AI For Gen Z

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AI For Gen Z

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Foreword

BY BRYANT CRUSE

Why is there a Generation Z? That is, why does it have a name, or more broadly, why do we give each succeeding generation its own identification these days? It is generally agreed that the practice didn't take hold until the 20th Century. At first, such designations were bestowed retroactively. For example, "The Lost Generation" was so named by author Gertrude Stein, for the people who came of age during the First World War.

It has always been recognized that the attitudes and perspectives of an entire generation can be molded by extraordinary events. But what has changed is that it is now expected that each succeeding generation will behave in ways distinguishable from the previous one.

Such generational change has not been the norm for our species. Philosopher and mathematician Jacob Bronowski, in his 1973 documentary series and book, The Ascent of Man, describes the Bakhtiari, a nomadic tribe in the Caucasus mountains that followed a way of living that remained unchanged for 10,000 years. Bakhtiari children performed the same tasks, dressed the same, ate the same foods, even walked with the same movements as their parents, generation after generation.

Human intelligence makes us uniquely adaptable to our environment. The Bakhtiari adapted and found ways to survive while following their herds over six mountain ranges and back again, every year. But intelligence also conveys an even more powerful survival skill: the capacity to alter the environment itself, to forcibly adapt it to us. This is also the capacity to create technology. The Bakhtiari could not create durable technologies because they were on the move everyday of their existence and could only utilize the tools that they could carry with them. And so, they became stuck in time.

But elsewhere, humans learned to domesticate animals and practice agriculture. Now they could settle in one place. With the invention of written language, they could pass accumulated knowledge and technology down the generations. With that technology they built cities, aqueducts, and ocean-going ships. They explored and altered the world they lived in and adapted to their new environment and changed themselves; not their core nature, but their beliefs about what the world is and how humans fit into it.

So began an ever-accelerating feedback loop. We change our world, then adapt to what we have created. Then we find a new perspective and from that perspective we change the world again. And with each cycle we grow farther and farther from the world we came from, the natural environment in which our core nature evolved. Today, the cycle of technology-driven change-adaption-change has become so rapid that it is recognizable in a single generation.

We might expect it would take someone from outside Gen Z with a perspective of many years to fully

appreciate how technology has formed the values and attitudes of the newest generation. With this second edition of AI for Gen Z, Ayush Prakash has been able to understand the pulse of his own generation. With abundant statistics and references, he reveals preferences and practices of his generation that many in the more senior generations will find shocking.

Gen Z is, of course, the first to grow up with the Internet, a technology that continues to have a profound impact on our society. But even as we adapt and adjust to that disruption, another technology with an even greater potential to change the world we live in is looming, Artificial Intelligence.

Real intelligence in machines, combining humans' greatest skill, the capacity to comprehend and alter the world around us, with the speed, reliability and connectivity of computers, would be the ultimate technology with the ultimate potential for societal disruption. In fact, as we are already seeing, the very idea of AI is disruptive.

Whether you are skeptical that today's machine learning and so called GenAI applications are truly machine intelligence, an advance towards it, or merely a clever imitation of human intelligence, there can be no doubt, as Prakash explains, that they are already having a profound effect, not just on his generation, but on everyone of any generation. Everyone should read this book.

Coherence

HOW AI FOR GEN Z WROTE ITSELF

"So that's it. Pretty sick, right?" I remember this moment like it was yesterday. Retrospectively a divine intervention, it felt like cosmic horror at the time. It was one of the many independent events that wove the narrative of this book. Acknowledging people is cool (and important) but rarely do we reflect on how many small, seemingly inconsequential events orient our lives a mere few degrees. Like a compass pointing us in the correct direction, if not for these reorientations, our goal, our destination, would not have been reached.

This introductory moment was when a friend of mine told me about his post-secondary plan. He talked about his dad, an accountant, and who had devised an

ingenious solution that took care of 90% of his tasks at work. His father was, in my friend's words, "Just chilling everyday, yo. And that's what imma do. Get an accounting degree and all that, and then just relax with my Machine Learning algorithm, or whatever." This last phrase made my ears perk. I put two-and-two together. "So, you're telling me," I responded, "that your dad automates his own job with AI, and that you aren't worried that the company might find out and just automate your dad and not pay him a salary…? Why would you pursue a degree in a field that might soon not exist entirely?"

The conversation abruptly ended, an unfriendly silence taking its place.

It may be abrasive, but this is what I mean when I say that Gen Z have no bloody clue what they're walking into. While anecdotal, it serves as an idiosyncratic foundation for the generation. We see similar lines of thinking with the massive influx of Computer Science degrees, stemming from some (loose) psychology which hypnotized everybody and their mother to attain a very specific degree in a very saturated field.

"Computers aren't going away anytime soon," they would seemingly remark, "this will set you up for the rest of your life." The first clause is atrociously prescient for humans; historically, we aren't good predictors of the future. The second clause could use a bit of a rewrite, "this [computers] will **disrupt** you for the rest of your life."

See, I got my first computer when I was ten (a big mistake, Mom and Dad). I was introduced to Facebook, YouTube, and the vast digital depth of the Internet from a very young age. I didn't know it at the time but being introduced to digital technology meant that I was being groomed, in a sense, to write this very book.

That's because my mind got destroyed as I grew up: Facebook addiction, YouTube binging, social media ruining my self-esteem, yada-yada. Not just me, but every single person in my generation suffered through this. We talk of past events that brought the world together, like the Cuban Missile Crisis or Woodstock. Yet we never discuss how all my peers were watching the same YouTube videos through the same algorithms that were addicting them to the platform. We never go so far as to talk about the slow but

sure disinterest for outside playtime and social bonding, preferring stimulating screens and multiplayer video games. Apparently, addiction brings people together. Who knew?

I was thrown out of this hypnotic effect during COVID-19. I still don't know precisely what happened or how I became "enlightened", but I began reading about AI and everything clicked. I was reading pages and pages on algorithms and bias and data privacy and profiling and social media addiction and kept thinking, "Oh! That explains it. This is what I experienced! It's why my mind was so messed up during those years."

Then I got to the pages on job automation, autonomous weapons, deepfakes, and other horrifying items on our future's menu and thought, "Well, this is bad. No one really cares about a 20-year-old writing a book on AI. Although I have a slight understanding of AI, I have a great understanding of my generation. Why not write a book explaining these concepts in our language, without the jargon and technical complexities, and maybe they would get these same 'aha!' moments that I had? Maybe

this could serve as one on-ramp for Gen Z to understand the world and themselves." It was at this moment that the journey of AI for Gen Z commenced. It has not stopped or slowed down since.

This book and its evolution have connected me with inspiring and incredible individuals and missions. From the podcast I run to the company I work for, I owe everything to the insights and passion this book forced out of me. I hope it gives you, dear reader, the same power, inspiration, and dedication it gave me.

This is the start of the hero's journey. We are trying to help our heroes and heroines slay the massive, multi-headed dragon that is about to destroy our planet. Clearing the path and slaying the dragon is not our job, and not the point: teaching our heroes that they have the skills, that it is within them to conquer, to win; helping them up when they fall, and showing them where they stumbled; and crucially, explaining that past problems must not dictate future affairs.

There's a lot of work to be done for, with, and by Gen Z. Fortunately, I do not think they have realized their

power and skillset. This is a good thing. This means there is opportunity for anyone and everyone to help Gen Z. I firmly believe that the more we talk, write, and think about what future we want, the more likely we are to build a future that we deserve.

Ayush Prakash

Montreal, Quebec

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Errare humanum est, sed perseverare autem diabolicum.

: Anyone can err, but only the fool persists in his fault.

Singularity

HOW DID WE GET HERE?

In 1913, Henry Ford introduced the world to the assembly line. The invention of mass production reduced the time to build cars from twelve hours to ninety minutes. Mass production effected the world, allowing goods to be created and consumed much faster than before. At that time, the assembly line was the biggest industry disruption.

In the 1970s, computer chips became cost effective and available through the assembly line process. The impact of this invention was instantaneous and gave way to the advancement of computer chips. This is what led to the creation of Moore's Law. This law, really an observation from Intel co-founder Gordon Moore, basically says that the number of transistors, which are the small building blocks

on a computer chip, doubles and becomes twice as cheap every two years. For example, in 1970, the average computer chip contained 2000 transistors. Today, the average iPhone has a computer chip with fifteen *billion* transistors. At that time, the computer chip became the biggest industry disruption.

In 1994, using the power of the computer chip, the Internet was unleashed. The effects of the Internet, on humans and societies alike, are still being understood. In the 21st century, the Internet is everywhere and in everything, from cars to refrigerators. It has become a household norm; some would say an addiction. Few things had changed our world as profoundly as the Internet, making it the biggest and widest reaching disruption. Until now.

The Internet's ability to collect large amounts of user data coupled with advancements in computer chip technology has led to the development of an unpredictable new technology. This technology is known as artificial intelligence (AI).

In 2023, Suumit Shah, an e-commerce CEO in India, replaced 90% of his staff (23 employees) with a chatbot. It reduced wait times from hours to minutes and response times from minutes to an instant. He told the Washington Post, "It was [a] no-brainer for me to replace the entire team with a bot which is like 100 times smarter, who is instant, and who cost[s] me like 100th of what I used to pay to the support team."[1]

In 2024, according to Resume Builder, 44% of companies who use AI say employees will (21%) or probably (23%) be laid off due to the use of this technology.[2]

By 2025, 80% of retail executives expect their businesses to adopt AI automation.[3]

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[1] Teo, Kai Xiang. "A CEO Who Replaced 90% of His Support Staff with an AI Chatbot Says Copy-Paste Jobs Are Gone." Business Insider. Accessed July 25, 2024. https://www.businessinsider.com/ai-ecommerce-ceo-layoff-support-staff-copy-paste-jobs-unsafe-2023-10

[2] "1 in 3 Companies Will Replace Employees with AI in 2024." ResumeBuilder.com, March 22, 2024. https://www.resumebuilder.com/1-in-3-companies-will-replace-employees-with-ai-in-2024/.

[3] Trends, Market. "80% of Companies Will Adopt Intelligent Automation by 2025." Analytics Insight. Accessed July 25, 2024. https://www.analyticsinsight.net/intelligent-automation/80-of-companies-will-adopt-intelligent-automation-by-2025.

By 2030, a McKinsey Global Institute report concluded that 800 million jobs could be impacted — this means significantly altered in terms of tasks and responsibilities or replaced completely — around the world due to AI and robotic automation.[4]

For those earning an hourly wage of less than $20, there is an 83% chance that their job will be automated within the next decade.[5]

*

In the past, disruptions were few and far between. The time between the assembly line and the computer chip was a half-century; the time between the computer chip and the Internet was roughly a decade and a half. Disruptions were

[4] "Robot Automation Will 'take 800 Million Jobs by 2030' - Report." BBC News, November 29, 2017. https://www.bbc.com/news/world-us-canada-42170100.

[5] Illanes, Pablo, Susan Lund, Mona Mourshed, Scott Rutherford, and Magnus Tyreman. "Retraining and Reskilling Workers in the Age of Automation." McKinsey & Company. McKinsey & Company, January 10, 2019. https://www.mckinsey.com/featured-insights/future-of-work/retraining-and-reskilling-workers-in-the-age-of-automation.

indeed felt but unfolded in a way that was comfortable and adjustable. Businesses adapted and society eventually benefitted. The time between disruptions is picking up pace as technology (in this case and book, AI) changes and collides with a non-adapted society.

While all generations are at risk of being heavily disrupted, one generation will be most affected. They are known as Gen Z. Already comprising one-quarter of the global workforce, they have already experienced significant disruptions to their jobs, lifestyles, governance, privacy, and more within their lifetimes. AI will further change their lives in a lot of ways, and there's no telling to what extent.

It must be stated early that AI is not accelerating. Peter Theil's consensus of technology slowing down instead of speeding up like most expect and predict is of great prescience. The intersection of AI for Gen Z, in this case, is the catalyst for disruption. Gen Z are essentially colliding with a technology that is creating a perfect storm for them. This book explores the genesis of the hurricane, the long-term effects of the damage, and how to find the eye of the storm (if there even is one)

Right now, Gen Z's focus should be understanding *what* AI is and *how* it is disrupting industries, lifestyles, and ultimately their future.

Every book needs a story. The story of this book is how an already obstructed generation is intersecting with an already disruptive technology. AI for Gen Z is not prediction, speculation, or hypothesis. It's happening right now, as I write and as you read, on micro and macroscales. The people who pay attention and strive to understand what this could mean for them will determine the potential impact it will make on their lives. Those that don't will be at the mercy of technology. This isn't intended to be an alarmist book, but the content and the impact on our future are indeed alarming.

This book focuses on what areas AI is disrupting, how it is disrupting these areas, and particularly, how these disruptions will affect Gen Z. For the first time in history, job competition, warfare, and romance won't be just with other humans; it will be with artificial intelligence systems and/or robots, or non-humans.

This book is easily consumable with little industry jargon and formatted so that anyone can read it without prior knowledge of AI or Gen Z.

To illustrate potential future scenarios in an AI-driven world, Part 2 includes vivid narratives that explore events that may unfold and depict the levels of disruption Gen Z could face. These narratives serve to illuminate the potential dystopian paths the world could be heading towards.

As with any book about the future, attempting to predict exactly what will happen is futile. *C'est fou.* Very rarely is anyone correct. That's why this book doesn't do that.

It's a sort of "build your narrative" format. If what you find in this book is alarming, you have more motivation and evidence to make necessary changes in lifestyle and career. However, if you find these data points unconvincing or unscary, that's okay. This book does not aim to change your perspective. Instead, it simply brings together data easily found online to outline how our future is shaping itself. Although things could change, current

events suggest that the light at the end of the tunnel is fading.

This book is being written in a time of great uncertainty and speaks of many years of disruption. If it changes one person's opinion or pathway, for the better, then it has been successful in every regard.

Part I

Understanding Gen Z

CRITICAL IDEAS AND EVENTS THAT SHAPED, AND STILL SHAPE, OUR UNDERSTANDING OF GEN Z CULTURE

In 2019, Gen Z surpassed the Millennials and the Baby Boomers becoming the largest generation in the world. Comprising 2.45 billion out of the seven billion people living on the planet,[6] Gen Z's strength isn't just in numbers. They are the first generation to grow up with direct access to the Internet, resulting in hyper-connectivity and digital nativity.[7]

Understanding Gen Z is of importance in this book because it demonstrates how Gen Z sees the world and how they are affected by disruption. A fact that will be constantly repeated throughout this book is that Gen Z is the most disrupted generation thus far, and the extent of such impact has occurred so early on in their lives. Already, they have dealt or are dealing with social media addiction, global pandemics, a devastating climate crisis, and as this book will discuss heavily, the impending disruption of AI.

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[6] Spitznagel, Eric. "Generation z Is Bigger than Millennials - and They're out to Change the World." New York Post. New York Post, January 25, 2020. https://nypost.com/2020/01/25/generation-z-is-bigger-than-millennials-and-theyre-out-to-change-the-world/.

[7] "Gen Z's Tech-Driven Take on Adulting." The Garage. Accessed August 4, 2021. https://garage.hp.com/us/en/modern-life/generation-z-redefining-the-world.html.

Gen Z is going through an unprecedented time of constant shifts and lifestyle changes. And it's only just beginning.

1

Rage Against the Matrix

CLIMATE & POLITICS

Across the globe, Gen Z is growing more powerful and connected with each passing day. As such, they have started to take a stance on problems that will matter in their lifetime. Global issues, such as climate change, are a space where Gen Z are making the most noise. And for good reason. According to Pew Research, 76% of Gen Z say climate change is one of their biggest concerns, with 37% placing it as the pinnacle cause of their uncertainty about the future.[8]

[8] "Fresh Takes on Climate Change: The Power of Gen Z Perspectives in Tech and Venture Capital." The Economist. Accessed July 25, 2024. https://impact.economist.com/sustainability/net-zero-and-energy/fresh-takes-on-climate-change-the-power-of-gen-z-perspectives-in-tech#.

Primarily, they are concerned and frustrated over the ineffectiveness of governments and corporations to improve the precariousness of climate change. This has forced Gen Z to tackle climate change alone.

In 2019, millions of Gen Z walked out and protested in the streets over the changing climate. This came to be the largest climate strike in history, with most people striking under 20 years of age. The protests, starting in London, spread rapidly through social media, and spurred further protests in Japan, India, Malaysia, Bangladesh, and the Philippines.[9] The message conveyed was clear: Change does not happen in a vacuum. Society must demand action be taken to improve the problem of climate change before it's too late.

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[9] Nagumo, Jada. "Purpose over Profit: How Generation z Is Redefining Business." Nikkei Asia. Nikkei Asia, September 18, 2019. https://asia.nikkei.com/Spotlight/The-Big-Story/Purpose-over-profit-How-Generation-Z-is-redefining-business.

As Gen Z learn about the relationship of economic growth and environmental decline, the never-ending pollution from corporations, and the slow pace of change by governments, they end up depressed and anxious for their future. As a generation, they are more likely to have severe emotional reactions and rates of worry around the topic of climate change.

A Lancet survey found more than half of 16- to 25-year-olds said they believe humanity is doomed, with 40% reluctant to have children due to the increasing uncertainty about their futures.[10] This is not just about future uncertainty, such as the uncertainty surrounding investments, like "I don't know what the price of Stock X will be in Year Y." In this case, Gen Z is uncertain if there will even *be* a future.

[10] Richard Schiffman • April 28, Richard Schiffman, Richard Schiffman, Richard Schiffman reports on the environment and health for a variety of publications that include The New York Times, More about Richard Schiffman →, Jim Robbins, Jim Robbins, et al. "For Gen Z, Climate Change Is a Heavy Emotional Burden." Yale E360. Accessed July 25, 2024. https://e360.yale.edu/features/for-gen-z-climate-change-is-a-heavy-emotional-burden.

In an extreme example, one student refused to consume anything entirely in favor of environmental sustainability. This meant giving up food to eat, water to cleanse, and anything else this student deemed unnecessary; all of this, to keep the environment from collapsing.

While some refuse to acknowledge the changing climate, Gen Z is not waiting around for further planetary rot. Unfortunately, any discussion of the environment and how it affects the future is immediately turned into political debate. Topics that should be founded on undeniable evidence, like ecological decline, spark numerous, polarizing, politically charged debates across classrooms and social media. Similar topics like healthcare, abortion, gun control, and freedom of speech are all leading political issues for Gen Z. As a result, they are slowly becoming the most politically polarized generation to date.

Gen Z's relationship with politics is very different from what other generations have experienced. The biggest reason why this generation is so engaged and driven by

these political matters is that they are exposed to it every day, multiple times a day.

Gen Z, the most digitally native generation ever (for now), get their election news primarily from social media, rather than newspapers or TV — TikTok ranked as their number one source for news.[11] Other platforms like X (formerly known as Twitter), Instagram, WhatsApp, and YouTube are similar vessels that provide a steady flow of information, accurate or not. Gen Z has been known to describe platforms such as Instagram as "the go-to source for political news."[12]

While social media may not be the only way for political discourse to circulate, significant amounts of teens and young adults use platforms not just to socialize but to

[11] "TikTok Dominates Media Outlets as News Source for Gen Z." Axios, February 24, 2024. https://www.axios.com/2024/02/16/tiktok-news-gen-z-social-media.

[12] Simonson, Hayley. "How Social Media Is Influencing Gen Z's Political Views." UNF Spinnaker. Accessed August 4, 2021. https://unfspinnaker.com/90538/news/university/how-social-media-is-influencing-gen-zs-political-views/.

learn and become more involved with global inequities.[13] In addition to climate change, issues like LGBTQ rights and racial injustices are of the highest priority in the minds of Gen Z. They see posting on social media as a way of expressing themselves and their political identities, along with spreading the message to their friends and family. However, the coupling of politics with social media comes with a cost.

The representation of politics on social media platforms seems to reduce their belief, interest, and trust in political factions altogether. They are less confident to vote than any other generation because they don't believe voting does what it needs to do. They have little faith in voting because their wants and needs constantly fall on deaf ears. Specifically, they don't believe that *their* votes matter in the eyes of elected officials.[14] Talking about climate change,

[13] Ruhl, Lindsay. "Social Media Pulls Generation z into Politics." the Southerner Online. Accessed August 4, 2021. https://thesoutherneronline.com/78770/lifestyle/social-media-pulls-generation-z-into-politics/.

[14] Dugyala, Rishika, and Kamran Rahman. "6 Things to Know about Gen z, Politics and 2020." POLITICO. POLITICO, October 11, 2020. https://www.politico.com/news/2020/10/11/gen-z-politics-2020-poll-takeaways-426767.

inequality, freedom of speech, and the employment crisis seems futile. Nothing seems to change no matter how much they try to do.

*

While social media does encourage engagement and discussion by default, the cons of this digital dynamic weigh heavily. Access to information may be widespread, yet misinformation plays a controversial role in shaping how Gen Z think. Sticky headlines and sixty-second video posts are easily consumable and profitable, but it could be argued that these new forms of information consumption are *too* easy to consume.

Even when the news is fake, it is more likely to be considered valid if it is widely posted and constantly consumed. You can see a fake story once and forget about it. However, if you see it 50 times in a day or spanning multiple days, you are more likely to consider it as absolute truth. In many instances, information on social media tells only parts of a story, not all of it.

While the ability to fact check is always available, not many in Gen Z are willing to dedicate a mere fifteen minutes to check if what they've consumed is legitimate.[15] These factors have led to a generation with heated opinions on matters that they may not fully understand or are entirely accurate. This leads to them reposting opinions on social media, spreading the word about injustices and directly influencing others with misinformation.

One of the most notable issues that Gen Z have faced in their lifetime is the COVID-19 pandemic. Politically divisive (in terms of masking and social distancing policies) and mentally taxing, COVID-19 has negatively affected Gen Z's lifestyles, and more importantly, the possibilities for their future. Previous generations have been set up early on in life, able to find a solid career, start a family, and look forward to retirement. For Gen Z, this isn't the case. Mental illnesses, financial struggles, missed opportunities, and academic challenges have severely impacted Gen Z's

[15] Choi, Matthew. "When Gen Z Is the Source of the Misinformation It Consumes." POLITICO. POLITICO, October 12, 2020. https://www.politico.com/news/2020/10/11/gen-z-misinformation-politics-news-conspiracy-423913.

desired lifestyles. What's worse, we are still discovering the effects of the pandemic, leading to more confusion on how to secure their livelihood and the scope of disruption to their future.

2

Calling In Sick

COVID-19 & JOBS

The COVID-19 pandemic was a radical time in history and a cause for disruption. Lockdowns and restrictions represented a shock to Gen Z's lifestyles and future. The effects of COVID-19 on Gen Z were felt instantly and totally. They were the most likely to be laid off during the mandated shutdowns, with the unemployment rate for those aged 16-24 at 27% by April 2020. For those that could find a job, it came at a hefty price. The salaries for entry-level positions were 20% lower than what their parents earned at the same age.[16]

[16] Davies, Anna. "Will Gen Z Ever Recover from the Covid-19 Recession?" Business and Economy News | Al Jazeera. Al Jazeera, November 10, 2020.

Millions of Gen Zs graduated and were looking for entry-level jobs but were outpaced by people with years of experience. For example, the hospitality industry shut down for numerous months at the start of the pandemic. This resulted in cancelled interviews and overflowing waitlists, halting the beginning of many careers. When things slowly opened up and interviews recommenced, those who had been looking for entry-level positions were notified that only applicants with at least five years of experience would be "seriously considered."[17]

*

Job opportunities were not the only things lost during this time. For Gen Z, COVID-19 was particularly disruptive to their mental health. 46% of Gen Z adults — those aged

https://www.aljazeera.com/economy/2020/11/10/will-gen-z-ever-recover-from-the-coronavirus-recession.

[17] AliciaAdamczyk. "'Not Knowing How Long This Will Continue Is Daunting': How the Coronavirus Is Impacting Gen z." CNBC. CNBC, September 25, 2020. https://www.cnbc.com/2020/09/24/how-coronavirus-will-impact-gen-zs-careers-and-finances.html.

18-25 — claimed the pandemic significantly worsened their psychological and emotional condition. Unorganized school schedules, family troubles, sickness, and financial dependence all influenced their declining mental state.

Moreover, 47% of Gen Z have said that the loneliness and isolation caused by the lockdowns really affected them. They were nearly twice as likely to report needing emotional support than Baby Boomers and almost four times as likely compared to Gen Xers or older generations.[18] Another frightening survey, conducted by the American Psychological Association titled "Stress in America 2020", found that *seven* out of ten Gen Z adults experienced symptoms of depression — weight gain or loss, insomnia, inability to focus, anxiety, etc. — during the pandemic.[19] In

[18] "Young Americans Continue to Struggle." American Psychological Association. American Psychological Association. Accessed August 4, 2021. https://www.apa.org/news/press/releases/stress/2021/one-year-pandemic-stress-youth.

[19] Stieg, Cory. "More than 7 in 10 Gen-Zers Report Symptoms of Depression DURING PANDEMIC, Survey Finds." CNBC. CNBC, October 21, 2020. https://www.cnbc.com/2020/10/21/survey-more-than-7-in-10-gen-zers-report-depression-during-pandemic.html.

Europe alone, 64% of young adults were at risk of depression, increasing over 15% from before 2019.[20]

This taxing mental situation caused millions from Gen Z to turn towards unhealthy habits. One of which was increased spending. There were clear differences in their spending values compared to other generations. Millennials spent more on online courses, and health and cut down (by 60%) their total spending due to the pandemic. On the other hand, during the pandemic, Gen Z was more focused on food, experiences, fashion, and digital subscriptions.[21]

Spending is a big deal. Before the world locked down, Gen Z saved for retirement, the first generation to do so early on in life. They knew the world was rapidly changing and saving for retirement was the best solution for certain security. During the pandemic, priorities

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[20] "'A Sacrificed GENERATION': Psychological Scars of COVID on Young May Have Lasting Impact." The Guardian. Guardian News and Media, June 2, 2021. https://www.theguardian.com/world/2021/jun/02/a-sacrificed-generation-psychological-scars-of-covid-on-young-may-have-lasting-impact.

[21] www.ETRetail.com. "Pandemic Effect: Millennials, Gen z Spend More on Food, Wellness, Health - Et Retail." ETRetail.com, June 18, 2021. https://retail.economictimes.indiatimes.com/news/industry/pandemic-effect-millennials-gen-z-spend-more-on-food-wellness-health/83624451.

changed, causing them to dip into their and their parents' savings to buy materialistic goods and unnecessary services. Their incessant spending became uncontrollable to the point where during the pandemic their spending level increased to 125% of what it was before 2019.[22]

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In stark contrast to the Baby Boomers, a goal-orientated generation keen on promotions and acknowledgement, Gen Z are motivated by purpose more than anything else. They need to connect with their work and what they do for a living. Studies show that 65% of Gen Z think of their job status as linked to their identity, creating the need for their employment to align with their overall values and outlooks (not many of Gen Z will be accepting "fossil fuel researcher" gigs anytime soon).

Gen Z also considers themselves the hardest working generation. But they'll only work hard and

[22] "Gen z Is Now Spending More than It Did before the Pandemic." BloombergQuint, June 5, 2021. https://www.bloombergquint.com/onweb/gen-z-is-now-spending-more-than-it-ever-did-before-the-pandemic.

produce excellent results if — and only if — a company's values align with theirs. They want to work for companies that create an ideal workplace. This has resulted in something spectacular: Gen Z are the disruptors of the workplace. This means flexibility and stability, a heavy emphasis on interpersonal connections, more diversity and inclusiveness, transparency from leaders, and a considerable increase in environmental, social, and governance (ESG) practices.

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For them to thrive in a modern workplace environment, Gen Z want more meaningful interpersonal connections. While Millennials prefer digital communications such as email or Slack, Gen Z go the opposite way; they want more face time. A study found that 90% of Gen Z want human interaction woven into their work life.[23] Simple switches

[23] Stahl, Ashley. "How Generation-Z Will Revolutionize the Workplace." Forbes, September 10, 2019. https://www.forbes.com/sites/ashleystahl/2019/09/10/how-generation-z-will-revolutionize-the-workplace/.

from phone calls or emails to video chats have increased productivity among Gen Z workers. Seeing a face, rather than words on a screen, creates new meaning for them. And they want these interactions to be as frequent as possible. 60% of Gen Z workers said they want more communication from their managers, preferring weekly and even daily check-ins. Gen Z may prefer these interpersonal connections because they are deprived of them. This is important because the future of jobs may depend on interpersonal skills, and if Gen Z don't have them, they won't be seriously considered for hiring.

Gen Z looks at diversity from a completely different perspective than their parent's generation. To the Baby Boomers, diversity meant giving the underrepresented racial, gender, and ethnic demographics more acceptance and value. Gen Z looks at diversity as a mix of experiences, identities, opinions, and ideas.

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With almost 40% of the current working population being Gen Z, it's already quite concerning that 74% of business leaders have already labelled them as "more difficult to work with" than previous generations.[24] The respondents went on to say that the generation lacks effort, productivity, and motivation, and tend to act entitled. As Gen Z has entered the workforce over past years, more and more articles and research have reported their strange working habits and career goals. So much so, that a new term has been thrown around to describe how Gen Z work: quiet quitting.

Quiet quitting can be defined as "doing the minimum requirements of one's job and putting in no more time, effort, or enthusiasm than absolutely necessary." This aspect of Gen Z's working habits (particularly in the West, but more on this later) creates massive amounts of tension in the workplace. Publicized on social media, this 'trend' among young employees has caused executives and Gen Z

[24] "3 in 4 Managers Find It Difficult to Work with Genz." ResumeBuilder.com, March 22, 2024. https://www.resumebuilder.com/3-in-4-managers-find-it-difficult-to-work-with-genz/.

to lock horns. Executives believe that employees, especially entry-level ones, should work as hard as possible and 'pay their dues', so to speak.

Since the executives at the beginning of their careers had to go through it, it stands to their reasoning that Gen Z should have to put in the same time, effort, and long hours as previous generations did and still do. Further, quiet quitting is costing companies competitive advantages. Theoretically, the businesses whose employees work the hardest are considered the most likely to win. This is the general misunderstanding of Gen Z. For them, quiet quitting represents much more than merely not working hard. This behaviour is a symptom, not a cause, of a more important and ugly reality: work is unfulfilling.

This is a prime difference between Gen Z and other generations. The work they do matters to them; according to Deloitte, "If given the choice of accepting a better-paying but boring job versus work that was more interesting but didn't pay as well, Gen Z was fairly evenly split over the

choice."[25] What matters is the organization's efforts and values: How are they dealing with issues like climate change, world hunger, social justice? Is the company passive or active in voicing support for global issues? This isn't to say that Gen Z does not care about wages. Gen Z routinely point out that low pay is a big driver for their lack of effort. When previous generations began their careers, relatively low wages could afford a decent life. This is not the case anymore. If working long hours does not result in more money, then why would Gen Z force themselves into these situations and be taken advantage of?

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The beginning of this anti-work psychology is rooted in mental health, the pandemic, and the disaster of the job market. A McKinsey survey conducted in May 2022 found that 55% of Gen Z (aged 18-24) received a diagnosis and/or

[25] Mawhinney, Tiffany, and Kimberly Betts. "Understanding Generation Z in the Workplace." Understanding Generation Z in the workplace, August 30, 2019. https://www2.deloitte.com/us/en/pages/consumer-business/articles/understanding-generation-z-in-the-workplace.html.

treatment for a mental illness. The chaos of the pandemic for the generation is still being understood, but the effects are clear: a lot of Gen Z students missed vital opportunities (internships, part-time work) during COVID, so they couldn't develop the necessary skills to be 'hard-working'. Due to the pandemic, social isolation and depression were at an all-time high, combined with their education being destroyed via online learning.

But that's not all. The sterile job market deserves plenty of the blame as well. The 'experience paradox' has affected many members of Gen Z; entry-level jobs require 3-5 years of work experience, but no employers are willing to provide opportunities to gain that experience.

Eventually, when Gen Z can finally land a job, they begin looking for other opportunities, making them highly susceptible to job hopping. 60% of 18–25-year-olds wanted to change their jobs in 2023; an increase from 53% in 2022.[26] Simply put, jobs don't respect Gen Z, and Gen Z do not

[26] DePass, Dee, and Star Tribune. "Gen Z Job Market Turnover Expected to Exceed 2022 Levels." Star Tribune, March 17, 2023. https://www.startribune.com/gen-z-turnover-expected-to-exceed-2022-levels/600259842/.

respect jobs. They are not interested in working long hours for someone else's paycheck, having their work/life balance disrespected, mental health ruined, and not having their input contribute to advancing solutions to societal problems.

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So, what are they interested in doing? The reality here is horrifying. The main career goal for Gen Z is to become an influencer. Yes, really.[27]

A report by Morning Consult found that 57% of Gen Zers would choose to be an influencer if given the chance, and a further 53% view influencing as a respectable career choice and would even leave their current job to attempt to sustain a life as an influencer. 30% of those in the same

[27] Garfinkle, Madeline. "What Is Gen Z's No. 1 Career Choice? Social Media Influencer." Entrepreneur, September 20, 2023. https://www.entrepreneur.com/business-news/what-is-gen-zs-no-1-career-choice-social-media-influencer/459387.

survey said they would pay (what!) to become an influencer.[28]

The idea of being an influencer has been developed and exacerbated by TikTok, a platform that reduced the barriers to fame for the average person. This race for fame, if one could even call it fame, spread throughout the generation. Almost like a digital lottery ticket, any video on TikTok could go viral at any time, giving those with immature ambitions to continuously post and use the platform, much like a gambling addict continues to bet on Red because "the next one will be the big winner."

The worst part about influencing is not just that the entire role is meaningless for humans, or a race to the bottom. Nor is it the fact that the job is already being replaced by artificial intelligence: Aitana López is an AI-generated influencer by a Spanish agency that is relinquishing reliance on human influencers, and generates

[28] Liu, Jennifer. "More than Half of Gen Zers Think They 'can Easily Make a Career in Influencing,' Says Branding Expert." CNBC, September 20, 2023. https://www.cnbc.com/2023/09/20/more-than-half-of-gen-zers-think-they-can-easily-make-a-career-in-influencing.html.

over 10, 000 euros per month. ‘She’ has already amassed 124,000 Instagram followers.[29]

The most sinister part about influencing, for now, is the debt that Gen Z are willing to take on to replicate the lifestyles they see on social media. It's quite literally ‘pay to play’, exactly like online games designed to be fun only after the purchase of significant in-game items that cost real dollars and cents. In other words, not investing massive amounts of money into influencing is a recipe for failure.

For example, spending ~$5000 on a great camera to document the fine-dining experiences and shopping hauls from trendy stores is out of most Gen Z's budget. An article from Yahoo Finance backs this up, “To be an Instagram influencer, you literally had to be rich. And if you weren't rich, then you were gonna have to be in debt.”[30]

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[29] Bhaimiya, Sawdah. “An Agency Created an AI Model Who Earns up to $11,000 a Month Because It Was Tired of Influencers ‘Who Have Egos.’” Business Insider. Accessed July 25, 2024. https://www.businessinsider.com/ai-influencer-aitana-clueless-agency-tech-spain-2023-11.

[30] “$10,000 Debt and Zero Savings: The Untold Side of Making It as a Social Media Influencer.” Yahoo! Finance. Accessed July 25, 2024. https://finance.yahoo.com/news/10-000-debt-zero-savings-150000295.html

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On the one hand, human influencers are slowly but surely being replaced by AI. On the other hand, those who consume content from influencers are putting themselves and their livelihoods into financial trouble to mimic the lifestyles of the rich and famous.

Gen Z is the disrupting force for politics, work-life balance and social norms. While being the disruptors, they are set up to be disrupted by the very technology they use daily, hourly, and even minute-to-minute. Their relationship with technology has been one of subtlety. They have grown up with laptops and phones within arm's reach, thus dubbed the "digital natives." They are obsessed with technology and can multitask with up to five screens at a time. They want technology woven into almost every aspect of their work and daily life. However, as technology gets more advanced, it will further disrupt the lives of Gen Z. They are naïve to the effects of a looming technology,

Artificial Intelligence, that is changing the world faster than anyone thought possible. AI weapon systems, virtual politicians, systematic bias, deepfakes, and automation are the prime problems concerning AI for Gen Z. They must understand AI and how it is changing their future for them to have any chance at stability or control of what their future will look like. Otherwise, they face a lifetime of disruption and frustration.

Part II

AI Disruptions

WHAT IS HAPPENING WITH AI AND HOW IT AFFECTS GEN Z

Gen Z doesn't fully understand what artificial intelligence is. This is a problem. On one hand, they're super comfortable with using AI in their daily lives: using ChatGPT or Gemini, catering to the Instagram or YouTube algorithm for content creation or asking their phones what the weather is like outside. On the other hand, they're unaware of how this technology utilizes their data and the platforms they use to alter their futures and change their minds in extraordinary, possibly illegal, ways.

When talking about AI and its role in the 21st century, most struggle to understand what AI actually means for them. The topic is difficult and technical (the author falls asleep during conversations about math and physics), and unfortunately, only a select few are making talking about it accessible.

What is a disruption? Disruptions can be defined as events that change courses of action, lives, freedoms, etc. For instance, AI researchers commonly refer to GPS, which disrupted taxi drivers forever. In London, to obtain a taxi license, you had to memorize the city's streets, alleys, and intricacies to pass a test called "The Knowledge." Studying

for this test took over 24 months. The reason for acquiring this knowledge was to improve the experience of the customer with the use of the best routes and shortcuts. Then came along GPS, eliminating the need for human memorization.

With GPS came traffic monitoring, police notifiers, and other features that made the knowledge of navigation useless. One technology disrupted an entire industry and the skills that were of value (then came Uber — ouch). Similar instances of disruption can be found in Netflix, Spotify, the iPhone, and Google.

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These events can be dubbed mini singularities, where things were never the same — in that particular industry or field — once certain technologies made their bones. AI is a similar disruptor but has far more impacts that create deeper effects in a wider variety of industries, sectors, and fields of study. It is changing everything and will continue to do so for the foreseeable future.

With AI, there is always more to be discussed than research or media suggests. Each of the following chapters includes a hypothetical scenario speculating where things could go, what the world could look like and how AI could impact Gen Z. These scenarios are created to enhance the dialogue around this technology in classrooms, companies, and courtrooms. Gen Z must understand AI and the ethical implications it has on the future. Only then will they be able to overcome the disruptions it poses and begin to secure their future. Serious conversations and precautions must take place sooner rather than later regarding AI's role in the 21st century.

3

With Great Bias Comes Great Responsibility

AI BIAS, TRANSPARENCY, HALLUCINATION

Biased decisions from AI have consequences and are becoming more difficult to spot. For example, Large Language Models (LLMs) inadvertently promote gender stereotypes. How? By simply using pronouns biasedly associated with professions, like describing a doctor as male and a nurse as female.[31] Applying this unfortunate reality to socioeconomic status, race, ethnicity, education, cultural history, and more, it is fair to say that current AI chatbots are highly likely to promote biases that are destructive to society. To this point, companies may respond by saying

[31] Paul, Anwesha. "Unravelling the Intricate Web of Biases in Llms." Gnani.ai, October 11, 2023. https://www.gnani.ai/resources/blogs/unravelling-the-intricate-web-of-biases-in-llms

that slowly but surely, more data and bigger models will fix these problems. Yet, the damage may already be done and even amplified.

A study published in Scientific Reports found that bias introduced to a user by an AI model can persist in a person's behavior — even after they stop using the AI program.[32] A feedback loop emerges: human biases influence AI systems which in turn strengthen human biases which affect AI systems.

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Unfortunately, Gen Z's barriers don't stop at bias. Known as the transparency or "black box" problem, AI systems produce results without the programmers understanding why they produced those results.[33] Thus, questions

[32] Leffer, Lauren. "Humans Absorb Bias from AI--and Keep It after They Stop Using the Algorithm." Scientific American, February 20, 2024. https://www.scientificamerican.com/article/humans-absorb-bias-from-ai-and-keep-it-after-they-stop-using-the-algorithm/

[33] Schmelzer, Ron. "Towards a More Transparent Ai." Forbes. Forbes Magazine, May 29, 2020. https://www.forbes.com/sites/cognitiveworld/2020/05/23/towards-a-more-transparent-ai/.

surrounding how AI systems can be unethical arise and make headlines (and fill up many pages of books), but no conclusive answers are given or *can* be given regarding why or how these systems came to biased conclusions.

'Imagine' if those same AIs were used to determine jail time, issue warrants, accept or reject patients in hospitals and clinics, decide between shooting civilians or not, decide UBI checks, the list goes on.

One of the most famous examples of AI transparency (or a lack thereof) was when a husband and wife applied for an Apple Card. To the couple's surprise, the husband received a credit limit *twenty* times higher than his wife. When the couple called to investigate the matter, they were told that the bank uses AI to determine credit limits and as such were unable to explain why the husband's credit limit was higher than his wife's.[34]

The inability of humans to understand the decisions being made by AI is concerning and only further reduces

[34] Kopf, Dan. "Goldman Sachs' Misguided World Cup Predictions Could Provide Clues to the Apple CARD CONTROVERSY." Quartz. Quartz. Accessed August 4, 2021. https://qz.com/1748321/the-role-of-goldman-sachs-algorithms-in-the-apple-credit-card-scandal/.

the trust possible in AI. Possibly more concerning is the lack of responsibility from companies when it comes to AI.

Now, AI has entered every home and classroom and affected just about every job in the market. Light regulations became meaningless for AI as systems became larger, more expensive, complex, and widespread, subsequently causing deeper social, societal, and geopolitical problems as the technology aggressively spread. This new age of AI opens up Pandora's Box.

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The issue of companies training their AI models on creators' work without permission has caused a frenzy. Celebrities like Sarah Silverman are suing OpenAI and Meta for copyright infringement[35]; Universal Music is suing Anthropic for distributing song lyrics without a licensing deal, and George R.R Martin (along with 16 other

[35] Davis, Wes. "Sarah Silverman Is Suing OpenAI and Meta for Copyright Infringement." The Verge, July 9, 2023. https://www.theverge.com/2023/7/9/23788741/sarah-silverman-openai-meta-chatgpt-llama-copyright-infringement-chatbots-artificial-intelligence-ai.

authors) are suing OpenAI for "systematic theft on a mass scale."[36]

Young people gravitate towards consuming news via LLMs. According to Bloomberg, Gen Z thinks that ChatGPT is better than Google Search.[37] It has been proven time and again that these systems are not reliable sources of information, leaving most users poisoned with misunderstandings about politics, society, culture, and more.

Dubbed "the hallucination problem," LLMs generating factually incorrect text and nonsense is not going away anytime soon. This disperses plagiarism and mis- or disinformation on a global scale. Fabricating quotes from phoney sources, making up references for academic papers, and giving a weather forecast for a non-existent city

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[36] Italie, Hillel. "'Game of Thrones' Creator and Other Authors Sue Chatgpt-Maker Openai for Copyright Infringement." AP News, September 21, 2023. https://apnews.com/article/openai-lawsuit-authors-grisham-george-rr-martin-37f9073ab67ab25b7e6b2975b2a63bfe.

[37] "Chatgpt Is Big with Gen Z, but They Won't Pay for It | Insights | Bloomberg Professional Services." Bloomberg.com, October 31, 2023. https://www.bloomberg.com/professional/insights/data/chatgpt-is-big-with-gen-z-but-they-wont-pay-for-it/.

are real and really frightening examples of the raw influence and power that AI hallucination holds. And it's not going to be fixed anytime soon or at all.

Scenario I

Arjun and Alex, two 20-year-old minority students studying chemistry, are late for class. Their usual route is to take the subway to campus, but today the subway system is under construction. They decide to take an autonomous taxi to school instead of walking the whole way. Neither of the pair have ever called a taxi themselves. Usually, their friends do it for them. The requirements for riding inside the taxi are laid out upon request: riders must have a verified profile before entering; all riders must connect their profiles to calculate fares; riders must not drink, smoke, vape, or loiter inside the taxi; if crashes or damages occur, riders may be held responsible. Since they've used the service before, the two students already know how to behave, so they go ahead and book. The fare has been

automatically calculated but, as they get in, they notice a significant increase in the fare than when they rode with their Caucasian friends by a factor of almost three. Wondering about the sudden increase, they contact the company through the app to figure out why they are being charged a much higher price.

As Arjun and Alex stare at the screen awaiting a reply, the autonomous taxi suddenly swerves to the right and crashes into a parked vehicle. The two students get out of the car to observe the damage. Almost immediately, police and company representatives are at the scene. It's not the first time this autonomous taxi company has been at fault for their vehicles suddenly crashing. Looking over the car's AI record the company representatives figure out that the taxi mistook a bag blowing in its direction for a human child and swerved to avoid a collision. Having determined the issue and taken notes, the police and the company representatives go on their way, leaving Arjun and Alex on their own.

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They are still flustered from the accident but are increasingly late for class. So, they call another taxi. As the students get into their second autonomous taxi of the day, they realize that the fare is much higher than even the previously inflated price. How can this be? Not ten minutes ago, the fare was a bit more expensive but still manageable. Now, it's ludicrously more than the two students — who are already short for money — are comfortable paying. They file another request, demanding to speak to the department responsible for explaining the AI's decisions. The company came back to them a couple of days later.

It turns out the AI system that determines the taxi's fare looked at Arjun's name and postal code. Not only did it recognize the name "Arjun" as a minority name, but since Alex connected his family profile with Arjun to share the cost, it looked at Alex's *family's record* and discovered a historical record of vandalism. With the combination of criminal history and a minority name, the AI significantly increased the fare price — according to the company representatives, minorities tend to abuse the service, so the

AI compensated by predicting that Arjun, a minority, and Alex, a criminal, would also abuse the service. That was until the taxi crashed.

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Though not their fault, Arjun and Alex's profiles were now associated with a crash, impacting the even higher fee for the second taxi. The two students must write a report explaining the incident and why the company should remove the accident from their profiles. Once submitted, the company's "Explainability Department" will review the necessary details and get back to them.

In the meantime, the two students vow never to use the service again. They are being milked for money they don't have for an accident that was not their fault. Even though they understood the AI's decisions, it doesn't mean it was correct. It was harmfully biased, regardless of its transparency. Arjun and Alex remain furious with the company's terms and irresponsibility as they step onto the subway, late for class once again.

4

All Is Noisy On The Digital Fronts

KILLER ROBOTS & DEEPFAKES

Autonomous Weapons Systems (AWS) are any form of weapons system that uses AI to find and attack targets without human control.[38] Ranging anywhere from drones, tanks, missiles, and submarines, if the weapon is using AI and humans cannot intervene, it is an autonomous weapon, or killer robot. A warfare innovation of this magnitude offers its wielder tremendous power as well as great responsibility.

For militaries, AWS levels out the battlefield. Before, the biggest strength of any military was the people behind

[38] "Home." Lethal Autonomous Weapons, June 11, 2021. https://autonomousweapons.org/.

the operations — the tough decisions and well-formulated strategies deployed with a moral conscience behind them. Now, the art of warfare is replacing these strategists and soldiers with AI systems that will do the bidding of military generals but without thinking or feeling. Transforming warfare entirely. If a soldier senses that something is wrong with a particular order, they can object or refuse; AI listens and executes without perception or question.

If left unchecked, the lethality of AWS is equivalent to that of nuclear weapons. One push of a button launches thousands of killer drones, tanks, or submarines, in pursuit of anyone or anything, anywhere. Are Gen Z comfortable with yet another civilization-threatening technology being in the hands of radical leaders, one that can quickly destroy millions of lives and start the next world war or end the human species entirely?

This leads directly to the conversation of an AI arms race, similar in scope and lethality to the nuclear arms race that took over the latter half of the twentieth century, which we clearly learnt little from.

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As the power behind AWS is slowly realized, the proliferation of these destructive technologies will occur, pushing the boundaries (and lethality) of these weapons even further. Already, more than thirty nations have autonomous defensive weapons in place for 'situations in which the speed of engagement is too fast for humans to act.'[39]

Though, the spotlight isn't on just militaries anymore. Thinking back to nuclear weapons where only nation-states have the resources and capacity to build them, AI is not subject to this restriction. The technology allowed for any company or individual interested in creating autonomous weapons of mass destruction.

The significance of these civilization-threatening innovations cannot be overstated, especially when there is currently little regulation of the creation and distribution of

[39] Jonah. "Killer Robots Aren't Regulated. Yet." The New York Times. The New York Times, December 13, 2019. https://www.nytimes.com/2019/12/13/technology/autonomous-weapons-video.html.

these weapons. Some countries have started to understand the consequences. The United States Department of Defense has, as of November 2021, announced that they will require any third-party military developers to follow responsible and ethical guidelines when building AI for planning, deployment, and so on.[40] This is a step in the right direction but is of little use if the United States is the only country engaging in ethical AWS practices.

Policies and interventions surrounding these technologies are rather light and ineffective. Out of fifty companies surveyed in twelve nations, a mere seven have adopted strict practices and procedures to ensure that their products don't end up as autonomous weapons.[41] The way militaries, policymakers, and companies handle the usage and methods of developing these types of weaponized

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[40] Douglas, Will. "The Department of Defense Is Issuing AI Ethics Guidelines for Tech Contractors." MIT Technology Review. MIT Technology Review, November 16, 2021. https://www.technologyreview.com/2021/11/16/1040190/department-of-defense-government-ai-ethics-military-project-maven/

[41] "Arms Control Today." Few Tech Firms Limit Autonomous Weapons | Arms Control Association. Accessed August 5, 2021. https://www.armscontrol.org/act/2019-09/news/few-tech-firms-limit-autonomous-weapons.

technology directly influences how society, and Gen Z, deal with AWS.

The applications of these weapons may not be what the average person is comfortable with. The inability of humans to intervene when these weapons make decisions is, for some, crossing a critical moral red line.

For example, should a child, in similar clothing as the enemy troops, be killed? Humans would say no for obvious reasons. The child isn't part of the squadron of soldiers. It just happens to be in the wrong place at the wrong time wearing the wrong thing. Human soldiers would distinguish between a child and an enemy soldier and make the ethical decision that the child is innocent, based off human instinct, reasoning, and common sense. AWS would (likely) kill the child because it has none of these, just faulty training data and fancy algorithms controlling its behavior.

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Even in its infancy, AWS is a threat to rival nations and national security. As with any technology, it can be hacked and used against the very military that deployed it. Who takes responsibility if this happens?

Moreover, what's to stop governments from deploying AWS against their citizens? Police forces are already using AI to amplify power and control, so why not use AWS to keep peaceful protests or angry rioters at bay? Since AI is prone to frequent mistakes, what happens when AWS mistakes a citizen for a terrorist and kills them before it can be stopped? ("Death By Robot" is what their cause of death would be classified as. In fact, Robert Williams was the first person to be killed by a robot; this happened in 1979.) Who does society boycott and riot against when the next minority is not shot by a human police officer, but by a robot?

Prohibiting the development and inevitable proliferation of AWS also keeps them out of reach of black-market dealers, terrorist organizations, and drug cartels, who would have no problem using advanced autonomous weaponry to gain and hold a significant advantage over the

competition. What happens when ISIS or the Sinaloa Cartel obtain AWS? Nothing good.

Campaigns have started the conversation around the dangers of AWS. The Campaign to Stop Killer Robots has been working actively to ban these weapons entirely. A growing global coalition in over 65 countries, they are taking the first steps to get the word out about how devastating and existential these weapons systems are.[42] Being a generation of lasting social change Gen Z may opt to follow in similar footsteps to the campaign, protesting to stop the development of yet another existential technology — and causing social unrest until critical action is taken.

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On another front, deepfakes present an entirely different battle. Video is frictionless in comparison to text, the latter giving time for falsehoods and hallucinations to be spotted with some effort. The rapid adoption and importance of

[42] Campaign to Stop killer robots. Accessed August 5, 2021. https://www.stopkillerrobots.org/learn/#problem.

platforms such as TikTok, Instagram Reel, or YouTube Short are indicative of video's effectiveness. As such, deepfakes are becoming the new digital weapons of mass destruction.

Pre-ChatGPT, deepfakes were of little impact. Most were used for satiric and other (adult) purposes. The most convincing and interesting ones were treated as marvels of how far AI technology has advanced — a deepfake creating a podcast conversation between Steve Jobs and Joe Rogan, for example. Being able to produce audio and video of anyone doing and/or saying anything relied on the fortunate reality that creating these media was quite unintuitive. Only an experienced person with technical understanding could create something convincingly sinister.

With the release of ChatGPT, the power to distort reality has been democratized to those with little technical capability but large appetites for societal chaos. Especially when used on the political battlefield, there is tremendous cause for concern. Taking further advantage of Gen Z's face value relationship with information, with most of them declining to spend a mere 15 minutes to verify whether the

information consumed was legitimate or not, and regardless of validity, proceed to share it with their social networks. Considering modern attention spans and the forced virality on social media platforms, tremendous advantage is given to those that utilised deepfakes in the right ways for the wrong reasons.

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Towards the beginning of the war in Ukraine, a deepfake of Russian president Vladimir Putin declaring peace spread (again) around YouTube; at the same time, a video of Ukraine's president Volodymyr Zelenskyy telling Ukrainians to put down their weapons began to circulate on Instagram and YouTube but was swiftly taken down.[43]

Concerning the Israel-Hamas conflict, both sides have started to utilize deepfakes as propaganda tools to shape public opinion - mostly "shock and awe" images

[43] Wakefield, Jane. “Deepfake Presidents Used in Russia-Ukraine War.” BBC News, March 18, 2022. https://www.bbc.com/news/technology-60780142.

according to Henry Ajder, an authority on deepfakes and generative AI. Further, fake audio resurfaced of US President Joe Biden announcing that he would be opening the U.S. Selective Service draft to women. This prompted a TikTok trend that garnered millions of views complete with a "#WomenDraft."[44]

It's clear as day that anyone with sufficient data on the Internet can and will be deepfaked. In fact, the amount of data needed to deepfake anyone is about three (!) seconds of audio and/or video. This doesn't bode well for society, and horrifically, this new era of deepfakes poses a considerable danger to children.

Teenagers are terrorizing their classmates with deepfakes, taking images and videos of (mostly) female classmates and crafting illicit photos, then distributing them. At the time of writing, the most recent case is out of New Jersey, where boys at a high school spread AI-generated images that had the faces of their female

[44] Klee, Miles, and Nikki McCann Ramirez. “Ai Has Made the Israel-Hamas Misinformation Epidemic Much, Much Worse .” Rolling Stone, October 27, 2023. https://www.rollingstone.com/politics/politics-features/israel-hamas-misinformation-fueled-ai-images-1234863586/.

classmates on naked bodies.[45] In Spain, 30 girls between the ages of 12 and 14 were sent pictures of themselves undressed; the process of taking someone's photo and 'undressing' it is being dubbed 'Nudify,' and can happen to anyone, even with a single Instagram selfie. Further, a man in Wisconsin targeted middle school girls and, after receiving 'innocent photos', threatened to 'nudify' them if they didn't send him further illicit images.[46]

When political climates ignite, deepfakes can be used as extinguishers. Those in power now have limitless scapegoats. If a politician or business executive is caught saying or doing something inappropriate, they can simply blame it on a deepfake: "I didn't say/do that! Someone created a deepfake of me!" Anything racist, sexist, transphobic, misogynistic, or genocidal can instantly be blunted by blaming deepfakes.

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[45] MorningBrew. "Teens Are Terrorizing Classmates with Fake Nudes." Morning Brew, November 4, 2023. https://www.morningbrew.com/daily/stories/2023/11/04/teens-are-terrorizing-classmates-with-fake-nudes/

[46] Schmidt, Brittany. "Wisconsin Middle School Students Targeted in AI Generated Nude Photo Exploitation." https://www.wbay.com, October 5, 2023. https://www.wbay.com/2023/10/05/wi-middle-school-students-targeted-ai-generated-nude-photo-exploitation/

All these instances equate to a digital battlefield of confusion. Politicians and leaders can say or do anything and if put under public scrutiny, blame it on deepfakes. Anyone can generate unlimited content of a celebrity or CEO saying or doing anything, causing social upheaval, cancelled movies or media deals, political exile, destroyed careers, scandalous legal proceedings, and ruined lives.

Scenario II

Sherry woke up with an extra spring in her step. *Today's the day those bastards get what they deserve.* A thought not out of the ordinary for the typical rebellious Gen Z, on that particular Wednesday, Sherry attended a climate protest on her university campus in Toronto. Her school came under fire after the Dean and other staff were caught — on numerous occasions — using private jets which spew horrendous amounts of carbon into the atmosphere. Worse, the Dean had recently signed off on a "Greener Education" commitment put forth by the Climate Committee. One where e-bikes were readily available for students (for a fee, of course), plastic bottles were banned, vending machines were removed, and No Electricity days implemented. A liberal university, to be fair, but all necessary steps for both

students and staff to follow, to positively impact the growing climate emergency.

Making her way downtown, walking fast, and unable to contain her excitement at finally being a part of a large group activity. An explicit thought flashed into her mind. *What if I get arrested and thrown in jail?* Quickly dismissing such an outrageous and unrealistic scenario, she got to campus and started setting up.

It was then she noticed a sizable police presence in and around the campus. Since this was meant to be a peaceful and informative protest, Sherry asked one of the officers what the situation was. The group were only planning to make a ruckus for a few hours, get it going viral on social media, hold the Dean and staff accountable, and expect the entire university system to change overnight. *No biggie.*

*

The officer informed Sherry bluntly that the heavy police presence was requested by the Dean herself. New rules had

previously limited the amount of police personnel on a given scene. However, a loophole being utilized (some would say abused) was a new, experimental robot offering. This new service was being offered by Toronto police departments — for a sizable fee — that boosted the capacity of police presence. Since drones, robot dogs, and androids were not classified as living entities, there could be as many as the purchaser would like to augment the police's ability to handle crowds. Thus, on this day of protest, police robots outnumbered human police by 4:1. They were everywhere: drones manning the skies, robot dogs surveying the crowd and getting under tables, androids standing guard alongside the human officers.

Sherry couldn't believe her eyes, but she had bigger fish to fry. Slowly but surely, as she continued setting up the booths and posters, Gen Z's and some Gen Alpha's filled the space. It looked like a sea of green, thanks to the foresight of the organizers to recommend wearing the color of the trees being bulldozed every day. The noise of the crowd was ramping up, selfie sticks propping up for live streams to reach more viewers and gain more attention, and

X (formerly known as Twitter) hashtags highlighting the madness of the crowd.

Peace was held, for the most part. Some extroverted Gen Z were sticking cameras in some (human) police officers' faces, demanding to know why they're supporting the destruction of planet Earth. The Toronto officers numbly took the verbal blows. They couldn't really do anything unless authorized by the station watching the scene through their body cams. *All was going well.*

*

Until someone smashed into a human officer. A true accident, one of the girls had been jumping and landed in an awkward position, causing her ankle to bend, and tumbling into one of the officers standing nearby. The crowd didn't notice one girl falling amongst the thousands present, but what did register an attack on the officers were the robots. An experimental unit replete with facial recognition and faster-than-human reflexes, all robots on the scene opened fire on the crowd, with one goal: kill

anything in green. The peaceful madness quickly and drastically morphed into a shooting spree of blood and death. The human officers attacked the robots, but it was futile. Robot dogs were scattered in the middle of the crowd, drones manned the skies, and androids stood on the edge. Everywhere a protestor ran, they were met with bullets or thrown to the ground by the fleeing crowd. Sherry, standing on the edge, was knocked into a brick wall just as the commotion started. She woke up in the hospital 27 hours later and was immediately greeted by her mother, who hadn't left her side for a moment. Thinking this was all a dream, she asked her mother what had happened.

The news was still breaking the details, but the gist was that a girl falling into the human officer had triggered a response from all the robots, who were programmed to recognize this interaction as an attack. All the data they had been trained on did not consider accidental encroachment towards the human officers. The robots simply saw one officer get hurt by someone in green. Their programming instructed them to utilize their faster-than-human reflexes and prevent any officers from getting hurt by the 'green

people' since the codified laws of the robots were to keep *their* humans alive. The reason they shot only those in green was due to their training data. The AI had extrapolated that all terrorists and criminals usually wear similar clothing. Thus, anyone in green was grouped in with the girl who 'attacked' the officer, and since that girl was labelled a 'hostile' who needed to be eradicated, everyone else in the vicinity received the same label as well. It took the best 'LLM Explainers' from various companies to understand why the AIs in the robots had reacted in this way.

*

Sherry didn't get off scot-free. Just because she got knocked unconscious early on didn't mean she was off the hook for getting shot. Two bullets had struck her lower back, one of those bullets connecting with her spine. She would never walk again.

Wheeling onto campus six months later, she stopped at the very spot where everything had gone so devastatingly wrong. A memorial was dedicated to the

victims. Their parents received death certificates which amounted this massacre to "Death by Robot(s)." Since none of the robots were classified as living entities, the city and police department were not held liable for the damages caused. Still, the Dean said she would honor those lost by giving students the day off and that she would be halting the usage of the private jet. A small win for those Gen Z and Alpha protestors still alive, who suffered the consequences of untested, unregulated AI.

5

Davids and Goliaths

AI REGULATIONS & GEOPOLITICS

Before the generative AI boom, the regulation of AI meant precious little. The idea that a narrow artificial intelligence system could pose a threat to society (thus needing to be regulated) was a foolish thought. Generative AI (now) appears more concerning, and thus more practical to regulate. The problem is that no one can agree on what safe, secure, and suitable regulation is.

Proposed regulations on generative AI systems benefit only a small minority, Big Tech, and close the playing field off to any new players. The point of regulation has now become a game of getting the government to widen the gap between the David's and Goliaths of AI. David can never get close enough to slay Goliath if the field

continues to expand. Big Tech companies are untouchable in the AI realm, collecting as much data and money, using as much water, energy, and computation, and releasing as much carbon into the atmosphere, as they see fit.

Let's visit the example of flip phones while driving. Policies were put in place that prevent using a flip phone to call while operating a vehicle. When smartphones came along, new policies had to be put in place because the technology was different, updated. Policies that deal with the problems of past technologies do not and cannot apply to newer, more advanced technologies. Policies must be updated as frequently as the respective technology changes to address the new problems created by its advancement.

It's not likely that generative AI will exponentially advance, as most people believe (incorrectly). In this case, leaving grey areas in these policies is a recipe for disaster. Let's say there is a generative AI system, called 'System A' for simplicity If System A has the features of 'XYZ,' policies can be written to regulate XYZ.

However, when System A updates and becomes 'System B,' which has the same features, but also has a new feature, 'W', things change.

Now, the argument can be made that System B is *totally different* and functions in an *entirely* different way with the introduction of W. All policies applicable to System A could be rendered redundant when it comes to System B. See what I mean?

Even if generative AI gets only incrementally better (highly likely), Big Tech could argue that these incrementally-but-still-technically-different systems do not fall under the umbrella of regulation due to new features, hence not subject to existing policies.

*

Geopolitics presents an interesting caveat to this perspective of regulation. The EU AI Act will only regulate the AI safety and ethics in a handful of countries; the US has some sweeping regulations in place and more in the

pipeline. But will they be followed by countries that fall outside of such alliances?

While other nations accelerate their development of advanced AI technologies, do those implementing regulation fall behind in areas that may contribute to our safety? Game theory suggests that if an opponent has a new weapon, it is in your best interest to develop defences against that weapon while also accelerating your development on that weapon to use against them.

While the EU and US are focused on halting development and developing integrity around the technology, other countries are developing advanced AI systems, giving them the game theoretic advantage. Worse, other nations may use their advanced AI to impose their rule on nations that regulated AI. This begs the question: Is regulation truly beneficial or a hidden hinderance?

*

For Gen Z, the current shortage of laws poses a dire threat, one where anything can happen around and equally

because of AI. Identifying where AI should and should not be used is critical, especially for a society that is starting to see it woven into everything. One reason why AI regulation is met with suspicion is due to the absence of understanding around what AI is and what it is capable of.

How can policymakers try to regulate a technology they and the industry do not fully understand? It's like trying to regulate Quantum Physics. No one really understands how it works, so how can you go a step further and regulate it?

One example that is prevalent for Gen Z is the impact of automation, discussed later in Chapter 8. Since there are no regulations or laws detailing the number of jobs or people that can be replaced with robots or AI, Gen Z could find themselves in a powerless situation: one that is slow to unfold; threatening their careers or, in some instances, the existence of one; left watching the disappearance of jobs; the devaluation of their current skills; and little idea of what retraining or new skills would be relevant in an AI-dominated world. Regulations must take place within this decade to force companies to

seriously consider the impact on society when automating humans.

AI needs guidance. Policymakers don't know where to start, and governments don't understand the technology. Not only are AI laws meaningless, but they also barely exist. It seems to be increasingly unlikely that AI will be regulated in any useful sense. Regulations around generative AI are suspicious, with Big Tech playing both sides as the advocates and the vetoers. Geopolitics throws regulations for a loop and even puts countries that choose to regulate AI at a national security risk.

It would be foolish to attempt to predict the next years with AI. One thing is certain: when it comes to generative AI, everything is uncertain.

Scenario III

Mara had a brilliant idea. She would build an AI startup that sold consumer healthcare chatbots with which people could discuss their health complications. Instead of waiting in hour-long lines at the walk-in clinic, they'd be able to get a diagnosis and access help within minutes. A golden ticket opportunity that she wasn't about to pass up, especially since the market for AI chatbots is booming.

Starting the company was the easy part. Filling out some simple legal documents and a little light advertising on social media. Next, she would need to showcase how the chatbot worked. Combining online tools with her wicked

ability to learn new things quickly, she had a Minimum Viable Product (MVP) within just three months.

Marketing this new technology, codenamed Baymax, was a different story altogether. Mara went viral and was inundated with enquiries. Everyone wanted to invest in the company or buy Baymax as a gift for their relatives who suffered from a variety of diseases. Some even wanted to work for her. She was known as the 'female Elon Musk, but better.' As Mara became accustomed to her new stardom, the landscape of AI was undergoing a metamorphosis.

*

Big Tech didn't like that Mara's company was getting so much attention. The shift away from people searching for illnesses and diseases came at quite the cost. A lot of data could be harvested from user clicks around medical sites, especially from older folks who tended to give more personal information away than necessary to self-diagnose and treat their afflictions as soon as possible. Mara's startup

was a threat to user profiling, tailored advertising, and ultimately, profit.

Sweeping reforms are instigated, targeting AI startups who were using licensed software to collect user data. Mara was indeed collecting user data, but only to link to summarized medical articles. The data was stored anonymously for each active session. She also implemented a "Forget Me" button to erase all the user's conversations with Baymax. Mara was benign, she respected how personal medical data is and vowed to never take advantage of her customers by selling their information to the highest bidder. Mara's integrity didn't matter to Big Tech. Benign tumors eventually have to be removed.

For the first time in history, all members of Big Tech joined forces to agree on an AI bill that restricted usage and development parameters of AI, rendering Mara's startup un-operational. She didn't have the technical expertise to re-program her code to avoid being affected by the ruling, and as soon as the Bill came into power, all investment and interest in her company faded as fast as it generated.

Mara refused to quit. She had worked too long and hard on this to simply give it up at the slightest adversity. She began the arduous process of setting up a new company, but this time, she would use open-sourced technology. This way, she wouldn't fall under the regulatory umbrella of Big Tech.

Within months, she had her MVP, along with even more interest and hype behind her. Internet users referred to her as 'Phoenix', a bird who rises from the ashes. Mara didn't intend on making the same mistake as last time. Investment money was secured, a team was built, the technology worked, and her company's ethics were intact. Things were looking up.

*

Like clockwork, Big Tech struck back. Who did this no-name think she was? If she was successful, people would notice how fragile the Big Tech monopoly really is. More visionaries would flood in and try to disrupt Big Tech's

stronghold. They couldn't allow this to happen. Goliath had to stop David.

A new set of AI rules were enacted. This time, however, guidelines were published that determined the safety, security, and viability of AI models. These tests were approved by government agencies and technology leaders alike. New players in the space had to verify their business was adhering to the standards correctly. If they didn't pass, they'd be terminated – unless they changed their business and technology structure to adhere to the guidelines. If they didn't comply and verify, they'd be terminated within 90 days.

Mara had no choice. She knew when she submitted her business documents for verification, Big Tech would once again pull the rug out from under her. But if she didn't comply, she'd be terminated anyway. This was a nightmare catch-22 that obstructed her dreams.

Mara ended up going to social media and demanding action be taken. She was actually one of the first leaders to voice concerns about Big Tech regulation and how their monopolistic practices are authoritarian, greedy,

and holding the industry and the world back from truly beneficial technologies. People agreed, but to a fault. Mara became a pseudo celebrity. Every Tweet, post, and video she put out instantly went viral. She was a quasi-deity. But blind followers who act in the presumed defense of their leader is a recipe for disaster. This case was no exception. Big Tech offices in major cities were ransacked and destroyed. Not because of Mara, but *for* her. As news outlets began reporting the damage, Mara took to social media and begged her followers to stop the madness. If they believed in the mission, and if they truly believed in her, they should know that violence is not and can never be the answer. They'd build a different solution, together, but not like this.

*

For the first time, her voice fell on deaf ears. People were angry on behalf of Mara, but also at Big Tech in general. The circumstance with Mara's company was a blatant overextension of Big Tech's authoritarian practices that keep people in line and obeying the self-proclaimed 'tech

Gods.' Enough was enough. They needed to be stopped. Mara was just an excuse to get out and light some shit on fire. Within days, Big Tech offices *globally* were partially or completely destroyed. Billions of dollars in damages, trillions in infrastructure. Someone had to be blamed, responsibility had to fall on someone. Big Tech already had the perfect scapegoat.

72 hours after the frenzy died down, Mara was arrested on grounds of inciting violence and a litany of other bogus claims. She was sentenced to 25 years in prison, with the option of parole after five years. Big Tech got what they wanted. They managed to close the barn door after getting the horse back in. Mara's followers continued to riot but to no avail. She was gone. Her mission was over. Big Tech won, Mara none.

6

The Wolves of Silicon Valley

AI JOB AUTOMATION

It has long been foretold that artificial intelligence, through the process known as "automation" would wipe out millions of jobs, reshaping the workforce. Every book talking about the ramifications of narrow AI touches on this point of automation, citing it as an inevitability that will lead to a dystopic reality.

A new reality with generative AI paints a different picture. The robots supposed to disrupt warehouse jobs and

replace taxi drivers and truckers are not and do not seem to be coming anytime soon. In fact, the biggest surprise was the total disruption of white-collar jobs, and not blue-collar jobs as forecasted.

It was always expected that automation would take away low-level jobs from workers with limited skills, creeping its way up the career ladder, absorbing more jobs with more skill sets. Those at the top of the ladder (first place in the rat race?) were supposed to be untouched.

The context of automation has shifted. Forget about physical jobs being automated. Those require too much time, investment, and technology. Blue-collar and trades jobs seem much more secure than ever before but do not have the same glamourization as a software engineer or graphics designer does. Automation has undergone a redefinition of sorts. It is no longer a one-size-fits-all term to describe anyone, anywhere, in any occupation, losing their job to technology (specifically, AI and robots). Right now, the world is dealing with the reality of automation via LLMs, or generative AI.

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Jobs have changed with generative AI. A point must be made, however, that these chatbots will not be replacing most jobs anytime soon, as these roles require a degree of general intelligence that LLMs cannot suddenly possess. For example, customer support roles that mostly involve copying-and-pasting responses appropriately is an instance where AI could overtake an entire role and do away with the human. A startup CEO in India already went down this path, replacing 90% of his staff (23 people) with a chatbot, reducing his resolution time from hours to minutes, and response time from minutes to instantaneous. This is a unique example that cannot be applied to all jobs as some would hope.

Detailing this impact is strange considering the recency of generative AI. For starters, business leaders are still understanding what roles the technology can help, and which employees can be enhanced or replaced by these tools. Still, automation via LLMs has indeed shaken things up. Data scientists and software engineers, the prime

careers that were dubbed untouchable by automation, are falling by the wayside. This doesn't mean that computer science degrees will go out of fashion anytime soon, but it does mean that fewer software engineers will be needed due to the proficiency of LLMs at generating adequate code.

This represents a stark departure from what was taught to Gen Z in schools: technical jobs were at the very top, with computer science classrooms full of bright and hungry students eager to learn the big new coding language and invent the next Facebook. Introducing ChatGPT has forced a rethink, with those students thinking less creatively about code due to the ease of using these chatbots. But it's not just coding and the eagerness of new coders that have been disrupted.

*

The idea that ChatGPT is an existential threat to schools and education is nonsense. Education systems have refused to update accordingly or dynamically to support new

advances in technology and culture for as long as they have existed, ~300 years. There's always been a tremendous lag time between what is relevant to proper education and what schools teach students.

Now, with the arrival of ChatGPT and similar systems, schools are caught with their pants down. Somehow, the advancement of technology, to the point where mundane tasks like homework are eradicated, is a bad thing? Isn't it particularly destructive that schools are thinking of going back to writing with pens and paper instead of updating curriculums to support new technologies?

Should we not commend the young minds that rapidly adopt technology? Sure, they are shooting themselves in the foot by using ChatGPT, as they won't learn how to write (which involves focus, attention, critical thinking, and other highly important and transferrable skills), but to some degree, we must sit back and marvel at how quickly students learned to use such an 'advanced' system.

Through their use of ChatGPT, some students may recognize the inherent flaws of LLMs, like bias, lack of transparency, hallucination, and more. In this case, students may find these problems fascinating and want to study how generative AI works and even aim to solve those problems altogether. AI has been brought into the classroom and is, by itself, educating students on the problems of AI and inspiring young minds to pursue AI in post-secondary studies.

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Students are not learning how to write, effectively how to think, which is detrimental to their long-term health and career aspirations. This notion of using AI to complete previously boring tasks is destroying hard work and patience in the classroom. Instead of writing an essay and being forced to do research, gather ideas, and write clearly, one simply types a sentence (a prompt) into a chatbot and receives a paper in return. No fees, no questions asked, and no work or thought put in.

On the surface, this may seem reasonable. But in this metaphorical onion, peeling back the initial layers reveals an ugly truth. Thinking about the plasticity of young minds in response to their environment, young folks are strengthening a behaviour that relies on chatbots like ChatGPT to do the heavy lifting of thinking. Their brain is wiring around chatbots being the oracle of truth and the equivalent of the Library of Alexandria.

As these students grow up, they will be more reliant on technology than ever. This is starkly different to Gen X or Y, who learned to use Google as a search engine but then parse the relevant information. Now, Gen Z and Alpha are spending less time critically thinking about their information diet and more time blindly consuming and repeating it.

*

In the first edition of this book, I suffered from FOFU: fear of failing utterly. Learning about automation and its potentially destructive force on the job market and

particularly on Gen Z, I felt it was my duty to write and inform my generation of this doom. However, just as the act of doom scrolling through social media is common in modern society, this quality of "doom writing" seems to take a hold on any author writing about automation.

In any case, I was incorrect about how jobs and careers would and will be affected by AI. What I have learned, so far, is that physical and blue-collar jobs, and the trades, will be safe for as long as robots stay prototypes and not consumer products. (Could LLMs catalyze robotics research and capabilities? Possibly.[47] But this is conjecture and should be taken with a grain of salt, not treated as forecast or prediction.) Furthermore, massive amounts of careers will not simply vanish overnight; a steady-state approach seems a more appropriate transition for jobs that will succumb to automation via generative AI.

[47] Salemann, Miska. "World-First Humanoid Robot Factory Will Have Bots Building Bots & Open This Year." The US Sun, September 30, 2023. https://www.the-sun.com/tech/9214972/worlds-first-humanoid-robot-factory/.

Malheureusement, I am still correct in one aspect: there is no safe, clear path forward for Gen Z. It's clear from all the data and reports that automation will not be a single disruption, but a constant disruptor for the foreseeable future. The effects of automation have just started to be felt.

*

The future is not predictable in any sense, as the world saw with the assembly line, the microprocessor, the Internet, and ironically, the current moment of artificial intelligence. Disruptions are happening frequently, and the time between them is thinning.

The biggest difference between these disruptions and artificial intelligence is that jobs were created *while* industries were being disrupted, a yin-and-yang of destruction and creation. AI is replacing jobs and entire industries with little to no jobs being created to supplement the unemployed.

The light at the end of the tunnel doesn't look bright for Gen Z. They have inadequate experience because of

their age and don't want to attend university because of the astronomically high fees. The ones who end up going to college or university are left with a lifetime of debt, but those who don't obtain a post-secondary education struggle to find employment due to an oversaturated job market. Gen Z couldn't start their work life due to the circumstances of the pandemic, and they spend too much time online and less time sharpening their people skills. Finally, they are coming into a world lessening the value of low-wage and low-skill jobs with companies valuing more experience, credentials, sharper interpersonal skills, and ultimately, a preference for generative AI. What's worse, the majority of Gen Z don't know this.

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Some of Gen Z are starting to address the impact of automation on their lives. A survey by Indeed found that automation is a real concern for Gen Z aged 24 and below. Another study done by Lucid Research found that 57% of Gen Z are worried about automation and its impact on their

jobs and livelihood.[48] Job insecurity from Gen Z is not uncommon — they already suffer from the 'last hired, first fired' mentality. Adding automation to the mix only makes things worse.

As a result, 56% of Gen Z workers had their mental health worsened by worry for their job security due to automation.[49] A generation of lasting mental health problems intensified by the COVID-19 pandemic, when automation starts running rampant, leaving them with nowhere to go and nothing to do, their mental, physical, and emotional health will plummet further. Since workers consider job status directly linked to their identity,[50] it is no surprise that when automation starts displacing them out of

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[48] Merchant, Brian. "Gen z Is Already Afraid Automation Will Eat Their Jobs." Gizmodo. Gizmodo, September 6, 2019. https://gizmodo.com/gen-z-is-already-afraid-automation-will-eat-their-jobs-1837930958.

[49] "Increased Automation Drives Employee Mental Health Concerns." HR Magazine. Accessed August 5, 2021. https://www.hrmagazine.co.uk/content/news/increased-automation-drives-employee-mental-health-concerns.

[50] Bolden-Barrett, Valerie. "Millennials, Gen z Are Ditching the Job-Hopper Label, Study Says." HR Dive, February 4, 2020. https://www.hrdive.com/news/millennials-gen-z-are-ditching-the-job-hopper-label-study-says/571533/.

a job, it would take away an aspect of their identity, and mental health levels across the generation will decline further.

There is even talk of a new derogatory term for the people at risk of being replaced, dubbed 'the Dispensables.'[51] When generational mental health decreases coupled with a new stigmatized underclass of people, the age of automation could see a massive spike in domestic violence, homicides, lootings, riots, suicides, and even cyberattacks. (Criminologists may counter this point and say that unemployment rates do not necessarily lead to spiked rates of violent crime, but this may be proven wrong due to the rare inability to obtain *any* type of employment).

One of the problems with writing about the future of work, especially the future of work for an entire generation, is that everything is contextual. It's incorrect to suggest, "doing XYZ will prevent displacement for the next fifty

[51] Richardson, Jillian. "Work Gives Our Lives Meaning. What Will We Do When Robots Have Taken Our Jobs?" Quartz. Quartz. Accessed August 5, 2021. https://qz.com/973149/work-gives-our-lives-meaning-what-will-we-do-when-robots-have-taken-our-jobs/.

years." What works for a nurse will not work for a programmer will not work for a warehouse worker will not work for a car salesperson.

Research and conversations are essential to understand what's taking place — objectively and subjectively. Objectively to know where and how the world is changing and subjectively to figure out the correct individual pathway.

One seemingly incorrect 'solution' to job insecurity from automation is that new jobs will be created, and workers can slide into those new jobs with no fuss. This logic is lazy because those new jobs will require higher degrees of expertise, better interpersonal skills, more experience, etc. These new jobs will not be accessible through lateral movement — an Amazon warehouse worker cannot be replaced by a robot and then get a job as an algorithm data cleanser the next day. Gen Z must realize what is at stake for their future sooner rather than later because there will be a giant amount of competition between Gen Z, older generations, and younger generations, like Gen Alpha, for jobs in the coming years.

With technical jobs like data scientists and software engineers dwindling every day, narrow jobs like copywriting or customer support totally disappearing, and schools not using these technologies effectively or at all, the future of AI for Gen Z is looking to be filled with low attention spans and focus, minimal critical thinking and writing abilities, misunderstandings about the effects of technology on the mind, brain, and body, and confusion about the future. In turn, this could cause a lot of Gen Z to turn towards further mindless activities like video games, drugs, or worse, suicides, homicides, riots, and cyberattacks.

This generation needs guidance on how to navigate a future with increasingly sophisticated AI technologies, and no one (for now) wants to step up to the plate and offer help and resources. This means that Gen Z must reinvent their future, paying attention to how, where, and why AI is disrupting, the opportunities that are generated, and share these understandings with their peers and fellow generational members.

Just like Gen Z have taken matters of climate change into their own hands, protesting in their own way and creating a ruckus that makes headlines, similar action must be taken regarding AI, and louder actions must take place to save the roughly 2.1 billion global members of Gen Z from absolute dismay.

Scenario IV

Tim is a warehouse worker in 2025. He has worked at Amazon's warehouse in Los Angeles for about two years. Tim holds a more senior position. He knows his team very well and chooses to stay in the job because it makes ends meet for his family. The perks of the job are the stable income, working with his friends, and spending time away from his family (he just had a baby boy, who cries a *lot*). Some cons include the monotonous and repetitive work. Tim ignores this because he has no other choice. He barely graduated high school, chose not to go to college, and has racked up a ton of debt gambling. This job is the only way for Tim to pay off his debts, keep his family and overall life

afloat, and generate some meaning in an otherwise rather dull life. Tim was never late, never complained, never asked for a raise, never cut corners, and secretly, he enjoyed the mindlessness of his work.

Towards the end of 2025, Tim comes into work. On the surface, it's another normal day for him and yet becomes far from it. As Tim walked into the warehouse, men in suits were handing out papers. In the middle of the warehouse was the Regional District Manager (RDM) with all the warehouse employees huddled around him, sheets of paper in their hands. The noise in the warehouse is generally loud, but on this day the noise level was deafening. Workers were shouting at the top of their lungs at the RDM, and the other men dressed in suits. Wondering why, he approached his friend, Alex, and asked what was going on.

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Alex handed him his piece of paper. It read, "Employee #487245: On December 31, 2025, effective immediately, you

will be released from your contract at this facility." The rest of the contract was lawyer talk, which went right over Tim's head. It might as well have been gibberish. Just as he handed the piece of paper back to Alex, he got a tap on the shoulder. It was one of the men in suits. He handed Tim a piece of paper, saying the same thing with the same date. Tim was not sure what to feel. His main question was, why?

Tim joined the crowd surrounding the RDM. The men in suits had finished handing out their papers; now they were trying to calm the crowd down. The RDM continued speaking, unfazed by the dismay of the warehouse employees. He said, "Look, we had to cut costs in the name of business. Our automated factories in China are doing well, forcing us to make some tough decisions here in America. We have decided that our American factories will be entirely automated by the start of 2026. I'm sorry about this. I dread telling you this, I've had to tell all the other warehouses in this district the bad news. It's difficult to relay such horrible information. Good luck in your next venture!"

After the RDM and the other men left, Tim and his friends realized they had been automated out of a job. All that hard work went unnoticed; the lack of complaints, sacrificed time off, late nights. A single piece of paper completely changed the trajectory of Tim's life. He wondered how he would explain this to his girlfriend, who is a stay-at-home mother. How would he support his baby boy? How would he find another job without a college education? These questions flooded Tim's head, as he took a bus back home carrying the bad news.

Six months have passed since Tim was made redundant. It took around two weeks for the realization replaced by automation to sink in. He didn't make rent after month one, so he's now living in a shelter; he wasn't able to feed his child and was forced to give him to an adoption center — this caused the relationship with his girlfriend to collapse entirely. He also had to file for bankruptcy due to his inability to pay back his gambling debts.

Tim is living off unemployment insurance, for now. He was notified on the fourth month that his

unemployment benefits would only last a year since there has been a massive uptick of unemployed citizens. The U.S. Department of Labor can only provide unemployment insurance to everyone for a limited time. After the benefits run out, that person is left to their wits.

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Tired, restless, and particularly frustrated, Tim thinks enough is enough. One event will not dictate the rest of his life. He will find another job by transitioning his skills. He goes to the local library and does some research, deciding that his next venture will be in front-end web development. With the little money he has left, he takes some online courses to develop his skills. Eventually, he began to apply for front-end software development jobs.

But the market is far too saturated in 2026. Everyone is trying to transition into different jobs, attempting to gather some form of safety or security in their lives. Tim is up against stiff competition. His lack of college education renders him invisible on the resume shortlist. He constantly

receives automated messages that he hasn't been selected. It's not looking good.

One day, he gets a phone call from Alex, his friend from the warehouse. Alex has transitioned into front-end development as well and has landed a job with an established company. Alex tells Tim that he can get him an interview—and Tim immediately accepts. Knowing his people skills are up to par, he is confident he can find a way to land that job. And he does. Tim excels in the interview with the hiring manager, who hires him on the spot. Tim has successfully transitioned, with the help of his past relationships and his meticulous understanding of people.

Having gotten off unemployment insurance, moving into a studio apartment that he sweet-talked the Realtor into giving him at a discounted rate, and working in front-end web development for the past year, Tim's life has turned around for the better. He made a promise to himself, to transition and find a way to live a normal life again, and he did it.

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In 2027, Tim receives an email. Contained in the email is a PDF attachment of a document with strangely familiar attributes. Tim has seen it before. This is the notification of being automated. Tim doesn't understand. He worked in a monotonous job before, so being automated was a question of when rather than if. In stark contrast, front-end web development is supposed to be more creative, non-routine, and cognitively intensive. How could these roles be automated?

The document explains that certain breakthroughs in AI technology have been replacing the tasks of front-end engineers for quite some time. Now, the time has come for AI to take over the entirety of these roles. Tim reads the words 'business decisions' and 'sorry' and 'good luck' as a nasty wave of Deja-vu washes over him. He can't believe it. He has been replaced again.

He calls Alex, wondering if his friend shared the same fate. A different voice picks up the phone; Alex had committed suicide after receiving his email.

Tim doesn't know what to do. He tried everything, turning his life around, and gaining back some form of meaning and purpose. With a snap of someone else's fingers, he was back to square one. He is unable to transition again. Rather, he has no motivation since he knows what will happen once he does.

Automation is not one disruption. It's not a singular event. It is a brutal, uncaring force. A force not of nature, but of man and its relation to technology and power.

Part III

The Case Against the Internet Generation

HOW GEN Z GOT THEIR BRAINS HACKED,
BEHAVIOUR MODIFIED, PERSONALITIES PROFILED,
DATA STOLEN, AND FREEDOMS TAKEN
BY DIGITAL TECHNOLOGY.

7

Techfluence

HOW TECHNOLOGY HACKED GEN Z

Techfluence can be defined as, 'the capacity for technology to have an effect on the character, development, or behaviour of someone or something.' The genesis of who Gen Z are today is technology, specifically digital technologies like the smartphone and social media. This perfect intersection of technological addictions created a generational mindset that searches for digital fixes and rewards overconsumption.

At some point, we've all quenched our hunger by resorting to a bag of potato chips instead of eating a healthy meal. But what if we were to do this for every meal? This

metaphor aptly describes Gen Z's reliance on digital technologies.

They consistently opt for unhealthy digital technologies (potato chips) over healthier, natural lifestyles (nutritious meals), often unaware that these frequent choices diminish their social skills, attention span, focus, mating opportunities, career aspirations, motivation, and cognitive abilities, to name a few, prioritizing short-term pleasures over long-term health.

Was this natural or nurtured? It's been actively studied that the human brain fully matures at about 25 years of age. This is the period of time where we adapt to our environment; beyond crucial to development, shaping how we think, behave, learn, and communicate. So, what happens when technologies are introduced to one’s environment and contribute thoroughly to the development of a human being?

It's important to clarify that technology isn't negative. The steam engine, for instance, improved transportation rather than destroying cities. Similarly, the telephone allowed for long-distance communication

without damaging social discourse. Digital technology, particularly for Gen Z and future generations, presents a different developmental challenge due to three factors: Reward, Reputation, and Reach.

REWARD

Addiction doesn't happen in a vacuum. Lifestyles, genetics, and mental health disorders make up some of the reasons why humans turn to hard drugs like alcohol, cocaine, heroin, methamphetamine, fentanyl, etc. In this case, were Gen Z developed to have addictive tendencies to TikTok and Facebook? Or did something else far more sinister and perhaps more purposeful occur?

Dopamine is a 'pleasure' molecule in your brain which motivates a person to pursue behavior that will trigger a function to release it and its affects in the brain. Picture a seesaw at its resting state – horizontal. The right side is labelled 'pleasure', and the left side, 'pain.' Let's say you eat a cookie (and that you like cookies). The dopamine in your brain spikes, since you're about to receive a reward that has biological gratification. Moments before you eat the

cookie, the seesaw pulls upwards (pleasure goes all the way up, pain touching the ground). The actual act of eating the cookie, however, changes things entirely.

You get some pleasure (from the sugar high and the reward being received) but rapidly, the seesaw begins to go back down (pleasure slowly decreases, pain slowly increases). This isn't merely a metaphor – this creates pain in your brain. Your dopamine system now prompts you to eat another cookie to alleviate this pain and swing the seesaw back up to get pleasure. Let's say you eat another cookie. Problem solved, pleasure secured? No.

Eating the second cookie spikes your dopamine (and pleasure) but not to the same levels as before. This is because a certain amount of tolerance has been built up. The pleasure side of the seesaw will never swing as high as it did the first time you ate the cookie because your body has adapted to it. Every subsequent hit of stimuli, the cookies, provides less dopamine, less pleasure, and then more pain, more craving, than before.

To make matters even worse, when so much of a certain stimulus is consumed, and the seesaw is fully

weighted on the side of pain, an individual may find themselves using their stimuli of choice to bring about a level of mere normalcy. Thus, one is no longer binging on cookies to feel good; they are eating cookies *to stop feeling bad*. Enter social media, and things really go bonkers.

Social platforms like Facebook, Instagram, YouTube, TikTok, Snapchat, and others exploit our dopamine system with notifications for likes, comments, shares, and views. The endless scroll feature further amplifies this by triggering dopamine release with each new post, causing a cycle of seeking pleasure and avoiding pain.

As soon as you see a post on TikTok, which is perfectly tailored to your interests by the algorithm's understanding of you, dopamine is released. It feels good to watch the video, to look at the post; to consume. However, as soon as you continue watching the video, the initial pleasure high subsides and the pain sets in. So, what do you do? Swipe down, which brings you to a fresh, new video, which releases dopamine. Repeat this process, call it doom-scrolling, and you have understood the stimuli-crazed state of Generation Z.

But is this all just neurobiological? That is, are we simply suffering the consequences of chemicals in our brain that have been neuro-hacked by Big Tech and others? Unfortunately, no. Reputation is another layer.

REPUTATION

Social creatures at heart, our status matters. Things that enhance our status, or provide an indication of where we rank, become all-important drivers of our behavior. Introduce X (formerly known as Twitter), a social platform that allowed for communications and connections with strangers, while also providing an unprecedented and collapsed proximity to rapid social advancement.

The Retweet feature meant that any post could go viral and attract millions of likes, comments, and interactions at any time. This is important, as this prospect of hyper-normal reward (massive spikes in dopamine) kept people coming back to the platform in the hopes (the expectations) of going viral. It's a gambling addiction.

Posting a Tweet and waiting for likes, comments, shares, and virality to flood in is the essence of reward anticipation and reward response.

These digital metrics amount to something like social status points. The more social status you acquire, the happier you believe yourself to be due to the increase in the brain's serotonin levels. X's (formerly known as Twitter) homepage is designed to frictionlessly show the number of followers one has, indicating once again your social ranking in an immediate and gratifying way. Logging back in to check if the number went up has become a sort of digital tick. When the number rises, dopamine is released and when it decreases, major pain is felt due to the perception of lost social standing.

Ever caught yourself posting something, and that post getting more or less likes, comments, shares, views, etc., than previous posts? What ends up happening is we bias ourselves – a bias learned through dopamine release – to the posts that did well, from the posts that garnered the most attention, that received the most recognition, that appeared to enhance our reputation. This subconsciously

influences us to broadcast actions and behaviors that match more closely with the attention-receiving posts.

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These platforms offer a taste of artificial (and potentially bottomless) fame, status, stimuli. Compared to everyday life, which doesn't offer these things to the average person, TikTok is the preferred gateway to pseudo-stardom. Understandably, young people are drawn to it. They'll go to great lengths to attain that status again and again.

It may even be the case that these pangs of fame emerge a virality-identity. If a post goes viral, one may end up thinking that 'famous' person is the real or even better version of themselves, believing 'the person in the video is the one that got the billions of views, and not regular old me.' This might prompt that person to pursue actions, behaviors, and even surgery (Snapchat dysmorphia is a real thing, where particularly women go under the knife to shape their faces closer to Snapchat filters) to realize this

façade, to be closer to the person that went viral and got the attention.

Multiple platforms having such profound consequences precisely demonstrates the chaos Gen Z grew up in. These digital addictions were and are still being baked into the psyche and DNA of Gen Z. In fact, digital technologies and their consequences *were their childhood* to begin with.

These two behavioral mechanisms, the reward function (dopamine) and the reputation game (societal positioning), are being exploited by social media. It must be expressed that this type of attention is hyper-normal; it's just not natural. Not to mention that social networks are designed to manipulate this behavior further. Humans are not wired or truly equipped to handle this environment correctly or at all. Our brains, after receiving these readily accessible/available hits of social status which then spikes our dopamine levels are telling us to get more, more, more. But social media does not act alone in this fascinating, disturbing, and unprecedented relationship between

humans and technology. The smartphone is a carrier of this virus.

REACH

Social media would not be as insidiously effective if one had to travel to a library to use it. One thing must be made abundantly clear: the smartphone instilled and intensified these addictions. Social platforms and their consequences would not, and could not, be as effective if they weren't able to be accessed 24/7 in any circumstance.

Netflix's CEO in 2017, Reed Hastings, pointed out that the company's biggest competitor was not Disney+, Prime Video, or even YouTube for that matter. Their biggest competitor was not a digital technology, but a biological necessity: sleep. 'You know, think about it, when you watch a show from Netflix and you get addicted to it, you stay up late at night. We're competing with sleep, on the margin. And so, it's a very large pool of time.'[52]

[52] Bradley, Laura. "Netflix's Biggest Competition? Basically Everything besides TV, Says Netflix." Vanity Fair, January 18, 2019. https://

It is clear why and how Gen Z became so addicted, so fast. The ease of reaching these digital substructures of society combined with such platforms preying on reward and reputation created the most potent digital toxin humanity has ever faced. Social media sites like X (formerly known as Twitter) and Instagram operate with this greedy mindset. Doom-scrolling at night is baked into our culture. A recent social media study found that the most active time for most platforms is between 9pm and 11pm.

The social aspect of smartphone technology is the harmful variable in this equation. The fact that every person is now basically required to own a smartphone creates not just a mental cesspool, but an environment that incentivizes and subsidizes addiction.

The Fear of Missing Out (FOMO) is a further consequence of social media. As humans, we strive to feel included. Abandonment from tribes is a real feeling, even in our advanced and modern society, and social media exaggerates that feeling massively.

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www.vanityfair.com/hollywood/2019/01/netflix-competition-disney-hulu-fortnite

Since you never know when your friends will send a message or post something to comment on and be a part of, you must continue to log back on and interact. But here's the catch. It was reported that users who spent more time on these platforms had further perceptions of social isolation. FOMO also elicits significantly detrimental forms of jealousy and frustration, at others and ourselves.

Looking at everyone's happiness on social media, all the cool places they're travelling to and all the fun activities they're partaking in is a dangerous mixed bag. First, it makes us bitter towards them because they're doing something we aren't. Second, we get frustrated at our seemingly stagnant situation, further depressing our feelings and creating resentment towards those around us for not allowing us to participate in the fun activities we constantly see online, a stark contrast from scrolling through them from our bedrooms alone.

Dr. Anna Lembke's book, *Dopamine Nation: Finding Balance in the Age of Indulgence* offers a much fuller and richer body of work on the world of addiction, dopamine, and their effects on modern society than this condensed

section. Her book contains a discovery by Henry Knowles Beecher, who wrote about hundreds of soldiers with severe injuries. Beecher reported how those soldiers, regardless of the intensity and severity of the wounds they endured, had their physical pain lessened through the emotional relief of escaping "from an exceedingly dangerous environment, one filled with fatigue, discomfort, anxiety, fear, and real danger of death."

It seems appropriate to liken this to Gen Z who are undergoing a war for their attention, health, wealth, education, data, identity, votes, and more. Through the overuse of digital technologies, they are afforded a surefire escape from the harsh realities of fatigue, discomfort, mating, career advancement, anxiety, discipline, fear, and pseudo-danger of death.

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Through the prolonged and repeated exposure to pleasure in the form of social networks, their capacity to tolerate pain decreases. Could this be one of the reasons for Gen Z's

perceived weakness; their tendency to complain instead of taking action, the perceived lack of work ethic and initiative, the increased desire for (possibly unrealistic) work-life balance?

Since they were and are the digital natives who grew up with hyper-addicting technologies like the iPhone and Facebook, their literal tolerance for pain has been hardcoded from a very young age to be lesser. This could mean that *slightly* uncomfortable occupational, social, or individual circumstances cause them to pursue pleasure to counteract the pain, or to avoid pain entirely. This may be a large contributing factor to why Gen Z are turning towards being influencers rather than pursuing post-secondary or startup pathways. The former appears frictionless through social media, where the latter two are tedious, uncertain, unstable, and potentially unenjoyable for long periods of time. Unknowingly, they seek pleasure from the platforms that cause this neurobiological and psychological catastrophe, falling farther down the drain of digital addiction. In other words, Gen Z are self-medicating, using social media to deal with the effects of social media. It's

ludicrous, like injecting heroin to stave off a heroin addiction.

8

Deus Ex Machina

POLARIZATION & ADULT FILMS

The integration of technology into our daily lives is extraordinary. It is striking, to say the least, that most of what we see, hear, read, and do is on, from, or by some type of digital technology accessing networks containing millions of posts, billions of monthly users, and trillions of dollars in revenue. An important question must be asked: What are the real-world consequences and influences of digital technologies? The list is already an extensive one but outside of plain addiction to devices and sites, the dominant two are polarization and pornography. The downstream effects have civilization-shaping

consequences, affecting culture, politics, economics, business, society, and on and on.

POLARIZATION

The so-called 'echo chambers' we find ourselves in through using platforms like X (formerly known as Twitter) or Facebook only compounds the 'polarization' we've all experienced. Every time we log onto any social platform, users are fighting about something.

Was it always like this, and social media has just given us a transparent view of how argumentative and frustrated we all really are? Did the comforted seclusion of user accounts give slack to venomous comments and ideas that would never be shouted in a physical town square?

Or has something else happened that has amplified the vitriol online users have towards others? According to the Pew Research Center, 64% of Americans feel that social media has a negative effect on their country's predicament. The foundation for these concerns has to do with AI.

AI uses our data to customize content and hoard engagement. For instance, on YouTube, if you watch many dog videos, the algorithm suggests more do videos based on your watch history, time spent watching, and engagement such as likes, comments, and shares. This strategy seeks to maximize your time on the platform, leading to more ad consumption and revenue for YouTube. However, this carefully crafted pipeline also ignites polarization among populations.

Consider this scenario. What would keep an American liberal on YouTube: a video recommendation featuring Joe Biden's uplifting speech or Donald Trump making derogatory remarks about minorities? If the majority prefers the latter, why is that? Why not opt for the positive speech from the (current, at the time of writing) President? The answer lies in emotions.

Controversy incites strong reactions, such as anger and frustration, prompting users to comment, share, and consume more content. Heightened emotions increase user engagement.

Consequently, groups begin to form where individuals express agreement or disagreement with a message, further projecting these ideas into the digital realm. Then, these groups engage in conflicts with one another, leading to the spread of the message due to the heightened attention from the conflict, resulting in the mutation of the original message.

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It's akin to the childhood game of Broken Telephone, where participants pass a message down the line, revealing how and where the message changes as it passes from one person to another, but on an extreme and exponential scale. Playing Broken Telephone with ten children is an entirely different game compared to playing with one billion people with different backgrounds, interpretations, philosophies, and perspectives.

This is what happens with social media and the polarization of content. As a result, people become furious at the state of the world because of what they consume online. But in fact, what they're interpreting as news might

just be hokum. In turn, they might post on social media talking about the horrific state of the world which restarts the cycle. Even more unfortunate, they take this hatred from social media and spread it around society.

The anger created and consumed online manifests into real-life through hostile interactions, like terrorism and shootings. A greater picture of the anarchy of social media in the 21st Century is being built, but we aren't done yet.

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The immediate global effects of social media were evident, for the first time, in March of 2020. The organic and rapid spread of misinformation and disinformation was both astonishing and frightening. Small mutations in the language or interpretation of how things are interpreted can have unpredictable effects. The difference (in emotional reaction) between the language of a 'China-made bioweapon' and a 'virus that emerged from Wuhan, China' can significantly change the extent of, for example, xenophobia towards East Asia.

This is precisely what was experienced when an uncontrollable, misunderstood virus took control of all information platforms and shut the world down. Anyone's opinion trumped everyone's. For the first time, scientists no longer had an answer that was sufficient to the majority. Theories, conspiracies, and truths were all considered equal, taken on face value, and treated as both absolute truth and total nonsense. The effects of this continue to be felt, as nanobots in the (mRNA) vaccines and lab leaks from BSL-4 laboratories are still talked about in the same breath.

Contemporary social media clearly contains little benefit and massive detriment to citizens, cultures, and civilization. Without focused transformation, we cannot reap the real advantages of planetary connectivity. We have in/direct access to almost eight billion people via pocket technology, and yet we don't have the wisdom to navigate and respect this access.

ADULT FILMS

Intimacy. Love. Romance. Words that have meaning, and words that cannot be thrown around without serious commitment and consequence. Translated from physical reality into digital fantasy, adult films have ravaged every nook and cranny of the lives of adolescents and adults. We cannot underestimate the impact of this portal. An outlet for lust, expression, frustration, fantasy, disconnection, rebellion, and boredom. People between 18 and 34 years of age make up 51% of users on the leading adult film site, a Hub of erotic entertainment. In the United States alone, viewership which was at 130 million users per day, increased by 42% at the start of the pandemic. The relation between escaping into this non-romantic reality and loneliness is clear. Worse, it's creating an alienated and addicted generation who don't want or care to partake in natural human activities like finding a mate and creating tinier versions of themselves.

The addictive nature of these films has to do with price, the ease of access, the lack of regulation, and, of course, dopamine. Accessing this NSFW content is free and easy, unlimited in variety and non-judgmental of selection.

Simply navigate to a (hopefully private) browser, type in your favorite website, and you are faced with endless possibilities of orgasmic potential in the comfort of seclusion.

Furthermore, the lack of regulation means that while this content is free and unlimited, there is no potential for abuse, betrayal, danger, deception, lies, STIs/STDs, violence, or any other ramifications that come with sexual selection in the 21st century. Just click and c**.

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Finally, to our good old friend dopamine. Of course, orgasms are a kind of high we feel, a massive release of oxytocin — the "love" hormone." However, from what we know about dopamine, the reward molecule, we fully understand the implications. Since this high spikes our dopamine levels, and decreases them as the high subsides, we will repeatedly seek this stimuli out. Since our access to it is laughably easy, and doesn't force us any financial or repetitional cost, it's easy to see why seeking out NSFW

content on a weekly, daily, even hourly basis has become ever-present in modernity.

Alienation of users who consume massive amounts of NSFW content cannot be underestimated. Starting with aggression, it has been shown that 88% of scenes of the top-rated content portray anger and violence from men towards women. A shocking study conducted in the United States revealed that people who watched this violent content were six times as likely to commit sexual violence later in life. What's more, with the direct link between sexual content and erectile dysfunction, not being able to have any kind of healthy sex life induces further frustration, self-esteem issues, alienation, and a stronger pull towards consuming more.

Constant usage from such a young age alters perceptions of sex, romance, and the concept of what an ideal partner is. For males specifically, as more content is consumed, the expectation that such acts would be requested for in the bedroom increases. Instead of adult films being a tool in times of romantic scarcity, it has become the bedrock for youth to learn about sexual

encounters and suffer the detriments because of these overexaggerated and unrealistic situations and expectations.

Low testosterone in men can heavily influence lifestyle choices, like having the energy to even get out of bed and exercise. As it stands, the new generation of digital fanatics are becoming less interested in the romantic reality of exerting energy to create their toolkit of attraction (status, skills, hobbies, aspirations), with more interest in their unrealistic and unproductive fantasies that alter their expectations, require little effort to access and enjoy, destroy their lives, and subsequently, further addict them to a false reality.

9

Inheritance

No one can argue that, due to technology, Gen Z have grown up in an environment with many, many problems. But there is a more important, broader consequence in recognizing this blame.

Gen Z often reject responsibility and assign blame to external factors, such as saying, 'I blame Mark Zuckerberg for my Instagram addiction,' or 'I blame the iPhone for my device addiction,' even blaming broader societal issues on previous generations. This book aims to serve as a bridge for Gen Z to better understand themselves and their environment, but also, between Gen Z and other generations. The focus is to collaborate and create a cross-generational framework to address pressing planetary issues, including, but not limited to: ocean acidification, melting ice caps, rising sea levels, antibiotic resistance, population collapse, insect apocalypse, overfishing,

homelessness, plastic pollution, mass crop failures, coral die-offs, and food and water insecurity, among others.

Older generations frequently dismiss the issues of Gen Z, 'My generation got through it so Gen Z can as well.' This is astonishing but understandable given that these generations truly cannot comprehend the intricacies of Gen Z's world. This makes more sense when thinking about Gen Z's literal brain structure — they grew up with technology in their immediate environment, so their brains were wired around it. What Gen Z grew up inside of, other generations had to adopt and understand slowly. The gap in technological grasp is underexaggerated. Put simply, Gen Z might be classified as the 'cyborg generation' since they are the first set of humans who neuro-plastically adapted to digital technologies.

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It is no wonder that older generations fail at understanding the complexity of, for example, Gen Z's social media use. They don't see how social networks morphed into Gen Z's

portal into society, into sociality. Their relationships, information circuits, and worldly perspectives are not just augmented, but predicated on social media usage. For past generations, all they see are young people with their heads down, staring into the void of a screen.

Widening the gap, Gen Z dismiss earlier generations by retorting, "They simply don't understand what we're going through", and "They also created this world we didn't ask to be born into." This solves nothing. Imagine an astronaut on an alien planet. Adaptable as all humans are, when given enough time and space (and doughnuts), the explorer will eventually understand the culture, norms, and customs of the species' environment. But they would never fully understand the intricacies and subtleties of how that species speaks, thinks, and interacts. In other words, no matter how much they might want to, regardless of their level of adaptability, they'd never be truly native to that environment.

In a similar tone, prior generations will never be digitally native. They will never understand cyberspace interactions the way those who grew up in cyberspace do.

This is precisely why some slack must be extended to them. Regardless of how much they may want to understand the current trends of cyberspace society, they cannot have the same relationship with technology as Gen Z. But this generational gap is indeed bridgeable.

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We need to recognize that both arguments hold water. While Gen Z is facing challenges, there is also a lack of effort among young people to proactively build solutions. Past generations often underestimate and overlook Gen Z's problems prematurely, yet they possess valuable experience and wisdom. The communication between generations is currently ineffective (rather nonexistent), consequently impeding progress in addressing these critical issues.

It is in Gen Z's best interest to move past the immature notion of "prior generations know nothing; we'll handle it ourselves" and assume a more mature stance, considering the significance of their age and experience. As these generations pass away, they take with them a wealth

of knowledge, wisdom, and expertise. It is essential to engage in dialogue sooner rather than later, as delaying this conversation will only exacerbate global challenges, making problem-solving increasingly difficult. This isn't about blindly following the footsteps or advice of previous generations. Rather, learning how they navigated their challenges and using this understanding to deal with modern crises.

FINAL THOUGHTS

The tale has been told; the stories completed. Predictions regarding technology, politics, and society, are always at risk of being too soon or too late — or plain wrong. The best one can do is understand the predictions and see how, or if, it fits into their lives. AI has and will impact everyone, regardless of country, job, social class, or awareness of it. All that's left to do is maintain a positive outlook and let the events unfold.

More important than just understanding these problems is how Gen Z *deals* with these problems. Reading about them and writing / talking about them is futile unless productive action is taken.

Becoming proactive and learning about how AI is going to be used in any industry is crucial. Many books,

podcasts, lectures, articles, and other resources exist on how AI is reshaping entire industries (while destroying some in the process). Gen Z is better adapted to the Internet and finding the best online resources, so learning about how AI affects them shouldn't be too difficult. As has been heavily emphasized throughout this book, shifts in the AI industry occur weekly to annually. Thus, merely learning about the technology once is not enough. Gen Z have to routinely keep up to date with the current trends, forecasts, and research on what's taking place. Just like creating laws, learning about AI now means nothing if the global scope around AI has shifted in six months. But it's not just AI they have to worry about.

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Nanotechnology disasters, the collapse of centralized banking, the increasing attraction to virtual reality (not to mention virtual partners), the food crisis, the looming submergence of coastal cities, the inevitable war between the United States and China over Taiwan, and engineered

viruses based on synthetic biology only compound insecurity over the planet's future. It makes any attempts at navigation almost impossible. However, contributing to the already vast amounts of existential dread and emotional distress is not good for anyone, especially those who want to innovate their future, or slay the dragon. Heroes must be inspired to embark on the quest, not broken down emotionally and mentally. Time for a bit of optimism to jump start Gen Z's journey.

Gen Z isn't like any other generation. They have traits unique only to them, like their hyper-connectivity and unstoppable push for social change. They are hard-working, can ignite activists around the world in a matter of days, and force global corporations to adapt to their lifestyles, workplace needs, and cultural values. They are not an ordinary or lacking generation by any means. At this moment in time, the odds are stacked against them.

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Gen Z must stay educated in the space of AI: researching how industries and jobs are adopting AI; keeping up to date with AI; talking to hiring managers and professors to explore how AI is used and what roles it's eliminating and the opportunities that it is creating. Companies will be ruthless with their deployment of AI, and it will disrupt Gen Z's future regardless of whether they know or care about it.

It's up to Gen Z to build a world they can be proud of, one that they can live in successfully, and ultimately, one that they deserve. They have the capacity to innovate the future, and hopefully, change the scope of AI for Gen Z.

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