and reward for natural reinforcers such as food, love, friendship, sex, and novelty.<sup>147</sup> The brain releases varying amounts of dopamine (the

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so-called “happiness chemical”) based on the anticipated value of what a person is expecting to experience. What we experience as enticing, our brain sees as an opportunity to fulfill our primitive needs. For example, seeing attractive women or men triggers a dopamine release as a biological response to finding a potential mate. Junk food equates to valuable calories once crucial for survival. Novel experiences such as exploration and learning evoke high doses of dopamine, which increases our desire to discover the world around us.<sup>148</sup> Dopamine solidifies these experiences by signaling the brain to strengthen neural connections, so the activity that released dopamine can be remembered and repeated. Neurons that fire together, wire together.<sup>149</sup> Thus, the brain begins to make physical alterations by strengthening the connections in the reward circuitry and pruning unused connections to make the brain more efficient.<sup>120</sup> This phenomenon largely dictates how teenagers interact with digital media.

*Lisa*

I met Hanna at a coffee shop. The tall, seventeen-year-old brunette was sipping on her latte. Hanna looked deeply grieving when I asked her about social media. She expressed her experience of uncontrollable interaction with social media:

I share a lot on social media. [ . . . ] I have mixed feelings about that. I want to stop doing that, because I think that it prevents me from living in the moment, because I am posting literally everything I am doing on my private story and videos where I share, “Oh my gosh, this just happened” and so I don’t like that I do that, but it has now become an outlet for me, kind of like therapeutic [ . . . ] but even though it has helped, it has also done damage and is something I want to stop doing [ . . . ]. You can just sit there for hours responding to Snapchat, back and forth.

Our brains are highly sophisticated miracles, but they tend to respond very primitively to external input.<sup>121</sup> The content we choose to consume online is often based on how it makes us feel, rather than its objective quality. This can help explain why we are so captivated by digital media. Emotions, impulses, drives, and subconscious decision-making

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are controlled by the primitive circuits of the brain.<sup>122</sup> Digital media, whether it be a gripping mystery series, a compelling gaming universe, or seductive sex videos, is designed to harness the raw power of these internal survival instincts, which then control our behavior by keeping us glued to the screen. The more often the behavior is repeated, the stronger these connections become.<sup>123</sup> The strongest natural achievable release of dopamine is through the anticipation of sexual stimulation and orgasm,<sup>124</sup> hence the saying, “sex sells.”

*Jason*

I met Alice Taylor at the 2018 Coalition to End Sexual Exploitation Global Summit in Washington D.C. Now a passionate anti-porn activist and successful author, she runs a non-profit called *The Grace Spot* that helps young women overcome addiction to pornography. Alice became acquainted with pornography at the age of twelve and battled porn dependency as a coping mechanism for years. She talks openly about using porn to numb feelings of depression, anxiety, and shame. She told me, “You feel, ‘I need comfort.’ The quickest way to do it is to get the dopamine rushing and the quickest way to do it is an orgasm. I know porn can do it. It’s anonymous. It’s quick. It’s easy. It’s free. I can do it in my room. Nobody will even know. There is absolutely no risk.” Many teenagers share Alice’s story; they too use porn as a coping mechanism to escape feelings of stress and anxiety.

## Dating is Dead

One doesn’t have to look far to observe how digital media has influenced the relational fluency of Gen Z and Millennials. Type the terms “Millennials” and “dating” into your search engine, and you will find trending headlines like “Dating’s Dead,” “Commitment Phobia,” or “Why Dating as A Millennial is so Screwed Up.” As a blogger writing for *Glamour Magazine* put it, “I belong to a generation that downloads their love lives via the App Store and considers liking one another’s Instagram selfies ‘flirting.’ The concept of actually meeting someone IRL (in real life) has become alien to us, so much so that we genuinely believe

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technology is the only way to find love.”<sup>125</sup> In the present age, many find it easier to choose solace behind a screen than to work through the ups and downs of a real relationship. Sexual frustration can wreak havoc on our relationships when instant porn-induced orgasm becomes the brain’s shortcut to the reward system, rather than wooing or pursuing a significant other for a well-earned dopamine kick. Hanna reflected on dating in her generation:

It is all about sex [ . . . ] It is all sexual relationships. I don’t see anything further than a sexual relationship there [ . . . ]. I wasn’t alive in my parents’ time, but when I see movies, I just don’t see that type of romance anymore. I don’t see a guy just randomly telling a girl she is beautiful. I just always see an ulterior motive [ . . . ] I think that people want that romantic relationship, but it is not how our generation approaches it.

Unlimited online sexual content creates a dopamine highway between the reward and the behavior of watching online sex, which makes sharing nudes through a screen appear normal, but can override or even cancel out the desire to risk becoming vulnerable and intimate with a real partner.

### Friends of Dopamine

Our brains are hardwired to initiate behaviors that make us feel good. This survival instinct shapes our response to certain stimuli, which can improve our ability to effortlessly navigate the complexities of social interactions. It streamlines our relationship fluency. We learn how to be nice to others largely because the brain relishes the neural chemical bath of feel-good hormones produced by friendship. Thanks to our brain’s reward circuitry, we learn early on how to naturally behave in ways that attract people to us rather than repelling them away. These behaviors are remembered and hardwired, and become our go-to responses when we are faced with similar situations.

The drive to belong and be known is one of our most fundamental human needs. The power of friendship, the comradery felt when we are accepted by others, or the ability to be vulnerable with someone we love creates strong neural rewards that promote positive social behavior.

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We work assiduously to steward our relationships to produce a healthy social network that strengthens our sense of well-being. In moments of relational tension, we learn to exercise conflict management by keeping our cool to avoid damaging the relationship. The reward system in our brain reminds us through the release of dopamine that people are worth our effort, time, and attention. Thus, we take on behavioral adaptations that represent our desire for intimacy, vulnerability, and companionship.

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Online media hijacks teenagers' reward circuitry by creating illusions of reality that trigger very real responses in the depths of their brain. Media is not their friend or their lover, but teens engage with online content that portrays powerful emulations of friendship or sexual intimacy. In many ways, media is an artistic expression; it is designed to evoke powerful emotions. However, the media industry is well-aware of the effects their products have on human behavior. Digital media is a great tool when used in accordance with our values; but when entertainment media becomes a hardwired coping strategy, it creates relational dysfunction. Rather than drawing upon their friendships or families, teenagers turn to digital media for comfort. Their brain's reward center has the capacity to forge new pathways based on specific media habits, which can override their ability to prioritize long-term goals over short-term rewards.

Online media, especially novel sexual content, is designed to hack the reward system of the brain by creating instant gratification with little investment. However, such media presents powerful neural rewards with no sustainable solution to the tension we feel. If teenagers don't develop healthy coping strategies, their brains will follow the path of least resistance when confronted with a situation that evokes negative feelings. When they are bored, do they feel the urge to meet up with friends or stream another episode on Amazon Prime? Essentially, any discomfort in life can become a trigger to get caught up in online media. When I spoke to Hannah, she put it this way: "The people that I know with the most followers on Instagram usually have the most problems going on [so] they start to lean on social media more, but once they are on social media, it heightens their problems."



## Quality Control Function?

Our biology is adapted to life before the internet. Tweens and Teens are simply not wired to respond wisely to the never-ending smorgasbord of digital entertainment. They find it difficult to put off instant gratification and ponder on the consequences of their actions. The reward circuitry does not objectively process the content consumed, but rather the amount of dopamine released. There is no quality control function. This job is left to their higher-thinking brain, known as the prefrontal cortex, which is central to crucial executive brain functions. This can be very confusing for a child or adolescent who is exposed to degrading content, such as hardcore pornography or excessively violent games. Their higher thinking or logic may process the acts of violence and degradation as unacceptable; however, their association with sex and novelty create arousal and excitement. This could prove to be a toxic combination when they stumble across online content they know is inherently wrong, but feels really good. The reward circuitry of the brain is a tough competitor when it comes to decision making. This part of our brain has an all-access pass to our body's feel-good pharmacy. It releases an instant, intoxicating dopamine buzz with the cost of only the click of a mouse or a tap of a finger. Suddenly, putting in the time and effort to achieve relational rewards the old-fashioned way—by meeting up with friends, or pursuing a crush—sounds like a lot of unnecessary work. I met Julie, a sixteen-year-old, over a cup of tea. She talked about her friend, who became popular on social media when she started portraying herself as the party girl:

Then I saw her again this summer and realized how much social media had changed her. Of course, it is not just social media, but for her, her identity is so attached to social media [...]. If one day Instagram was gone, that would have a huge impact on her life, because she is so dependent on that to get attention from so many people [...]. When you start getting more attention, you start craving it even more.

She went on to say that her friend eventually took on the new social media personality in real life. She had slowly become the superficial party girl she had portrayed online.

## **The Digital Universe, Broccoli, Sweets, and Poison**

Enjoying a good movie, socializing through media, or playing video games online can be great entertainment if we have a balanced approach to consumption. We refer to such media as digital sweets. They are designed to taste great. They are coded to make us feel good and can temporarily improve our mood. Using the internet as a tool to support a friend or plan fun get-togethers is like a healthy serving of broccoli. This doesn't always equate to a heavy hit of dopamine in our reward circuitry, but it does build a healthier lifestyle. When COVID-19 hit, we all benefited from the ways the internet connected us with each other. Most of us were still able to continue schooling, get the essentials we needed, and converse with co-workers and loved ones. Using web-based functions can never measure up to real-life encounters, but it can promote a lifestyle that connects us in meaningful ways, which improves our overall sense of well-being. On the other end of the media nutrition scale is what we refer to as poison. Harmful media, such as violent, humiliating, sadistic sex videos and racist or degrading comedy acts, have the potential to harm impressionable minds and hijack an adolescent's healthy development. Too often, teenagers are completely unaware of the imprint the often-subconscious consumption of such media leaves on their internal selves.

### **Neural Highways**

It is important that teens take control of their neural highways, because what they feed their brains shapes their thinking. Their choices of how often, how much, and what kind of content they consume carries over into their adult lifestyles, and will majorly affect their health and well-being over the course of the rest of their lives. Kids who grow up eating excessive amounts of junk food are less likely to crave healthy nutrition choices later. The same is true for kids who develop largely behind a screen and receive little guidance or accountability regarding their media choices. Their social development may be stunted if they don't learn to cope with life's highs and lows by making healthy choices, or to draw near to friends and family rather than a screen.

Lexy was straight out of the heart of Georgetown, D.C. She was a

homegrown third-generation Washingtonian. We sat down on the rooftop garden of one of the city's finest cafés. This seventeen-year-old senior had a strong sense of who she was and where she had come from. I was intrigued when she accepted my request for an interview. She shared with me, "Our generation will definitely have more singles throughout adulthood. By only using the internet and social media, we avoid learning and practicing key skills one needs in a lasting relationship."

When we talk about internet media and youth, we must be aware of the uniquely vulnerable state of developing adolescents. Based on their status as children, youth are given special privileges and protections to have the space and time to develop into responsible, self-sustaining, and productive members of society. Youth are pre-programmed to absorb and learn about the world around them. Their brains are far more flexible and plastic than adults. The adolescent brain is loaded with an excess of billions of neural connections, giving them a wide canvas of learning potential. However, their brains are undergoing incredible changes in preparation for adulthood. After the age of twelve, a natural shrinking process of their brain takes place, where billions of neural connections are pruned or hardwired.<sup>126</sup> This is also known as the "use it or lose it principle,"<sup>127</sup> which translates to behavior adaptations as teens act upon what they observe and learn. In other words, the very nature of being young is to be impressionable.

Adults tend to perceive internet media consumption and smartphone use from their own individual perspectives. It is easy to visualize adolescent struggles and imagine what we would do. However, adolescents don't share our state of mental maturity or developed identities. They are in a mind-bending stage of physical and mental development. They are rapidly becoming intellectually, hormonally, physically, and socially

### **RUMB Challenge**

Common Sense Media is the leading source of entertainment and technology reviews for families and schools. It rates online games, movies, and TV shows and gives age-appropriate recommendations.

Check out Common Sense Media:

<https://www.commonsensemedia.org>

and examine some of the digital media your teens engage with.

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mature. Adolescents are raging with a potent cocktail of sex hormones: estrogen, progesterone, and testosterone. Their current state of brain development “remains structurally and functionally vulnerable to impulsive”<sup>128</sup> behaviors related to natural reinforcers, such as sex, sleep, and eating habits. They are significantly more vulnerable to the allure of risk-taking and novelty-seeking behaviors. The adolescent brain is undergoing a massive rewiring process that does not reach full maturity until roughly twenty-five years of age. In comparison to adults’ fully developed brains, adolescents are prone to being seduced by the foreseeable positive reward of a decision or behavior, and are less likely to be swayed by the possible negative outcomes of their choices. Consequently, most addictions develop during adolescence.<sup>129</sup> Teens are more likely to follow their emotions, doing what feels right in social interactions or when making important decisions. During my teen years, I would often hear the words, “What were you thinking?” Scientifically speaking, I wasn’t thinking. I was feeling. More than at any other stage in life, teens are influenced by their emotions. Digital media is tailored to acquire swipes, clicks, and views from youth who engage with its highly sensual content.

Emotional vulnerability is just the tip of the iceberg when it comes to understanding how teens engage with online media. The prefrontal cortex is the last area of the brain to reach full maturity. This can help explain the familiar and less-than-desirable adolescent behavior that drives parents, teachers, and youth workers crazy. The prefrontal cortex processes feedback from all senses and coordinates thoughts and actions to accomplish distinct goals. It is responsible for a vast diversity of higher thinking processes, such as: the capacity to balance short-term rewards with long term goals, impulse control, delaying gratification, assessing consequences of behavior, predicting future outcomes of decisions, and avoiding and correcting inappropriate behavior. Such deficiency in crucial thought processes can help explain why teens are known to make decisions that make no logical sense to their adult counterparts. In fact, due to the underdeveloped prefrontal cortex, adolescents who are well-aware of the potential danger of certain behaviors are predisposed to override logical thinking to participate in risky activities.<sup>130</sup>

The adolescent brain is a biological construction site. Adolescence is largely about learning, gaining experiences, and being motivated to try something new. If teens skipped this developmental process, they

might never come to realize their boundaries, uncover their passions, or embark on the fundamental journey of self-discovery. This is not to say that anything goes. Digital youth are especially vulnerable and need boundaries and guidance. Sadly, the mortality rate among fifteen- to twenty-four-year-olds is three times higher than middle-school-aged children.<sup>431</sup> Teens are capable of complex thought, such as assessing hypothetical situations and considering appropriate choices. However, such thought processes are significantly influenced by emotional or high-intensity situations. This is referred to as *hot cognition* (high arousal and intense emotion) and *cold cognition* (critical and over-analyzing).<sup>432</sup> A thirteen-year-old using the family computer in the kitchen is most likely going to make better choices with their parents around (cold cognition) than the same adolescent who is being coaxed by their peers to make fun of somebody online (hot cognition). The same goes for teens who send sexts. A girl who is being wooed by the attractive football star at school is in a state of hot cognition when weighing the consequences of sending him an intimate photo. Teens' predisposition to novelty and sex places them in a state of high arousal, making it incredibly difficult for them to assess the consequences of their online media choices. The reward circuitry of the adolescent brain is very sensitive during their development. It sends out impulses to act upon something desirable, which can be as simple as *likes* on Instagram, another gaming level, Snapchat followers, or porn-induced orgasm.<sup>433</sup> It's hard enough for adults to resist such primitive pleasures. How can we expect youth, whose ability to judge and make decisions is still developing, to manage this on their own?

### When Pixels Win

Gabe started consuming porn at the age of twelve. At the age of twenty-three, he knew it was time to quit when he was no longer able to get an erection without internet pornography. He explained that his brain was so conditioned to online sex that he could not "get it up" with his girlfriend, even though she was someone he was very attracted to. He first thought it could be an early onset of erectile dysfunction, but there was something very odd about the way his body was responding to sex. Gabe reflected:

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I literally had porn every time I tried to masturbate for a decade. [. . .] to be really explicit, no matter how hard I stroked myself, no matter what I fantasized about, nothing could give me the slightest of an erection, but just typing in the [porn]site gave my body this rush and I got a full erection in anticipation. It was obvious to me in that moment. It could not have been clearer that I was dependent on porn for arousal. I had this big epiphany, porn screwed me up, and I broke down crying. I could not believe that I did not see this coming!

Upon researching his condition further, Gabe found that he was not alone. “I was reading [the posts of] thousands and thousands of guys that were going through the same thing.” Today, Gabe Deem is one of the most inspiring and courageous anti-porn activists I have ever met. He runs an organization called *Reboot Nation* that informs youth about porn’s true destructive nature.

## The Plastic Brain

Nicholas Carr, author of *The Shallows*, provides an explorative journey through the internet’s intellectual and cultural consequences. In his book, he recollects how the web began to shape his way of thinking: “The very way my brain worked seemed to be changing. It was then that I began worrying about my inability to pay attention to one thing for more than a couple of minutes.” According to a Microsoft study from 2015, the average attention span has decreased from twelve seconds in 2000 to only eight seconds in 2013, which is one second shorter than that of a goldfish.<sup>434</sup> Carr described what was happening to his brain: “At first I’d figured that the problem was a symptom of middle-age rot. But my brain, I realized, wasn’t just drifting. It was hungry. It was demanding to be fed the way the Net fed it and the more it was fed, the hungrier it became.”<sup>435</sup> The neuroplasticity of our brain allows us to adapt to new situations and circumstances. We learn how to deal with life’s twists and turns and adjust our thinking accordingly. Just like remodeling your house to make way for another child or moving furniture around for maximum room efficiency, the brain can also initiate its own renovation projects when exposed to new situations that require a different set of skills. However, as liberating as the plastic brain may be, it also has the potential to trap us in unhealthy behavioral cycles.

Once the brain goes to all the effort to solidify and strengthen specific neural pathways, it favors using these synaptic highways over blazing new trails.<sup>136</sup> Therefore, we can fall back into certain habits and ways of behaving when triggered by boredom, stress, anxiety, loneliness, or depression. As Carr put it, “[p]lastic does not mean elastic [. . .]. Our neural loops don’t snap back to their former state the way a rubber band does[. . .].”<sup>137</sup> Our brains don’t always wire themselves to desirable behavior. When the teenagers in our lives feel bored, lonely, or anxious, it’s only natural that they respond to the draw of technology. The most popular times to stream porn are between 10 p.m. and 1 a.m.<sup>138</sup> When our kids are alone with their smartphones, how have they conditioned their brains to respond to the pull of sexual content? What values drive their online habits? Do they immediately get the urge to watch deviant videos because their brains are conditioned to get dopamine rewards when people aren’t watching? We need to teach the next generation that they are responsible to be the gatekeepers of their minds and the masters of their choices. Circumstances should never dictate mindsets and behavior.

### From Trauma to Triumph

*Jason*

“Perhaps one of the most dramatic personal examples in my own life of the brain’s ability to rewire its circuitry was when I almost lost my life. I used to play college basketball during a season of my life when the pressure to perform burdened me everywhere I went. If I wanted good grades, I had to learn to balance approximately forty hours of basketball alongside forty hours of lectures and homework a week. When I hit my limit of screaming coaches and a never-ending pile of deadlines, I would find my solace in skateboarding. I was certainly no Tony Hawk, but more of an asphalt surfer. Sometimes, I would cruise for hours on the midnight streets of LA’s suburbs. I relished the adrenaline rush of screaming down hills and sliding through corners. It was only a matter of time before the adrenaline caught up to me. The weekend had finally arrived. I went to visit my little brother, who was finishing his senior year at a nearby prep school. I threw my skateboard in my trunk. After

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a 45-minute drive, I arrived at his house. We took off to catch the last rays of sunlight before dark. The rest of the story is a bit fuzzy. I know I landed on my back because of the holes in my t-shirt. My head whipped into the asphalt so hard that my brain bounced off the back of my skull, only to slam into my forehead. My brain hemorrhaged. After regaining consciousness, my mind was only half there. I couldn't even remember who my parents were. My brother, who was with me when the accident occurred, told me later that my memory was stuck in a five-minute loop.

I spent four agonizing days in the hospital and a few nights in the ICU before being released. The pain was all-consuming. I spent the next few days vomiting and experienced throbbing migraines at the slightest sound. It was about a two-year recovery process that was nothing short of a miracle. I moved back home to live with my parents. Everything I valued in life previously was gone. In a matter of moments, I had lost basketball, school, and my friends. I struggled with major depression and felt completely hopeless. My doctor told me that I should lower my expectations. "Don't expect to get the same grades you once had," he warned me. In one appointment, he showed me the MRI scans of my brain. It was peppered with black spots showing where all the damage had occurred. He shook his head. "I have another patient with the same injuries. Skateboarding accident. He is most likely not going to survive."

I no longer recognized my face in the mirror. I looked like a drug addict, and had dark circles around my eyes. I wore sunglasses and a hoodie to block out the world around me, because light exposure felt like a jackhammer drilling into my head. There came a point where I had to make an important decision. I could either spend the rest of my life crawling through my own grief, or I could take responsibility for getting healthy again. I rejected the rehab plan the doctor recommended and substituted my own. I got a job at a coffee shop and drove my colleagues crazy. I couldn't remember the drink orders to save my life. However, I knew that it was good for me. I practiced every day and eventually got the hang of things. I learned to process lots of information, respond to customers, take orders, time espresso shots, and synchronize the construction of multiple drink orders.

I amped up my rehab program and enrolled in a Chinese course at the local community college. It was grueling work. I memorized hundreds of characters and learned to pronounce the coinciding words with the proper tones. I could feel my brain regaining its strength. My



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doctor administered a test to gauge where I was in my recovery process. He found that, based on previous testing, I was smarter than I was before the accident. I went from sleeping twenty-three hours a day to completing my bachelor's in Organizational Leadership, a master's in International Human Rights and Humanitarian Law, and learning German at a professional proficiency. I intentionally chose to feed my brain what it needed to rewire itself and bypass the damaged regions of my neural network. I certainly can't take all the credit for my miraculous recovery, and could not have done it without supportive family and friends. However, my experience highlights the power of goals and choices as they influence our brain's neural structures. I'm sure that if I had simply chosen to be a victim instead of a fighter, I would be a very different type of person today.

We need to challenge teens to anchor their choices in their personal values and convictions to reach what they desire to become in life. When our values and goals chart the courses of our lives, the brain understands tech as a tool for the journey rather than the destination itself.

### Discussion Guide:

1. What are some of the online habits you turn to if you need comfort?
2. If you compared online media to food on a nutrition scale, what kind of media would be healthy, unhealthy, or poisonous? Why?
3. Have you ever come across media content that felt good and wrong at the same time? How did this affect the way you saw yourself?
4. What does your generation need to learn about building healthy relationships in the digital age?
5. What are some of the goals you have for your life? How do your media habits support or hijack the pursuit of these goals?